

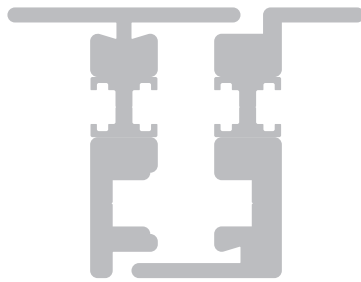
# METALFORM

OTTOSTUMM | mogs

Mogs® 2 mm  
M65 TB







Mogs® 2 mm  
M65 TB

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System

System

Système

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System description  
Performances  
Type overview and  
dimensional limits

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Leistungseigenschaften  
Typenübersicht und Abmessungen

Description du système  
Performance  
Exemples d'utilisation et  
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| System description | Systembeschreibung | Description du système | 1.1 |
|--------------------|--------------------|------------------------|-----|
|--------------------|--------------------|------------------------|-----|

## System description

M65 TB is a series created to meet the requirements of contemporary architecture, aiming at producing minimalistic yet solid and performing windows and doors, which represent the state of the art. M65 TB profiles are the only roll formed thermally broken tubular (welded) profiles made from 2 mm steel sheet, guaranteeing maximum strength, while the visual impact is extremely minimal (up to 40 mm). The depth of the profile, from 65 to 72 mm, is designed to achieve high moments of inertia ( $I_x/W_x$ ) and to accommodate the latest generation of insulating glazing units. The 6.6 polyamide insulating core guarantees excellent performance in terms of thermal transmission and energy saving. M65 TB is available in a wide range of materials: galvanised steel, AISI 316 L stainless steel, Cor-Ten steel and bright steel, in all their fascinating finishes. Finally, the option of coating steel extends the possibilities of customising windows and doors. The system allows the creation of all openings, and is completed by a wide range of accessories.

## Systembeschreibung

M65 TB ist eine Serie, die geschaffen wurde, um die Anforderungen der zeitgenössischen Architektur gerecht zu werden, mit dem Ziel, minimalistische, und zugleich solide und leistungsfähige Fenster und Türen zu produzieren, die den Stand der Technik repräsentieren. M65 TB-Profil sind die einzigen rollgeformten, thermisch getrennten und geschlossenen (geschweißt) Halbschalen aus 2 mm Stahlblech, die eine maximale Festigkeit garantieren und zeitgleich eine extrem schlanke Ansichtsbreite (bis 40 mm) bieten. Die Tiefe des Profils, von 65 bis 72 mm, ist darauf ausgelegt, hohe Trägheitsmomente zu erreichen ( $I_x$  und  $W_x$ ) und die neueste Generation von Isolierverglasungen aufzunehmen. Der Isolierkern aus Polyamid 6.6 garantiert hervorragende Leistungen in Bezug auf Wärmedurchgang und Energieeinsparung. M65 TB ist in einer Vielzahl von Werkstoffen und Oberflächen erhältlich: verzinkter Stahl, Edelstahl 1.4401, Cor-Ten-Stahl und blanker Stahl, in all ihren faszinierenden Oberflächenausführungen. Schließlich erweitert die Option, Stahl zu beschichten, die Möglichkeiten der individuellen Gestaltung von Fenstern und Türen. Das System erlaubt die Ausführung aller gewünschten Öffnungsarten und wird durch eine breite Palette von Zubehör ergänzt.

## Description du système

M65 TB est une série créée pour répondre aux exigences de l'architecture contemporaine, visant à produire des fenêtres et des portes minimalistes mais solides et performantes, compatibles avec le double ou le triple vitrage et permettant de grandes gammes de dimensions. Les profilés M65 TB sont les seuls profilés tubulaires à rupture de pont thermique formés à froid à partir d'une tôle d'acier de 2 mm, garantissant une résistance maximale, tandis que l'impact visuel est extrêmement minimal (jusqu'à 40 mm). La profondeur du profilé, de 65 à 72 mm, est conçue pour atteindre des moments d'inertie ( $I_x/W_x$ ) élevés et pour accueillir les vitrages isolants de dernière génération. Le noyau isolant en polyamide 6.6 garantit d'excellentes performances en termes d'économie d'énergie. M65 TB est disponible dans une large gamme de matériaux: acier galvanisé, acier inoxydable AISI 316 L, acier Cor-Ten et acier décapé, dans toutes leurs fascinantes finitions. La peinture, enfin, étend les possibilités de personnalisation des fenêtres et des portes. Le système permet la création de tous les types d'ouverture, et, il est complété par une large gamme d'accessoires.



## System description

Fixed glazing, side hung single and double leaf windows, opening inwards and outwards. Tilt&Turn, Bottom hung and top-hung/ projecting windows. Single and double leaf doors open inward and outward.

Wet and dry glazing;

Glass thickness from 15 to 46 mm;

System fittings weld-on hinges;

Classic and modern fittings.

## Systembeschreibung

Festverglasung, Ein- und zweiflügelige Drehfenster nach innen und außen öffnend sowie Dreh-Kippfenster nach innen öffnend und Senkkippfenster nach außen öffnend, Ein- und Zweiflügelige Türen nach innen und außen öffnend.

Nass- und Trockenverglasung;

Glasstärke von 15 bis 46 mm;

Systembeschläge mit  
Anschweißbänder;

Klassische und moderne Beschläge  
für Fenster und Türen.

## Description du système

Fenêtres fixes, fenêtres à battants at un et deux vantaux, ouvrant vers l'intérieur et vers l'extérieur. Fenêtres oscillo-battantes, à soufflet ouvrant vers l'intérieur et à l'italienne ouvrant vers l'extérieur. Portes à un et deux vantaux ouvrant vers l'intérieur et vers l'extérieur.

Vitrages à étanche humide et sec;

Epaisseur de vitrages de 15 à 46 mm;

Système de ferrures avec paumelles soudées;

Ferrures classiques et modernes.

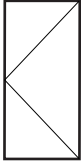
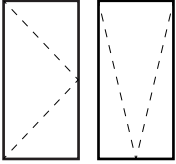
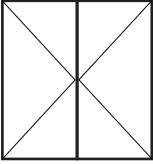
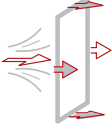
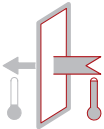


**Performances**

**Leistungseigenschaften**

**Performance**

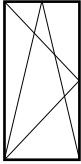
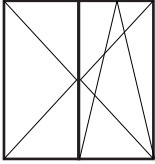
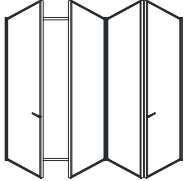
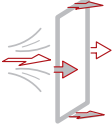
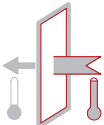
1.2

| Standard<br>Norm<br>Norme                                                           | Test<br>Prüfungen<br>Essais                                                                                                                         |                                        |                                       |                                      |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|                                                                                     |                                                                                                                                                     | Open in window<br>Nach innen öffnend<br>Ouverture vers l'intérieur                                                      | Open out window<br>Nach außen öffnend<br>Ouverture vers l'extérieur                                                     | Open in window<br>Nach innen öffnend<br>Ouverture vers l'intérieur                                                      |
|    | <b>EN12207</b><br>Air permeability<br>Luftdurchlässigkeit<br>Perméabilité à l'air                                                                   | up to class 4 - 600 Pa<br>bis Klasse 4 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa                                         | up to class 4 - 600 Pa<br>bis Klasse 4 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa                                         | up to class 4 - 600 Pa<br>bis Klasse 4 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa                                         |
|    | <b>EN12208</b><br>Water tightness<br>Schlagregendichtheit<br>Étanchéité à l'eau                                                                     | up to class 7A - 300 Pa<br>bis Klasse 7A - 300 Pa<br>jusqu'à la classe 7A - 300 Pa                                      | up to class 7A - 300 Pa<br>bis Klasse 7A - 300 Pa<br>jusqu'à la classe 7A - 300 Pa                                      | up to class 7A - 300 Pa<br>bis Klasse 7A - 300 Pa<br>jusqu'à la classe 7A - 300 Pa                                      |
|  | <b>EN12210</b><br>Resistance to wind load<br>Widerstand bei Windlast<br>Résistance à la pression du vent                                            | up to class C4 - 1600 Pa<br>bis Klasse C4 - 1600 Pa<br>jusqu'à la classe C4 - 1600 Pa                                   | up to class C4 - 1600 Pa<br>bis Klasse C4 - 1600 Pa<br>jusqu'à la classe C4 - 1600 Pa                                   | up to class C4 - 1600 Pa<br>bis Klasse C4 - 1600 Pa<br>jusqu'à la classe C4 - 1600 Pa                                   |
|  | <b>EN ISO10077-1</b><br>Heat transfer coefficient<br>Wärmedurchgangskoeffizient<br>Coefficient de transmission thermique                            | from > 1.10 W/m²K (*)<br>ab > 1.10 W/m²K (*)<br>à partir de > 1.10 W/m²K (*)                                            | from > 1.10 W/m²K (*)<br>ab > 1.10 W/m²K (*)<br>à partir de > 1.10 W/m²K (*)                                            | from > 1.10 W/m²K (*)<br>ab > 1.10 W/m²K (*)<br>à partir de > 1.10 W/m²K (*)                                            |
|  | <b>EN ISO10140</b><br>Sound insulation<br>Schallschutz<br>Isolation acoustique                                                                      | up to $R_w + C_{tr} = 44$ dB (-1; -5)<br>bis $R_w + C_{tr} = 44$ dB (-1; -5)<br>jusqu'à $R_w + C_{tr} = 44$ dB (-1; -5) | up to $R_w + C_{tr} = 44$ dB (-1; -5)<br>bis $R_w + C_{tr} = 44$ dB (-1; -5)<br>jusqu'à $R_w + C_{tr} = 44$ dB (-1; -5) | up to $R_w + C_{tr} = 44$ dB (-1; -5)<br>bis $R_w + C_{tr} = 44$ dB (-1; -5)<br>jusqu'à $R_w + C_{tr} = 44$ dB (-1; -5) |
|  | <b>EN14024</b><br>Metal profile with thermal barrier<br>Metallprofil mit thermischer Trennung<br>Profils métalliques avec rupture de pont thermique | CW / TC2                                                                                                                | CW / TC2                                                                                                                | CW / TC2                                                                                                                |
|  | <b>EN1627</b><br>Burglary resistance<br>Anti-Einbruch<br>Anti-effraction                                                                            |                                                                                                                         |                                                                                                                         | RC2                                                                                                                     |

(\*) value calculated with maximum performance, on sample standardized window frame dimension 1230x1480 mm according to the UNI EN 14351-1

(\*) Wert berechnet mit maximaler Leistung, auf Muster standardisierte Fensterrahmenabmessung 1230x1480 mm gemäß UNI EN 14351-1

(\*) valeur calculée avec des performances maximales, sur un échantillon de dimension de cadre de fenêtre standardisé 1230x1480 mm selon la norme UNI EN 14351-1

| Standard<br>Norm<br>Norme                                                                            | Test<br>Prüfungen<br>Essais                                                                                                                 |                                        |    |                                       |
|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
|                                                                                                      |                                                                                                                                             | Tilt&Turn window<br>Nach innen öffnend<br>Fenêtre inclinable et pivotante                                               | Tilt&Turn window<br>Nach außen öffnend<br>Fenêtre inclinable et pivotante            | Bi-folding door - open in<br>Faltwand - nach innen öffnend<br>Système de porte accordéon -<br>ouverture vers l'intérieur |
| <br>EN12207         | Air permeability<br>Luftdurchlässigkeit<br>Perméabilité à l'air                                                                             | up to class 4 - 600 Pa<br>bis Klasse 3 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa                                         | up to class 4 - 600 Pa<br>bis Klasse 3 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa      | up to class 4 - 600 Pa<br>bis Klasse 4 - 600 Pa<br>jusqu'à la classe 4 - 600 Pa                                          |
| <br>EN12208         | Water tightness<br>Schlagregendichtheit<br>Étanchéité à l'eau                                                                               | up to class 7A - 300 Pa<br>bis Klasse 9A - 600 Pa<br>jusqu'à la classe 7A - 300 Pa                                      | up to class 7A - 300 Pa<br>bis Klasse 5A - 200 Pa<br>jusqu'à la classe 7A - 300 Pa   | up to class 7A - 300 Pa<br>bis Klasse 7A - 300 Pa<br>jusqu'à la classe 7A - 300 Pa                                       |
| <br>EN12210       | Resistance to wind load<br>Widerstand bei Windlast<br>Résistance à la<br>pression du vent                                                   | up to class C4 - 1600 Pa<br>bis Klasse C2 - 800 Pa<br>jusqu'à la classe C4 - 1600 Pa                                    | up to class C4 - 1600 Pa<br>bis Klasse C2 - 800 Pa<br>jusqu'à la classe C4 - 1600 Pa | up to class C4 - 1600 Pa<br>bis Klasse C4 - 1600 Pa<br>jusqu'à la classe C2 - 1600 Pa                                    |
| <br>EN ISO10077-1 | Heat transfer coefficient<br>Wärmedurchgangskoeffizient<br>Coefficient de<br>transmission thermique                                         | from > 1.10 W/m²K (*)<br>ab > 1.10 W/m²K (*)<br>à partir de > 1.10 W/m²K (*)                                            | from > 1.10 W/m²K (*)<br>ab > 1.10 W/m²K (*)<br>à partir de > 1.10 W/m²K (*)         |                                                                                                                          |
| <br>EN ISO10140   | Sound insulation<br>Schallschutz<br>Isolation acoustique                                                                                    | up to $R_w + C_{tr} = 44$ dB (-1; -5)<br>bis $R_w + C_{tr} = 44$ dB (-1; -5)<br>jusqu'à $R_w + C_{tr} = 44$ dB (-1; -5) |                                                                                      |                                                                                                                          |
| <br>EN14024       | Metal profile with<br>thermal barrier<br>Metallprofile mit<br>thermischer Trennung<br>Profils métalliques avec<br>rupture de pont thermique | CW / TC2                                                                                                                | CW / TC2                                                                             |                                                                                                                          |
| <br>EN1627        | Burglary resistance<br>Anti-Einbruch<br>Anti-effraction                                                                                     |                                                                                                                         | RC2                                                                                  | RC2                                                                                                                      |

(\*) value calculated with maximum performance,  
on sample standardized window frame  
dimension 1230x1480 mm according to the  
UNI EN 14351-1

(\*) Wert berechnet mit maximaler  
Leistung, auf Muster standardisierte  
Fensterrahmenabmessung 1230x1480 mm  
gemäß UNI EN 14351-1

(\*) valeur calculée avec des performances  
maximales, sur un échantillon de dimension  
de cadre de fenêtre standardisé 1230x1480  
mm selon la norme UNI EN 14351-1

**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|                            | T = 24 mm | T = 36 mm |  |
|----------------------------|-----------|-----------|--|
| MT 6518L-02                | 2.9       | 2.8       |  |
| MT 6518L-05                | 2.9       | 2.8       |  |
| MT 6518L-07                | 3.0       | 2.9       |  |
| MT 6518L-12                | 2.9       | 2.8       |  |
| MT 6518L-02<br>MT 6518L-02 | 3.1       | 2.9       |  |
| MT 6518L-05<br>MT 6518L-05 | 3.0       | 2.8       |  |
| MT 6518L-07<br>MT 6518L-07 | 3.1       | 3.0       |  |
| MT 6518L-12<br>MT 6518L-12 | 3.1       | 2.9       |  |
| MT 6518H-02                | 2.4       | 2.3       |  |
| MT 6518H-05                | 2.3       | 2.2       |  |
| MT 6518H-07                | 2.4       | 2.4       |  |
| MT 6518H-12                | 2.4       | 2.3       |  |
| MT 7218LF-02               | 2.6       | 2.5       |  |
| MT 7218LF-05               | 2.6       | 2.5       |  |
| MT 7218LF-07               | 2.8       | 2.5       |  |
| MT 7218LF-12               | 2.6       | 2.5       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|              | T = 24 mm | T = 36 mm |  |
|--------------|-----------|-----------|--|
| MT 7218HF-02 | 2.1       | 2.0       |  |
| MT 7218HF-05 | 2.0       | 1.9       |  |
| MT 7218HF-07 | 2.2       | 2.0       |  |
| MT 7218HF-12 | 2.1       | 2.0       |  |
| MT 6518T-02  | 2.7       | 2.5       |  |
| MT 6518T-05  | 2.6       | 2.6       |  |
| MT 6518T-07  | 2.8       | 2.6       |  |
| MT 6518T-12  | 2.7       | 2.5       |  |
| MT 7218TF-02 | 2.4       | 2.3       |  |
| MT 7218TF-05 | 2.4       | 2.3       |  |
| MT 7218TF-07 | 2.7       | 2.4       |  |
| MT 7218TF-12 | 2.4       | 2.3       |  |
| MT 6507TN-14 | 2.3       | 2.0       |  |
| MT 6507TN-34 | 2.3       | 2.0       |  |
| MT 6507TN-32 | 2.4       | 2.1       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|                             | T = 24 mm | T = 36 mm |  |
|-----------------------------|-----------|-----------|--|
| MT 7207TN-14                | 2.5       | 2.2       |  |
| MT 7207TN-34                | 2.4       | 2.2       |  |
| MT 7207TN-32                | 2.5       | 2.2       |  |
| MT 6507TR-14                | 2.8       | 2.6       |  |
| MT 6507TR-34                | 2.7       | 2.5       |  |
| MT 6507TR-32                | 2.8       | 2.6       |  |
| MT 7207TR-14                | 2.7       | 2.6       |  |
| MT 7207TR-34                | 2.7       | 2.6       |  |
| MT 7207TR-32                | 2.8       | 2.6       |  |
| MT 6518L-02<br>MT 7218ZR-02 | 3.2       | 3.2       |  |
| MT 6518L-05<br>MT 7218ZR-05 | 3.1       | 3.0       |  |
| MT 6518L-07<br>MT 7218ZR-07 | 3.3       | 3.2       |  |
| MT 6518L-12<br>MT 7218ZR-12 | 3.2       | 3.2       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]



**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|                                             | T = 24 mm | T = 36 mm |  |
|---------------------------------------------|-----------|-----------|--|
| MT 7218TZ-02<br>MT 7218ZR-02                | 3.1       | 3.0       |  |
| MT 7218TZ-05<br>MT 7218ZR-05                | 3.0       | 2.9       |  |
| MT 7218TZ-07<br>MT 7218ZR-07                | 3.2       | 3.1       |  |
| MT 7218TZ-12<br>MT 7218ZR-12                | 3.1       | 3.0       |  |
| MT 6518T-02<br>MT 7218ZR-02                 | 3.1       | 3.0       |  |
| MT 6518T-05<br>MT 7218ZR-05                 | 3.0       | 2.9       |  |
| MT 6518T-07<br>MT 7218ZR-07                 | 3.2       | 3.1       |  |
| MT 6518T-12<br>MT 7218ZR-12                 | 3.1       | 3.0       |  |
| MT 6518L-02<br>MT 7218ZR-02<br>MT 7218ZF-02 | 3.2       | 3.2       |  |
| MT 6518L-05<br>MT 7218ZR-05<br>MT 7218ZF-05 | 3.1       | 3.0       |  |
| MT 6518L-07<br>MT 7218ZR-07<br>MT 7218ZF-07 | 3.4       | 3.3       |  |
| MT 6518L-12<br>MT 7218ZR-12<br>MT 7218ZF-12 | 3.2       | 3.2       |  |
| MT 6518L-02<br>MT 7218LR-02                 | 3.5       | 3.5       |  |
| MT 6518L-05<br>MT 7218LR-05                 | 3.4       | 3.3       |  |
| MT 6518L-07<br>MT 7218LR-07                 | 3.6       | 3.5       |  |
| MT 6518L-12<br>MT 7218LR-12                 | 3.5       | 3.5       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|                                            | T = 24 mm | T = 36 mm |  |
|--------------------------------------------|-----------|-----------|--|
| MT 6518H-02<br>MT 7218LR-02                | 2.8       | 2.8       |  |
| MT 6518H-05<br>MT 7218LR-05                | 2.7       | 2.7       |  |
| MT 6518H-07<br>MT 7218LR-07                | 3.0       | 2.8       |  |
| MT 6518H-12<br>MT 7218LR-12                | 2.8       | 2.8       |  |
| MT 6518L-02<br>MT 6518L-02<br>MT 7218ZR-02 | 3.2       | 3.1       |  |
| MT 6518L-05<br>MT 6518L-05<br>MT 7218ZR-05 | 3.1       | 2.9       |  |
| MT 6518L-07<br>MT 6518L-07<br>MT 7218ZR-07 | 3.3       | 3.2       |  |
| MT 6518L-12<br>MT 6518L-12<br>MT 7218ZR-12 | 3.2       | 3.1       |  |
| MT 6518L-02<br>MT 7218TZ-02                | 3.5       | 3.3       |  |
| MT 6518L-05<br>MT 7218TZ-05                | 3.3       | 3.2       |  |
| MT 6518L-07<br>MT 7218TZ-07                | 3.6       | 3.3       |  |
| MT 6518L-12<br>MT 7218TZ-12                | 3.5       | 3.3       |  |
| MT 6518Z-02<br>MT 7218TZ-02                | 3.2       | 3.2       |  |
| MT 6518Z-05<br>MT 7218TZ-05                | 3.1       | 3.0       |  |
| MT 6518Z-07<br>MT 7218TZ-07                | 3.3       | 3.2       |  |
| MT 6518Z-12<br>MT 7218TZ-12                | 3.2       | 3.2       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

**U<sub>f</sub> value**

Performances according  
to EN 10077-2

**U<sub>f</sub> Wert**

Leistungseigenschaften  
nach EN 10077-2

**Valeur U<sub>f</sub>**

Performance selon  
EN 10077-2

|                                             | T = 24 mm | T = 36 mm |  |
|---------------------------------------------|-----------|-----------|--|
| MT 6518L-02<br>MT 7218TZ-02<br>MT 7218ZF-02 | 3.3       | 3.3       |  |
| MT 6518L-05<br>MT 7218TZ-05<br>MT 7218ZF-05 | 3.2       | 3.1       |  |
| MT 6518L-07<br>MT 7218TZ-07<br>MT 7218ZF-07 | 3.5       | 3.4       |  |
| MT 6518L-12<br>MT 7218TZ-12<br>MT 7218ZF-12 | 3.3       | 3.3       |  |
| MT 6518L-02<br>MT 6518L-02<br>MT 7218TZ-02  | 3.6       | 3.5       |  |
| MT 6518L-05<br>MT 6518L-05<br>MT 7218TZ-05  | 3.4       | 3.4       |  |
| MT 6518L-07<br>MT 6518L-07<br>MT 7218TZ-07  | 3.7       | 3.6       |  |
| MT 6518L-12<br>MT 6518L-12<br>MT 7218TZ-12  | 3.6       | 3.5       |  |
| MT 7218HZ-02                                | 3.4       | 3.4       |  |
| MT 7218HZ-05                                | 3.3       | 3.2       |  |
| MT 7218HZ-07                                | 3.8       | 3.6       |  |
| MT 7218HZ-12                                | 3.4       | 3.4       |  |

T = Glazing thickness  
According to EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> value in [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Füllungsdicken  
Nach EN 10077-2:  
U<sub>f</sub> = U<sub>f</sub> Wert [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]

T = Épaisseurs de remplissage  
Selon EN 10077-2:  
U<sub>f</sub> = valeur U<sub>f</sub> en [W/m²K]  
T = 24 mm, λ=0.035 [W/(mK)]  
T = 36 mm, λ=0.035 [W/(mK)]



Type overview and  
dimensional limits

Typenübersicht und  
Abmessungen

Exemples d'utilisation  
et limites dimensionnelles

1.3

Legend

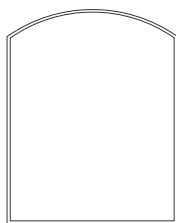
+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm

Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm

Légende

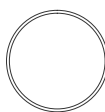
+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm



Fixed glazing

Festverglasungen mit Sprossen

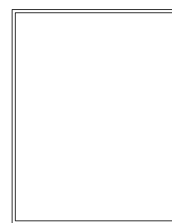
Châssis fixes avec meneaux



Fixed glazing

Festverglasungen mit Sprossen

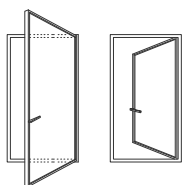
Châssis fixes avec meneaux



Fixed glazing

Festverglasungen mit Sprossen

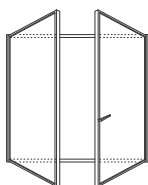
Châssis fixes avec meneaux



Single leaf open in or open out  
side hung window

Fenster Einflüglige  
nach innen oder außen öffnend

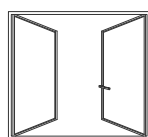
Fenêtre battante à un vantail  
ouvrant vers l'intérieur ou l'extérieur



Double leaf open in or open out  
side hung window

Drehfenster Zweiflügliges  
nach innen oder außen öffnend

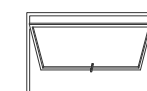
Fenêtre battante à deux vantaux  
ouvrant vers l'intérieur ou l'extérieur



Open in bottom hung window

Kipp-Fenster nach innen öffnend

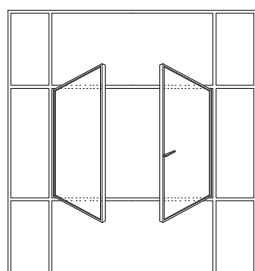
Fenêtre à soufflet  
ouvrant vers l'intérieur



Open out top hung  
projecting window

Senkklapp-Fenster  
nach außen öffnend

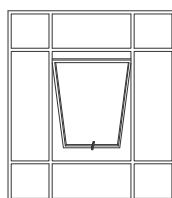
Fenêtre à l'italienne  
ouvrant vers l'extérieur



Double leaf open in side  
hung window in fixed glazing

Drehfenster Zweiflügliges nach  
innen öffnend in Verglasung

Fenêtre style industriel,  
deux vantaux ouvrant vers l'intérieur



Open out top hung  
projecting window

Senkklapp-Fenster  
nach außen öffnend

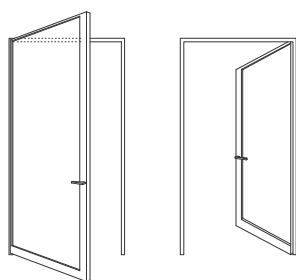
Fenêtre à l'italienne  
ouvrant vers l'extérieur



For trapezoidal windows, the minimum  
angle on the hinges side is 76°

Bei Trapezfenstern beträgt der  
Mindestwinkel auf der Scharnierseite 76°

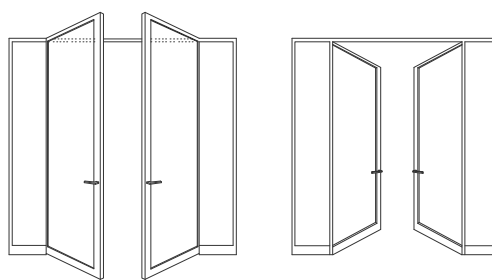
Pour les fenêtres trapézoïdales, l'angle  
minimum côté paumelles est de 76°



Single leaf door  
open in or open out

Einflüglige Anschlagtür  
nach innen oder außen öffnend

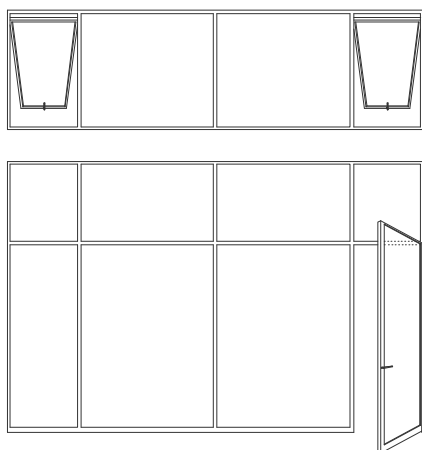
Porte à un vantail  
ouvrant vers l'intérieur ou l'extérieur



Double leaf door open in or open out  
with side lights

Zweiflügliges Anschlagtür  
mit Seitenteilen nach innen oder außen öffnend

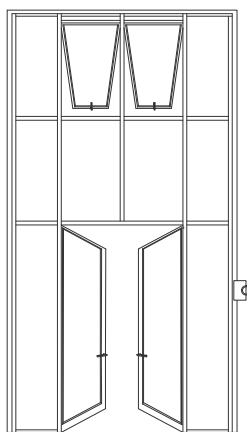
Porte à deux vantaux ouvrant vers  
l'intérieur ou l'extérieur avec des fixes latéraux



Fixed glazing with single leaf door open in  
and top hung windows

Verglasung mit Anschlagtür nach innen öffnend  
und Klappfenster

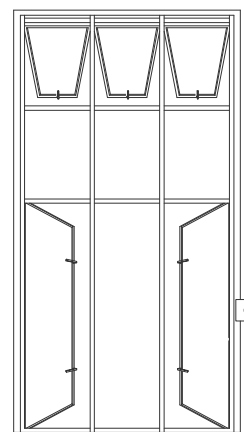
Façade avec porte et fenetre



Curtain wall with double leaf door  
and top hung windows

Fassaden mit Anschlagtür  
und Klappfenster

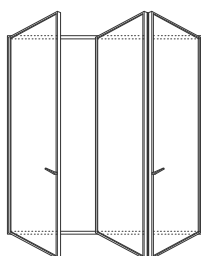
Façade avec porte et fenetre



Industrial sidewall windows  
and historical curtain walls

Fassaden und Verglasungen  
im Industriedesign

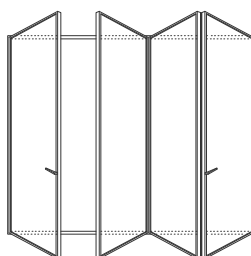
Façades et châssis  
style industriel



Bi-folding door system  
3 leaves (1+2 leaves)

Faltwand  
3 flügelig (1+2 flügelig)

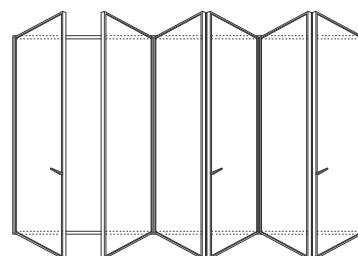
Système de porte accordéon  
3 vantailes (1+2 vantailes)



Bi-folding door system  
4 leaves (1+3 leaves)

Faltwand  
4 flügelig (1+3 flügelig)

Système de porte accordéon  
4 vantailes (1+3 vantailes)



Bi-folding door system  
6 leaves (1+5 leaves)

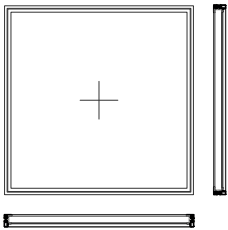
Faltwand  
6 flügelig (1+5 flügelig)

Système de porte accordéon  
6 vantailes (1+5 vantailes)

Dimensions  
M65 TB - Windows

Abmessungen  
M65 TB - Fenster

Limites dimensionnelles  
M65 TB - Fenêtres



Fixed window (windows and doors)

Festverglasung (Fenster und Türen)

Fenêtre fixe (menuiserie extérieure)

min. dimensions    400 x 400  
max. dimensions    3000 x 3000



## Dimensions

M65 TB - Windows

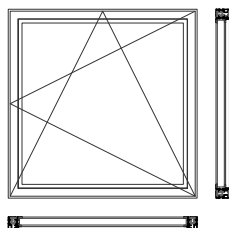
## Abmessungen

M65 TB - Fenster

## Limites dimensionnelles

M65 TB - Fenêtres

Tilt&Turn window - hardware with concealed hinges  
Dreh-Kippfenster - Hardware mit verdeckten Band  
Fenêtre inclinable et pivotante - ferrures avec paumelles cachée

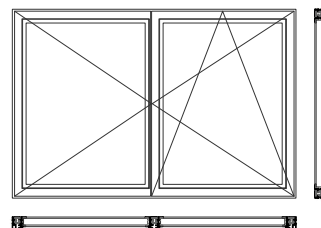


Single leaf Tilt&Turn window

Einflüglige Fenster Dreh-Kippfenster

Fenêtre à un vantail inclinable et pivotante

[See dimensions at page 5.9.79](#)



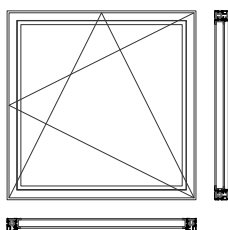
Double leaf Tilt&Turn window

Zweiflügliges Fenster Dreh-Kippfenster

Fenêtre à deux vantaux inclinable et pivotante

[See dimensions at page 5.9.79](#)

Tilt&Turn window - hardware with visible hinges  
Dreh-Kippfenster - Hardware mit Aufgesetzter Beschlag  
Fenêtre inclinable et pivotante - ferrures avec paumelles visibles

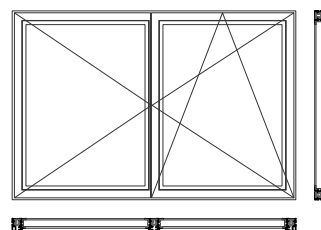


Single leaf Tilt&Turn window

Einflüglige Fenster Dreh-Kippfenster

Fenêtre à un vantail inclinable et pivotante

[See dimensions at page 5.9.35](#)



Double leaf Tilt&Turn window

Zweiflügliges Fenster Dreh-Kippfenster

Fenêtre à deux vantaux inclinable et pivotante

[See dimensions at page 5.9.35](#)

## Dimensions

M65 TB - Windows

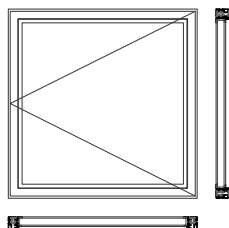
## Abmessungen

M65 TB - Fenster

## Limites dimensionnelles

M65 TB - Fenêtres

Side hung window - hardware with concealed hinges  
Fenster - Hardware mit verdeckten Band  
Fenêtre battante - ferrures avec paumelles cachée

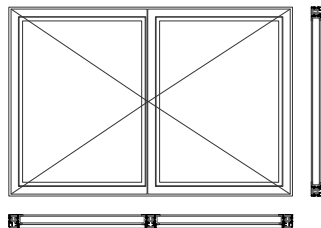


Single leaf window open in

Einflügliges Fenster nach innen öffnend

Fenêtre à un vantail ouvrant vers l'intérieur

[See dimensions at page 5.9.145](#)

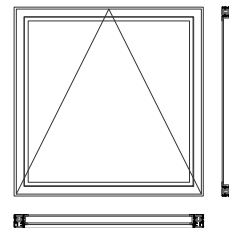


Double leaf window open in

Zweiflügliges Fenster nach innen öffnend

Fenêtre à deux vantaux ouvrant vers l'intérieur

[See dimensions at page 5.9.145](#)



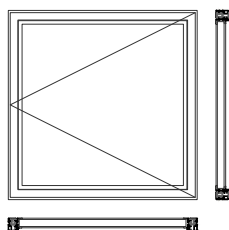
Bottom hung window open in

Kipp-Fenster nach innen öffnend

Fenêtre à soufflet ouvrant vers l'intérieur

[See dimensions at page 5.9.174](#)

Side hung window - hardware with visible hinges  
Fenster - Hardware mit Aufgesetzter Beschlag  
Fenêtre battante - ferrures avec paumelles visibles

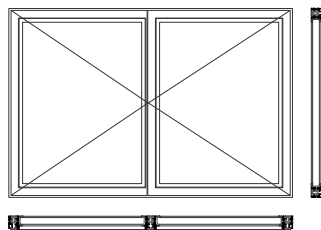


Single leaf window open in

Einflügliges Fenster nach innen öffnend

Fenêtre à un vantail ouvrant vers l'intérieur

[See dimensions at page 5.9.111](#)

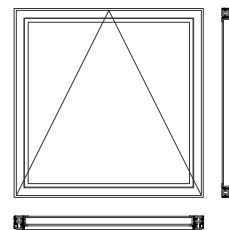


Double leaf window open in

Zweiflügliges Fenster nach innen öffnend

Fenêtre à deux vantaux ouvrant vers l'intérieur

[See dimensions at page 5.9.111](#)



Bottom hung window open in

Kipp-Fenster nach innen öffnend

Fenêtre à soufflet ouvrant vers l'intérieur

[See dimensions at page 5.9.161](#)

## Dimensions

M65 TB - Windows

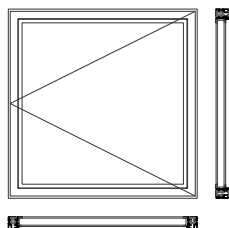
## Abmessungen

M65 TB - Fenster

## Limites dimensionnelles

M65 TB - Fenêtres

Side hung window - with weld-on hinges  
Fenster - mit Anschweißbänder  
Fenêtre battante - avec paumelles a souder



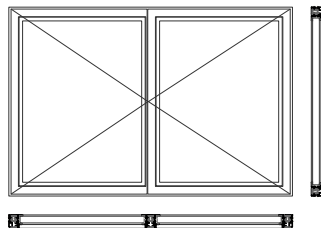
Single leaf window open in

Einflügliges Fenster nach innen öffnend

Fenêtre à un vantail ouvrant vers l'intérieur

**min. dimensions** 500 x 500  
**max. dimensions** 1200 x 3000

**max. leaf weight: 230 kg**



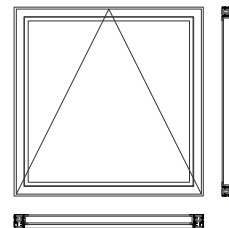
Double leaf window open in

Zweiflügliges Fenster nach innen öffnend

Fenêtre à deux vantaux ouvrant vers l'intérieur

**min. dimensions** 1000 x 500  
**max. dimensions** 2400 x 3000

**max. leaf weight: 230 kg**



Bottom hung window open in

Kipp-Fenster nach innen öffnend

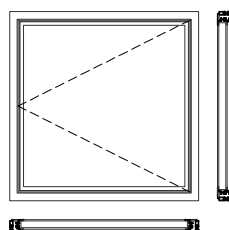
Fenêtre à soufflet ouvrant vers l'intérieur

**min. dimensions** 500 x 450  
**max. dimensions** 1800 x 1800

**max. leaf weight: 110 kg (\*)**

(\*) related accessory E99205-05

Side hung window - with weld-on hinges  
Fenster - mit Anschweißbänder  
Fenêtre battante - avec paumelles a souder



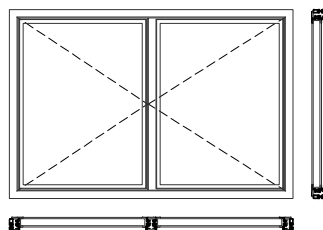
Single leaf window open out

Einflügliges Fenster nach außen öffnend

Fenêtre à un vantail ouvrant vers l'extérieur

**min. dimensions** 500 x 500  
**max. dimensions** 1200 x 3000

**max. leaf weight: 230 kg**



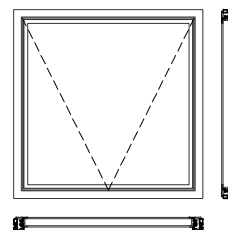
Double leaf window open out

Zweiflügliges Fenster nach außen öffnend

Fenêtre à deux vantaux ouvrant vers l'extérieur

**min. dimensions** 1000 x 500  
**max. dimensions** 2400 x 3000

**max. leaf weight: 230 kg**



Top hung projecting window open out

Senkklapp-Fenster nach außen öffnend

Fenêtre à l'italienne ouvrant vers l'extérieur

**min. dimensions** 500 x 450  
**max. dimensions** 1800 x 1800

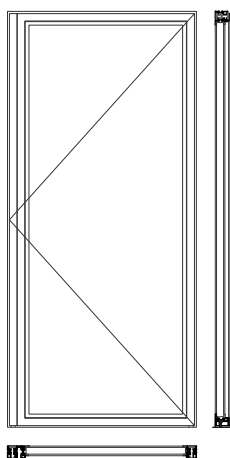
**max. leaf weight: 110 kg (\*\*)**

(\*\*) related accessory E99203-05

**Dimensions**  
M65 TB - Doors

**Abmessungen**  
M65 TB - Tür

**Limites dimensionnelles**  
M65 TB - Portes



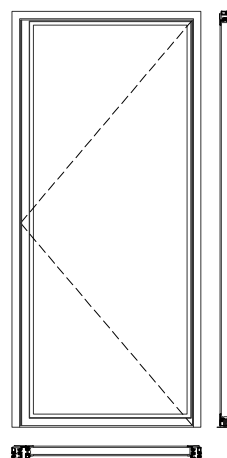
Single leaf door open in  
with full height additional profile

Einflüglige Tür nach innen öffnend  
mit Schlossverbreiterung in voller Höhe

Porte à un vantail ouvrant vers l'intérieur  
avec profilé de doublage pour serrure toute hauteur

**min. dimensions** 600 x 2000  
**max. dimensions** 1200 x 3000

**max. leaf weight: 230 kg**



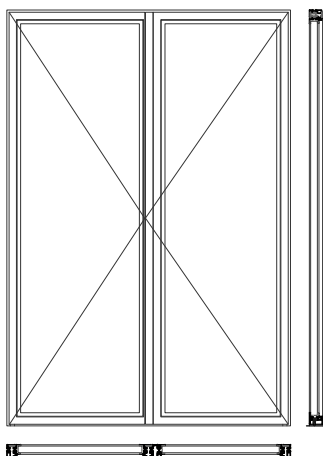
Single leaf door open out  
with full height additional profile

Einflüglige Tür nach außen öffnend  
mit Schlossverbreiterung in voller Höhe

Porte à un vantail ouvrant vers l'extérieur  
avec profilé de doublage pour serrure toute hauteur

**min. dimensions** 600 x 2000  
**max. dimensions** 1200 x 3000

**max. leaf weight: 230 kg**



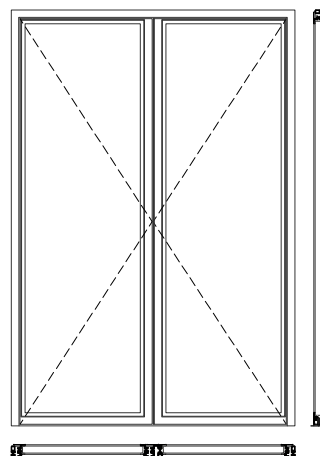
Double leaf door open in  
with full height additional profile

Zweiflüglige Tür nach innen öffnend  
mit Schlossverbreiterung in voller Höhe

Porte à deux vantaux ouvrant vers l'intérieur  
avec profilé de doublage pour serrure toute hauteur

**min. dimensions** 1200 x 2000  
**max. dimensions** 2400 x 3000

**max. leaf weight: 230 kg**



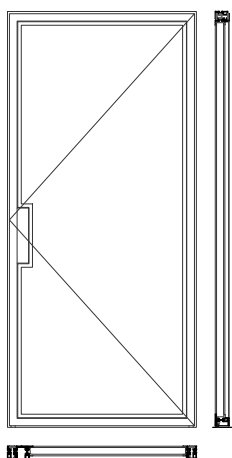
Double leaf door open out  
with full height additional profile

Zweiflüglige Tür nach außen öffnend  
mit Schlossverbreiterung in voller Höhe

Porte à deux vantaux ouvrant vers l'extérieur  
avec profilé de doublage pour serrure toute hauteur

**min. dimensions** 1200 x 2000  
**max. dimensions** 2400 x 3000

**max. leaf weight: 230 kg**



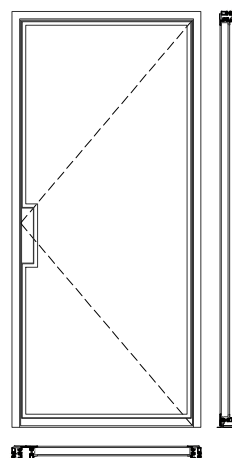
Single leaf door open in with locking box

Einflüglige Anschlagtür nach innen öffnend  
mit Schlosstasche

Porte à un vantail ouvrant vers l'intérieur  
avec boîte pour la serrure

**min. dimensions 600 x 2000**  
**max. dimensions 1200 x 3000**

**max. leaf weight: 230 kg**



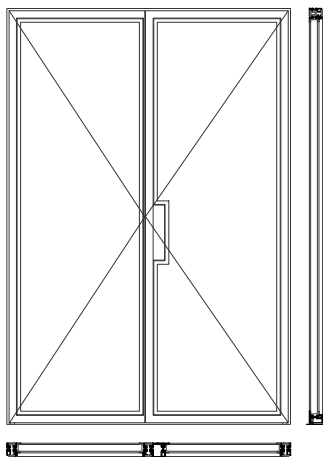
Single leaf door open out with locking box

Einflüglige Anschlagtür nach außen öffnend  
mit Schlosstasche

Porte à un vantail ouvrant vers l'extérieur  
avec boîte pour la serrure

**min. dimensions 600 x 2000**  
**max. dimensions 1200 x 3000**

**max. leaf weight: 230 kg**



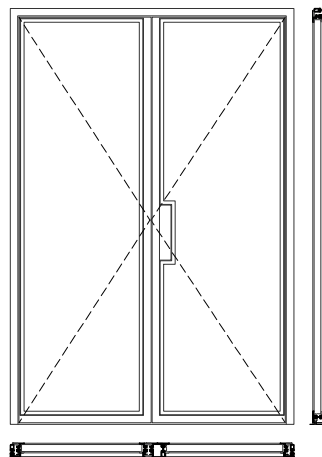
Double leaf door open in with locking box

Zweiflüglige Anschlagtür nach innen öffnend  
mit Schlosstasche

Porte à deux vantaux ouvrant vers l'intérieur  
avec boîte pour la serrure

**min. dimensions 1200 x 2000**  
**max. dimensions 2400 x 3000**

**max. leaf weight: 230 kg**



Double leaf door open out with locking box

Zweiflüglige Anschlagtür nach außen öffnend  
mit Schlosstasche

Porte à deux vantaux ouvrant vers l'extérieur  
avec boîte pour la serrure

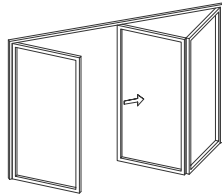
**min. dimensions 1200 x 2000**  
**max. dimensions 2400 x 3000**

**max. leaf weight: 230 kg**

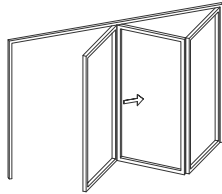
## Dimensions

Bi-folding door system

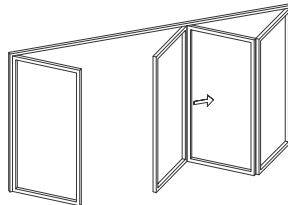
System 3 leaves (1+2 leaves)  
Anlage 3 flügelig (1+2 Flügelig)  
Système 3 vantailes (1+2 vantailes)



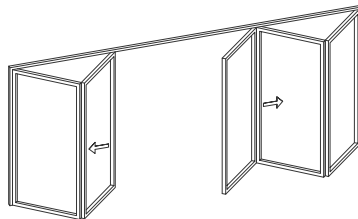
System 3 leaves (3 leaves)  
Anlage 3 flügelig (3 flügelig)  
Système 3 vantailes (3 vantailes)



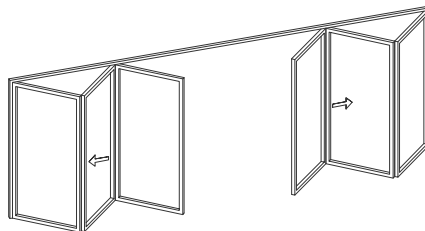
System 4 leaves (1+3 leaves)  
Anlage 4 flügelig (1+3 flügelig)  
Système 4 vantailes (1+3 vantailes)



System 5 leaves (2+3 leaves)  
Anlage 5 flügelig (2+3 flügelig)  
Système 5 vantailes (2+3 vantailes)



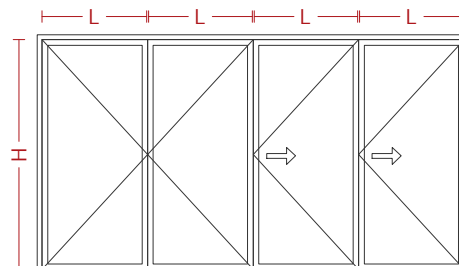
System 6 leaves (3+3 leaves)  
Anlage 6 flügelig (3+3 flügelig)  
Système 6 vantailes (3+3 vantailes)



Leaf dimensions using the example of  
a 4-part bi-folding door system.

Flügelabmessungen am Beispiel  
4-teiliger Faltwand.

Dimensions du vantail à l'aide de l'exemple  
d'un système de porte accordéon en 4 parties.



min. L x H 600 x 800  
max. L x H 1100 x 3000

Number of leaves can be extended

L = Leaf rebate width  
H = Leaf rebate height

Anzahl der flügelig erweiterbar

L = Flügelalzbreite  
H = Flügelalzhöhe

Le nombre de vantailes peut être étendu

L = Largeur de la remise sur les feuilles  
H = Hauteur de la remise sur les feuilles

Profile range

Profilsortiment

Gamme de profilés

2.0

Profiles  
Glazing beads  
Glazing table

Profile  
Glashalteleistenübersicht  
Verglasungstabellen

Profilés  
Parcloses  
Tableau de vitrage

2.1  
2.2  
2.3





Profiles

Profile

Profilés

2.1

Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1  
G = Weight  
U = Coated surface

Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1  
G = Gewicht  
U = Abwicklung

Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1  
G = Poids  
U = Surface à traiter

Profiles

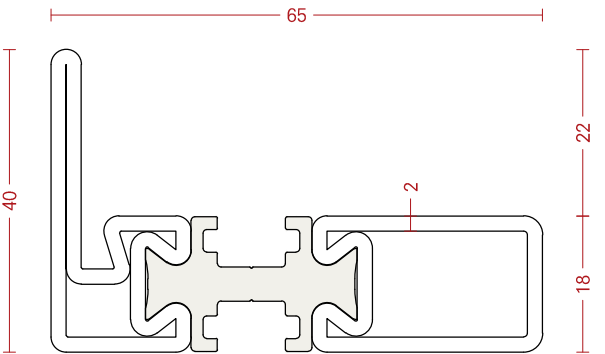
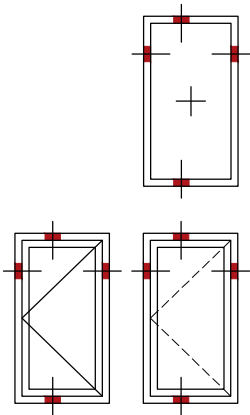
BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
05 - Stainless steel AISI 316L 2B  
07 - Cor-ten steel  
12 - Bright steel

Profile

STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
05 - Edelstahl 1.4404 2B  
07 - Cor-Ten-Stahl  
12 - Stahl blank

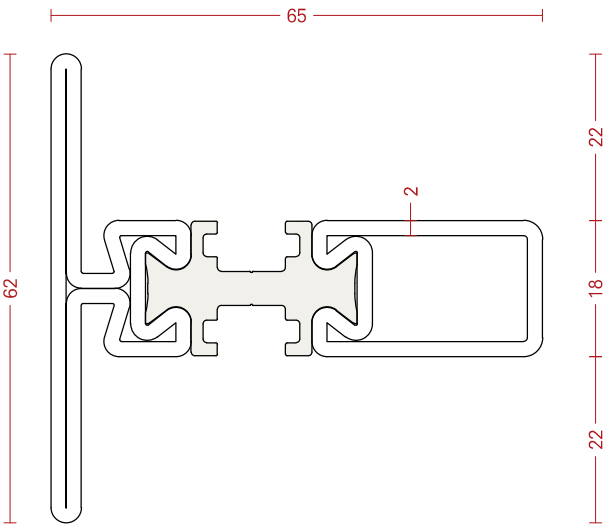
Profilés

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
05 - Acier inoxydable AISI 316L 2B  
07 - Acier Cor-ten  
12 - Acier décapé



MT 6518L-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 4.01 | U = 0.192 |
| -05 | G = 4.08 | U = 0.192 |
| -07 | G = 4.01 | U = 0.192 |
| -12 | G = 4.01 | U = 0.192 |
|     | kg/m     | m²/m      |



MT 6518T-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 4.91 | U = 0.250 |
| -05 | G = 5.00 | U = 0.250 |
| -07 | G = 4.91 | U = 0.250 |
| -12 | G = 4.91 | U = 0.250 |
|     | kg/m     | m²/m      |

Profiles

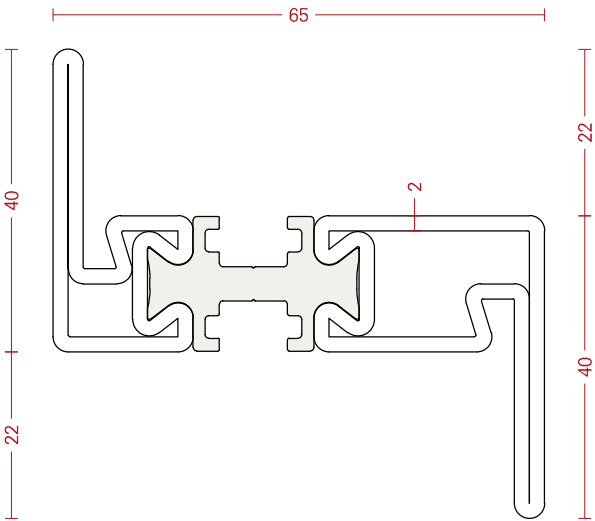
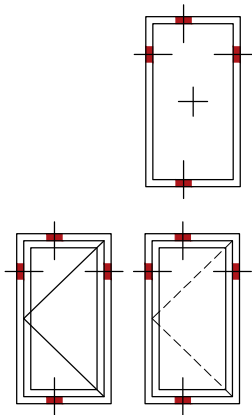
BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
05 - Stainless steel AISI 316L 2B  
07 - Cor-ten steel  
12 - Bright steel

Profile

STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
05 - Edelstahl 1.4404 2B  
07 - Cor-Ten-Stahl  
12 - Stahl blank

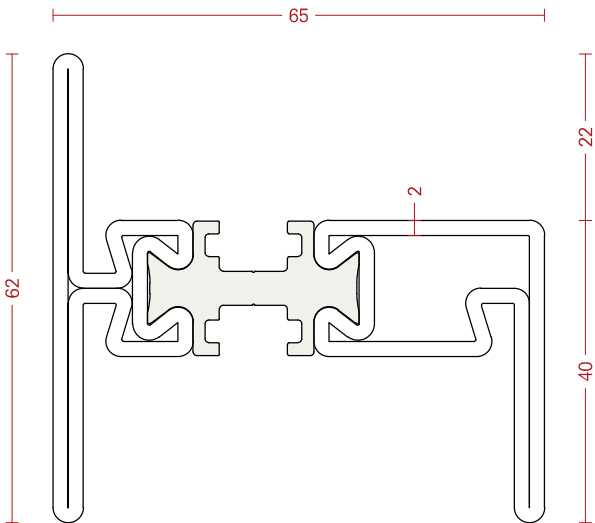
Profilés

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
05 - Acier inoxydable AISI 316L 2B  
07 - Acier Cor-ten  
12 - Acier décapé



MT 6518Z-nn

|     |          |                   |
|-----|----------|-------------------|
| -02 | G = 4.91 | U = 0.250         |
| -05 | G = 4.99 | U = 0.250         |
| -07 | G = 4.91 | U = 0.250         |
| -12 | G = 4.91 | U = 0.250         |
|     | kg/m     | m <sup>2</sup> /m |



MT 6518H-nn

|     |      |                   |
|-----|------|-------------------|
| -02 | 5.81 | 0.308             |
| -05 | 5.92 | 0.308             |
| -07 | 5.81 | 0.308             |
| -12 | 5.81 | 0.308             |
|     | kg/m | m <sup>2</sup> /m |

Profiles

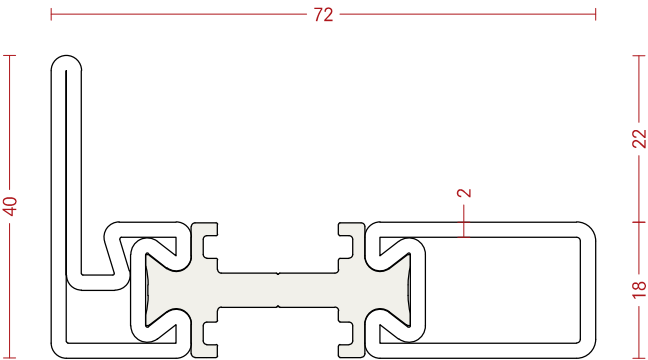
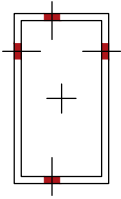
BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
05 - Stainless steel AISI 316L 2B  
07 - Cor-ten steel  
12 - Bright steel

Profile

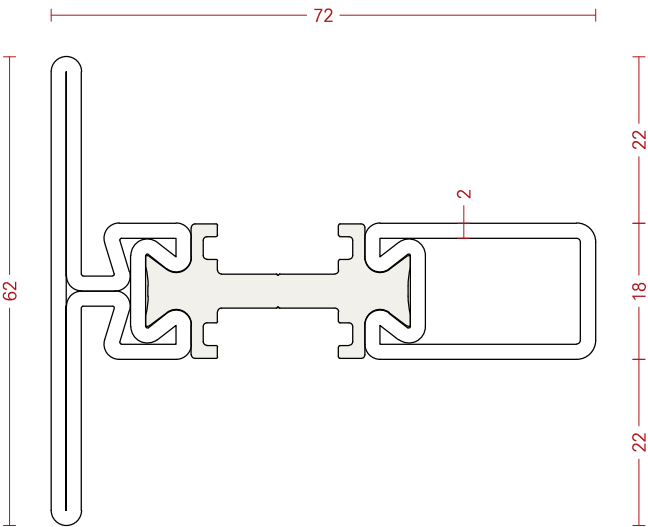
STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
05 - Edelstahl 1.4404 2B  
07 - Cor-Ten-Stahl  
12 - Stahl blank

Profilés

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
05 - Acier inoxydable AISI 316L 2B  
07 - Acier Cor-ten  
12 - Acier décapé



| MT 7218LF-nn |          |                   |  |
|--------------|----------|-------------------|--|
| -02          | G = 4.05 | U = 0.192         |  |
| -05          | G = 4.12 | U = 0.192         |  |
| -07          | G = 4.05 | U = 0.192         |  |
| -12          | G = 4.05 | U = 0.192         |  |
|              | kg/m     | m <sup>2</sup> /m |  |



| MT 7218TF-nn |          |                   |  |
|--------------|----------|-------------------|--|
| -02          | G = 4.96 | U = 0.250         |  |
| -05          | G = 5.04 | U = 0.250         |  |
| -07          | G = 4.96 | U = 0.250         |  |
| -12          | G = 4.96 | U = 0.250         |  |
|              | kg/m     | m <sup>2</sup> /m |  |

Profiles

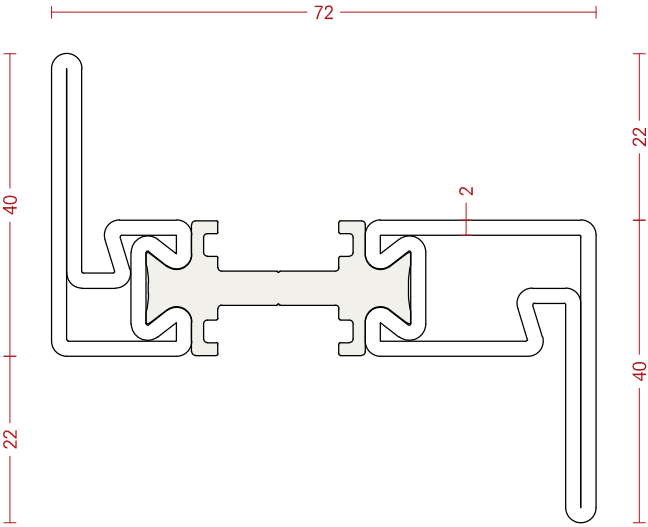
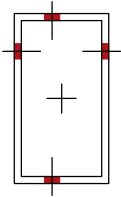
BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
05 - Stainless steel AISI 316L 2B  
07 - Cor-ten steel  
12 - Bright steel

Profile

STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
05 - Edelstahl 1.4404 2B  
07 - Cor-Ten-Stahl  
12 - Stahl blank

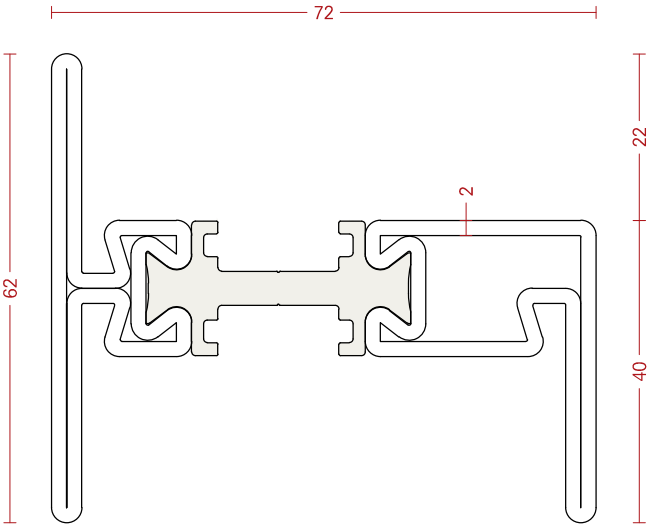
Profilés

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
05 - Acier inoxydable AISI 316L 2B  
07 - Acier Cor-ten  
12 - Acier décapé



MT 7218ZF-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 4.95 | U = 0.250 |
| -05 | G = 5.04 | U = 0.250 |
| -07 | G = 4.95 | U = 0.250 |
| -12 | G = 4.95 | U = 0.250 |
|     | kg/m     | m²/m      |



MT 7218HF-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 5.85 | U = 0.308 |
| -05 | G = 5.96 | U = 0.308 |
| -07 | G = 5.85 | U = 0.308 |
| -12 | G = 5.85 | U = 0.308 |
|     | kg/m     | m²/m      |

Profiles

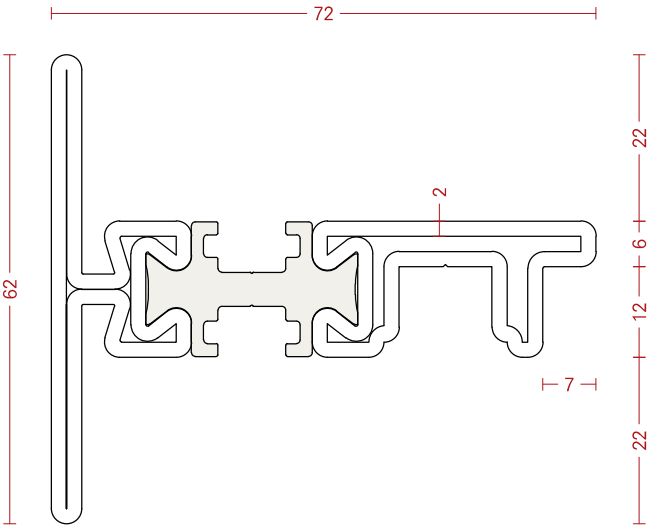
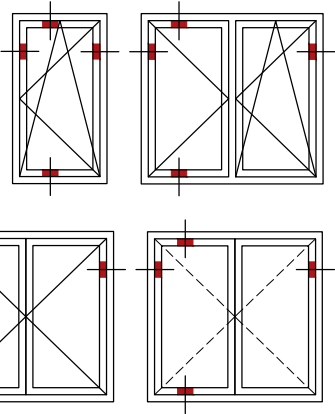
BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
05 - Stainless steel AISI 316L 2B  
07 - Cor-ten steel  
12 - Bright steel

Profile

STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
05 - Edelstahl 1.4404 2B  
07 - Cor-Ten-Stahl  
12 - Stahl blank

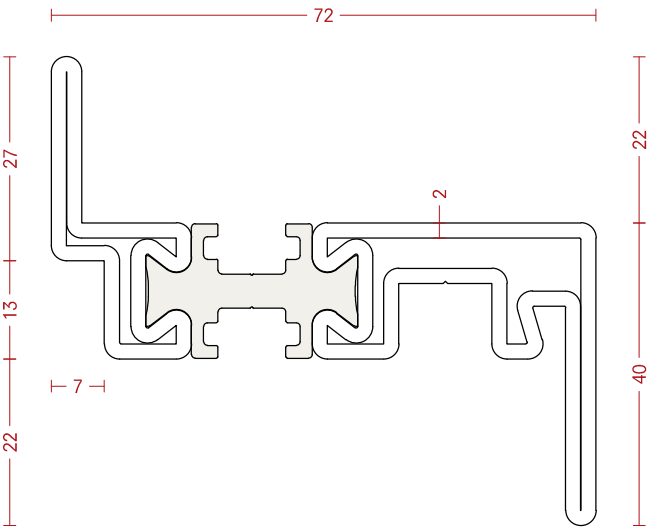
Profilés

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
05 - Acier inoxydable AISI 316L 2B  
07 - Acier Cor-ten  
12 - Acier décapé



MT 7218TZ-nn

|     |          |                   |
|-----|----------|-------------------|
| -02 | G = 5.41 | U = 0.284         |
| -05 | G = 5.50 | U = 0.284         |
| -07 | G = 5.41 | U = 0.284         |
| -12 | G = 5.41 | U = 0.284         |
|     | kg/m     | m <sup>2</sup> /m |



MT 7218ZR-nn

|     |          |                   |
|-----|----------|-------------------|
| -02 | G = 5.16 | U = 0.268         |
| -05 | G = 5.26 | U = 0.268         |
| -07 | G = 5.16 | U = 0.268         |
| -12 | G = 5.16 | U = 0.268         |
|     | kg/m     | m <sup>2</sup> /m |

Profiles

BAR LENGTH: 5800 mm

MATERIALS:

- 02 - Galvanized steel
- 05 - Stainless steel AISI 316L 2B
- 07 - Cor-ten steel
- 12 - Bright steel

Profile

STABLÄNGE: 5800 mm

WERKSTOFFE:

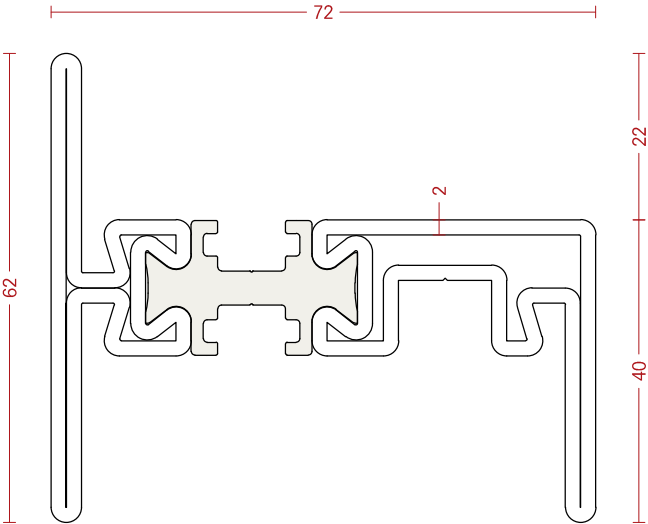
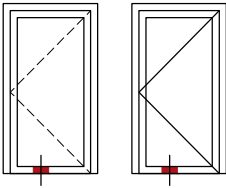
- 02 - Stahl bandverzinkt
- 05 - Edelstahl 1.4404 2B
- 07 - Cor-Ten-Stahl
- 12 - Stahl blank

Profilés

LONGUEUR DE BARRES: 5800 mm

MATÉRIAUX:

- 02 - Acier galvanisé
- 05 - Acier inoxydable AISI 316L 2B
- 07 - Acier Cor-ten
- 12 - Acier décapé



MT 7218HZ-nn

|     |          |                   |
|-----|----------|-------------------|
| -02 | G = 6.30 | U = 0.341         |
| -05 | G = 6.42 | U = 0.341         |
| -07 | G = 6.30 | U = 0.341         |
| -12 | G = 6.30 | U = 0.341         |
|     | kg/m     | m <sup>2</sup> /m |

Profiles

BAR LENGTH: 5800 mm

MATERIALS:

- 02 - Galvanized steel
- 05 - Stainless steel AISI 316L 2B
- 07 - Cor-ten steel
- 12 - Bright steel

Profile

STABLÄNGE: 5800 mm

WERKSTOFFE:

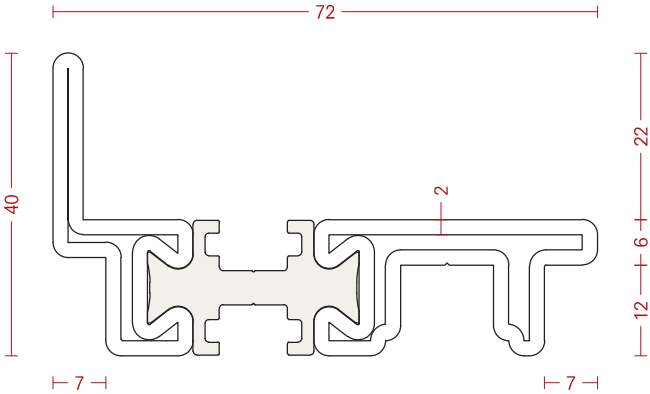
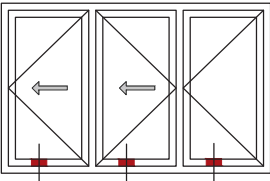
- 02 - Stahl bandverzinkt
- 05 - Edelstahl 1.4404 2B
- 07 - Cor-Ten-Stahl
- 12 - Stahl blank

Profilés

LONGUEUR DE BARRES: 5800 mm

MATÉRIAUX:

- 02 - Acier galvanisé
- 05 - Acier inoxydable AISI 316L 2B
- 07 - Acier Cor-ten
- 12 - Acier décapé



MT 7218LR-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 4.27 | U = 0.211 |
| -05 | G = 4.34 | U = 0.211 |
| -07 | G = 4.27 | U = 0.211 |
| -12 | G = 4.27 | U = 0.211 |
|     | kg/m     | m²/m      |



Profiles

BAR LENGTH: 5800 mm

MATERIALS:

- 02 - Galvanized steel
- 05 - Stainless steel AISI 316L 2B
- 07 - Cor-ten steel
- 12 - Bright steel

Profile

STABLÄNGE: 5800 mm

WERKSTOFFE:

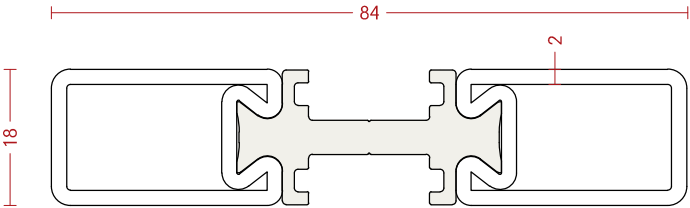
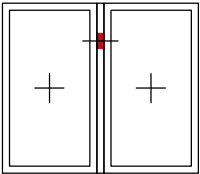
- 02 - Stahl bandverzinkt
- 05 - Edelstahl 1.4404 2B
- 07 - Cor-Ten-Stahl
- 12 - Stahl blank

Profilés

LONGUEUR DE BARRES: 5800 mm

MATÉRIAUX:

- 02 - Acier galvanisé
- 05 - Acier inoxydable AISI 316L 2B
- 07 - Acier Cor-ten
- 12 - Acier décapé



MT 8418SU-nn

|     |          |                   |
|-----|----------|-------------------|
| -02 | G = 3.53 | U = 0.158         |
| -05 | G = 3.59 | U = 0.158         |
| -07 | G = 3.53 | U = 0.158         |
| -12 | G = 3.53 | U = 0.158         |
|     | kg/m     | m <sup>2</sup> /m |

## Profiles

BAR LENGTH: 5800 mm

MATERIALS:

- 14 - Bead-blasted laser welded steel
- 32 - Bead-blasted laser welded Cor-Ten steel
- 34 - Bead-blasted laser welded stainless steel

## Profile

STABLÄNGE: 5800 mm

WERKSTOFFE:

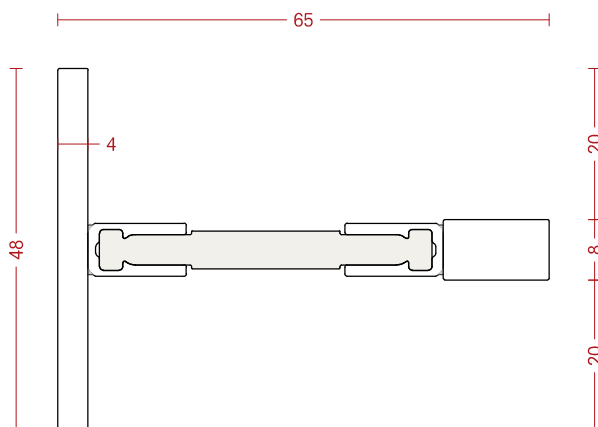
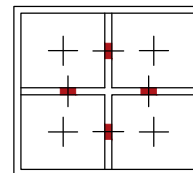
- 14 - Lasergeschweißter Stahl, perlgestrahlt
- 32 - Lasergeschweißter Cor-Ten-Stahl, perlgestrahlt
- 34 - Lasergeschweißter Edelstahl, perlgestrahlt

## Profilés

LONGUEUR DE BARRES: 5800 mm

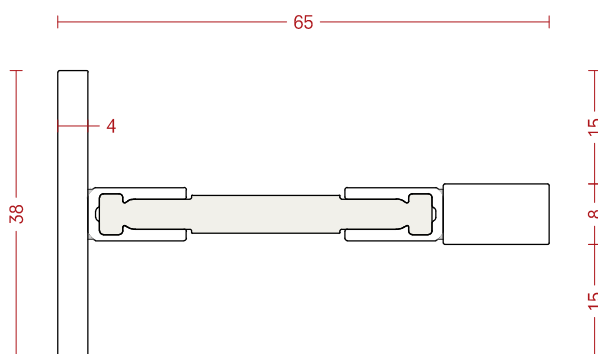
MATÉRIAUX:

- 14 - Acier soudé au laser par grenaillage
- 32 - Acier Cor-Ten soudé au laser par grenaillage
- 34 - Acier inoxydable soudé au laser par grenaillage



MT 6507TN-nn

|     |           |                   |
|-----|-----------|-------------------|
| -14 | G = 3.292 | U = 0.23          |
| -32 | G = 3.292 | U = 0.23          |
| -34 | G = 3.338 | U = 0.23          |
|     | kg/m      | m <sup>2</sup> /m |



MT 6507TR-nn

|     |           |                   |
|-----|-----------|-------------------|
| -14 | G = 2.978 | U = 0.21          |
| -32 | G = 2.978 | U = 0.21          |
| -34 | G = 3.018 | U = 0.21          |
|     | kg/m      | m <sup>2</sup> /m |

### Note:

Only L-shaped glazing beads can be used with these crosspieces (see page 2.3.14).

### Anmerkung:

Mit diesen Querstücken können nur L-förmige Glasperlen verwendet werden (siehe Seite 2.3.14).

### Remarque:

Seuls les parcloes en forme de L peuvent être utilisées avec ces traverses (voir page 2.3.14).

## Profiles

BAR LENGTH: 5800 mm

MATERIALS:

- 14 - Bead-blasted laser welded steel
- 32 - Bead-blasted laser welded Cor-Ten steel
- 34 - Bead-blasted laser welded stainless steel

## Profile

STABLÄNGE: 5800 mm

WERKSTOFFE:

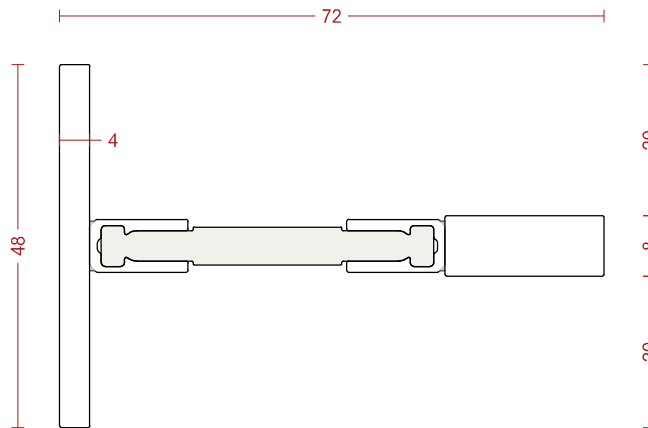
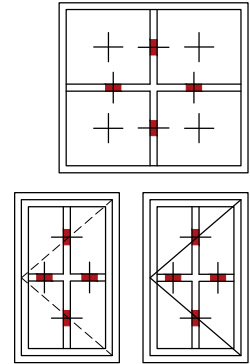
- 14 - Lasergeschweißter Stahl, perlgestrahlt
- 32 - Lasergeschweißter Cor-Ten-Stahl, perlgestrahlt
- 34 - Lasergeschweißter Edelstahl, perlgestrahlt

## Profilés

LONGUEUR DE BARRES: 5800 mm

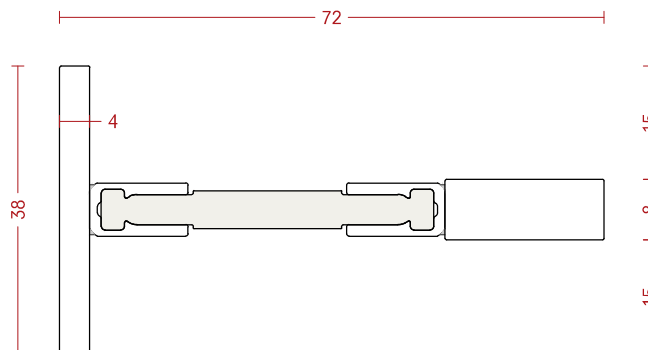
MATÉRIAUX:

- 14 - Acier soudé au laser par grenaillage
- 32 - Acier Cor-Ten soudé au laser par grenaillage
- 34 - Acier inoxydable soudé au laser par grenaillage



MT 7207TN-nn

|     |           |                   |
|-----|-----------|-------------------|
| -14 | G = 3.732 | U = 0.25          |
| -32 | G = 3.732 | U = 0.25          |
| -34 | G = 3.786 | U = 0.25          |
|     | kg/m      | m <sup>2</sup> /m |



MT 7207TR-nn

|     |           |                   |
|-----|-----------|-------------------|
| -14 | G = 3.418 | U = 0.23          |
| -32 | G = 3.418 | U = 0.23          |
| -34 | G = 3.466 | U = 0.23          |
|     | kg/m      | m <sup>2</sup> /m |

## Note:

Only L-shaped glazing beads can be used with these crosspieces (see page 2.3.21).

## Anmerkung:

Mit diesen Querstücken können nur L-förmige Glasperlen verwendet werden (siehe Seite 2.3.21).

## Remarque:

Seuls les parcloles en forme de L peuvent être utilisées avec ces traverses (voir page 2.3.21).

**Inertia values**  
according to EN14024

**Trägheitswerte**  
gemäß EN14024

**Valeurs d'inertie**  
selon EN14024

|              |                                                                                     | ly<br>(cm <sup>4</sup> ) | Wy<br>(cm <sup>3</sup> ) | Ix<br>(cm <sup>4</sup> )<br>SPAN L1 | Ix<br>(cm <sup>4</sup> )<br>SPAN L2 | Ix<br>(cm <sup>4</sup> )<br>SPAN L3 | Wx<br>(cm <sup>3</sup> )<br>SPAN L1 | Wx<br>(cm <sup>3</sup> )<br>SPAN L2 | Wx<br>(cm <sup>3</sup> )<br>SPAN L3 |
|--------------|-------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| MT 6518L-nn  |    | 4.612                    | 1.687                    | 14.68                               | 18.82                               | 20.95                               | 3.64                                | 4.67                                | 5.20                                |
| MT 6518T-nn  |    | 8.973                    | 2.895                    | 16.44                               | 21.65                               | 24.45                               | 3.69                                | 4.87                                | 5.49                                |
| MT 6518Z-nn  |    | 8.980                    | 2.897                    | 20.97                               | 27.96                               | 31.83                               | 6.35                                | 8.47                                | 9.65                                |
| MT 6518H-nn  |   | 12.259                   | 3.663                    | 22.83                               | 32.50                               | 37.82                               | 6.77                                | 9.64                                | 11.22                               |
| MT 7218LF-nn |  | 4.612                    | 1.687                    | 18.93                               | 24.58                               | 27.48                               | 4.27                                | 5.55                                | 6.20                                |
| MT 7218TF-nn |  | 8.973                    | 2.895                    | 21.14                               | 28.19                               | 31.97                               | 6.64                                | 9.93                                | 11.61                               |
| MT 7218ZF-nn |  | 8.980                    | 2.897                    | 26.32                               | 35.56                               | 40.68                               | 7.25                                | 9.80                                | 11.21                               |
| MT 7218HF-nn |  | 12.259                   | 3.663                    | 27.61                               | 41.30                               | 48.29                               | 6.64                                | 9.93                                | 11.61                               |

**Legend**

G = Weight  
U = Coated surface  
Wx / Wy = Flexural strength module  
about one axis  
Ix / Iy = Moment of inertia  
about one axis  
SPAN = profile length between  
two fixtures

For any additional information  
please contact our technical office.

**Legende**

G = Gewicht  
U = Abwicklung  
Wx / Wy = Biegefestigkeitsmodul  
um eine Achse  
Ix / Iy = Trägheitsmoment um  
eine Achse  
SPAN = Profillänge zwischen  
zwei Befestigungen

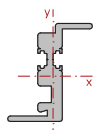
Für weitere Informationen wenden  
Sie sich bitte das technische Büro.

**Légende**

G = Poids  
U = Surface à traiter  
Wx / Wy = Module de résistance  
autour d'un axe  
Ix / Iy = Moment d'inertie  
autour d'un axe  
SPAN = longueur de profilés  
entre deux fixations

Pour toute information  
supplémentaire, contacter le  
bureau technique.

SPAN L1 2500 mm  
SPAN L2 4000 mm  
SPAN L3 5800 mm



|              |                                                                                     | ly<br>(cm <sup>4</sup> ) | Wy<br>(cm <sup>3</sup> ) | Ix<br>(cm <sup>4</sup> )<br>SPAN L1 | Ix<br>(cm <sup>4</sup> )<br>SPAN L2 | Ix<br>(cm <sup>4</sup> )<br>SPAN L3 | Wx<br>(cm <sup>3</sup> )<br>SPAN L1 | Wx<br>(cm <sup>3</sup> )<br>SPAN L2 | Wx<br>(cm <sup>3</sup> )<br>SPAN L3 |
|--------------|-------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| MT 7218TZ-nn |    | 8.953                    | 2.827                    | 20.81                               | 28.14                               | 32.33                               | 4.37                                | 5.91                                | 6.79                                |
| MT 7218ZR-nn |    | 8.968                    | 2.850                    | 22.28                               | 33.61                               | 38.01                               | 6.53                                | 9.86                                | 11.15                               |
| MT 7218HZ-nn |    | 12.440                   | 3.765                    | 22.11                               | 41.86                               | 48.96                               | 5.42                                | 10.26                               | 12.00                               |
| MT 7218LR-nn |   | 4.158                    | 1.568                    | 17.46                               | 22.54                               | 25.23                               | 4.23                                | 5.46                                | 6.11                                |
| MT 8418SU-nn |  | 1.845                    | 2.050                    | 20.36                               | 25.51                               | 28.06                               | 4.84                                | 6.06                                | 6.67                                |
| MT 6507TN-nn |  | 3.801                    | 1.584                    | 12.12                               | 17.55                               | 20.79                               | 2.93                                | 4.25                                | 5.03                                |
| MT 6507TR-nn |  | 1.945                    | 1.024                    | 11.58                               | 16.47                               | 19.31                               | 2.98                                | 4.24                                | 4.98                                |
| MT 7207TN-nn |  | 3.831                    | 1.596                    | 14.16                               | 23.30                               | 28.16                               | 3.32                                | 5.47                                | 6.61                                |
| MT 7207TR-nn |  | 1.975                    | 1.039                    | 14.16                               | 21.80                               | 26.00                               | 3.55                                | 5.46                                | 6.52                                |

## Legend

G = Weight  
U = Coated surface  
Wx / Wy = Flexural strength module  
about one axis  
Ix / Iy = Moment of inertia  
about one axis  
SPAN = profile length between  
two fixtures

For any additional information  
please contact our technical office.

## Legende

G = Gewicht  
U = Abwicklung  
Wx / Wy = Biegefestigkeitsmodul  
um eine Achse  
Ix / Iy = Trägheitsmoment um  
eine Achse  
SPAN = Profillänge zwischen  
zwei Befestigungen

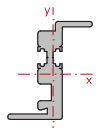
Für weitere Informationen wenden  
Sie sich bitte das technische Büro.

## Légende

G = Poids  
U = Surface à traiter  
Wx / Wy = Module de résistance  
autour d'un axe  
Ix / Iy = Moment d'inertie  
autour d'un axe  
SPAN = longueur de profilés  
entre deux fixations

Pour toute information  
supplémentaire, contacter le  
bureau technique.

SPAN L1 2500 mm  
SPAN L2 4000 mm  
SPAN L3 5800 mm





**Glazing beads  
and complementary**

**Glashalteleisten  
und komplementär**

**Parcloses  
et complémentaire**

**2.2**

**Legend**

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1  
G = Weight  
U = Coated surface

**Legende**

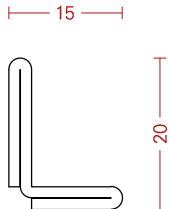
+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1  
G = Gewicht  
U = Abwicklung

**Légende**

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1  
G = Poids  
U = Surface à traiter

### Glazing beads

BAR LENGTH: 5800 mm  
MATERIALS:  
02 - Galvanized steel  
07 - Cor-ten steel  
12 - Bright steel

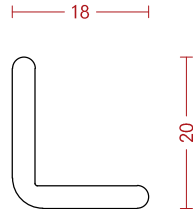


FV 2015A-nn  
L 3000 mm

|     |          |           |
|-----|----------|-----------|
| -02 | G = 0.68 | U = 0.067 |
| -07 | G = 0.68 | U = 0.067 |
|     | kg/m     | m²/m      |

### Glashalteleisten

STABLÄNGE: 5800 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt  
07 - Cor-Ten-Stahl  
12 - Stahl blank

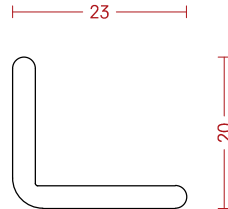


FV 2018L-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 0.78 | U = 0.072 |
| -07 | G = 0.78 | U = 0.072 |
| -12 | G = 0.78 | U = 0.072 |
|     | kg/m     | m²/m      |

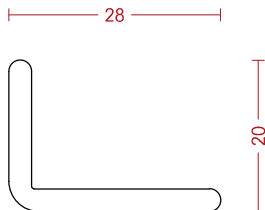
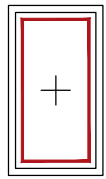
### Parcloses

LONGUEUR DE BARRES: 5800 mm  
MATÉRIAUX:  
02 - Acier galvanisé  
07 - Acier Cor-ten  
12 - Acier décapé



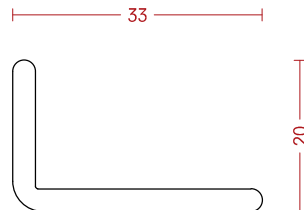
FV 2023L-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 0.90 | U = 0.082 |
| -07 | G = 0.90 | U = 0.082 |
| -12 | G = 0.90 | U = 0.082 |
|     | kg/m     | m²/m      |



FV 2028L-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 1.02 | U = 0.092 |
| -07 | G = 1.02 | U = 0.092 |
| -12 | G = 1.02 | U = 0.092 |
|     | kg/m     | m²/m      |

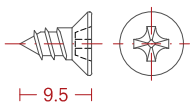


FV 2033L-nn

|     |          |           |
|-----|----------|-----------|
| -02 | G = 1.14 | U = 0.102 |
| -07 | G = 1.14 | U = 0.102 |
| -12 | G = 1.14 | U = 0.102 |
|     | kg/m     | m²/m      |

### Fixing screw

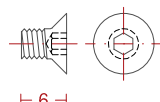
PU: 100 pc  
MATERIAL: Stainless steel A2



D99815-03  
Ø4.2 x 9.5 mm  
only for profiles -02  
nur für Profile -02  
seulement pour profilés -02

### Befestigungsschraube

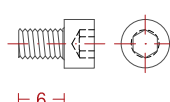
VE: 100 Stk.  
WERKSTOFF: Edelstahl A2



D99867-03  
M4 x 6 mm

### Vis de fixation

UV: 100 unités  
MATÉRIEL: Acier inoxydable A2

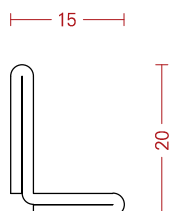


D99866-03  
M4 x 6 mm



### Glazing beads

BAR LENGTH: 3000 mm  
MATERIALS:  
06 = Satin stainless steel AISI 316L

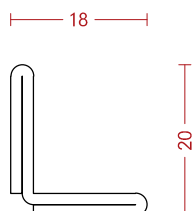


FV 2015A-06

-06     $G = 0.69$      $U = 0.067$   
kg/m    m<sup>2</sup>/m

### Glashalteisen

STABLÄNGE: 3000 mm  
WERKSTOFFE:  
06 = Edelstahl 1.4404

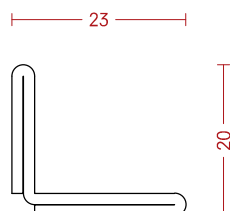


FV 2018A-06

-06     $G = 0.76$      $U = 0.073$   
kg/m    m<sup>2</sup>/m

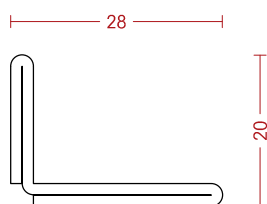
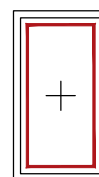
### Parcloses

LONGUEUR DE BARRES: 3000 mm  
MATÉRIAUX:  
06 = Acier inoxydable AISI 316L brossé



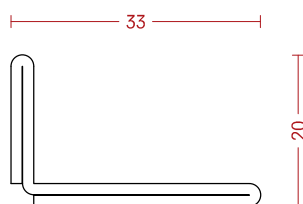
FV 2023A-06

-06     $G = 0.89$      $U = 0.083$   
kg/m    m<sup>2</sup>/m



FV 2028A-06

-06     $G = 1.01$      $U = 0.093$   
kg/m    m<sup>2</sup>/m

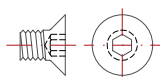


FV 2033A-06

-06     $G = 1.12$      $U = 0.103$   
kg/m    m<sup>2</sup>/m

### Fixing screw

PU: 100 pc  
MATERIAL: Stainless steel A2

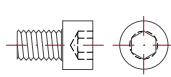


6

D99867-03  
M4 x 6 mm

### Befestigungsschraube

VE: 100 Stk.  
WERKSTOFF: Edelstahl A2



6

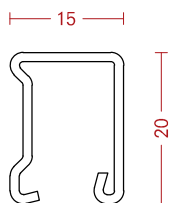
D99866-03  
M4 x 6 mm

### Vis de fixation

UV: 100 unités  
MATÉRIEL: Acier inoxydable A2

### Glazing beads

BAR LENGTH: 6000 mm  
MATERIALS:  
02 - Galvanized steel

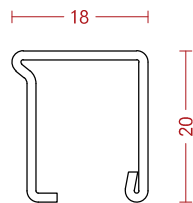


FV 2015R-02

-02 G = 0.56 U = 0.068  
kg/m m²/m

### Glashalteleisten

STABLÄNGE: 6000 mm  
WERKSTOFFE:  
02 - Stahl bandverzinkt

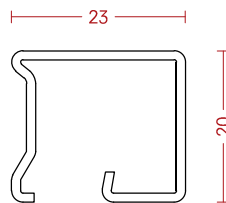


FV 2018R-02

-02 G = 0.59 U = 0.072  
kg/m m²/m

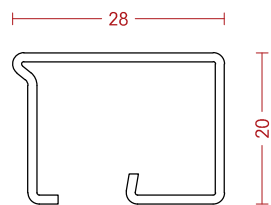
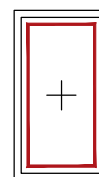
### Parcloses

LONGUEUR DE BARRES: 6000 mm  
MATÉRIAUX:  
02 - Acier galvanisé



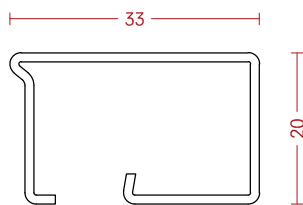
FV 2023R-02  
L 5800 mm

-02 G = 0.70 U = 0.083  
kg/m m²/m



FV 2028R-02

-02 G = 0.77 U = 0.092  
kg/m m²/m

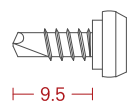


FV 2033R-02

-02 G = 0.87 U = 0.102  
kg/m m²/m

### Fixing screw

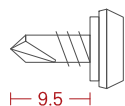
PU: 100 pc  
MATERIALS:  
02 - Galvanized steel



F99054-02  
Ø4.2 x 9.5 mm  
for FV 2015R-02  
für FV 2015R-02  
pour FV 2015R-02

### Befestigungsschraube

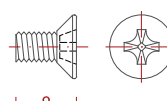
VE: 100 Stk.  
WERKSTOFFE:  
02 - Stahl bandverzinkt



F99051-02  
Ø4.8 x 9.5 mm

### Vis de fixation

UV: 100 unités  
MATÉRIAUX:  
02 - Acier galvanisé



D99980-02  
M4 x 8 mm  
for F99061-03  
für F99061-03  
pour F99061-03

### Fixing bushings

PU: 50 pc  
MATERIAL:  
Stainless steel A2



F99061-03

### Befestigungsschraube

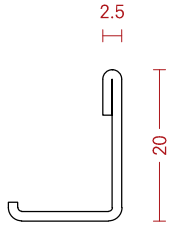
VE: 50 Stk.  
WERKSTOFF:  
Edelstahl A2

### Vis de fixation

UV: 50 unités  
MATÉRIEL:  
Acier inoxydable A2

### Glazing beads

BAR LENGTH: 6000 mm  
MATERIALS:  
06 = Satin stainless steel AISI 316L



FV 2003R-06

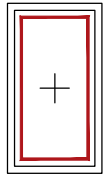
-06      G = 0.39      U = 0.072  
            kg/m          m<sup>2</sup>/m

### Glashalteleisten

STABLÄNGE: 6000 mm  
WERKSTOFFE:  
06 = Edelstahl 1.4404

### Parcloses

LONGUEUR DE BARRES: 6000 mm  
MATÉRIAUX:  
06 = Acier inoxydable AISI 316L brossé



### Glazing bead - clips

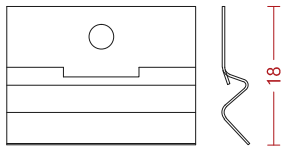
PU: 100 pc  
MATERIAL:  
Stainless steel AISI 304 2B

### Glashalteleisten - Klips

VE: 100 Stk.  
WERKSTOFF:  
Edelstahl 1.4301

### Clips pour parcloses

UV: 100 unités  
MATÉRIEL:  
Acier inoxydable AISI 304 2B



F99008-03

### Fixture - clips

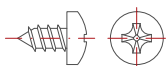
PU: 100 pc  
MATERIAL:  
Stainless steel A2

### Befestigung Klips

VE: 100 Stk.  
WERKSTOFF:  
Edelstahl A2

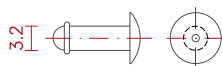
### Fixation enclipsage

UV: 100 unités  
MATÉRIEL:  
Acier inoxydable A2



6.5

D99801-03  
Ø3.5 x 6.5 mm



10.2

D99950-03  
Ø3.2 x 8 mm

### Glazing beads

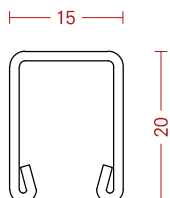
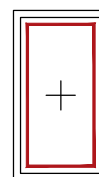
BAR LENGTH: 6000 mm  
MATERIALS:  
06 = Satin stainless steel AISI 316L

### Glashalteleisten

STABLÄNGE: 6000 mm  
WERKSTOFFE:  
06 = Edelstahl 1.4404

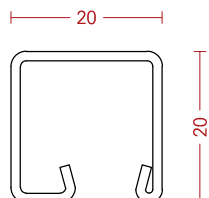
### Parcloses

LONGUEUR DE BARRES: 6000 mm  
MATÉRIAUX:  
06 = Acier inoxydable AISI 316L brossé



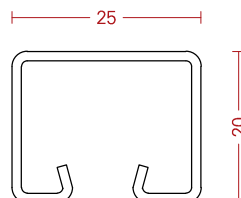
FV 2015R-06

-06     $G = 0.61$      $U = 0.067$   
kg/m    m<sup>2</sup>/m



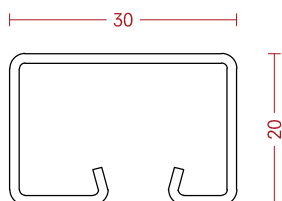
FV 2020R-06

-06     $G = 0.71$      $U = 0.077$   
kg/m    m<sup>2</sup>/m



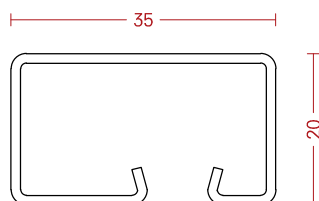
FV 2025R-06

-06     $G = 0.81$      $U = 0.087$   
kg/m    m<sup>2</sup>/m



FV 2030R-06

-06     $G = 0.91$      $U = 0.097$   
kg/m    m<sup>2</sup>/m



FV 2035R-06

-06     $G = 1.01$      $U = 0.107$   
kg/m    m<sup>2</sup>/m

### Fixing screw

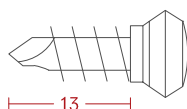
PU: 100 pc  
MATERIALS:  
05 - Stainless steel AISI 316L 2B

### Befestigungsschraube

VE: 100 Stk.  
WERKSTOFFE:  
05 - Edelstahl 1.4404 2B

### Vis de fixation

UV: 100 unités  
MATÉRIAUX:  
05 - Acier inoxydable AISI 316L 2B



F99055-05  
Ø4.8 x 13 mm

## Glazing table

## Verglasungstabellen

## Tableaux de vitrage

2.3

### Important notes:

**This system requires the use of glasses with edge covered.**

The glazing tables and sealing guidelines are based on the nominal sizes of the profiles and glazing. Due to the production tolerances (profiles, glazing beads, panes) we advise double checking your selection.

### Wichtige Anmerkungen:

**Dieses System erfordert die Verwendung von Brillen mit abgesenkten Kanälen.**

Die Verglasungstabellen beziehen sich auf die Nennmaße der Profile und Verglasungen. Aufgrund von Fertigungstoleranzen (Profile, Glashalteleisten, Füllung) ist die Auswahl ggf. zu anzupassen.

### Remarques importantes:

**Ce système nécessite utilisation d'un intercalaire de vitrage a hauteur réduit.**

Les tableaux de vitrage et les joints se réfèrent aux dimensions nominales des profilés et des vitrages. En raison des tolérances de fabrication (profilés, parcloles, remplissage), une attention particulier est requise et nous recommandons une vérification.

### Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1  
A = External gaskets  
B = Internal gaskets  
C = Glazing bead  
D = Screw connection  
E = Offset

### Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1  
A = Außendichtungen  
B = Innendichtungen  
C = Glashalteleiste  
D = Verschraubung  
E = Versatz

### Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1  
A = Joints extérieurs  
B = Joints intérieurs  
C = Parclose  
D = Vissage  
E = Décalage

## Glazing table

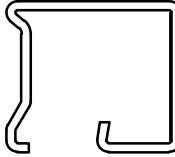
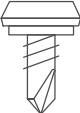
02 - Galvanized steel  
Dry glazing

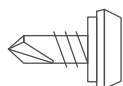
## Verglasungstabelle

02 - Stahl bandverzinkt  
Trockenverglasung

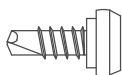
## Tableau de vitrage

02 - Acier galvanisé  
Vitrage à sec

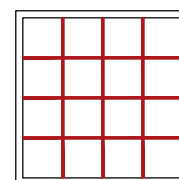
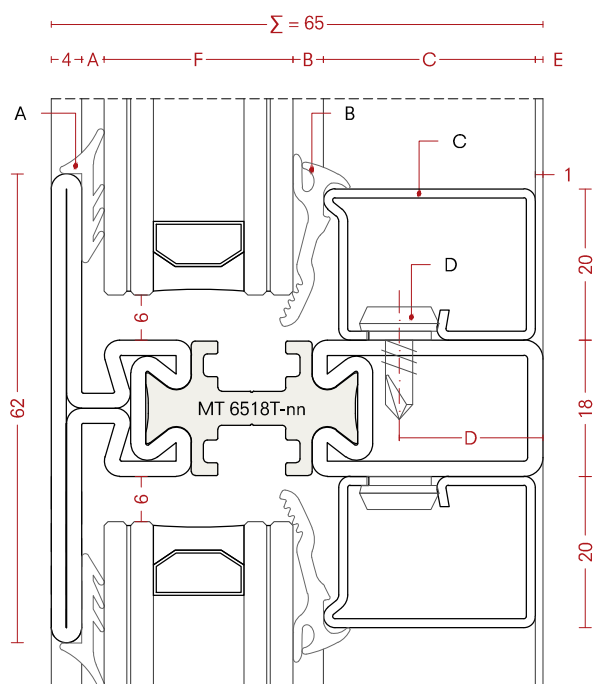
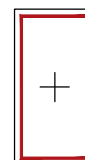
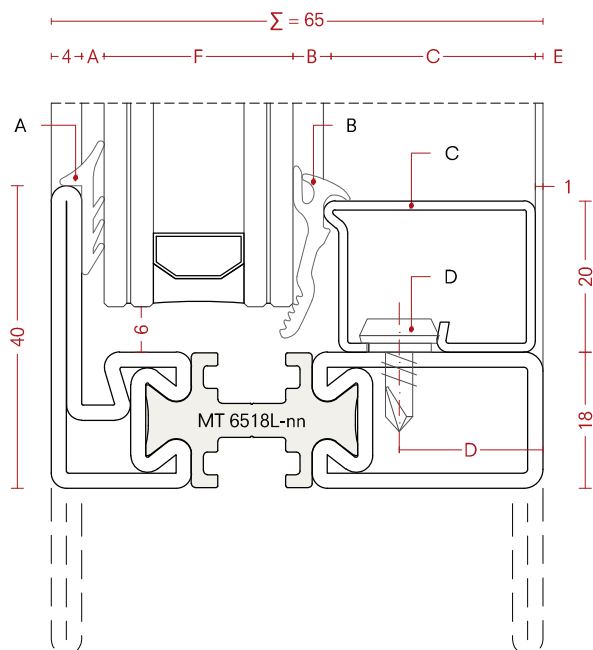
|  |  |    |  |    |  |    |  |    |    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|----|----|
| F                                                                                 | A                                                                                 |    | B                                                                                 |    | C                                                                                  |    | D                                                                                   |    | E  |
| mm                                                                                | code                                                                              | mm | code                                                                              | mm | code                                                                               | mm | code                                                                                | mm | mm |
| 21                                                                                | G99108-60                                                                         | 5  | G99219-60                                                                         | 6  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 22                                                                                | G99108-60                                                                         | 5  | G99219-60                                                                         | 5  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 23                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 6  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 24                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 5  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 25                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 4  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 26                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 3  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 27                                                                                | G99108-60                                                                         | 5  | G99219-60                                                                         | 5  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 28                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 6  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 29                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 5  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 30                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 4  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 31                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 3  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 32                                                                                | G99108-60                                                                         | 5  | G99219-60                                                                         | 5  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 33                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 6  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 34                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 5  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 35                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 4  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 36                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 3  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 37                                                                                | G99107-60                                                                         | 3  | G99219-60                                                                         | 5  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |
| 38                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 4  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |
| 39                                                                                | G99107-60                                                                         | 3  | G99209-60                                                                         | 3  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |



F99051-02  
Ø4.8 x 9.5 mm



F99054-02  
Ø4.2 x 9.5 mm



**Note:**

Please refer to page 5.5.6: Assembly sequence.

**Anmerkung:**

Siehe Seite 5.5.6: Montager Reihenfolge.

**Remarque:**

Référer à la page 5.5.6: Séquence d'assemblage.

## Glazing table

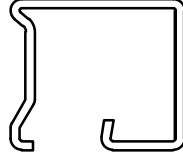
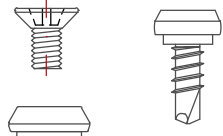
02 - Galvanized steel  
Dry glazing

## Verglasungstabelle

02 - Stahl bandverzinkt  
Trockenverglasung

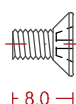
## Tableau de vitrage

02 - Acier galvanisé  
Vitrage à sec

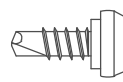
| <br>F<br>mm | <br>A<br>code      mm |   | <br>B<br>code      mm |   | <br>C<br>code      mm |    | <br>D<br>code      mm |    | E<br>mm |
|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------|---|--------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------|----|---------|
|                                                                                              |                                                                                                        |   |                                                                                                        |   |                                                                                                        |    |                                                                                                          |    |         |
| 23                                                                                           | G99108-60                                                                                              | 5 | G99219-60                                                                                              | 6 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 24                                                                                           | G99108-60                                                                                              | 5 | G99219-60                                                                                              | 5 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 25                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 6 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 26                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 5 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 27                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 4 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 28                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 3 | FV 2033R-02                                                                                            | 33 | F99061-03 + D99980-02                                                                                    | 24 | 1       |
| 29                                                                                           | G99108-60                                                                                              | 5 | G99219-60                                                                                              | 5 | FV 2028R-02                                                                                            | 28 | F99061-03 + D99980-02                                                                                    | 19 | 1       |
| 30                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 6 | FV 2028R-02                                                                                            | 28 | F99061-03 + D99980-02                                                                                    | 19 | 1       |
| 31                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 5 | FV 2028R-02                                                                                            | 28 | F99061-03 + D99980-02                                                                                    | 19 | 1       |
| 32                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 4 | FV 2028R-02                                                                                            | 28 | F99061-03 + D99980-02                                                                                    | 19 | 1       |
| 33                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 3 | FV 2028R-02                                                                                            | 28 | F99061-03 + D99980-02                                                                                    | 19 | 1       |
| 34                                                                                           | G99108-60                                                                                              | 5 | G99219-60                                                                                              | 5 | FV 2023R-02                                                                                            | 23 | F99061-03 + D99980-02                                                                                    | 17 | 1       |
| 35                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 6 | FV 2023R-02                                                                                            | 23 | F99061-03 + D99980-02                                                                                    | 17 | 1       |
| 36                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 5 | FV 2023R-02                                                                                            | 23 | F99061-03 + D99980-02                                                                                    | 17 | 1       |
| 37                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 4 | FV 2023R-02                                                                                            | 23 | F99061-03 + D99980-02                                                                                    | 17 | 1       |
| 38                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 3 | FV 2023R-02                                                                                            | 23 | F99061-03 + D99980-02                                                                                    | 17 | 1       |
| 39                                                                                           | G99108-60                                                                                              | 5 | G99219-60                                                                                              | 5 | FV 2018R-02                                                                                            | 18 | F99061-03 + D99980-02                                                                                    | 9  | 1       |
| 40                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 6 | FV 2018R-02                                                                                            | 18 | F99061-03 + D99980-02                                                                                    | 9  | 1       |
| 41                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 5 | FV 2018R-02                                                                                            | 18 | F99061-03 + D99980-02                                                                                    | 9  | 1       |
| 42                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 4 | FV 2018R-02                                                                                            | 18 | F99061-03 + D99980-02                                                                                    | 9  | 1       |
| 43                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 3 | FV 2018R-02                                                                                            | 18 | F99061-03 + D99980-02                                                                                    | 9  | 1       |
| 44                                                                                           | G99107-60                                                                                              | 3 | G99219-60                                                                                              | 5 | FV 2015R-02                                                                                            | 15 | F99054-02                                                                                                | 9  | 1       |
| 45                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 4 | FV 2015R-02                                                                                            | 15 | F99054-02                                                                                                | 9  | 1       |
| 46                                                                                           | G99107-60                                                                                              | 3 | G99209-60                                                                                              | 3 | FV 2015R-02                                                                                            | 15 | F99054-02                                                                                                | 9  | 1       |



F99061-03

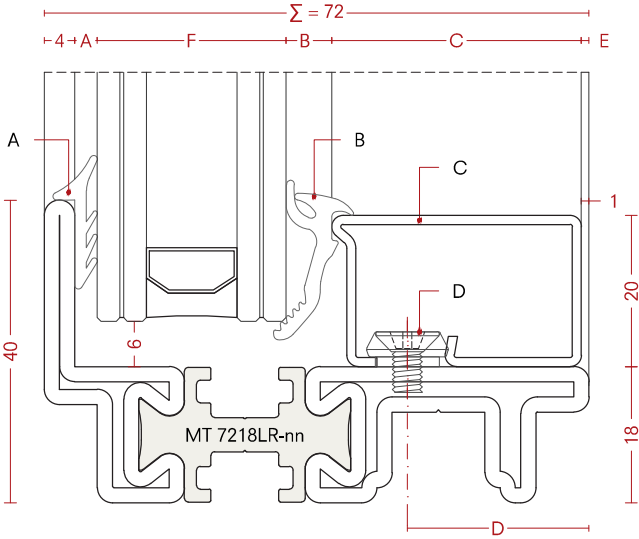
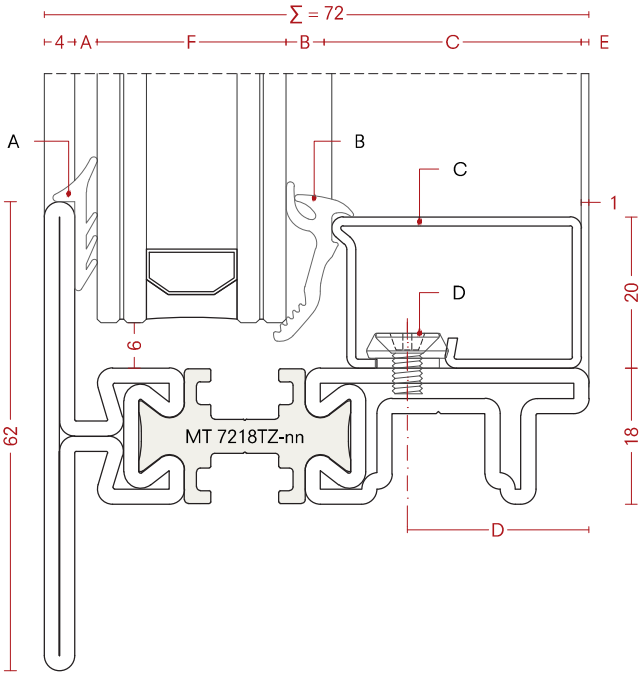
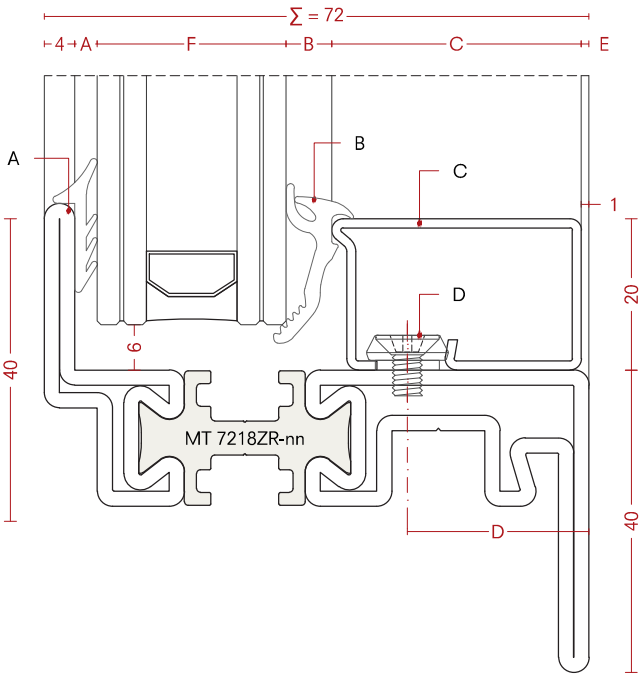


D99980-02  
M4 x 8 mm



F99054-02  
Ø4.2 x 9.5 mm





## Glazing table

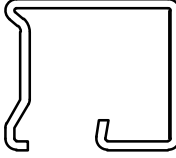
02 - Galvanized steel  
Dry glazing

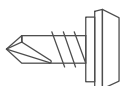
## Verglasungstabelle

02 - Stahl bandverzinkt  
Trockenverglasung

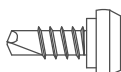
## Tableau de vitrage

02 - Acier galvanisé  
Vitrage à sec

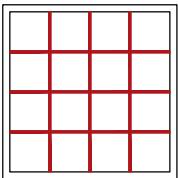
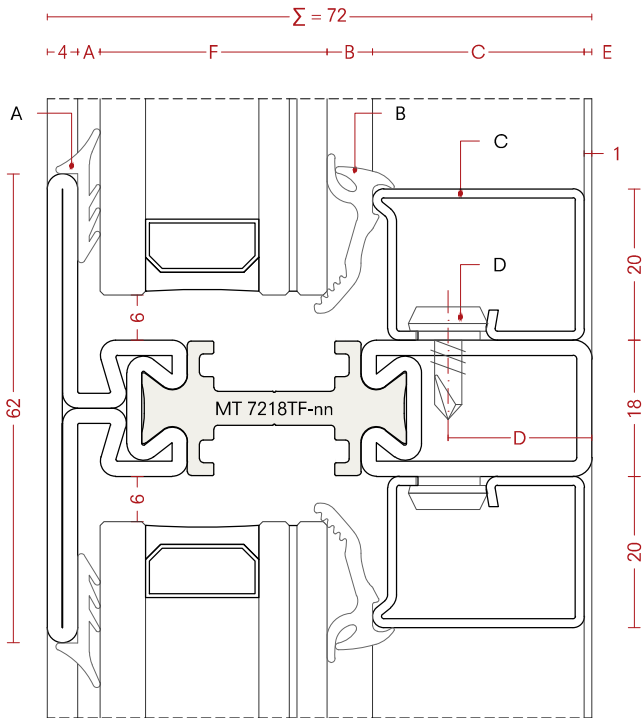
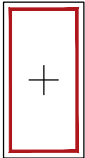
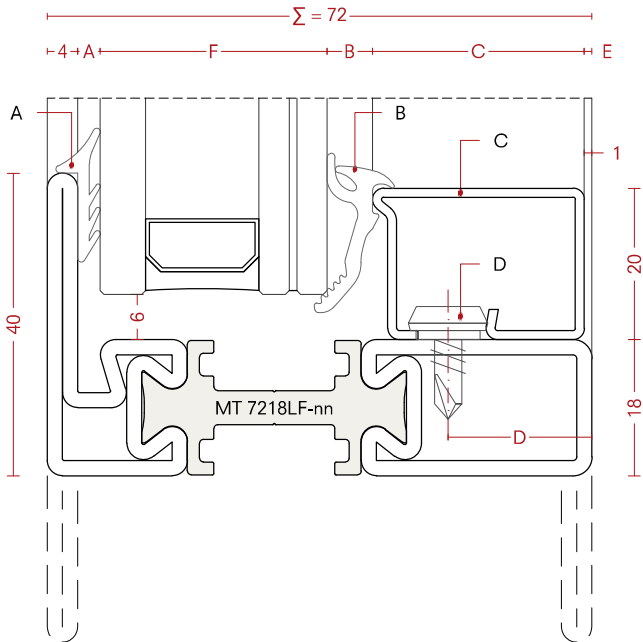
| <br>F | <br>A |    | <br>B |    | <br>C |    | <br>D |    | E |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|---|
|                                                                                        | code                                                                                   | mm | code                                                                                   | mm | code                                                                                    | mm | code                                                                                     | mm |   |
| 28                                                                                     | G99108-60                                                                              | 5  | G99219-60                                                                              | 6  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 29                                                                                     | G99108-60                                                                              | 5  | G99219-60                                                                              | 5  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 30                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 6  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 31                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 5  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 32                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 4  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 33                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 3  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 34                                                                                     | G99108-60                                                                              | 5  | G99219-60                                                                              | 5  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 35                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 6  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 36                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 5  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 37                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 4  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 38                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 3  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 39                                                                                     | G99108-60                                                                              | 5  | G99219-60                                                                              | 5  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 40                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 6  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 41                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 5  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 42                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 4  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 43                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 3  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 44                                                                                     | G99107-60                                                                              | 3  | G99219-60                                                                              | 5  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |
| 45                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 4  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |
| 46                                                                                     | G99107-60                                                                              | 3  | G99209-60                                                                              | 3  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |



F99051-02  
Ø4.8 x 9.5 mm



F99054-02  
Ø4.2 x 9.5 mm



## Glazing table

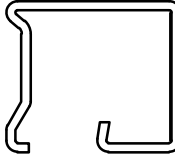
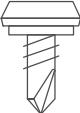
02 - Galvanized steel  
Wet glazing

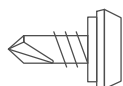
## Verglasungstabelle

02 - Stahl bandverzinkt  
Nassverglasung

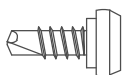
## Tableau de vitrage

02 - Acier galvanisé  
Vitrage au silicone

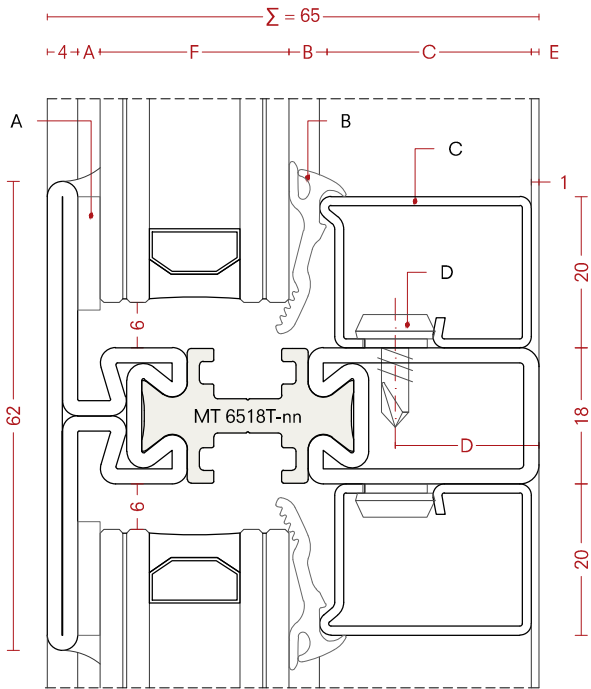
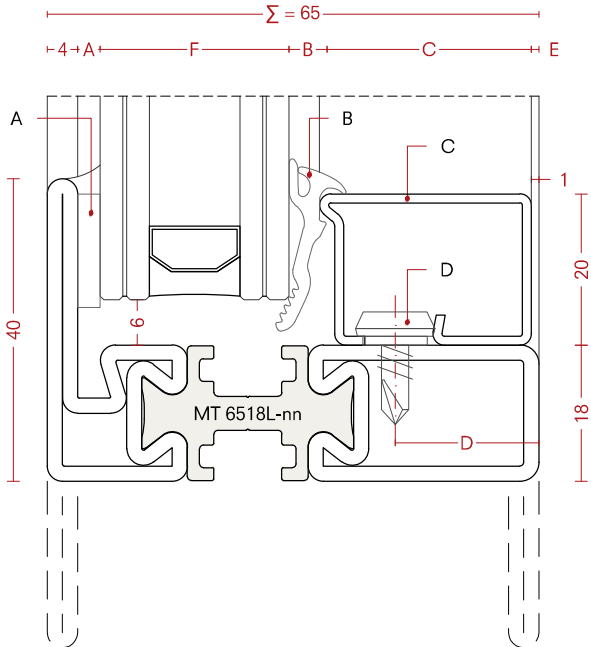
|  |  |    |  |    |  |    |  |    |    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|----|----|
| F                                                                                 | A                                                                                 |    | B                                                                                 |    | C                                                                                  |    | D                                                                                   |    | E  |
| mm                                                                                | code                                                                              | mm | code                                                                              | mm | code                                                                               | mm | code                                                                                | mm | mm |
| 21                                                                                | G99104-61                                                                         | 5  | G99219-60                                                                         | 6  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 22                                                                                | G99104-61                                                                         | 5  | G99219-60                                                                         | 5  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 23                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 6  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 24                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 5  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 25                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 4  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 26                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 3  | FV 2028R-02                                                                        | 28 | F99051-02                                                                           | 19 | 1  |
| 27                                                                                | G99104-61                                                                         | 5  | G99219-60                                                                         | 5  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 28                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 6  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 29                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 5  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 30                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 4  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 31                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 3  | FV 2023R-02                                                                        | 23 | F99051-02                                                                           | 17 | 1  |
| 32                                                                                | G99104-61                                                                         | 5  | G99219-60                                                                         | 5  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 33                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 6  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 34                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 5  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 35                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 4  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 36                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 3  | FV 2018R-02                                                                        | 18 | F99051-02                                                                           | 9  | 1  |
| 37                                                                                | G99105-61                                                                         | 3  | G99219-60                                                                         | 5  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |
| 38                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 4  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |
| 39                                                                                | G99105-61                                                                         | 3  | G99209-60                                                                         | 3  | FV 2015R-02                                                                        | 15 | F99054-02                                                                           | 9  | 1  |



F99051-02  
Ø4.8 x 9.5 mm



F99054-02  
Ø4.2 x 9.5 mm



## Glazing table

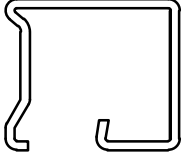
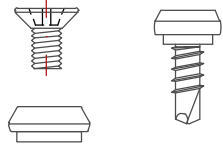
02 - Galvanized steel  
Wet glazing

## Verglasungstabelle

02 - Stahl bandverzinkt  
Nassverglasung

## Tableau de vitrage

02 - Acier galvanisé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |    | <br>C |    | <br>D |    | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm | code                                                                                   | mm | code                                                                                     | mm | mm |
| 23                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 6  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 25                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 26                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 27                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 28                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2033R-02                                                                            | 33 | F99061-03 + D99980-02                                                                    | 24 | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2028R-02                                                                            | 28 | F99061-03 + D99980-02                                                                    | 19 | 1  |
| 30                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2028R-02                                                                            | 28 | F99061-03 + D99980-02                                                                    | 19 | 1  |
| 31                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2028R-02                                                                            | 28 | F99061-03 + D99980-02                                                                    | 19 | 1  |
| 32                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2028R-02                                                                            | 28 | F99061-03 + D99980-02                                                                    | 19 | 1  |
| 33                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2028R-02                                                                            | 28 | F99061-03 + D99980-02                                                                    | 19 | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2023R-02                                                                            | 23 | F99061-03 + D99980-02                                                                    | 17 | 1  |
| 35                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2023R-02                                                                            | 23 | F99061-03 + D99980-02                                                                    | 17 | 1  |
| 36                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2023R-02                                                                            | 23 | F99061-03 + D99980-02                                                                    | 17 | 1  |
| 37                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2023R-02                                                                            | 23 | F99061-03 + D99980-02                                                                    | 17 | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2023R-02                                                                            | 23 | F99061-03 + D99980-02                                                                    | 17 | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2018R-02                                                                            | 18 | F99061-03 + D99980-02                                                                    | 9  | 1  |
| 40                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2018R-02                                                                            | 18 | F99061-03 + D99980-02                                                                    | 9  | 1  |
| 41                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2018R-02                                                                            | 18 | F99061-03 + D99980-02                                                                    | 9  | 1  |
| 42                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2018R-02                                                                            | 18 | F99061-03 + D99980-02                                                                    | 9  | 1  |
| 43                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2018R-02                                                                            | 18 | F99061-03 + D99980-02                                                                    | 9  | 1  |
| 44                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2015R-02                                                                            | 15 | F99054-02                                                                                | 9  | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2015R-02                                                                            | 15 | F99054-02                                                                                | 9  | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2015R-02                                                                            | 15 | F99054-02                                                                                | 9  | 1  |

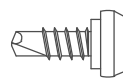


F99061-03

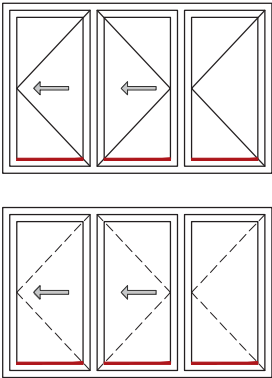
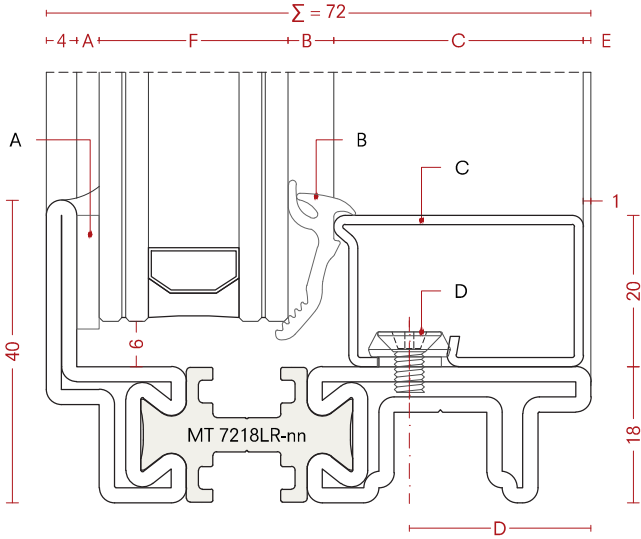
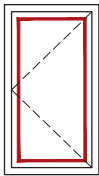
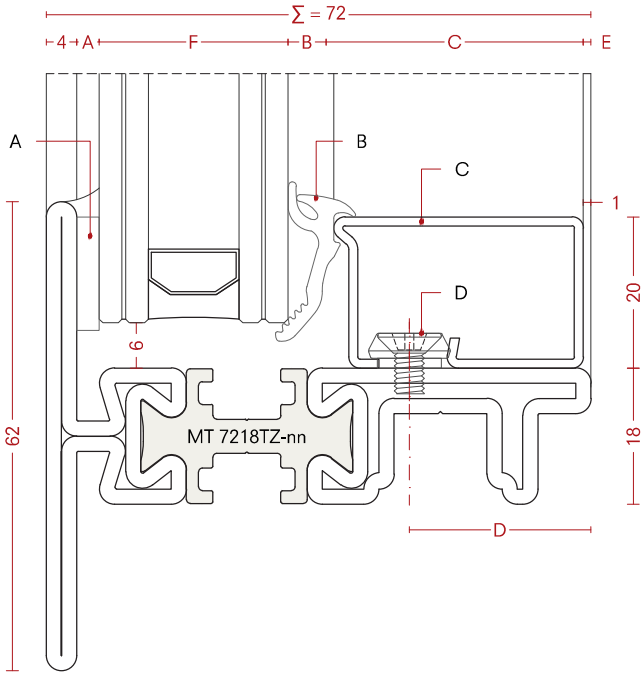
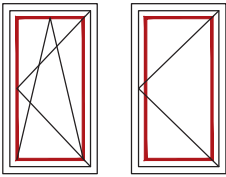
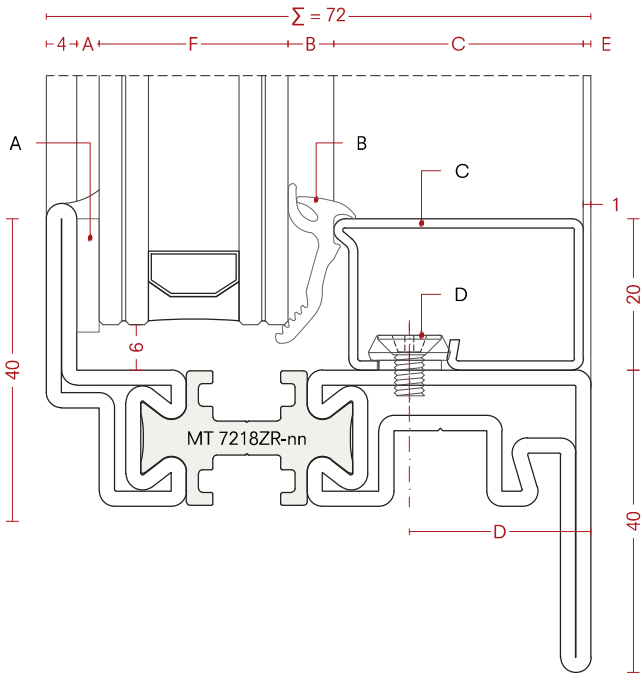


D99980-02  
M4 x 8 mm

± 8.0



F99054-02  
Ø4.2 x 9.5 mm



## Glazing table

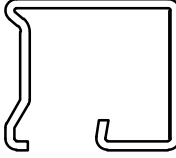
02 - Galvanized steel  
Wet glazing

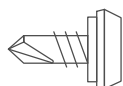
## Verglasungstabelle

02 - Stahl bandverzinkt  
Nassverglasung

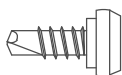
## Tableau de vitrage

02 - Acier galvanisé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |    | <br>C |    | <br>D |    | E |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|---|
|                                                                                        | code                                                                                   | mm | code                                                                                   | mm | code                                                                                    | mm | code                                                                                     | mm |   |
| 28                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 6  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 29                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 30                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 31                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 32                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 33                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2028R-02                                                                             | 28 | F99051-02                                                                                | 19 | 1 |
| 34                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 35                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 36                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 37                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 38                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2023R-02                                                                             | 23 | F99051-02                                                                                | 17 | 1 |
| 39                                                                                     | G99104-61                                                                              | 5  | G99219-60                                                                              | 5  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 40                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 6  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 41                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 42                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 43                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2018R-02                                                                             | 18 | F99051-02                                                                                | 9  | 1 |
| 44                                                                                     | G99105-61                                                                              | 3  | G99219-60                                                                              | 5  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |
| 45                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 4  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |
| 46                                                                                     | G99105-61                                                                              | 3  | G99209-60                                                                              | 3  | FV 2015R-02                                                                             | 15 | F99054-02                                                                                | 9  | 1 |

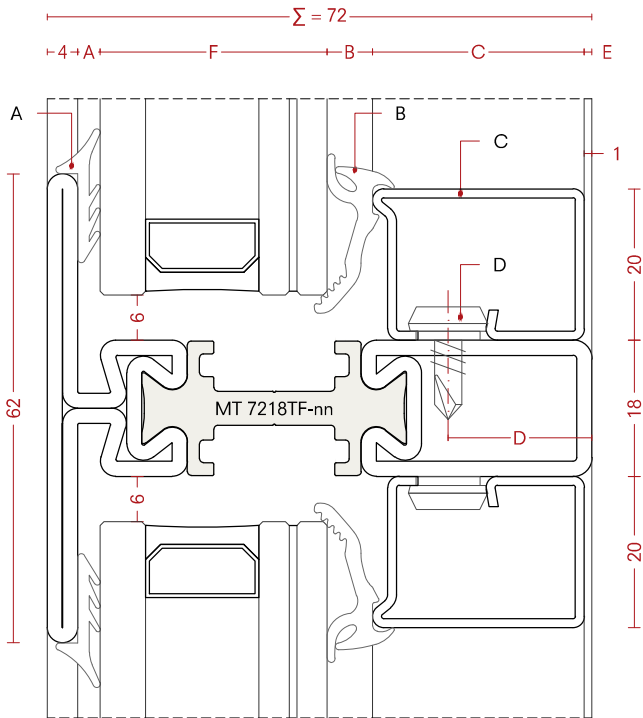
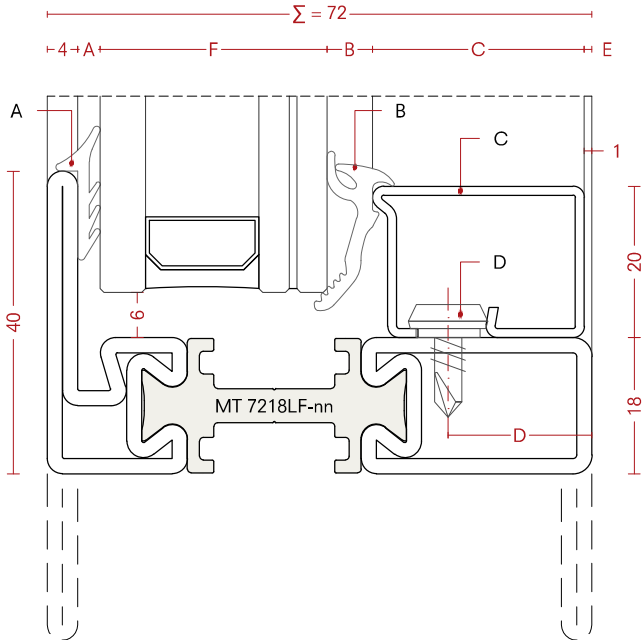


F99051-02  
Ø4.8 x 9.5 mm



F99054-02  
Ø4.2 x 9.5 mm





## Glazing table

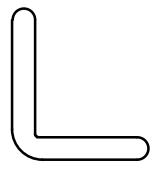
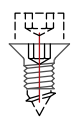
02 - Galvanized steel  
06 = Satin stainless steel AISI 316L  
07 - Cor-ten steel  
Wet glazing

## Verglasungstabelle

02 - Stahl bandverzinkt  
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Nassverglasung

## Tableau de vitrage

02 - Acier galvanisé  
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Vitrage au silicone

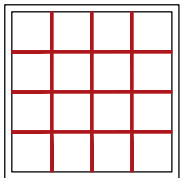
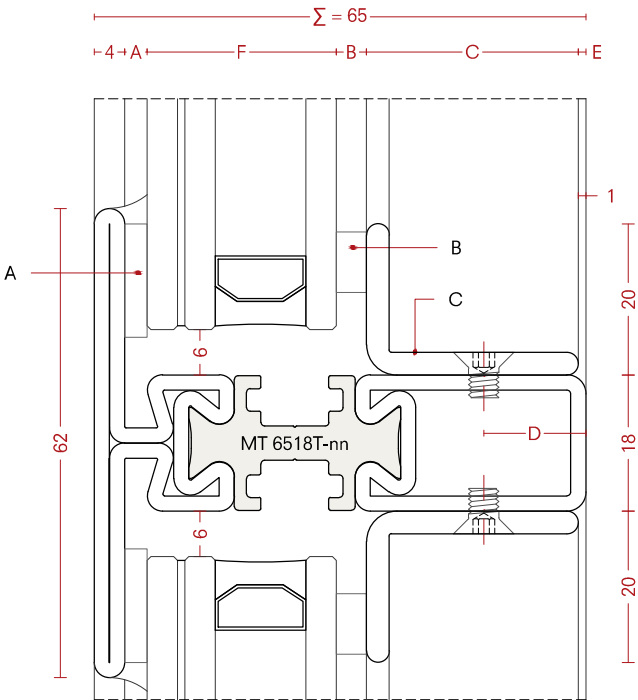
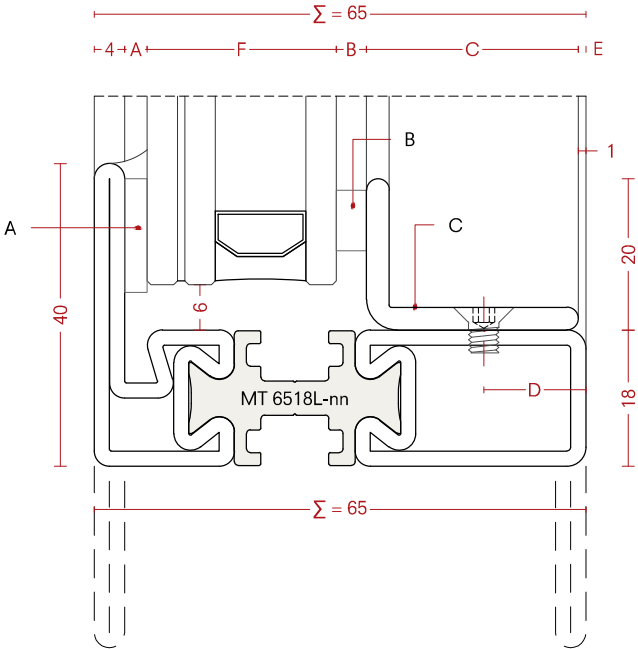
| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 16                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 17                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 18                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 19                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 20                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 21                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 22                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 23                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 25                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 26                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 27                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 28                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 30                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 31                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 32                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 33                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 35                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 36                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 37                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 39                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |



(1) With the 38 mm narrow T-profile, we recommend reducing the height of the spacer of the Insulated Glass Unit (IGU).

(1) Beim 38 mm schmalen T-Profil empfehlen wir, die Höhe des Abstandshalters der Isolierglaseinheit zu verringern.

(1) Avec le profil en T étroit de 38 mm, nous recommandons de réduire la hauteur de l'entretoise de l'unité de vitrage isolant.



## Glazing table

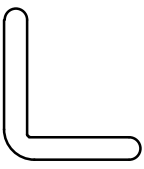
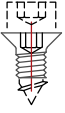
02 - Galvanized steel  
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Vitrage au silicone

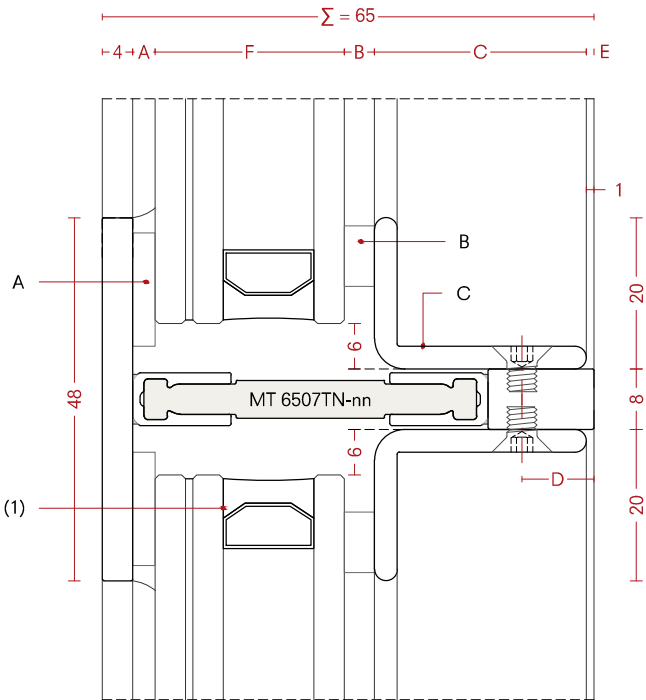
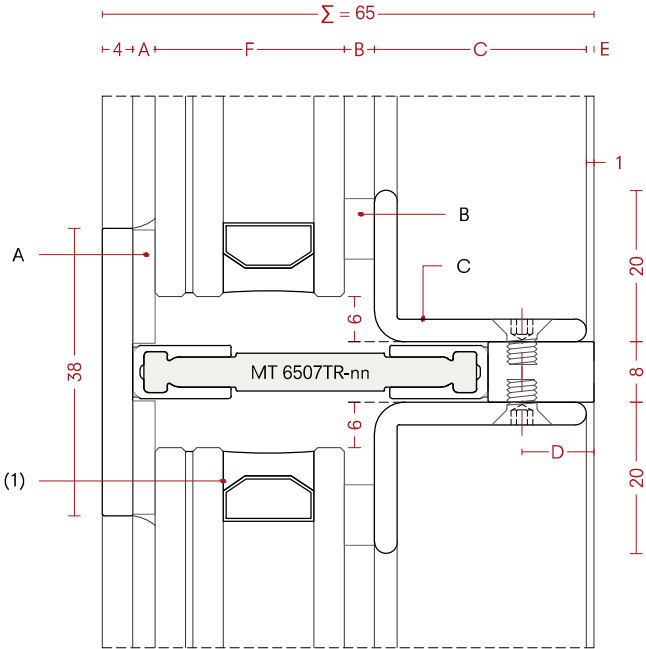
| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 16                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 17                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 18                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 19                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 20                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 21                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 7.5                                                                                      | 1  |
| 22                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2028L-nn                                                                             | 28 | 7.5                                                                                      | 1  |
| 23                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 7.5                                                                                      | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 7.5                                                                                      | 1  |
| 25                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 7.5                                                                                      | 1  |
| 26                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 7.5                                                                                      | 1  |
| 27                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2023L-nn                                                                             | 23 | 7.5                                                                                      | 1  |
| 28                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 7.5                                                                                      | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 7.5                                                                                      | 1  |
| 30                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 7.5                                                                                      | 1  |
| 31                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 7.5                                                                                      | 1  |
| 32                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2018L-nn                                                                             | 18 | 7.5                                                                                      | 1  |
| 33                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 7.5                                                                                      | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 7.5                                                                                      | 1  |
| 35                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 7.5                                                                                      | 1  |
| 36                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 7.5                                                                                      | 1  |
| 37                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 7.5                                                                                      | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015A-nn                                                                             | 15 | 7.5                                                                                      | 1  |
| 39                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 7.5                                                                                      | 1  |



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## Glazing table

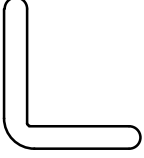
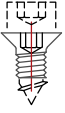
02 - Galvanized steel  
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Wet glazing

## Verglasungstabelle

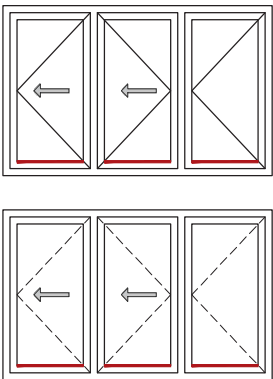
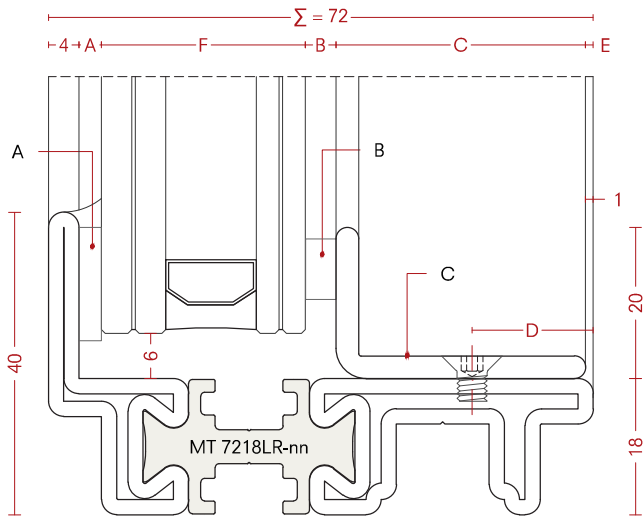
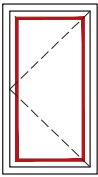
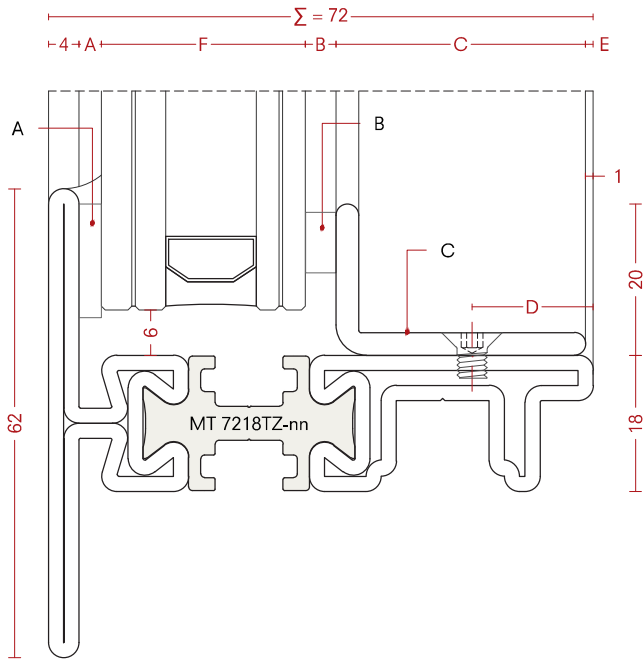
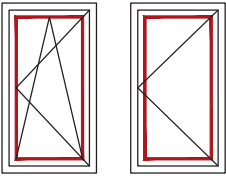
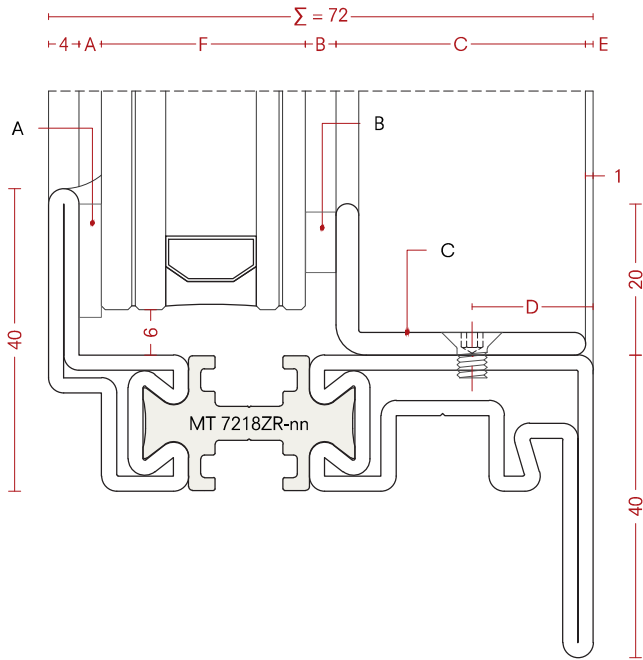
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Nassverglasung

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Vitrage au silicone

| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 23                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 25                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 26                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 27                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 28                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 30                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 31                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 32                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 33                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 35                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 36                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 37                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 40                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 41                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 42                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 43                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 44                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |





## Glazing table

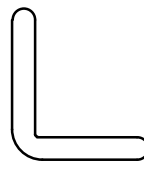
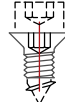
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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 23                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 25                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 26                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 27                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 28                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 30                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 31                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 32                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 33                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 35                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 36                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 37                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 40                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 41                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 42                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 43                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 44                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |

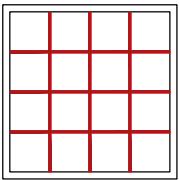
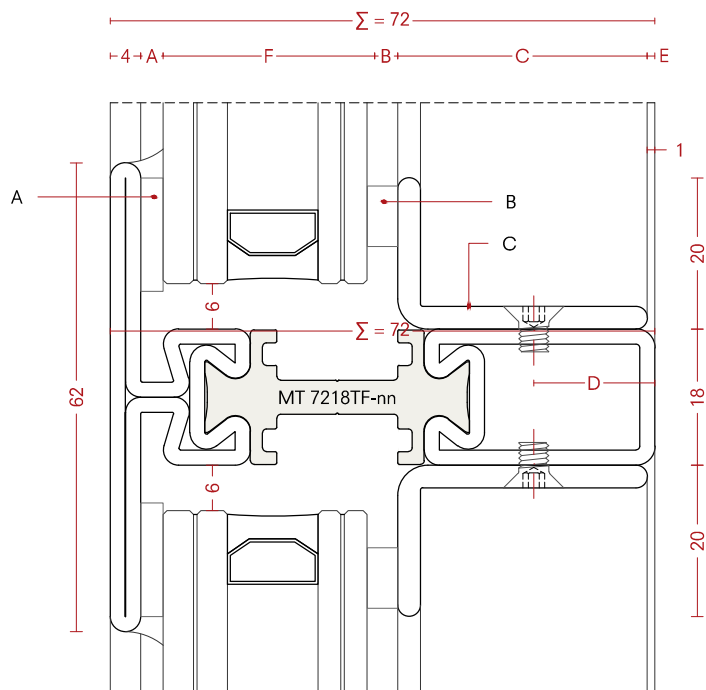
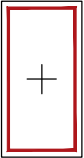
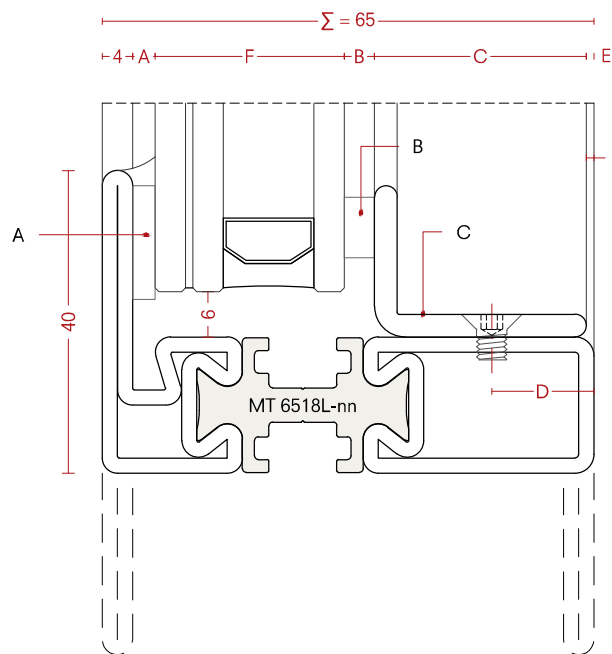


(1) With the 38 mm narrow T-profile, we recommend reducing the height of the spacer of the Insulated Glass Unit (IGU).

(1) Beim 38 mm schmalen T-Profil empfehlen wir, die Höhe des Abstandshalters der Isolierglaseinheit zu verringern.

(1) Avec le profil en T étroit de 38 mm, nous recommandons de réduire la hauteur de l'entretoise de l'unité de vitrage isolant.





## Glazing table

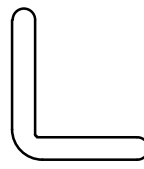
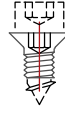
02 - Galvanized steel  
06 = Satin stainless steel AISI 316L  
07 - Cor-ten steel  
Wet glazing

## Verglasungstabelle

02 - Stahl bandverzinkt  
06 = Edelstahl 1.4404  
07 - Cor-Ten-Stahl  
Nassverglasung

## Tableau de vitrage

02 - Acier galvanisé  
06 = Acier inoxydable AISI 316L brossé  
07 - Acier Cor-ten  
Vitrage au silicone

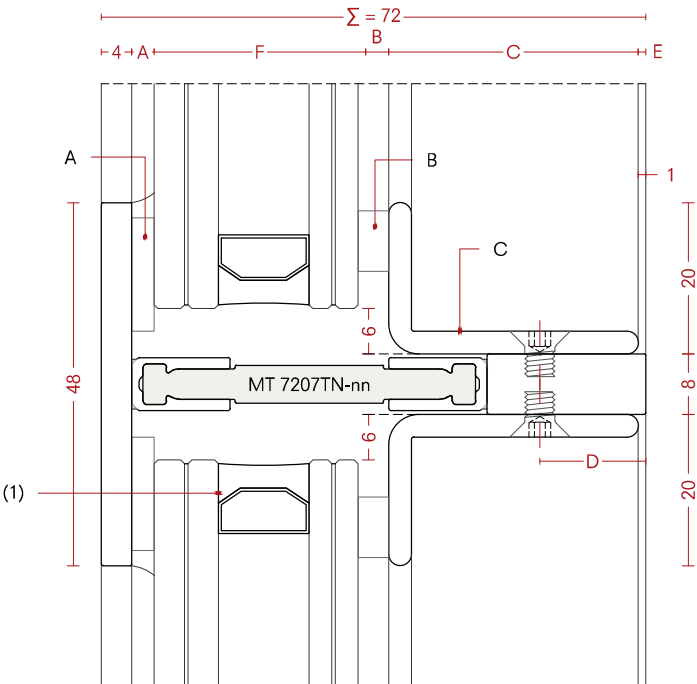
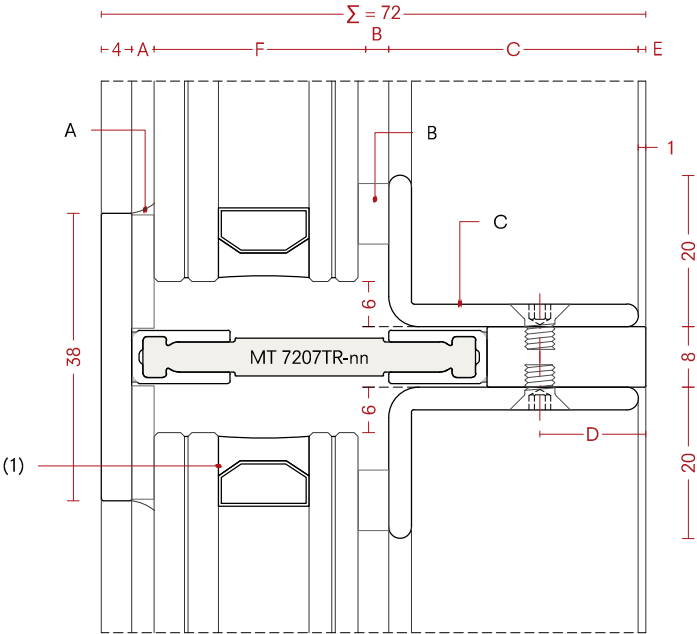
| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 23                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 25                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 26                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 27                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 28                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2033L-nn                                                                             | 33 | 16                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 30                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 31                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 32                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 33                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2028L-nn                                                                             | 28 | 13.5                                                                                     | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 35                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 36                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 37                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2023L-nn                                                                             | 23 | 11                                                                                       | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 40                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 41                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 42                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 43                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2018L-nn                                                                             | 18 | 8.5                                                                                      | 1  |
| 44                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015A-nn                                                                             | 15 | 8.5                                                                                      | 1  |



(1) With the 38 mm narrow T-profile, we recommend reducing the height of the spacer of the Insulated Glass Unit (IGU).

(1) Beim 38 mm schmalen T-Profil empfehlen wir, die Höhe des Abstandshalters der Isolierglaseinheit zu verringern.

(1) Avec le profil en T étroit de 38 mm, nous recommandons de réduire la hauteur de l'entretoise de l'unité de vitrage isolant.



## Glazing table

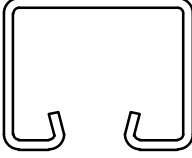
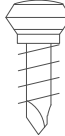
06 = Satin stainless steel AISI 316L  
Wet glazing

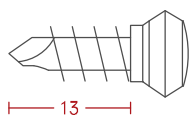
## Verglasungstabelle

06 = Edelstahl 1.4404  
Nassverglasung

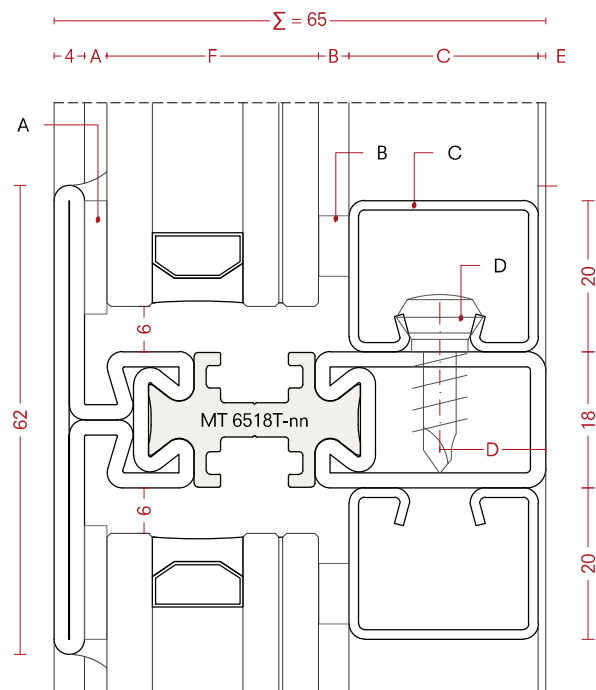
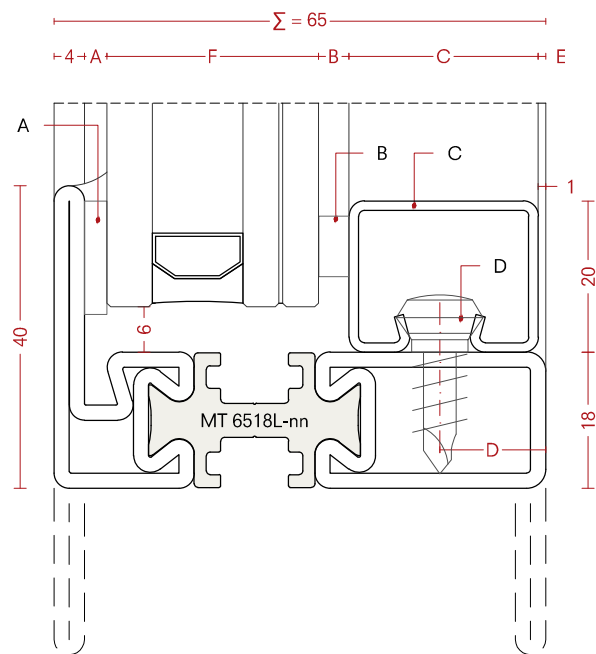
## Tableau de vitrage

06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 14                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 15                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 16                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 17                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 18                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 19                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 20                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 21                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 22                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 23                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 24                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 25                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 26                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 27                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 28                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 29                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 30                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 31                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 32                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 33                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 34                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 35                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 36                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 37                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 38                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 39                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |



F99055-05  
Ø4.8 x 13 mm



## Glazing table

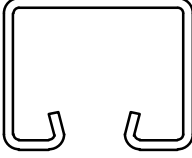
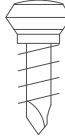
06 = Satin stainless steel AISI 316L  
Wet glazing

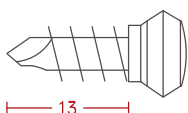
## Verglasungstabelle

06 = Edelstahl 1.4404  
Nassverglasung

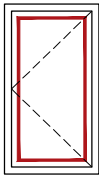
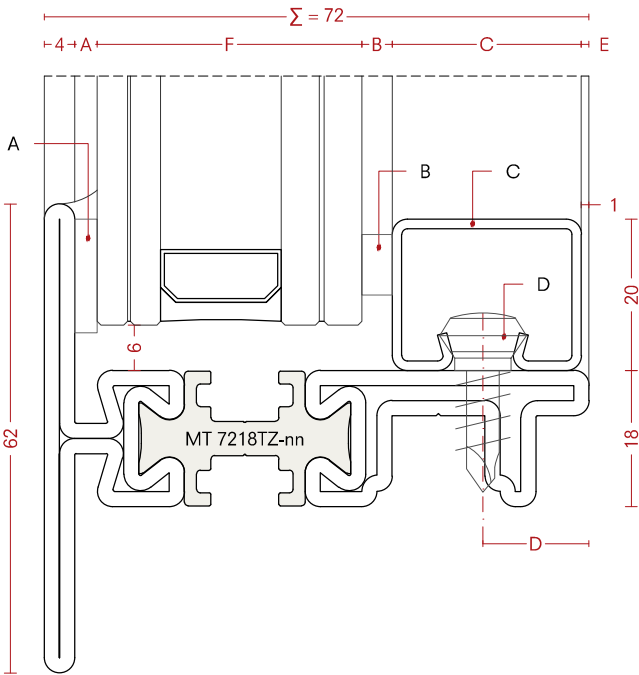
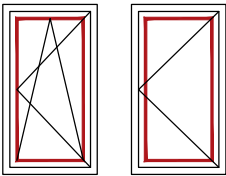
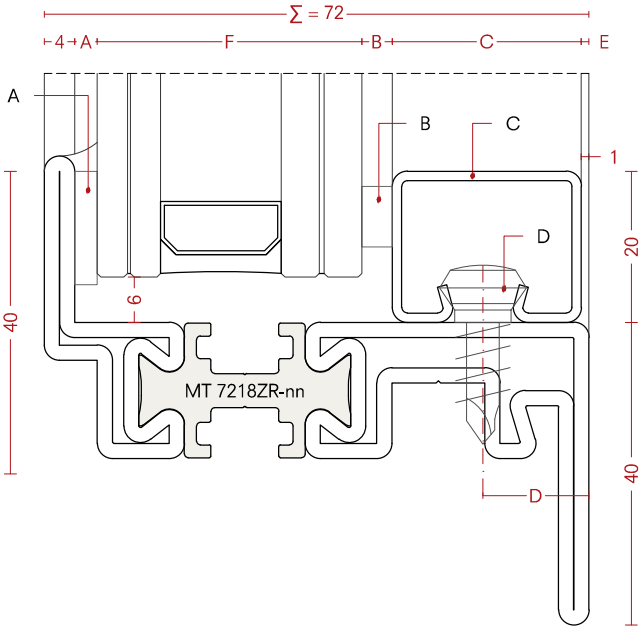
## Tableau de vitrage

06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 21                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 22                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 23                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 25                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 26                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 27                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 28                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 30                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 31                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 32                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 33                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 35                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 36                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 37                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 38                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 40                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 41                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 42                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 43                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 44                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |



F99055-05  
Ø4.8 x 13 mm



## Glazing table

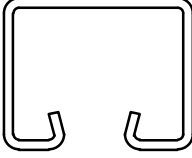
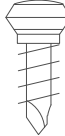
06 = Satin stainless steel AISI 316L  
Wet glazing

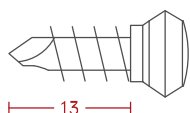
## Verglasungstabelle

06 = Edelstahl 1.4404  
Nassverglasung

## Tableau de vitrage

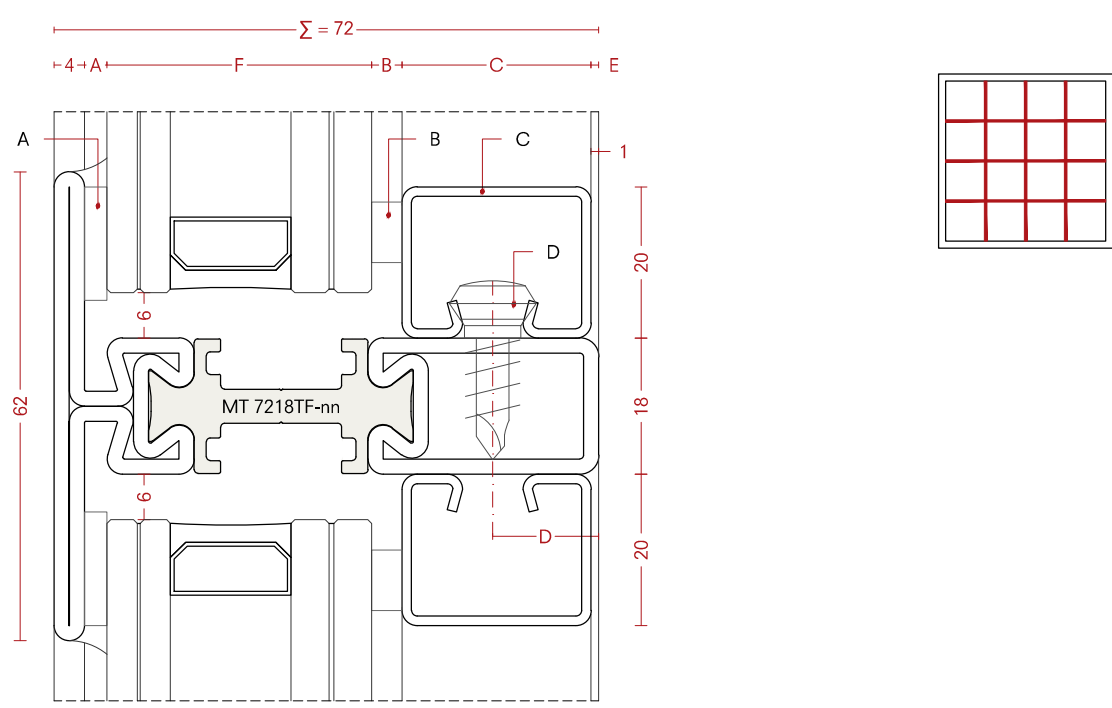
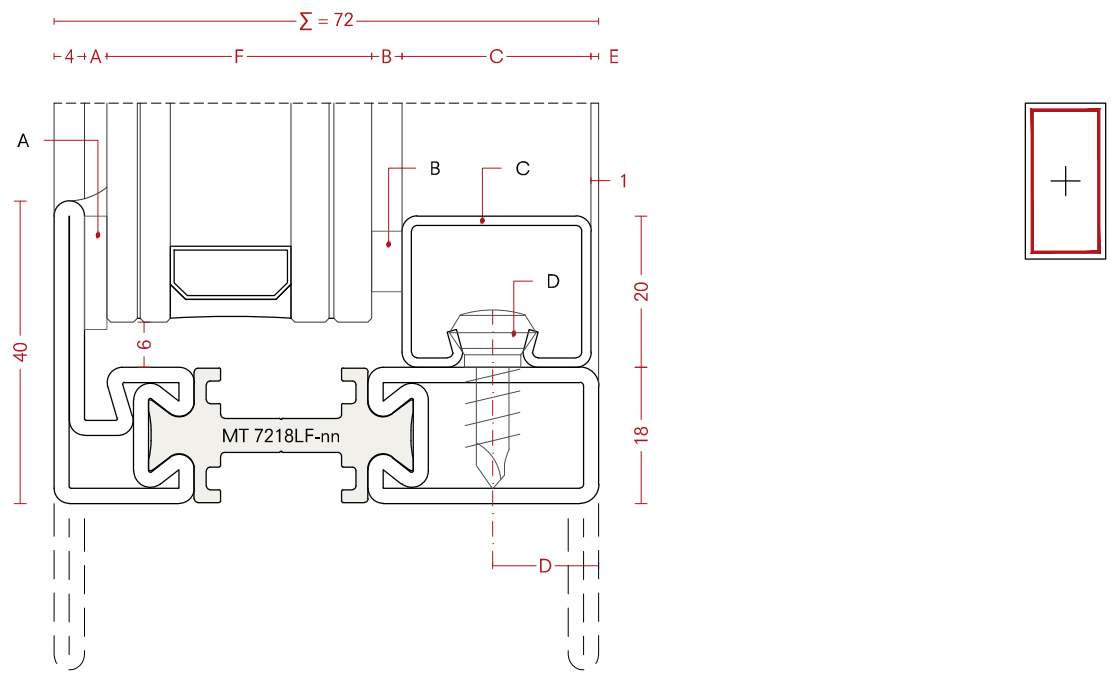
06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |     | <br>C |    | <br>D | E  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------|----|
| mm                                                                                     | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm | mm                                                                                       | mm |
| 21                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 22                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 23                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 24                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 25                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 26                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2035R-06                                                                             | 35 | 14                                                                                       | 1  |
| 27                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 28                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 29                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 30                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 31                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2030R-06                                                                             | 30 | 14                                                                                       | 1  |
| 32                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 33                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 34                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 35                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 36                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2025R-06                                                                             | 25 | 14                                                                                       | 1  |
| 37                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 38                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 39                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 40                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 41                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2020R-06                                                                             | 20 | 8.5                                                                                      | 1  |
| 42                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 43                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 44                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 45                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |
| 46                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2015R-06                                                                             | 15 | 8.5                                                                                      | 1  |



F99055-05  
Ø4.8 x 13 mm





## Glazing table

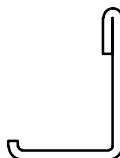
06 = Satin stainless steel AISI 316L  
Wet glazing

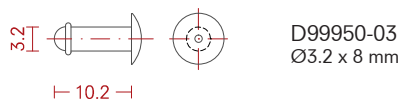
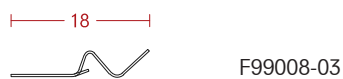
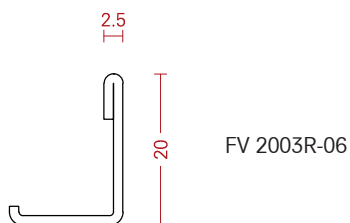
## Verglasungstabelle

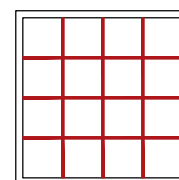
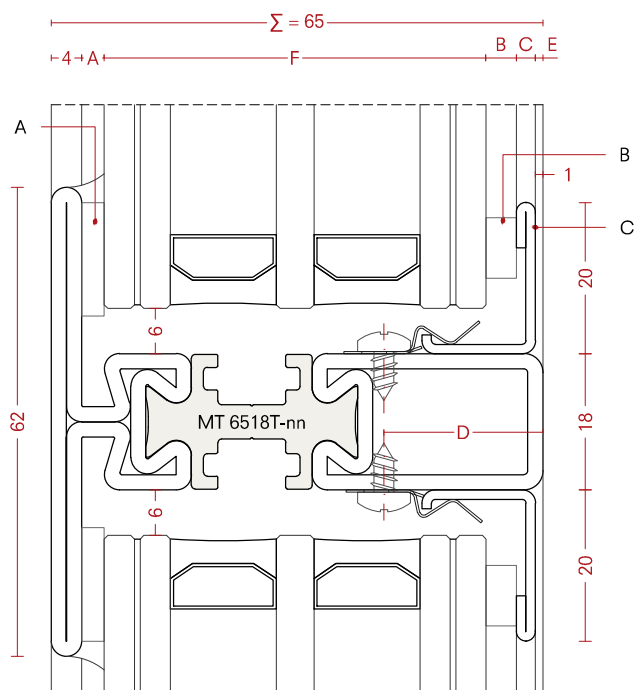
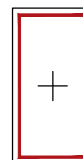
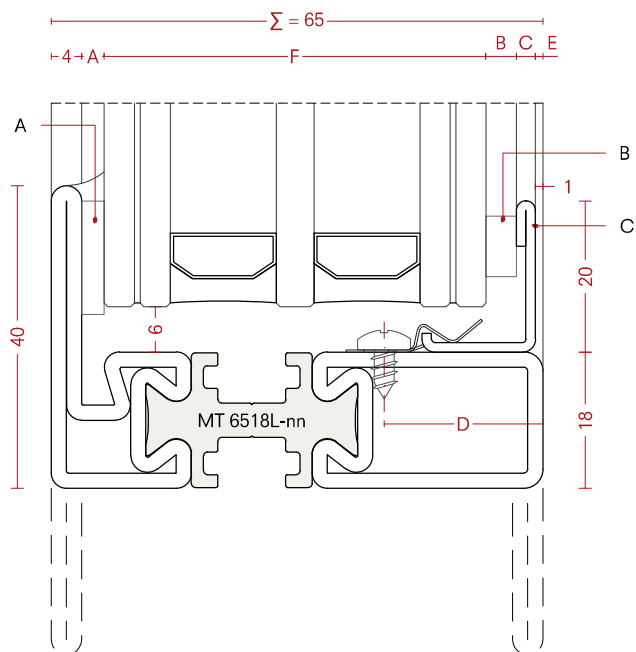
06 = Edelstahl 1.4404  
Nassverglasung

## Tableau de vitrage

06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

|  |  |    |  |     |  |     |    |    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------|-----|----|----|
| F                                                                                 | A                                                                                 |    | B                                                                                 |     | C                                                                                  |     | D  | E  |
| mm                                                                                | code                                                                              | mm | code                                                                              | mm  | code                                                                               | mm  | mm | mm |
| 46                                                                                | G99104-61                                                                         | 5  | G99204-61                                                                         | 5.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 47                                                                                | G99104-61                                                                         | 5  | G99203-61                                                                         | 4.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 48                                                                                | G99104-61                                                                         | 5  | G99202-61                                                                         | 3.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 49                                                                                | G99104-61                                                                         | 5  | G99201-61                                                                         | 2.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 50                                                                                | G99105-61                                                                         | 3  | G99202-61                                                                         | 3.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 51                                                                                | G99105-61                                                                         | 3  | G99201-61                                                                         | 2.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |





## Glazing table

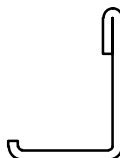
06 = Satin stainless steel AISI 316L  
Wet glazing

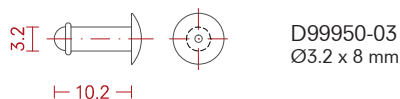
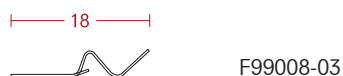
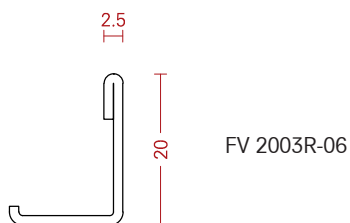
## Verglasungstabelle

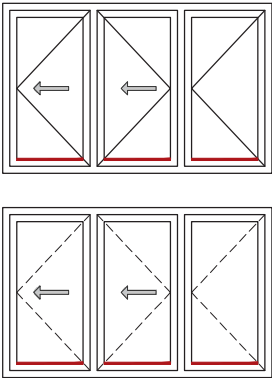
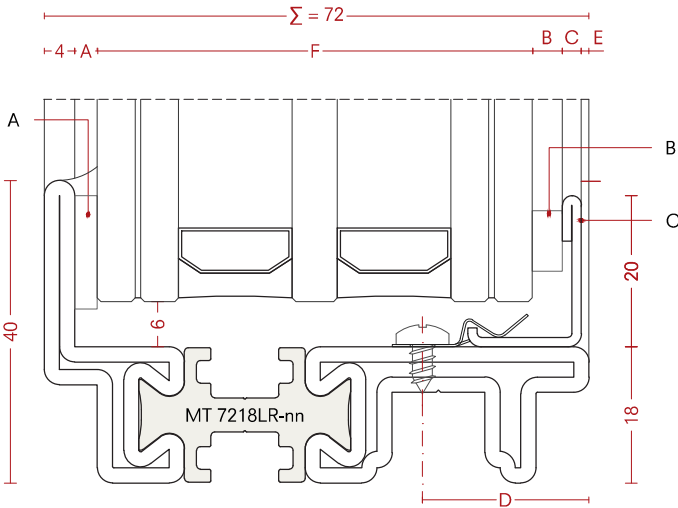
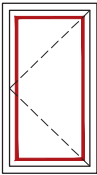
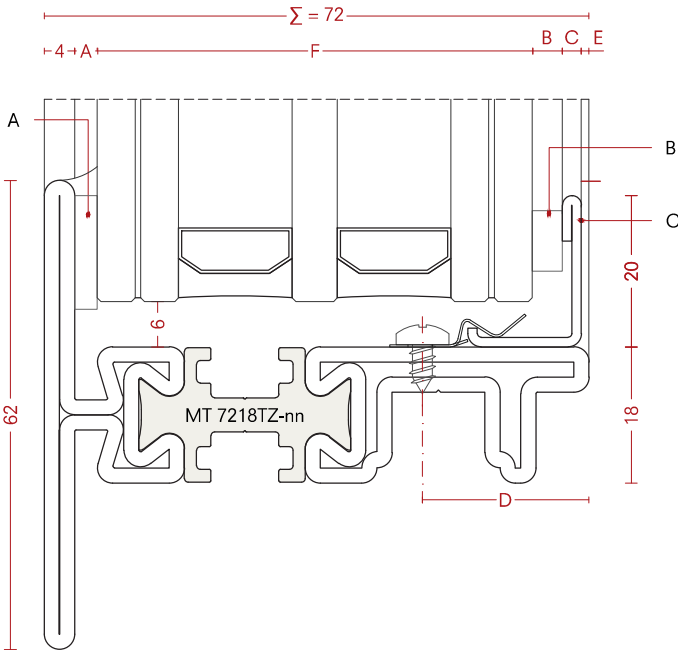
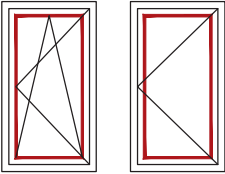
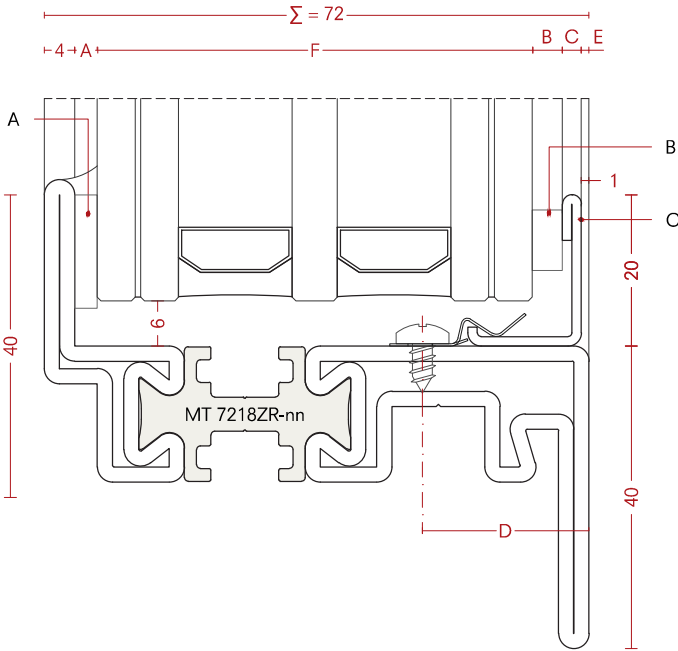
06 = Edelstahl 1.4404  
Nassverglasung

## Tableau de vitrage

06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

|  |  |    |  |     |  |     |    |    |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------|-----|------------------------------------------------------------------------------------|-----|----|----|
| F                                                                                 | A                                                                                 |    | B                                                                                 |     | C                                                                                  |     | D  | E  |
| mm                                                                                | code                                                                              | mm | code                                                                              | mm  | code                                                                               | mm  | mm | mm |
| 53                                                                                | G99104-61                                                                         | 5  | G99204-61                                                                         | 5.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 54                                                                                | G99104-61                                                                         | 5  | G99203-61                                                                         | 4.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 55                                                                                | G99104-61                                                                         | 5  | G99202-61                                                                         | 3.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 56                                                                                | G99104-61                                                                         | 5  | G99201-61                                                                         | 2.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 57                                                                                | G99105-61                                                                         | 3  | G99202-61                                                                         | 3.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |
| 58                                                                                | G99105-61                                                                         | 3  | G99201-61                                                                         | 2.5 | FV 2003R-06                                                                        | 2.5 | 22 | 1  |





Glazing table

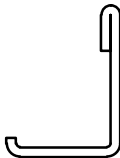
06 = Satin stainless steel AISI 316L  
Wet glazing

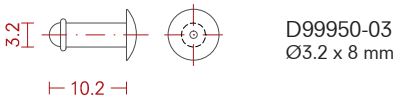
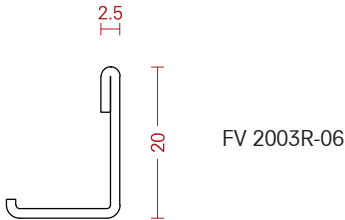
Verglasungstabelle

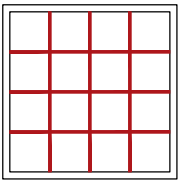
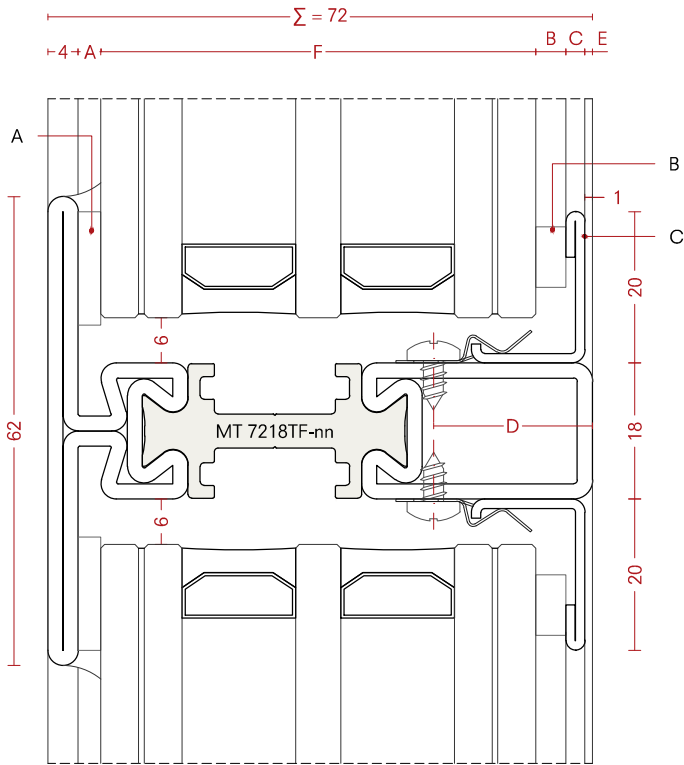
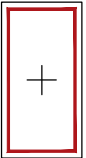
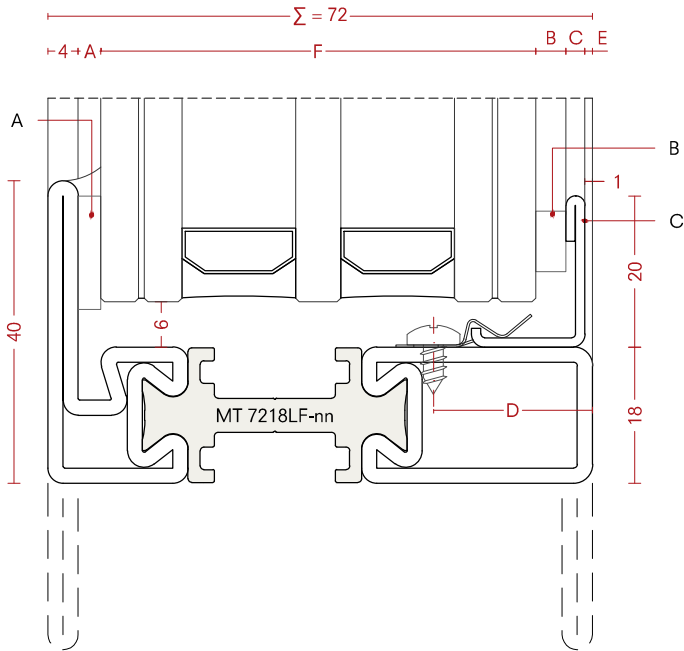
06 = Edelstahl 1.4404  
Nassverglasung

Tableau de vitrage

06 = Acier inoxydable AISI 316L brossé  
Vitrage au silicone

| <br>F | <br>A |    | <br>B |     | <br>C |     | D  | E |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|-----|-----------------------------------------------------------------------------------------|-----|----|---|
|                                                                                        | code                                                                                   | mm | code                                                                                   | mm  | code                                                                                    | mm  |    |   |
| 53                                                                                     | G99104-61                                                                              | 5  | G99204-61                                                                              | 5.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |
| 54                                                                                     | G99104-61                                                                              | 5  | G99203-61                                                                              | 4.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |
| 55                                                                                     | G99104-61                                                                              | 5  | G99202-61                                                                              | 3.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |
| 56                                                                                     | G99104-61                                                                              | 5  | G99201-61                                                                              | 2.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |
| 57                                                                                     | G99105-61                                                                              | 3  | G99202-61                                                                              | 3.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |
| 58                                                                                     | G99105-61                                                                              | 3  | G99201-61                                                                              | 2.5 | FV 2003R-06                                                                             | 2.5 | 21 | 1 |









## Accessories

## Zubehör

## Accessoires

3.0

Opening scheme  
Surface finishes

Öffnungsdefinition  
Oberflächenausführungen

Schéma d'ouverture  
Finitions de surface

Gaskets  
System accessories  
Hinges  
Flush bolts  
General fittings  
Tilt&Turn window  
Handles  
Locks  
Screws  
Assembling tools  
Installation templates  
Cutting templates

Dichtungen  
Systemzubehör  
Bänder  
Kantriegel  
Beschlüge Allgemein  
Dreh-Kippfenster  
Griffe  
Schlösser  
Schrauben  
Montagewerkzeuge  
Installationsvorlagen  
Sägebeilagen

Joints  
Accessoires système  
Paumelles  
Verrou a bascule  
Ferrures générales  
Fênetre oscillo-battant  
Poignées  
Serrures  
Vis  
Outils d'usinage  
Gabarits d'installation  
Gabarits de découpe

3.1  
3.2  
3.3  
3.4  
3.5  
3.6  
3.7  
3.8  
3.9  
3.10  
3.11  
3.12

## Opening scheme

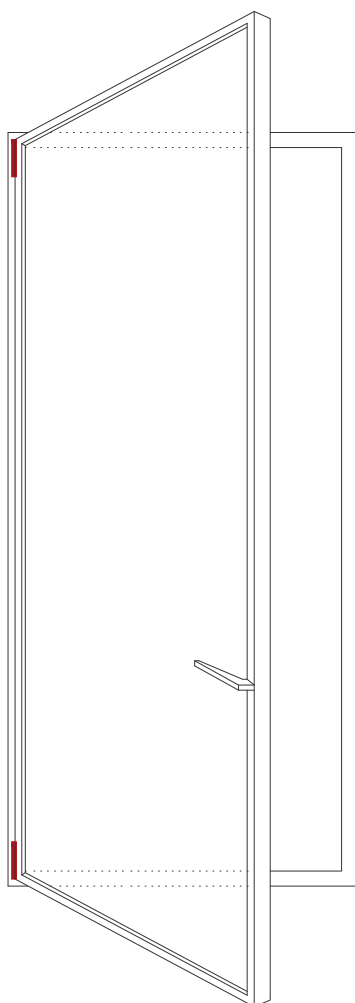
A window or a door is defined as "left opening" or "right opening" when, viewed from the opening side, the hinges are respectively on the left or on the right.

## Öffnungsdefinition

Ein Fenster oder Tür wird als "DIN links" oder "DIN rechts" definiert, wenn sich die Bänder in Öffnungsrichtung Link oder Recht befinden.

## Schéma d'ouverture

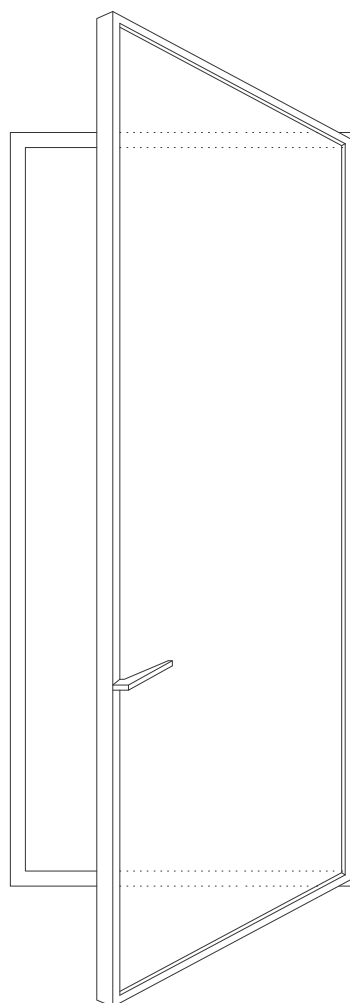
Une fenêtre ou une porte est définie comme ouverture "ouverture gauche" ou "ouverture droite" lorsque, dans le sens d'ouverture, les paumelles sont respectivement à gauche ou à droite.



Left opening

DIN links

Ouverture gauche



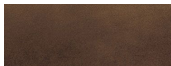
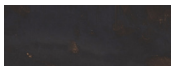
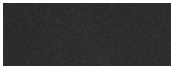
Right opening

DIN rechts

Ouverture droite

**Surface finishes**

**Oberflächen-Ausführungen Finitions de surface**

|                   |                 |                   |    |    |                                                                                       |
|-------------------|-----------------|-------------------|----|----|---------------------------------------------------------------------------------------|
| Satin chrome      | Chrom satiniert | Chrome satiné     | SC | 15 |    |
| Dark bronze       | Bronze dunkel   | Bronze foncé      | DB | 17 |    |
| Oil-rubbed bronze | Bronze geölt    | Bronze bruni ciré | OB | 18 |    |
| Gun metal         | Dunkelgrau      | Gris foncé        | GM | 42 |  |
| Matt black        | Schwarz matt    | Noir mat          | MB | 43 |  |



**Gaskets**

**Dichtungen**

**Joints**

**3.1**

**Internal/external  
rebate gasket**

EPDM black

PU = 50 m

**Anschlagdichtung innen/  
außen**

EPDM schwarz

VE = 50 m

**Joint de butée  
intérieur/extérieur**

EPDM noir

UV = 50 m



G99030-60

**Centre gasket**

EPDM black

PU = 25 m

**Mitteldichtung**

EPDM schwarz

VE = 25 m

**Joint central**

EPDM noir

UV = 25 m



G10316-60

**Centre gasket**

EPDM black

PU = 25 m

**Mitteldichtung**

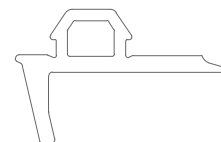
EPDM schwarz

VE = 25 m

**Joint central**

EPDM noir

UV = 25 m



G10317-60

**Condensate  
collection tray**

EPDM black

PU = 25 m

**Kondensatsammelschale**

EPDM schwarz

VE = 25 m

**Bac de récupération  
des condensats**

EPDM noir

UV = 25 m



G99314-60

**External glazing gasket**

EPDM, black,  
self-adhesive, 3 mm

PU = 50 m

**Verglasungsdichtung außen**

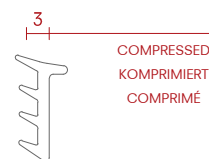
EPDM, schwarz,  
selbstklebend, 3 mm

VE = 50 m

**Joint vitrage extérieur**

EPDM, noir,  
autocollant, 3 mm

UV = 50 m



G99107-60

**External glazing gasket**

EPDM, black,  
self-adhesive, 5 mm

PU = 100 m

**Verglasungsdichtung außen**

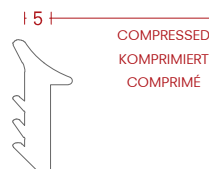
EPDM, schwarz,  
selbstklebend, 5 mm

VE = 100 m

**Joint vitrage extérieur**

EPDM, noir,  
autocollant, 5 mm

UV = 100 m



G99108-60

**External tape seals**

Neoprene, black,  
self-adhesive, 3 mm

PU = 25 m

**Vorlegeband außen**

Neopren, schwarz,  
selbstklebend, 3 mm

VE = 25 m

**Joint vitrage extérieur**

Néoprène, noir,  
autocollant, 3 mm

UV = 25 m



G99105-61

**External tape seals**

PVC, black,  
self-adhesive, 5 mm

PU = 25 m

**Vorlegeband Außen**

PVC, schwarz,  
selbstklebend, 5 mm

VE = 25 m

**Joint vitrage extérieur**

PVC, noir,  
autocollant, 5 mm

UV = 25 m



G99104-61

### Internal tape seals

Neoprene, black,  
self-adhesive, 3 mm

PU = 20 m

### Vorlegeband innen

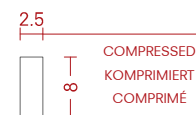
Neopren, schwarz,  
selbstklebend, 3 mm

VE = 20 m

### Joint vitrage intérieur

Néoprène, noir,  
autocollant, 3 mm

UV = 20 m



G99201-61

### Internal tape seals

Neoprene, black,  
self-adhesive, 4 mm

PU = 20 m

### Vorlegeband innen

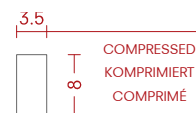
Neopren, schwarz,  
selbstklebend, 4 mm

VE = 20 m

### Joint vitrage intérieur

Néoprène, noir,  
autocollant, 4 mm

UV = 20 m



G99202-61

### Internal tape seals

Neoprene, black,  
self-adhesive, 5 mm

PU = 20 m

### Vorlegeband innen

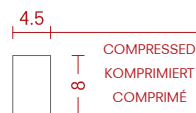
Neopren, schwarz,  
selbstklebend, 5 mm

VE = 20 m

### Joint vitrage intérieur

Néoprène, noir,  
autocollant, 5 mm

UV = 20 m



G99203-61

### Internal tape seals

Neoprene, black,  
self-adhesive, 6 mm

PU = 20 m

### Vorlegeband innen

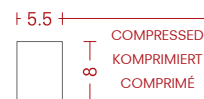
Neopren, schwarz,  
selbstklebend, 6 mm

VE = 20 m

### Joint vitrage intérieur

Néoprène, noir,  
autocollant, 6 mm

UV = 20 m



G99204-61



### Internal glazing gasket

EPDM, black, 3-4 mm

PU = 150 m

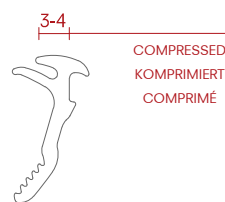
### Verglasungsdichtung innen Joint vitrage intérieur

EPDM, schwarz, 3-4 mm

VE = 150 m

EPDM, noir, 3-4 mm

UV = 150 m



G99209-60

### Internal glazing gasket

EPDM, black, 5-6 mm

PU = 150 m

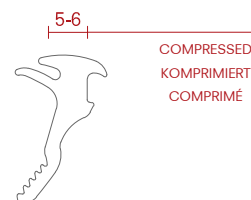
### Verglasungsdichtung innen Joint vitrage intérieur

EPDM, schwarz, 5-6 mm

VE = 150 m

EPDM, noir, 5-6 mm

UV = 150 m



G99219-60

### Brush gasket

For bi-folding doors, plastic,  
black, 4.8x11 mm

PU = 100 m

### Bürstendichtung

Für Faltwand, Kunststoff,  
schwarz, 4.8x11 mm

VE = 100 m

### Joint à brosse

Pour portes accordéon, plastique,  
noir, 4.8x11 mm

UV = 100 m



G99404-62

### Brush support

For bi-folding doors, aluminium,  
8x18 mm, to hold the brush gasket  
G99404-62

L = 5800 mm

### Bürstenaufnahmeprofil

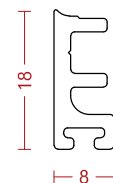
Für Faltwand, aluminium, 8x18 mm,  
zur Aufnahme der Bürstendichtung  
G99404-62

L = 5800 mm

### Profilé maintien brosse

Pour portes accordéon, aluminium,  
8x18 mm, pour tenir le joint à  
brosse G99404-62

L = 5800 mm



A99401-00



**System accessories**

**Systemzubehör**

**Accessoires système**

3.2

### Weather bar

-00 = Aluminium

Usage only on galvanized steel (-02) and bright steel (-12) profiles.

L = 5800 mm

### Wetterschutzschiene

-00 = Aluminium

Verwendung nur für stahl bandverzinkt (-02) und Stahl blank (-12) profilen.

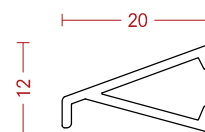
L = 5800 mm

### Renvoi d'eau

-00 = Aluminium

Montage seulement sur profilés dans acier galvanisé (-02) et acier décapé (-12).

L = 5800 mm



A99001-00

### Fixing screw

Fixing screw weather bar  
A99001-00, M4x9 mm DIN84

-02 = Galvanized steel

PU = 50 pieces

### Klemmknopf

Befestigungsschraube  
Wetterschenkel A99001-00,  
M4x9 mm DIN84

-02 = Stahl bandverzinkt

VE = 50 Stück

### Bouton de fixation

Vis de fixation renvoi d'eau  
A99001-00, M4x9 mm DIN84

-02 = Acier galvanisé

UV = 50 unités



D99901-02

### Weather bar

-02 = Galvanized steel  
-06 = Satin stainless steel AISI 316L  
-07 = Cor-Ten steel

L = 3000 mm

### Wetterschutzschiene

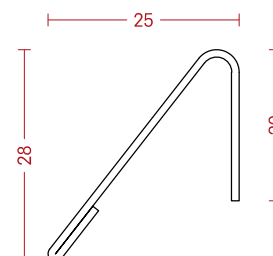
-02 = Stahl bandverzinkt  
-06 = Edelstahl 1.4404  
-07 = Cor-Ten Stahl

L = 3000 mm

### Renvoi d'eau

-02 = Acier galvanisé  
-06 = Acier inoxydable AISI 316L brossé  
-07 = Acier Cor-ten

L = 3000 mm



A99007-nn

### Drainage pipe

EPDM, black.

PU = 10 pieces

### Entwässerungsröhrchen

EPDM, schwarz.

VE = 10 Stück

### Tube drainage

EPDM, noire.

UV = 10 unités



A99286-83

### Cover cap

Plastic, black, for covering drainage holes.

PU = 10 pieces

### Abdeckkappe

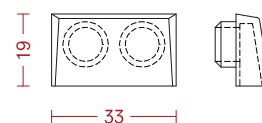
Kunststoff, schwarz, zur Abdeckung der Entwässerungsbohrungen.

VE = 10 Stück

### Capuchon

Matière plastique, noire, pour couvrir les trous d'évacuation d'eau.

UV = 10 unités



A99201-35

### End pieces

For open in and open out double leaf window, 2nd leaf.

B = black

PU = 2 set  
(x4 right; x4 left)

### Endstücke

Für Zweiflügliges Fenster nach innen öffnend und nach außen öffnend, Standflügel.

B = schwarz

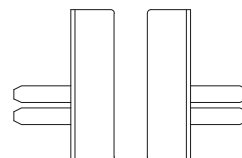
VE = 2 Set  
(x4 Rechts; x4 Links)

### Pièce terminale

Pour fenêtre à deux vantaux ouvrant vers l'intérieur et l'extérieur, 2e ouvrant.

B = noir

UV = 2 set  
(x4 droite; x4 gauche)



K99021



## Hinges

## Bänder

## Paumelles

3.3

### Important notes:

All weld-on and/or screw-on hinges are compatible for both open-in and open-out.

### Wichtige Anmerkungen:

Alle Anschweißband und Anschraubband sind sowohl für innen Öffnend auch für außen Öffnend kompatibel.

### Remarques importantes:

Toutes les paumelles à souder et/ou à visser sont compatibles aussi bien en ouverture intérieure et ouverture extérieure.

### Weld-on hinge

Ø12 mm, length 80 mm, with fixed pin and brass intermediate washer.

Capacity: 50 kg (pair=2 pc)

-03 = Stainless steel AISI 304 2B  
-12 = Bright steel

PU = 1 piece

### Anschweißband

Ø12 mm, Länge 80 mm, mit festem Bolzen und Messing Zwischenring.

Tragkraft: 50 kg (Paar=2 Stück)

-03 = Edelstahl 1.4301 2B  
-12 = Stahl blank

VE = 1 Stück

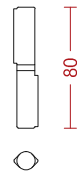
### Paumelle à souder

Ø12 mm, longueur 80 mm, avec goupille fixe et rondelle en laiton.

Capacité: 50 kg (paire=2 unités)

-03 = Acier inoxydable AISI 304 2B  
-12 = Acier décapé

UV = 1 unité



C99001-nn

### Weld-on hinge

Bright steel, Ø14 mm, length 100 mm, with fixed pin and brass intermediate washer.

Capacity: 80 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Stahl blank, Ø14 mm, Länge 100 mm, mit festem Bolzen und Messing Zwischenring.

Tragkraft: 80 kg (Paar=2 Stück)

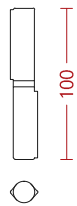
VE = 1 Stück

### Paumelle à souder

Acier décapé, Ø14 mm, longueur 100 mm, avec goupille fixe et rondelle en laiton.

Capacité: 80 kg (paire=2 unités)

UV = 1 unité



C99002-12

### Weld-on hinge

Bright steel, Ø16 mm, length 120 mm, with fixed pin and brass intermediate washer.

Capacity: 100 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Stahl blank, Ø16 mm, Länge 120 mm, mit festem Bolzen und Messing Zwischenring.

Tragkraft: 100 kg (Paar=2 Stück)

VE = 1 Stück

### Paumelle à souder

Acier décapé, Ø16 mm, longueur 120 mm, avec goupille fixe et rondelle en laiton.

Capacité: 100 kg (paire=2 unités)

UV = 1 unité



C99003-12

### Weld-on hinge

Bright steel, Ø16 mm, length 140 mm, with fixed pin and brass intermediate washer.

Capacity: 140 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Stahl blank, Ø16 mm, Länge 140 mm, mit festem Bolzen und Messing Zwischenring.

Tragkraft: 140 kg (Paar=2 Stück)

VE = 1 Stück

### Paumelle à souder

Acier décapé, Ø16 mm, longueur 140 mm, avec goupille fixe et rondelle en laiton.

Capacité: 140 kg (paire=2 unités)

UV = 1 unité



C99004-12



### Weld-on hinge

Galvanized steel, Ø16 mm, length 140 mm, with galvanized pin intermediate washer with "loose" pin.

Capacity: 200 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Stahl bandverzinkt, Ø16 mm, Länge 140 mm, mit verzinktem Bolzen und Zwischenring mit "losem" Stift.

Tragkraft: 200 kg (Paar=2 Stück)

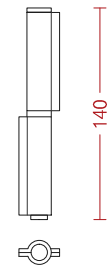
VE = 1 Stück

### Paumelle à souder

Acier galvanisé, Ø16 mm, longueur 140 mm, avec goupille galvanisé amovible et rondelle.

Capacité: 200 kg (paire=2 unités)

UV = 1 unité



C99005-02

### Weld-on hinge

Ø12 mm, length 83 mm, with galvanized pin and intermediate washer with "loose" pin.

Capacity: 100 kg (pair=2 pc)

-02 = Galvanized steel  
-03 = Stainless steel AISI 304 2B

PU = 1 piece

### Anschweißband

Ø12 mm, Länge 83 mm, mit verzinktem Bolzen und Zwischenring mit "losem" Stift.

Tragkraft: 100 kg (Paar=2 Stück)

-02 = Stahl bandverzinkt  
-03 = Edelstahl 1.4301 2B

VE = 1 Stück

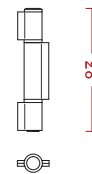
### Paumelle à souder

Ø12 mm, longueur 83 mm, avec goupille galvanisé amovible et rondelle.

Capacité: 100 kg (paire=2 unités)

-02 = Acier galvanisé  
-03 = Acier inoxydable AISI 304 2B

UV = 1 unité



C99006-nn

### Weld-on hinge

Galvanized steel, Ø16 mm, length 140 mm, 3 pc with galvanized pin and intermediate washer with "loose" pin.

Capacity: 230 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Stahl bandverzinkt, Ø16 mm, Länge 140 mm, 3-teilig mit verzinktem Bolzen und Zwischenring mit "losem" Stift.

Tragkraft: 230 kg (Paar=2 Stück)

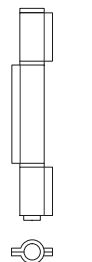
VE = 1 Stück

### Paumelle à souder

Acier galvanisé, Ø16 mm, longueur 140 mm, 3 parties avec goupille galvanisé amovible et rondelle.

Capacité: 230 kg (paire=2 unités)

UV = 1 unité



C99007-02

### Weld-on hinge

Weld-on hinge, bright steel, Ø20 mm, length 178 mm, 2-dimensional adjustable.

Capacity: 260 kg (pair=2 pc)

PU = 1 piece

### Anschweißband

Anschweißband, Stahl blank, Ø20 mm, Länge 178 mm, 2-dimensional verstellbares.

Tragkraft: 260 kg (Paar=2 Stück)

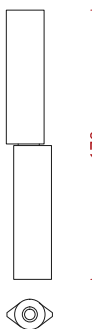
VE = 1 Stück

### Paumelle à souder

Paumelle à souder, acier décapé, Ø20 mm, longueur 178 mm, réglage sur 2 dimensions.

Capacité: 260 kg (paire=2 unités)

UV = 1 unité



C99120-12

### 3D Weld-on hinge

3-dimensional adjustable hinge for windows and doors.  
Length 122 mm, Ø16 mm, with low-maintenance bushes made of brass, eccentric spindle and screw plug made from stainless steel AISI 304

Adjustability:  
Height  $\pm 2$  mm;  
Lateral contact pressure  $\pm 1$  mm

Capacity: 160 kg (pair=2 pc)

-04 = Satin stainless steel AISI 304  
-12 = Bright steel  
(End caps in galvanized steel. In case of Cor-Ten finishing needed n°2 Q99966-12).

PU = 1 piece

### 3D Anschweißband

3-dimensional verstellbares Band für Fenster und Türen.  
Länge 122 mm, Ø16mm, mit wartungsarmer Gleitlagerung aus Spezialbronze, Exzenter-Dorn und Verschluss-Schraube aus Edelstahl 1.4301

Verstellbarkeit:  
Höhe  $\pm 2$  mm  
Seite und Anpressdruck  $\pm 1$  mm

Tragkraft: 160 kg (Paar= 2 Stück)

-04 = Satiniert Edelstahl 1.4301  
-12 = Stahl blank  
(Endkappen aus verzinktem Stahl. Bei Cor-Ten-Nachbearbeitung erforderlich 2x Q99966-12).

VE = 1 Stück

### Paumelle à souder 3D

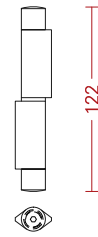
Réglage sur 3 dimensions pour fenêtres et portes.  
Longueur 122 mm, Ø16 mm, avec insert en bronze, tenon en inox et vis de blocage en acier inoxydable AISI 304.

Réglage:  
Verticalement  $\pm 2$  mm  
Horizontalement  $\pm 1$  mm

Capacité: 160 kg (paire=2 unités)

-04 = Acier inoxydable AISI 304 brossé  
-12 = Acier décapé  
(Embouts en acier galvanisé. En cas de finition Cor-Ten nécessaire n°2 Q99966-12).

UV = 1 unité



C99008-nn

### End caps for hinges

For Ø16 mm 3D weld-on hinge.

-02 = Galvanized steel  
-04 = Satin stainless steel AISI 304  
-12 = Bright steel

PU = 1 piece

### Endkappen für Band

Für 3D Anschweißband, Ø16 mm

-02 = Stahl bandverzinkt  
-04 = Satiniert Edelstahl 1.4301  
-12 = Stahl blank

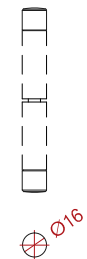
VE = 1 Stück

### Embouts pour paumelle

Pour paumelle à souder 3D, Ø16 mm

-02 = Acier galvanisé  
-04 = Acier inoxydable AISI 304 brossé  
-12 = Acier décapé

UV = 1 unité



Q99966-nn

### 3D Weld-on hinge

3-dimensional adjustable hinge for windows and doors.  
Length 178 mm, Ø20 mm, with low-maintenance bushes made of brass, eccentric spindle and screw plug made from stainless steel AISI 304

Adjustability:  
Height  $\pm 2$  mm;  
Lateral contact pressure  $\pm 1$  mm

Capacity: 210 kg (pair=2 pc)

-04 = Satin stainless steel AISI 304  
-12 = Bright steel  
(End caps in galvanized steel. In case of Cor-Ten finishing needed n°2 Q99965-12).

PU = 1 piece

### 3D Anschweißband

3-dimensional verstellbares Band für Fenster und Türen.  
Länge 178 mm, Ø20 mm, mit wartungsarmer Gleitlagerung aus Spezialbronze, Exzenter-Dorn und Verschluss-Schraube aus Edelstahl 1.4301

Verstellbarkeit:  
Höhe  $\pm 2$  mm  
Seite und Anpressdruck  $\pm 1$  mm

Tragkraft: 210 kg (Paar= 2 Stück)

-04 = Satiniert Edelstahl 1.4301  
-12 = Stahl blank  
(Endkappen aus verzinktem Stahl. Bei Cor-Ten-Nachbearbeitung erforderlich 2x Q99965-12).

VE = 1 Stück

### Paumelle à souder 3D

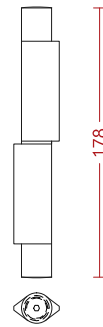
Réglage sur 3 dimensions pour fenêtres et portes.  
Longueur 178 mm, Ø20 mm, avec insert en bronze, tenon en inox et vis de blocage en acier inoxydable AISI 304.

Réglage:  
Verticalement  $\pm 2$  mm  
Horizontalement  $\pm 1$  mm

Capacité: 210 kg (paire=2 unités)

-04 = Acier inoxydable AISI 304 brossé  
-12 = Acier décapé  
(Embouts en acier galvanisé. En cas de finition Cor-Ten nécessaire n°2 Q99965-12).

UV = 1 unité



C99009-nn

### End caps for hinges

For Ø20 mm 3D weld-on hinge.

-02 = Galvanized steel  
-04 = Satin stainless steel AISI 304  
-12 = Bright steel

PU = 1 piece

### Endkappen für Band

Für 3D Anschweißband, Ø20 mm

-02 = Stahl bandverzinkt  
-04 = Satiniert Edelstahl 1.4301  
-12 = Stahl blank

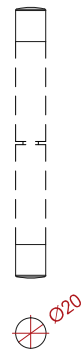
VE = 1 Stück

### Embouts pour paumelle

Pour paumelle à souder 3D, Ø20 mm

-02 = Acier galvanisé  
-04 = Acier inoxydable AISI 304 brossé  
-12 = Acier décapé

UV = 1 unité



Q99965-nn

### Friction stay (projecting)

Stainless steel AISI 316L 2B, for open out top hung projecting windows with adjustable opening angles.

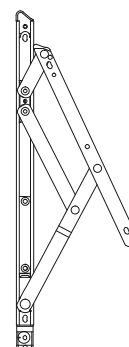
### Senk-Klapp-Schere

Edelstahl 1.4404 2B, für Senkkklapp-Fenster nach außen öffnend mit einstellbarem Öffnungswinkel.

### Compas pour ouverture à l'italienne

Acier inoxydable AISI 316L 2B, pour fenêtres à l'italienne ouvrant vers l'extérieur avec angle d'ouverture réglable.

| Code<br>Code<br>Code | Capacity<br>Tragkraft<br>Capacité<br>[kg] | H size<br>H Größe<br>H dimension<br>[mm] | Opening angle<br>Öffnungswinkel<br>Angle d'ouverture<br>[°] |
|----------------------|-------------------------------------------|------------------------------------------|-------------------------------------------------------------|
| C99201-05            | 40                                        | 270-640                                  | 50                                                          |
| C99202-05            | 50                                        | 640-800                                  | 50                                                          |
| C99203-05            | 65                                        | 800-1100                                 | 50                                                          |
| C99204-05            | 100                                       | 600-1100                                 | 30                                                          |
| C99205-05            | 100                                       | 1100-1500                                | 45                                                          |
| C99206-05            | 100                                       | 1500-2000                                | 20                                                          |
| C99207-05            | 180                                       | 2000-2500                                | 20                                                          |



C9920X-05

PU = 1 pair

VE = 1 Paar

UV = 1 paire

### Friction stay (turn)

Stainless steel AISI 316L 2B, for open in or open out side hung windows.

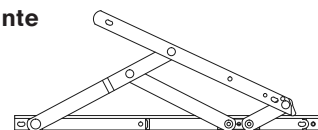
### Dreh-Schere

Edelstahl 1.4404 2B, für Dreh-Fenster nach innen oder außen öffnend.

### Compas pour fenêtre battante

Acier inoxydable AISI 316L 2B, pour fenêtres basculante ouvrant l'intérieur ou l'extérieur.

| Code<br>Code<br>Code | Capacity<br>Tragkraft<br>Capacité<br>[kg] | H size<br>H Größe<br>H dimension<br>[mm] | Opening angle<br>Öffnungswinkel<br>Angle d'ouverture<br>[°] |
|----------------------|-------------------------------------------|------------------------------------------|-------------------------------------------------------------|
| C99210-05            | 22                                        | 300-600                                  | 80                                                          |
| C99211-05            | 24                                        | 400-700                                  | 90                                                          |
| C99212-05            | 38                                        | 300-660                                  | 85                                                          |
| C99213-05            | 55                                        | 450-840                                  | 60                                                          |



C9921X-05

PU = 1 pair

VE = 1 Paar

UV = 1 paire

### Trolley

Galvanized steel, for bi-folding doors, trolley with four wheels an hinge.  
Suitable only for galvanized steel (-02) and bright steel (-12) profiles.

PU = 1 piece

### Laufwagen

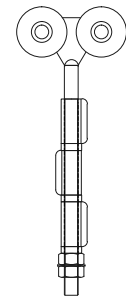
Stahl bandverzinkt, Für Faltwand, Laufwagen vier Rädern und Band. Geeignet nur für Stahl bandverzinkt (-02) und Stahl blank (-12) Profile.

VE = 1 Stück

### Chariot

Acier galvanisé, Pour portes accordéon, chariot à 4 roues et paumelle.  
Seulement pour les profilés en acier galvanisé (-02) et acier décapé (-12).

UV = 1 unité



E99901-02

### Trolley

Galvanized steel, for bi-folding doors, trolley with four wheels an hinge.

PU = 1 piece

### Laufwagen

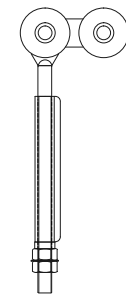
Stahl bandverzinkt, Für Faltwand, Laufwagen vier Rädern und Band.

VE = 1 Stück

### Chariot

Acier galvanisé, Pour portes accordéon, chariot à 4 roues et paumelle.

UV = 1 unité



E99907-02

### Weld-on hinge

Galvanized steel, for bi-folding doors, hinge with three rotating leaves.

PU = 1 piece

### Anschweißband

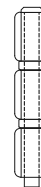
Stahl bandverzinkt, Für Faltwand, Band mit drei drehbaren Laschen.

VE = 1 Stück

### Paumelle à souder

Acier galvanisé, Pour portes accordéon, paumelle à trois vantaux tournants.

UV = 1 unité



E99904-02

### Lower guide pin

Galvanized steel, for bi-folding doors, lower guide pin with olive and hinge.

PU = 1 piece

### Unterer Führungssachse

Stahl bandverzinkt, für Faltwand, Untere Führungssachse mit Rolle und mit Band.

VE = 1 Stück

### Axe de guidage inférieur

Acier galvanisé, Pour portes accordéon, axe de guidage inférieure avec olive et paumelle.

UV = 1 unité



E99903-02

### Note:

Evaluate the class corrosion.

### Anmerkung:

Bitte bewerten Sie die Klassenkorrosion.

### Remarque:

Évaluer la classe de corrosion.

### Lower guide pin

Galvanized steel, for bi-folding doors, lower guide pin with olive and hinge.

PU = 1 piece

### Unterer Führungssachse

Stahl bandverzinkt, für Faltwand, Untere Führungssachse mit Rolle und mit Band.

VE = 1 Stück

### Axe de guidage inférieur

Acier galvanisé, Pour portes accordéon, axe de guidage inférieure avec olive et paumelle.

UV = 1 unité



E99905-02

### Monorail profile

Galvanized steel, for bi-folding doors.

L = 6000 mm

### Laufschienenprofil

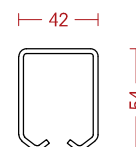
Stahl bandverzinkt, für Faltwand.

L = 6000 mm

### Profilé de rail

Acier galvanisé, pour portes accordéon.

L = 6000 mm



99 5442GU-02

### Lower guide profile

For bi-folding doors.

-02 = Galvanized steel

L = 6000 mm

### Führungsschienenprofil unten

Für Faltwand.

-02 = Stahl bandverzinkt

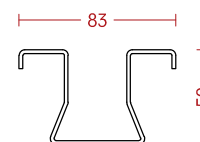
L = 6000 mm

### Profilé de guide inférieur

Pour portes accordéon.

-02 = Acier galvanisé

L = 6000 mm



99 8350GU-02

### Lower guide profile

For bi-folding doors.

-04 = Satin stainless steel AISI 304  
-06 = Satin stainless steel AISI 316L

L = 4000 mm

### Führungsschienenprofil unten

Für Faltwand.

-04 = Satiniert Edelstahl 1.4301  
-06 = Satiniert Edelstahl 1.4404

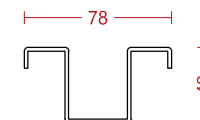
L = 4000 mm

### Profilé de guide inférieur

Pour portes accordéon.

-04 = Acier inoxydable AISI 304 brossé  
-06 = Acier inoxydable AISI 316L brossé

L = 4000 mm



99 7840GU-nn

### Lower guide profile

For bi-folding doors.

-06 = Satin stainless steel AISI 316L

L = 3000 mm

### Führungsschienenprofil unten

Für Faltwand.

-06 = Satiniert Edelstahl 1.4404

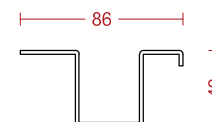
L = 3000 mm

### Profilé de guide inférieur

Pour portes accordéon.

-06 = Acier inoxydable AISI 316L brossé

L = 3000 mm



99 8640GU-nn

### Note:

Evaluate the class corrosion.

### Anmerkung:

Bitte bewerten Sie die Klassenkorrosion.

### Remarque:

Évaluer la classe de corrosion.

**Flush bolts**

**Kantriegel**

**Verrou a bascule**

**3.4**





**Flush bolt with lever  
for doors**

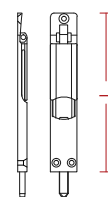
Concealed.  
PU = 1 piece

**Kantriegel  
für Türen**

Verdeckt.  
VE = 1 Stück

**Verrou à bascule  
pour portes**

Câche.  
UV = 1 unité



| code      | L      |
|-----------|--------|
| E99021-35 | 140 mm |
| E99022-35 | 220 mm |
| E99023-35 | 450 mm |
| E99024-35 | 650 mm |

**Shoot bolt for door**

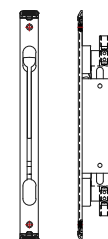
PU = 1 piece

**Kantriegel für Tür**

VE = 1 Stück

**Verrou à bascule pour porte**

UV = 1 unité



E99035-02

**Strike plate**

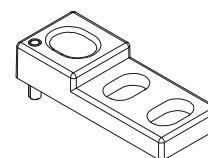
PU = 1 piece

**Schließblech**

VE = 1 Stück

**Gâche**

UV = 1 unité



E99012-11

**Floor recess plate**

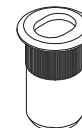
-05 = Stainless steel AISI 316L 2B  
PU = 1 piece

**Bodenmulde**

-05 = Edelstahl 1.4404 2B  
VE = 1 Stück

**Gache au sol**

-05 = Acier inoxydable AISI 316L 2B  
UV = 1 unité



E99013-05



**General fittings**

**Beschläge Allgemein**

**Ferrures générales**

3.5

### Automatic drop seal

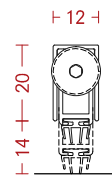
Automatic drop seal with 14 mm lift height, floor compensation.

### Automatische Bodendichtung

Absenkbare Bodendichtung mit 14 mm Hub. Parallelabsenkung mit automatischem Bodenausgleich.

### Joint de seuil automatique

Plinthe avec une course de 14 mm automatique. Abaissement parallèle avec égalisation automatique du seuil.



C995XX-62

| Code<br>Code<br>Code | Length<br>Länge<br>Longueur | Can be shortened<br>Kürzbar<br>Découpable |
|----------------------|-----------------------------|-------------------------------------------|
| G99501-62            | 330 mm                      | 50 mm                                     |
| G99502-62            | 430 mm                      | 135 mm                                    |
| G99503-62            | 530 mm                      | 200 mm                                    |
| G99504-62            | 630 mm                      | 200 mm                                    |
| G99505-62            | 730 mm                      | 200 mm                                    |
| G99506-62            | 830 mm                      | 200 mm                                    |
| G99507-62            | 930 mm                      | 200 mm                                    |
| G99508-62            | 1030 mm                     | 200 mm                                    |
| G99509-62            | 1130 mm                     | 200 mm                                    |
| G99510-62            | 1230 mm                     | 200 mm                                    |

PU = 1 piece

VE = 1 Stück

UV = 1 unité

### Lateral cover cap for automatic drop seal

-35 = black  
-41 = RAL 7035 grey

PU = 1 pair

### Seitliche Abdeckkappe für Automatische Bodendichtung

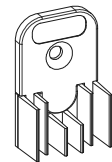
-35 = Schwarz  
-41 = Grau RAL 7035

VE = 1 Paar

### Capuchon latéral pour joint de seuil automatique

-35 = noir  
-41 = gris RAL 7035

UV = 1 paire



G99511-nn

### Handle spindle

-02 = Galvanized steel  
☐ 8 mm L=140 mm

PU = 1 piece

### Drückerstift

-02 = Stahl bandverzinkt  
☐ 8 mm L=140 mm

VE = 1 Stück

### Épingle carrée

-02 = Acier galvanisé  
☐ 8 mm L=140 mm

UV = 1 unité



E99551-02

### Reducing sleeve 8 mm to 7 mm

-02 = Galvanized steel  
☐ 7 mm

PU = 1 piece

### Redezierhülse Von 8 mm auf 7 mm

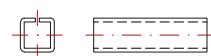
-02 = Stahl bandverzinkt  
☐ 7 mm

VE = 1 Stück

### Réduction carrée poignées 8 mm sur 7 mm

-02 = Acier galvanisé  
☐ 7 mm

UV = 1 unité



E99531-02

### Opening restrictor

Concealed opening restrictor, right/left, fastening with screws.

-02 = Galvanized steel

PU = 1 pair

###  ffnungsbegrenzer

Verdeckter  ffnungsbegrenzer  
Rechts/Links, Befestigung mit  
Schrauben.

-02 = Stahl bandverzinkt

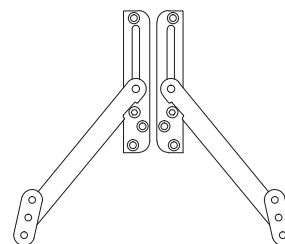
VE = 1 Paar

### Compas de limitation d'ouverture

Limiteur d'ouverture invisible  
droite/gauche, fixation avec vis.

-02 = Acier galvanis 

UV = 1 paire



E99201-02

### Opening restrictor

Concealed opening restrictor, top-hung windows, open out.

-05 = Stainless steel AISI 316L 2B

Capacity: 110 kg (pair)

PU = 1 pair

###  ffnungsbegrenzer

Verdeckter  ffnungsbegrenzer,  
Klappfenster, Nach au en  ffnend.

-05 = Edelstahl 1.4404 2B

Tragkraft: 110 kg (Paar)

VE = 1 Paar

### Compas de limitation d'ouverture

Limiteur d'ouverture invisible, fen tre  
  l'italienne, ouverture vers l'ext rieur.

-05 = Acier inoxydable AISI 316L 2B

Capacit  de charge: 110 kg (couple)

UV = 1 paire



E99203-05

### Opening restrictor

Opening restrictor for ironmongery  
groove profiles. Galvanized steel.

PU = 1 pair

###  ffnungsbegrenzer

Offnung begrenze f r  
Eisenwarenpfrol. Stahl bandverzinkt.

VE = 1 Paar

### Compas de limitation d'ouverture

Limiteur ouverture profil s avec rainur s  
quincaillerie. Acier galvanis 

UV = 1 paire



K88033

### Opening restrictor

Concealed opening restrictor, bottom hung windows, open in and open out.

-05 = Stainless steel AISI 316L 2B

Capacity: 110 kg (pair)

PU = 1 pair

###  ffnungsbegrenzer

Verdeckter  ffnungsbegrenzer, Drehfenster, Nach innen-und au en  ffnend.

-05 = Edelstahl 1.4404 2B

Tragkraft: 110 kg (Paar)

VE = 1 Paar

### Compas de limitation d'ouverture

Limiteur d'ouverture invisible, fen tre   soufflet, ouverture vers l'int rieur et l'ext rieur.

-05 = Acier inoxydable AISI 316L 2B

Capacit  de charge: 110 kg (couple)

UV = 1 paire



E99205-05

### Opening restrictor

Concealed opening restrictor, side and bottom hung windows, open in and open out.

-03 = Stainless steel AISI 304 2B

Capacity: 90 kg (pair)

PU = 1 pair

###  ffnungsbegrenzer

Verdeckter  ffnungsbegrenzer, Drehfenster, Nach innen-und au en  ffnend.

-03 = Edelstahl 1.4301 2B

Tragkraft: 90 kg (Paar)

VE = 1 Paar

### Compas de limitation d'ouverture

Limiteur d'ouverture invisible, fen tre   battante et   soufflet, ouverture vers l'int rieur et l'ext rieur.

-03 = Acier inoxydable AISI 304 2B

Capacit  de charge: 90 kg (couple)

UV = 1 paire



E99206-03

**Tilt&Turn window**

**Dreh-Kippfenster**

**Fênetre oscillo-battant**

**3.6**

### Stabilising scissor stay

Stabilising scissor stay case Euro-channel 18 mm, silver.

PU = 1 piece

### Zweitscherengehäuse

Zweitscherengehäuse Euro-Nut 18 mm, Silber.

VE = 1 Stück

### Gâche pour compas additionel

Gâche pour compas additionnel feuillure plane 18 mm, argent.

UV = 1 unité



MC 52794

### Turn restrictor

Turn restrictor Euro-channel L=187 mm, silver.

PU = 1 piece

### Drehbegrenzung

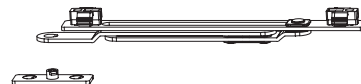
Drehbegrenzung Euro-Nut L=187 mm, Silber.

VE = 1 Stück

### Limiteur d'ouverture

Limiteur d'ouverture, feuillure plane L=187 mm, argent.

UV = 1 unité



MC 103623

### Load transfer

Load transfer for FT 24 mm R, silver.

R = Right opening

PU = 1 piece

### Lastabtragung

Lastabtragung FT 24 mm R, Silber.

R = DIN rechts

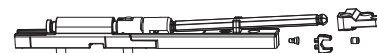
VE = 1 Stück

### Tige de support

Tige de support pour FT 24 mm R, argent.

R = Ouverture droite

UV = 1 unité



MC 105336

### Load transfer

Load transfer for FT 24 mm L, silver.

L = Left opening

PU = 1 piece

### Lastabtragung

Lastabtragung FT 24 mm L, Silber.

L = DIN links

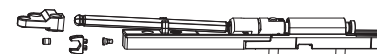
VE = 1 Stück

### Tige de support

Tige de support pour FT 24 mm L, argent.

L = Ouverture gauche

UV = 1 unité



MC 105339



### Adaptor

Adaptor with contact sensor KVS, grey.

PU = 1 piece

### Adapter

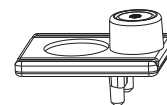
Adapter mit Magnetzapfen KVS, Grau.

VE = 1 Stück

### Adaptateur

Adaptateur avec contact KVS, gris.

UV = 1 unité



MC 200906

### Faceplate extension

Faceplate extension, extendable 235 mm, with 1 i.S., silver.

PU = 1 piece

### Stulpverlängerung verlängerbar

Stulpverlängerung verlängerbar 235 mm, mit 1 i.S., Silber.

VE = 1 Stück

### Prolongateur rallongeable

Prolongateur rallongeable 235 mm, avec 1 i.S., argent.

UV = 1 unité



MC 201750

### Centre lock

Centre lock 1280 mm, with 1 i.S. HBB/LBB 801-1280 mm, silver.

PU = 1 piece

### Mittelverschluss

Mittelverschluss 1280 mm, mit 1 i.S. HBB/LBB 801-1280 mm, Silber.

VE = 1 Stück

### Verrouilleur

Verrouilleur 1280 m, avec 1 i.S. HBB/LBB 801-1280 mm, argent.

UV = 1 unité



MC 201751

### Centre lock

Centre lock 1500 mm, with 1 i.S. HBB/LBB 1281-1500 mm, silver.

PU = 1 piece

### Mittelverschluss

Mittelverschluss 1500 mm, mit 1 i.S. HBB/LBB 1281-1500 mm, Silber.

VE = 1 Stück

### Cierre central

Cierre central 1500 mm, avec 1 bulón i.S. HBB/LBB 1281-1500 mm, argent.

UV = 1 unité



MC 201752

### Centre lock

Centre lock extendable 1500V  
with 1 i.S. HBB/LBB 1281-1500 mm,  
silver.

PU = 1 piece

### Mittelverschluss verlängerbar

Mittelverschluss verlängerbar 1500V  
mit 1 i.S. HBB/LBB 1281-1500 mm,  
Silber.

VE = 1 Stück

### Verrouilleur rallongeable

Verrouilleur rallongeable 1500V  
avec 1 i.S. HBB/LBB 1281-1500  
mm, argent.

UV = 1 unité



MC 201753

### Centre lock extendable

Centre lock extendable 2200V  
with 2 i.S. HBB/LBB 1701-2200 mm,  
silver.

PU = 1 piece

### Mittelverschluss verlängerbar

Mittelverschluss verlängerbar 2200V  
mit 2 i.S. HBB/LBB 1701-2200 mm,  
Silber.

VE = 1 Stück

### Verrouilleur rallongeable

Verrouilleur rallongeable 2200V  
avec 2 i.S. HBB/LBB 1701-2200  
mm, argent.

UV = 1 unité



MC 201754

### Centre lock extendable

Centre lock extendable 1280V  
with 1 i.S. HBB/LBB 801-1280 mm,  
silver.

PU = 1 piece

### Mittelverschluss verlängerbar

Mittelverschluss verlängerbar 1280V  
mit 1 i.S. HBB/ LBB 801-1280 mm,  
Silber.

VE = 1 Stück

### Verrouilleur rallongeable

Verrouilleur rallongeable 1280V  
avec 1 i.S. HBB/LBB 801-1280 mm,  
argent.

UV = 1 unité



MC 201840

### Tilt&Turn drive gear

Tilt&Turn drive gear 2250 mm,  
BS 6.5 mm, variabel with 3 i.S.  
HBB 1751-2250 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 2250 mm, DM 6.5 mm,  
variabel mit 3 i.S. HBB 1751-2250  
mm, Silber.

VE = 1 Stück

### Crémone

Crémone OB 2250 mm,  
DM 6.5 mm, variable avec 3 i.S.  
HBB 1751-2250 mm, argent.

UV = 1 unité



MC 202205

### Turn-only drive gear

Turn-only drive gear 660 mm,  
BS 6.5 mm, fixed handle height  
SRH 455-660 mm, HH 190 mm,  
silver.

PU = 1 piece

### Dreh Getriebe

Dreh Getriebe 660 mm,  
DM 6.5 mm, fix HBB 455-660 mm,  
HH 190 mm, Silber.

VE = 1 Stück

### Crémone OF

Crémone OF 660 mm, DM 6.5 mm,  
fixe HBB 455-660 mm, HH 190 mm,  
argent.

UV = 1 unité



MC 202206

### Tilt&Turn drive gear

Tilt&Turn drive gear 840 mm,  
BS 6.5 mm, fixed handle height  
with 1 i.S. HBB 661-840 mm,  
HH 300 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 840 mm, DM 6.5 mm,  
fix mit 1 i.S. HBB 661-840 mm,  
HH 300 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 840 mm, DM 6.5 mm,  
fixe avec 1 i.S. HBB 661-840 mm,  
HH 300 mm, argent.

UV = 1 unité



MC 202207

### Tilt&Turn drive gear

Tilt&Turn drive gear 1090 mm,  
BS 6.5 mm, fixed handle height  
with 1 i.S. HBB 841-1090 mm,  
HH 400 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1090 mm, DM 6.5 mm,  
fix mit 1 i.S. HBB 841-1090 mm,  
HH 400 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1090 mm, DM 6.5 mm,  
fixe avec 1 i.S. HBB 841-1090 mm,  
HH 400 mm, argent.

UV = 1 unité



MC 202208

### Tilt&Turn drive gear

Tilt&Turn drive gear 1340 mm,  
BS 6.5 mm, fixed handle height  
with 1 i.S. HBB 1091-1340 mm,  
HH 500 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1340 mm, DM 6.5 mm,  
fix mit 1 i.S. HBB 1091-1340 mm,  
HH 500 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1340 mm, DM 6.5 mm,  
fixe avec 1 i.S. HBB 1091-1340 mm,  
HH 500 mm, argent.

UV = 1 unité



MC 202209

### Tilt&Turn drive gear

Tilt&Turn drive gear 1590 mm,  
BS 6.5 mm, fixed handle height with  
2 i.S. HBB 1341-1590 mm,  
HH 600 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1590 mm, DM 6.5 mm,  
fix mit 2 i.S. HBB 1341-1590 mm,  
HH 600 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1590 mm, DM 6.5  
mm, fixe avec 2 i.S. HBB 1341-1590  
mm, HH 600 mm, argent.

UV = 1 unité



MC 202216

### Turn-only drive gear

Turn-only drive gear 800 mm,  
BS 6.5 mm, variabel  
HBB 530-800 mm, silver.

PU = 1 piece

### Dreh Getriebe

Dreh Getriebe 800 mm, DM 6.5  
mm, variabel HBB 530-800 mm,  
Silber.

VE = 1 Stück

### Crémone OF

Crémone OF 800 mm, DM 6.5 mm,  
variable HBB 530-800 mm, argent.

UV = 1 unité



MC 202491

### Tilt&Turn drive gear

Tilt&Turn drive gear 1250 mm,  
BS 6.5 mm, variabel with 1 i.S.  
HBB 801-1250 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1250 mm, DM 6.5 mm,  
variabel mit 1 i.S. HBB 801-1250  
mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1250 mm,  
DM 6.5 mm, variable avec 1 i.S.  
HBB 801-1250 mm, argent.

UV = 1 unité



MC 202492

### Tilt&Turn drive gear

Tilt&Turn drive gear 1750 mm,  
BS 6.5 mm, variabel with 2 i.S.  
HBB 1251-1750 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1750 mm, DM 6.5 mm,  
variabel mit 2 i.S. HBB 1251-1750  
mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1750 mm,  
DM 6.5 mm, variable avec 2 i.S.  
HBB 1251-1750 mm, argent.

UV = 1 unité



MC 202494

### Turn-only drive gear

Turn-only drive gear 2250 mm,  
BS 6.5 mm, variabel with 3 i.S.  
HBB 1751-2250 mm, silver.

PU = 1 piece

### Dreh Getriebe

Dreh Getriebe 2250 mm, DM 6.5  
mm, variabel mit 3 i.S. HBB 1751-  
2250 mm, Silber.

VE = 1 Stück

### Crémone OF

Crémone OF 2250 mm,  
DM 6.5 mm, variable avec 3 i.S.  
HBB 1751-2250 mm, argent.

UV = 1 unité



MC 202497

### Tilt&Turn drive gear

Tilt&Turn drive gear 1950 mm,  
BS 6.5 mm, fixed handle height  
with 3 i.S. HBB 1701-1950 mm,  
HH 1050 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1950 mm, DM 6.5 mm,  
fix mit 3 i.S. HBB 1701-1950 mm,  
HH 1050 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1950 mm,  
DM 6.5 mm, fixe avec 3 i.S. HBB  
1701-1950 mm, HH 1050 mm,  
argent.

UV = 1 unité



MC 202737

### Tilt&Turn drive gear

Tilt&Turn drive gear 2200 mm,  
BS 6.5 mm, fixed handle height  
with 3 i.S. HBB 1951-2200 mm,  
HH 1050 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 2200 mm, DM 6.5 mm,  
fix mit 3 i.S. HBB 1951-2200 mm,  
HH 1050 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 2200 mm,  
DM 6.5 mm, fixe avec 3 i.S. HBB  
1951-2200 mm, HH 1050 mm,  
argent.

UV = 1 unité



MC 202738

### Faceplate extension

Faceplate extension, extendable  
140 mm, silver.

PU = 1 piece

### Stulpverlängerung verlängerbar

Stulpverlängerung verlängerbar  
140 mm, Silber.

VE = 1 Stück

### Prolongateur rallongeable

Prolongateur rallongeable 140 mm,  
argent.

UV = 1 unité



MC 206630

### Corner element

Corner element horizontally extendable short for variable espagnolettes with 1 i.S.  
LBB 320-1800 mm, silver.

PU = 1 piece

### Eckumlenkung

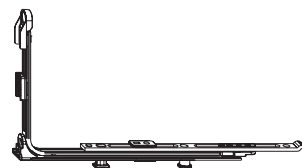
Eckumlenkung waagrecht verlängerbar kurz für variable Getriebe mit 1 i.S.  
LBB 320-1800 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle horizontal rallongeable court pour crémonne variable avec 1 i.S.  
LBB 320-1800 mm, argent.

UV = 1 unité



MC 206860

### Tilt&Turn drive gear

Tilt&Turn drive gear 1700 mm, BS 6.5 mm, fixed handle height with 2 i.S. HBB 1591-1700 mm, HH 700 mm, silver.

PU = 1 piece

### DK Getriebe

DK Getriebe 1700 mm, DM 6.5 mm, fix mit 2 i.S. HBB 1591-1700 mm, HH 700 mm, Silber.

VE = 1 Stück

### Crémone OB

Crémone OB 1700 mm, DM 6.5 mm, fixe avec 2 i.S. HBB 1591-1700 mm, HH 700 mm, argent.

UV = 1 unité



MC 207305

### Espagnolette - centred handle

Espagnolette - centred handle height 500 mm, BS 6.5 mm, with 2 i.S., silver.

PU = 1 piece

### Kantenverschluss

Kantenverschluss mittig 500 mm, DM 6.5 mm, mit 2 i.S., Silber.

VE = 1 Stück

### Crémone-verrou milieu

Crémone-verrou milieu 500 mm, DM 6.5 mm, avec 2 i.S., argent.

UV = 1 unité



MC 208323

### Espagnolette - centred handle

Espagnolette - centred handle height 700 mm, BS 6.5 mm, with 2 i.S., silver.

PU = 1 piece

### Kantenverschluss

Kantenverschluss mittig 700 mm, DM 6.5 mm, mit 2 i.S., Silber.

VE = 1 Stück

### Crémone-verrou

Crémone-verrou milieu 700 mm, DM 6.5 mm, avec 2 i.S., argent.

UV = 1 unité



MC 208324

### Espagnolette - centred handle

Espagnolette - centred handle  
height 1000 mm, BS 6.5 mm  
with 2 i.S., silver.

PU = 1 piece

### Kantenverschluss

Kantenverschluss mittig 1000 mm,  
DM 6.5 mm, mit 2 i.S., Silber.

VE = 1 Stück

### Crémone-verrou

Crémone-verrou milieu 1000 mm,  
DM 6.5 mm, avec 2 i.S., argent.

UV = 1 unité



MC 208325

### Espagnolette - centred handle

Espagnolette - centred handle  
height 1400 mm, BS 6.5 mm  
with 3 i.S., silver.

PU = 1 piece

### Kantenverschluss

Kantenverschluss mittig 1400 mm,  
DM 6.5 mm, mit 3 i.S., Silber.

VE = 1 Stück

### Crémone-verrou

Crémone-verrou milieu 1400 mm,  
DM 6.5 mm, avec 3 i.S., argent.

UV = 1 unité



MC 208326

### Espagnolette - centred handle

Espagnolette - centred handle  
height 1800 mm, BS 6.5 mm  
with 3 i.S., silver.

PU = 1 piece

### Kantenverschluss

Kantenverschluss mittig 1800 mm,  
DM 6.5 mm mit 3 i.S., Silber.

VE = 1 Stück

### Crémone-verrou

Crémone-verrou milieu 1800 mm,  
DM 6.5 mm avec 3 i.S., argent.

UV = 1 unité



MC 208327

### End piece

End piece bottom and top 180°  
with 1 i.S., silver.

PU = 1 piece

### Endverschluss

Endverschluss unten u. oben 180°  
mit 1 i.S., Silber.

VE = 1 Stück

### Embout

Embout bas et haut 180°  
avec 1 i.S., argent.

UV = 1 unité



MC 212211

### Stabilizing scissor stay

Stabilizing scissor stay mounted without night-vent, silver.

PU = 1 piece

### Zweitschere

Zweitschere montiert ohne Sparlüftung, Silber.

VE = 1 Stück

### Compas additionnel prémonté

Compas additionnel prémonté sans fonction entrebâilleur, argent.

UV = 1 unité



MC 213043

### Concealed compression lock ES

Concealed compression lock ES for Eurogroove sash component with lateral adjustment, silver.

PU = 1 piece

### Anpressverschluss

Anpressverschluss verdeckt ES für Beschlagsnut Flügelteil mit Seiteneinstellung, Silber.

VE = 1 Stück

### Fiche médiane

Fiche médiane sous recouvrement ES pour rainure à ferrage partie ouvrant avec réglage latéral, argent.

UV = 1 unité



MC 215577



### Corner support

Corner support 13 mm offset R, silver.

R = Right opening

PU = 1 piece

### Ecklagerband

Ecklagerband 13 mm R, Silber.

R = DIN rechts

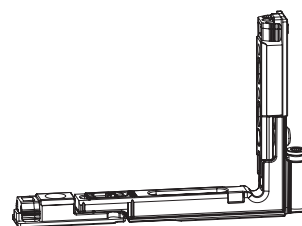
VE = 1 Stück

### Fiche d'angle

Fiche d'angle 13 mm R, argent.

R = Ouverture droite

UV = 1 unité



MC 215804

### Corner support

Corner support 13 mm offset L, silver.

L = Left opening

PU = 1 piece

### Ecklagerband

Ecklagerband 13 mm L, Silber.

L = DIN links

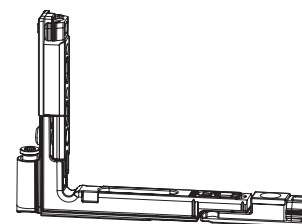
VE = 1 Stück

### Fiche d'angle

Fiche d'angle 13 mm L, argent.

L = Ouverture gauche

UV = 1 unité



MC 215805

### Pivot post

Pivot post R, 24 mm rebate depth, 13 mm offset, silver.

R = Right opening

PU = 1 piece

### Ecklager

Ecklager 13 mm R, FT 24 mm, Silber.

R = DIN rechts

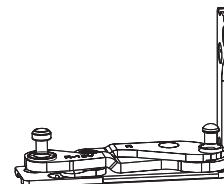
VE = 1 Stück

### Palier d'angle

Palier d'angle R, FT 24 mm 13 mm, argent.

R = Ouverture droite

UV = 1 unité



MC 215810

### Pivot post

Pivot post L, 24 mm rebate depth, 13 mm offset, silver.

L = Left opening

PU = 1 piece

### Ecklager

Ecklager 13 mm L, FT 24 mm, Silber.

L = DIN links

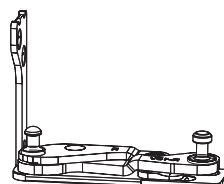
VE = 1 Stück

### Palier d'angle

Palier d'angle L, FT 24 mm 13 mm, argent.

L = Ouverture gauche

UV = 1 unité



MC 215811

### Tilt&Turn/tilt-first scissor

Tilt&Turn/tilt-first scissor stay  
faceplate 600 mm,  
LBB 465-600 mm, silver.

PU = 1 piece

### DK/KD Scherenstulp

DK/KD Scherenstulp 600 mm,  
LBB 465-600 mm, Silber.

VE = 1 Stück

### Têteière de compas

Têteière de compas OB/OB inversé  
600 mm, LBB 465-600 mm, argent.

UV = 1 unité



MC 217346

### Tilt&Turn/tilt-first scissor

Tilt&Turn/tilt-first scissor stay  
faceplate 800 mm,  
LBB 601-800 mm, silver.

PU = 1 piece

### DK/KD Scherenstulp

DK/KD Scherenstulp 800 mm,  
LBB 601-800 mm, Silber.

VE = 1 Stück

### Têteière de compas

Têteière de compas OB/OB inversé  
800 mm, LBB 601-800 mm, argent.

UV = 1 unité



MC 217347

### Tilt&Turn/tilt-first scissor

Tilt&Turn/tilt-first scissor stay  
faceplate 1050 mm, LBB 801-1050  
mm, with 1 i.S., silver.

PU = 1 piece

### DK/KD Scherenstulp

DK/KD Scherenstulp 1050 mm,  
LBB 801-1050 mm, mit 1 i.S., Silber.

VE = 1 Stück

### Fiche d'angle

Têteière de compas OB/OB inversé  
1050 mm, LBB 801-1050 mm, avec  
1 i.S., argent.

UV = 1 unité



MC 217348

### Tilt&Turn/tilt-first scissor

Tilt&Turn/tilt-first scissor stay  
faceplate 1300 mm, LBB 1051-1300  
mm, with 1 i.S., silver.

PU = 1 piece

### DK/KD Scherenstulp

DK/KD Scherenstulp 1300 mm,  
LBB 1051-1300 mm, mit 1 i.S.,  
Silber.

VE = 1 Stück

### Têteière de compas

Têteière de compas OB/OB inversé  
1300 mm, LBB 1051-1300 mm, avec  
1 i.S., argent.

UV = 1 unité



MC 217349

### Tilt&Turn scissor stay

Tilt&Turn scissor stay arm with bearing 600/800 24 mm rebate depth 13 mm offset right LBB 370-800, silver.

R = Right opening

PU = 1 piece

### DK Scherenarm

DK Scherenarm mit Lager 600/800 FT24 mm 13 mm Rechts LBB 370-800, Silber.

R = DIN rechts

VE = 1 Stück

### Bras de compas OB

Bras de compas OB avec palier 600/800 FT 24 mm 13 mm droite LBB 370-800, argent.

R = Ouverture droite

UV = 1 unité



MC 217470

### Tilt&Turn scissor stay

Tilt&Turn scissor stay arm with bearing 600/800 mm, 24 mm rebate depth, 13 mm offset L, LBB 370-800 mm, silver.

L = Left opening

PU = 1 piece

### DK Scherenarm

DK Scherenarm mit Lager 600/800 mm, FT 24 mm 13 mm L, LBB 370-800 mm, Silber.

L = DIN links

VE = 1 Stück

### Bras de compas OB

Bras de compas OB avec palier 600/800 mm, FT 24 mm 13 mm L, LBB 370-800 mm, argent.

L = Ouverture gauche

UV = 1 unité



MC 217471

### Tilt&Turn scissor stay

Tilt&Turn scissor stay arm with bearing 1050/1300 mm, 24 mm rebate depth, 13 mm offset R, LBB 801-1300 mm, silver.

R = Right opening

PU = 1 piece

### DK Scherenarm

DK Scherenarm mit Lager 1050/1300 mm, FT 24 mm 13 mm R, LBB 801-1300 mm Silber.

R = DIN rechts

VE = 1 Stück

### Bras de compas OB

Bras de compas OB avec palier 1050/1300 mm, FT 24 mm 13mm R, LBB 801-1300 mm, argent.

R = Ouverture droite

UV = 1 unité



MC 217474

### Tilt&Turn scissor stay

Tilt&Turn scissor stay arm with bearing 1050/1300 mm, 24 mm rebate depth, 13 mm offset L, LBB 801-1300 mm, silver.

L = Left opening

PU = 1 piece

### DK Scherenarm

DK Scherenarm mit Lager 1050/1300 mm, FT 24 mm 13 mm L, LBB 801-1300 mm, Silber.

L = DIN links

VE = 1 Stück

### Bras de compas OB

Bras de compas OB avec palier 1050/1300 mm, FT 24 mm 13 mm L, LBB 801-1300 mm, argent.

L = Ouverture gauche

UV = 1 unité



MC 217475

### Turn-only hinge arm

Turn-only hinge arm with hinge V2 R, 24 mm rebate depth LBB 255-1400 mm, 13 mm offset, silver.

R = Right opening

PU = 1 piece

### Drehbandarm

Drehbandarm mit Lager V2 R, FT 24 mm, LBB 255-1400 mm, 13 mm, Silber.

R = DIN rechts

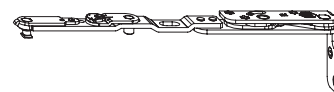
VE = 1 Stück

### Fiche de compas OF

Bras de compas OF avec palier V2 R, FT 24 mm, LBB 255-1400 mm, 13 mm, argent.

R = Ouverture droite

UV = 1 unité



MC 217691

### Turn-only hinge arm

Turn-only hinge arm with hinge V2 L, 24 mm rebate depth, LBB 255-1400 mm, 13 mm offset, silver.

L = Left opening

PU = 1 piece

### Drehbandarm

Drehbandarm mit Lager V2 L, FT 24 mm, LBB 255-1400 mm, 13 mm, Silber.

L = DIN links

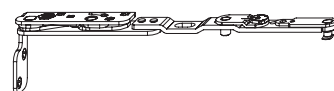
VE = 1 Stück

### Bras de compas OF

Bras de compas OF avec palier V2 L, FT 24 mm, LBB 255-1400 mm, 13 mm, argent.

L = Ouverture gauche

UV = 1 unité



MC 217692

### Tilt-only hinge arm

Tilt-only hinge arm with hinge V2 R, 24 mm rebate depth 13 mm offset, silver.

R = Right opening

PU = 1 piece

### Kippbandarm

Kippbandarm mit Lager V2 R, FT 24 mm 13 mm, Silber.

R = DIN rechts

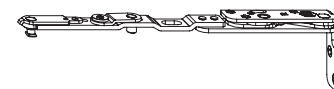
VE = 1 Stück

### Bras de soufflet

Bras de soufflet avec palier V2 R, FT 24 mm 13 mm, argent.

R = Ouverture droite

UV = 1 unité



MC 217723

### Tilt-only hinge arm

Tilt-only hinge arm with hinge V2 L, 24 mm rebate depth 13 mm offset, silver.

L = Left opening

PU = 1 piece

### Kippbandarm

Kippbandarm mit Lager V2 L, FT 24 mm 13 mm, Silber.

L = DIN links

VE = 1 Stück

### Bras de soufflet

Bras de soufflet avec palier V2 L, FT 24 mm 13 mm, argent.

L = Ouverture gauche

UV = 1 unité



MC 217724

### Tilt-only hinge and turn-only hinge

Turn-only and tilt-only faceplate  
FHH V2, LBB 255-1400 mm, silver.

PU = 1 piece

### Dreh- und Kippbandstulp

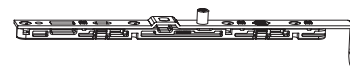
Dreh- und Kippbandstulp fix V2,  
LBB 255-1400 mm, Silber.

VE = 1 Stück

### Têteière OF

Têteière OF et soufflet fixe V2,  
LBB 255-1400 mm, argent.

UV = 1 unité



MC 217729

### Corner element

Corner element with 1 i.S.  
LBB 320-1800 mm, silver.

PU = 1 piece

### Eckumlenkung

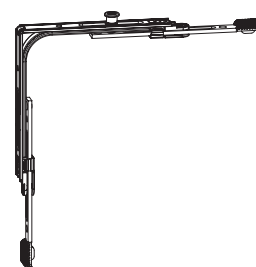
Eckumlenkung mit 1 i.S.  
LBB 320-1800 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle avec 1 i.S.  
LBB 320-1800 mm, argent.

UV = 1 unité



MC 222201

### Corner element

Corner element short with 1 i.S.  
LBB 220-319 mm, silver.

PU = 1 piece

### Eckumlenkung

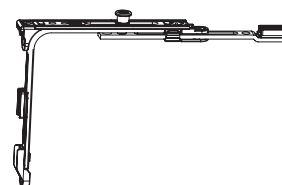
Eckumlenkung kurz mit 1 i.S.  
LBB 220-319 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle court avec 1 i.S.  
LBB 220-319 mm, argent.

UV = 1 unité



MC 222203

### Corner element

Corner element horizontally  
extendable with 1 i.S.  
LBB 320-1800 mm, silver.

PU = 1 piece

### Eckumlenkung

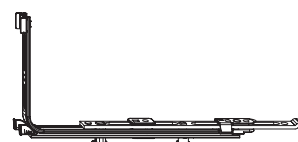
Eckumlenkung waagrecht  
verlängerbar mit 1 i.S.  
LBB 320-1800 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle horizontal  
rallongeable avec 1 i.S.  
LBB 320-1800 mm, argent.

UV = 1 unité



MC 222205

### Corner element

Corner element horizontally extendable for variable drive gear with 1 i.S. LBB 320-1800 mm, silver.

PU = 1 piece

### Eckumlenkung

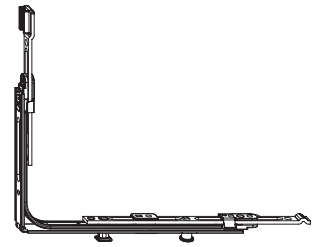
Eckumlenkung waagrecht verlängerbar für variable Getriebe mit 1 i.S. LBB 320-1800 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle horizontal rallongeable pour crémonne variable avec 1 i.S. LBB 320-1800 mm, argent.

UV = 1 unité



MC 222206

### Corner element

Corner element vertically extendable with 1 i.S. HBB 750-2800 mm, silver.

PU = 1 piece

### Eckumlenkung

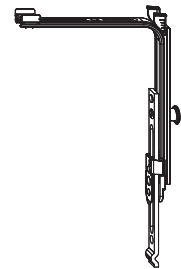
Eckumlenkung senkrecht verlängerbar mit 1 i.S. HBB 750-2800 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle vertical rallongeable avec 1 i.S. HBB 750-2800 mm, argent.

UV = 1 unité



MC 222209

### Travel restriction

90° Travel restriction surface-mounted, silver.

PU = 1 piece

### Hubbegrenzung

Hubbegrenzung 90° aufschraubbar, Silber.

VE = 1 Stück

### Limiteur de course

Limiteur de course 90° à visser, argent.

UV = 1 unité



MC 357081

### Lifting component

Lifting component for R, silver.

R = Right opening

PU = 1 piece

### Flügelheber

Flügelheber R, Silber.

R = DIN rechts

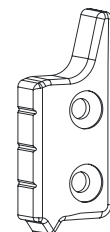
VE = 1 Stück

### Gâche de rehausse

Gâche de rehausse R, argent.

R = Ouverture droite

UV = 1 unité



MC 361004

### Lifting component

Lifting component L, silver.

L = Left opening

PU = 1 piece

### Flügelheber

Flügelheber L, Silber.

L = DIN links

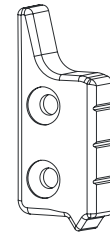
VE = 1 Stück

### Gâche de rehausse

Gâche de rehausse L, argent.

L = Ouverture gauche

UV = 1 unité



MC 361005

### Striker plate

Striker plate i.S., silver.

PU = 1 pieceww

### Schließteil

Schließteil i.S., Silber.

VE = 1 Stück

### Gâche

Gâche i.S., argent.

UV = 1 unité



MC 364310

### Strike plate for concealed compression

Strike plate for concealed compression lock ES Euro-channel 24 mm rebate depth 13 mm offset frame component, pearl light grey RAL9022.

PU = 1 piece

### Verriegelungsstück für Anpressverschluss

Verriegelungsstück für Anpressverschluss verdeckt ES Euro-Nut FT 24 mm 13 mm, Rahmenteil Perlhellgrau RAL9022.

VE = 1 Stück

### Gâche pour fiche médiane

Gâche pour fiche médiane sous recouvrement ES feuillure plane FT 24 mm 13 mm pièce dormant, gris clair perle RAL9022.

UV = 1 unité



MC 365161

### Flat magnet contact

Flat magnet contact for surface safety class 2 cable 3 m, light grey RAL7035.

PU = 1 piece

### Flacher Magnetkontakt

Flacher Magnetkontakt für Oberfläche Schutzklasse 2 Kabel 3 m, Lichtgrau RAL7035.

VE = 1 Stück

### Contact magnétique

Contact magnétique plat pour surface classe de protection 2 câble 3 m, gris clair RAL7035.

UV = 1 unité



MC 473010

### French casement drive gear

French casement drive gear fixed handle height 660 mm, HBB 431-660 mm, HH 190 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 660 mm, HBB 431-660 mm, HH 190 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 660 mm, HBB 431-660 mm, HH 190 mm, argent.

UV = 1 unité



MC 202873

### French casement drive gear

French casement drive gear fixed handle height 840 mm, for 1 i.S. HBB 661-840 mm, HH 300 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 840 mm, für 1 i.S. HBB 661-840 mm, HH 300 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 840 mm, pour 1 i.S. HBB 661-840 mm, HH 300 mm, argent.

UV = 1 unité



MC 221901

### French casement drive gear

French casement drive gear fixed handle height 1090 mm, for 1 i.S. HBB 841-1090 mm, HH 400 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 1090 mm, für 1 i.S. HBB 841-1090 mm, HH 400 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 1090 mm, pour 1 i.S. HBB 841-1090 mm, HH 400 mm, argent.

UV = 1 unité



MC 221902

### French casement drive gear

French casement drive gear fixed handle height 1340 mm, for 1 i.S. HBB 1091-1340 mm, HH 500mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 1340 mm, für 1 i.S. HBB 1091-1340 mm, HH 500 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 1340 mm, pour 1 i.S. HBB 1091-1340 mm, HH 500 mm, argent.

UV = 1 unité



MC 221903



### French casement drive gear

French casement drive gear fixed handle height 1590 mm, for 2 i.S. HBB 1341-1590 mm, HH 600 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 1590 mm, für 2 i.S. HBB 1341-1590 mm, HH 600 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 1590 mm, pour 2 i.S. HBB 1341-1590 mm, HH 600 mm, argent.

UV = 1 unité



MC 221906

### French casement drive gear

French casement drive gear fixed handle height 1700 mm, for 2 i.S. HBB 1591-1700 mm, HH 700 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 1700 mm, für 2 i.S. HBB 1591-1700 mm, HH 700 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 1700 mm, pour 2 i.S. HBB 1591-1700 mm, HH 700 mm, argent.

UV = 1 unité



MC 207242

### French casement drive gear

French casement drive gear fixed handle height 1950 mm, for 3 i.S. HBB 1701-1950 mm, HH 1050 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 1950 mm, für 3 i.S. HBB 1701-1950 mm, HH 1050 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 1950 mm, pour 3 i.S. HBB 1701-1950 mm, HH 1050 mm, argent.

UV = 1 unité



MC 221907

### French casement drive gear

French casement drive gear fixed handle height 2200 mm, for 3 i.S. HBB 1951-2200 mm, HH 1050 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 2200 mm, für 3 i.S. HBB 1951-2200 mm, HH 1050 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 2200 mm, pour 3 i.S. HBB 1951-2200 mm, HH 1050 mm, argent.

UV = 1 unité



MC 221908

### French casement drive gear

French casement drive gear fixed handle height 2450 mm, for 4 i.S HBB 2201-2450 mm, HH 1050 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe fix

Stulpflügelgetriebe fix 2450 mm, für 4 i.S. HBB 2201-2450 mm, HH 1050 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe fixe 2450 mm, pour 4 i.S HBB 2201-2450 mm, HH 1050 mm, argent.

UV = 1 unité



MC 221909

### Corner element

Corner element french casement drive gear variable 1250 mm, lever, with 1 i.S. HBB 801-1250 mm, silver.

PU = 1 piece

### Eckumlenkung Stulpflügelgetriebe

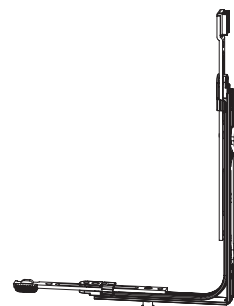
Eckumlenkung Stulpflügelgetriebe variabel 1250 mm, Spreizhebel, mit 1 i.S. HBB 801-1250 mm, Silber.

VE = 1 Stück

### Renvoi d'angle

Renvoi d'angle crémone semi-fixe variable 1250 mm, levier, avec 1 i.S. HBB 801-1250 mm, argent

UV = 1 unité



MC 202475

### French casement drive gear

French casement drive gear variable 800 mm, with 1 i.S. HBB 695-800 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe

Stulpflügelgetriebe variabel 800 mm, mit 1 i.S. HBB 695-800 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe variable 800 mm, avec 1 i.S. HBB 695-800 mm, argent

UV = 1 unité



MC 227937

### French casement drive gear

French casement drive gear variable 1250 mm, with 1 i.S. HBB 801-1250 mm, silver.

PU = 1 piece

### Stulpflügelgetriebe variabel

Stulpflügelgetriebe variabel 1250 mm, mit 1 i.S. HBB 801-1250 mm, Silber.

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe variable 1250 mm, avec 1 i.S. HBB 801-1250 mm, argent.

UV = 1 unité



MC 202471

### Faceplate extension

Faceplate extension French casement drive gear 235 mm with striker, silver.

PU = 1 piece

### Stulpverlängerung Stulpflügelgetriebe

Stulpverlängerung Stulpflügelgetriebe 235 mm mit Schließteil, Silber.

VE = 1 Stück

### Rallonge de tête

Rallonge de tête crémone de semi-fixe 235 mm avec gâche, argent.

UV = 1 unité



MC 203810

### Faceplate extension

Faceplate extension French casement drive gear 470 mm with striker, silver.

PU = 1 piece

### Stulpverlängerung Stulpflügelgetriebe

Stulpverlängerung Stulpflügelgetriebe 470 mm mit Schließteil, Silber.

VE = 1 Stück

### Rallonge de tête

Rallonge de tête crémone de semi-fixe 470 mm avec gâche, argent.

UV = 1 unité



MC 208333

### Rebated corner support

Rebated corner support 12/20-13 R, silver.

R = Right opening

PU = 1 piece

### Falzecklagerband

Falzecklagerband 12/20-13 R, Silber.

R = Rechts öffnend

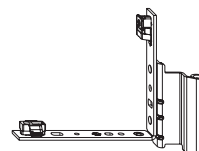
VE = 1 Stück

### Fiche d'angle

Fiche d'angle en feuillure 12/20-13 R, argent.

R = Ouverture droite

UV = 1 unité



MC 54892

### Rebated corner support

Rebated corner support 12/20-13 L, silver.

L = Left opening

PU = 1 piece

### Falzecklagerband

Falzecklagerband 12/20-13 L, Silber.

R = Links öffnend

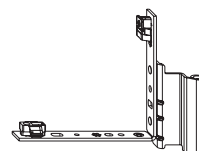
VE = 1 Stück

### Fiche d'angle

Fiche d'angle en feuillure 12/20-13 L, argent.

L = Ouverture gauche

UV = 1 unité



MC 54893

### Pivot post

Pivot post with supporting pins 3 mm D=7 mm, silver.

PU = 1 piece

### Ecklager

Ecklager mit Tragezapfen 3 mm D=7 mm, Silber

VE = 1 Stück

### Palier d'angle

Palier d'angle avec goujons de D=7 mm, courts 3 mm, argent.

UV = 1 unité



MC 52485

### Scissor stay hinge

Scissor stay hinge with D=7 mm supporting pin, silver.

PU = 1 piece

### Scherenlager

Scherenlager mit D=7 mm Tragezapfen, Silber.

VE = 1 Stück

### Palier de compas

Palier de compas avec goujons de D=7 mm, argent.

UV = 1 unité



MC 52481

### Scissor stay hinge pin

Scissor stay hinge pin for scissor stay hinges, silver.

PU = 1 piece

### Scherenlagerstift für

Scherenlagerstift für Scherenlager, Silber.

VE = 1 Stück

### Axe pour

Axe pour palier de compas, argent.

UV = 1 unité



MC 94491

### Scissor stay mounted

Scissor stay mounted without night-vent 400 mm, LBB 320-400 mm, silver.

PU = 1 piece

### Schere montiert ohne

Schere montiert ohne Sparlüftung 400 mm, LBB 320-400 mm, Silber.

VE = 1 Stück

### Compas prémonté

Compas prémonté sans entrebâilleur 400 mm, LBB 320-400 mm, argent.

UV = 1 unité



MC 211694

### Scissor stay mounted

Scissor stay mounted without  
night-vent 600 mm,  
LBB 401-600 mm, silver.

PU = 1 piece

### Schere montiert ohne

Schere montiert ohne Sparlüftung  
600 mm, LBB 401-600 mm, Silber.

VE = 1 Stück

### Compas prémonté

Compas prémonté sans  
entrebâilleur 600 mm,  
LBB 401-600 mm, argent.

UV = 1 unité



MC 211695

### Scissor stay mounted

Scissor stay mounted without  
night-vent 800 mm,  
LBB 601-800 mm, silver.

PU = 1 piece

### Schere montiert

Schere montiert ohne Sparlüftung  
800 mm, LBB 601-800 mm, Silber.

VE = 1 Stück

### Compas prémonté

Compas prémonté sans  
entrebâilleur 800 mm,  
LBB 601-800 mm, argent.

UV = 1 unité



MC 211696

### Scissor stay mounted

Scissor stay mounted without  
night-vent 1050 mm,  
LBB 801-1050 mm with 1 i.S. silver.

PU = 1 piece

### Schere montiert

Schere montiert ohne Sparlüftung  
1050 mm, LBB 801-1050 mm mit 1  
i.S. Silber.

VE = 1 Stück

### Compas prémonté

Compas prémonté sans  
entrebâilleur 1050 mm, LBB 801-  
1050 mm avec 1 i.S. argent.

UV = 1 unité



MC 211905

### Scissor stay mounted

Scissor stay mounted without  
night-vent 1300 mm, LBB 1051-  
1300 mm with 1 i.S. silver.

PU = 1 piece

### Schere montiert

Schere montiert ohne Sparlüftung  
1300 mm, LBB 1051-1300 mm mit 1  
i.S. Silber.

VE = 1 Stück

### Compas prémonté

Compas prémonté sans  
entrebâilleur 1300 mm, LBB 1051-  
1300 mm avec 1 i.S. argent.

UV = 1 unité



MC 211906

### Rebated scissor stay support

Rebated scissor stay support arm 12/20-13, silver.

PU = 1 piece

### Bandwinkel

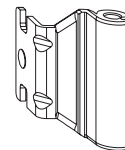
Bandwinkel 12/20-13, Silber.

VE = 1 Stück

### Fiche de compas

Fiche de compas 12/20-13, argent.

UV = 1 unité



MC 52486

### Turn-only hinge

Turn-only hinge on top + AS corner hinge version, silver.

PU = 1 piece

### Drehband oben

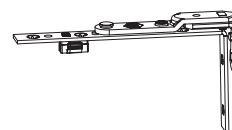
Drehband oben Winkelbandausführung, Silber.

VE = 1 Stück

### Compas OF

Compas OF haut version compas en applique, argent.

UV = 1 unité



MC 52462

### Tilt-only hinge

Tilt-only hinge and turn-only hinge, adjustable, silver.

PU = 1 piece

### Kipp- und Drehband

Kipp- und Drehband, einstellbar, Silber.

VE = 1 Stück

### Paumelle soufflet et OF

Paumelle soufflet et OF, réglable, argent.

UV = 1 unité



MC 52321



**Basic kits for Tilt&Turn windows**

**Grundgarnitur Dreh-Kippfenster**

**Kits de base pour fênêtre oscillo-battant**

**K88001**  
Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

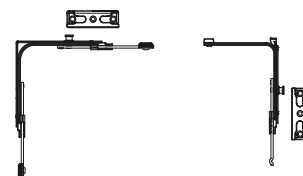
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**K88001**  
Standardfenster

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

**K88001**  
Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm



**K88002**

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**K88002**

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

**K88002**

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm



**K88002**  
Short corner  
for low windows

LBB = 465 - 815 mm  
HBB = 370 - 454 mm

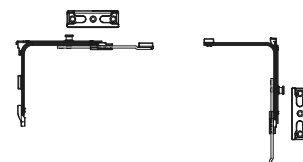
MC 222203 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**K88002**  
Kurze Ecke  
für niedrige Fenster

LBB = 465 - 815 mm  
HBB = 370 - 454 mm

**K88002**  
Coin court  
pour fenêtres basses

LBB = 465 - 815 mm  
HBB = 370 - 454 mm





## Gear kits

## Garnitur Getriebe

## Kits d'équipement

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm

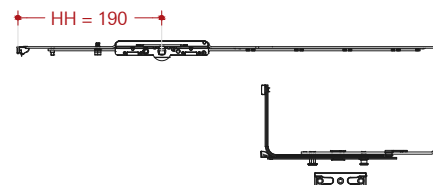
MC 202206 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°01 piece

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm



### K88004

HH = 300 mm  
HBB = 661 - 1790 mm

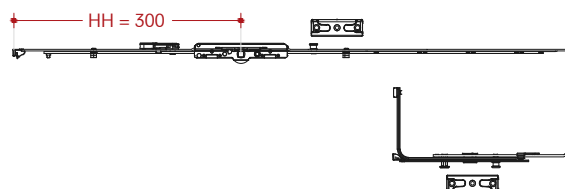
MC 202207 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88004

HH = 300 mm  
HBB = 661 - 1790 mm

### K88004

HH = 300 mm  
HBB = 661 - 1790 mm



### K88005

HH = 400 mm  
HBB = 841 - 2040 mm

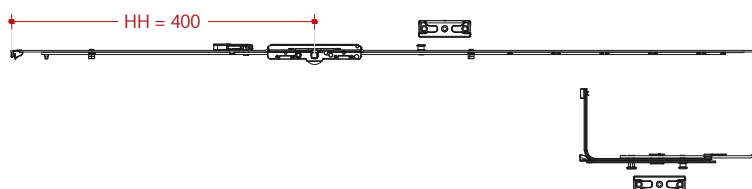
MC 202208 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88005

HH = 400 mm  
HBB = 841 - 2040 mm

### K88005

HH = 400 mm  
HBB = 841 - 2040 mm



### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

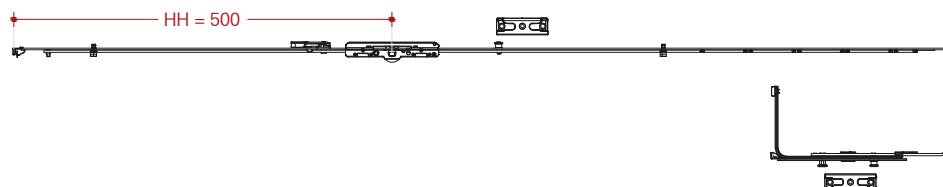
MC 202209 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm



## Gear kits

## Garnitur Getriebe

## Kits d'équipement

### K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

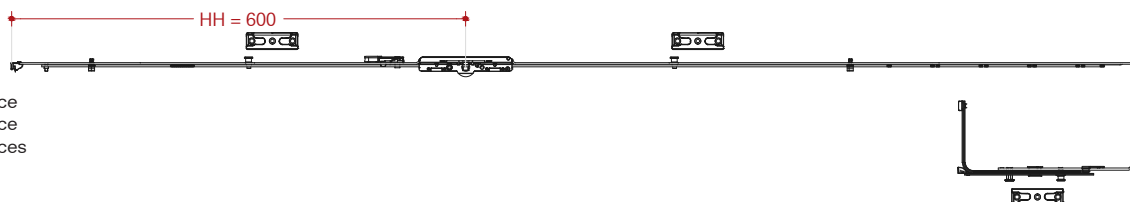
### K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

### K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

MC 202216 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces



### K88008

HH = 700 mm  
HBB = 1591 - 2650 mm

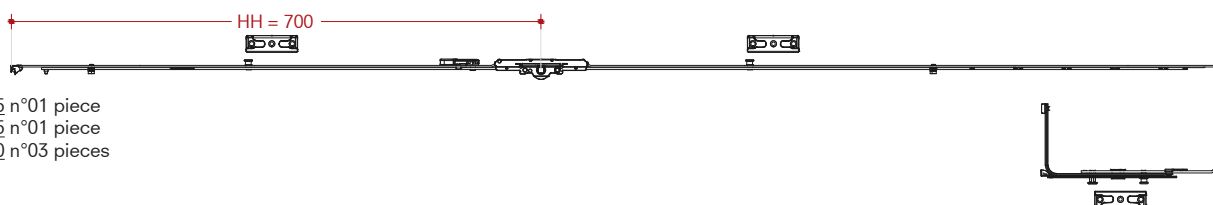
### K88008

HH = 700 mm  
HBB = 1591 - 2650 mm

### K88008

HH = 700 mm  
HBB = 1591 - 2650 mm

MC 207305 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces



### K88009

HH = 1050 mm  
HBB = 1701 - 2900 mm

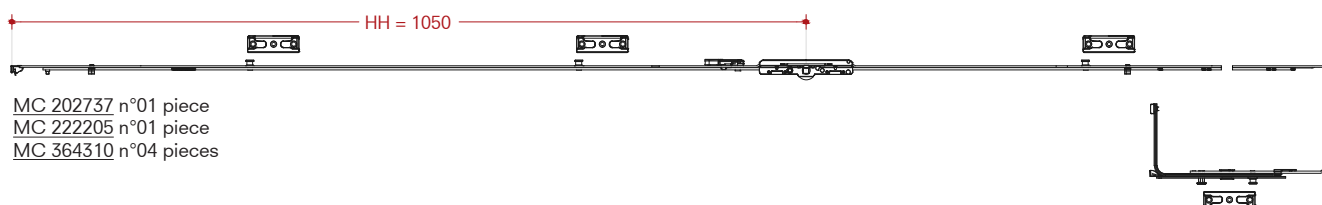
### K88009

HH = 1050 mm  
HBB = 1701 - 2900 mm

### K88009

HH = 1050 mm  
HBB = 1701 - 2900 mm

MC 202737 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces



### K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm

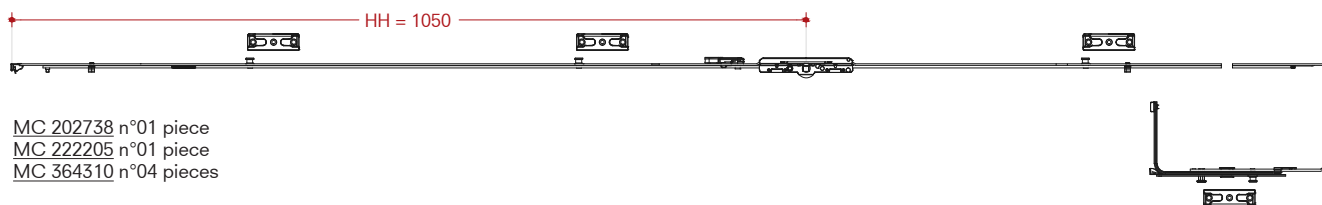
### K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm

### K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm

MC 202738 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces



Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm



K88012

141 - 235 mm

MC 201750 n°01 piece  
MC 364310 n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm



K88059

236 - 375 mm

MC 201750 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm



K88013

376 - 470 mm

MC 201840 n°01 piece  
MC 364310 n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm



## Extension kits

## Garnitur Getriebeverlängerung

## Kits extension d'équipement

K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88014

471 - 610 mm

K88014

471 - 610 mm



K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece1  
MC 364310 n°02 pieces

K88015

611 - 705 mm

K88015

611 - 705 mm



K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88060

706 - 845 mm

K88060

706 - 845 mm



K88016

846 - 940 mm

MC 201840 n°02 pieces  
MC 364310 n°02 pieces

K88016

846 - 940 mm

K88016

846 - 940 mm



**Scissors and hinges kits**  
Right opening

**Garnitur Scheren und Bänder**  
DIN rechts

**Kits pinces et paumelles**  
Ouverture droite

K88017

LBB = 370 - 600 mm

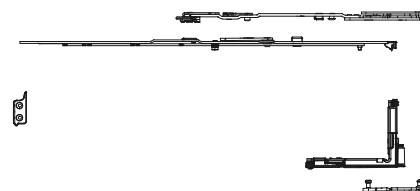
MC 217470 n°01 piece  
MC 217346 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece

K88017

LBB = 370 - 600 mm

K88017

LBB = 370 - 600 mm



K88018

LBB = 601 - 800 mm

MC 217470 n°01 piece  
MC 217347 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece

K88018

LBB = 601 - 800 mm

K88018

LBB = 601 - 800 mm



K88019

LBB = 801 - 1050 mm

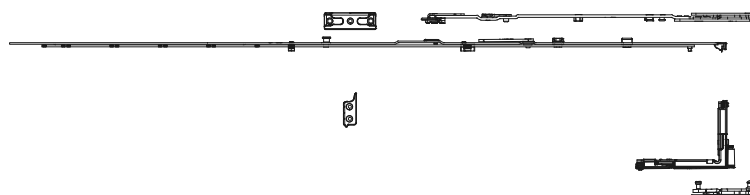
MC 217474 n°01 piece  
MC 217348 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

K88019

LBB = 801 - 1050 mm

K88019

LBB = 801 - 1050 mm



**Scissors and hinges kits**  
Right opening

**Garnitur Scheren und Bänder**  
DIN rechts

**Kits pinces et paumelles**  
Ouverture droite

K88020

LBB = 1051 - 1285 mm

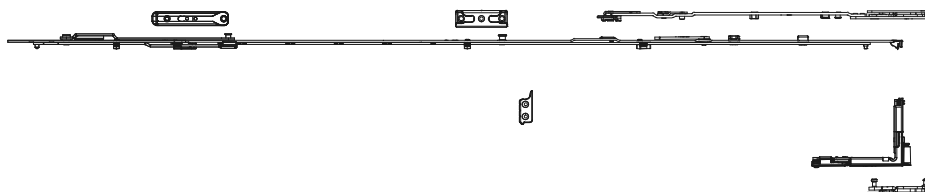
MC 217474 n°01 piece  
MC 217348 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

K88020

LBB = 1051 - 1285 mm

K88020

LBB = 1051 - 1285 mm



K88021

LBB = 1286 - 1400 mm

MC 217474 n°01 piece  
MC 217349 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

K88021

LBB = 1286 - 1400 mm

K88021

LBB = 1286 - 1400 mm



**Scissors and hinges kits**  
Left opening

**Garnitur Scheren und Bänder**  
DIN links

**Kits pinces et paumelles**  
Ouverture gauche

K88022

LBB = 370 - 600 mm

MC 217471 n°01 piece  
MC 217346 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece

K88022

LBB = 370 - 600 mm

K88022

LBB = 370 - 600 mm



K88023

LBB = 601 - 800 mm

MC 217471 n°01 piece  
MC 217347 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece

K88023

LBB = 601 - 800 mm

K88023

LBB = 601 - 800 mm



K88024

LBB = 801 - 1050 mm

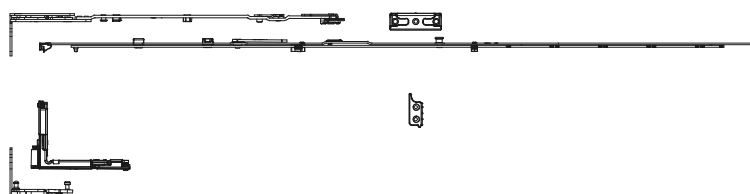
MC 217475 n°01 piece  
MC 217348 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

K88024

LBB = 801 - 1050 mm

K88024

LBB = 801 - 1050 mm



## Scissors and hinges kits

Left opening

## Garnitur Scheren und Bänder

DIN links

## Kits pinces et paumelles

Ouverture gauche

K88025

LBB = 1051 - 1285 mm

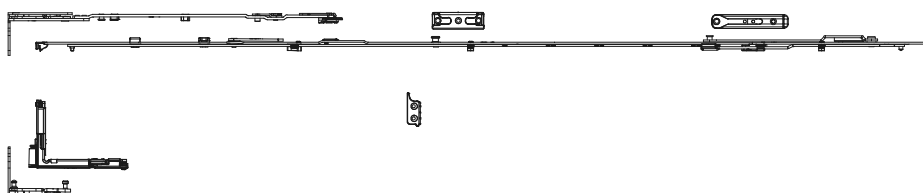
MC 217475 n°01 piece  
MC 217348 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

K88025

LBB = 1051 - 1285 mm

K88025

LBB = 1051 - 1285 mm



K88026

LBB = 1286 - 1400 mm

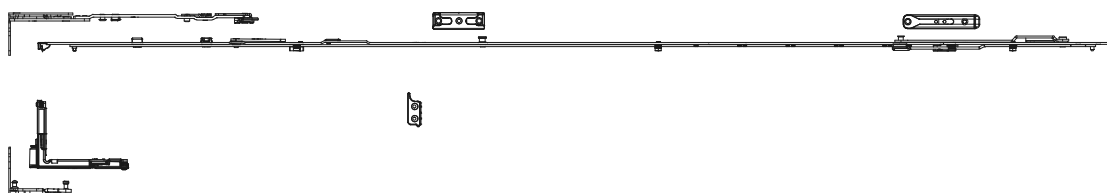
MC 217475 n°01 piece  
MC 217349 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

K88026

LBB = 1286 - 1400 mm

K88026

LBB = 1286 - 1400 mm





**Additional hinge side  
locking point**

**Garnitur Zusatzverriegelung  
Bandseite**

**Point de verrouillage  
supplémentaire côté paumelle**

K88027

HBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

K88027

HBB = 801 - 1280 mm

K88027

HBB = 801 - 1280 mm



K88028

HBB = 1281 - 1500 mm

MC 201752 n°01 piece  
MC 364310 n°01 piece

K88028

HBB = 1281 - 1500 mm

K88028

HBB = 1281 - 1500 mm



K88029

HBB = 1501 - 1700 mm

MC 201840 n°01 piece  
MC 201753 n°01 piece  
MC 364310 n°02 pieces

K88029

HBB = 1501 - 1700 mm

K88029

HBB = 1501 - 1700 mm



K88030

HBB = 1701 - 2800 mm

MC 201754 n°01 piece  
MC 364310 n°02 pieces

K88030

HBB = 1701 - 2800 mm

K88030

HBB = 1701 - 2800 mm



**Additional hinge bottom side  
locking point**

**Zusätzliche Verriegelungen  
Bandunterseite**

**Point de verrouillage supplémentaire  
côté inférieur paumelle**

K88031

LBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

K88031

LBB = 801 - 1280 mm

K88031

LBB = 801 - 1280 mm



K88032

LBB = 1281 - 1400 mm

MC 201752 n°01 piece  
MC 364310 n°01 piece

K88032

LBB = 1281 - 1400 mm

K88032

LBB = 1281 - 1400 mm



**Hinges kits  
2nd leaf**

**Garnitur Scheren- und Bandlager  
Standflügel**

**Kits paumelles  
2e ouvrant**

K88034

Right hinges

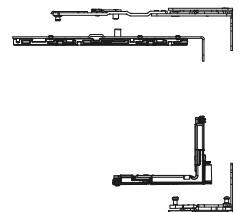
MC 217691 n°01 piece  
MC 217729 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece

K88034

Recht Band

K88034

Droite paumelles



K88035

Left hinges

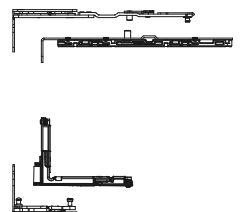
MC 217692 n°01 piece  
MC 217729 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece

K88035

Links Band

K88035

Gauche paumelles



### Concealed compression locks kits

### Anpressverschluss verdeckt

### Kits de serrures à compression cachée

K88036

HBB = 1280 - 2000 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

K88036

HBB = 1280 - 2000 mm

K88036

HBB = 1280 - 2000 mm



K88037

HBB = 2001 - 2800 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037

HBB = 2001 - 2800 mm

K88037

HBB = 2001 - 2800 mm



### French casement lock extendable

### Stulpflügelverschluss verlängerbar

### Serrure à battants française extensible

K88038

LBB = 370 - 800 mm

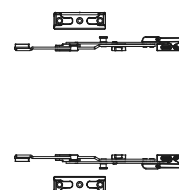
MC 215336 n°02 pieces  
MC 364310 n°02 pieces

K88038

LBB = 370 - 800 mm

K88038

LBB = 370 - 800 mm



## Door catch

## Türverschluss

## Loquet de porte

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

K88061

HBB = 661 - 2800 mm

K88061

HBB = 661 - 2800 mm



## Opening restrictor

## Öffnungsbegrenzer

## Compas de limitation d'ouverture

K88033

LBB = 490 - 1400 mm

MC 103623 n°01 piece

K88033

LBB = 490 - 1400 mm

K88033

LBB = 490 - 1400 mm



Load transfer 180 kg

Lastabtragung 180 kg

Tige de support 180 kg

E99510-02

Right

MC 105336 n°01 piece

E99510-02

DIN rechts

E99510-02

Droite



E99511-02

Left

MC 105339 n°01 piece

E99511-02

DIN links

E99511-02

Gauche



Alarm contact

Alarmkontakt

Contact d'alarme

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

K99062

K99062



### Lifting component

Only for single leaf window  
Visible hinge

### Hebekomponente

Nur für Einflügliges Fenster  
Aufgesetzter Beschlag

### Composant de levage

Seulement pour fenêtre à un vantail  
Paumelle visible

K88047

Right

MC 361004 n°01 piece

K88047

DIN rechts

K88047

Droite



K88048

Left

MC 361005 n°01 piece

K88048

DIN links

K88048

Gauche



### French casement drive kits

Visible hinge

### Stulpflügelgetriebe

Aufgesetzter Beschlag

### Crémone

Paumelle visible

K88062

HH = 190 mm

MC 202873 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88062

HH = 190 mm



K88063

HH = 300 mm

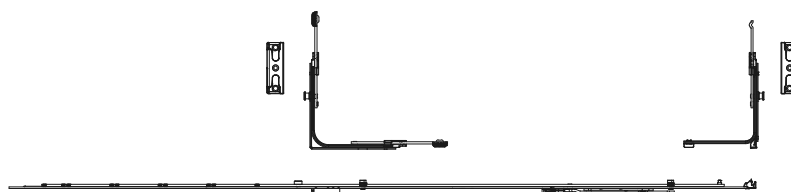
MC 221902 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

K88063

HH = 300 mm



### K88064

HH = 400 mm

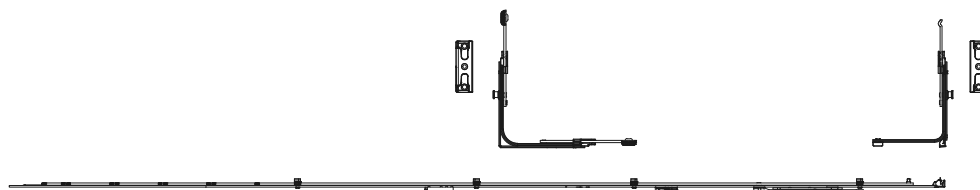
MC 221903 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

### K88064

HH = 400 mm

### K88064

HH = 400 mm



### K88065

HH = 500 mm

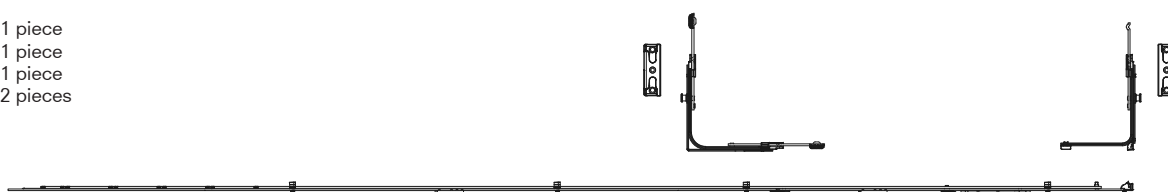
MC 221906 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

### K88065

HH = 500 mm

### K88065

HH = 500 mm



### K88066

HH = 600 mm

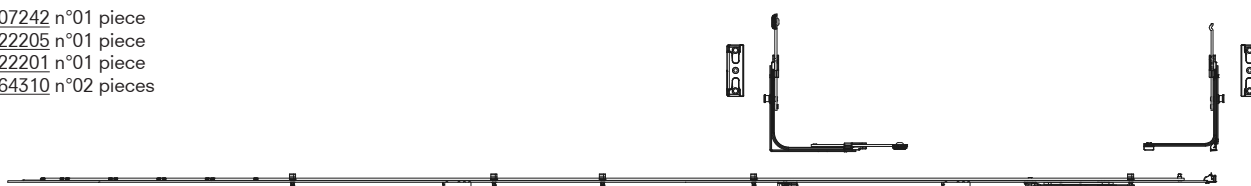
MC 207242 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

### K88066

HH = 600 mm

### K88066

HH = 600 mm



### K88067

HH = 700 mm

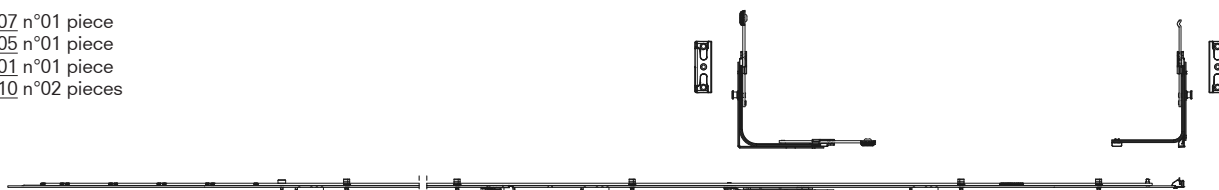
MC 221907 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

### K88067

HH = 700 mm

### K88067

HH = 700 mm



### K88068

HH = 1050 mm

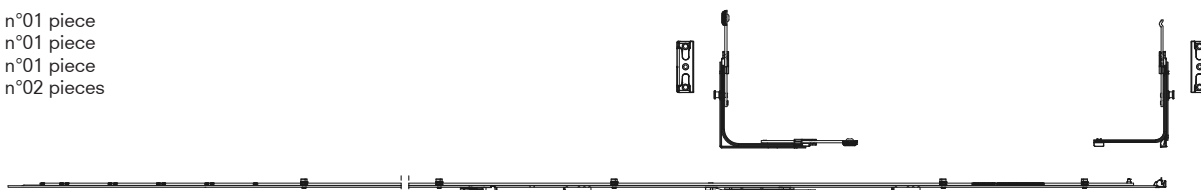
MC 221908 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

### K88068

HH = 1050 mm

### K88068

HH = 1050 mm



**French casement drive  
extension kits**  
Visible hinge

**Getriebeverlängerung  
Stulpflügelgetriebe**  
Aufgesetzter Beschlag

**Kit d'extension Crémone**  
Paumelle visible

K88071

141 - 235 mm

MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm



K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm



K88074

471 - 610 mm

MC 206630 n°01 piece  
MC 208333 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm



K88075

611 - 705 mm

MC 203810 n°01 piece  
MC 208333 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm



K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm



K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm





### Scissors and hinges kits

Visible hinge  
Right opening

### Garnitur Scheren und Bänder

Aufgesetzter Beschlag  
DIN rechts

### Kits pinces et paumelles

Paumelle visible  
Ouverture droite

K88078

LBB = 370 - 400 mm

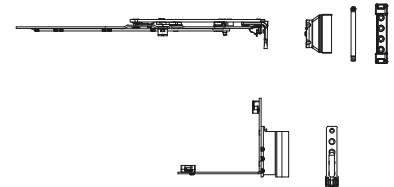
MC 211694 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

K88078

LBB = 370 - 400 mm

K88078

LBB = 370 - 400 mm



K88079

LBB = 401 - 600 mm

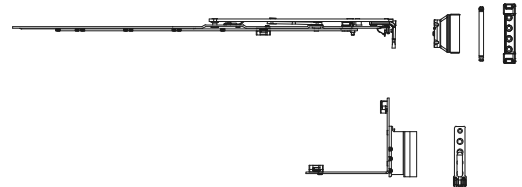
MC 211695 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

K88079

LBB = 401 - 600 mm

K88079

LBB = 401 - 600 mm



K88080

LBB = 601 - 800 mm

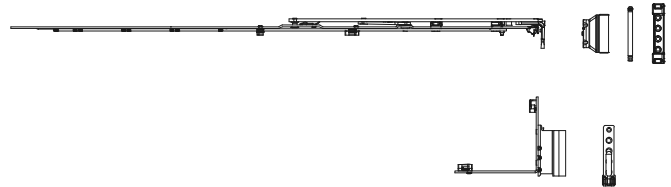
MC 211696 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

K88080

LBB = 601 - 800 mm

K88080

LBB = 601 - 800 mm



K88081

LBB = 801 - 1050 mm

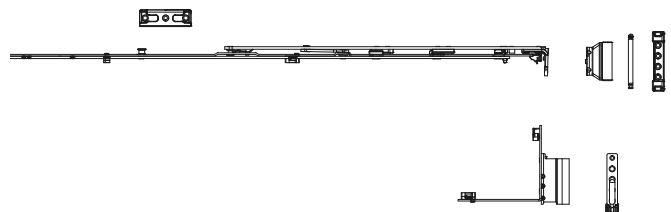
MC 211905 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 364310 n°01 piece

K88081

LBB = 801 - 1050 mm

K88081

LBB = 801 - 1050 mm



**K88082**

LBB = 1051 - 1300 mm

MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 364310 n°01 piece

**K88082**

LBB = 1051 - 1300 mm

**K88082**

LBB = 1051 - 1300 mm



**K88083**

LBB = 1301 - 1400 mm

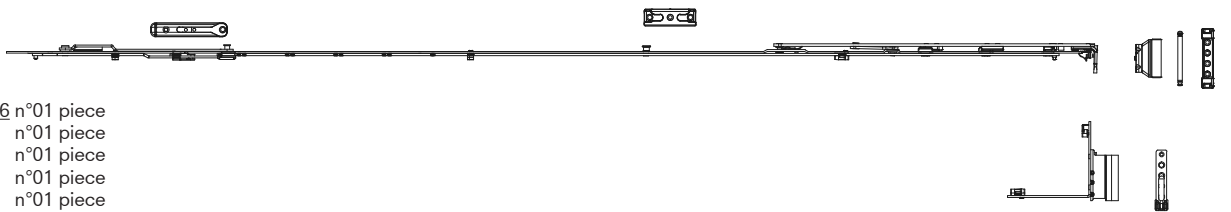
MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 52794 n°01 piece  
MC 213043 n°01 piece  
MC 364310 n°01 piece

**K88083**

LBB = 1301 - 1400 mm

**K88083**

LBB = 1301 - 1400 mm



**Scissors and hinges kits**

Visible hinge  
Left opening

**Garnitur Scheren und Bänder**

Aufgesetzter Beschlag  
DIN links

**Kits pincettes et paumelles**

Paumelle visible  
Ouverture gauche

**K88084**

LBB = 370 - 400 mm

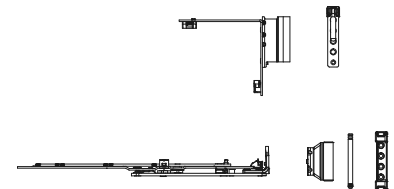
MC 211694 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

**K88084**

LBB = 370 - 400 mm

**K88084**

LBB = 370 - 400 mm



**K88085**

LBB = 401 - 600 mm

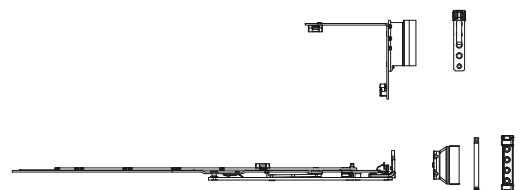
MC 211695 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

**K88085**

LBB = 401 - 600 mm

**K88085**

LBB = 401 - 600 mm



### K88086

LBB = 601 - 800 mm

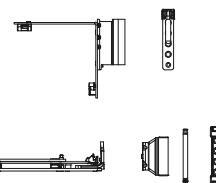
MC 211696 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

### K88086

LBB = 601 - 800 mm

### K88086

LBB = 601 - 800 mm



### K88087

LBB = 801 - 1050 mm

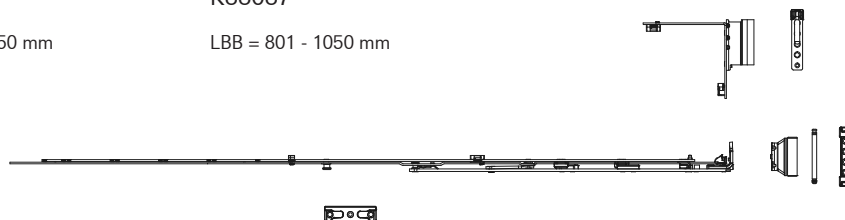
MC 211905 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 364310 n°01 piece

### K88087

LBB = 801 - 1050 mm

### K88087

LBB = 801 - 1050 mm



### K88088

LBB = 1051 - 1300 mm

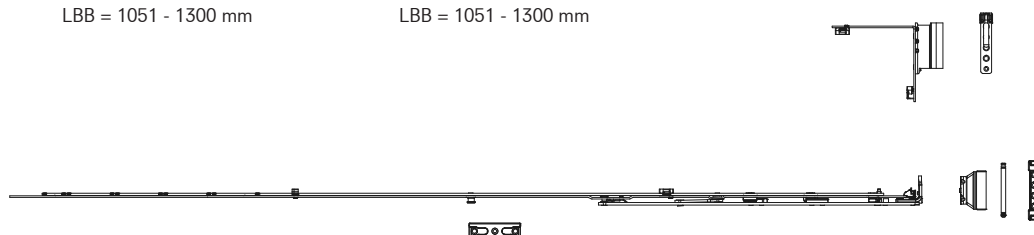
MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 364310 n°01 piece

### K88088

LBB = 1051 - 1300 mm

### K88088

LBB = 1051 - 1300 mm



### K88089

LBB = 1301 - 1400 mm

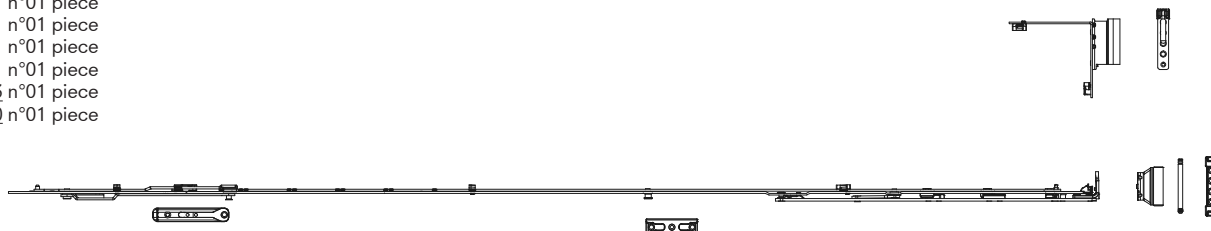
MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 52794 n°01 piece  
MC 213043 n°01 piece  
MC 364310 n°01 piece

### K88089

LBB = 1301 - 1400 mm

### K88089

LBB = 1301 - 1400 mm



### Hinges kits

2nd leaf

Visible hinge

### Garnitur Scheren- und Bandlager

Standflügel

Aufgesetzter Beschlag

### Kits paumelles

2e ouvrant

Paumelle visible

K88090

Right hinges

MC 52462 n°01 piece

MC 52481 n°01 piece

MC 52486 n°01 piece

MC 94491 n°01 piece

MC 52485 n°01 piece

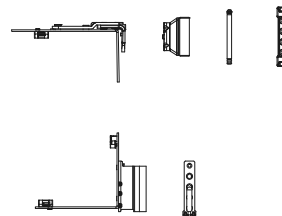
MC 54892 n°01 piece

K88090

Recht Band

K88090

Droite paumelles



K88091

Left hinges

MC 52462 n°01 piece

MC 52481 n°01 piece

MC 52486 n°01 piece

MC 94491 n°01 piece

MC 52485 n°01 piece

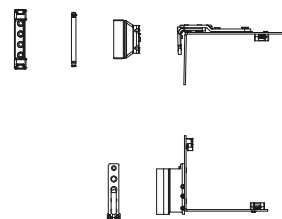
MC 54893 n°01 piece

K88091

Link Band

K88091

Gauche paumelles



**Double croppable gear kits**  
Visible hinge

**Beidseitig kürzbare Garnitur**  
Aufgesetzter Beschlag

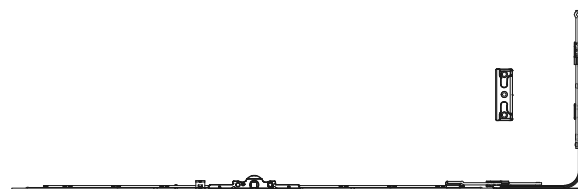
**Kits d'équipement à double recadrage** - Paumelle visible

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88109

K88109



K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88110

K88110

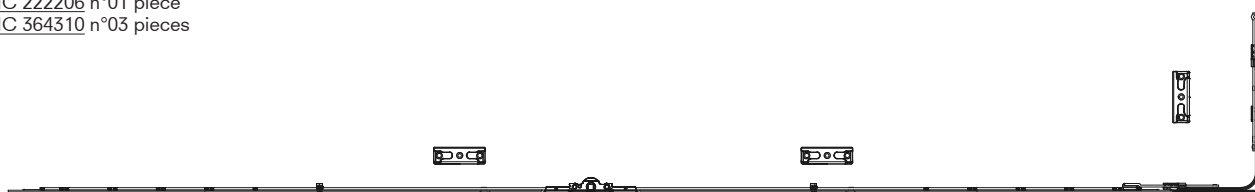


K88111

MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

K88111

K88111

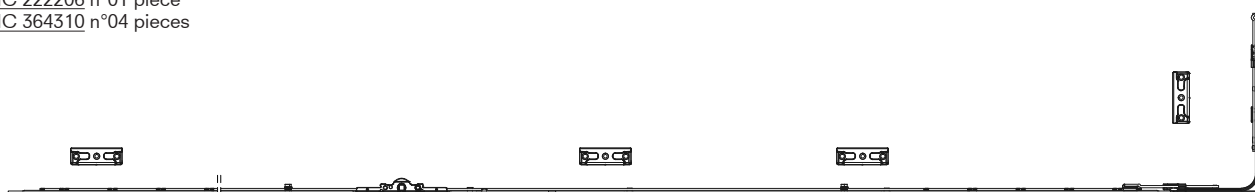


K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces

K88112

K88112



**French casement drive kits**  
Visible hinge

**Stulpflügelgetriebe**  
Aufgesetzter Beschlag

**Crémone**  
Paumelle visible

K88113

K88113

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces



K88114

K88114

K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

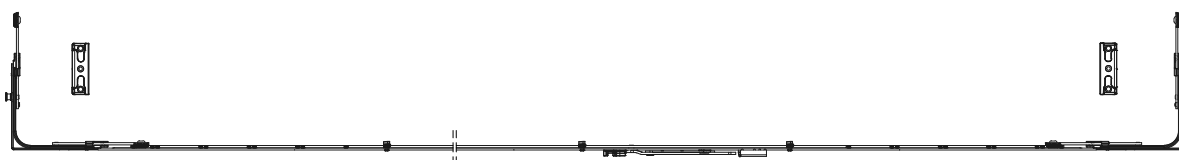


K88115

K88115

K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

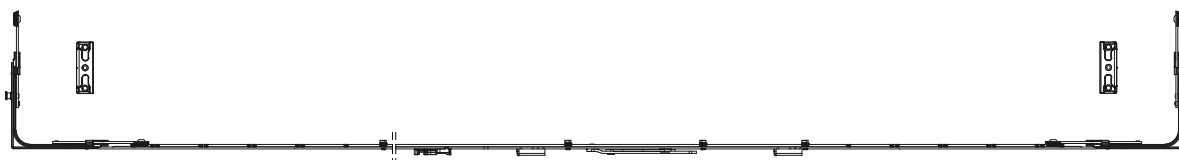


K88116

K88116

K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces





**Basic kits for side hung windows**

**Grundgarnitur Drehfenster**

**Kits de base pour fênêtre battante**

K88043

Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

MC 222201 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

K88043

Standardfenster

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

K88043

Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm



K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm



K88044

Short corner  
for low windows

LBB = 465 - 815 mm  
HBB = 370 - 454 mm

MC 222203 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

K88044

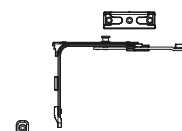
Kurze Ecke  
für niedrige Fenster

LBB = 465 - 815 mm  
HBB = 370 - 454 mm

K88044

Coin court  
pour fenêtres basses

LBB = 465 - 815 mm  
HBB = 370 - 454 mm





## Gear kits

## Garnitur Getriebe

## Kits d'équipement

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm

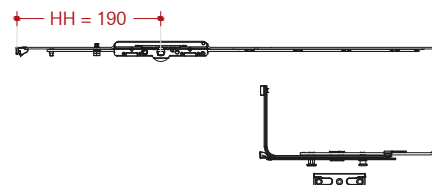
MC 202206 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°01 piece

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm

### K88003

HH = 190 mm  
HBB = 340 - 1608 mm



### K88004

HH = 300 mm  
HBB = 661 - 1790 mm

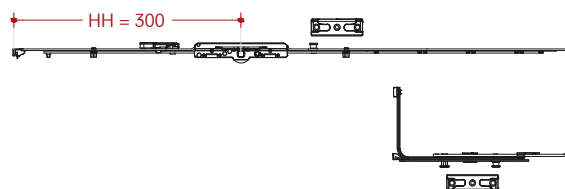
MC 202207 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88004

HH = 300 mm  
HBB = 661 - 1790 mm

### K88004

HH = 300 mm  
HBB = 661 - 1790 mm



### K88005

HH = 400 mm  
HBB = 841 - 2040 mm

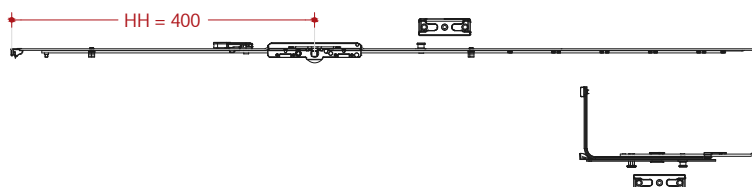
MC 202208 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88005

HH = 400 mm  
HBB = 841 - 2040 mm

### K88005

HH = 400 mm  
HBB = 841 - 2040 mm



### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

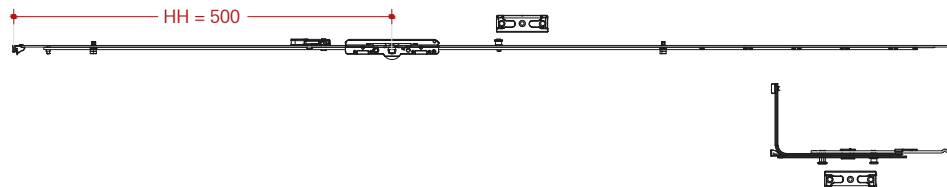
MC 202209 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

### K88006

HH = 500 mm  
HBB = 1091 - 2290 mm



**Gear kits**

**Garnitur Getriebe**

**Kits d'équipement**

**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

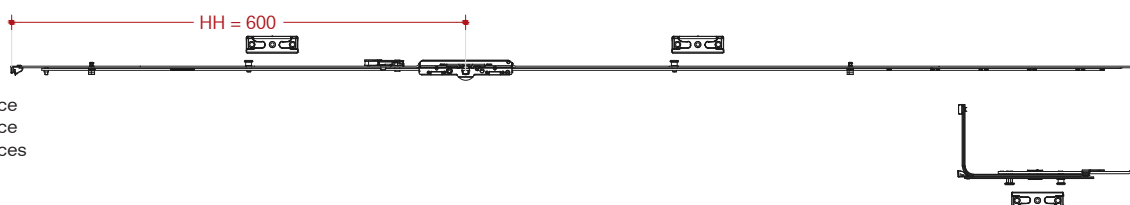
**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

MC 202216 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces



**K88008**

HH = 700 mm  
HBB = 1591 - 2650 mm

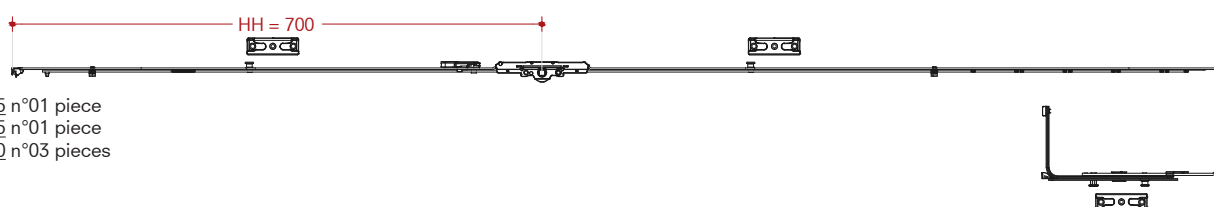
**K88008**

HH = 700 mm  
HBB = 1591 - 2650 mm

**K88008**

HH = 700 mm  
HBB = 1591 - 2650 mm

MC 207305 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces



**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

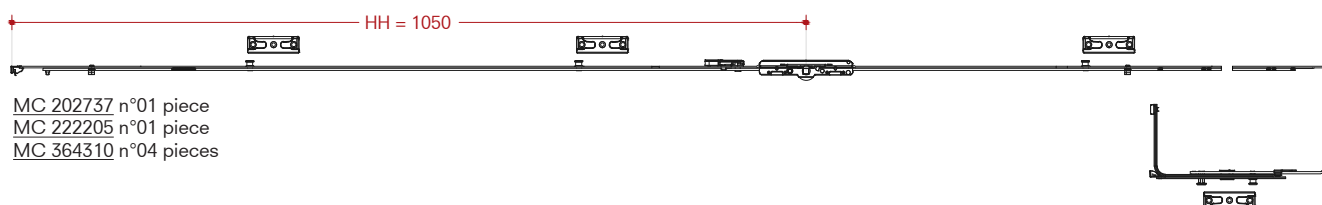
**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

MC 202737 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces



**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm

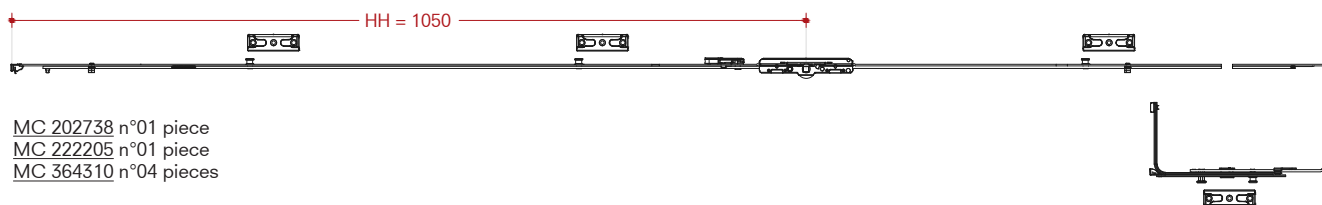
**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm

**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm

MC 202738 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces



Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

[MC 206630](#) n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm



K88012

141 - 235 mm

[MC 201750](#) n°01 piece  
[MC 364310](#) n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm



K88059

236 - 375 mm

[MC 201750](#) n°01 piece  
[MC 206630](#) n°01 piece  
[MC 364310](#) n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm



K88013

376 - 470 mm

[MC 201840](#) n°01 piece  
[MC 364310](#) n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm



## Extension kits

## Getriebeverlängerung

## Kits extension d'équipement

### K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

### K88014

471 - 610 mm

### K88014

471 - 610 mm



### K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

### K88015

611 - 705 mm

### K88015

611 - 705 mm



### K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

### K88060

706 - 845 mm

### K88060

706 - 845 mm



### K88016

846 - 940 mm

MC 201840 n°02 pieces  
MC 364310 n°02 pieces

### K88016

846 - 940 mm

### K88016

846 - 940 mm



## Hinges kits

## Garnitur Bänder

## Kits paumelles

K88034

Right hinges

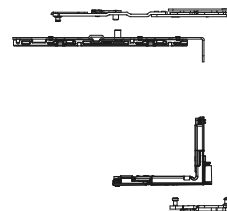
MC 217691 n°01 piece  
MC 217729 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece

K88034

Recht Band

K88034

Droite paumelles



K88035

Left hinges

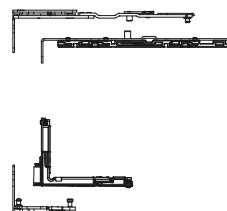
MC 217692 n°01 piece  
MC 217729 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece

K88035

Link Band

K88035

Gauche paumelles



## Concealed compression locks kits

## Anpressverschluss verdeckt

## Kits de serrures à compression cachée

K88036

HBB = 1280 - 2000 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

K88036

HBB = 1280 - 2000 mm

K88036

HBB = 1280 - 2000 mm



K88037

HBB = 2001 - 2800 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037

HBB = 2001 - 2800 mm

K88037

HBB = 2001 - 2800 mm



Additional top and bottom  
locking point

Zusätzlich oben und unten  
Verriegelungspunkt

Haut et bas supplémentaires  
point de verrouillage

K88045

LBB = 801 - 1280 mm

MC 201751 n°02 pieces  
MC 364310 n°02 pieces

K88045

LBB = 801 - 1280 mm

K88045

LBB = 801 - 1280 mm



K88046

LBB = 1281 - 1400 mm

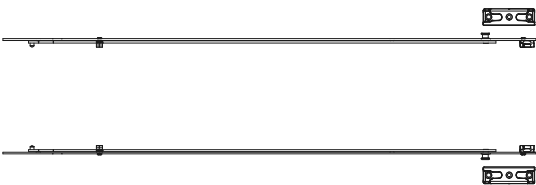
MC 201752 n°02 pieces  
MC 364310 n°02 pieces

K88046

LBB = 1281 - 1400 mm

K88046

LBB = 1281 - 1400 mm



Lifting component

Hebekomponente

Composant de levage

K88047

K88047

K88047

Right

Recht

Droite

MC 361004 n°01 piece



K88048

K88048

K88048

Left

Link

Gauche

MC 361005 n°01 piece



Door catch

Türverschluss

Loquet de porte

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

K88061

HBB = 661 - 2800 mm

K88061

HBB = 661 - 2800 mm



Opening restrictor

Öffnungsbegrenzer

Compas de limitation d'ouverture

K88033

LBB = 490 - 1400 mm

MC 103623 n°01 piece

K88033

LBB = 490 - 1400 mm

K88033

LBB = 490 - 1400 mm





Load transfer 180 kg

Lastabtragung 180 kg

Tige de support 180 kg

E99510-02

Right

MC 105336 n°01 piece

E99510-02

Recht

E99510-02

Droite



E99511-02

Left

MC 105339 n°01 piece

E99511-02

Link

E99511-02

Gauche



Alarm contact

Alarmkontakt

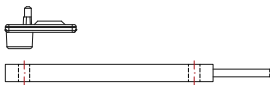
Contact d'alarme

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

K99062

K99062



**French casement drive kits**  
Visible hinge

**Stulpflügelgetriebe**  
Aufgesetzter Beschlag

**Crémone**  
Paumelle visible

K88062

HH = 190 mm

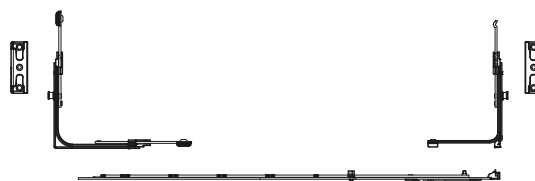
MC 202873 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88062

HH = 190 mm



K88063

HH = 300 mm

MC 221902 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

K88063

HH = 300 mm



K88064

HH = 400 mm

MC 221903 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88064

HH = 400 mm

K88064

HH = 400 mm



K88065

HH = 500 mm

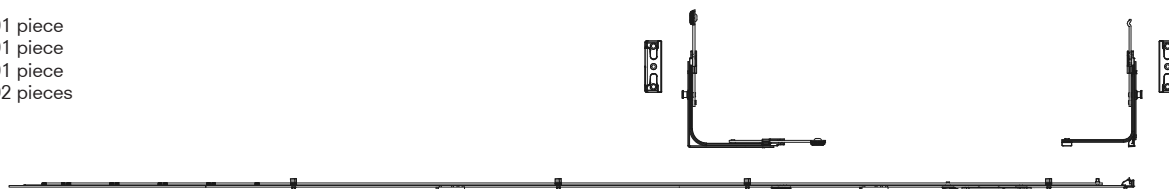
MC 221906 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88065

HH = 500 mm

K88065

HH = 500 mm



K88066

HH = 600 mm

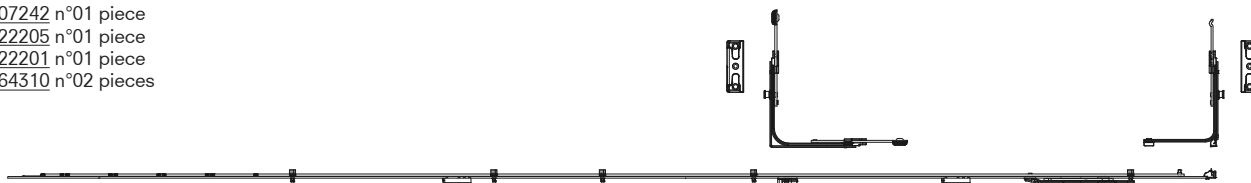
MC 207242 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88066

HH = 600 mm

K88066

HH = 600 mm



K88067

HH = 700 mm

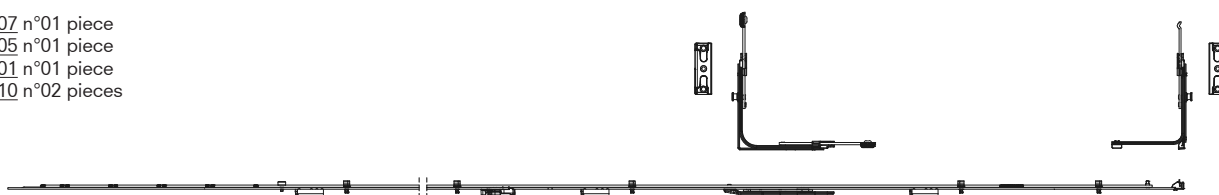
MC 221907 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88067

HH = 700 mm

K88067

HH = 700 mm



K88068

HH = 1050 mm

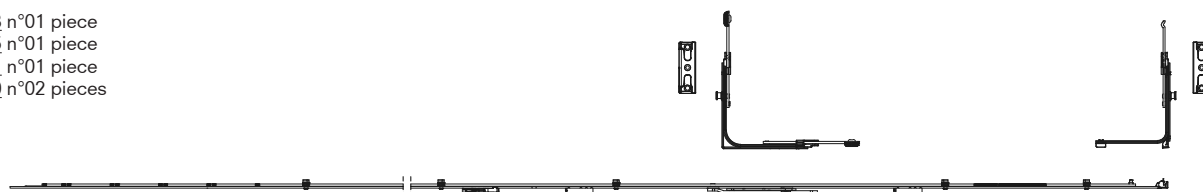
MC 221908 n°01 piece  
MC 222205 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88068

HH = 1050 mm

K88068

HH = 1050 mm



**French casement drive  
extension kits**  
Visible hinge

**Getriebeverlängerung  
Stulpflügelgetriebe**  
Aufgesetzter Beschlag

**Kit d'extension Crémone**  
Paumelle visible

K88071

141 - 235 mm

MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm



K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm



K88074

471 - 610 mm

MC 206630 n°01 piece  
MC 208333 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm



K88075

611 - 705 mm

MC 203810 n°01 piece  
MC 208333 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm



K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm



K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm



### Hinges kits

2nd leaf

Visible hinge

### Garnitur Scheren- und Bandlager

Standflügel

Aufgesetzter Beschlag

### Kits paumelles

2e ouvrant

Paumelle visible

K88090

Right hinges

MC 52462 n°01 piece

MC 52481 n°01 piece

MC 52486 n°01 piece

MC 94491 n°01 piece

MC 52485 n°01 piece

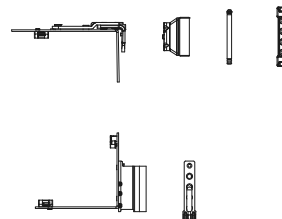
MC 54892 n°01 piece

K88090

Recht Band

K88090

Droite paumelles



K88091

Left hinges

MC 52462 n°01 piece

MC 52481 n°01 piece

MC 52486 n°01 piece

MC 94491 n°01 piece

MC 52485 n°01 piece

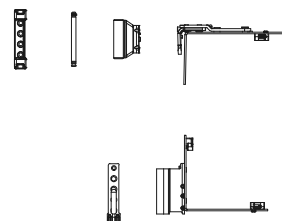
MC 54893 n°01 piece

K88091

Link Band

K88091

Gauche paumelles



**Double croppable gear kits**  
Visible hinge

**Beidseitig kürzbare Garnitur**  
Aufgesetzter Beschlag

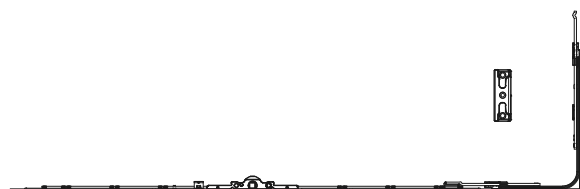
**Kits d'équipement à double recadrage** - Paumelle visible

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88109

K88109



K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88110

K88110

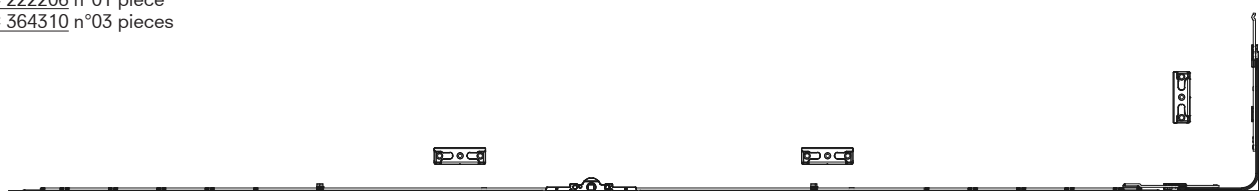


K88111

MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

K88111

K88111

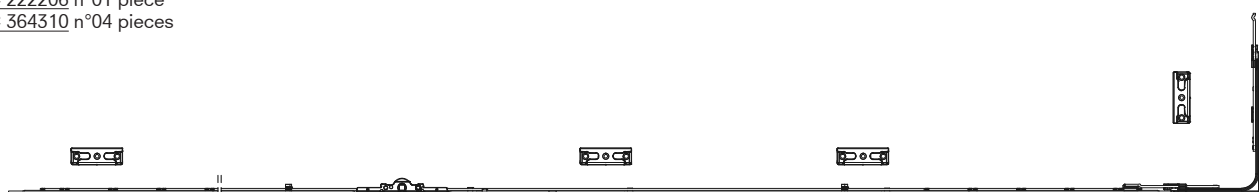


K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces

K88112

K88112



**French casement drive kits**  
Visible hinge

**Stulpflügelgetriebe**  
Aufgesetzter Beschlag

**Crémone**  
Paumelle visible

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88113

K88113



K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88114

K88114

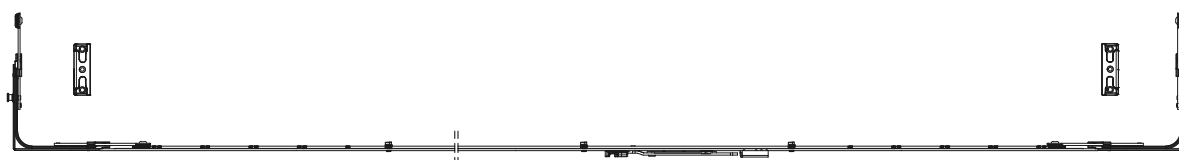


K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88115

K88115

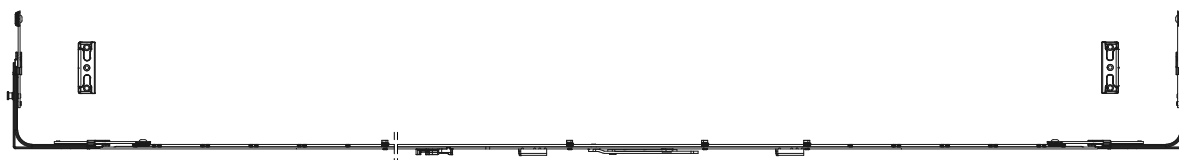


K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88116

K88116



## Kits for bottom hung windows

## Grundgarnitur Kippfenster

## Kits pour fenêtre à soufflet

### Gear kits

### Garnitur Getriebe

### Kits d'équipement

K88049

LBB = 390 - 500 mm

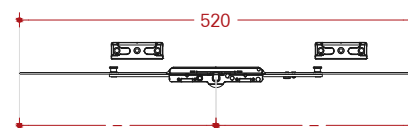
MC 208323 n°01 piece  
MC 364310 n°02 pieces

K88049

LBB = 390 - 500 mm

K88049

LBB = 390 - 500 mm



K88050

LBB = 501 - 700 mm

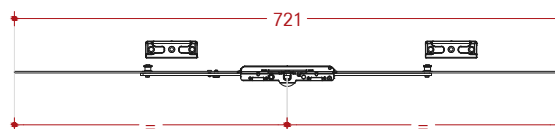
MC 208324 n°01 piece  
MC 364310 n°02 pieces

K88050

LBB = 501 - 700 mm

K88050

LBB = 501 - 700 mm



K88051

LBB = 701 - 1000 mm

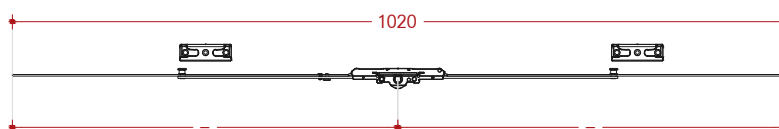
MC 208325 n°01 piece  
MC 364310 n°02 pieces

K88051

LBB = 701 - 1000 mm

K88051

LBB = 701 - 1000 mm





## Gear kits

## Garnitur Getriebe

## Kits d'équipement

### K88052

LBB = 1001 - 1400 mm

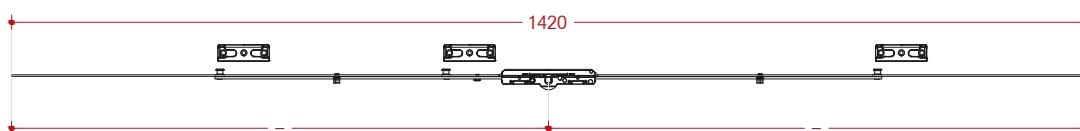
MC 208326 n°01 piece  
MC 364310 n°03 pieces

### K88052

LBB = 1001 - 1400 mm

### K88052

LBB = 1001 - 1400 mm



### K88053

LBB = 1401 - 1800 mm

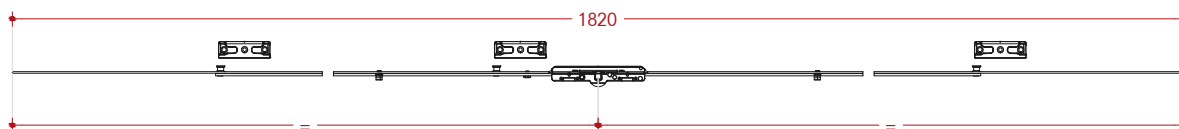
MC 208327 n°01 piece  
MC 364310 n°03 pieces

### K88053

LBB = 1401 - 1800 mm

### K88053

LBB = 1401 - 1800 mm



### K88054

LBB = 1801 - 2250 mm

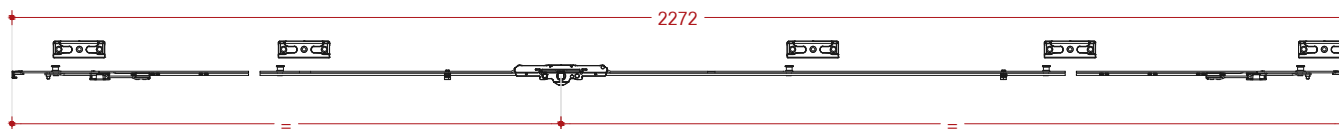
MC 202497 n°01 piece  
MC 212211 n°02 pieces  
MC 364310 n°05 pieces

### K88054

LBB = 1801 - 2250 mm

### K88054

LBB = 1801 - 2250 mm



## Hinges kits

## Garnitur Bänder

## Kits paumelles

### K88055

LBB = 390 - 1000 mm

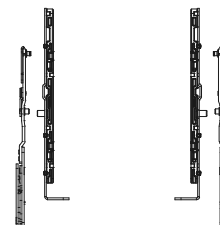
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

### K88055

LBB = 390 - 1000 mm

### K88055

LBB = 390 - 1000 mm



### K88056

LBB = 1001 - 1400 mm

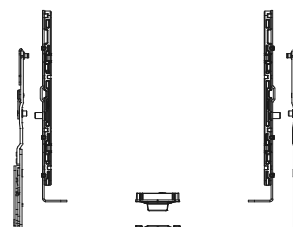
MC 215577 n°01 piece  
MC 365161 n°01 piece  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

### K88056

LBB = 1001 - 1400 mm

### K88056

LBB = 1001 - 1400 mm



### K88057

LBB = 1401 - 1800 mm

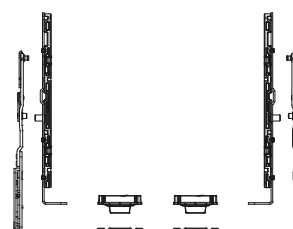
MC 215577 n°02 pieces  
MC 365161 n°02 pieces  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

### K88057

LBB = 1401 - 1800 mm

### K88057

LBB = 1401 - 1800 mm



### K88058

LBB = 1801 - 2250 mm

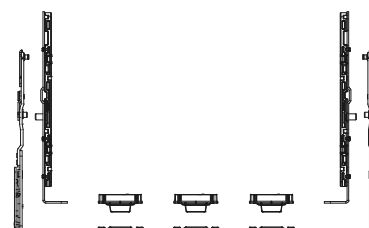
MC 215577 n°03 pieces  
MC 365161 n°03 pieces  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

### K88058

LBB = 1801 - 2250 mm

### K88058

LBB = 1801 - 2250 mm



## Opening restrictor

## Öffnungsbegrenzer

## Compas de limitation d'ouverture

E99205-05

With clicks.  
HBB = 400 - 1200 mm

Capacity: 110 kg (pair)

n°02 pieces

E99205-05

Mit Klicks.  
HBB = 400 - 1200 mm

Tragkraft: 110 kg (Paar)

2x Stück

E99205-05

Avec des clics.  
HBB = 400 - 1200 mm

Capacité de charge: 110 kg (couple)

n°02 unités



E99206-03

HBB = 400 - 1200 mm

Capacity: 110 kg (pair)

n°02 pieces

E99206-03

HBB = 400 - 1200 mm

Tragkraft: 110 kg (Paar)

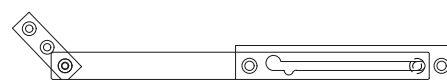
2x Stück

E99206-03

HBB = 400 - 1200 mm

Capacité de charge: 110 kg (couple)

n°02 unités



## Alarm contact

## Alarmkontakt

## Contact d'alarme

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

K99062

K99062



## Hinges kits Visible hinge

## Garnitur Bänder Aufgesetzter Beschlag

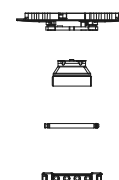
## Kits paumelles Paumelle visible

K88040  
n°1 kit per hinge

MC 52321 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece

K88040  
1x Kit pro Band

K88040  
n°1 kit par paumelle



Opening restrictor

Öffnungsbegrenzer

Compas de limitation d'ouverture

K88107

HBB = 520 - 620 mm

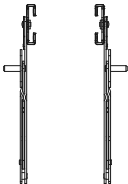
MC 455347 n°02 pieces

K88107

HBB = 520 - 620 mm

K88107

HBB = 520 - 620 mm



K88108

HBB = 621 - 1200 mm

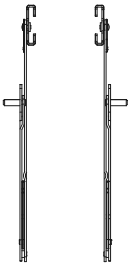
MC 455348 n°02 pieces

K88108

HBB = 621 - 1200 mm

K88108

HBB = 621 - 1200 mm



**Handles**

**Griffe**

**Poignées**

**3.7**









**Locks**

**Schlösser**

**Serrures**

**3.8**

### Mortise lock

Single latch and deadbolt, faceplate 24x3 mm, backset 35 mm, handle/lock distance 92 mm

-02 = Galvanized steel

PU = 1 piece

### Fallen-Riegel-Schloss

Einfallenschloss 24x3 mm, Dornmaß 35 mm, Drücker/Schlossabstand 92 mm

-02 = Stahl bandverzinkt

VE = 1 Stück

### Serrure à pêne demi-tour et à pêne dormant

Serrure à pêne demi-tour, plaque 24x3 mm, axe 35 mm, distance poignée/serrure 92 mm

-02 = Acier galvanisé

UV = 1 unité



B99016-02

### Multi-point locking

3-point locking device, deadbolt and head locking, faceplate 24x6 mm, backset 35 mm, handle/lock distance 92 mm; minimum vent height 2400 mm

-02 = Galvanized steel

PU = 1 piece

### Mehrfachverriegelung

3-Fachverriegelung 24x6 mm, mit Riegel und Bolzenverriegelung, Dornmaß 35 mm, Griff/Schlossabstand 92 mm; Mindesthöhe Flügel 2400 mm

-02 = Stahl bandverzinkt

VE = 1 Stück

### Serrure trois points

Verrouillage à 3 points, plaque 24x6 mm, tenon + verrouillage croché, axe 35 mm, distance poignée/serrure 92 mm; hauteur minimale vantail 2400 mm

-02 = Acier galvanisé

UV = 1 unité



B99172-02

### Extension

Extension for B99172-02 lock, faceplate 24x6 mm, L 500 mm

-02 = Galvanized steel

PU = 1 piece

### Verlängerung

Verlängerung für Fallen-Riegel-Schloss B99172-02, Stulp 24x6 mm, L 500 mm

-02 = Stahl bandverzinkt

VE = 1 Stück

### Extension

Extension pour serrure B99172-02, embout 24x6 mm, L 500 mm

-02 = Acier galvanisé

UV = 1 unité



B99169-02

### French casement drive gear

French casement drive gear for B99172-02 lock, faceplate 24x6 mm, H 2150 mm

-02 = Galvanized steel

R = Right opening

PU = 1 piece

### Stulpflügelgetriebe

Stulpflügelgetriebe für Fallen-Riegel-Schloss B99172-02, Stulp 24x6 mm, H 2150 mm

-02 = Stahl bandverzinkt

R = DIN rechts

VE = 1 Stück

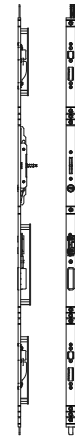
### Crémone de semi-fixe

Crémone de semi-fixe pour serrure B99172-02, embout 24x6 mm, H 2150 mm

-02 = Acier galvanisé

R = Ouverture droite

UV = 1 unité



B99162-02

### French casement drive gear

French casement drive gear for B99172-02 lock, faceplate 24x6 mm, H 2150 mm

-02 = Galvanized steel

L = Left opening

PU = 1 piece

### Stulpflügelgetriebe

Stulpflügelgetriebe für Fallen-Riegel-Schloss B99172-02, Stulp 24x6 mm, H 2150 mm

-02 = Stahl bandverzinkt

L = DIN links

VE = 1 Stück

### Crémone de semi-fixe

Crémone de semi-fixe pour serrure B99172-02, embout 24x6 mm, H 2150 mm

-02 = Acier galvanisé

L = Ouverture gauche

UV = 1 unité



B99163-02

### Extension

Extension for french casement drive gear B99162-02 and B99163-02, faceplate 24x6 mm, H 700 mm

-02 = Galvanized steel

PU = 1 piece

### Verlängerung

Verlängerung für Stulpflügelgetriebe B99162-02 und B99163-02, Stulp 24x6 mm, H 700 mm

-02 = Stahl bandverzinkt

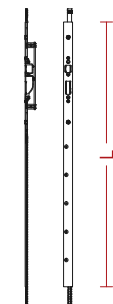
VE = 1 Stück

### Extension

Extension pour crémone de semi-fixe B99162-02 et B99163-02, embout 24x6 mm, H 700 mm

-02 = Acier galvanisé

UV = 1 unité



B99164-02

### Shoot bolt

Shoot bolt for french casement drive gear B99162-02 and B99163-02, faceplate 24x6 mm, H 530 mm

-02 = Galvanized steel

PU = 1 piece

### Kantriege

Kantriege für Stulpflügelgetriebe B99162-02 und B99163-02, Stulp 24x6 mm, H 530 mm

-02 = Stahl bandverzinkt

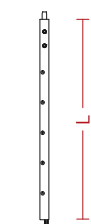
VE = 1 Stück

### Verrou à entailler

Verrou à entailler pour crémone de semi-fixe B99162-02 et B99163-02, embout 24x6 mm, H 530 mm

-02 = Acier galvanisé

UV = 1 unité



B99165-02

### Upper strike for 2nd leaf gear shoot bolt

Upper strike plate for 2nd leaf gear shoot bolt B99165-02, 100x24 mm

-02 = Galvanized steel

PU = 1 piece

### Überlegen Schließblech für Standflügel Kantriege

Überlegen Schließblech für Standflügel Kantriege B99165-02, 100x24 mm

-02 = Stahl bandverzinkt

VE = 1 Stück

### Gâche supérieur pour verrou à entailler 2e ouvrant

Gâche supérieur pour verrou à entailler 2e ouvrant B99165-02, 100x24 mm

-02 = Acier galvanisé

UV = 1 unité



B99176-02

### Lower strike for 2nd leaf gear shoot bolt

Lower strike plate for 2nd leaf gear shoot bolt B99165-02

-02 = Galvanized steel

PU = 1 piece

### Unterlegen Schließblech für Standflügel Kantriege

Unterlegen Schließblech für Standflügel Kantriege B99165-02

-02 = Stahl bandverzinkt

VE = 1 Stück

### Gâche inférieur pour verrou à entailler 2e ouvrant

Gâche inférieur pour verrou à entailler 2e ouvrant B99165-02

-02 = Acier galvanisé

UV = 1 unité



B99177-02

### Central strike plate

Central strike plate for 3-point locking device B99172-02, 22x6 mm

-02 = Galvanized steel

R = Right opening  
L = Left opening

PU = 1 piece

### Zentraler Schließblech

Zentraler Schließblech für 3-Fachverriegelung B99172-02, 22x6 mm

-02 = Stahl bandverzinkt

R = DIN rechts  
L = DIN links

VE = 1 Stück

### Gâche central

Gâche central pour verrouillage à 3 points B99172-02, 22x6 mm

-02 = Acier galvanisé

R = Ouverture droite  
L = Ouverture gauche

UV = 1 unité



B99203-02 R  
B99204-02 L

### Strike plate

Upper and lower strike plate for B99170-02, B99171-02, B99173-02 locks and B99169-02 extension, 22x6 mm

-02 = Galvanized steel

PU = 1 piece

### Schließblech

Schließblech oben und unten für Mehrfachverriegelung B99170-02, B99171-02, B99173-02 und Verlängerung B99169-02, 22x6 mm

-02 = Stahl bandverzinkt

VE = 1 Stück

### Gâche

Gâche supérieur et inférieur pour serrures B99170-02, B99171-02, B99173-02 et extension B99169-02, 22x6 mm

-02 = Acier galvanisé

UV = 1 unité



B99205-02

### Central strike plate

Central strike plate for mortise lock device B99015-02, 24x6 mm

-04 = Satin stainless steel AISI 304

PU = 1 piece

### Zentraler Schließblech

Zentraler Schließblech für Einfallenschloss B99015-02, 24x6 mm

-04 = Satiniert Edelstahl 1.4301

VE = 1 Stück

### Gâche central

Gâche central pour serrure à pêne demi-tour B99015-02, 24x6 mm

-04 = Acier inoxydable AISI 304 brossé

UV = 1 unité



B99207-04

### Rebate protection for latchbolt

Rebate protection for latchbolt, for  
open in door, 60x26.8x0.8 mm

-04 = Satin stainless steel AISI 304

PU = 1 piece

### Anschlagschutz für Schlossfalle

Anschlagschutz für Schlossfalle,  
für Tür nach innen öffnend,  
60x26.8x0.8 mm

-04 = Satiniert Edelstahl 1.4301

VE = 1 Stück

### Protection joint pour pêne demi-tour

Protection joint pour pêne  
demi-tour, pour porte ouverture  
intérieure, 60x26.8x0.8 mm

-04 = Acier inoxydable satiné

UV = 1 unité



D10155-04

### Rebate protection for latchbolt

Rebate protection for latchbolt, for  
open out door, 60x7.8x0.8 mm

-04 = Satin stainless steel AISI 304

PU = 1 piece

### Anschlagschutz für Schlossfalle

Anschlagschutz für Schlossfalle, für  
Tür nach außen öffnend, 60x7.8x0.8  
mm

-04 = Satiniert Edelstahl 1.4301

VE = 1 Stück

### Protection joint pour pêne demi-tour

Protection joint pour pêne  
demi-tour, pour porte ouverture  
extérieure, 60x7.8x0.8 mm

-04 = Acier inoxydable satiné

UV = 1 unité



D10156-04



Screws

Schrauben

Vis

3.9

### Screw

Cross recessed pan head screw,  
stainless steel A2 Ø3.5x6.5 mm  
DIN7981 / ISO7049

PU = 100 pieces

### Schrauben

Linsenkopf-Blehschraube mit  
Kreuzschlitz,  
Edelstahl A2 Ø3.5x6.5 mm  
DIN7981 / ISO7049

VE = 100 Stück

### Vis

Vis à tôle tête cylindrique bombée,  
empreinte cruciforme,  
acier inoxydable A2 Ø3.5x6.5 mm  
DIN7981 / ISO7049

UV = 100 unités



D99801-03

### Screw

Cross recessed countersunk head  
screw,  
stainless steel A2 Ø3.9x13 mm  
DIN7982 / ISO7050

PU = 100 pieces

### Schrauben

Senkkopf-Blehschraube mit  
Kreuzschlitz,  
Edelstahl A2 Ø3.9x13 mm  
DIN7982 / ISO7050

VE = 100 Stück

### Vis

Vis à tôle tête fraisée, empreinte  
cruciforme,  
acier inoxydable A2 Ø3.9x13 mm  
DIN 7982 / ISO7050

UV = 100 unités



D99802-03

### Screw

Cross recessed countersunk head  
screw,  
stainless steel A2 Ø4.2x9.5 mm  
DIN7982 / ISO7050

PU = 100 pieces

### Schrauben

Senkkopf-Blehschraube mit  
Kreuzschlitz,  
Edelstahl A2 Ø4.2x9.5 mm  
DIN7982 / ISO7050

VE = 100 Stück

### Vis

Vis à tôle tête fraisée, empreinte  
cruciforme,  
acier inoxydable A2 Ø4.2x9.5 mm  
DIN7982 / ISO7050

UV = 100 unités



D99815-03

### Screw

Hexagon recessed cap head screw,  
stainless steel A2 M4x6 mm  
DIN912 / ISO4762

PU = 100 pieces

### Schrauben

Zylinder-Schraube mit  
Innensechskant,  
Edelstahl A2 M4x6 mm  
DIN912 / ISO4762

VE = 100 Stück

### Vis

Vis à tête cylindrique, six pans creux,  
acier inoxydable A2 M4x6 mm  
DIN912 / ISO4762

UV = 100 unités



D99866-03

### Screw

Hexagon recessed countersunk  
screw,  
stainless steel A2 M4x6 mm  
DIN7991 / ISO10642

PU = 100 pieces

### Schrauben

Senkkopf-Schraube mit  
Innensechskant,  
Edelstahl A2 M4x6 mm  
DIN7991 / ISO10642

VE = 100 Stück

### Vis

Vis à tête fraisée six pans creux,  
acier inoxydable A2 M4x6 mm  
DIN7991 / ISO10642

UV = 100 unités



D99867-03

### Note:

All uncoded screws are the responsibility of the customer.

### Anmerkung:

Alle Schrauben ohne Artikelnummer werden nicht von OTTOSTUMM | Mogs geliefert.

### Remarque:

Toutes les vis non codées sont à la charge du client.



### Screw

Cross recessed countersunk head screw, M4x8 mm  
DIN7982 / ISO7050

PU = 100 pieces

### Schrauben

Senkkopf-Blechschaube mit Kreuzschlitz, M4x8 mm  
DIN7982 / ISO7050

VE = 100 Stück

### Vis

Vis à tôle tête fraisée, empreinte cruciforme, M4x8 mm  
DIN7982 / ISO7050

UV = 100 unités



D99980-02

### Screw

Glazing bead screw, Ø4.8 x 9.5 mm, galvanized steel.

PU = 50 pieces

### Schrauben

Glashalteleiste Schraube Stahl, Ø4.8 x 9.5 mm, verzinkter Stahl.

VE = 50 Stück

### Vis

Vis pour parclose, Ø4.8 x 9.5 mm, acier galvanisé.

UV = 50 unités



F99051-02

### Screw

Glazing bead screw, Ø4.2 x 9.5 mm, galvanized steel.

PU = 100 pieces

### Schrauben

Glashalteleiste Schraube Stahl, Ø4.2 x 9.5 mm, verzinkter Stahl.

VE = 100 Stück

### Vis

Vis pour parclose, Ø4.2 x 9.5 mm, acier galvanisé.

UV = 100 unités



F99054-02

### Screw

Glazing bead screw, Ø4.8 x 13 mm, stainless steel A4.

PU = 100 pieces

### Schrauben

Glashalteleiste Schraube Stahl, Ø4.8 x 13 mm, Edelstahl A4.

VE = 100 Stück

### Vis

Vis pour parclose, Ø4.8 x 13 mm, acier inoxydable A4.

UV = 100 unités



F99055-05

### Rivet

Button-head rivet, stainless steel A2 Ø3.2x8 mm  
DIN7337 / ISO15973

PU = 100 pieces

### Niet

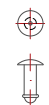
Halbrundniet, Edelstahl A2 Ø3.2x8 mm  
DIN7337 / ISO15973

VE = 100 Stück

### Rivet

Rivet à tête demi-ronde, acier inoxydable A2 Ø3.2x8 mm  
DIN7337 / ISO15973

UV = 100 unités



D99950-03

### Note:

All uncoded screws are the responsibility of the customer.

### Anmerkung:

Alle Schrauben ohne Artikelnummer werden nicht von OTTOSTUMM | Mogs geliefert.

### Remarque:

Toutes les vis non codées sont à la charge du client.

### Bushing

Bushing Ø10.8 mm, h 4.8 mm for snap-on glazing beads, stainless steel A2.

PU = 50 pieces

### Lagerbuchse

Lagerbuchse Ø10.8 mm, h 4.8 mm für Schnappverglasungspierlen, Edelstahl A2.

VE = 50 Stück

### Boîte

Boîte Ø10.8 mm, h 4.8 mm pour parcloes à encliqueter, acier inoxydable A2.

UV = 50 unités



F99061-03

### Bonding

Adhesive for rebate gaskets.

PU = 1 piece

### Kleben

Kleber für Anschlagdichtungen.

VE = 1 Stück

### Adhésif

Adhésif pour joints de butée.

UV = 1 unité



OS 364991

### Primer

Primer for self-adhesive tape.

PU = 1 piece

### Primer

Primer für selbstklebend Klebeband.

VE = 1 Stück

### Primer

Primer pour ruban autocollant.

UV = 1 unité



I99005-75

**Assembling tools**

**Montagewerkzeuge**

**Outils d'usage**

**3.10**

### Alignment pin

For welding of hinge  
C99008-nn

-03 = Stainless steel AISI 304 2B

PU = 1 piece

### Positionierstift

Positionierstift zum Anschweißen  
für Band C99008-nn

-03 = Edelstahl 1.4301 2B

VE = 1 Stück

### Gabarit de positionnement

Gabarit de positionnement pour le  
soudage de la paumelle C99008-nn

-03 = Acier inoxydable AISI 304 2B

UV = 1 unité



D99401-03

### Adjusting tool

Adjusting tool for 3D hinge  
C99008-nn

-03 = Stainless steel AISI 304 2B

PU = 1 piece

### Justierschlüssel

Einstellschlüssel zur Justierung  
von 3D Band C99008-nn

-03 = Edelstahl 1.4301 2B

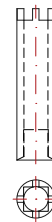
VE = 1 Stück

### Clé

Clé de réglage pour l'ajustement  
de la paumelle 3D C99008-nn

-03 = Acier inoxydable AISI 304 2B

UV = 1 unité



D99501-03

### Alignment pin

For welding of hinge  
C99009-nn

PU = 1 piece

### Positionierstift

Positionierstift zum Anschweißen  
für Band C99009-nn

VE = 1 Stück

### Gabarit de positionnement

Gabarit de positionnement pour le  
soudage de la paumelle C99009-nn

UV = 1 unité



D99402-31

### Adjusting tool

Adjusting tool for 3D hinge  
C99009-nn

PU = 1 piece

### Justierschlüssel

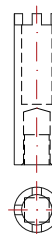
Einstellschlüssel zur Justierung  
von 3D Band C99009-nn

VE = 1 Stück

### Clé

Clé de réglage pour l'ajustement  
de la paumelle 3D C99009-nn

UV = 1 unité



D99502-31

### Scissors

Seal-cutting scissor,  
15°, 30°, 45°, 90° cutting angle.

PU = 1 piece

### Schere

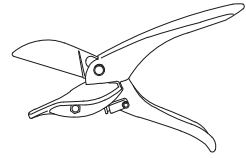
Dichtungsschere,  
15°, 30°, 45°, 90° Schneidewinkel.

VE = 1 Stück

### Pinces

Pinces pour joint d'étanchéité,  
coupe 15°, 30°, 45°, 90°.

UV = 1 unité



D99540-02

### Scissors Spare parts

Blades for scissor D99540-02

PU = 1 pair

### Schere Ersatzteile

Klingen für Dichtungsschere  
D99540-02

VE = 1 Paar

### Pinces Pièces de rechange

Lames pour pinces D99540-02

UV = 1 paire



Q99540C-99

### Scissors

Seal-cutting scissor,  
45° cutting angle.  
For G99019-60

PU = 1 piece

### Schere

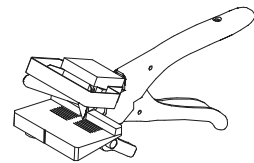
Dichtungsschere, 45°  
Schneidewinkel.  
Für G99019-60

VE = 1 Stück

### Pinces

Pinces pour joint d'étanchéité,  
coupe 45°.  
Pour G99019-60

UV = 1 unité



D99543-02

### Scissors Spare parts

Base for scissor D99543-02

PU = 1 piece

### Schere Ersatzteile

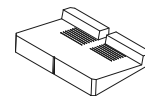
Unterlage für Dichtungsschere  
D99543-02

VE = 1 Stück

### Pinces Pièces de rechange

Base pour pinces D99543-02

UV = 1 unité



Q99543A-99

### Scissors Spare parts

Blades retainer with blades and  
safety bracket for scissor  
D99543-02

PU = 1 piece

### Schere Ersatzteile

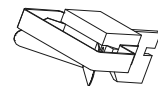
Klingenhalter komplett mit Klingen  
und Bügel für Dichtungsschere  
D99543-02

VE = 1 Stück

### Pinces Pièces de rechange

Retenue de lames avec lames et  
protection pour pinces D99543-02

UV = 1 unité



Q99543B-99

### Scissors Spare parts

Blades for scissor D99543-02

PU = 4 pieces

### Schere Ersatzteile

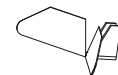
Klingen für Dichtungsschere  
D99543-02

VE = 4 Stück

### Pinces Pièces de rechange

Lames pour pinces D99543-02

UV = 4 unités



Q99543C-99

### Scissors Spare parts

Locking lever for scissor  
D99543-02

PU = 1 pair

### Schere Ersatzteile

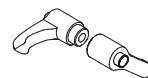
Klemmhebel für Dichtungsschere  
D99543-02

VE = 1 Paar

### Pinces Pièces de rechange

Lévier de verrouillage pour pinces  
D99543-02

UV = 1 paire



Q99543D-99



Installation templates

Installationsvorlagen

Gabarits d'installation

3.11

**Installation**

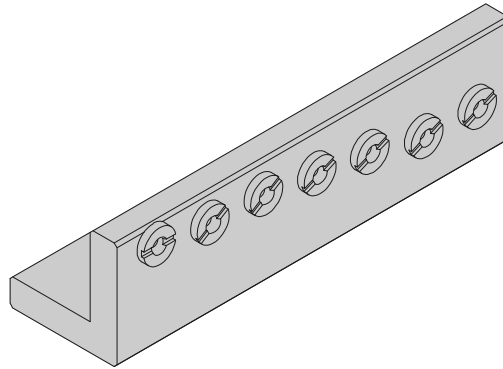
Template for glazing beads

**Einbau**

Schweißschablone für Glashalteleisten

**Schéma de montage**

Gabarit pour parclores



D99441-00

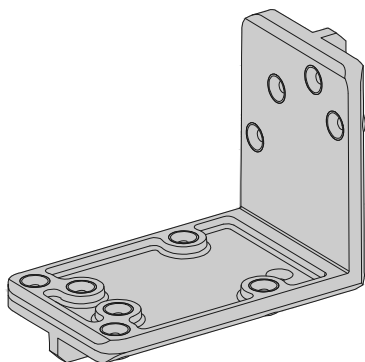
See installation page [5.12.17](#)



**Templates for  
Tilt&Turn fittings**

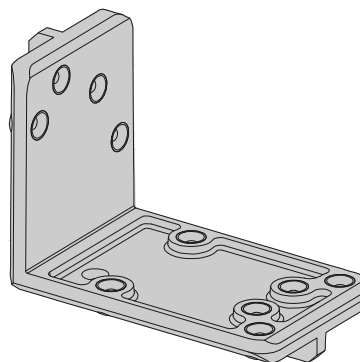
**Beilagen für Dreh-  
Kippfenster Beschläge**

**Gabarit pour ferrures  
de fenêtre oscillo-battant**



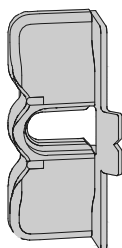
MC 217092

See installation page [5.9.211](#)



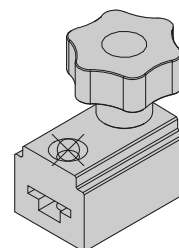
MC 217093

See installation page [5.9.211](#)



MC 229643

See installation page [5.9.227](#)



MC 463153

See installation page [5.9.199](#)



**Cutting templates**

**Sägebeilagen**

**Gabarits de découpe**

**3.12**

### Cutting templates

Aluminum, supports for cutting profiles, length 300 mm

PU = 1 piece

### Sägebeilagen

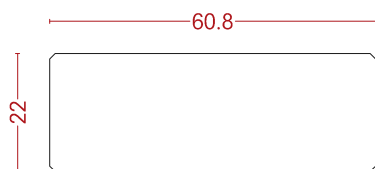
Aluminium, Unterlagen zum Sägen der Profile, Länge 300 mm

VE = 1 Stück

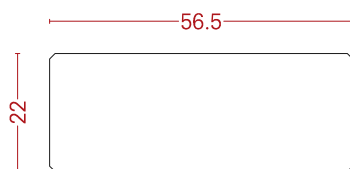
### Gabarit de découpe

Aluminium, gabarit de découpe, longueur 300 mm

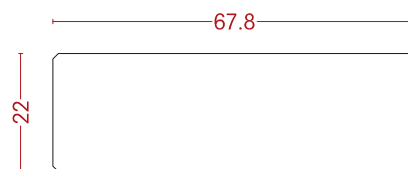
UV = 1 unité



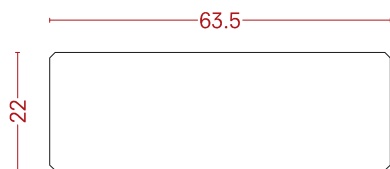
D10414-00



D10415-00



D10416-00



D10417-00

### Profile cutting

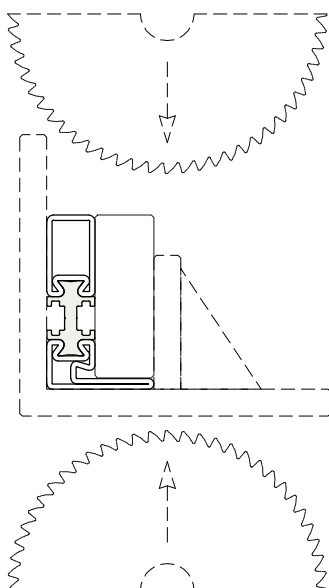
### Sägen von Profilen

### Surface d'appui des profilés

Top cut

Vertikaler Schnitt

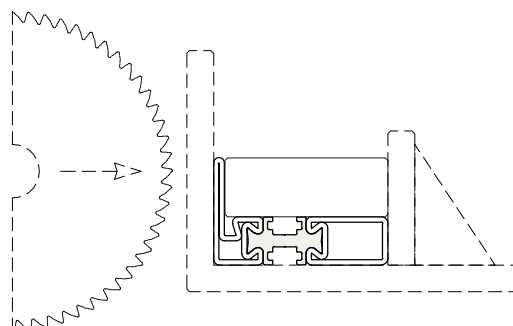
Coupe verticale

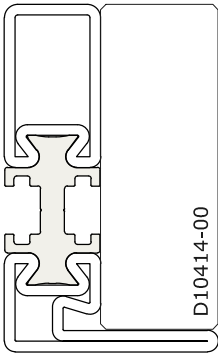


Side cut

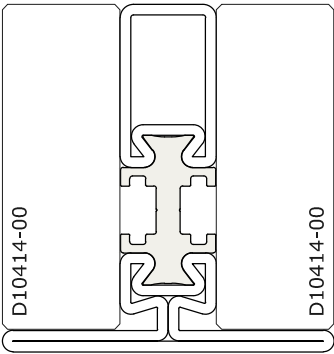
Horizontaler Schnitt

Coupe horizontale

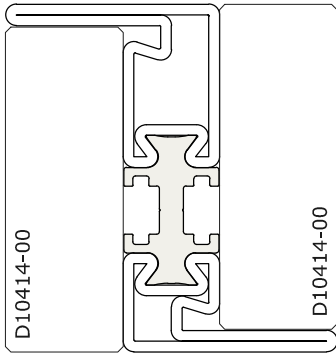




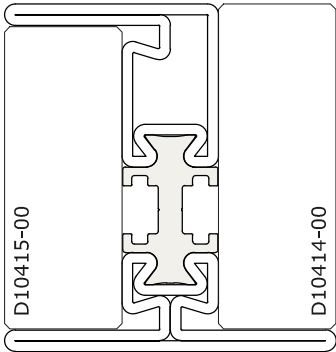
MT 6518L-nn



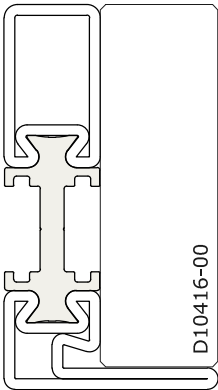
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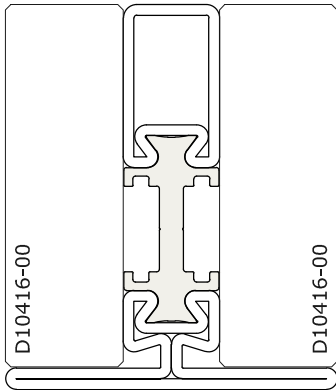
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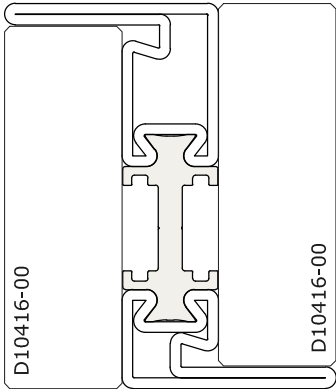
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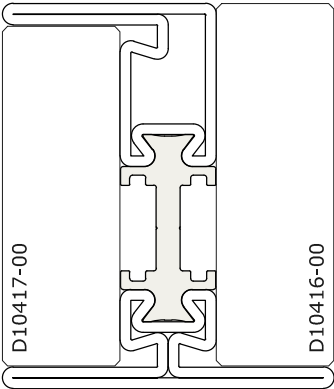
MT 7218LF-nn



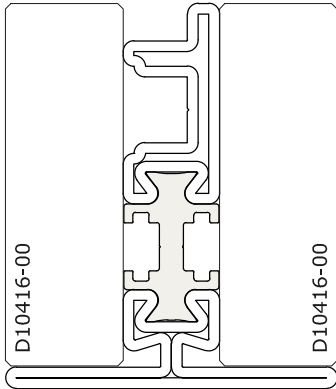
MT 7218TF-nn



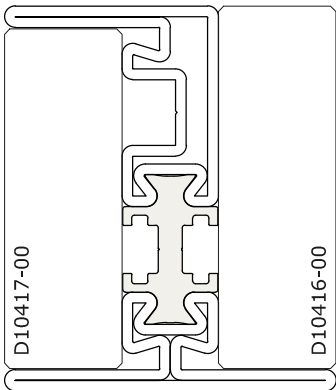
MT 7218ZF-nn



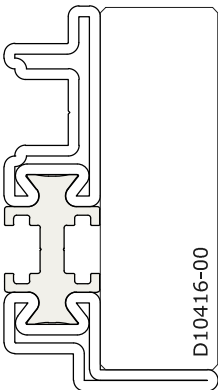
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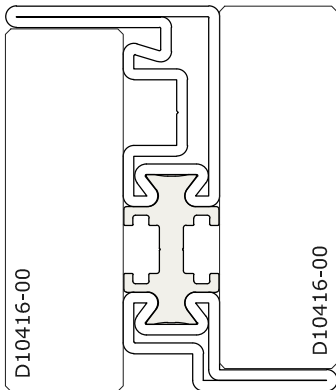
MT 7218TZ-nn



MT 7218HZ-nn



MT 7218LR-nn



MT 7218ZR-nn



Examples

Beispiele

Exemples

4.0

Window details  
Door details  
Details, structural connections  
Wall connections

Details Fenster  
Details Türen  
Details Konstruktion  
Bauanschlüsse

Détails fenêtres  
Détails portes  
Détails de construction  
Détails de raccords au mur

4.1  
4.2  
4.3  
4.4





Window details

Details Fenster

Détails fenêtres

4.1

Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2

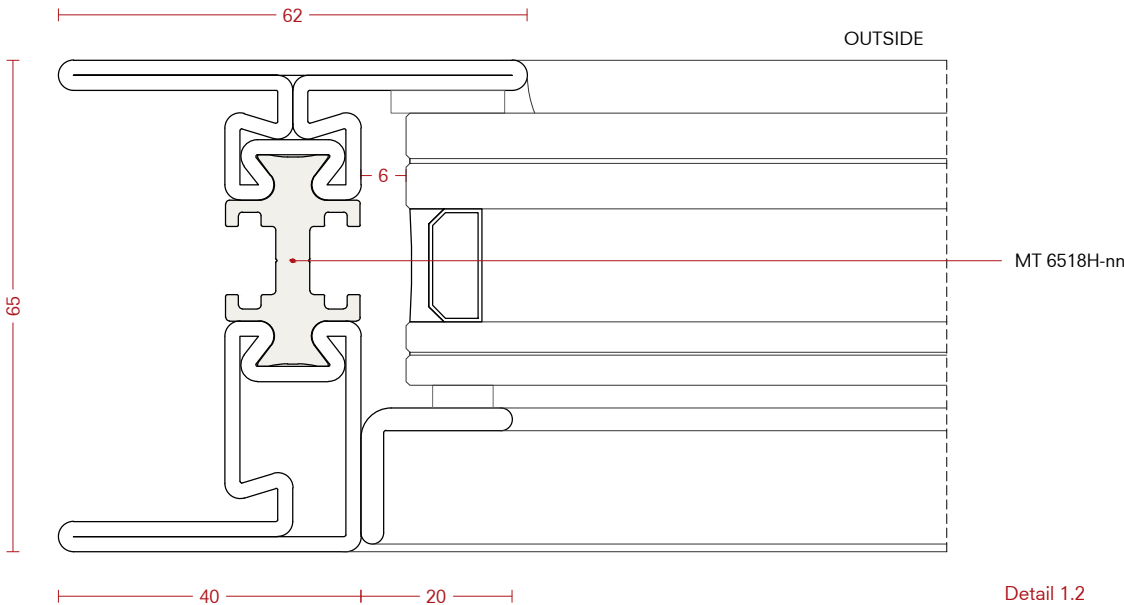
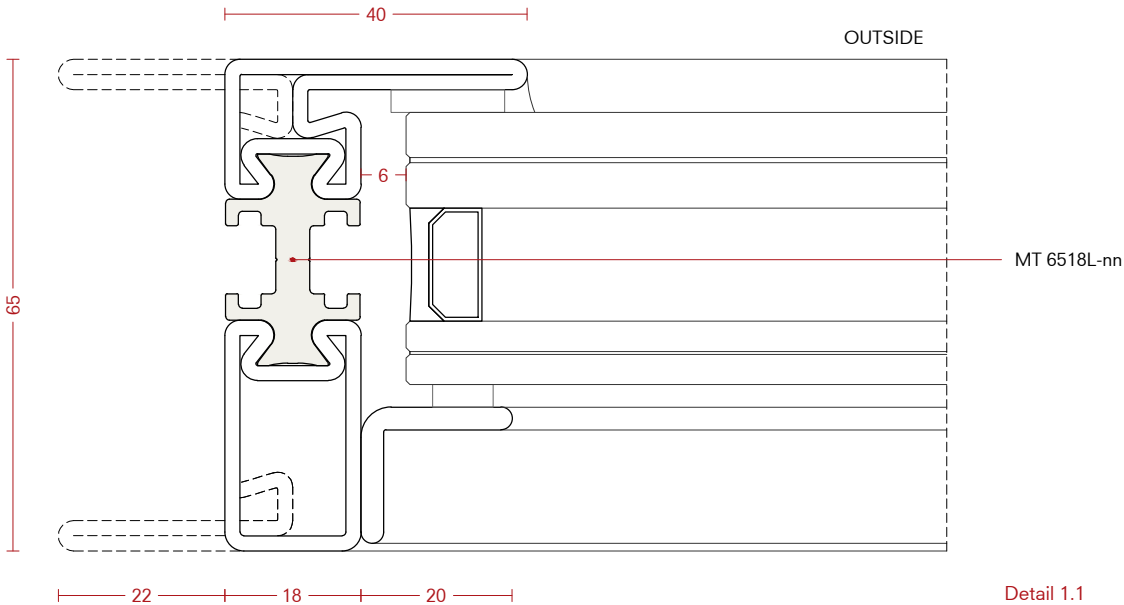
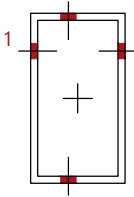
Legende

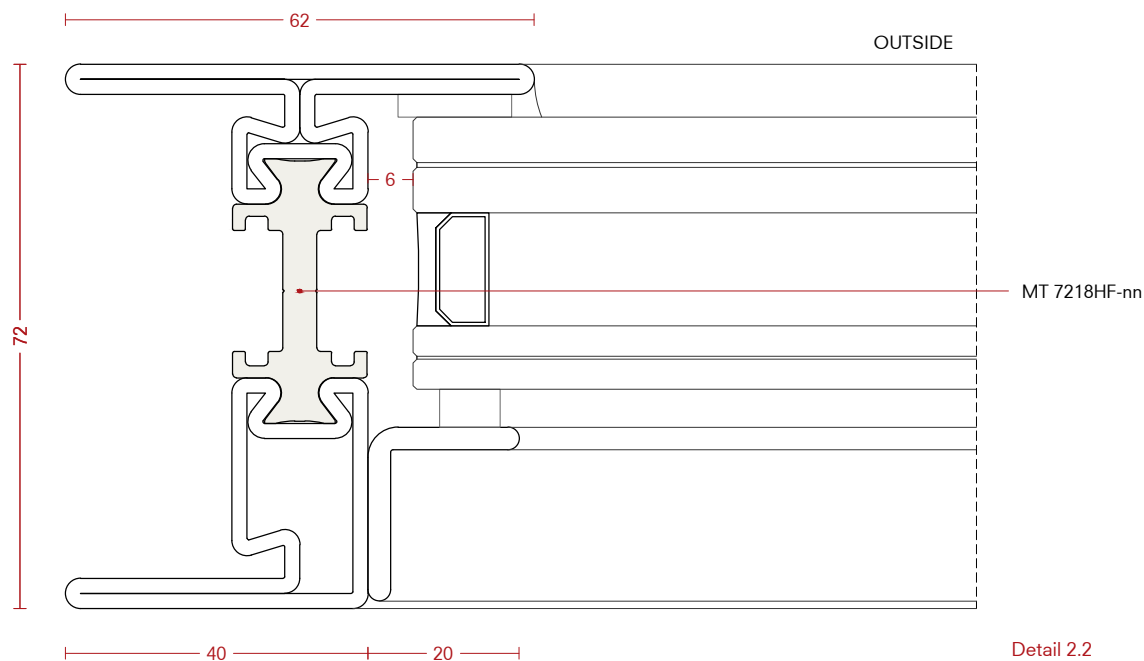
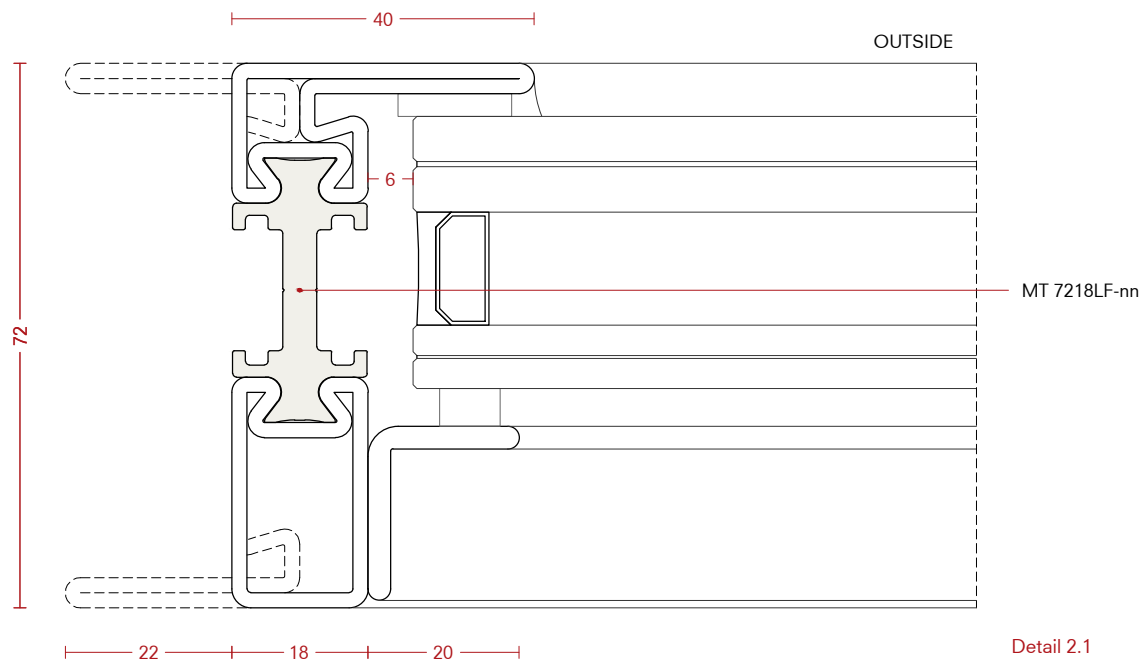
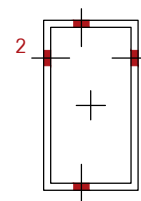
+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2

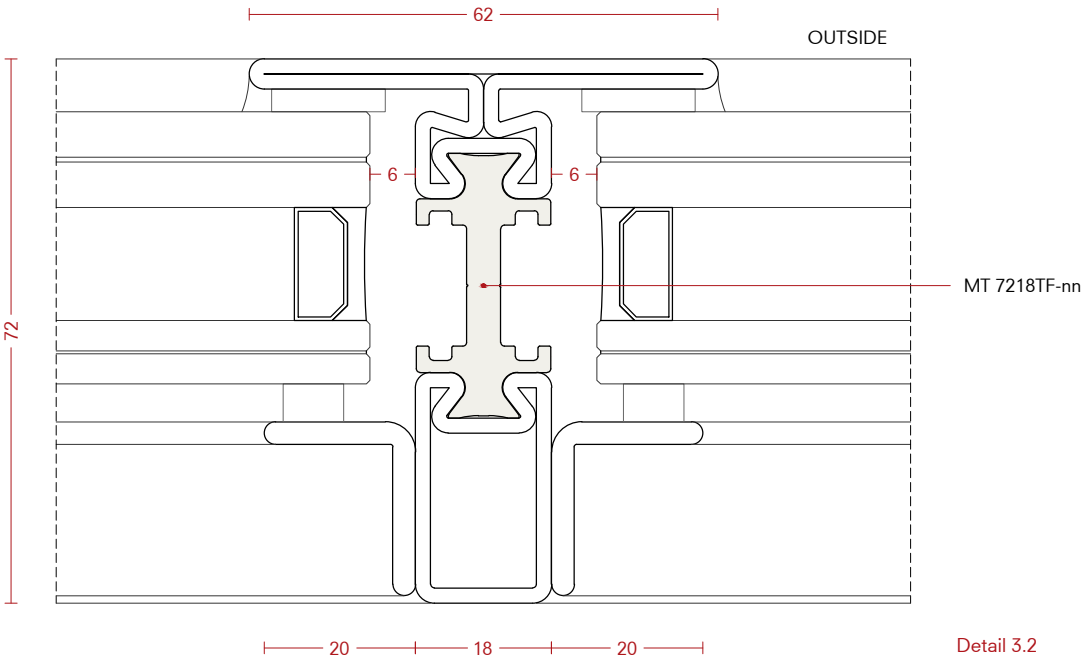
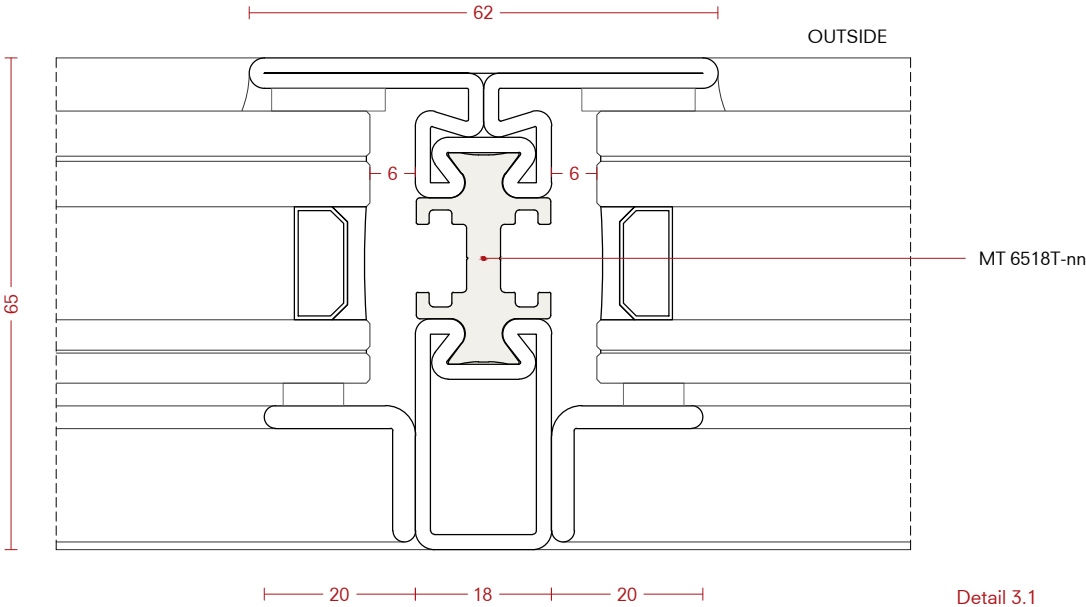
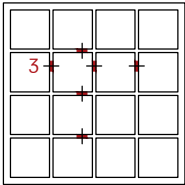
Légende

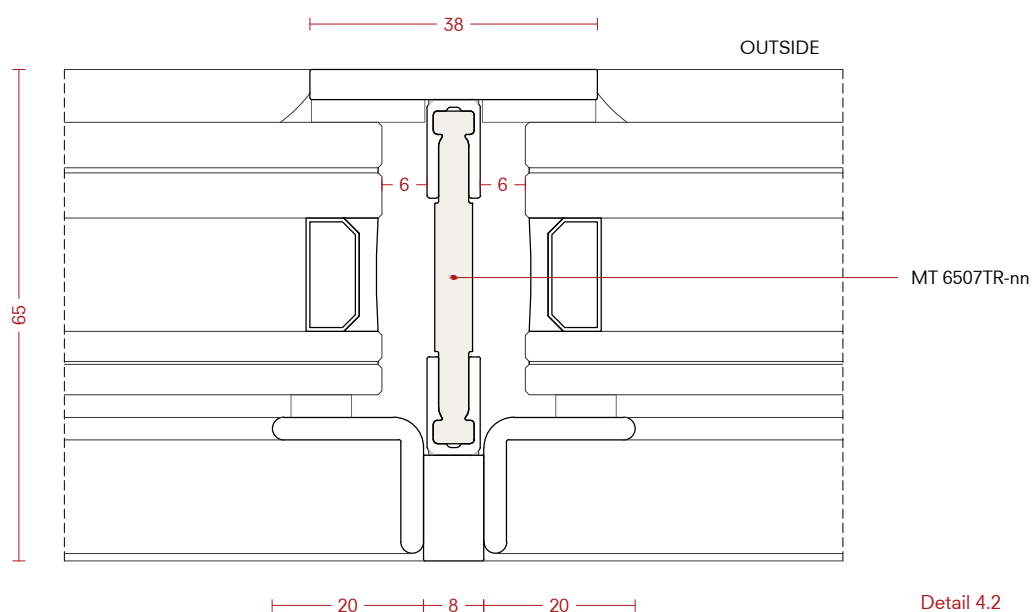
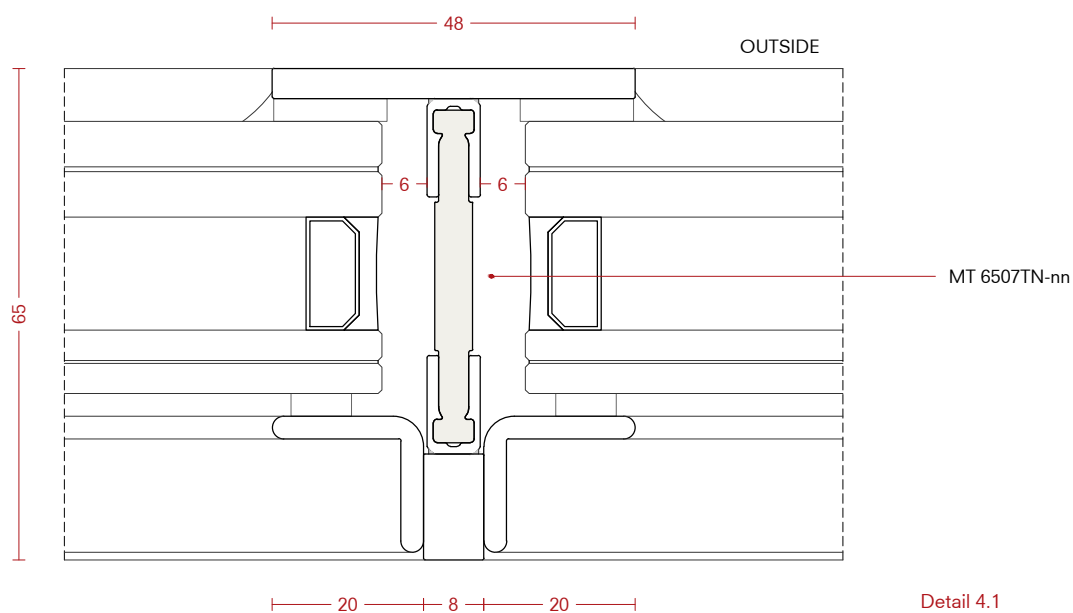
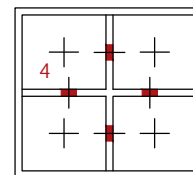
+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2

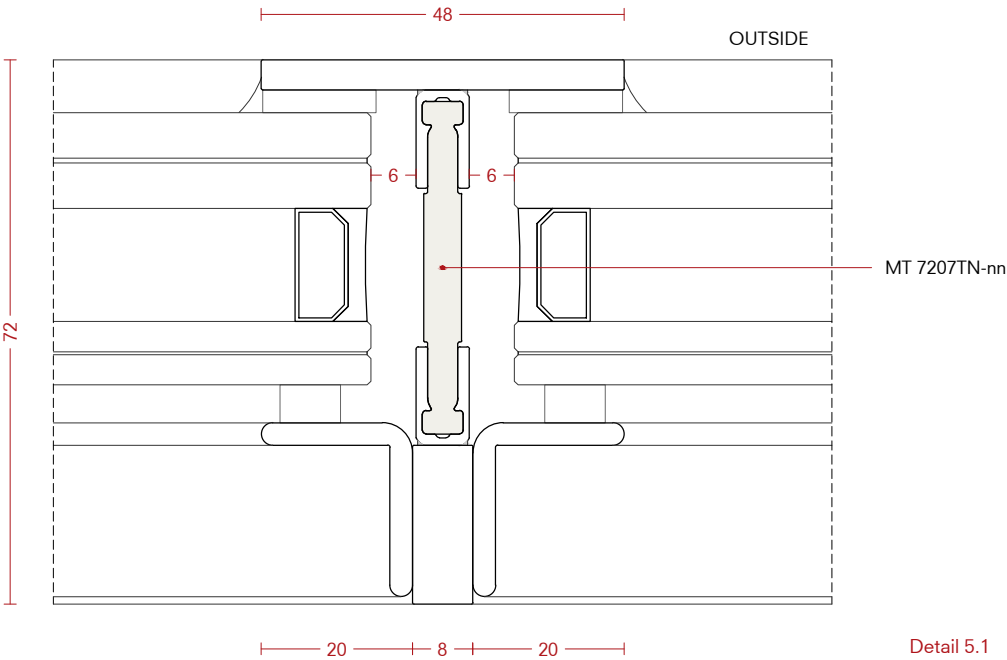
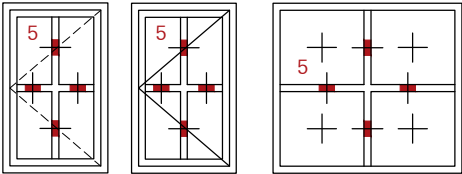




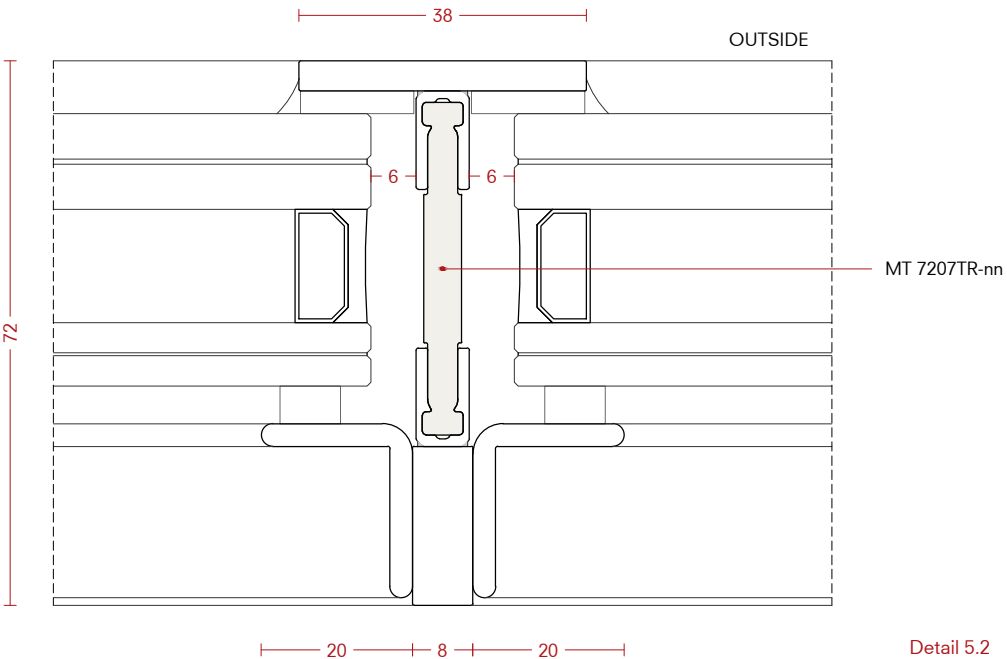




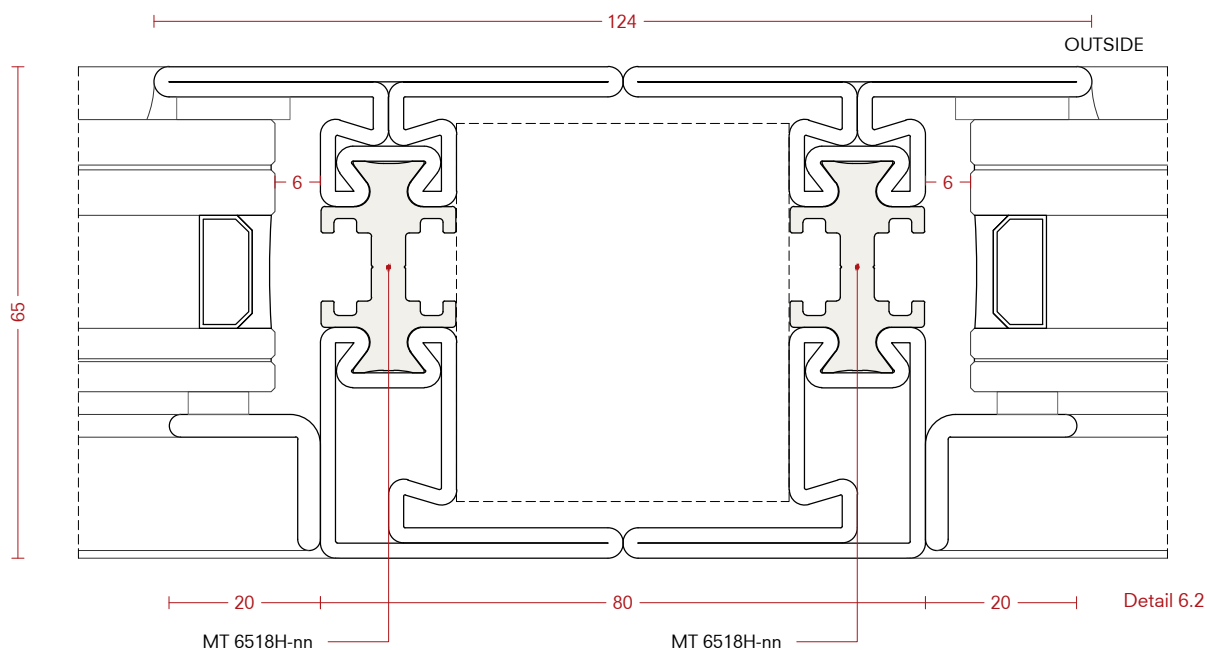
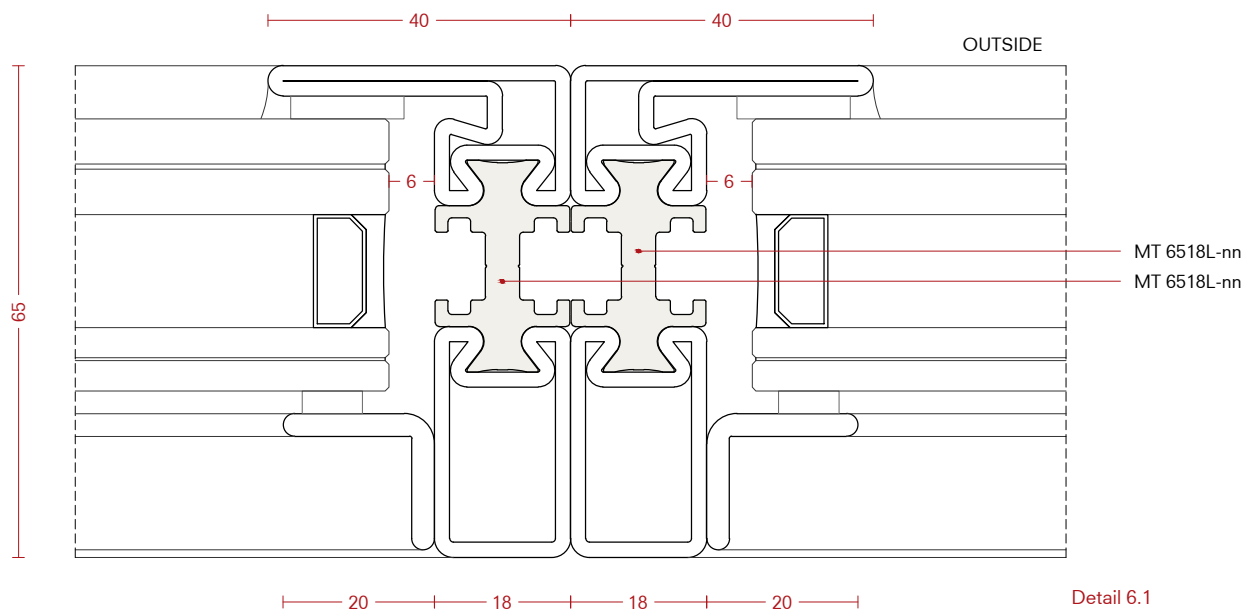
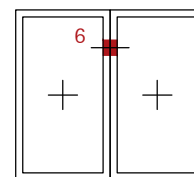




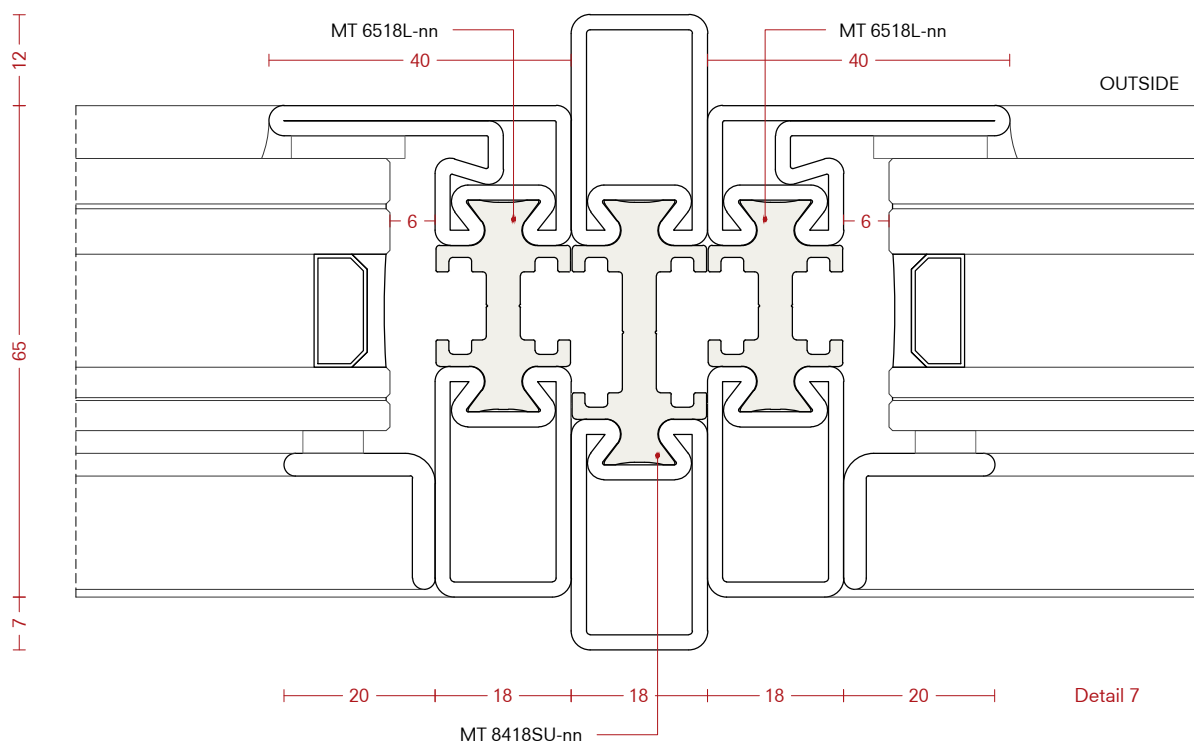
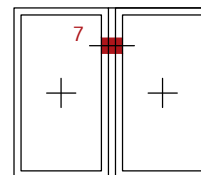
Detail 5.1

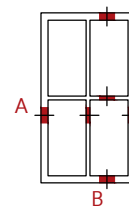


Detail 5.2

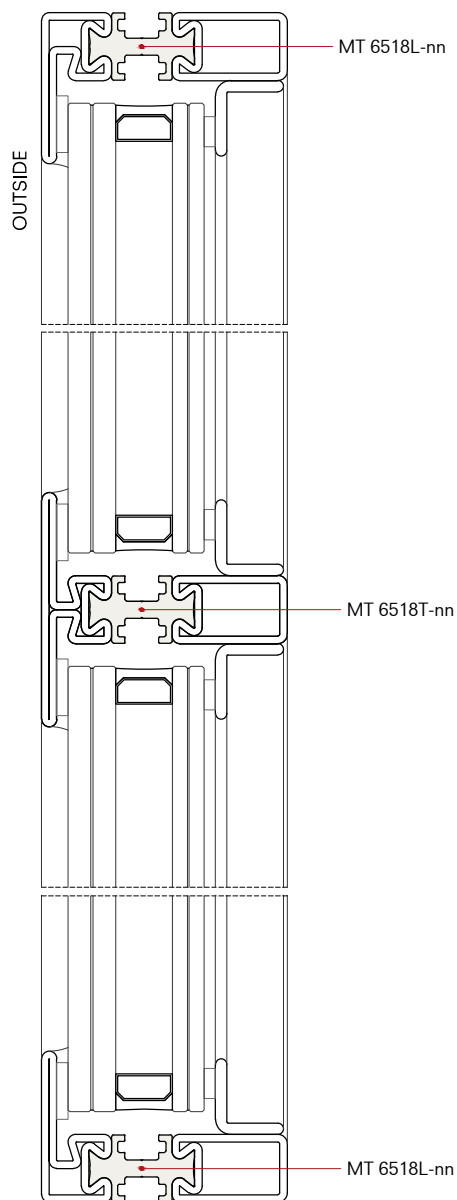
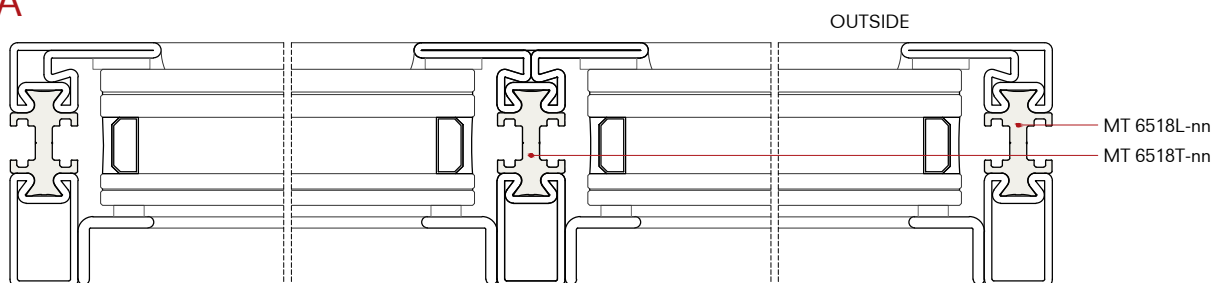




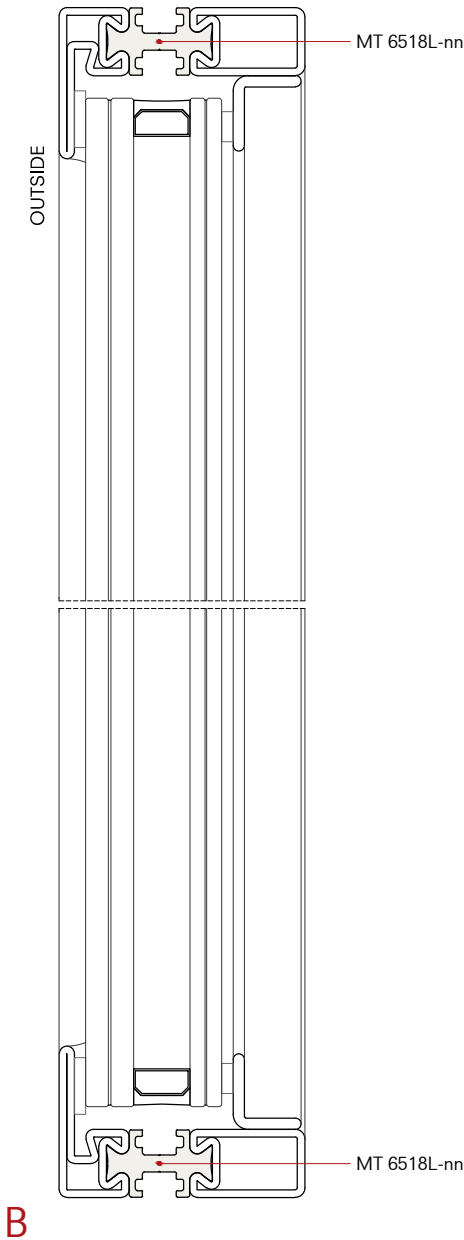
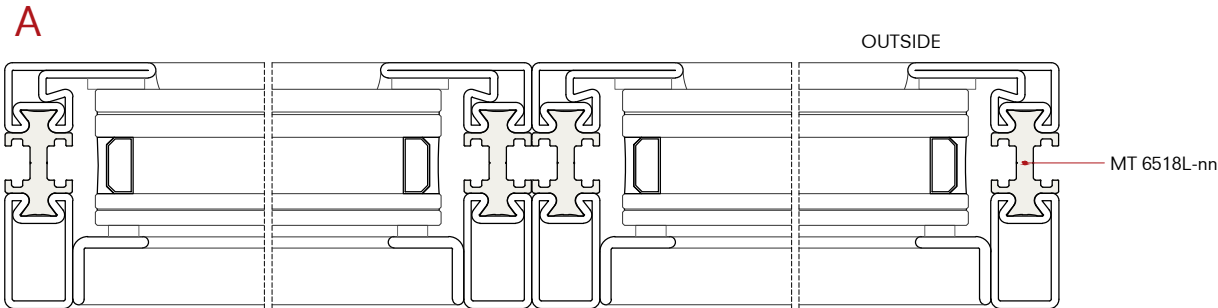
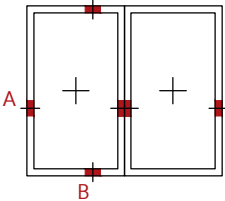


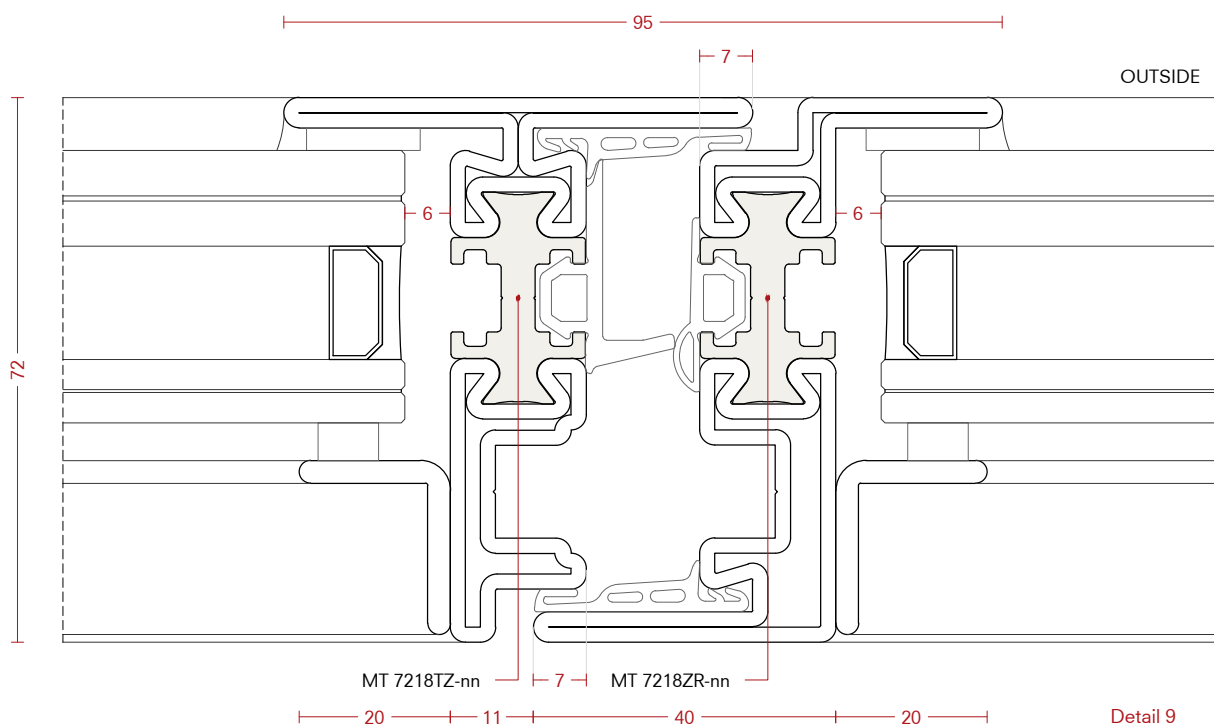
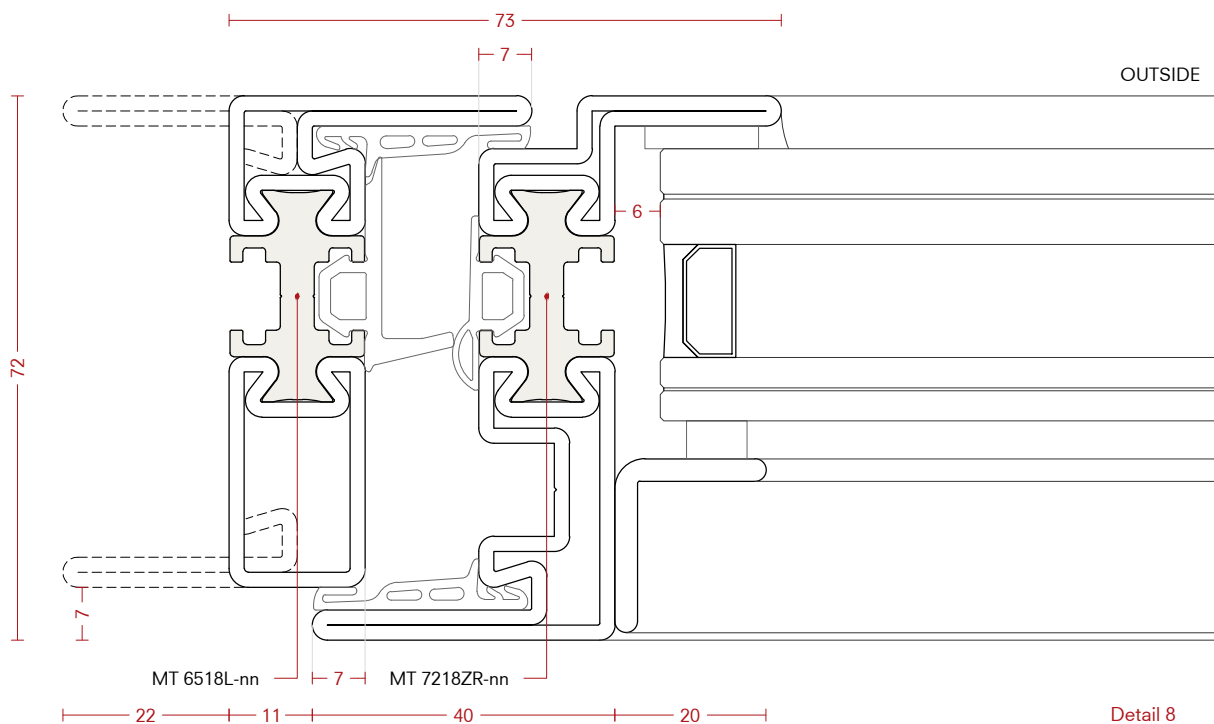
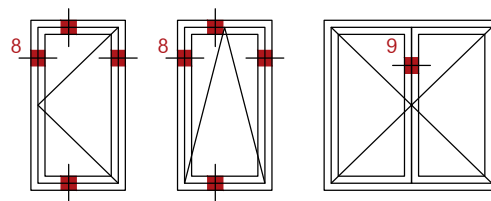


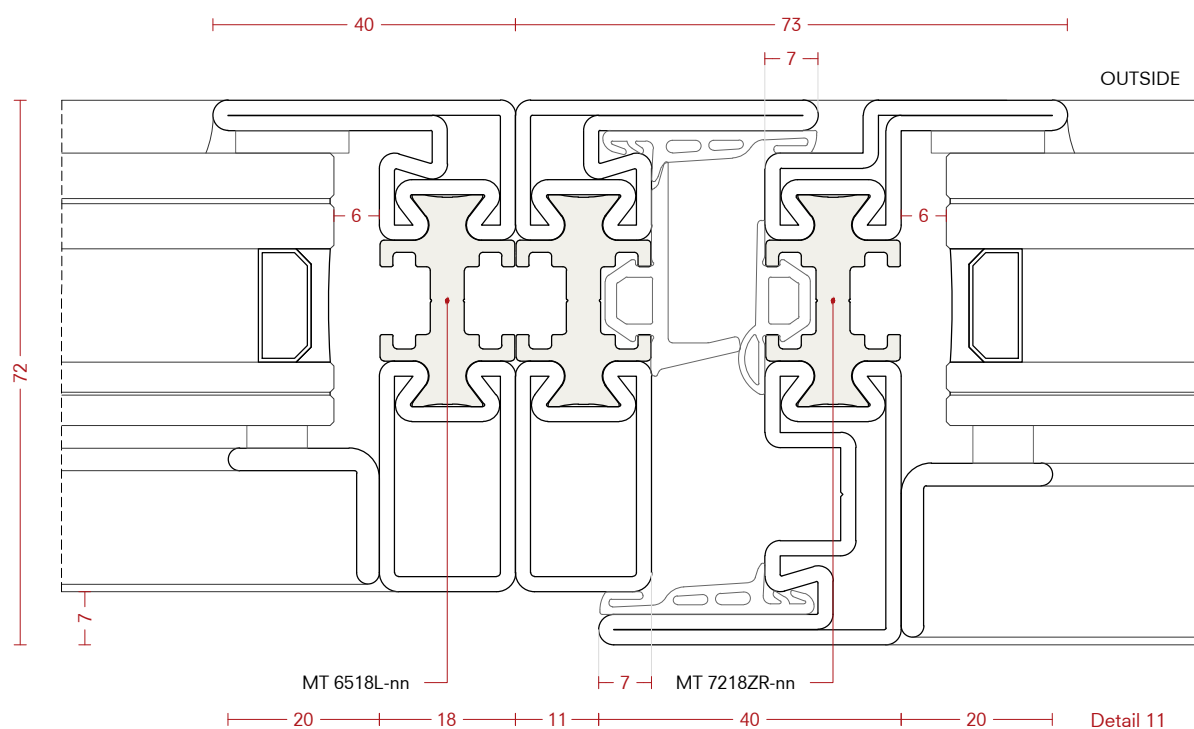
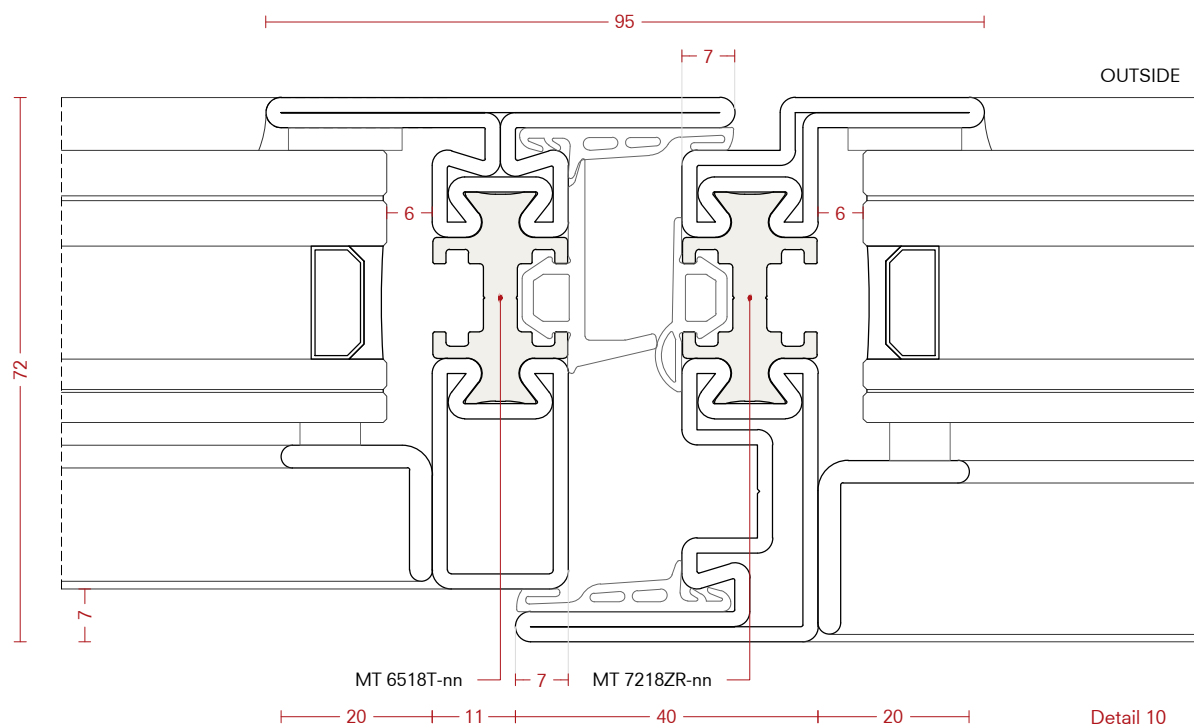
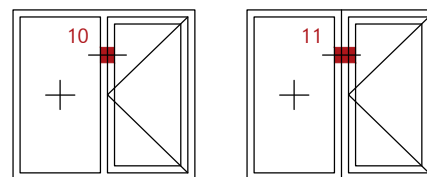
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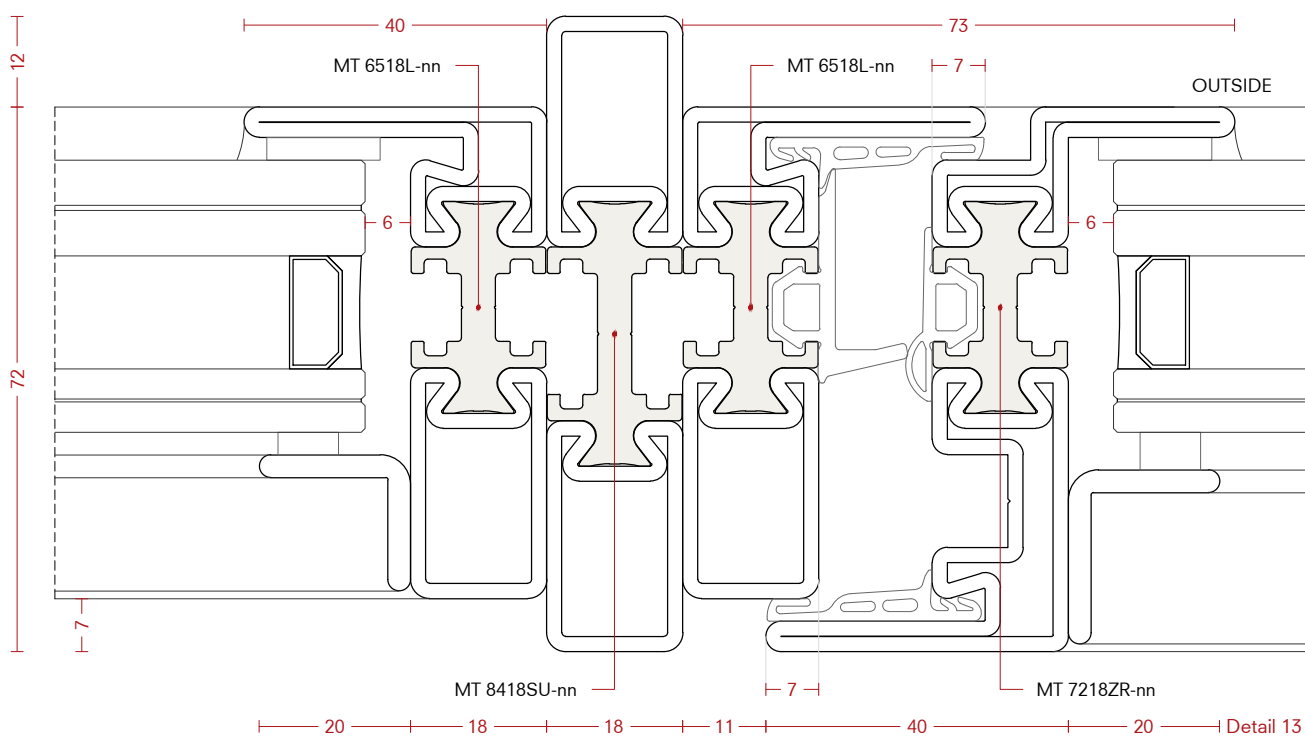
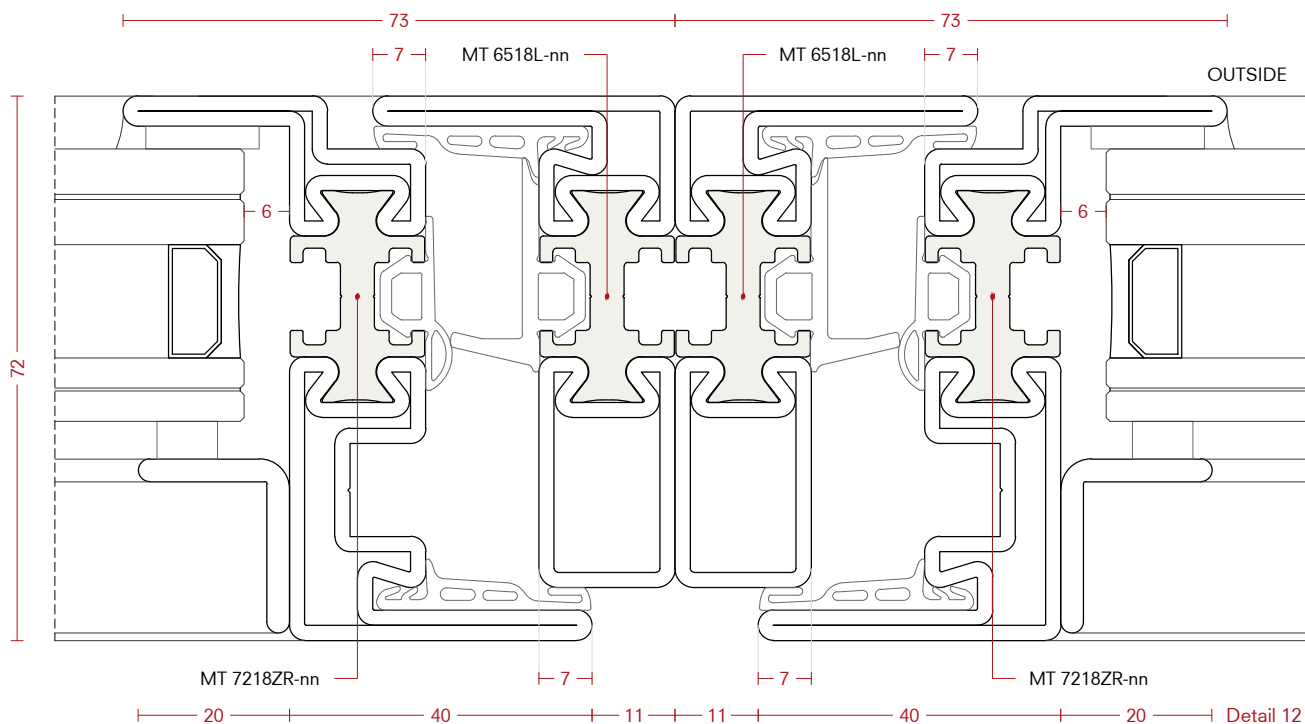
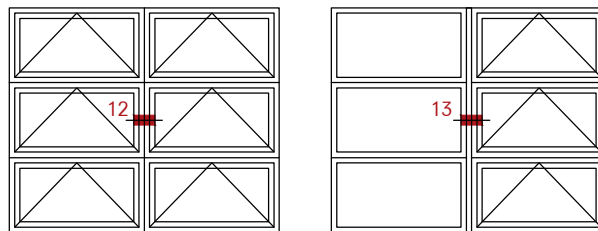


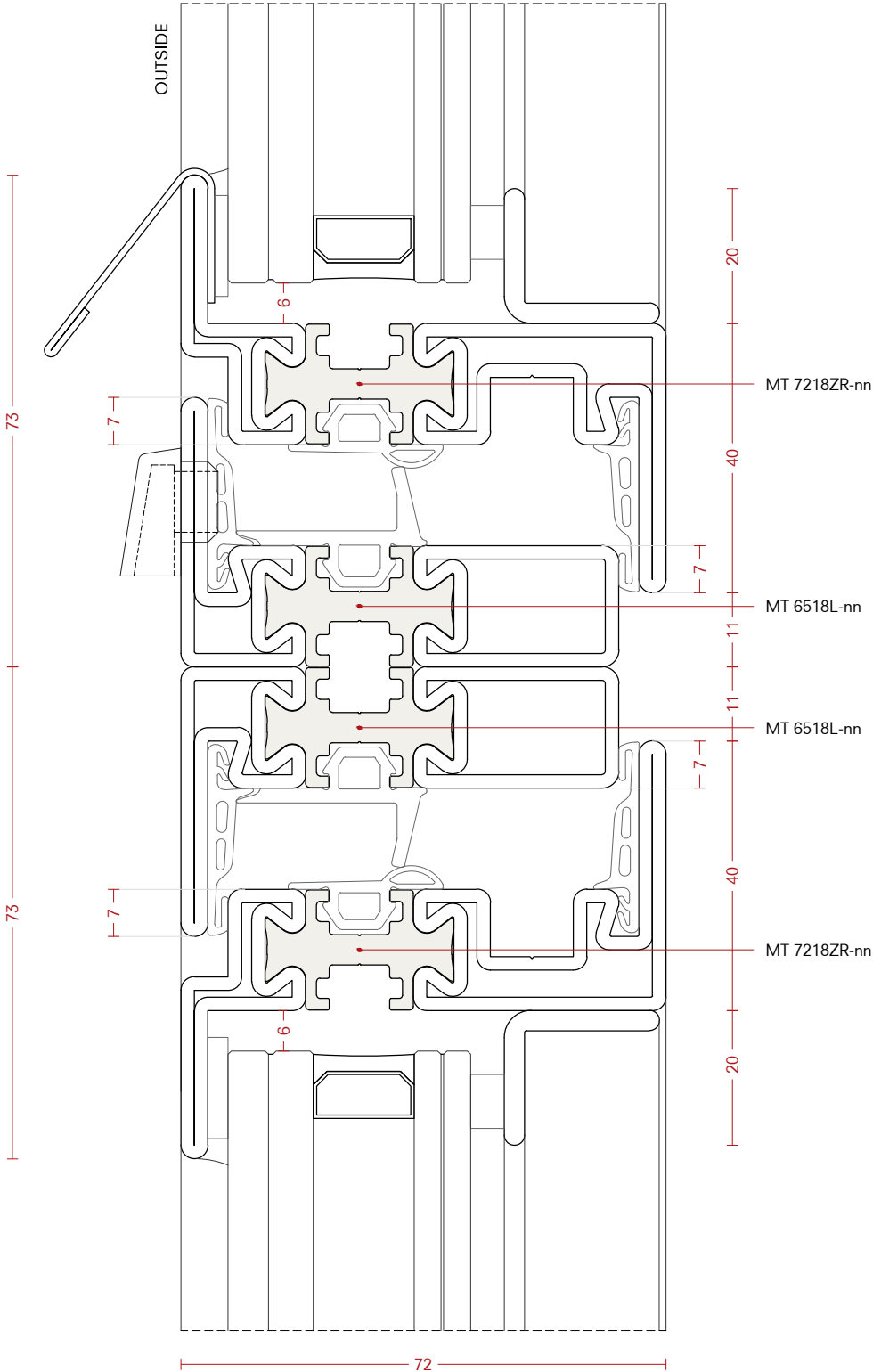
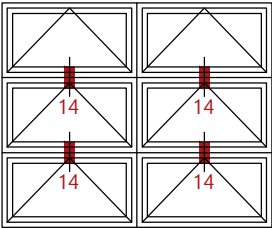
**B**



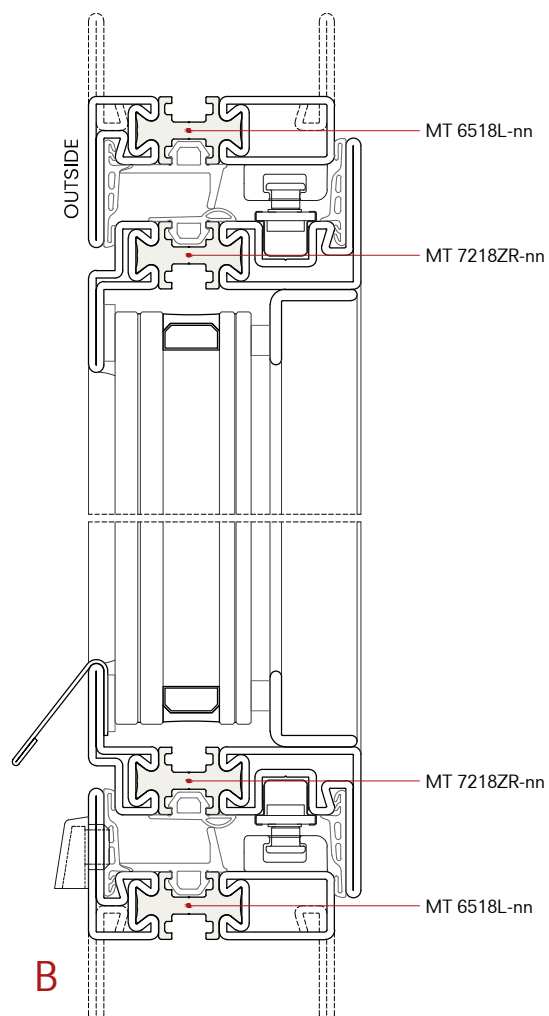
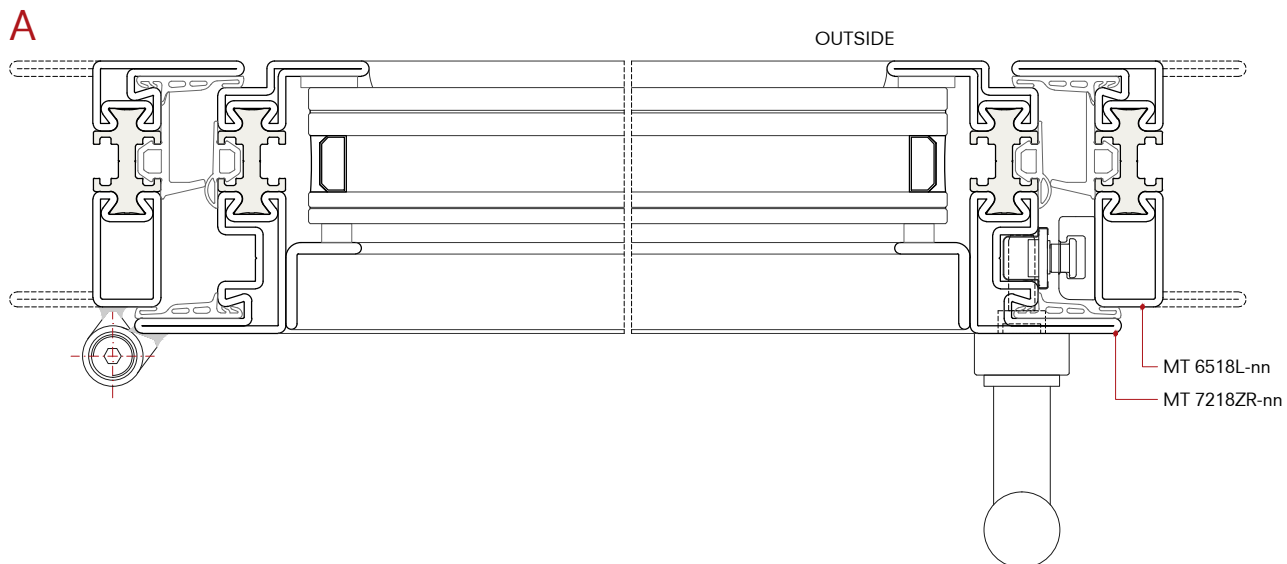




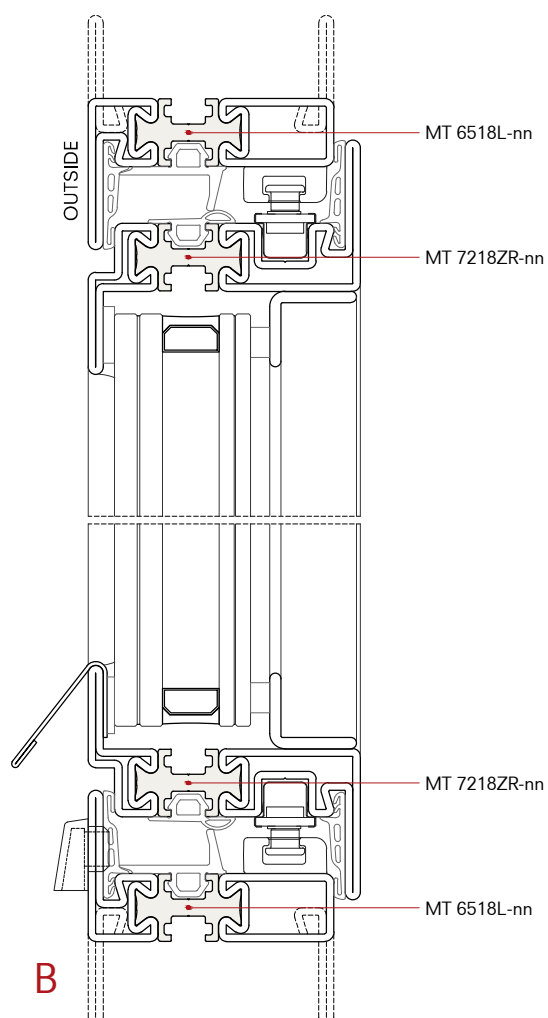
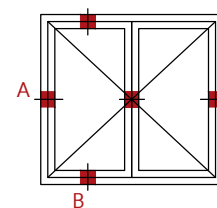
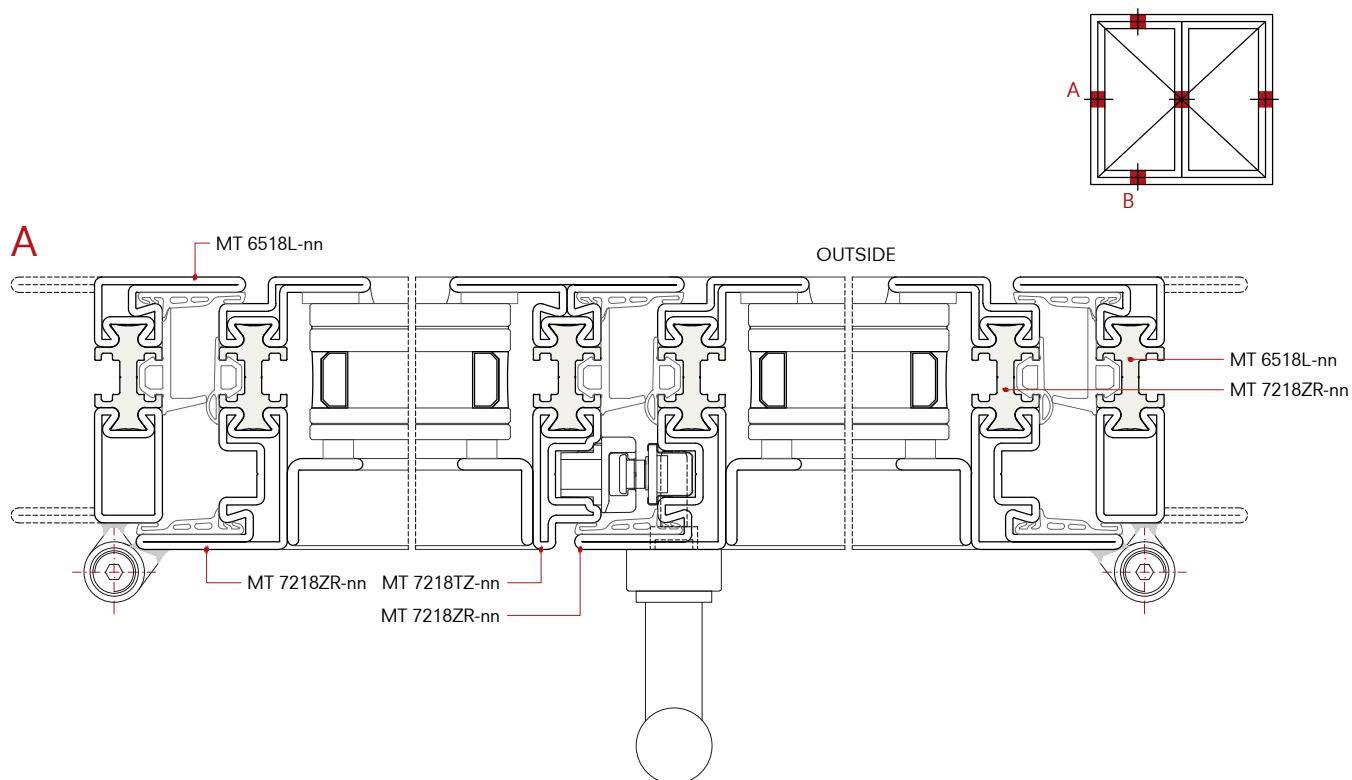


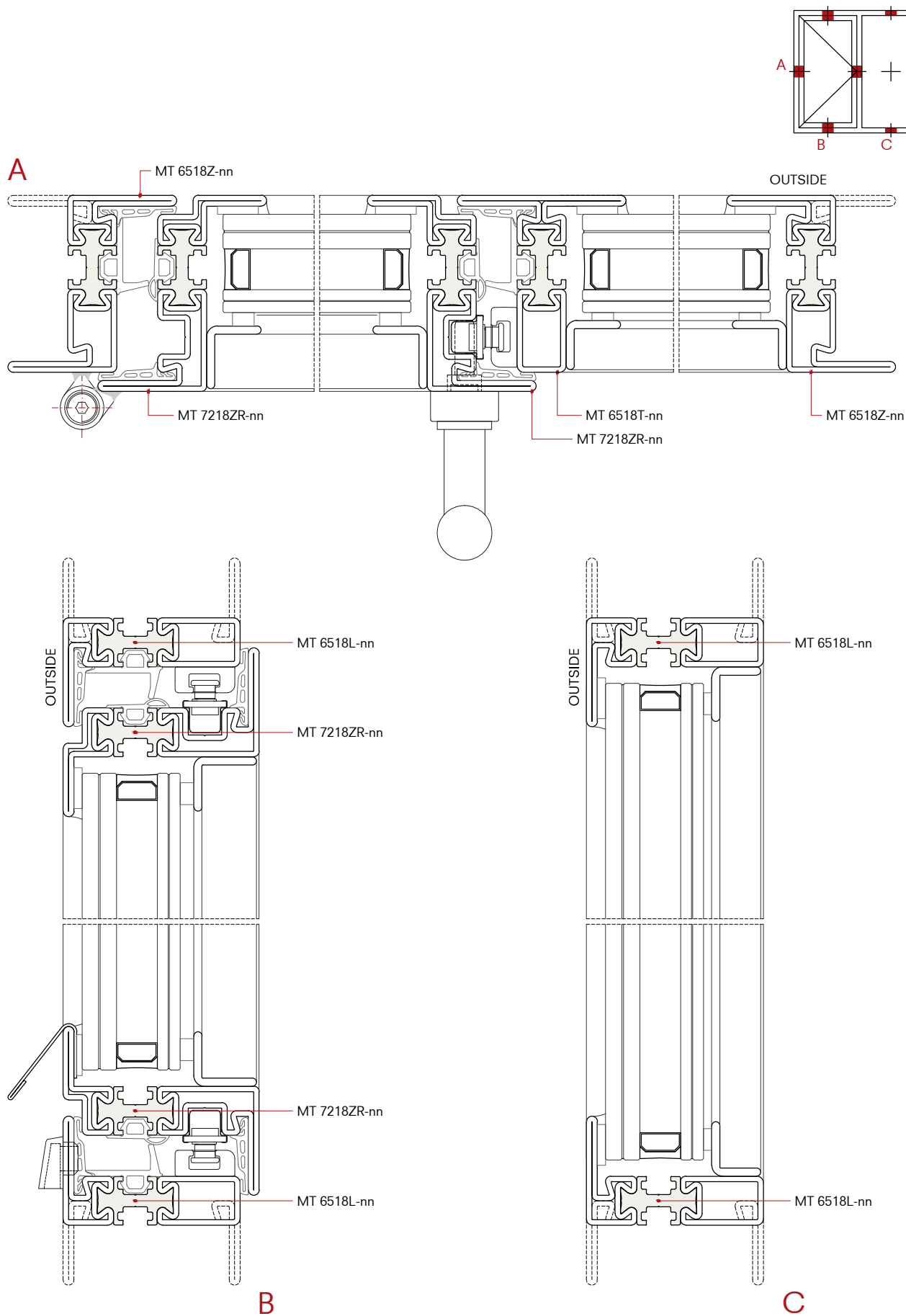


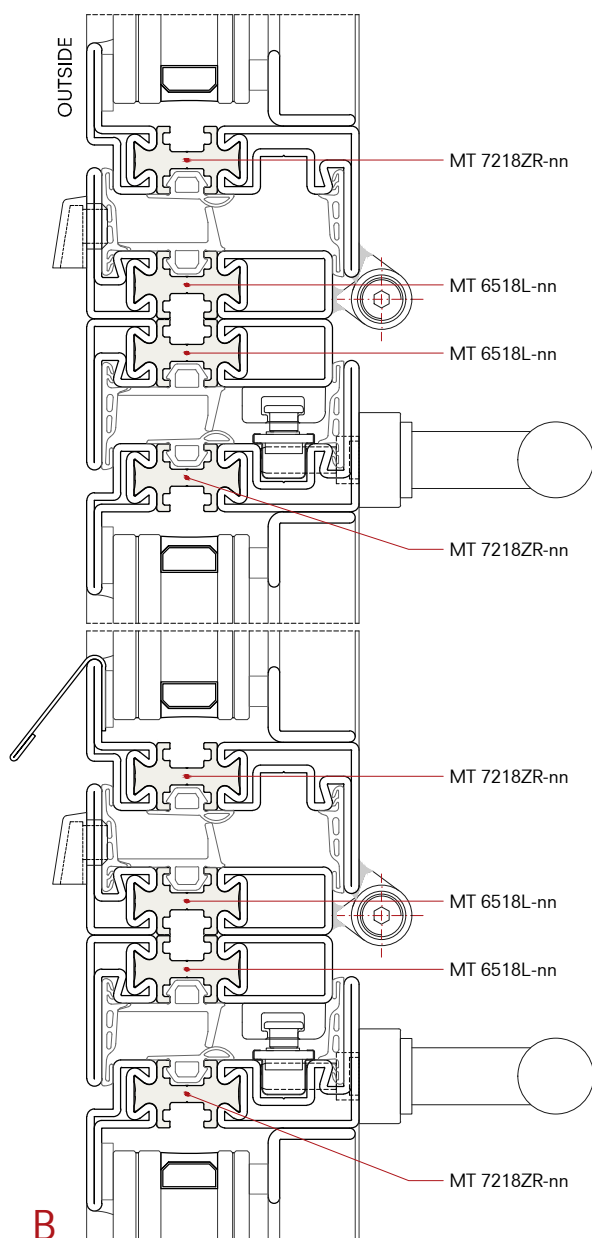
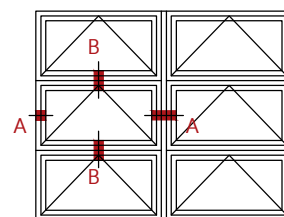
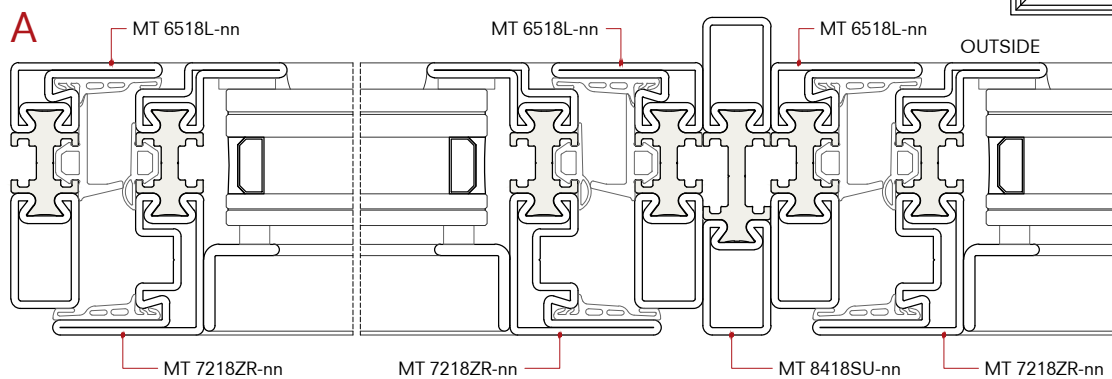
Detail 14

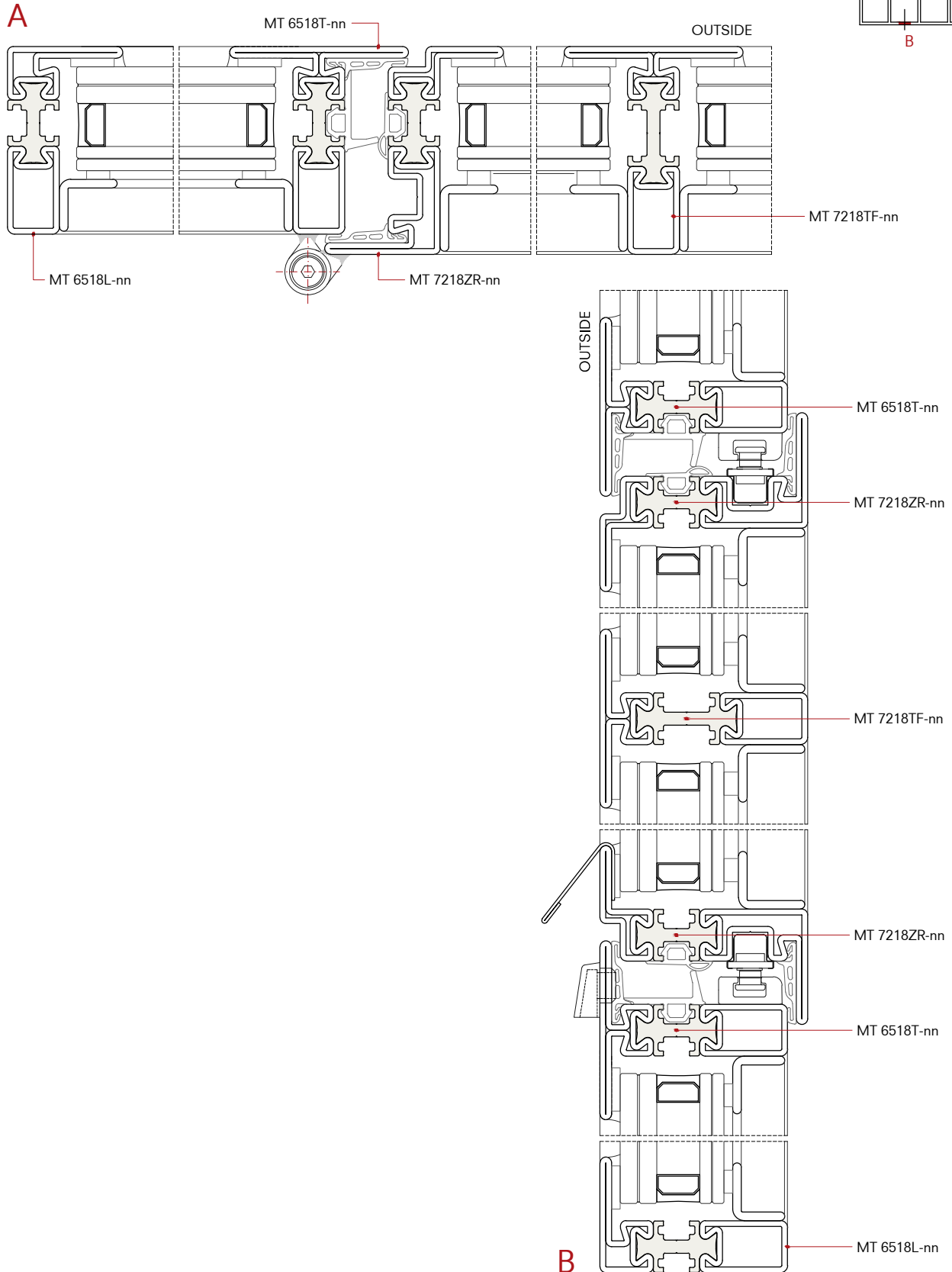


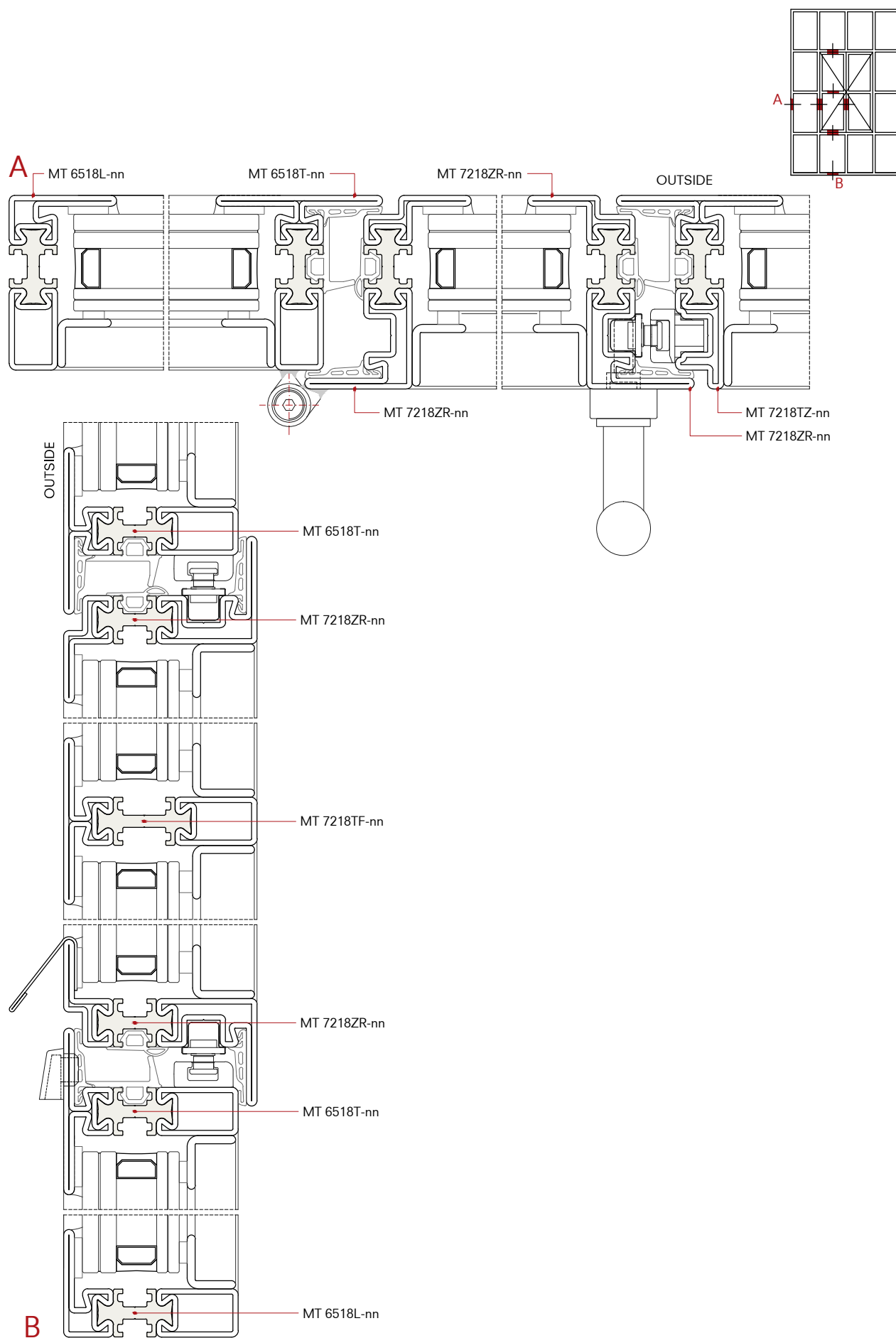


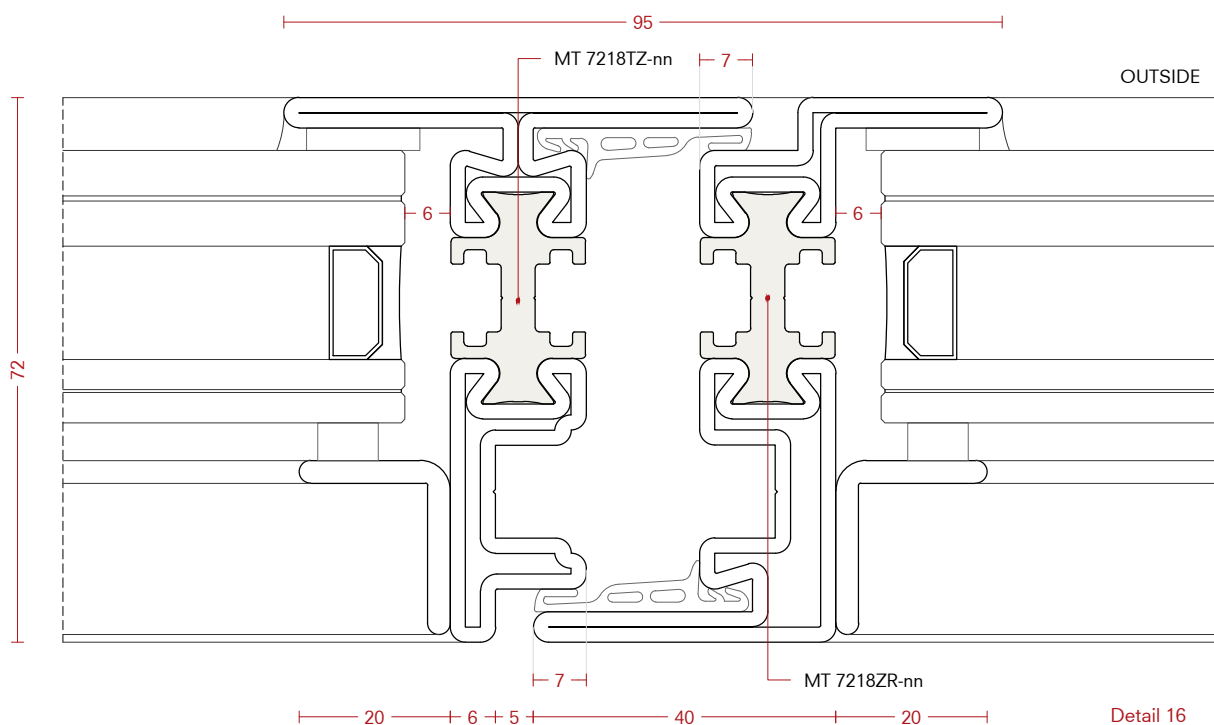
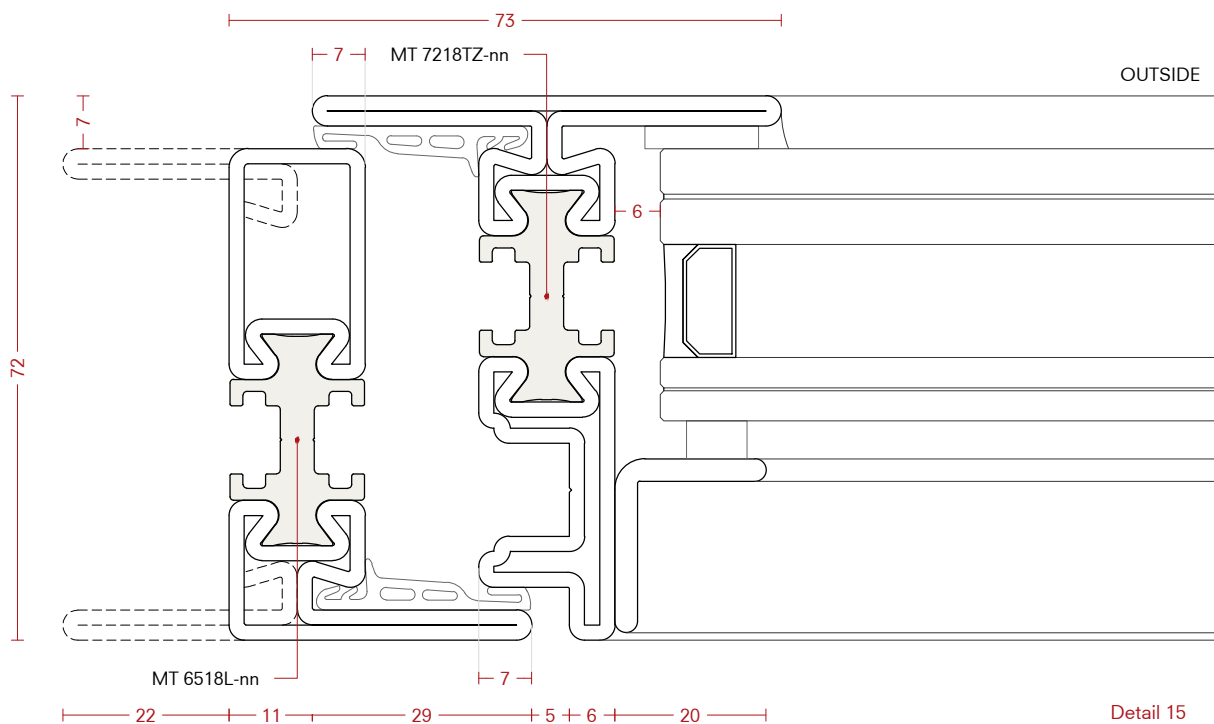
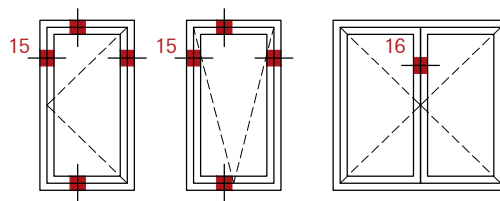


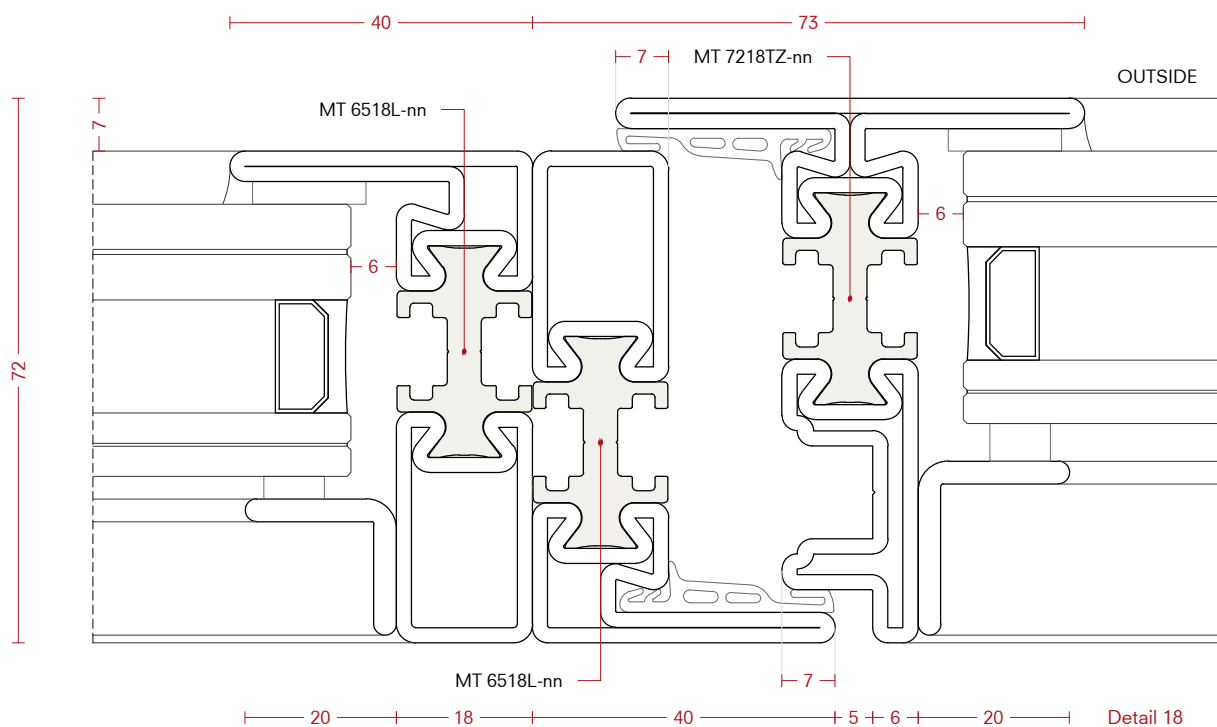
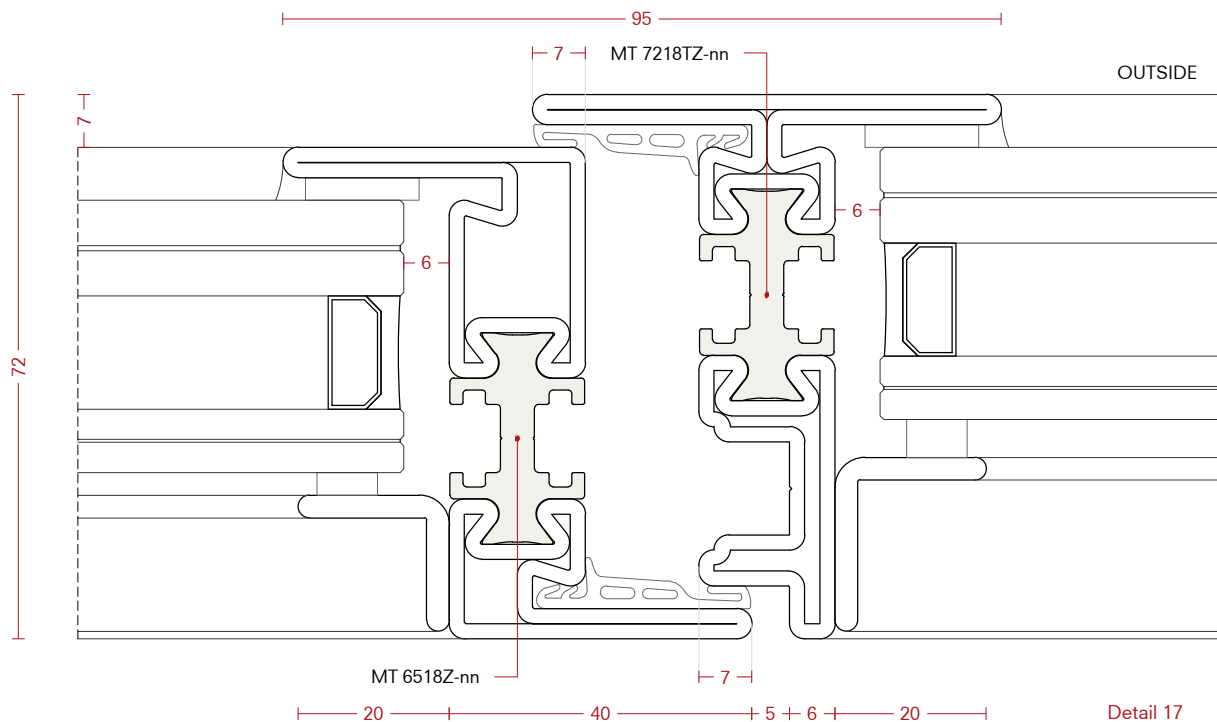
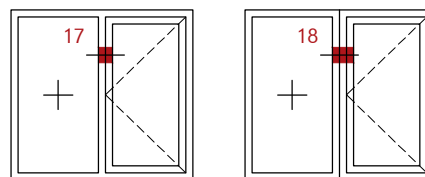


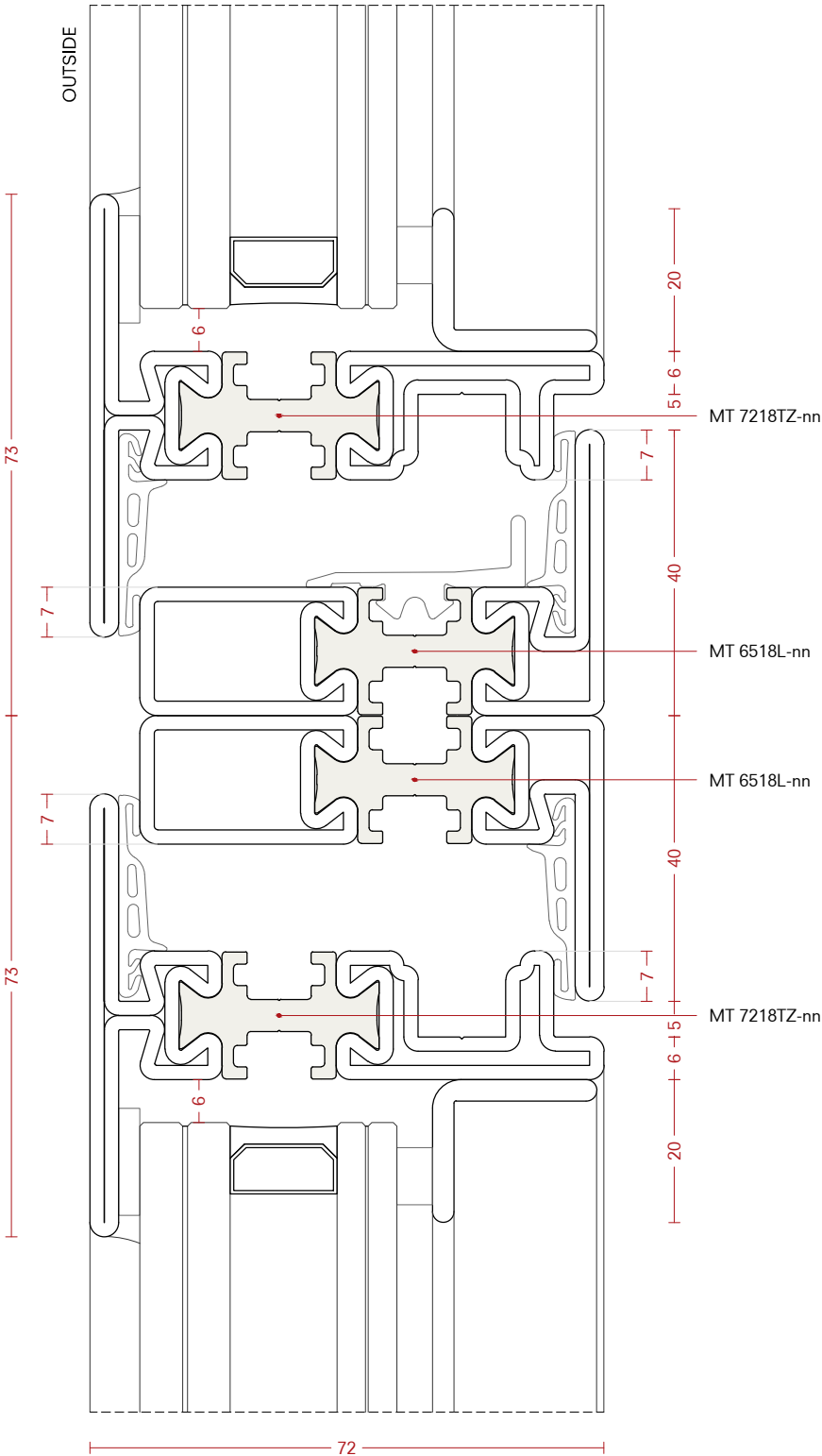
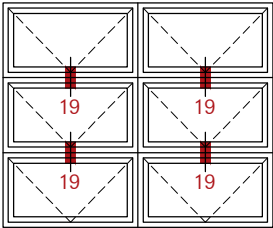






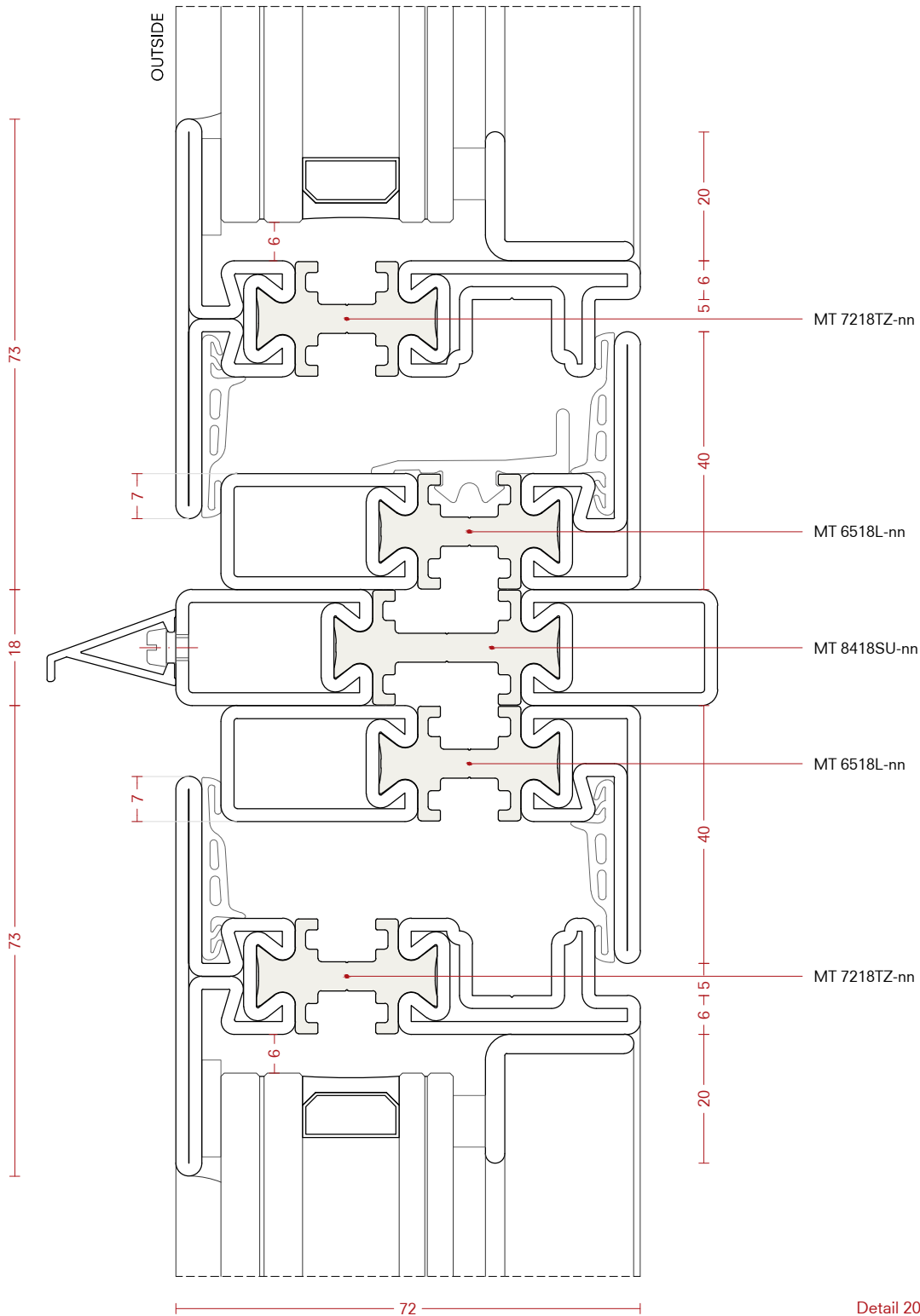
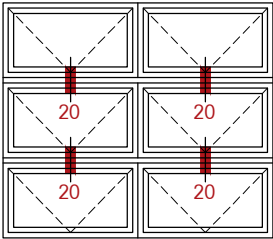


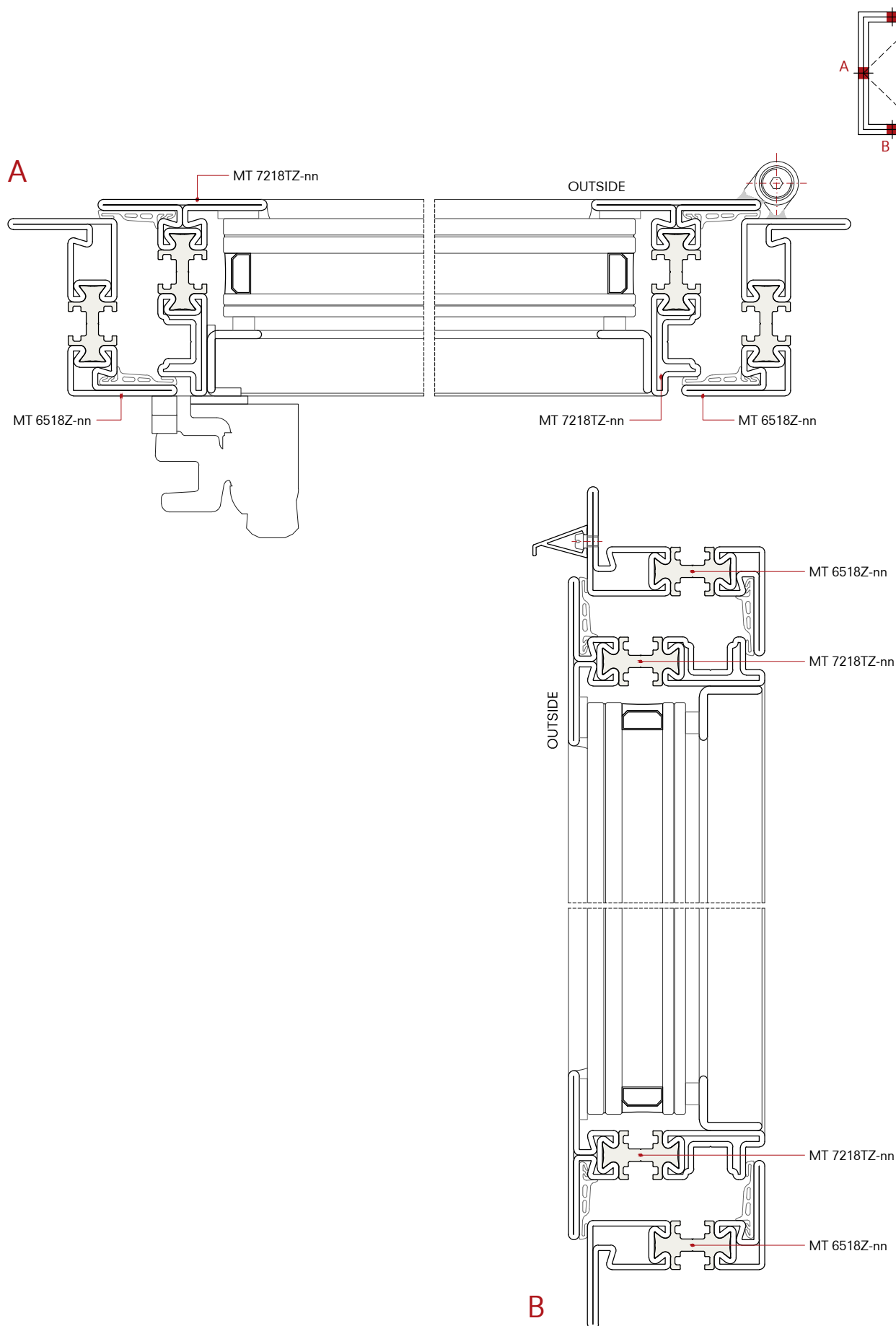


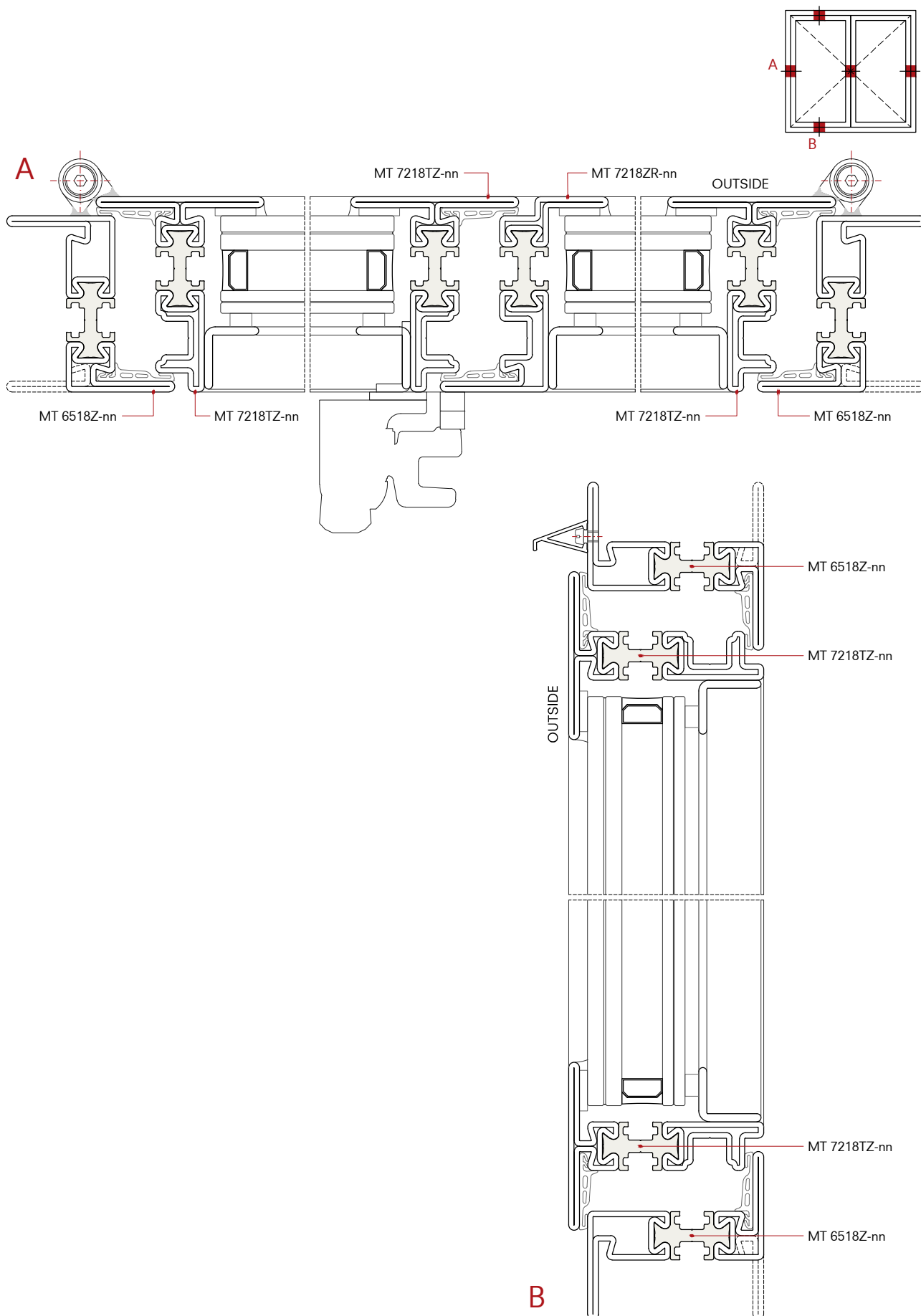


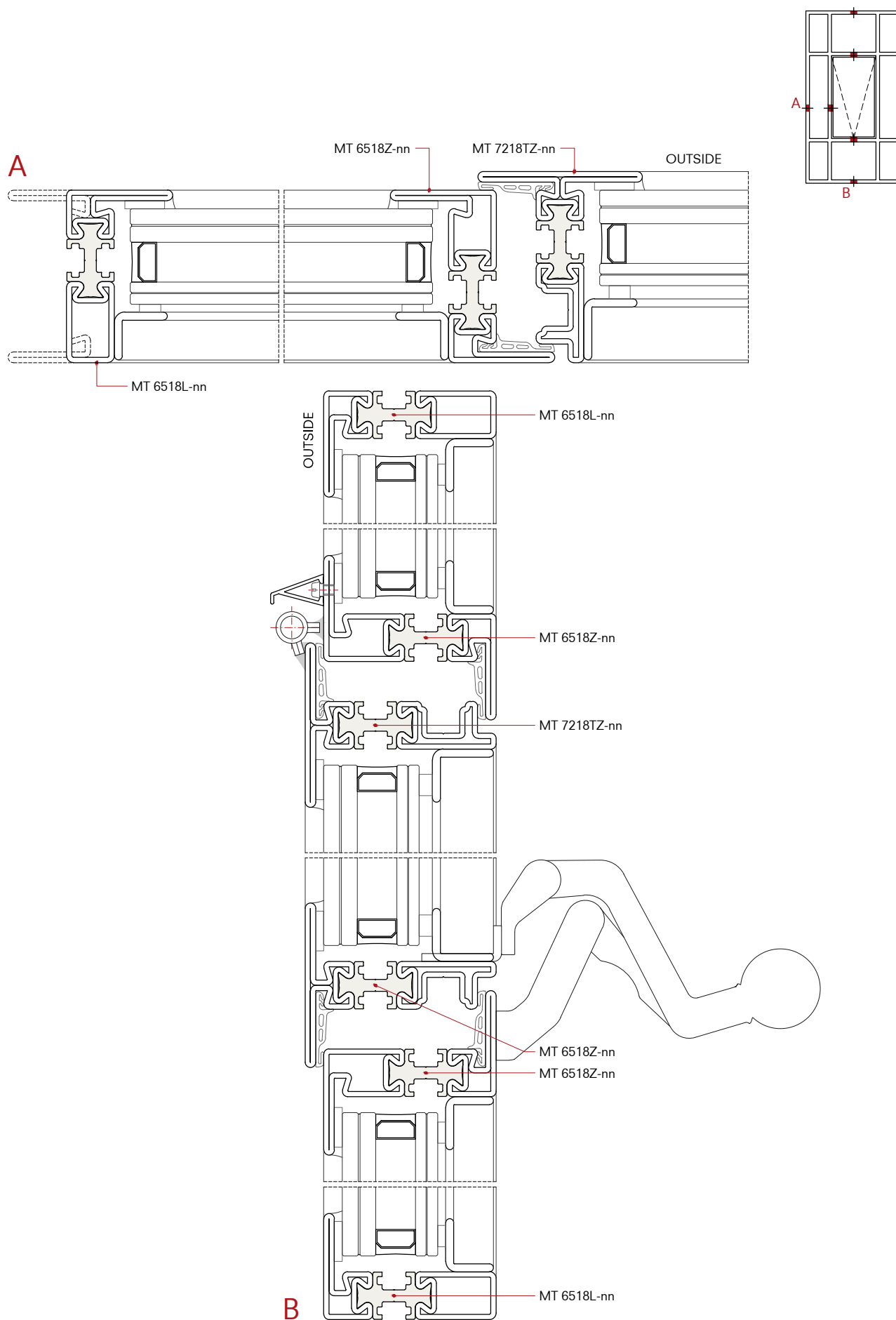
Detail 19

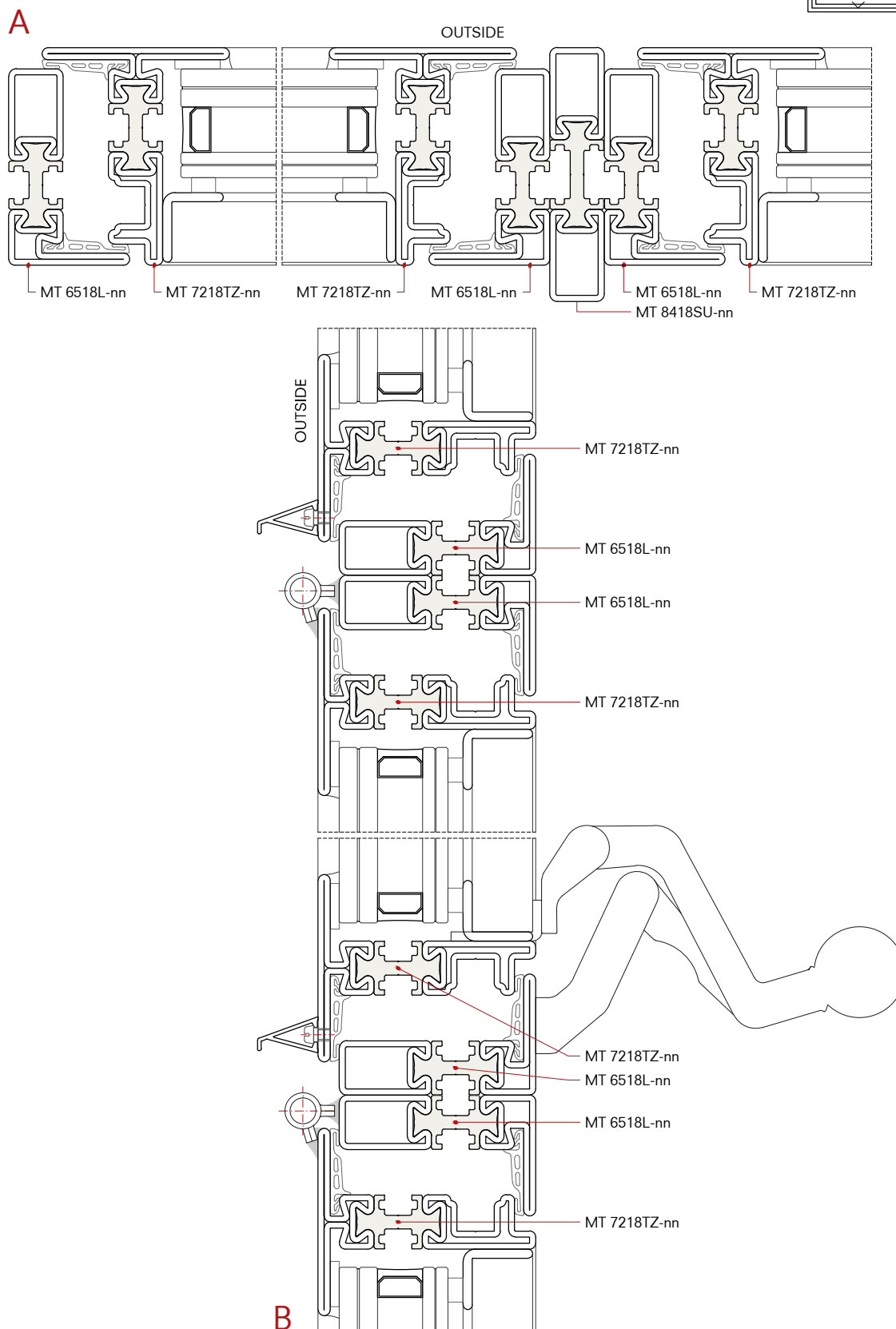
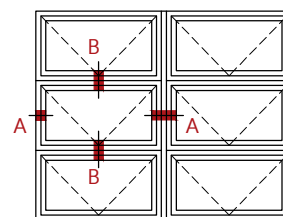








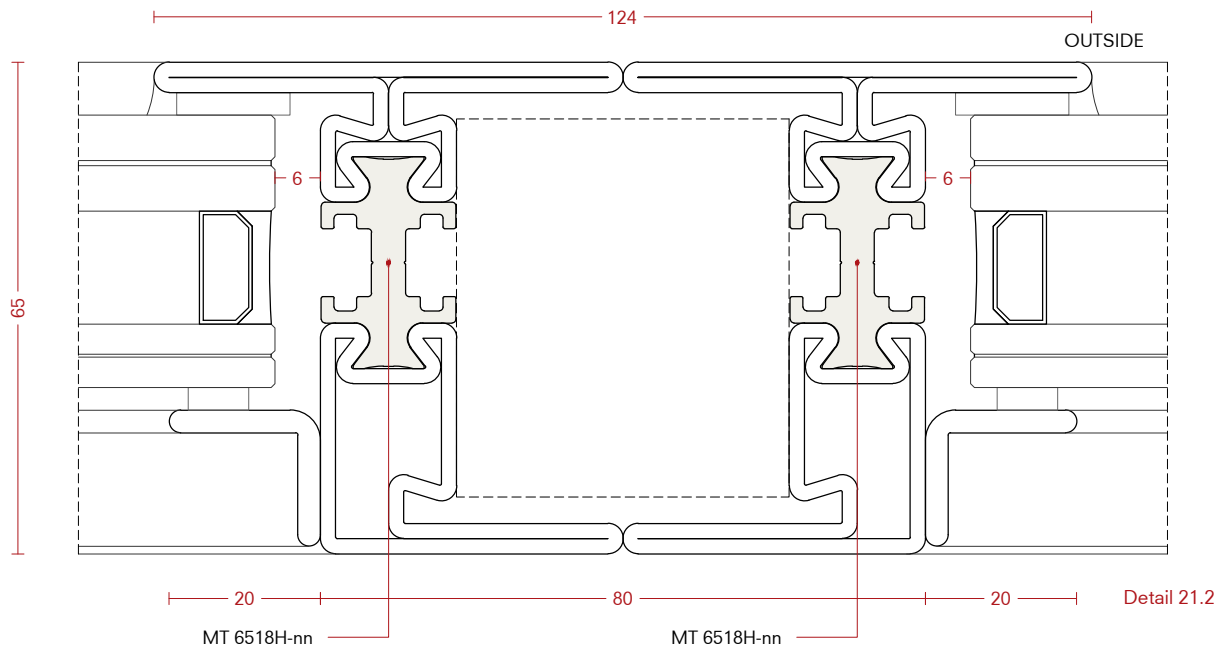
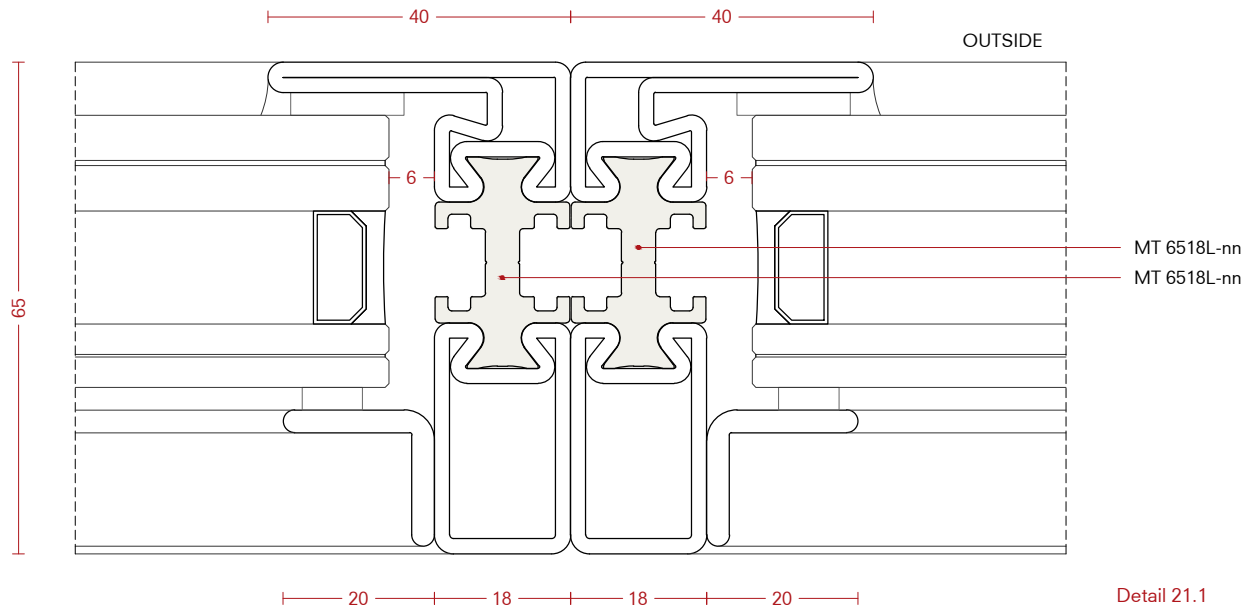
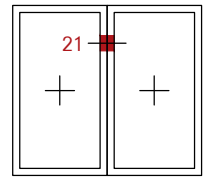




**Profile matching**

**Kombination von Profile**

**Combinaison de profils**



**Note:**

For the cutting list, consider the appropriate machining and welding tolerances in relation to the laying areas and the sealing chosen.

**Anmerkung:**

Berücksichtigen Sie für die Schnitliste die geeigneten Bearbeitungs- und Schweißtoleranzen in Bezug auf die Verlegebereiche und die ausgewählten Dichtungen.

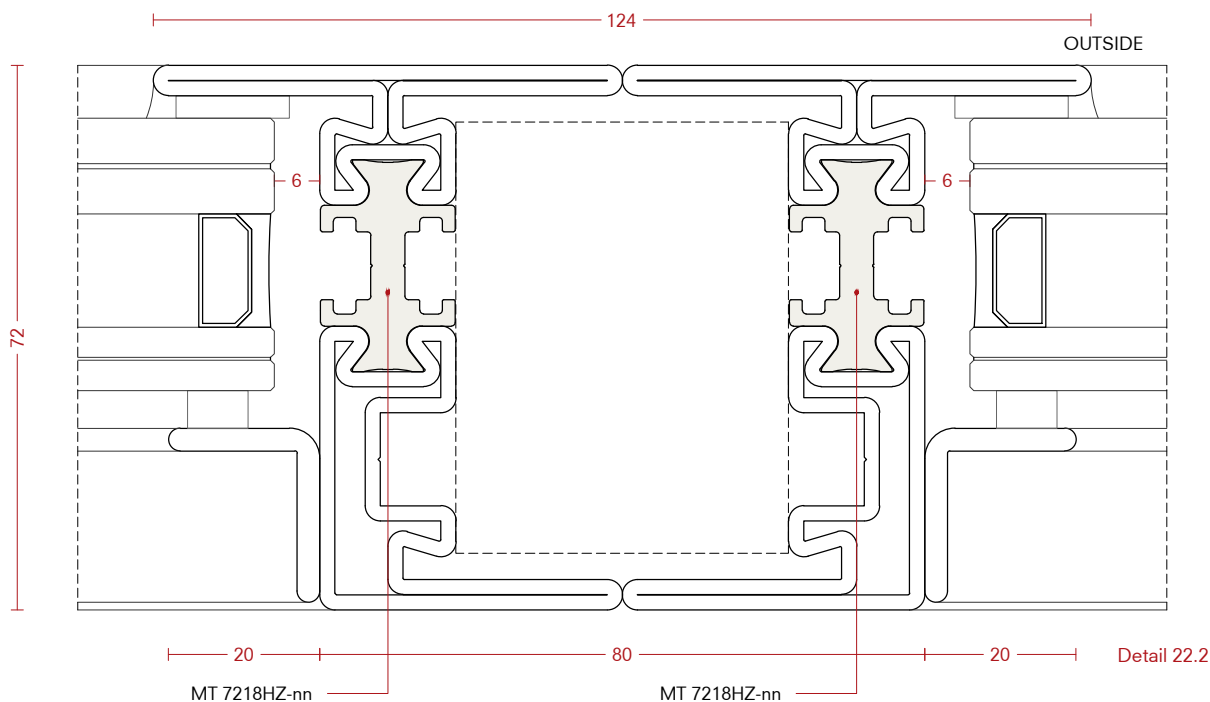
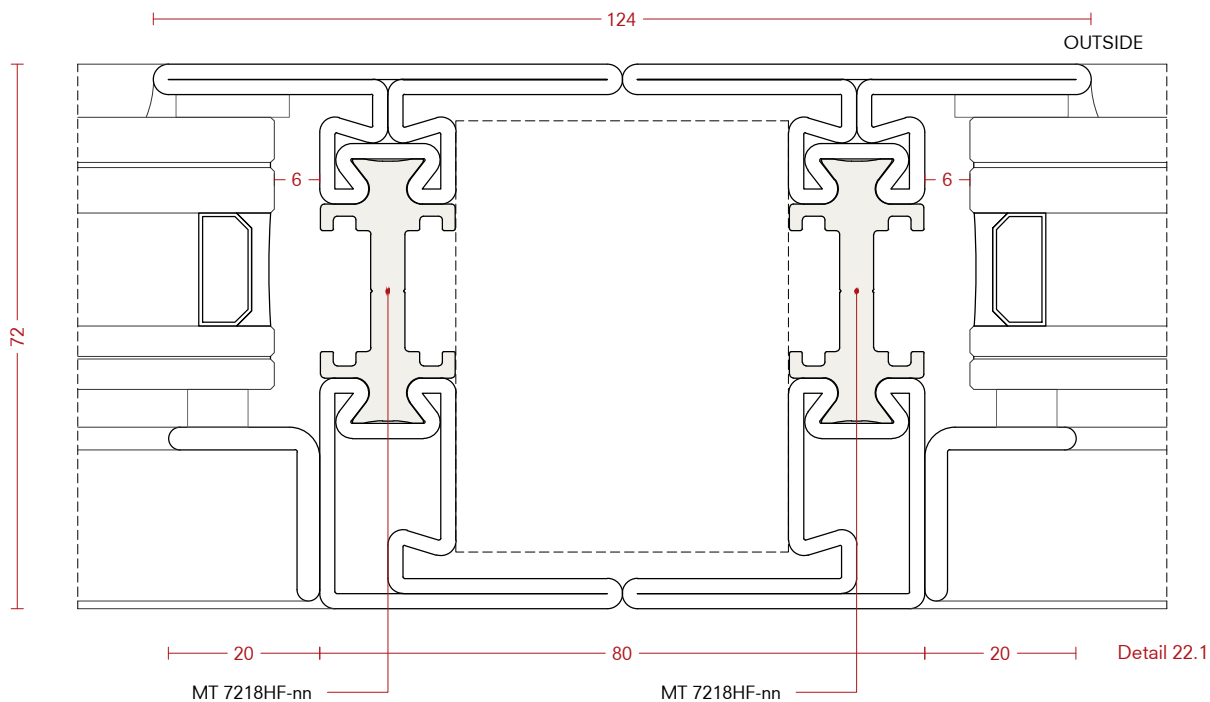
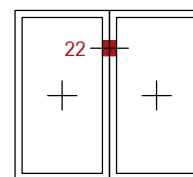
**Remarque:**

Pour la liste de coupe, tenez compte des tolérances d'usinage et de soudage appropriées en fonction des zones de pose et des joints choisis.

**Profile matching**

**Kombination von Profile**

**Combinaison de profils**



**Note:**

For the cutting list, consider the appropriate machining and welding tolerances in relation to the laying areas and the sealing chosen.

**Anmerkung:**

Berücksichtigen Sie für die Schnitliste die geeigneten Bearbeitungs- und Schweißtoleranzen in Bezug auf die Verlegebereiche und die ausgewählten Dichtungen.

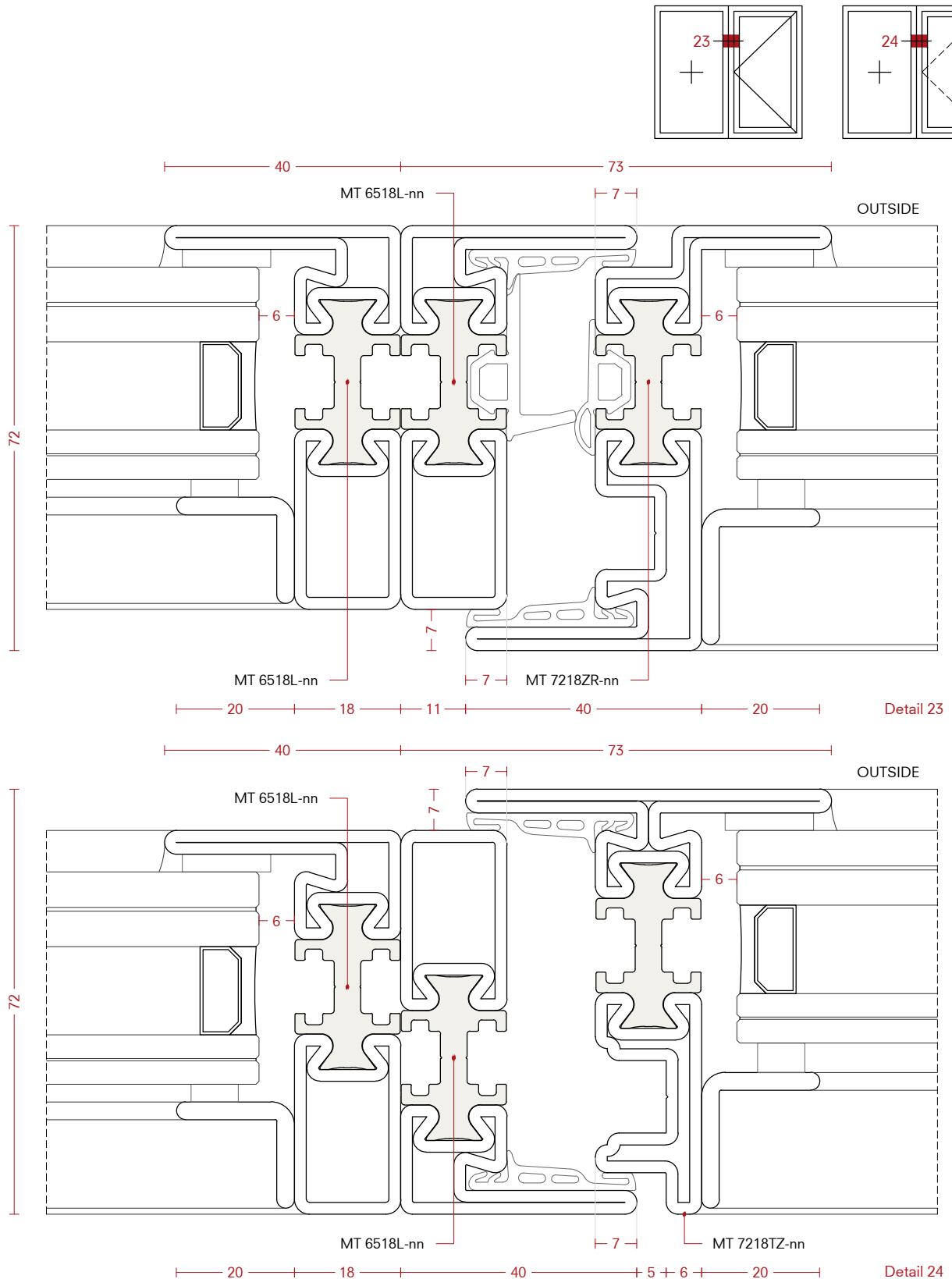
**Remarque:**

Pour la liste de coupe, tenez compte des tolérances d'usinage et de soudage appropriées en fonction des zones de pose et des joints choisis.

**Profile matching**

**Kombination von Profile**

**Combinaison de profils**



**Note:**

For the cutting list, consider the appropriate machining and welding tolerances in relation to the laying areas and the sealing chosen.

**Anmerkung:**

Berücksichtigen Sie für die Schnitliste die geeigneten Bearbeitungs- und Schweißtoleranzen in Bezug auf die Verlegebereiche und die ausgewählten Dichtungen.

**Remarque:**

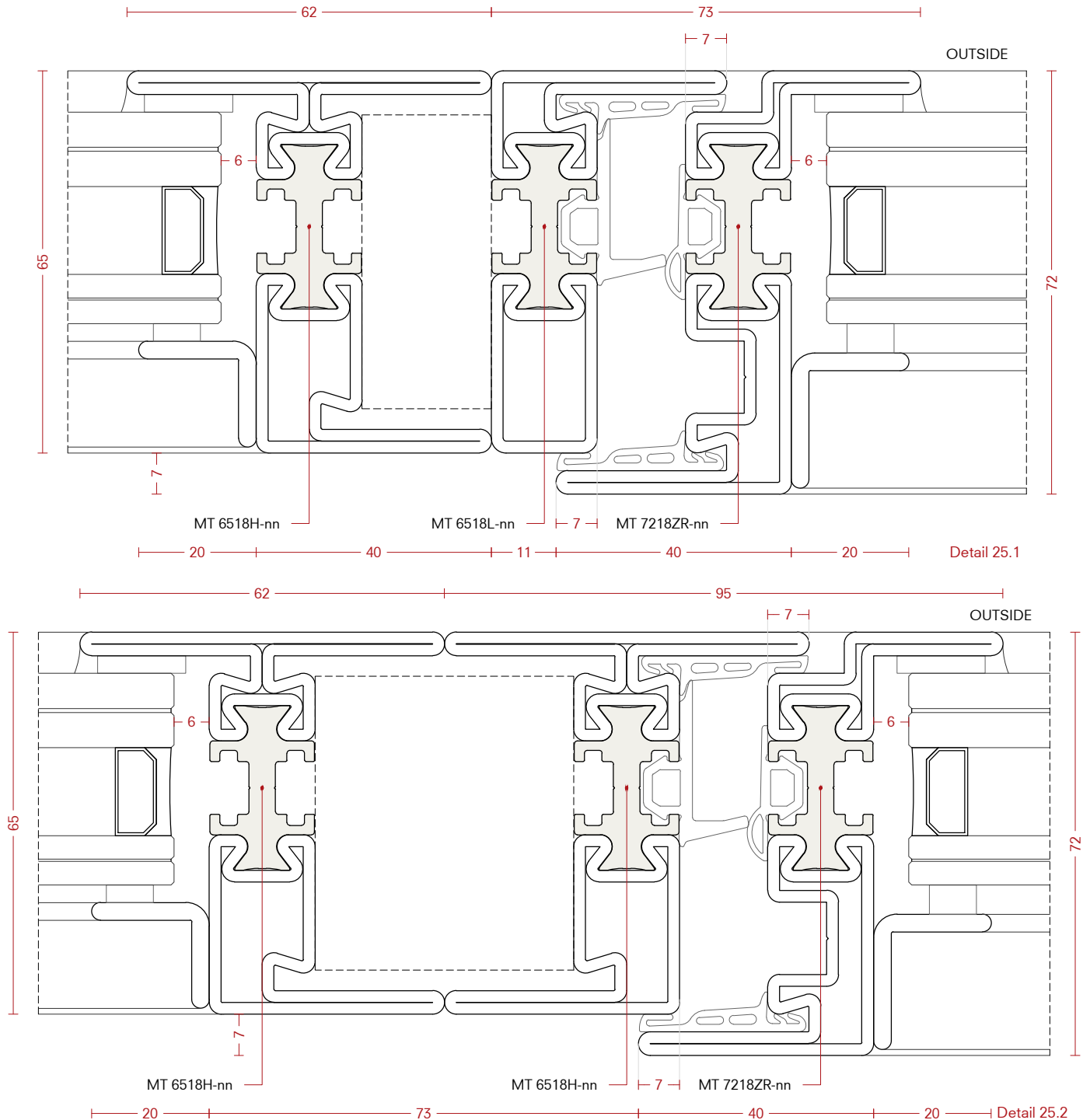
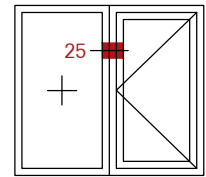
Pour la liste de coupe, tenez compte des tolérances d'usinage et de soudage appropriées en fonction des zones de pose et des joints choisis.



**Profile matching**

**Kombination von Profile**

**Combinaison de profils**



**Note:**

For the cutting list, consider the appropriate machining and welding tolerances in relation to the laying areas and the sealing chosen.

**Anmerkung:**

Berücksichtigen Sie für die Schnitliste die geeigneten Bearbeitungs- und Schweißtoleranzen in Bezug auf die Verlegebereiche und die ausgewählten Dichtungen.

**Remarque:**

Pour la liste de coupe, tenez compte des tolérances d'usinage et de soudage appropriées en fonction des zones de pose et des joints choisis.

## Profile matching

### Note:

For the cutting list, consider the relevant machining and welding tolerances taking into account the necessary gaps in the installation of frames and the chosen gasket.

## Kombination von Profile

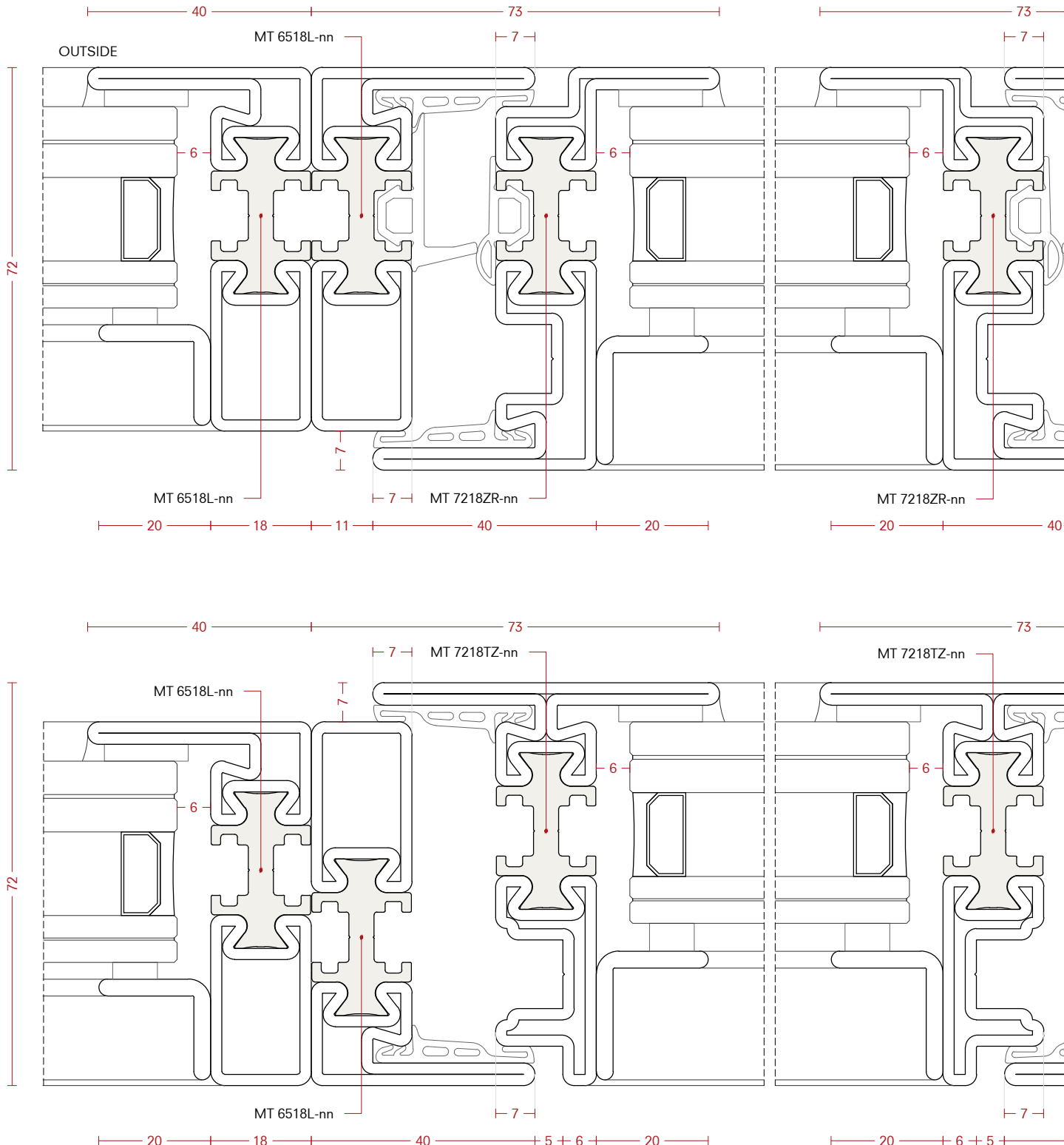
### Anmerkung:

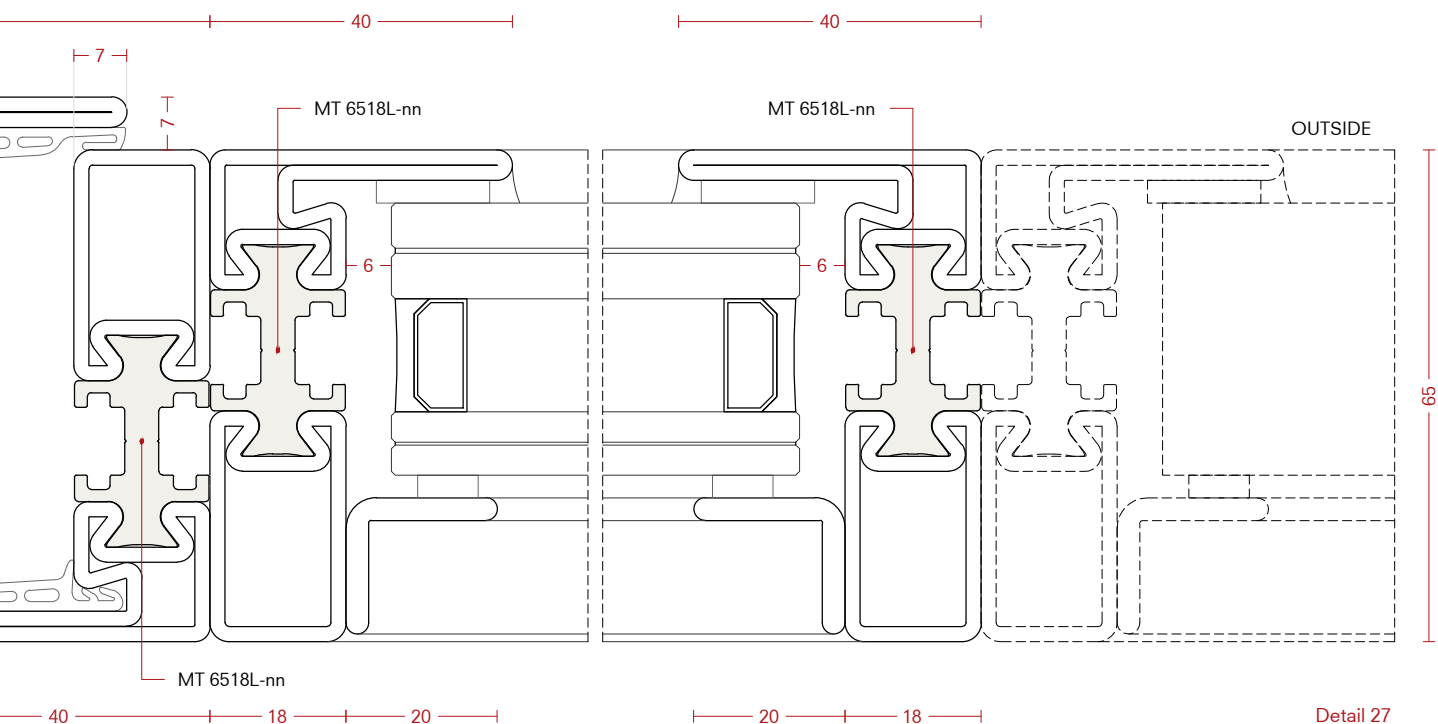
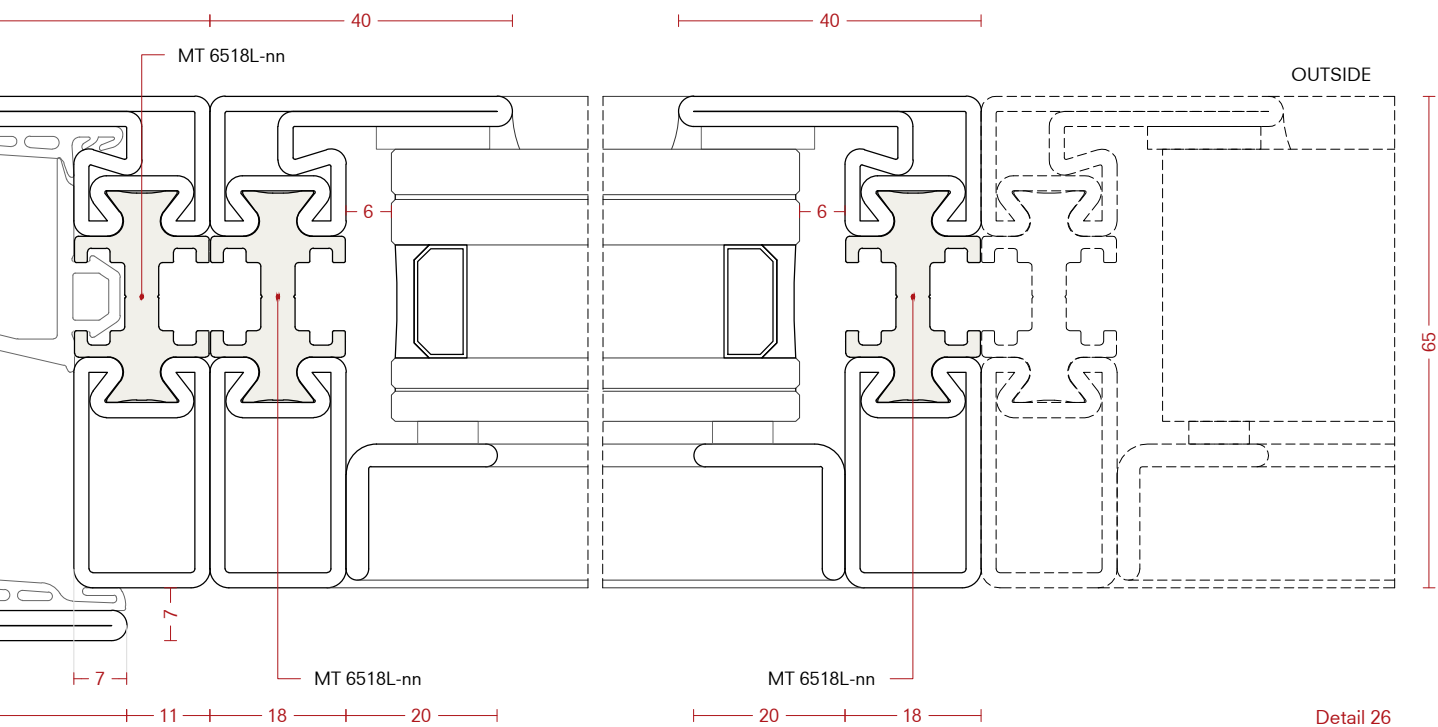
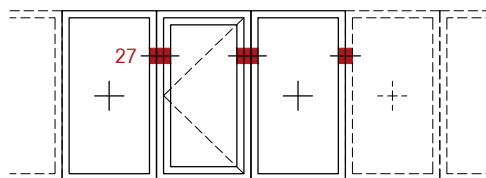
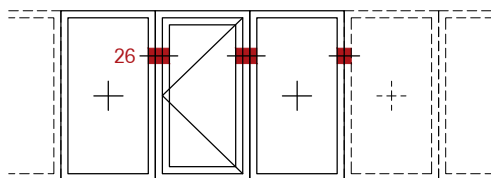
Berücksichtigen Sie für die Zuschnittsliste die geeigneten Bearbeitungs- und Schweißtoleranzen in Bezug auf Zusammenbau und die ausgewählten Dichtungen.

## Combinaison de profils

### Remarque:

Pour la liste de coupe, tenez compte des tolérances d'usinage et de soudage appropriées en fonction des zones de pose et des joints choisis.







Door details

Details Türen

Détails portes

4.2

Legend

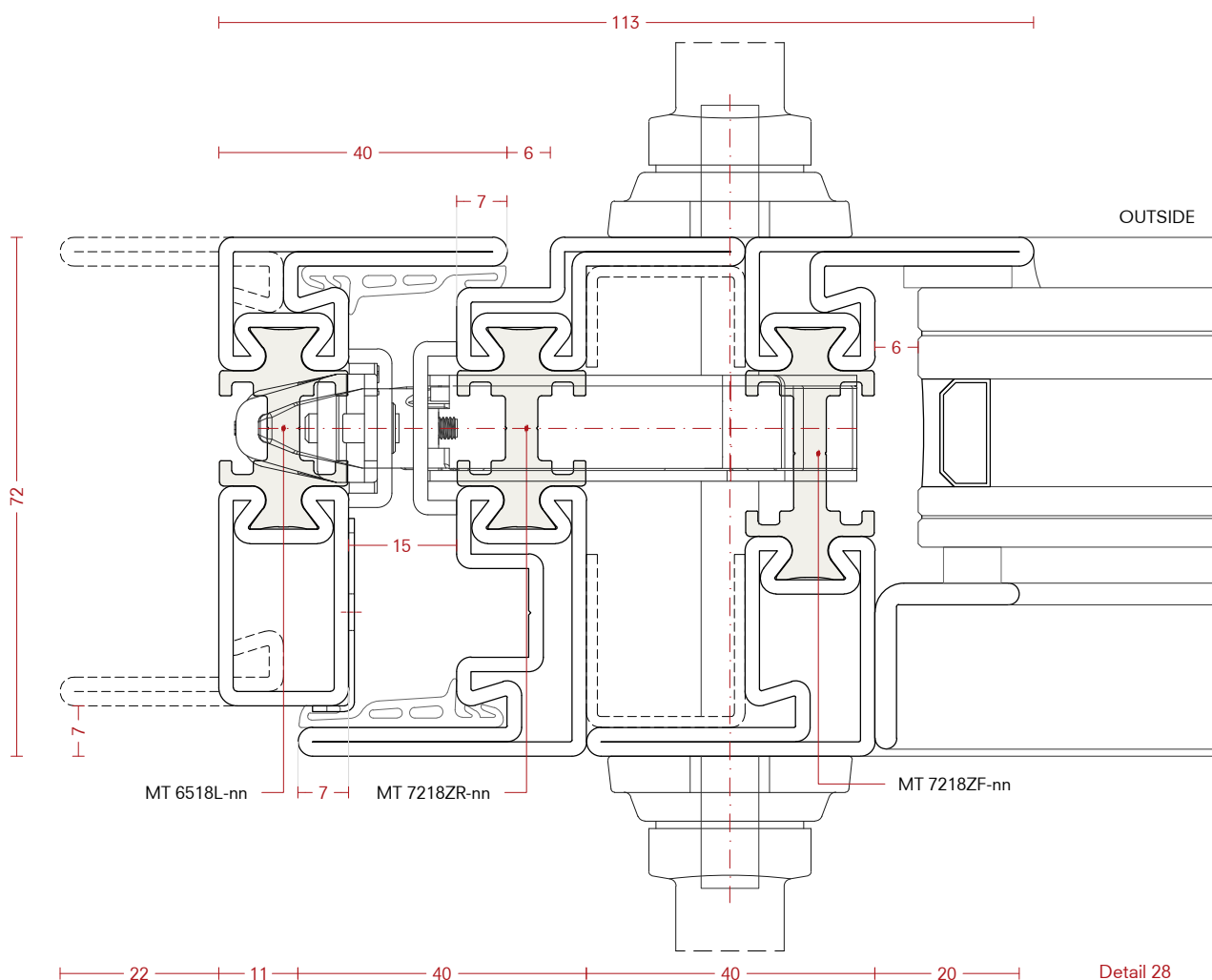
+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2

Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2

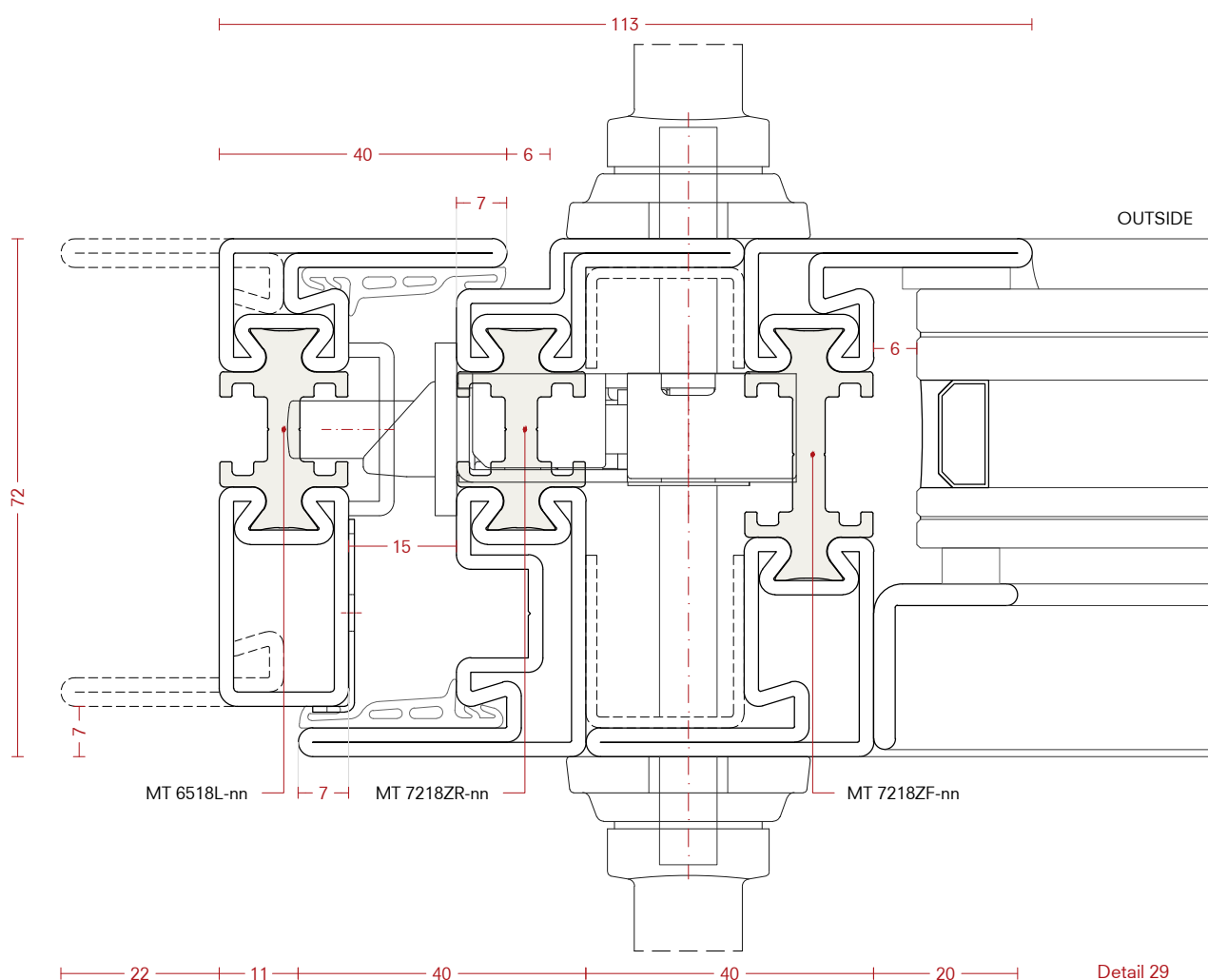
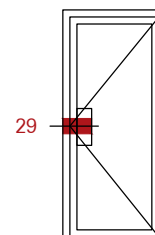
Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2



**Remarque:**

Pour l'installation des serrures, veuillez vous référer aux schémas de montage dans le paragraphe dédié 5.4



Detail 29

**Note:**

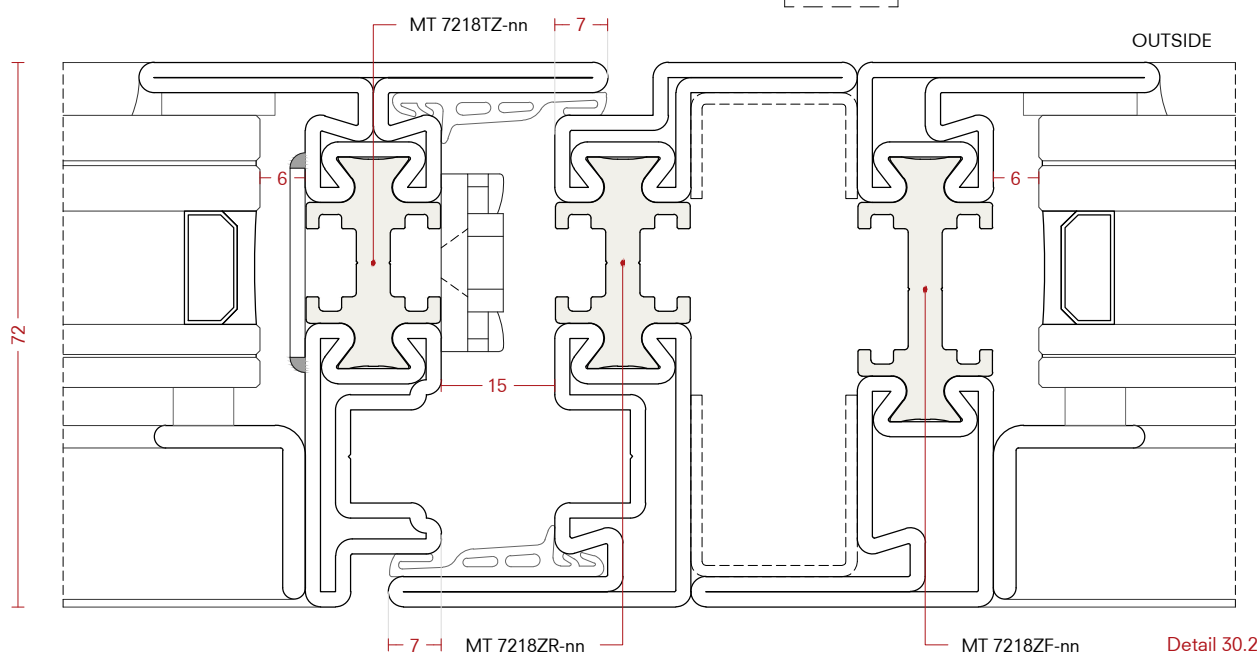
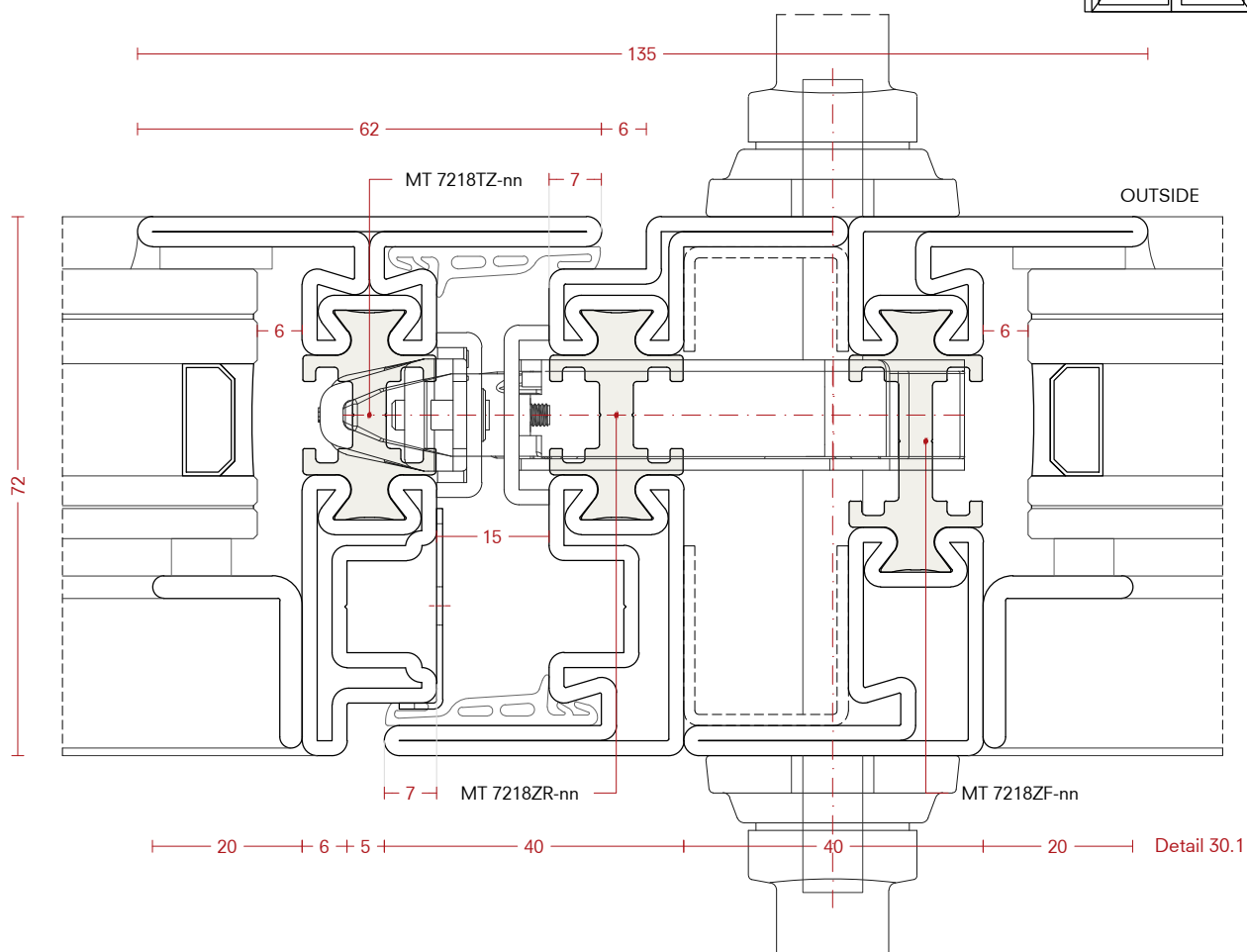
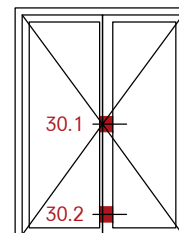
For the installation of the locks, please consult the processing sheets in the dedicated paragraph 5.4

**Anmerkung:**

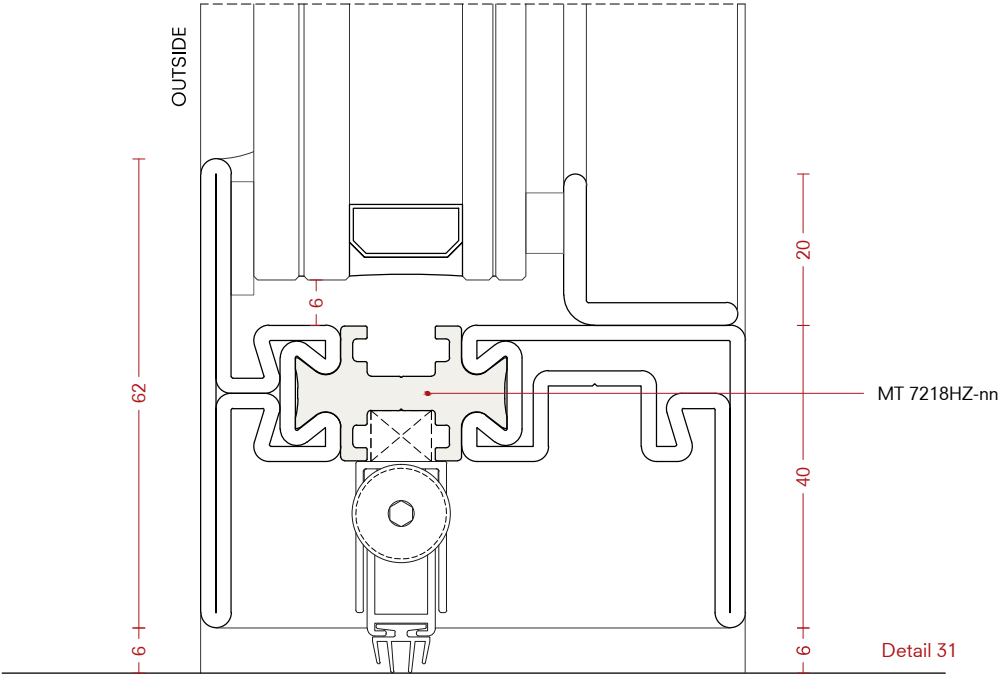
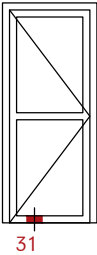
Informationen zur Einbau der Schlösser finden Sie in den Verarbeitungsblättern in Abschnitt 5.4

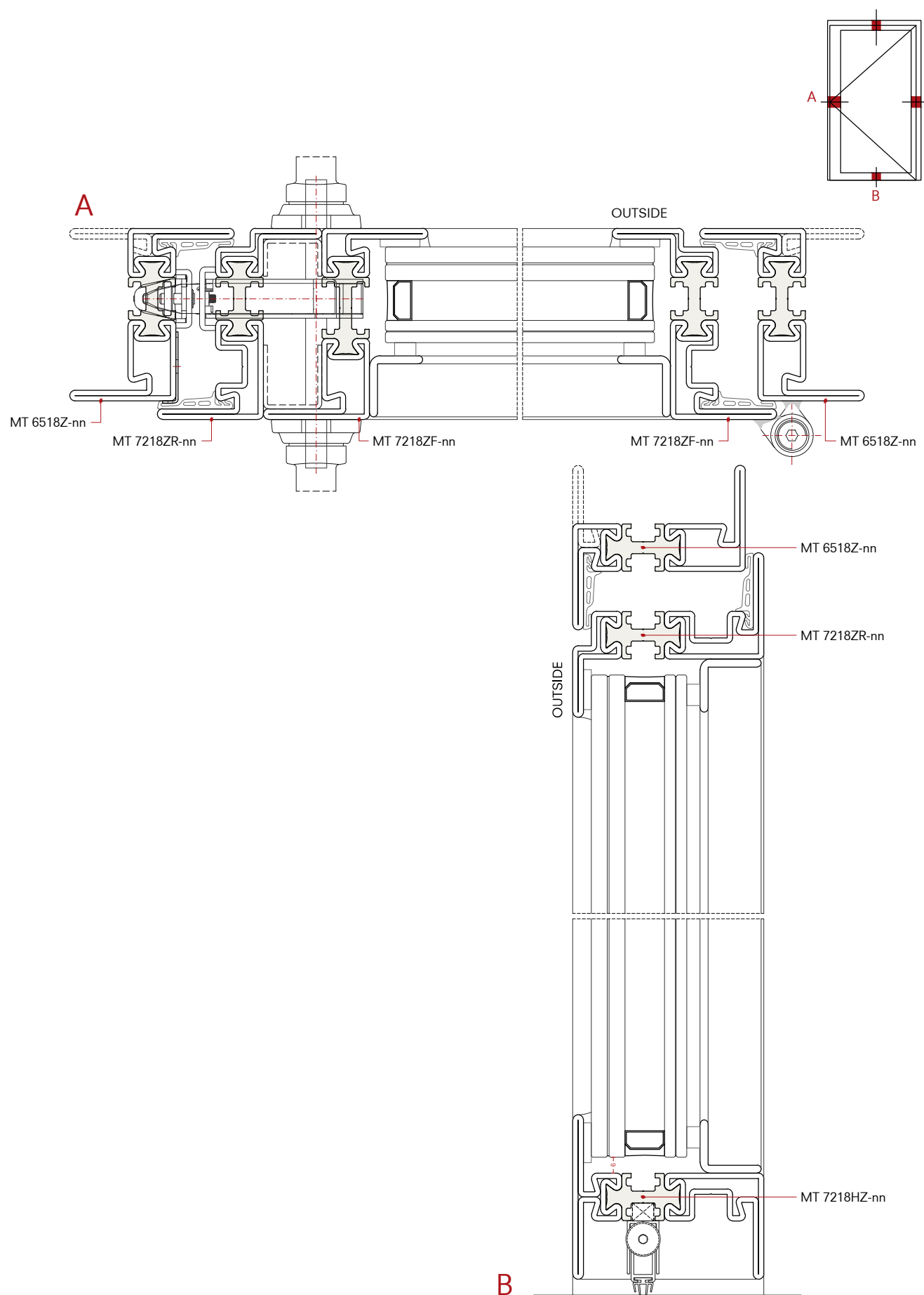
**Remarque:**

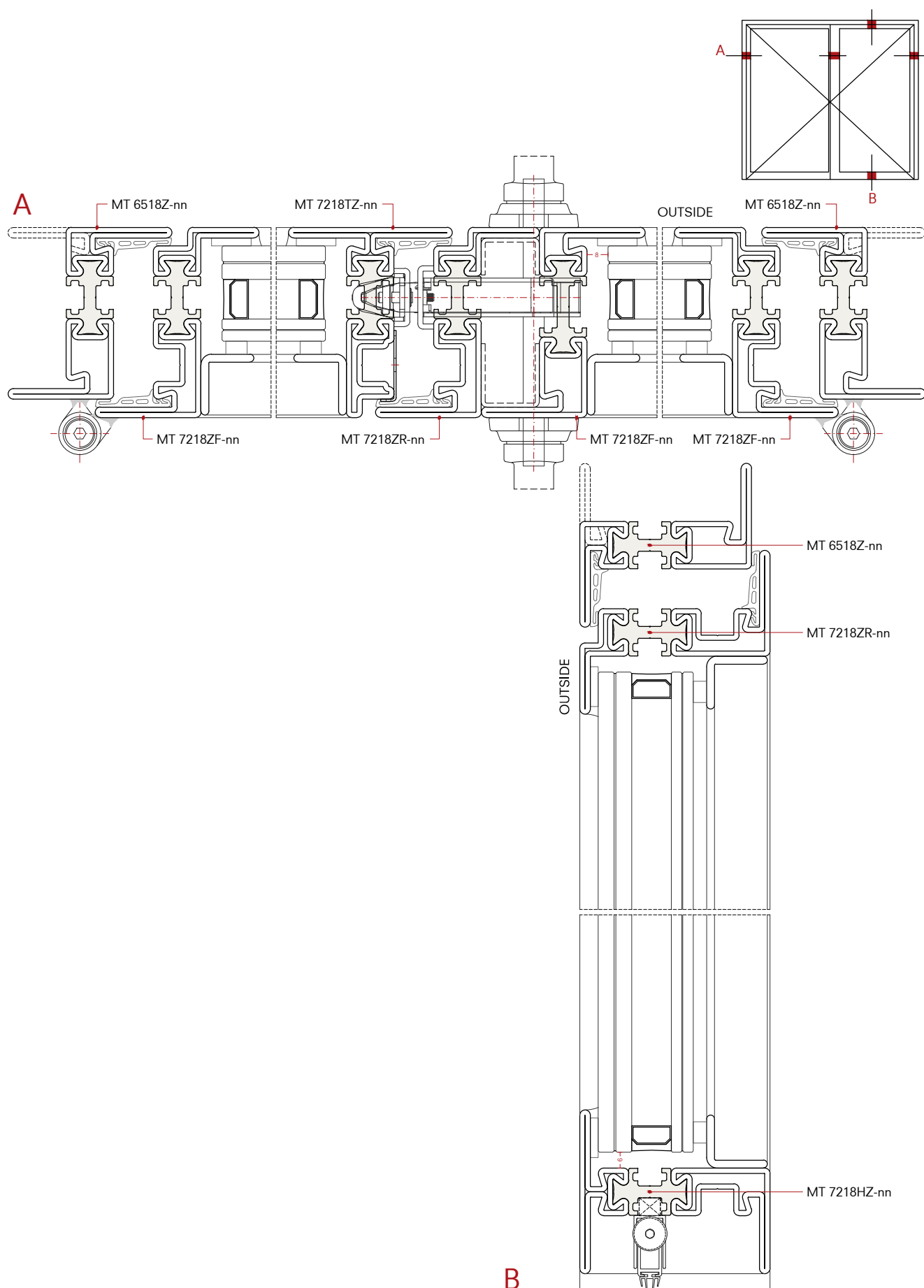
Pour l'installation des serrures, veuillez vous référer aux schémas de montage dans le paragraphe dédié 5.4

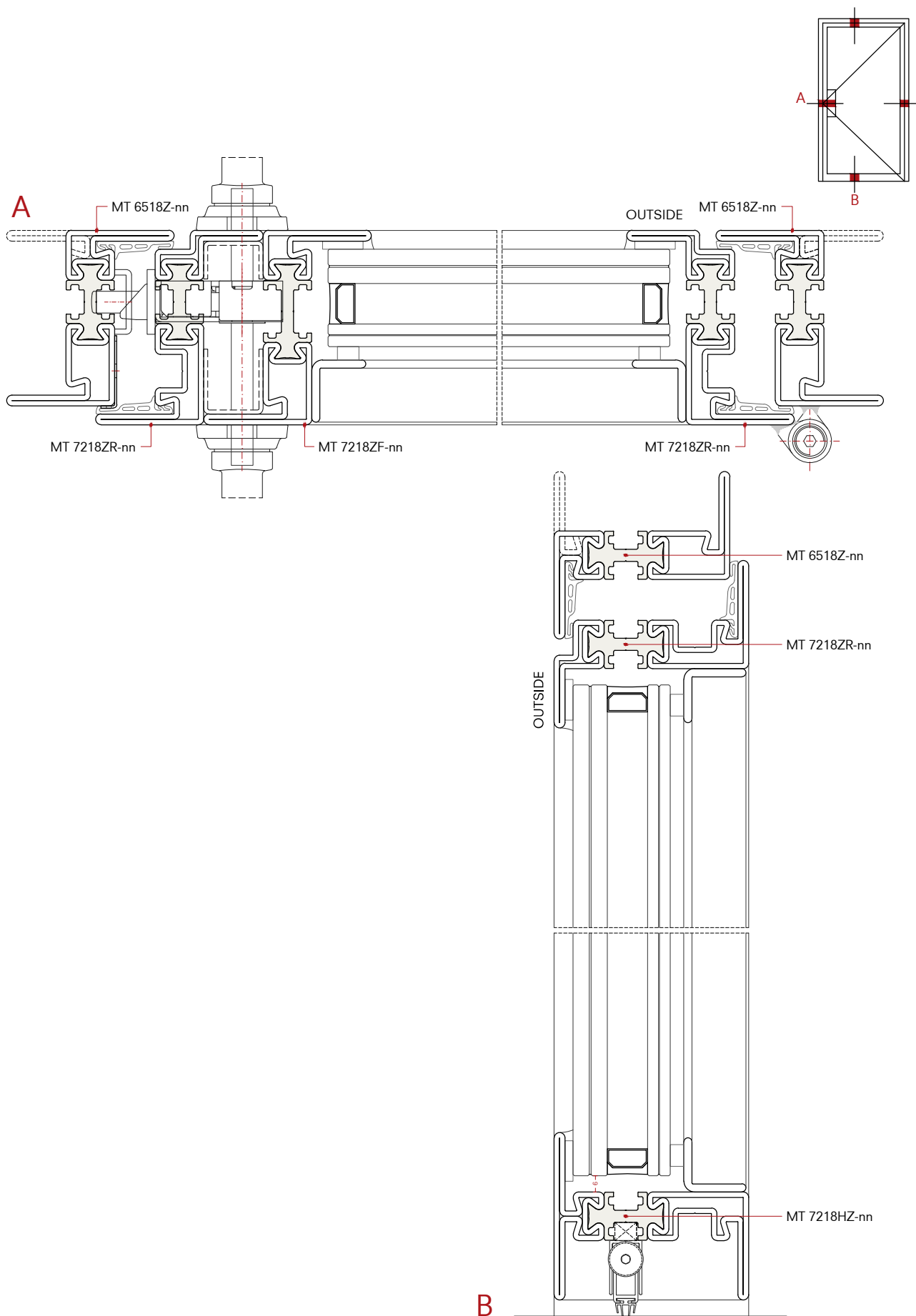


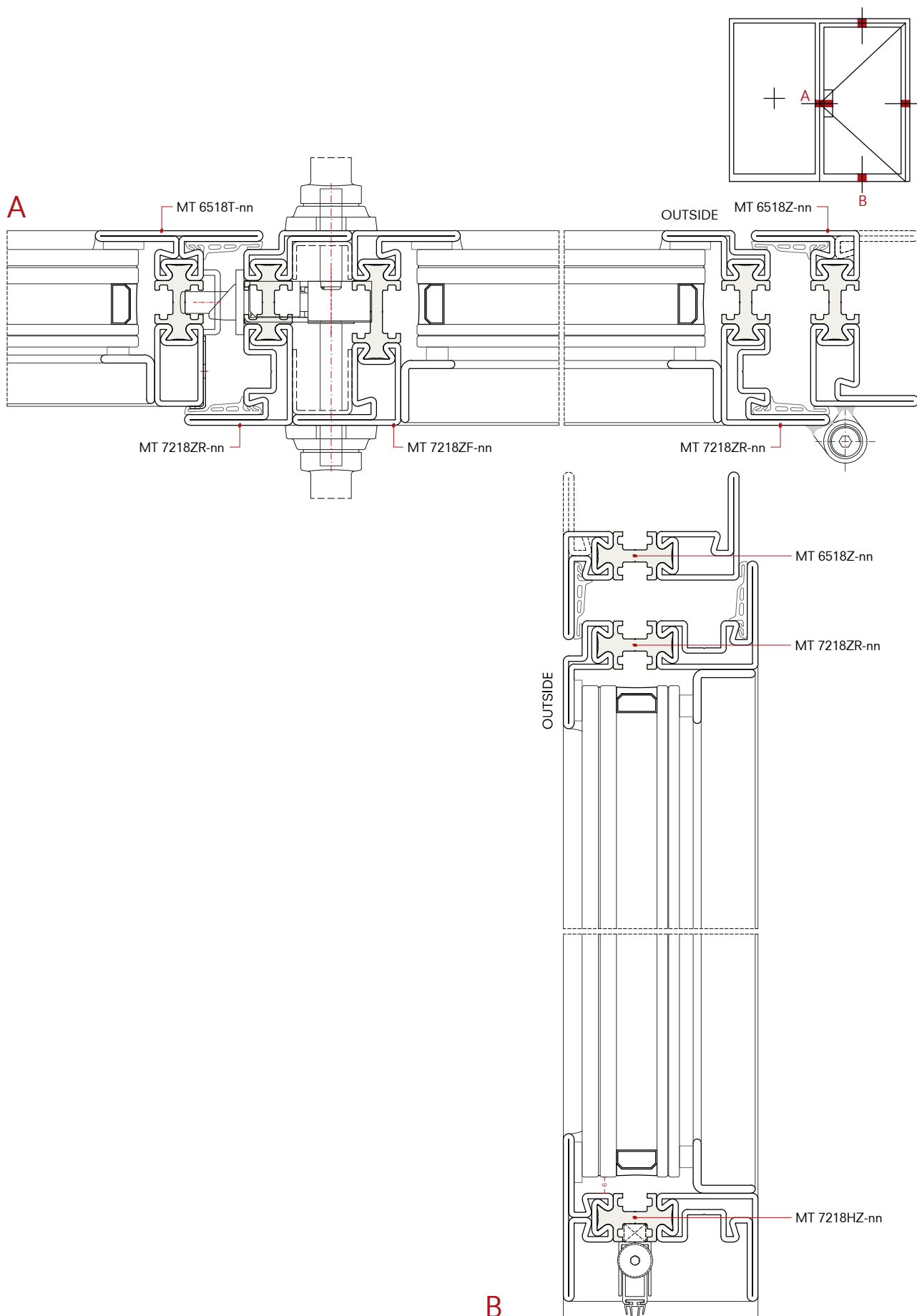


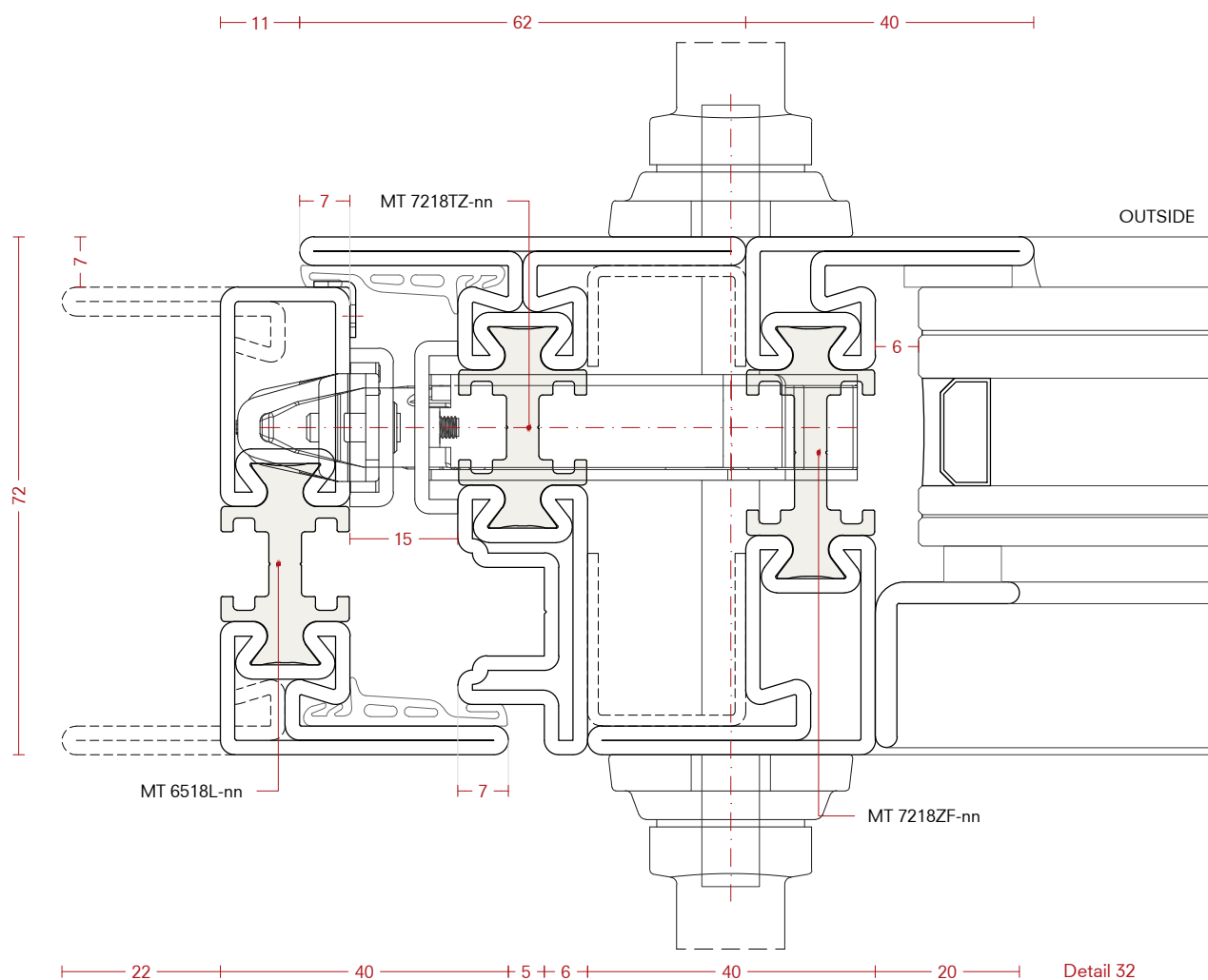
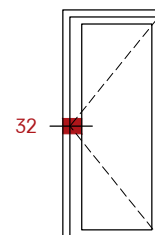












**Note:**

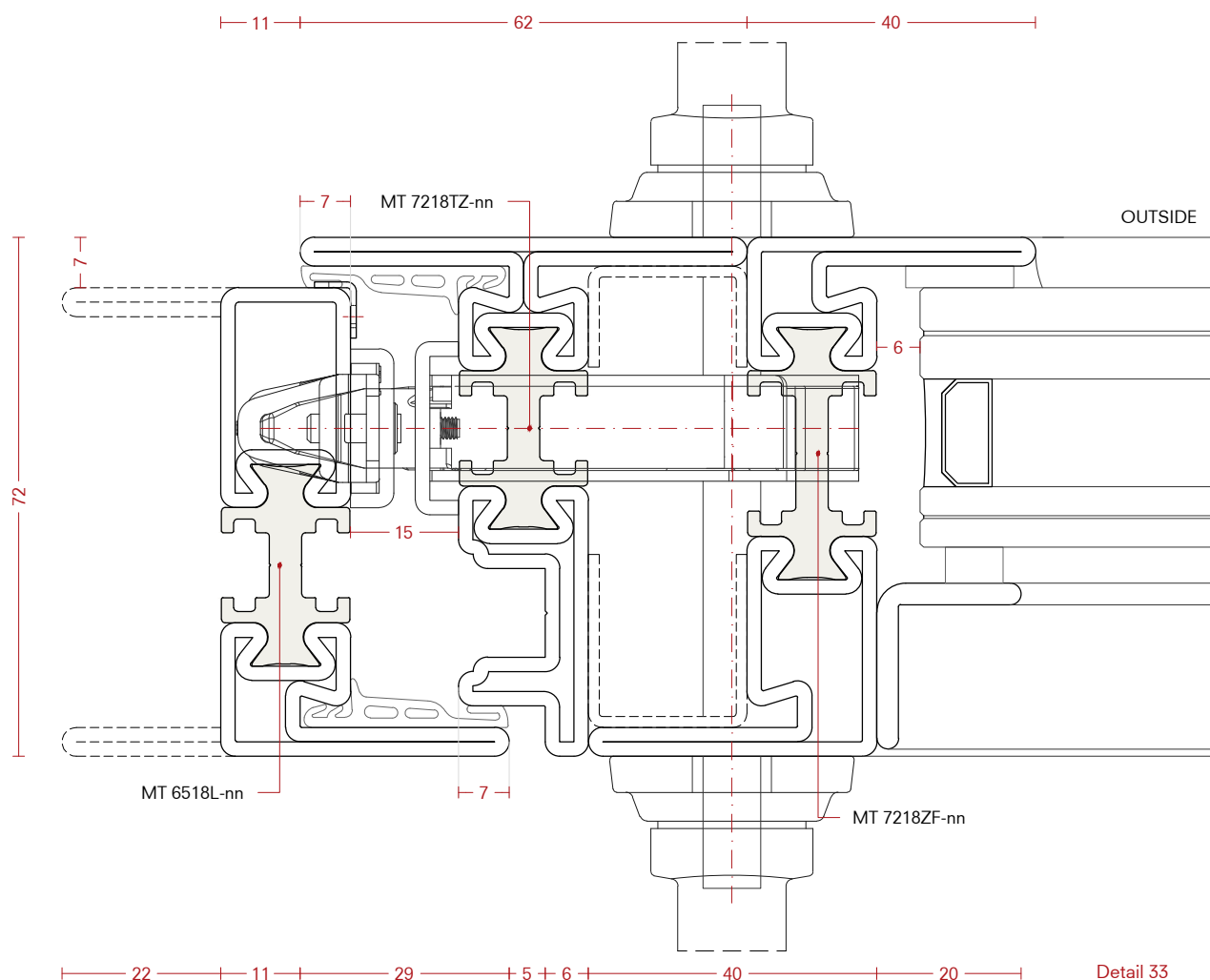
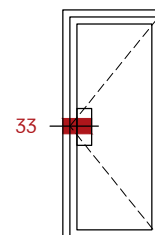
For the installation of the locks, please consult the processing sheets in the dedicated paragraph 5.4

**Anmerkung:**

Informationen zur Einbau der Schlösser finden Sie in den Verarbeitungsblättern in Abschnitt 5.4

**Remarque:**

Pour l'installation des serrures, veuillez vous référer aux schémas de montage dans le paragraphe dédié 5.4



**Note:**

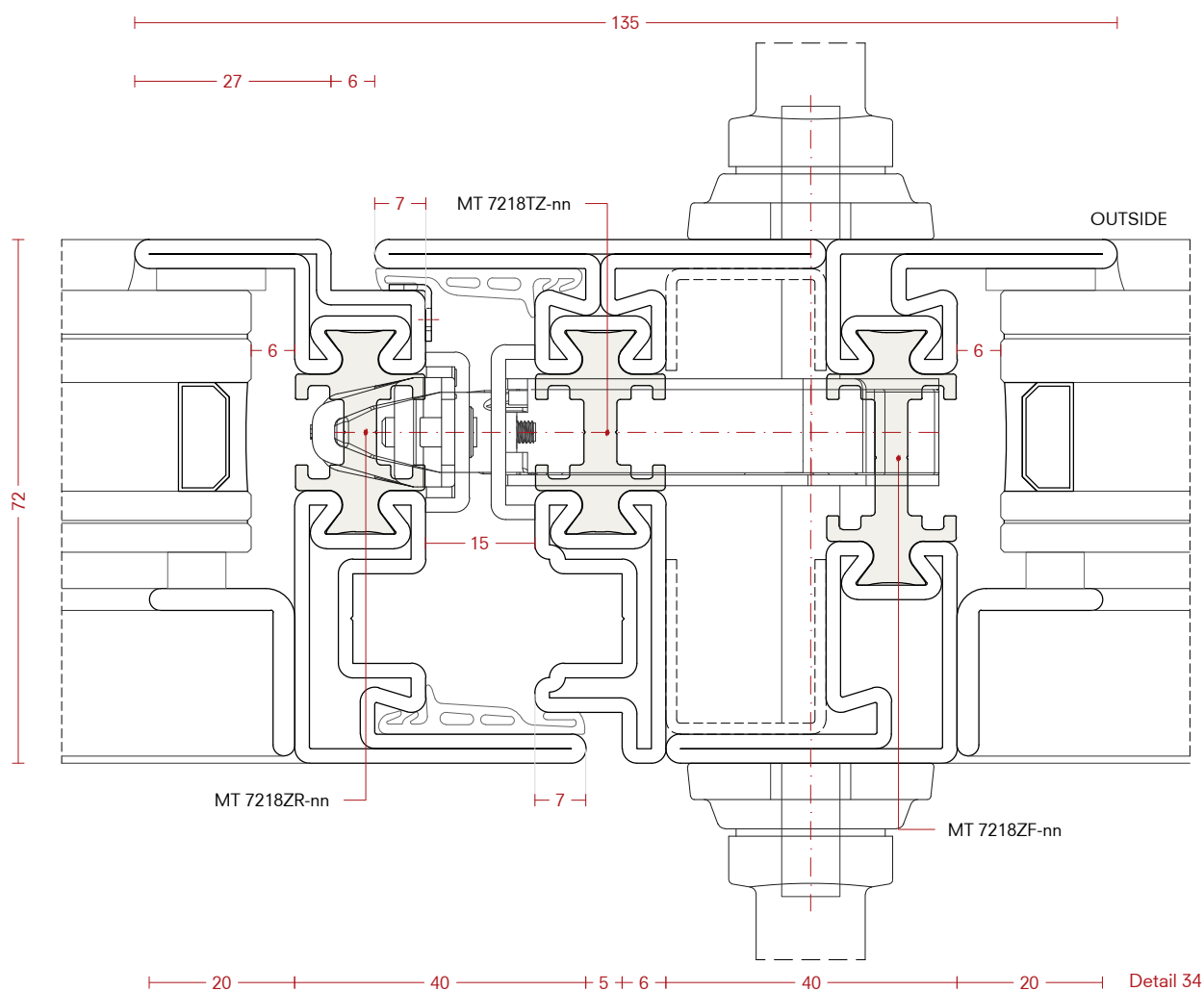
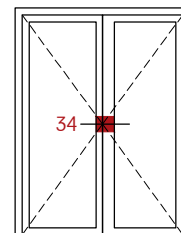
For the installation of the locks, please consult the processing sheets in the dedicated paragraph 5.4

**Anmerkung:**

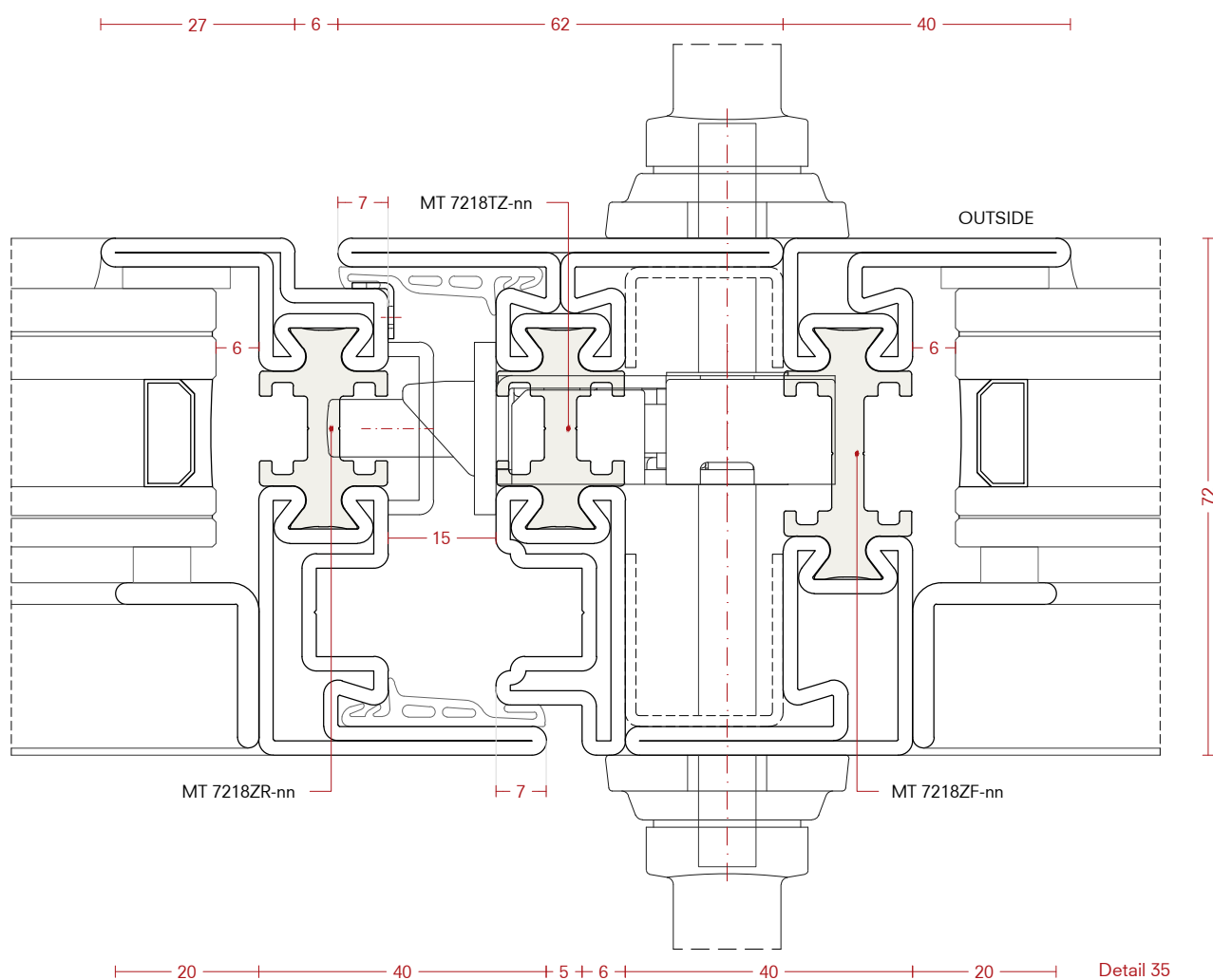
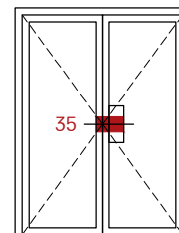
Informationen zur Einbau der Schlösser finden Sie in den Verarbeitungsblättern in Abschnitt 5.4

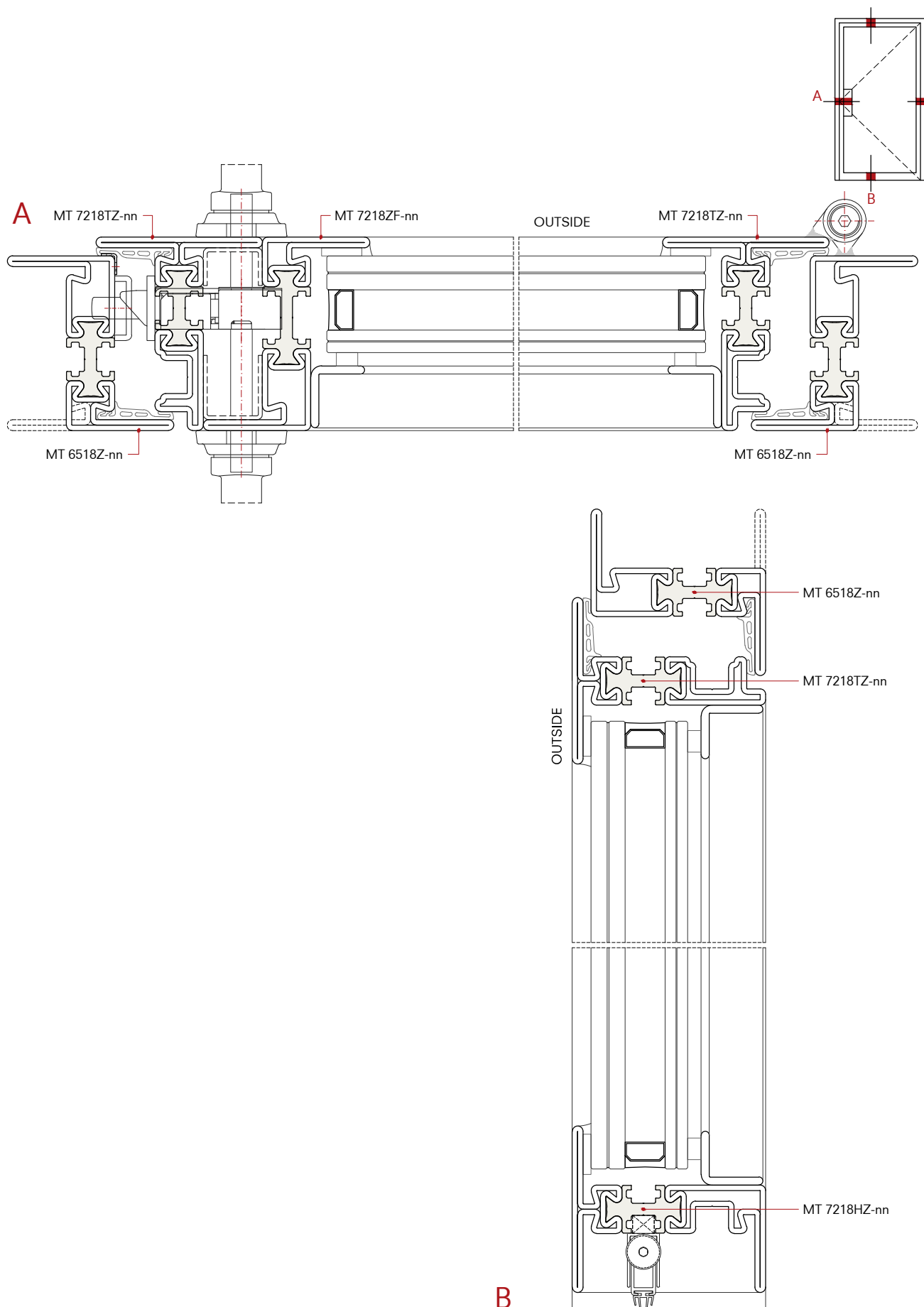
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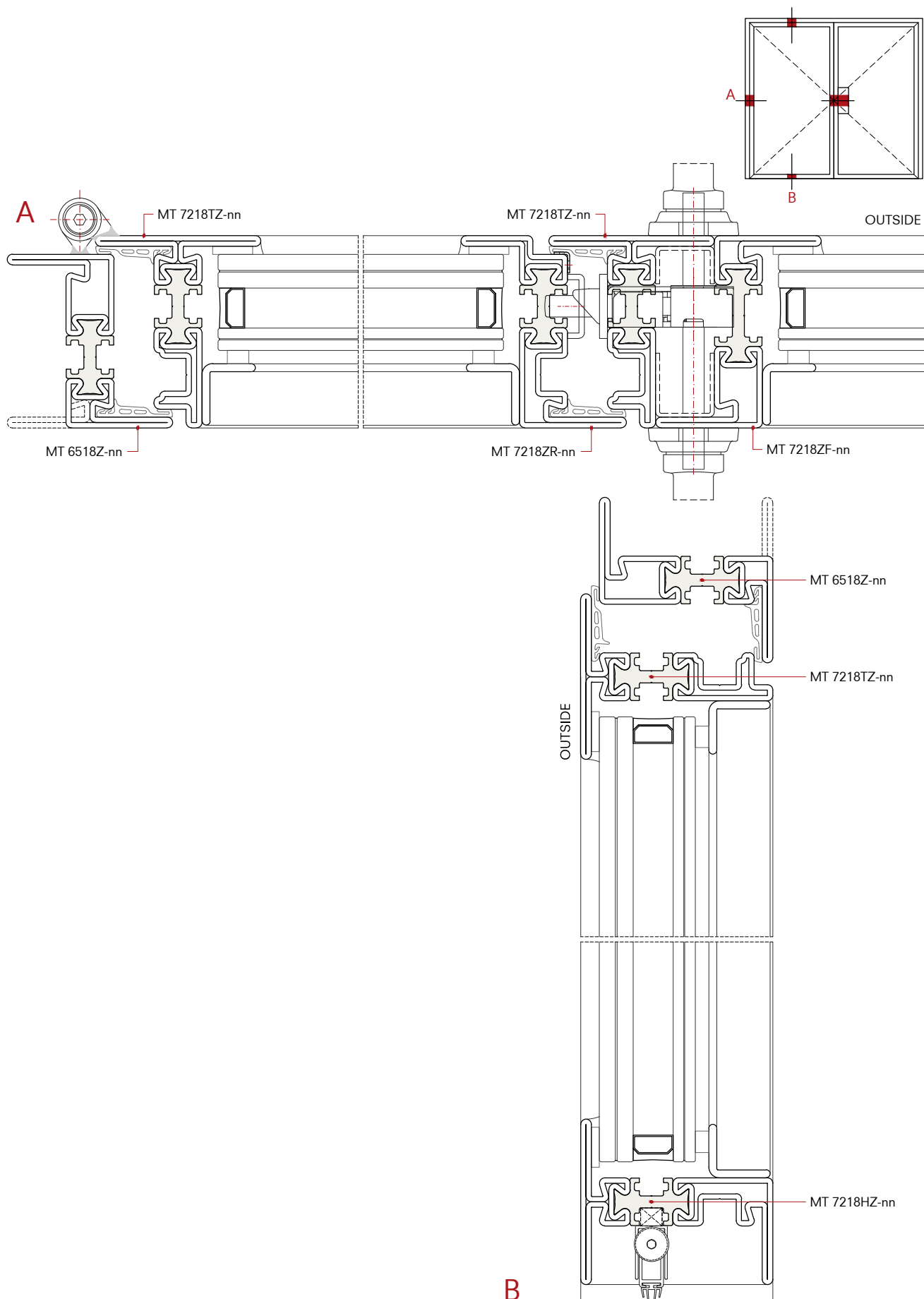
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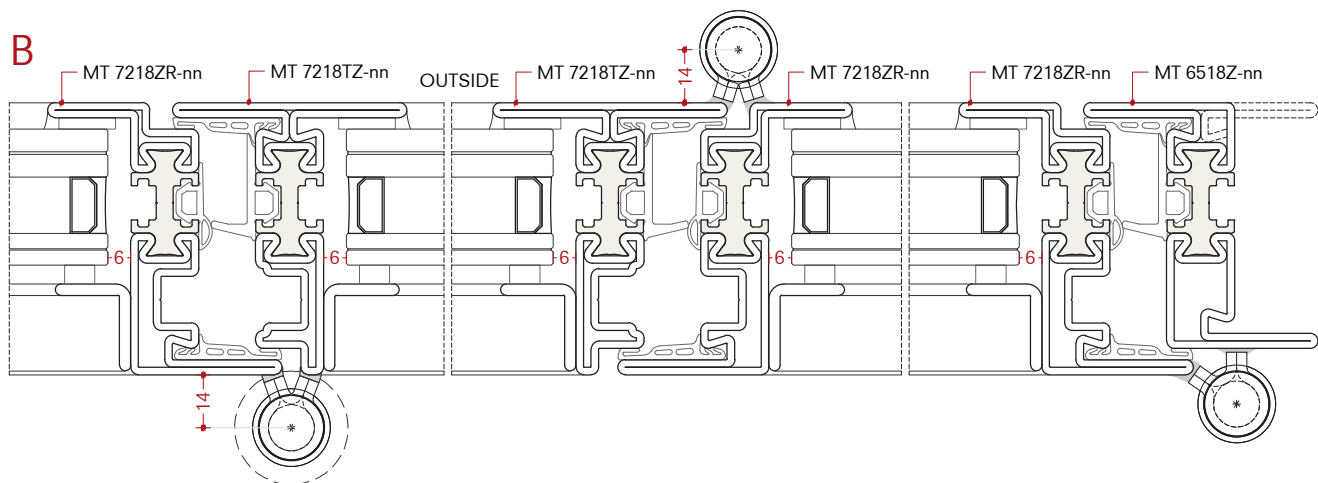
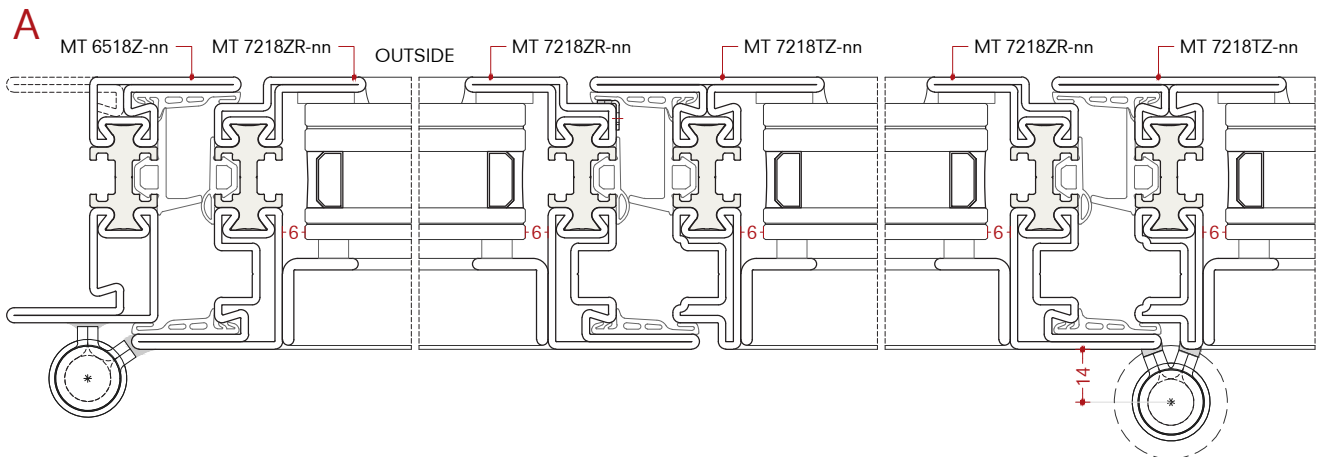
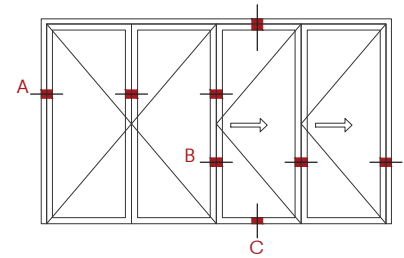












#### Note to bi-folding door systems:

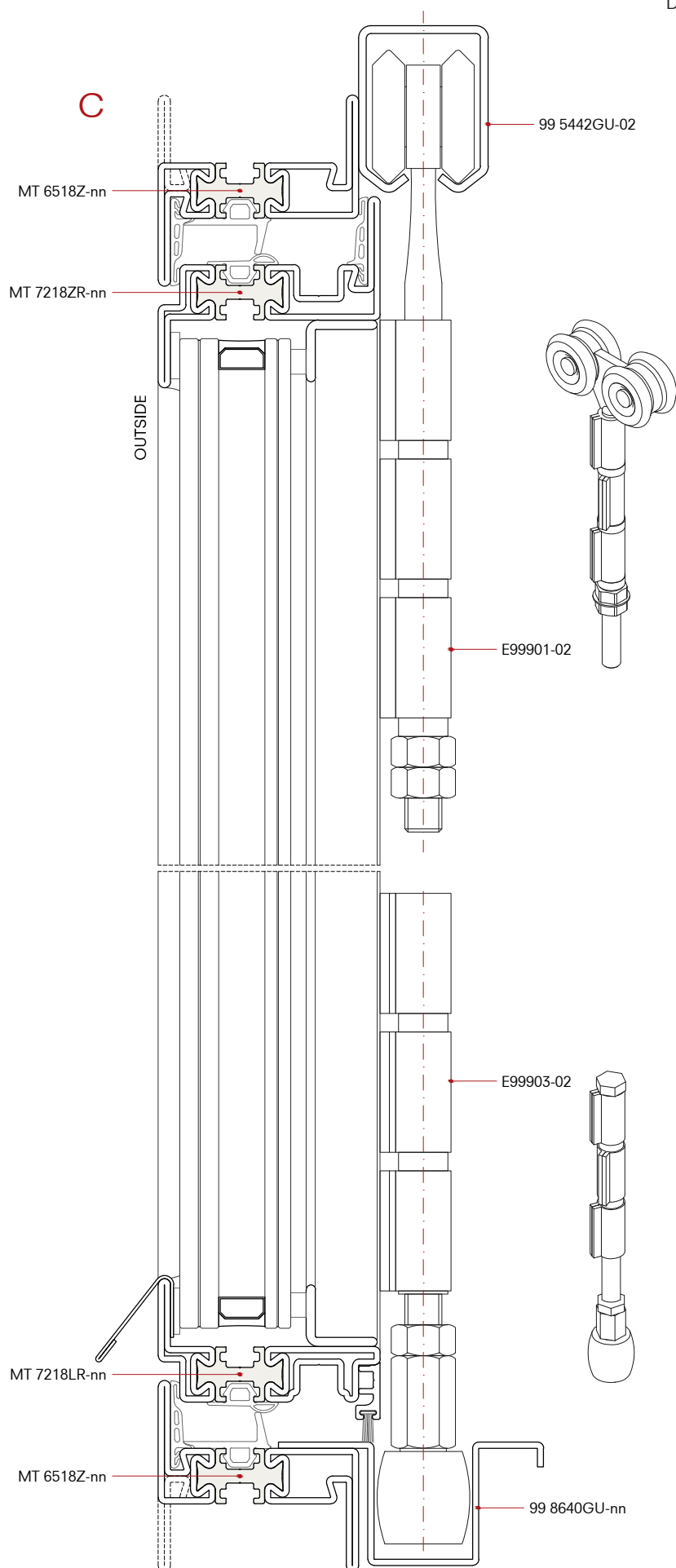
- In this documentation the bi-folding door systems are only included in extracts and must be adapted to the respective installation situation.
- Opening of the leaves only possible to the inside.
- Closure is by means of the Euro groove window fittings.
- Further information and processing instructions are available from your technical advisor.
- Building physical aspects are to be taken into account and independently adapted.

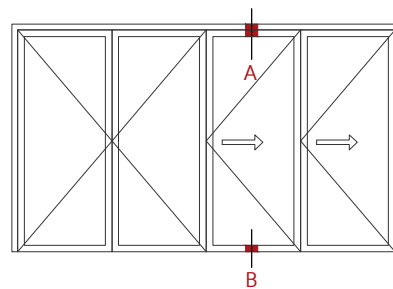
#### Anmerkungen zu Faltsystemen:

- In dieser Unterlage sind die Faltsysteme nur auszugsweise enthalten und sind auf die jeweilige Einbausituation abzustimmen.
- Öffnung der Flügel nur nach Innen möglich.
- Der Verschluss erfolgt über die Euro-Nut Fensterbeschläge.
- Weitere Informationen und Verarbeitungshinweise sind beim technischen Berater erhältlich.
- Bauphysikalische Aspekte sind zu berücksichtigen und eigenverantwortlich anzupassen.

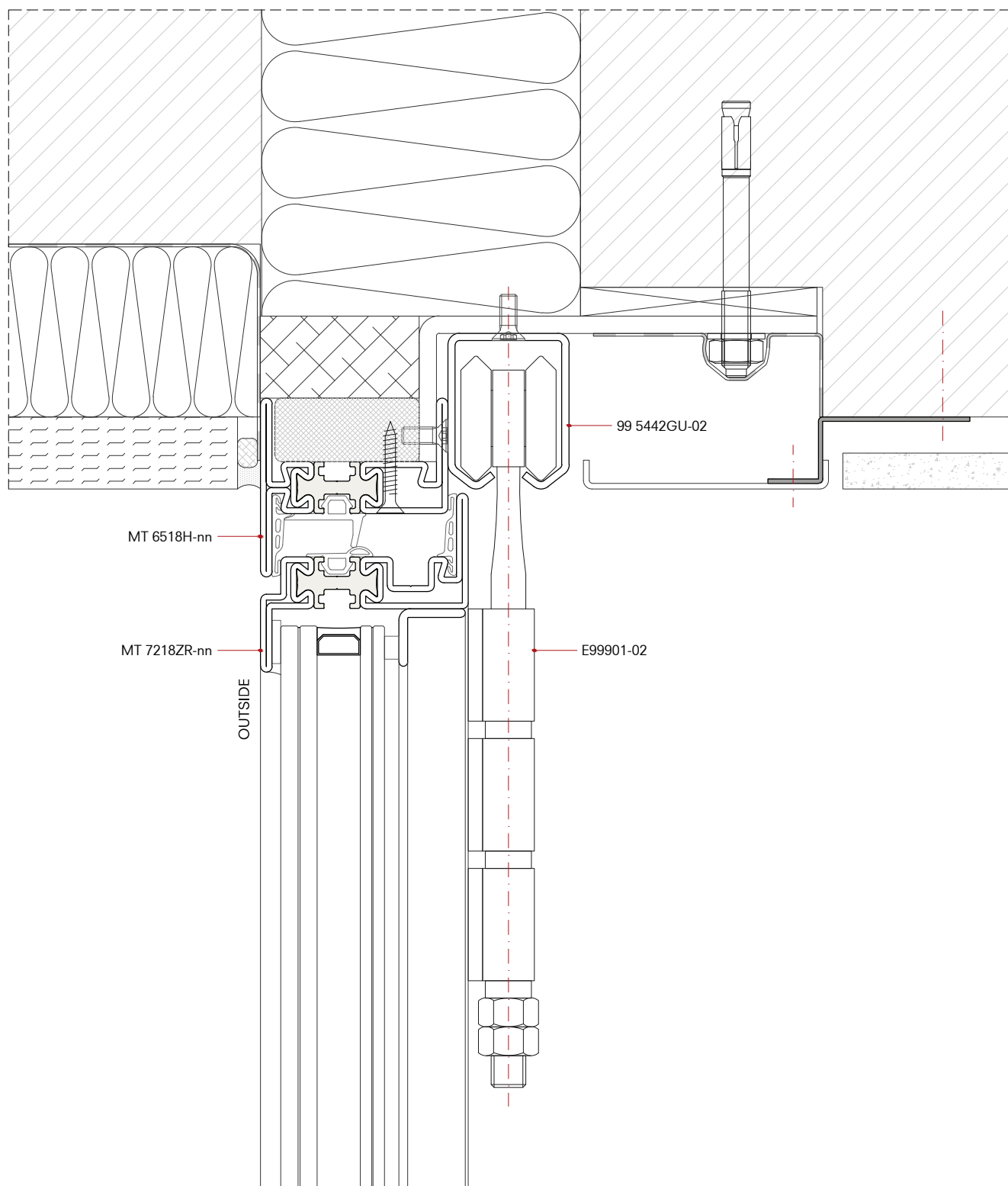
#### Remarque sur les systèmes de portes accordéon:

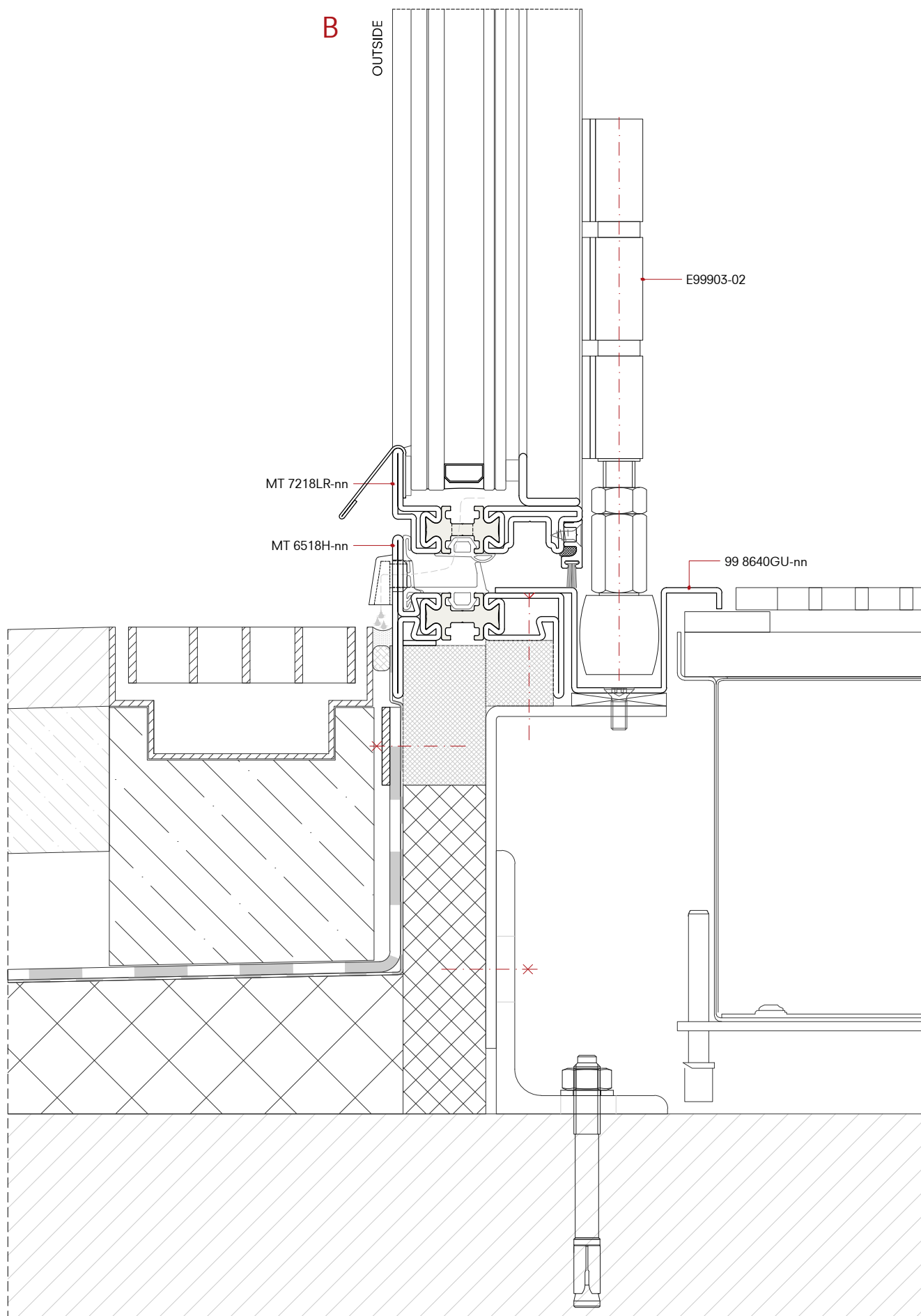
- Dans cette documentation, les systèmes de portes accordéon ne sont inclus que par extraits et doivent être adaptés à la situation d'installation respective.
- Ouverture des vantaux uniquement possible vers l'intérieur.
- La fermeture se fait au moyen des ferrures de fenêtre à rainure Euro.
- De plus amples informations et instructions d'installation supplémentaires peuvent être obtenues auprès du conseiller technique.
- Les aspects physiques des bâtiments doivent être pris en compte et adaptés de manière indépendante.





A









Details, structural  
connections

Details Konstruktion

Détails de construction

4.3

Legend

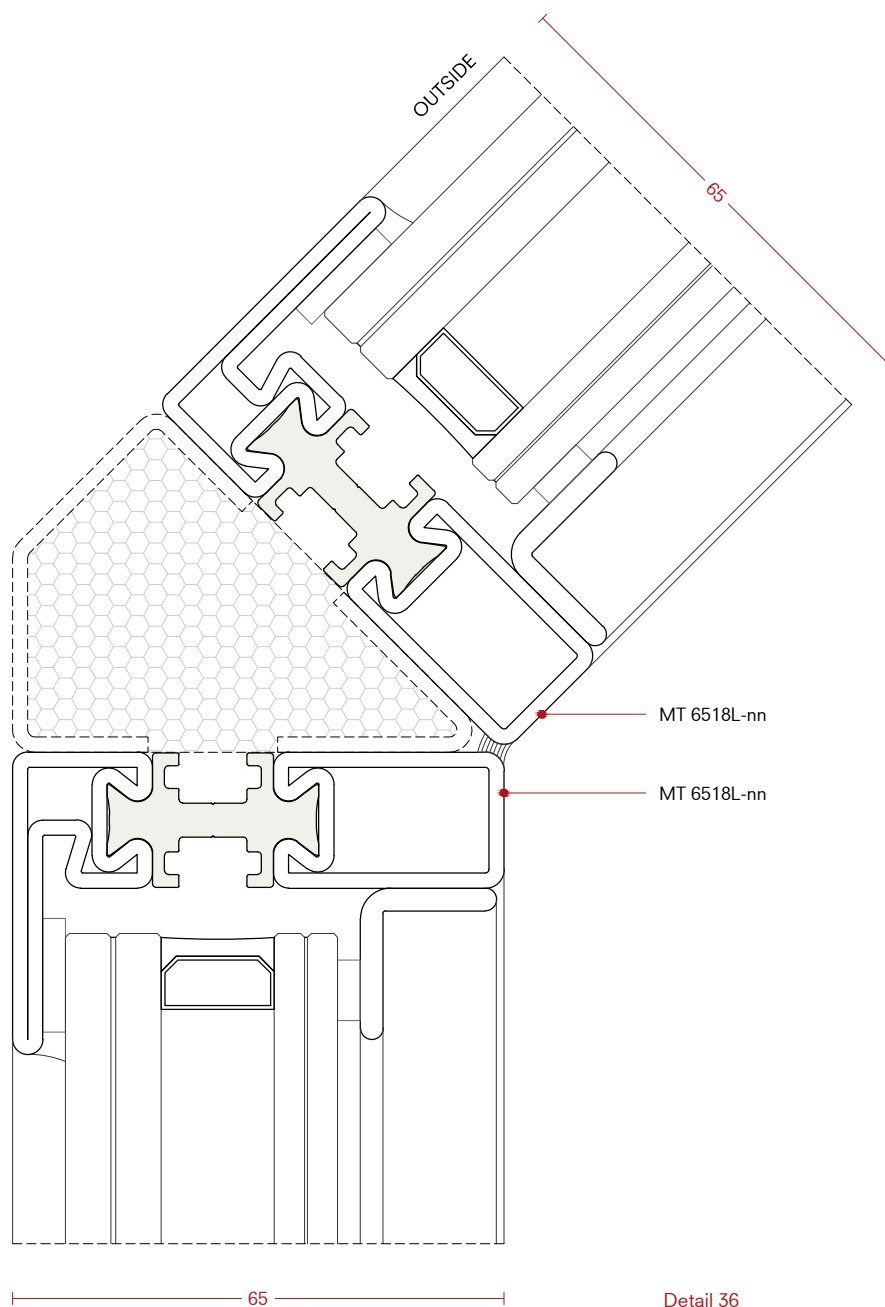
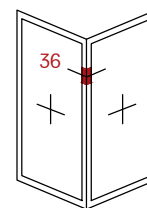
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— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1

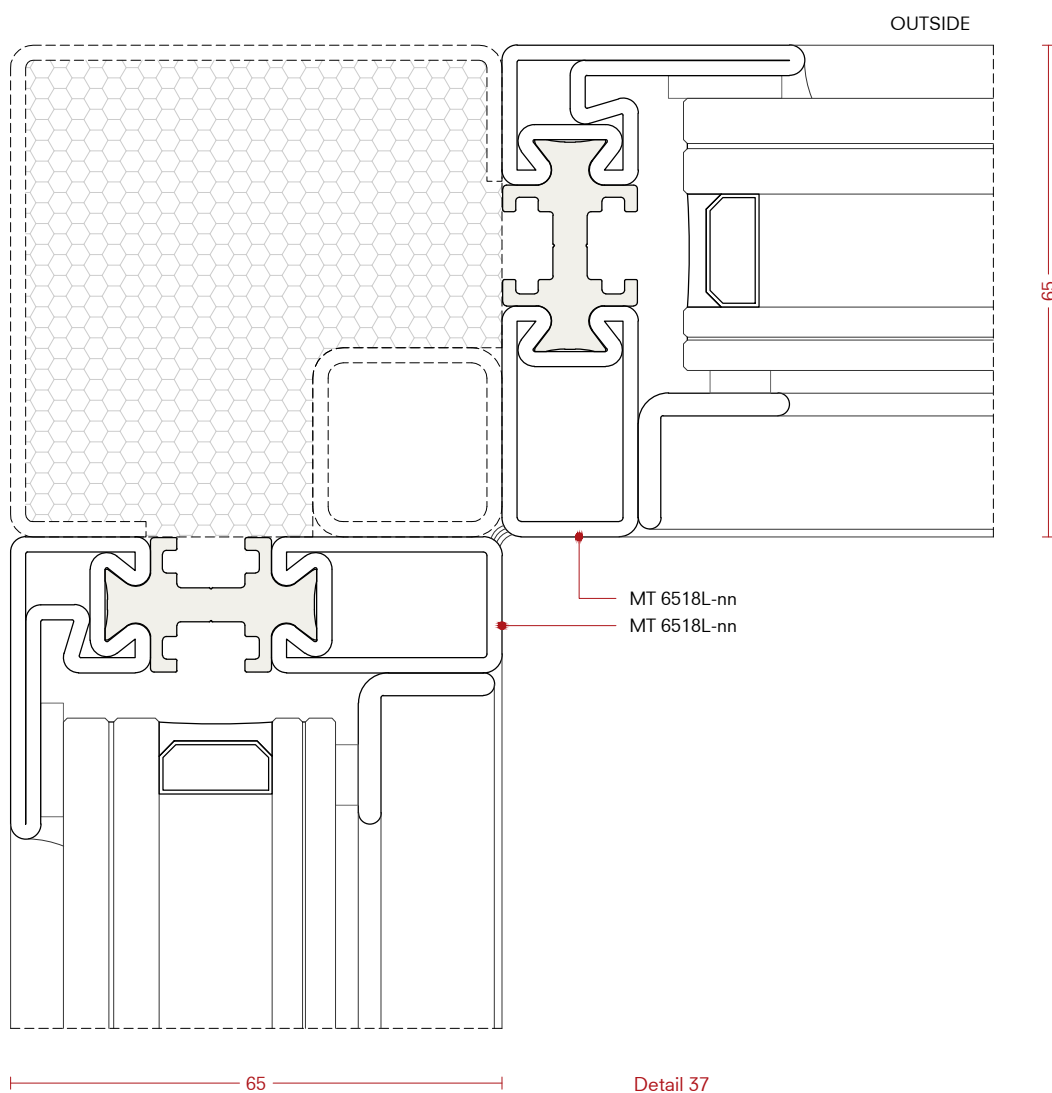
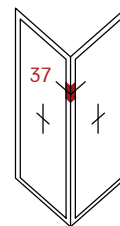
Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1

Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1







Wall connections

Bauanschlüsse

Détails de raccords au mur

4.4

Legend

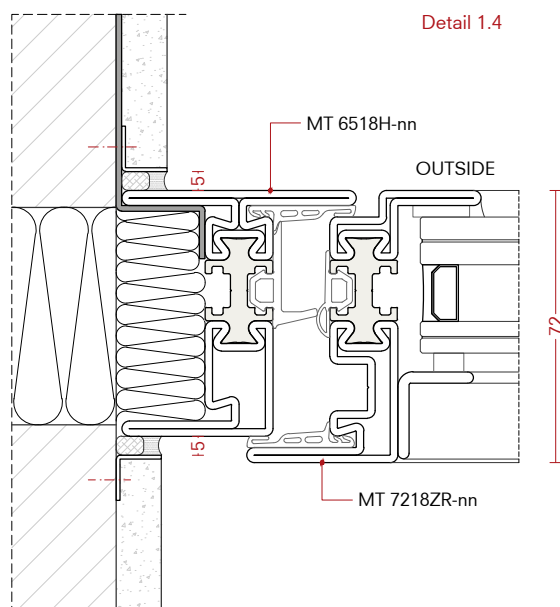
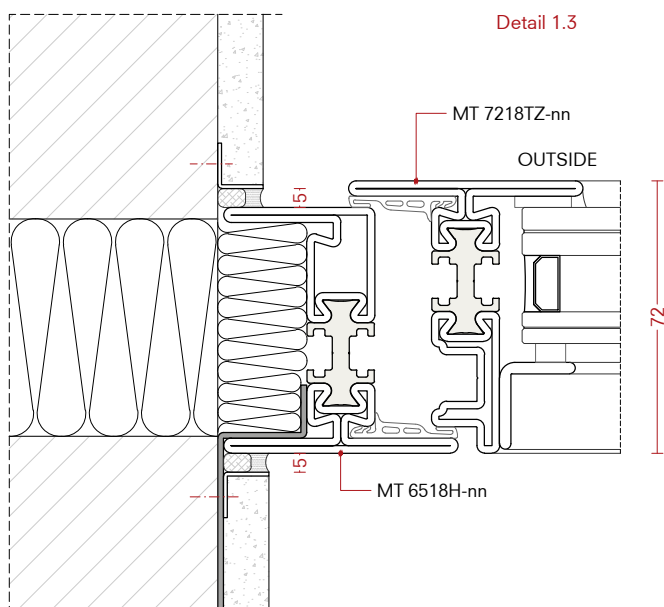
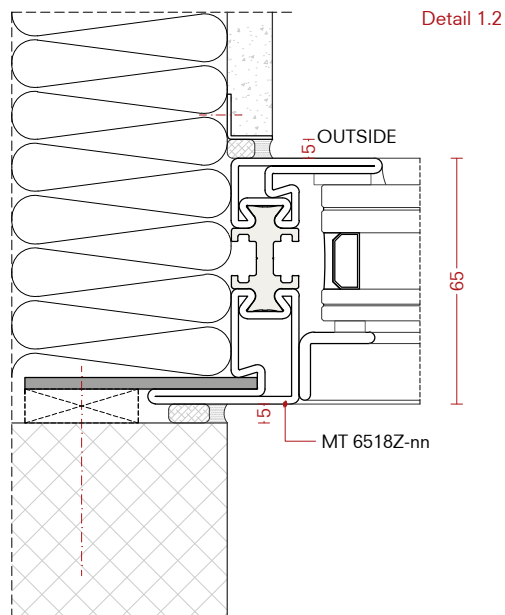
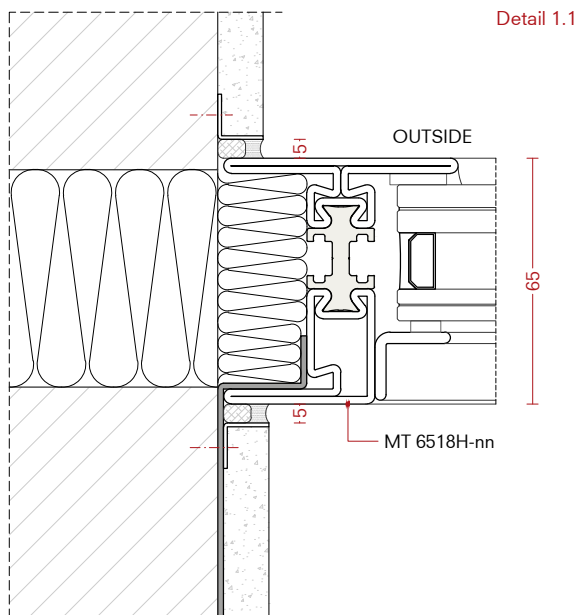
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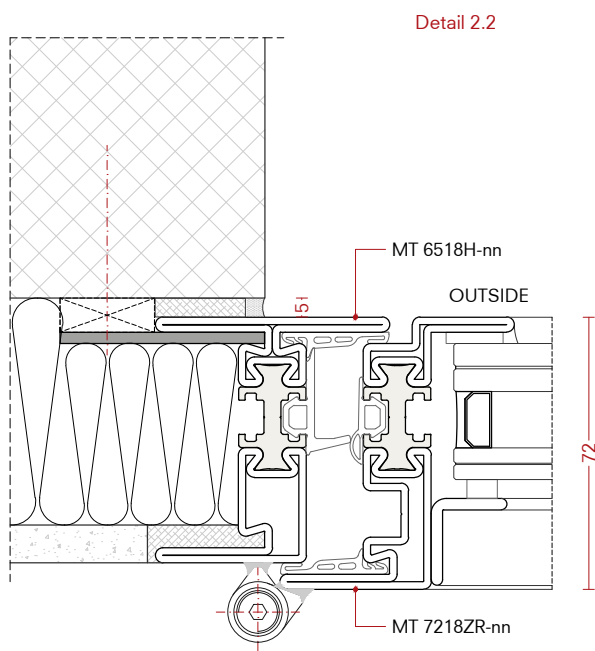
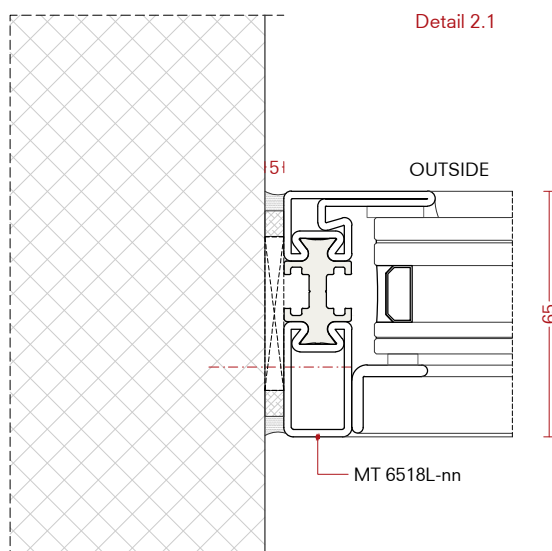
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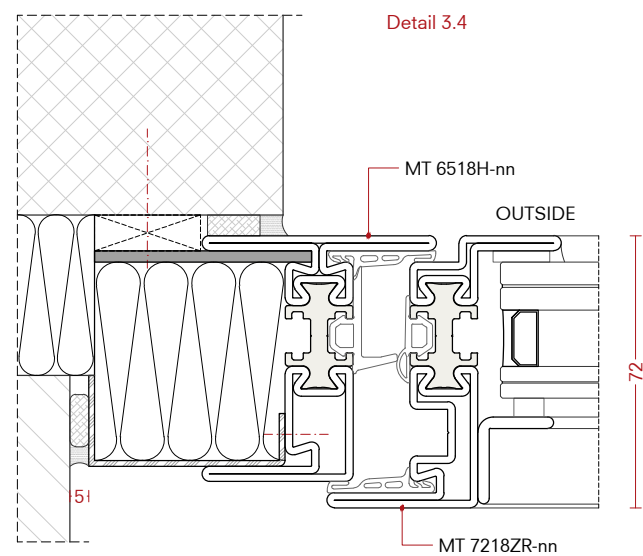
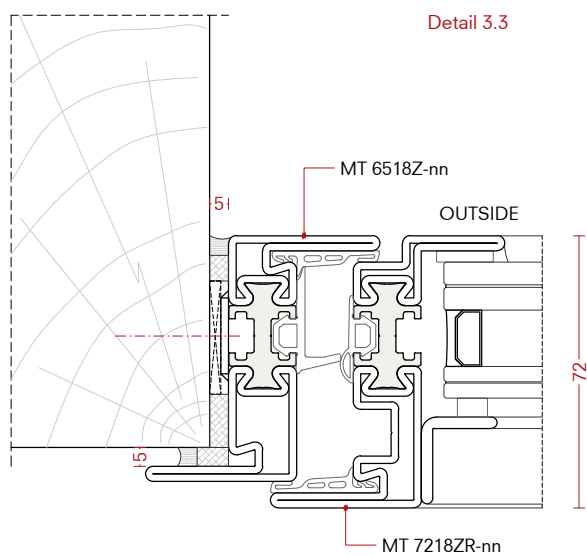
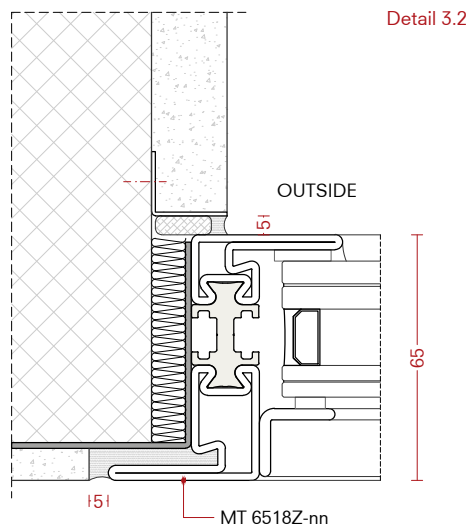
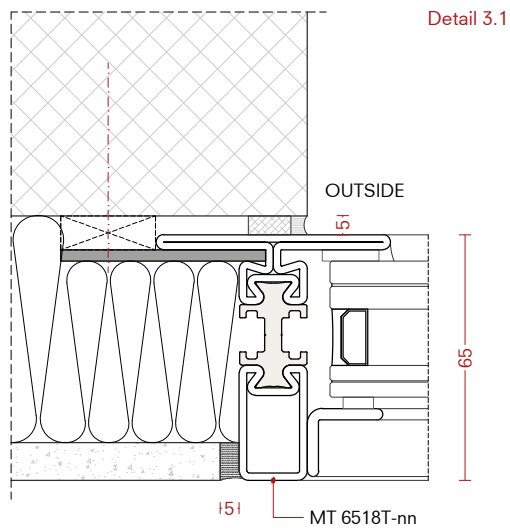
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Einheit in: mm  
Maßstab 1:2

Légende

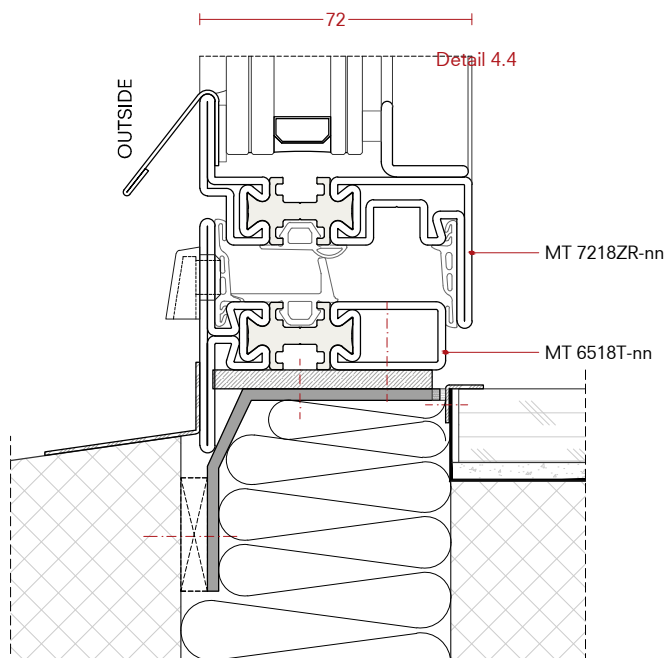
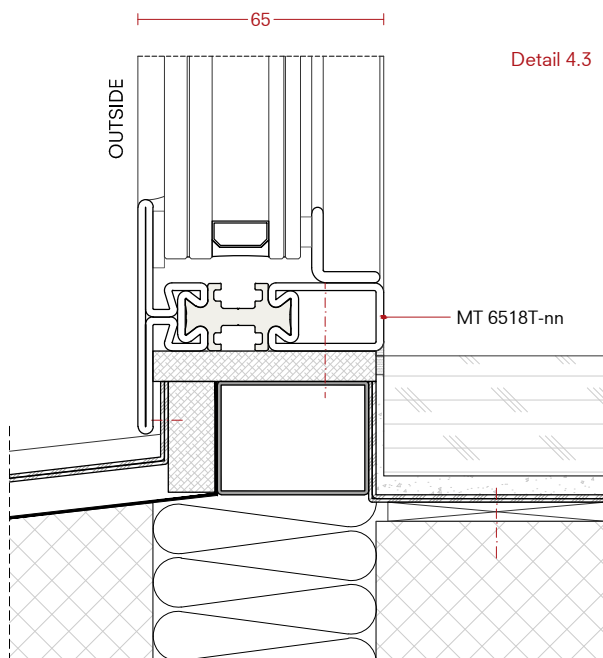
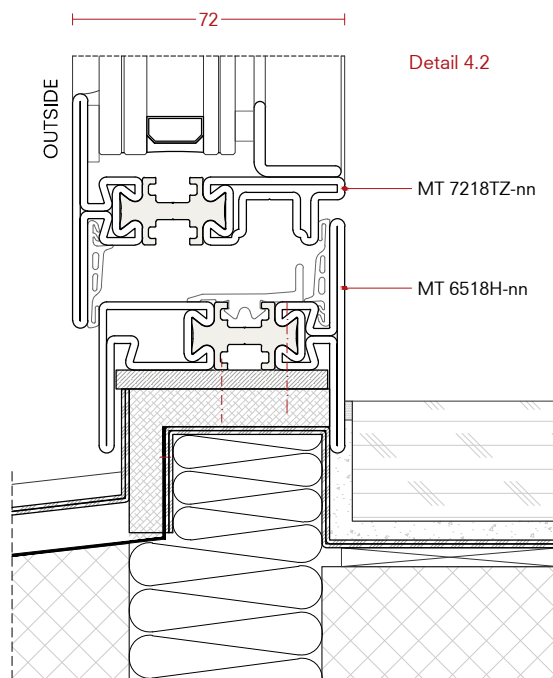
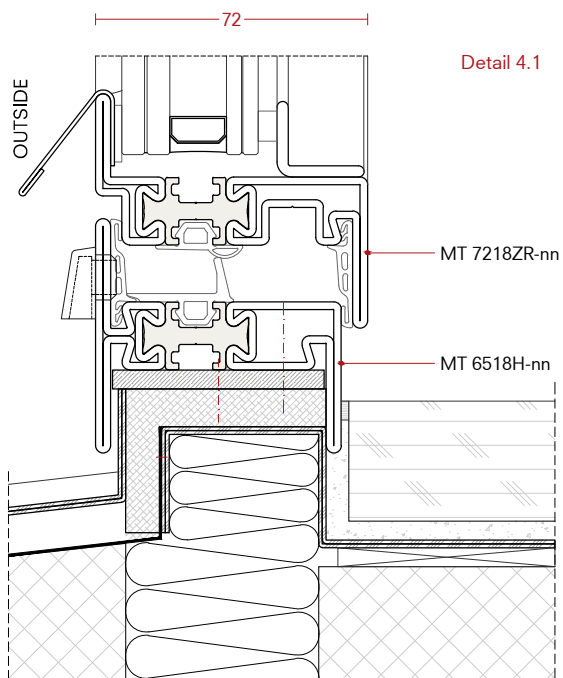
+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:2













## Processing

## Verarbeitung

## Usinage

5.0

Health and safety

Gesundheits- und Sicherheitsaspekte

Aspects sanitaires et de sécurité

5.1

Cutting  
Welding

Zuschnitt  
Schweißen

Découpe  
Soudage

5.2  
5.3

Accessories installation:  
Gaskets  
System accessories  
Hinges  
Flush bolts  
General fittings  
Installation Tilt&Turn fittings  
Handles  
Locks

Montage Zubehör:  
Dichtungen  
Systemzubehör  
Bänder  
Kantriegel  
Beschläge Allgemein  
Einbau Dreh-Kippfenster Beschläge  
Griffe  
Schlösser

Montage accessoires:  
Joints  
Accessoires système  
Paumelles  
Verrou à bascule  
Ferrures générales  
Montage fenêtre oscillo-battant accessoires  
Poignées  
Serrures

5.4  
5.5  
5.6  
5.7  
5.8  
5.9  
5.10  
5.11

Glazing

Verglasung

Vitrage

5.12

### Important notes:

All processes are considered glazed-in except where specified.

### Wichtige Anmerkungen:

Alle Prozesse gelten als verglast, sofern nicht anders angegeben.

### Remarques importantes:

Tous les usinages sont considérés comme vitrés de l'intérieur, sauf indication contraire.



**Health and safety**

**Gesundheits- und  
Sicherheitsaspekte**

**Aspects sanitaires**

**5.1**



## Health and safety

M65 TB profiles with polyamide thermal barrier can generally be processed the same way as other thermal barrier steel window profile systems.

No special machines or process for fabrication are required. The standard fabrication processes, such as welding and grinding, can be carried out easily. While drilling, sawing or machining the polyamide web a dust, similar to wood dust, is released. This dust does not require dedicated filters or extractors. However, we recommend to protect eyes and airways according to country specific health and safety regulations.

Heating any polyamide items releases gaseous substances. For this reason is recommended to weld with the special personal protective equipment suggested and in areas with sufficient ventilation and fume-disposing systems.

## Gesundheits- und Sicherheitsaspekte

M65 TB Profile mit vergossenen Polyamid-Isolator können grundsätzlich wie alle übrigen thermisch getrennten Profilsysteme verarbeitet werden.

Für die Verarbeitung müssen keine speziellen Maschinen beschafft oder sonstige besondere Maßnahmen getroffen werden. Die üblichen Verarbeitungsprozesse wie Schweißen und Schleifen sind problemlos durchführbar. Beim Bohren, Sägen oder Zerspanen des Polyamid-Isolators wird ein Staub, vergleichbar mit Holzstaub, freigesetzt. Es werden hierfür keine speziellen Absaug- oder Filteranlagen benötigt, wir empfehlen jedoch Augen und Atemwege gemäss den Landesüblichen Sicherheitsvorschriften zu schützen. Beim Erhitzen von Polyamidhaltigen Stoffen werden gasförmige Substanzen freigesetzt. Aus diesem Grund wird empfohlen, ausschließlich mit geeigneter Schutzausrüstung in Bereichen mit ausreichenden Belüftungs- und Rauchabzugssystemen zu schweißen.

## Aspects sanitaires et de sécurité

Profilés M65 TB avec polyamide isolant peuvent fondamentalement être usinés comme les autres systèmes de profilés en acier avec rupture de pont thermique. On ne nécessite pas des machines spéciales ou d'autres mesures particulières pour l'usinage. Les processus d'usinage usuels tels que le soudage et le meulage s'exécutent sans problème. Lors du perçage, de la coupe ou de l'usinage du polyamide, de la poussière, similaire à la poussière du bois, est libérée. Des aspirateurs ou des filtres appropriés ne sont pas nécessaires, mais nous recommandons de protéger les yeux et les voies respiratoires en appliquant les mesures de protections classiques en matière de sécurité de votre pays. L'éventuel surchauffe du polyamide libère des substances gazeuses: pour cette raison, il est conseillé de souder avec les Equipements de Protection Individuelle prévus, dans des zones avec suffisamment aérage et, en présence d'un système d'évacuation des fumées.





**Cutting**

**Zuschnitt**

**Découpe**

**5.2**

## Cutting

M65 TB profiles can be cut with conventional steel saws. However, when cutting and, in particular, when creating mitre cuts, cutting templates (D1041X-00) have to be used to ensure that the profiles are securely fixed.  
The feed rate on saws have to be reduced compared to conventional tubular steel profiles. We recommend a proper lubrication during cutting operations.

For further information, see also the chapter "General Information".

## Zuschnitt

M65 TB Profile lassen sich mit herkömmlichen Metallsägen zuschneiden. Beim Zuschnitt sollten jedoch, ins besondere bei Gehrungsschnitten, passende Sägebeilagen (D1041X-00) verwendet werden, damit eine stabile Profileinspannung gewährleistet ist. Da die Profile sehr filigran sind, sollte die Vorschubgeschwindigkeit beim Sägen, im Vergleich zu konventionellen Stahlrohrprofilen, reduziert werden. Wir empfehlen eine Mikrospüh-Schmierung für den Zuschnitt der Profile zu verwenden.

Weitere Informationen finden Sie auch im Kapitel "Allgemeine Informationen".

## Découpe

Les profilés M65 TB peuvent être découpés avec des scies à métaux conventionnelles. Pour la découpe, il convient toutefois d'utiliser des gabarit de découpe appropriés (D1041X-00), en particulier pour les découpes en onglet, afin de garantir un serrage stable du profilé. La vitesse d'avance pour le sciage doit être réduite par rapport aux profilés tubulaires en acier conventionnels. Nous recommandons d'utiliser une lubrification par microspray pour découper les profilés.

Pour plus d'informations, voir également le chapitre "Informations générales".

## Legend

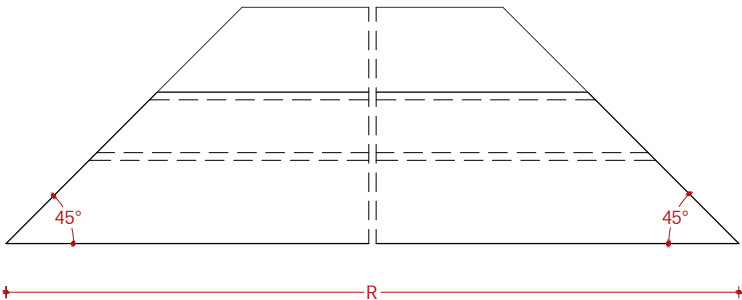
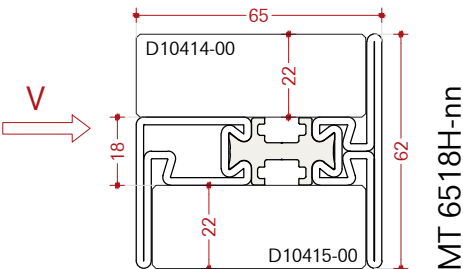
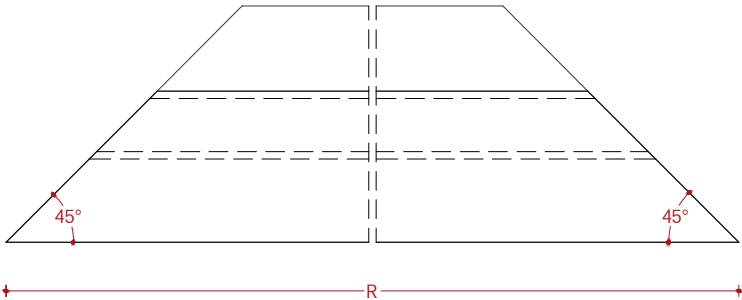
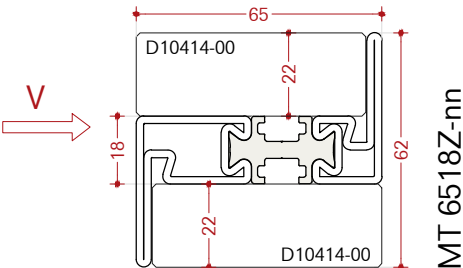
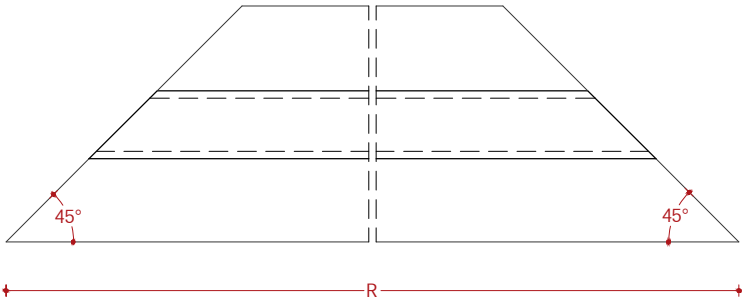
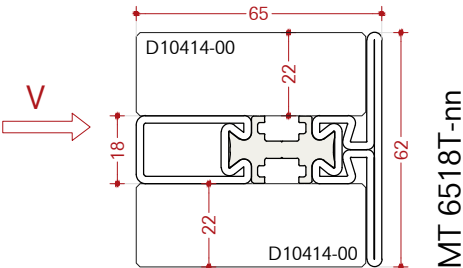
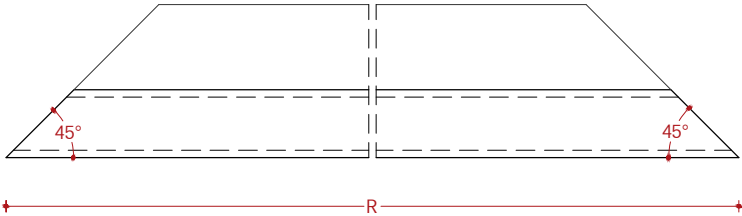
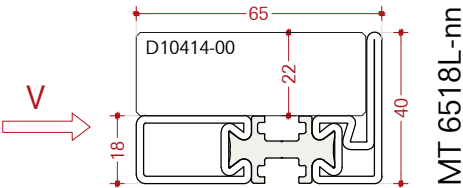
+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2  
V = View  
R = Reference cut length peak/peak  
CL = Cutting Length  
HF = Height Frame  
HG = Height Glass  
HL = Height Leaf  
WF = Width Frame  
WG = Width Glass  
WL = Width Leaf

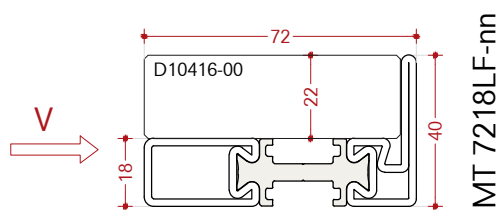
## Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2  
V = Ansicht  
R = Referenz der Schnittmessung mit größter Spitze  
CL = Zuschnitt  
HF = Höhe Rahmen  
HG = Höhe Glas  
HL = Höhe Flügel  
WF = Länge Rahmen  
WG = Länge Glas  
WL = Länge Flügel

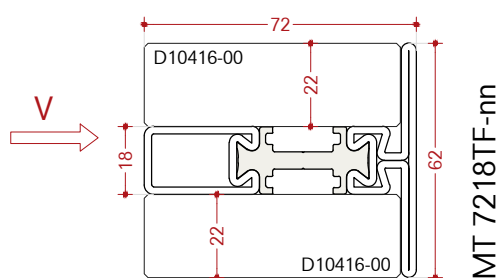
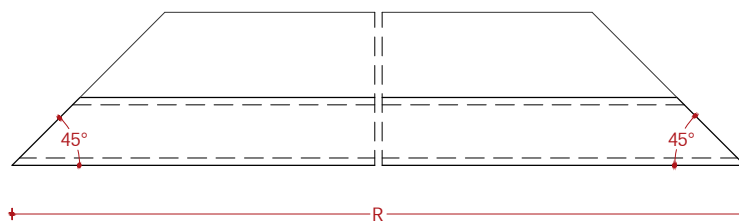
## Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2  
V = Vue  
R = Référence de la mesure de coupe avec la plus grande pointe  
CL = Découpe  
HF = Hauteur dormant  
HG = Hauteur vitre  
HL = Hauteur ouvrant  
WF = Largeur dormant  
WG = Largeur vitre  
WL = Largeur ouvrant

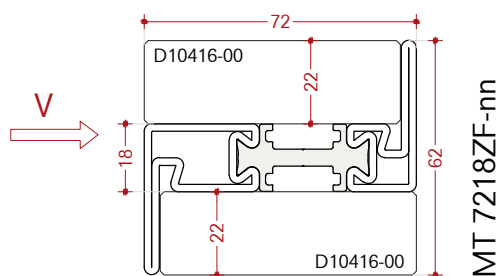
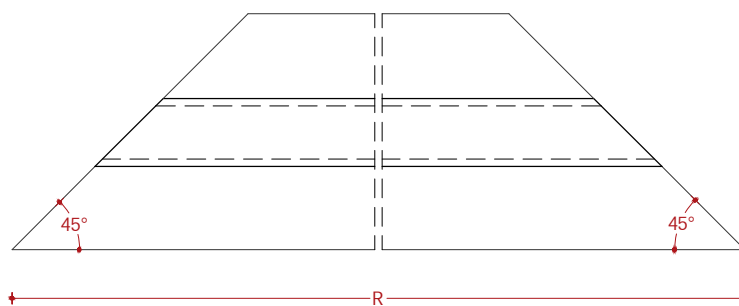




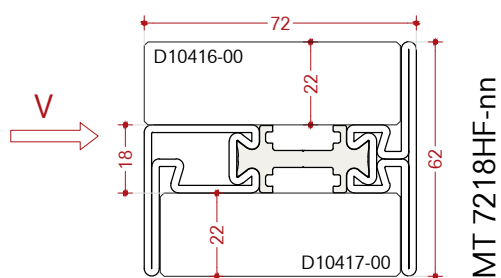
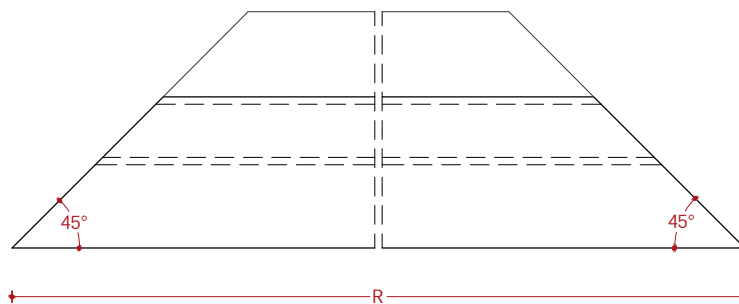
MT 7218LF-nn



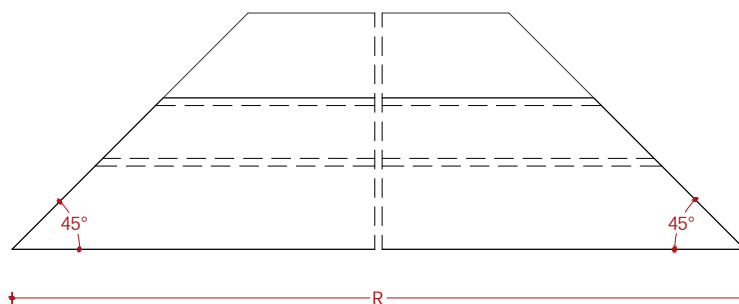
MT 7218TF-nn

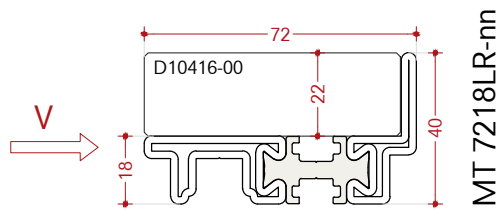


MT 7218ZF-nn

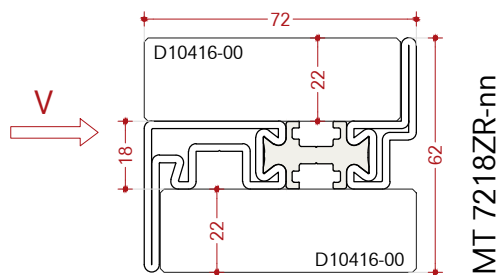
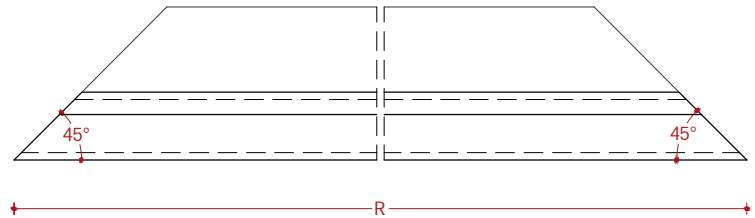


MT 7218HF-nn

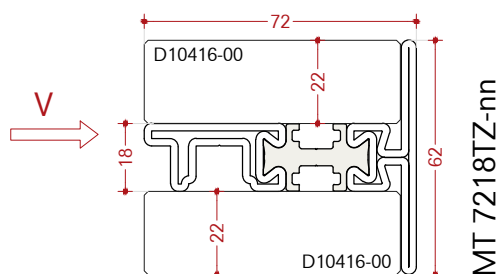
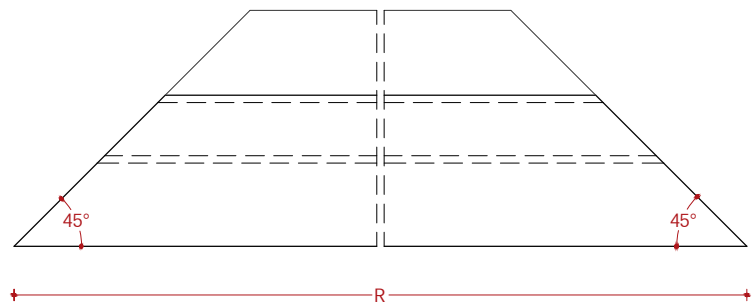




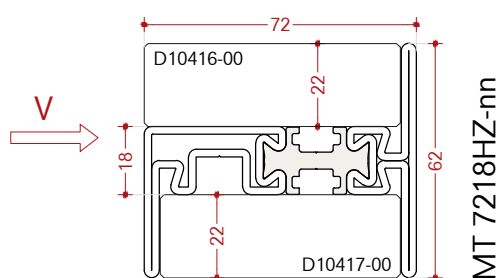
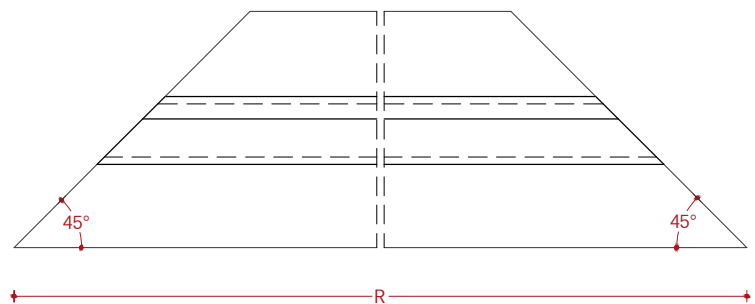
MT 7218LR-nn



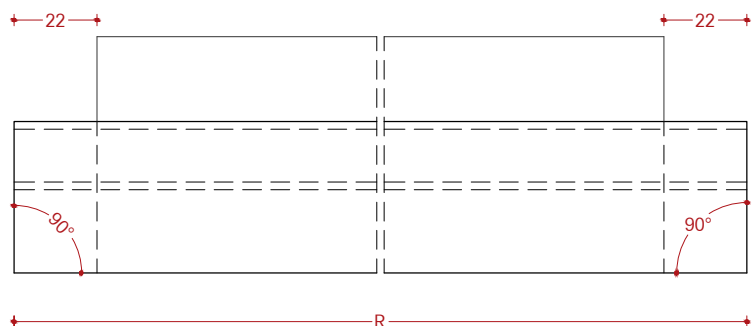
MT 7218ZR-nn



MT 7218TZ-nn



MT 7218HZ-nn



**Cutting length**

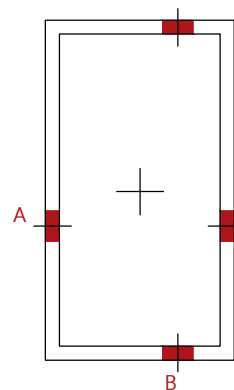
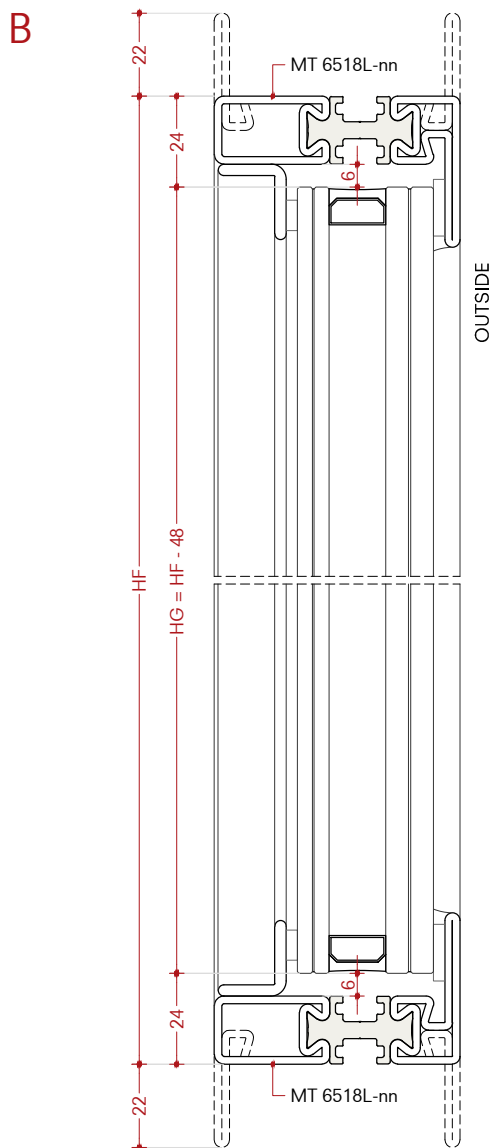
MT 6518L-nn  
Fixed frame

**Zuschnitt**

MT 6518L-nn  
Festverglasung

**Découpe**

MT 6518L-nn  
Fenêtre fixe



**Cutting length**

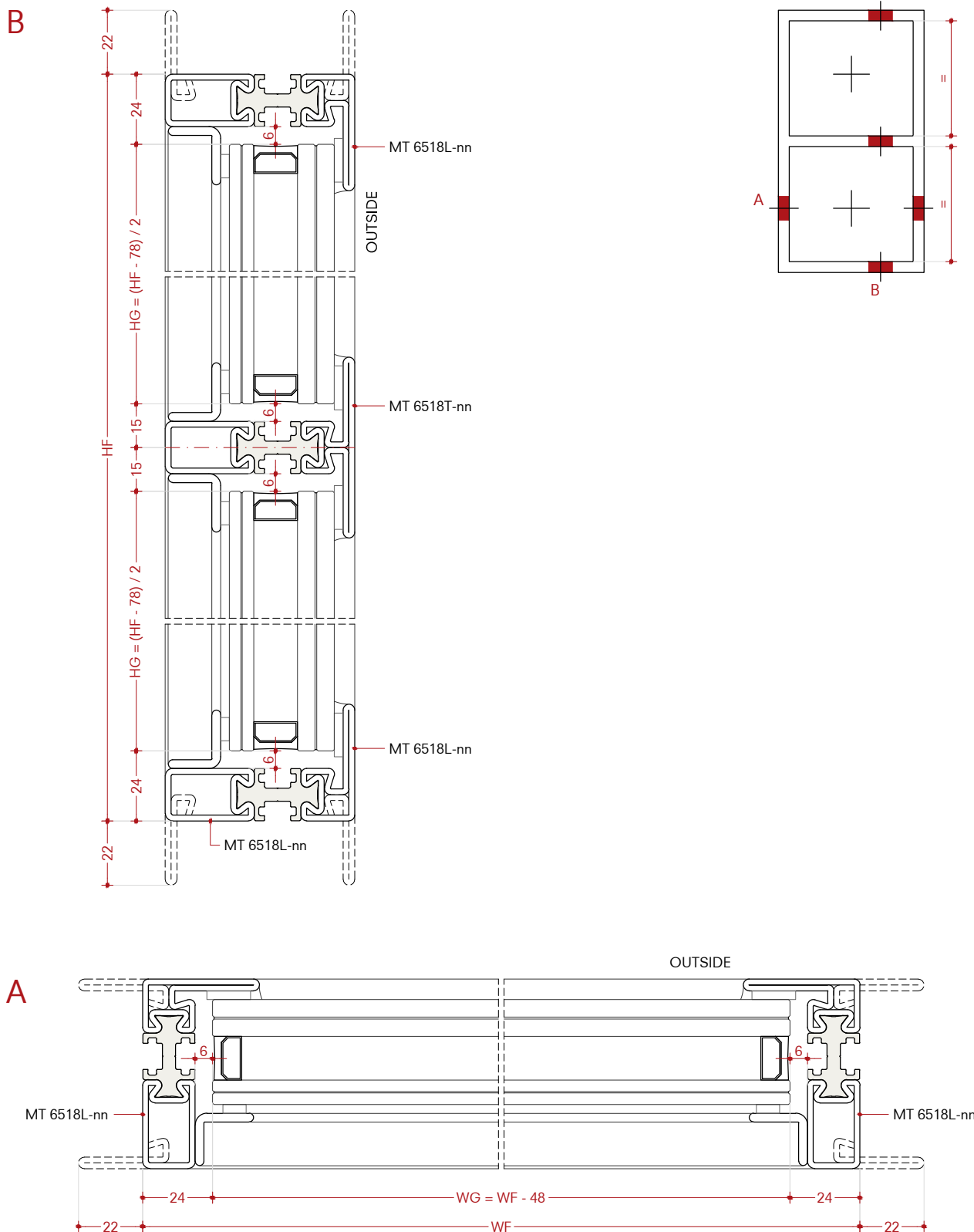
MT 6518L-nn / MT 6518T-nn  
Fixed frame

**Zuschnitt**

MT 6518L-nn / MT 6518T-nn  
Festverglasung

**Découpe**

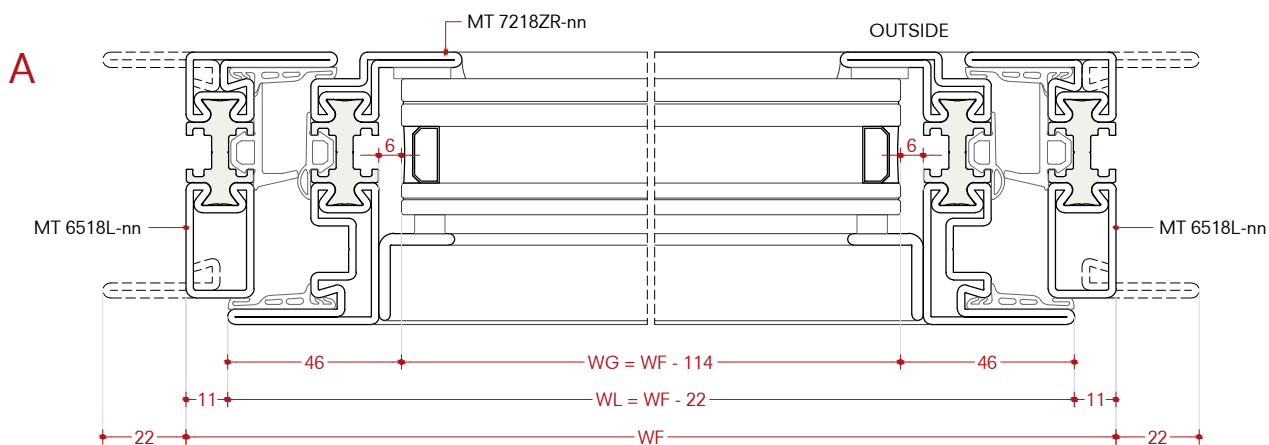
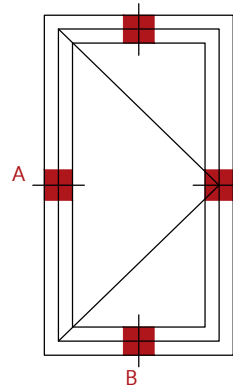
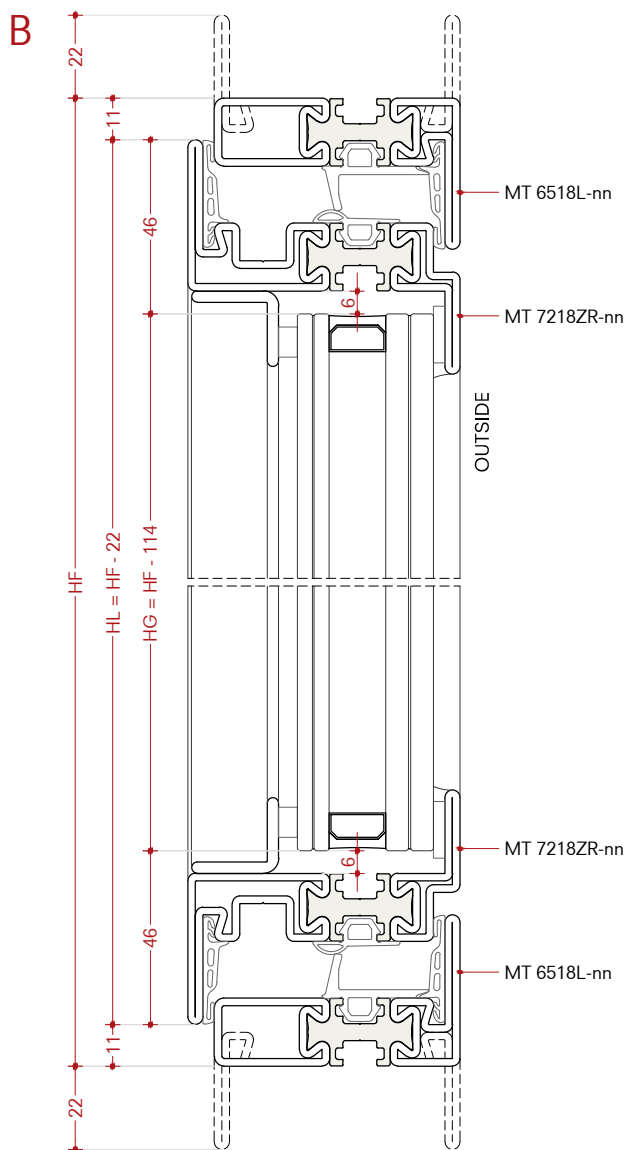
MT 6518L-nn / MT 6518T-nn  
Fenêtre fixe



**Cutting length**  
Single leaf window  
Open in

**Zuschnitt**  
Einflüglige Fenster  
Nach innen öffnend

**Découpe**  
Fenêtre à un vantail  
Ouverture intérieure

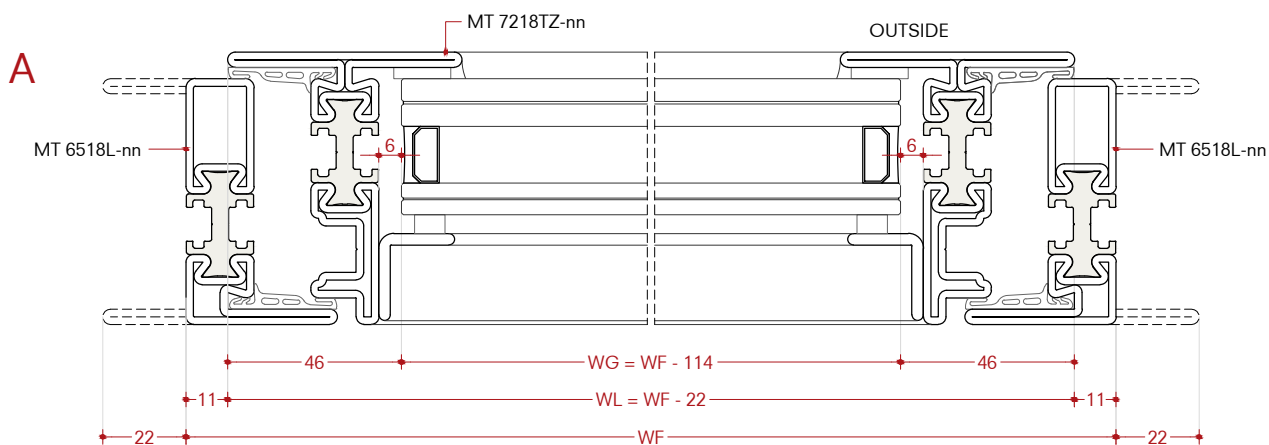
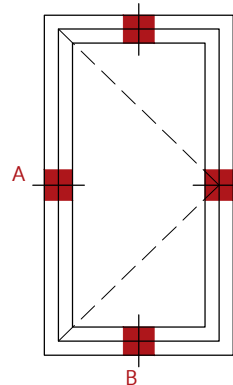
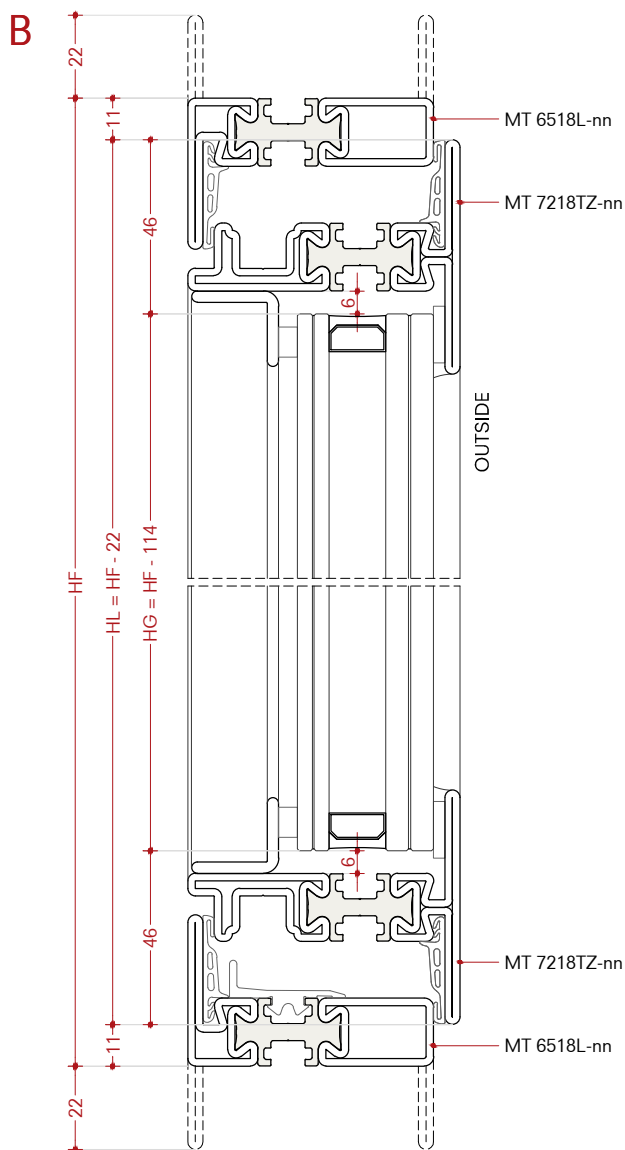




**Cutting length**  
Single leaf window  
Open out

**Zuschnitt**  
Einflügelige Fenster  
Nach außen öffnend

**Découpe**  
Fenêtre à un vantail  
Ouverture extérieure



### Cutting length

Window with top light  
Open in

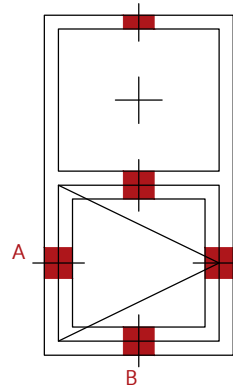
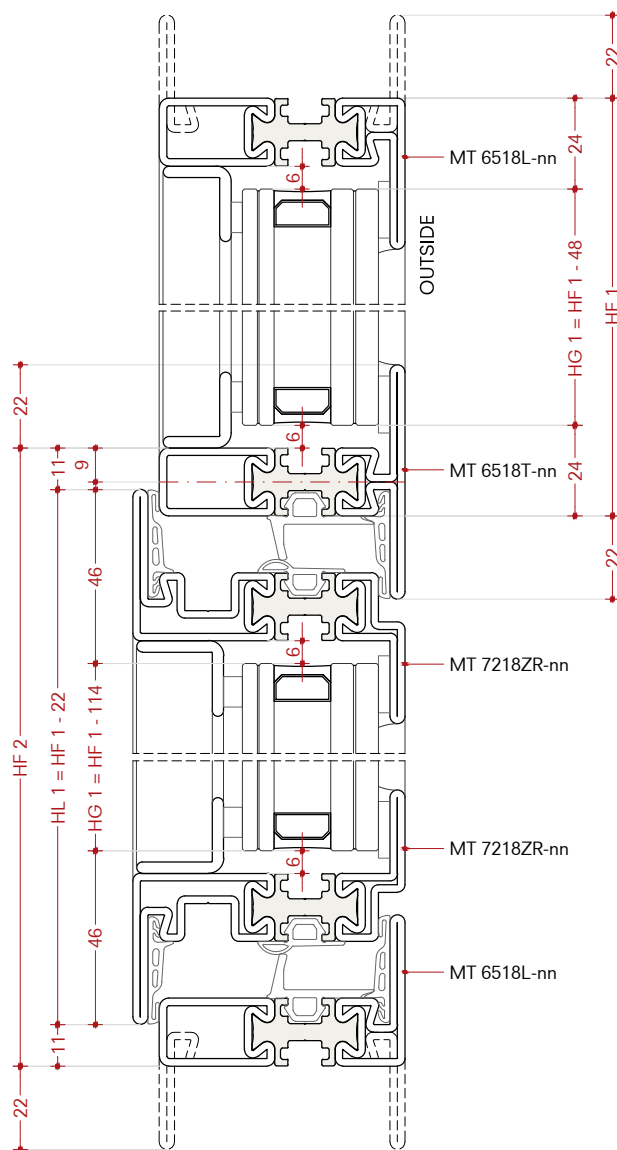
### Zuschnitt

Fenster mit Oberlicht  
Nach innen öffnend

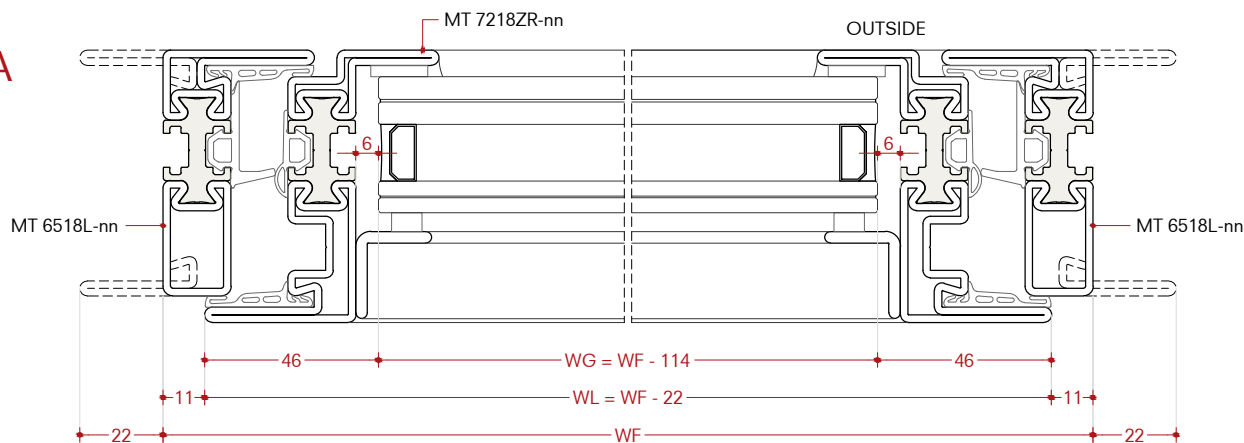
### Découpe

Fenêtre avec imposte  
Ouverture intérieure

**B**



**A**



### Cutting length

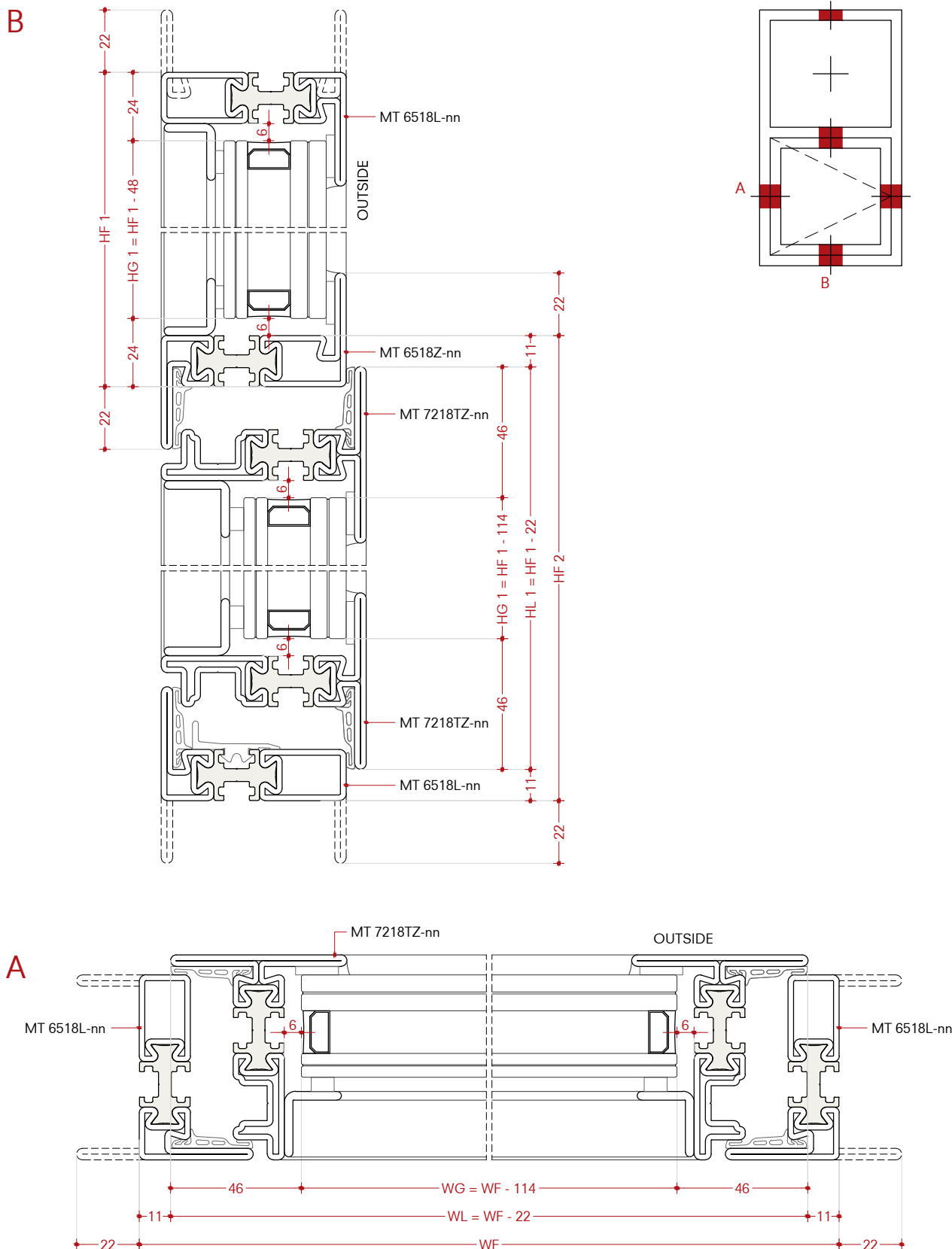
Window with top light  
Open out

### Zuschnitt

Fenster mit Oberlicht  
Nach außen öffnend

### Découpe

Fenêtre avec imposte  
Ouverture extérieure



### Cutting length

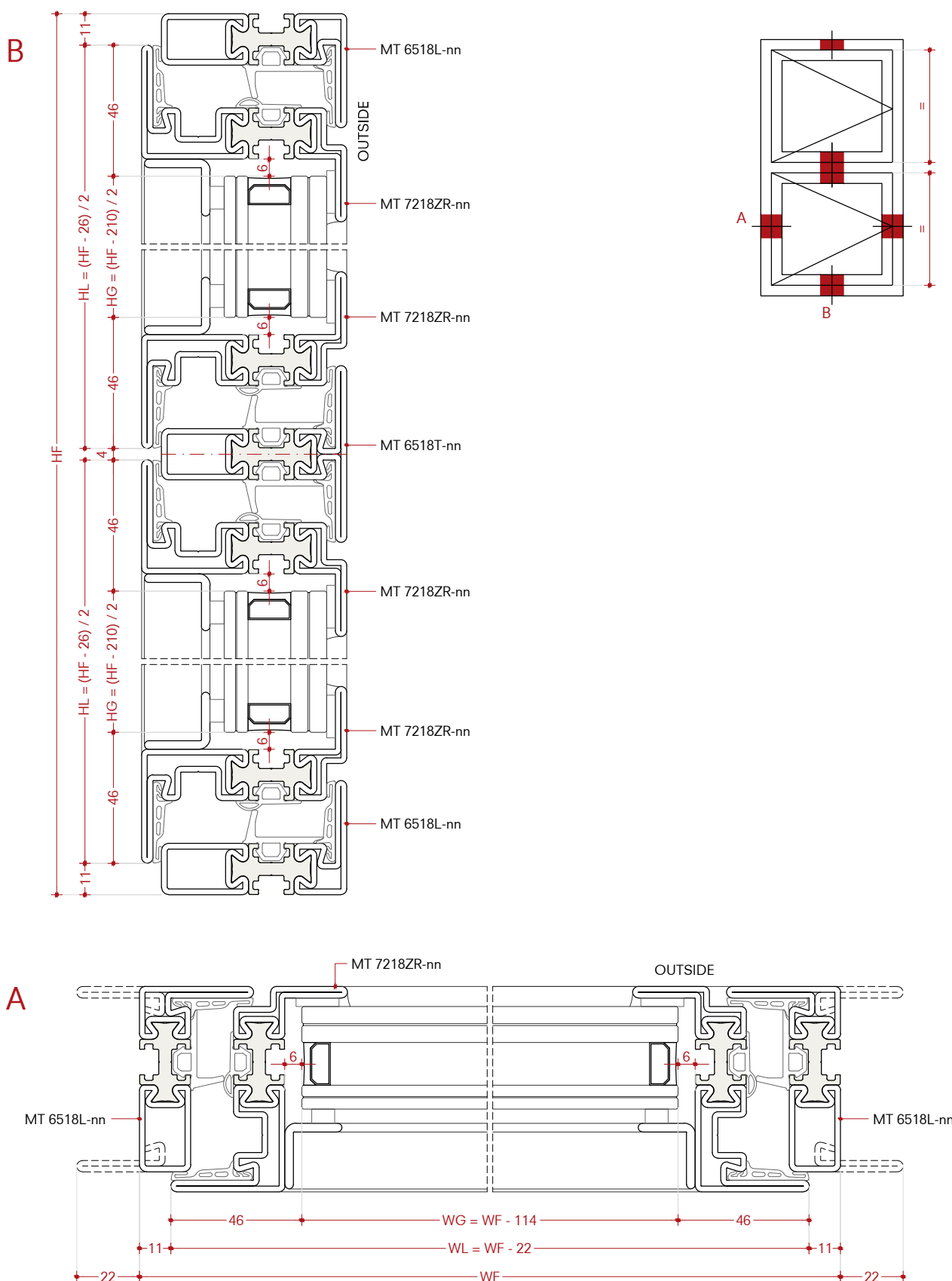
Two leaves one about another  
Open in

### Zuschnitt

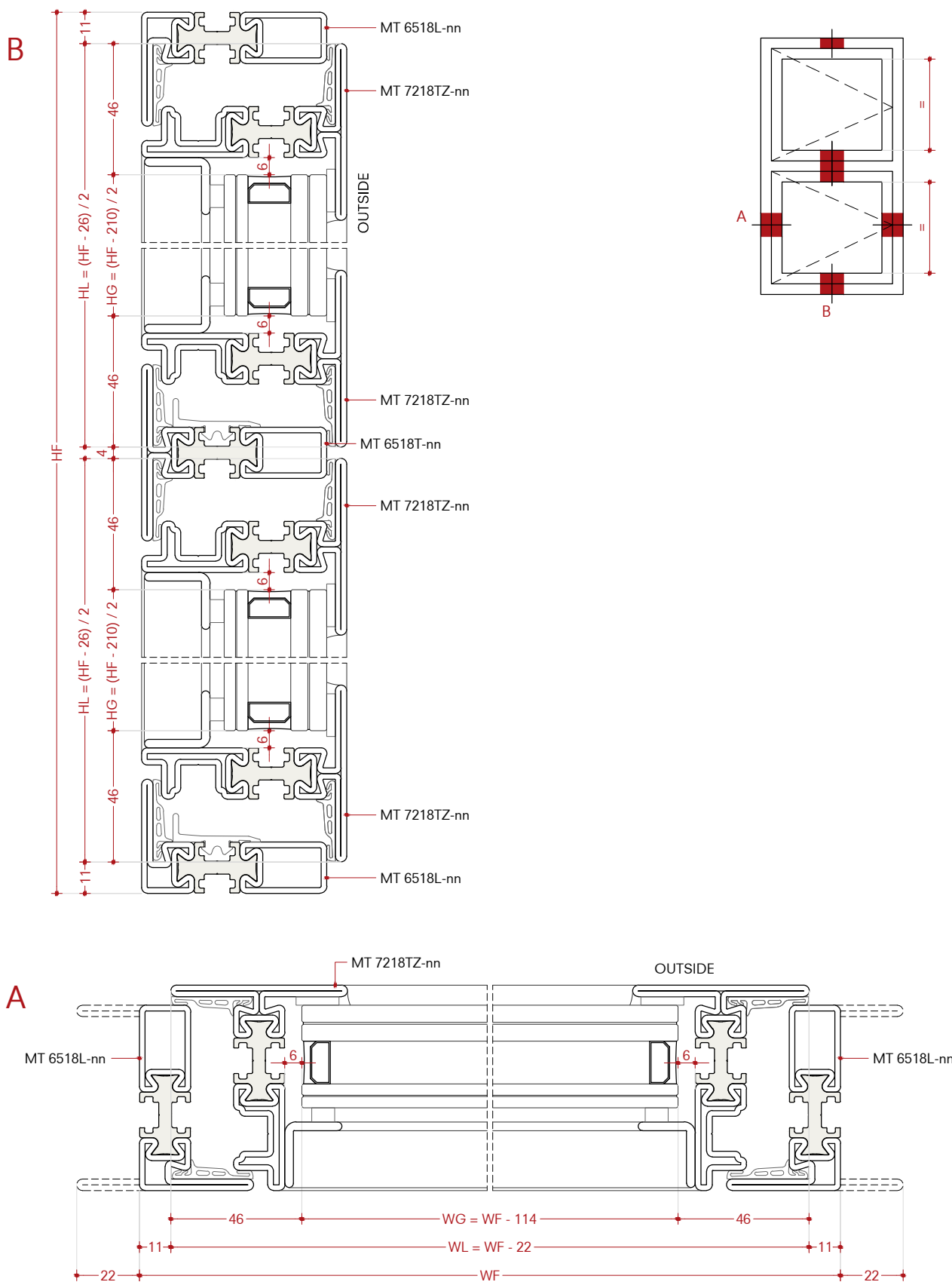
Zwei Flügel übereinander  
Nach innen öffnend

### Découpe

Deux vantaux l'un sur l'autre  
Ouverture intérieure



Deux vantaux l'un sur l'autre  
Ouverture extérieure



### Cutting length

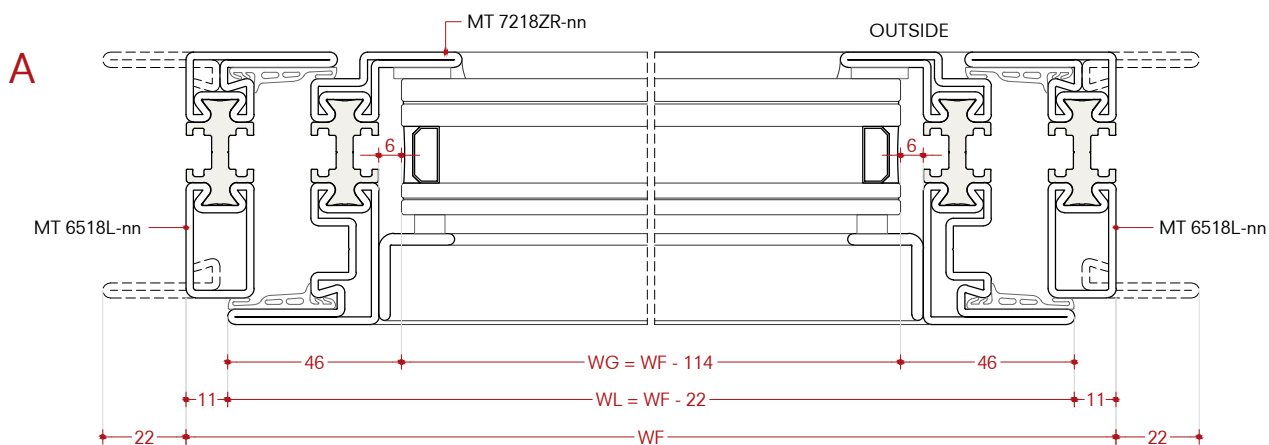
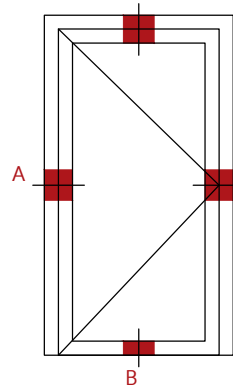
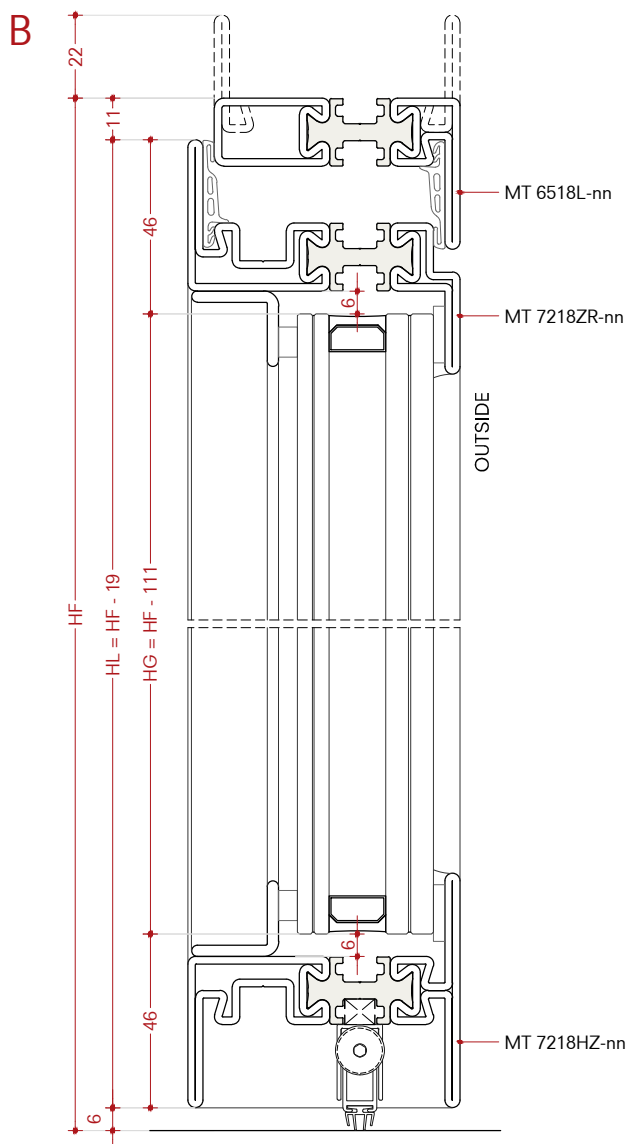
Single leaf door  
Open in

### Zuschnitt

Einflügelige Anschlagtür  
Nach innen öffnend

### Découpe

Porte à un vantail  
Ouverture intérieure



### Cutting length

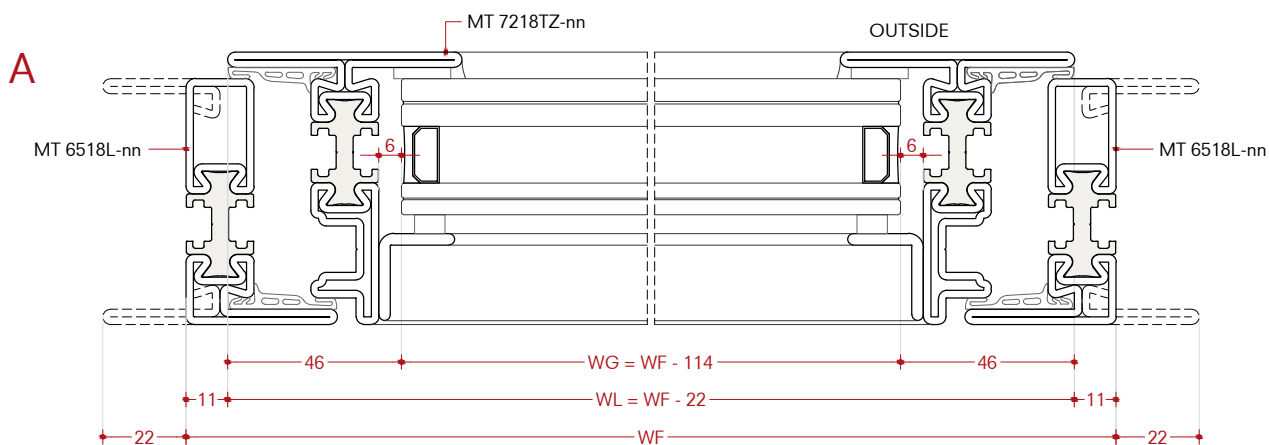
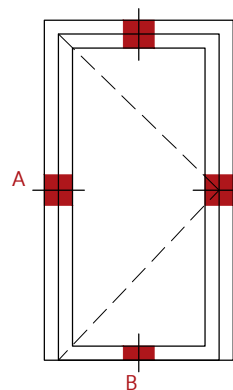
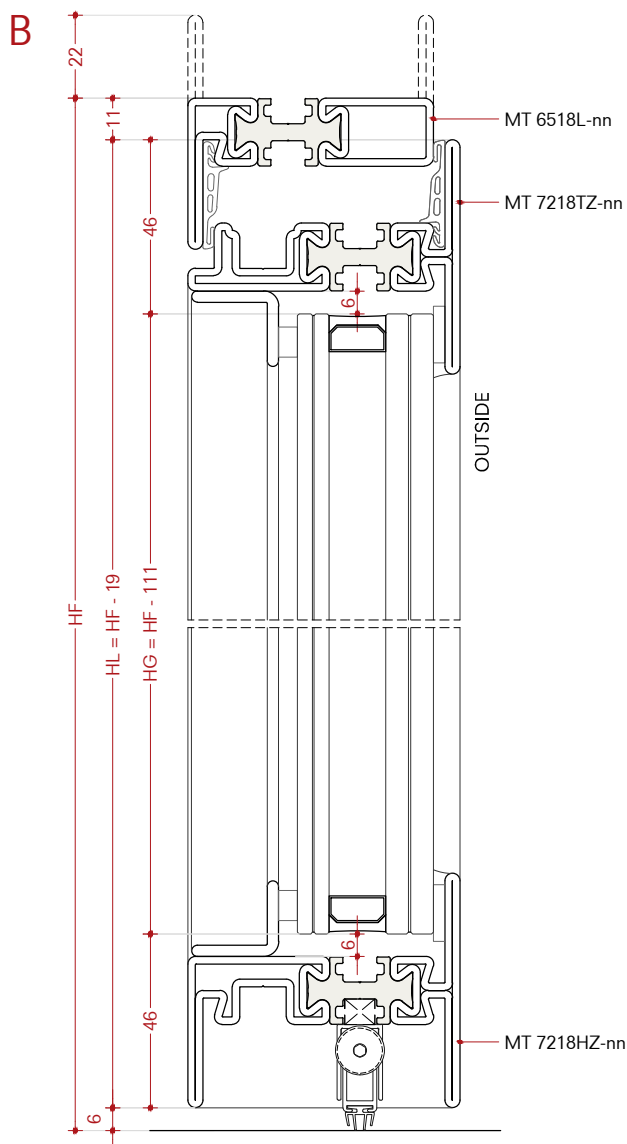
Single leaf door  
Open out

### Zuschnitt

Einflügelige Anschlagtür  
Nach außen öffnend

### Découpe

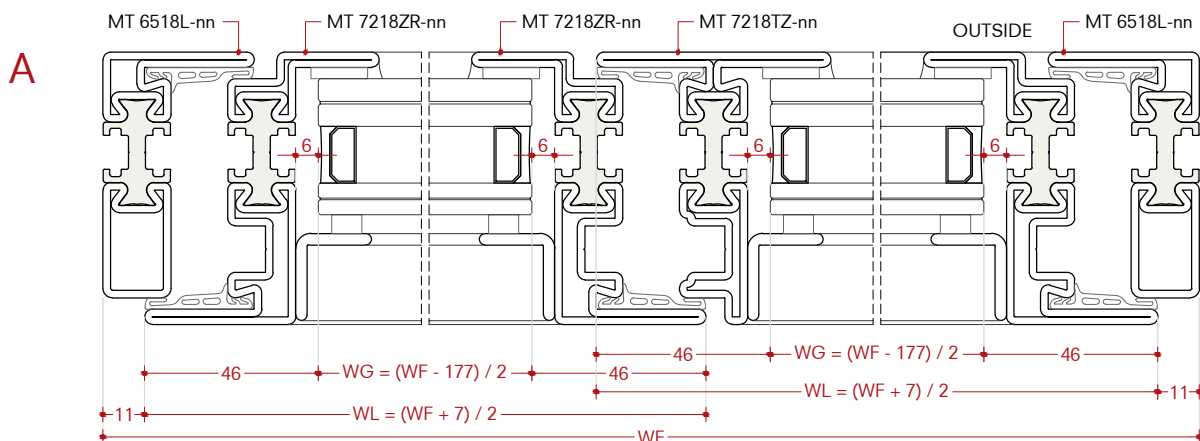
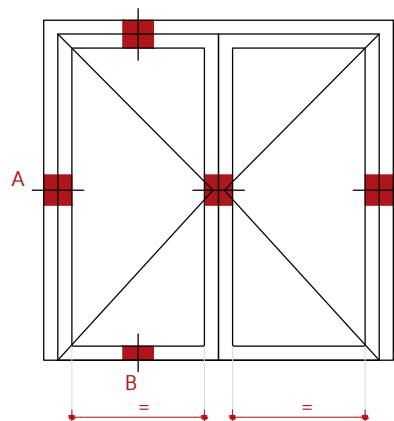
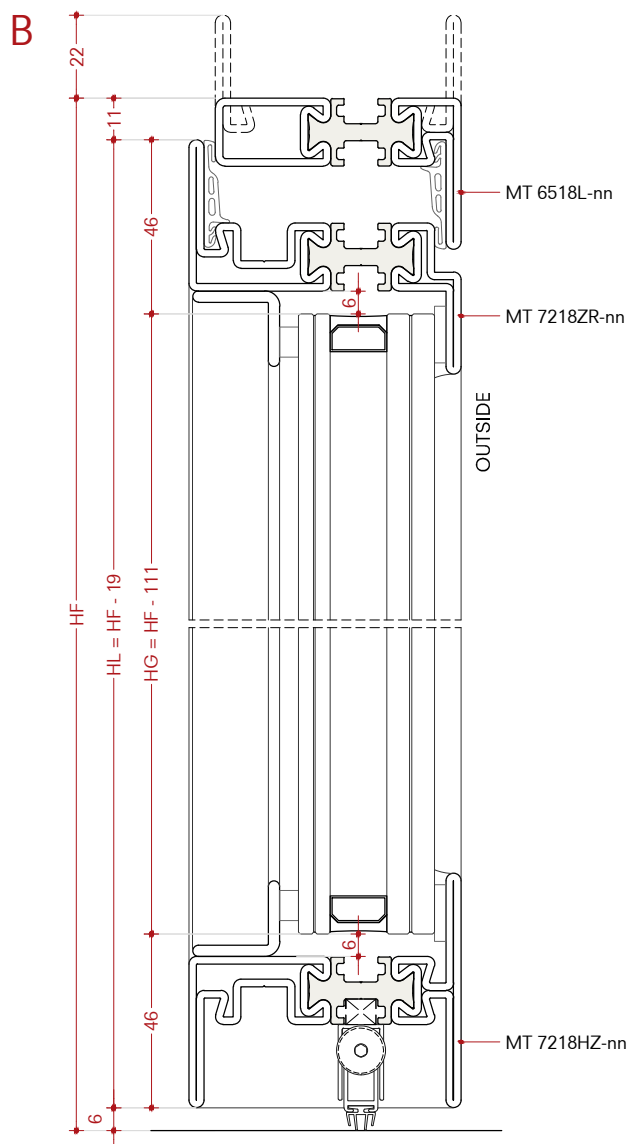
Porte à un vantail  
Ouverture extérieure



**Cutting length**  
Double leaf door  
Open in

**Zuschnitt**  
Zweiflüglige Anschlagtür  
Nach innen öffnend

**Découpe**  
Porte à deux vantaux  
Ouverture intérieure

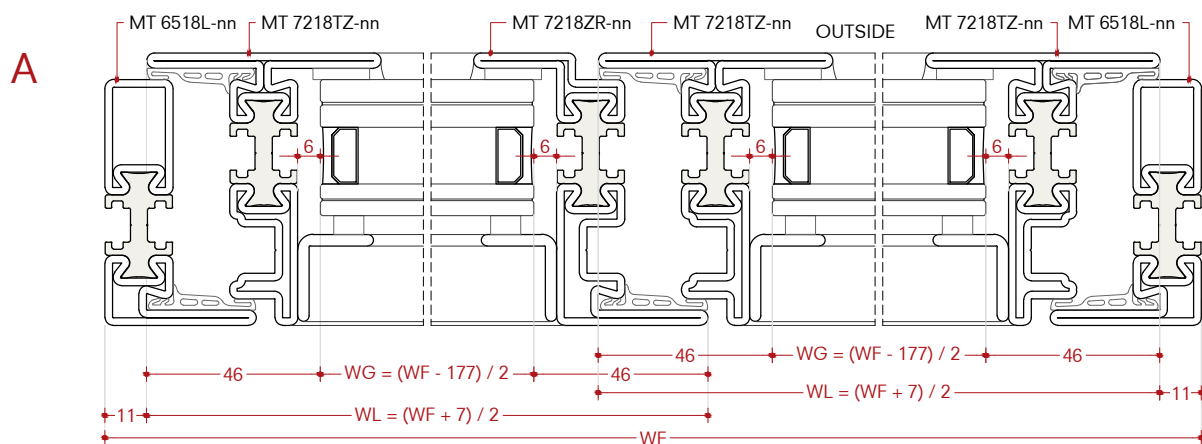
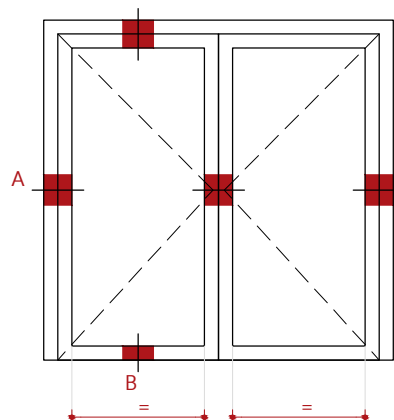
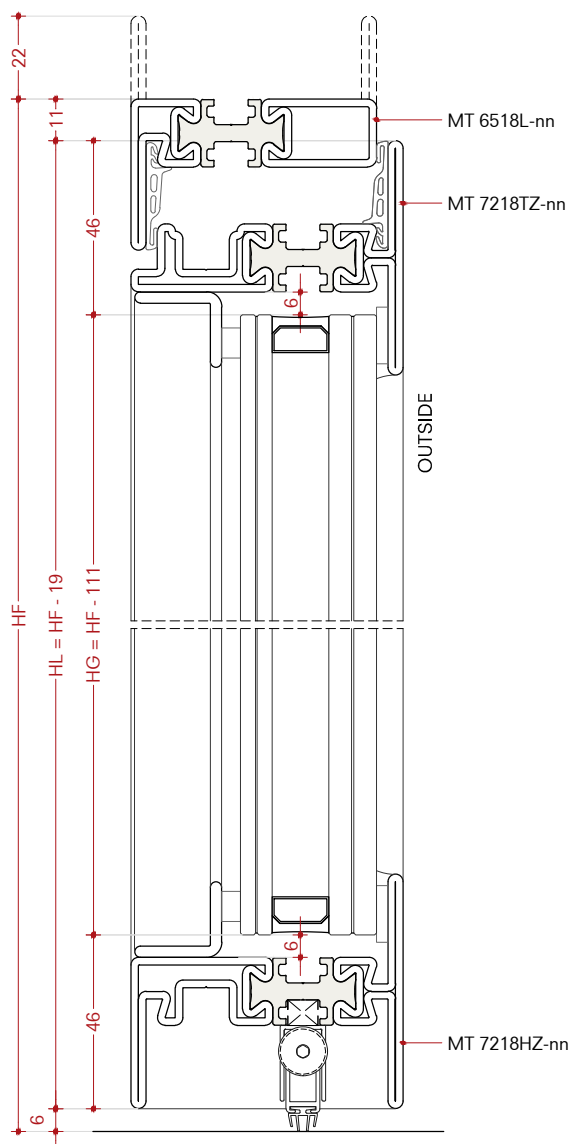




**Cutting length**  
Double leaf door  
Open out

**Zuschnitt**  
Zweiflüglige Anschlagtür  
Nach außen öffnend

**Découpe**  
Porte à deux vantaux  
Ouverture extérieure



### Cutting length

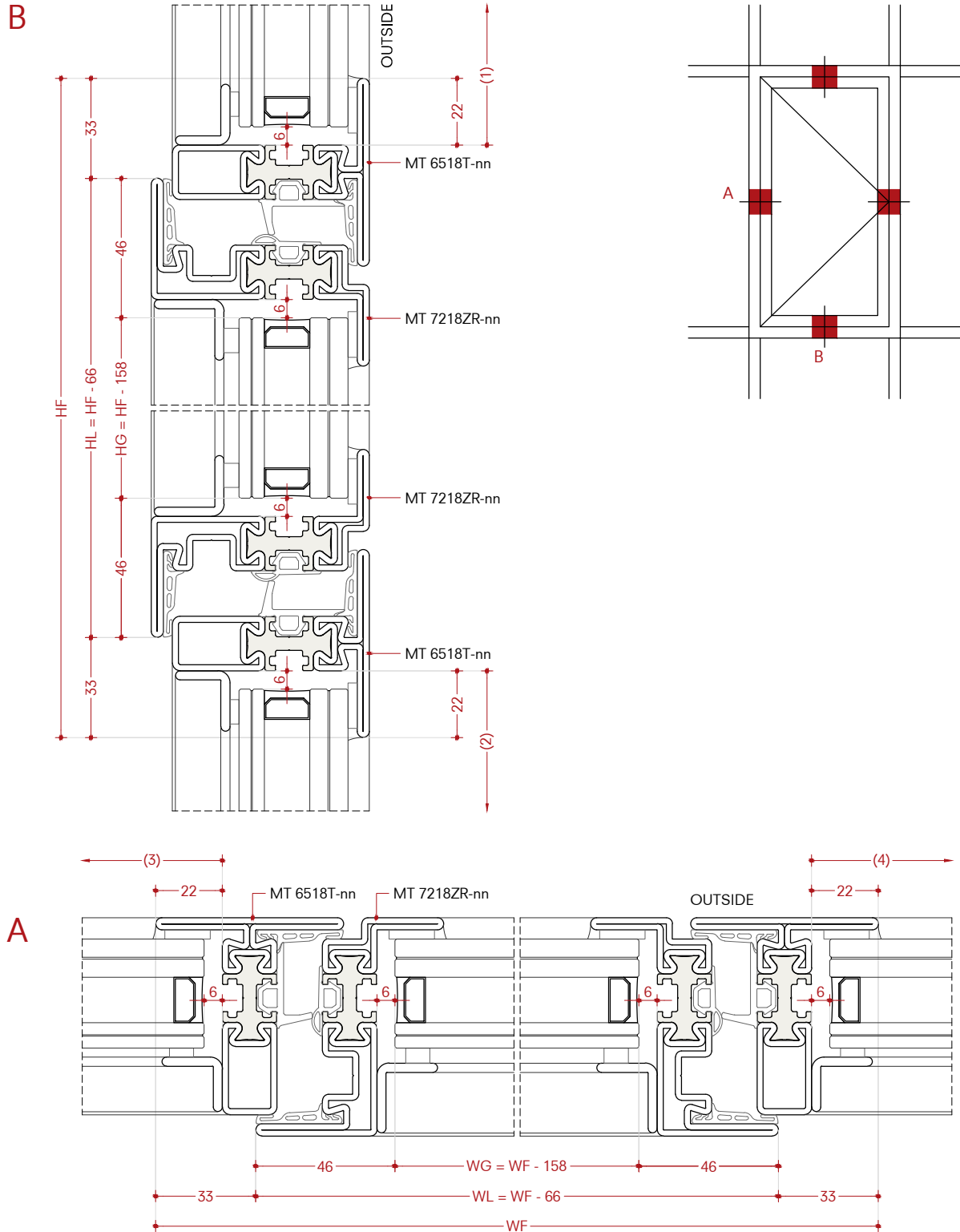
Single leaf in fixed frame  
Open in

### Zuschnitt

Flügel in Festfeld  
Nach innen öffnend

### Découpe

Vantail dans le cadre fixe  
Ouverture intérieure



- (1) Height top frame
- (2) Height bottom frame
- (3) Length left frame
- (4) Length right frame

- (1) Höhe Festfeld oben
- (2) Höhe Festfeld unten
- (3) Breite Festfeld Links
- (4) Breite Festfeld Rechts

- (1) Cadre supérieur haut
- (2) Cadre inférieur haut
- (3) Longueur du cadre gauche
- (4) Longueur du cadre droit

### Cutting length

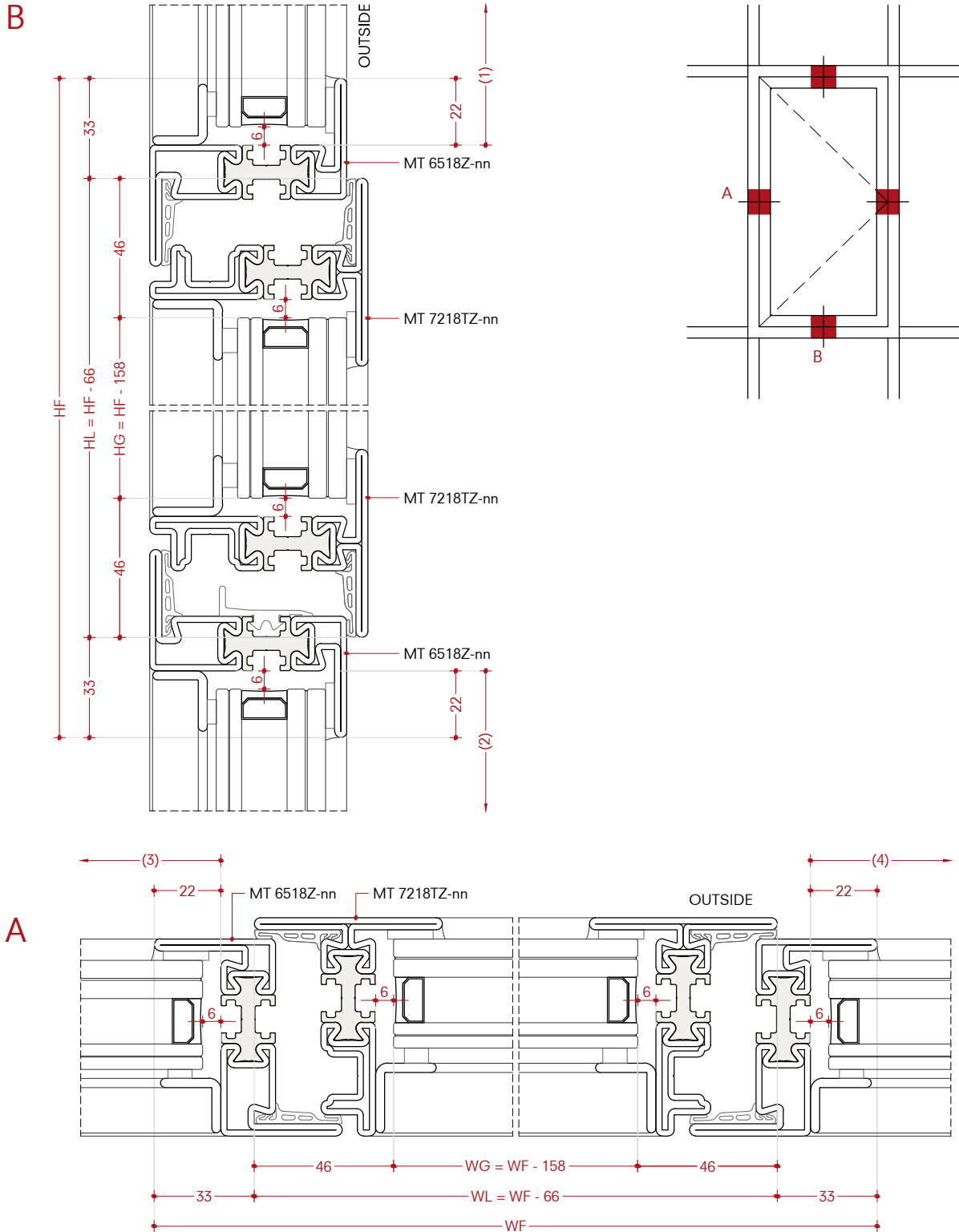
Single leaf in fixed frame  
Open out

### Zuschnitt

Flügel in Festfeld  
Nach außen öffnend

### Découpe

Vantail dans le cadre fixe  
Ouverture extérieure



(1) Height top frame  
(2) Height bottom frame  
(3) Length left frame  
(4) Length right frame

(1) Höhe Festfeld oben  
(2) Höhe Festfeld unten  
(3) Breite Festfeld Links  
(4) Breite Festfeld Rechts

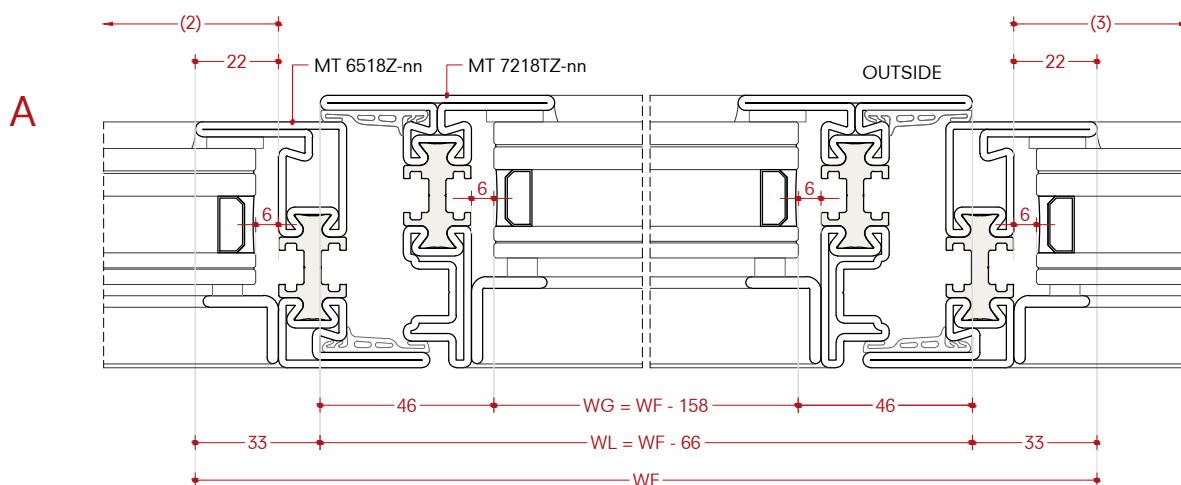
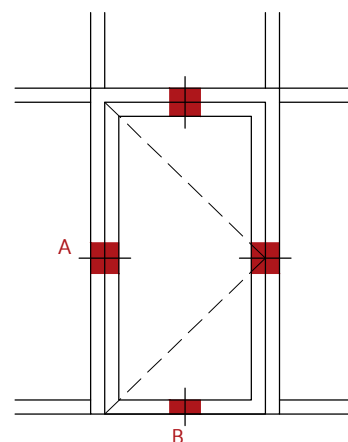
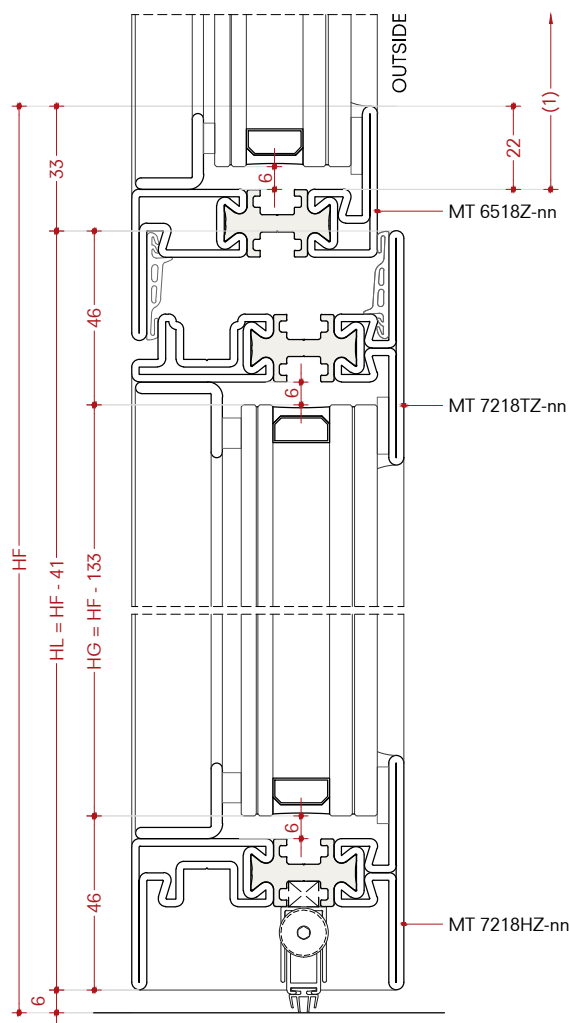
(1) Cadre supérieur haut  
(2) Cadre inférieur haut  
(3) Longueur du cadre gauche  
(4) Longueur du cadre droit



**Cutting length**  
Door in fixed frame  
Open out

**Zuschnitt**  
Tür in Festfeld  
Nach außen öffnend

**Découpe**  
Porte dans le cadre fixe  
Ouverture extérieure



(1) Height top frame  
(2) Length left frame  
(3) Length right frame

(1) Höhe Festfeld oben  
(2) Breite Festfeld Links  
(3) Breite Festfeld Rechts

(1) Cadre supérieur haut  
(2) Longueur du cadre gauche  
(3) Longueur du cadre droit

### Cutting length

Bi-folding door system  
3 leaves  
Open in

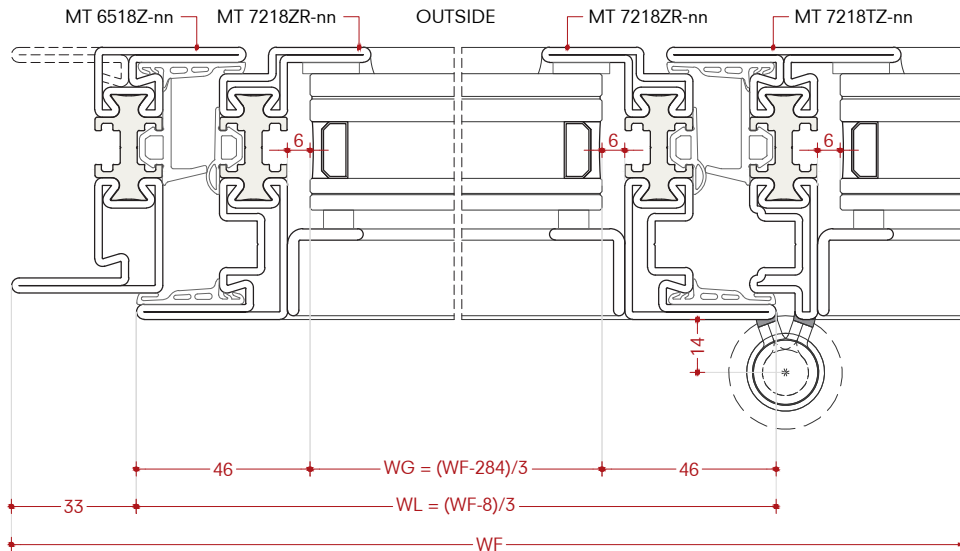
### Zuschnitt

Faltwand  
3-teilig  
Nach innen öffnend

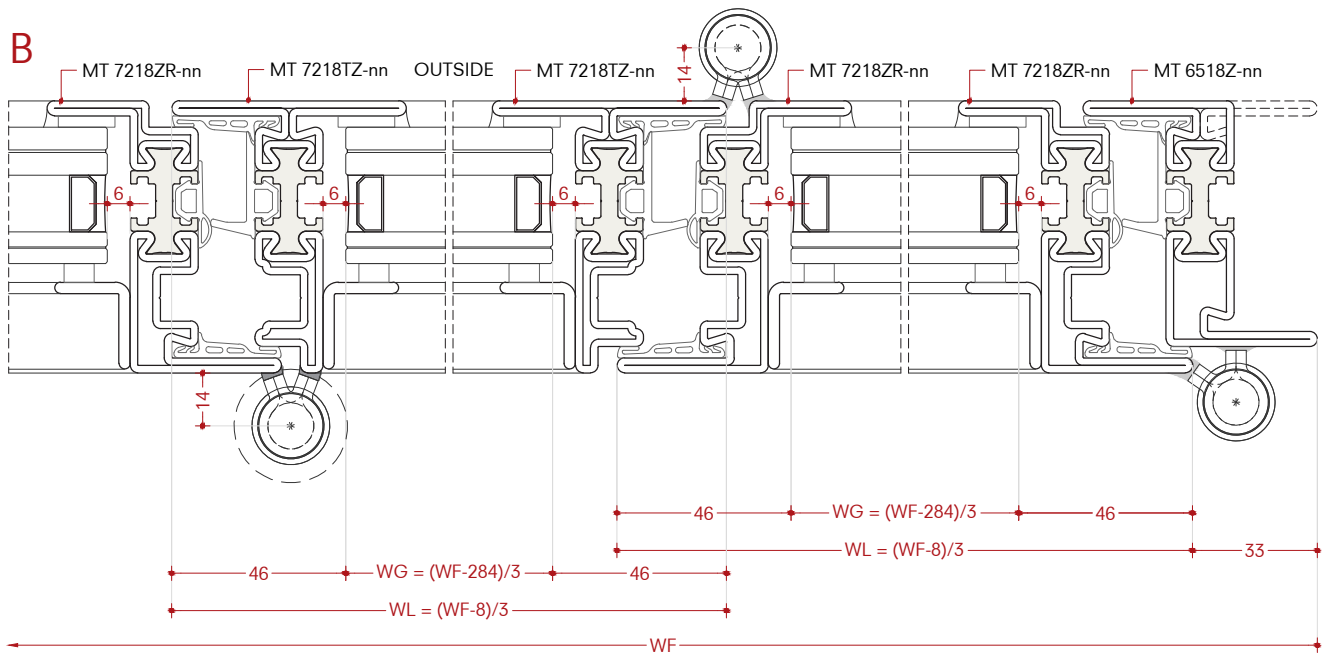
### Découpe

Système de porte accordéon  
3 vantailes  
Ouverture intérieure

**A**



**B**



### Note:

Cutting dimensions of the bi-folding door system only apply to this arrangement of profiles and hinges.

Further installation instructions can be obtained from the technical advisor.

### Anmerkung:

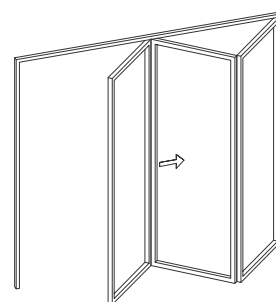
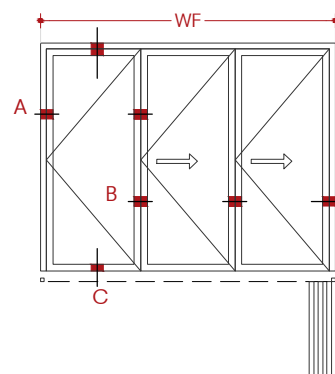
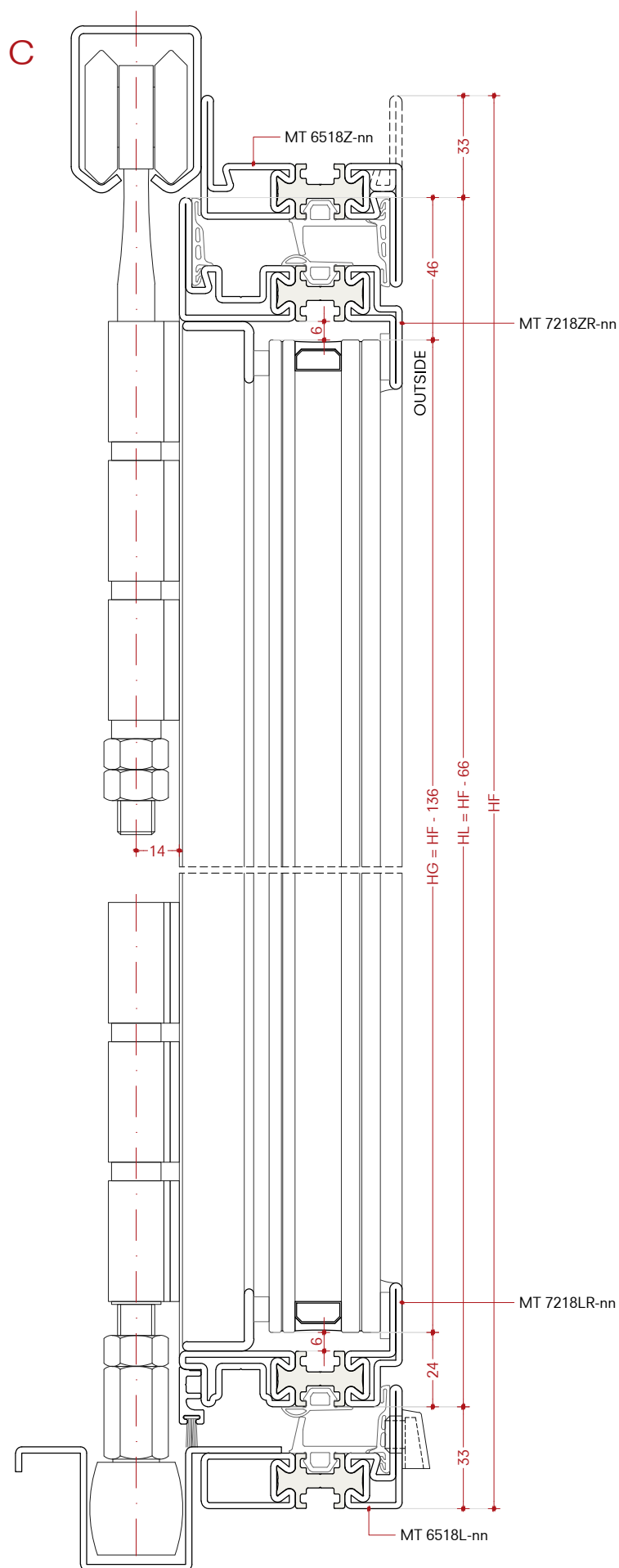
Zuschnittsmaße der Faltwand gelten nur für diese Anordnung der Profile und Bänder.

Weitere Verarbeitungshinweise sind beim technischen Berater erhältlich.

### Remarque:

Les dimensions de coupe du système de porte accordéon s'appliquent uniquement à cette disposition de profils et de paumelles.

Des instructions d'installation supplémentaires peuvent être obtenues auprès du conseiller technique.



### Cutting length

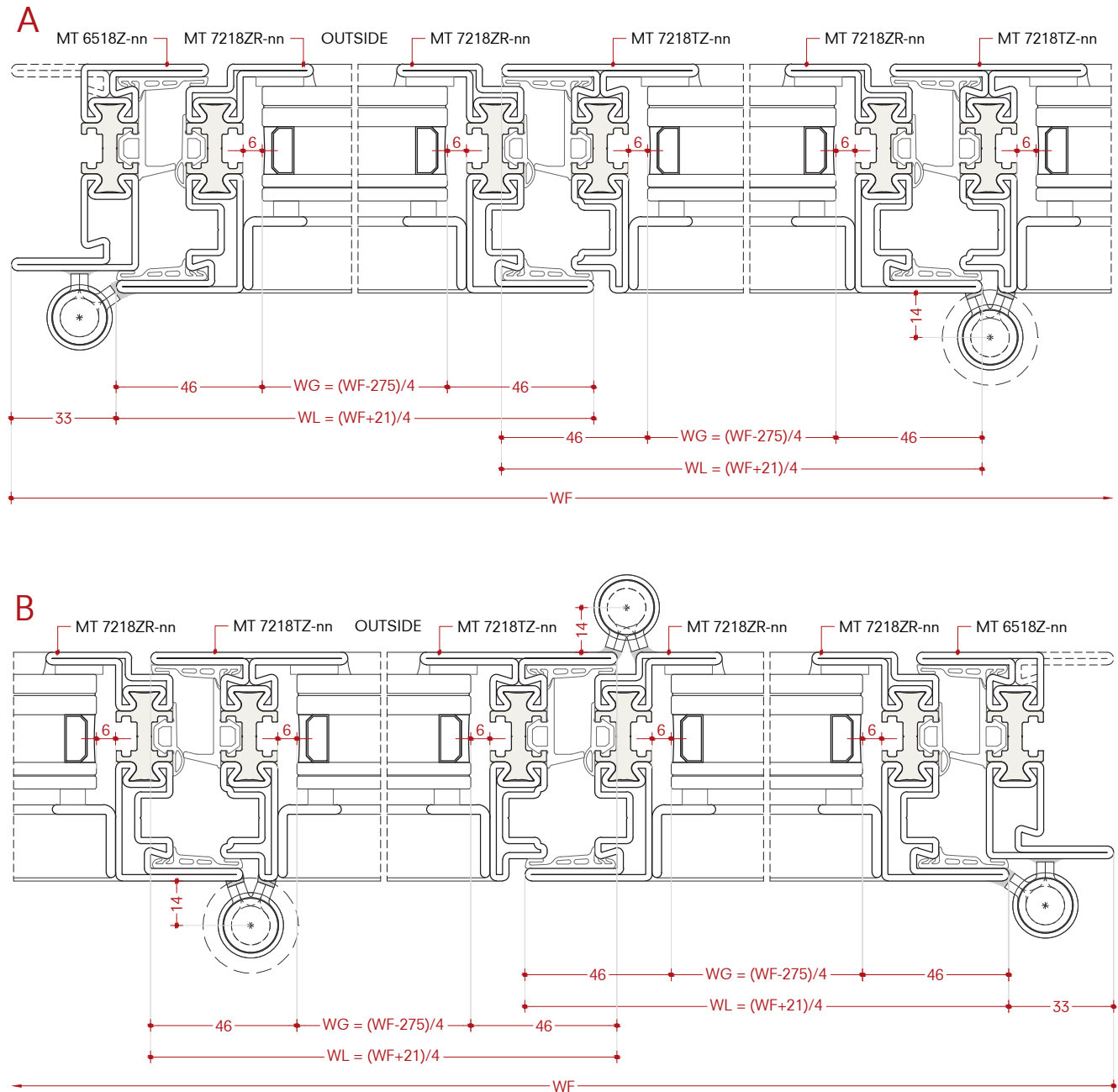
Bi-folding door system  
4 leaves (1+3 leaves)  
Open in

### Zuschnitt

Faltwand  
4-teilig (1+3 flügelig)  
Nach innen öffnend

### Découpe

Système de porte accordéon  
4 vantailes (1+3 vantailes)  
Ouverture intérieure



### Note:

Cutting dimensions of the bi-folding door system only apply to this arrangement of profiles and hinges.

Further installation instructions can be obtained from the technical advisor.

### Anmerkung:

Zuschnittsmaße der Faltwand gelten nur für diese Anordnung der Profile und Bänder.

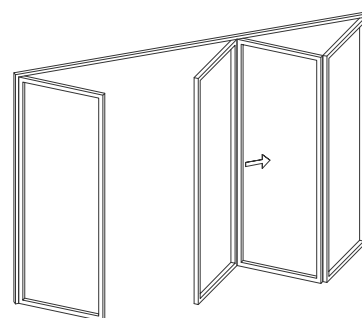
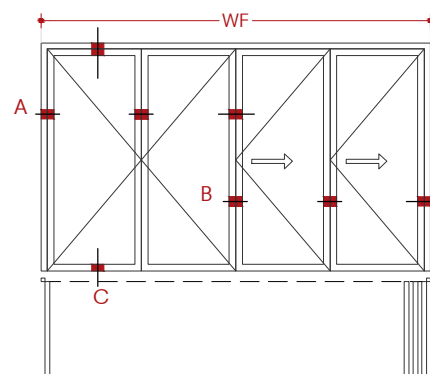
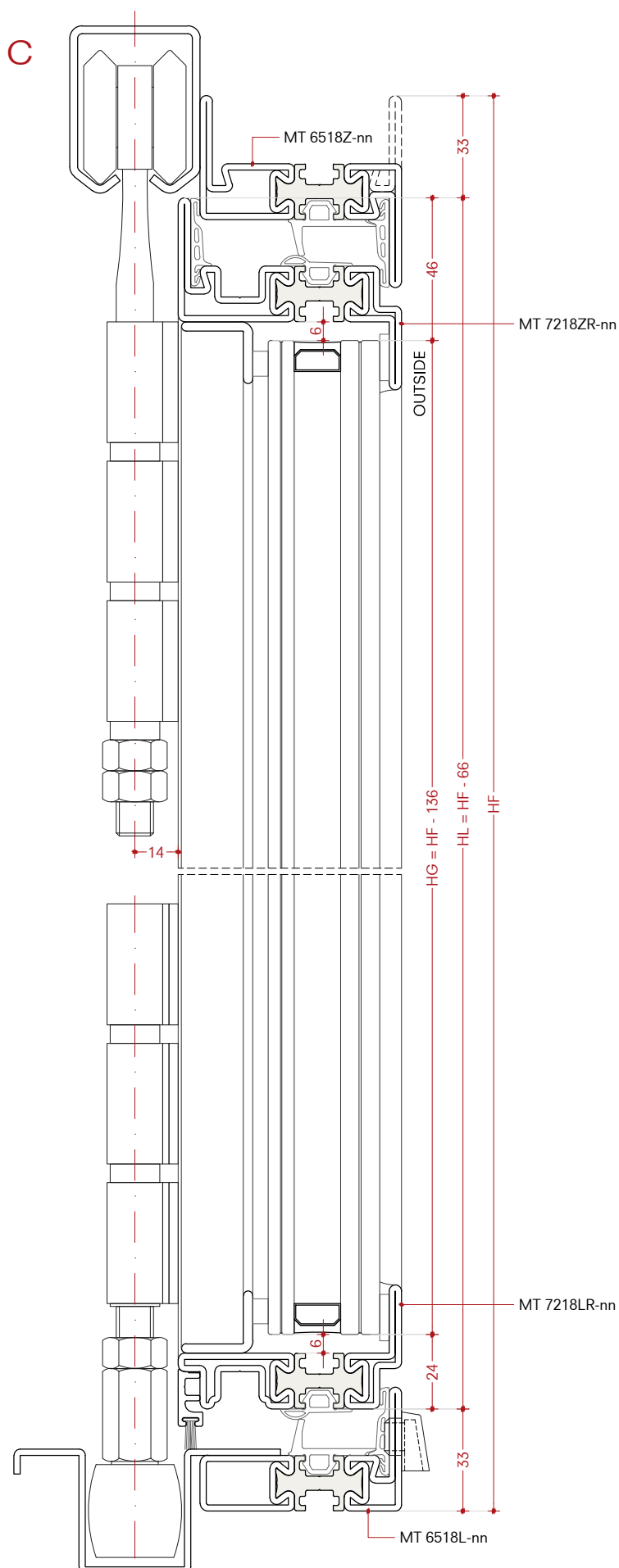
Weitere Verarbeitungshinweise sind beim technischen Berater erhältlich.

### Remarque:

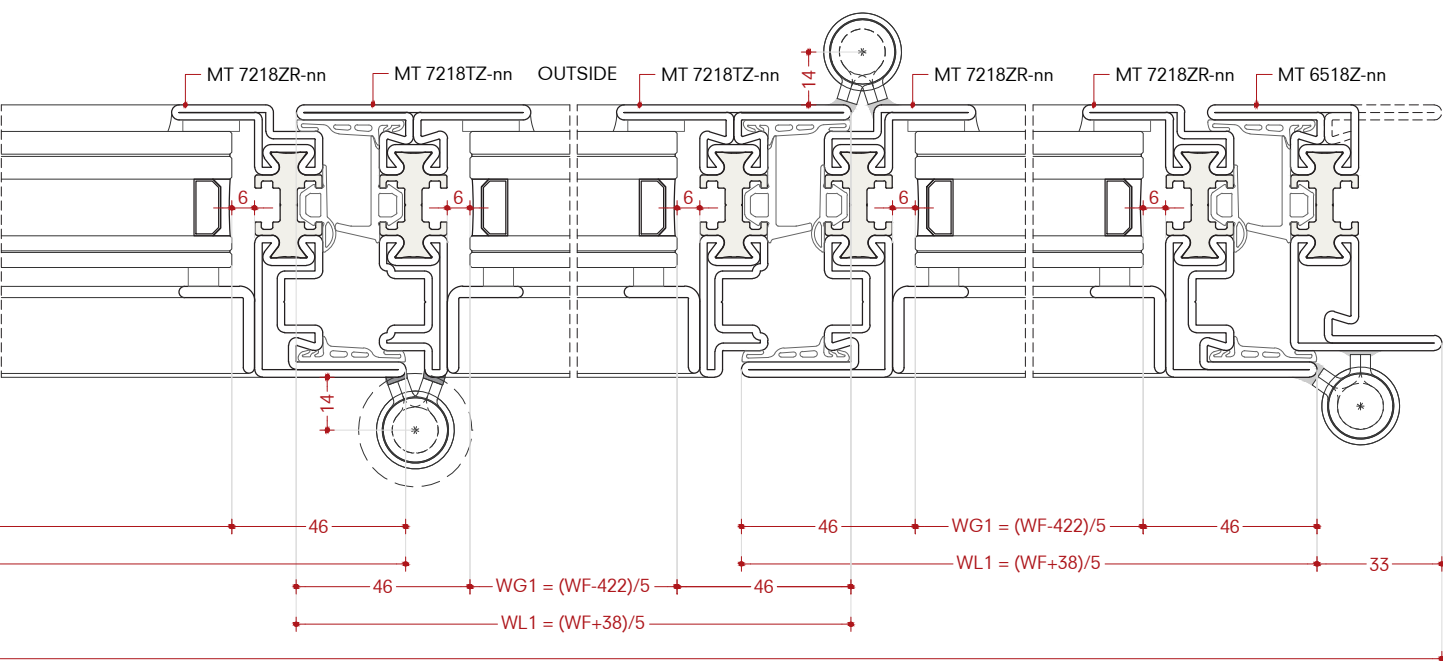
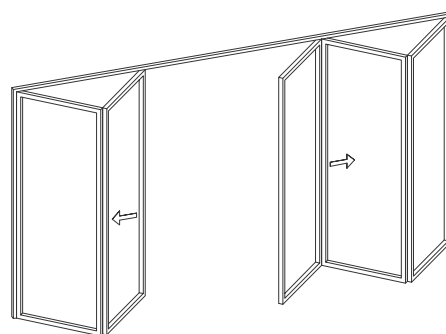
Les dimensions de coupe du système de porte accordéon s'appliquent uniquement à cette disposition de profils et de paumelles.

Des instructions d'installation supplémentaires peuvent être obtenues auprès du conseiller technique.









### Cutting length

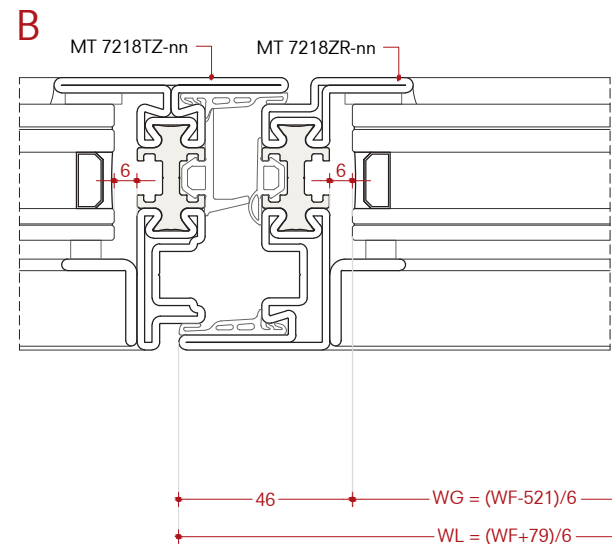
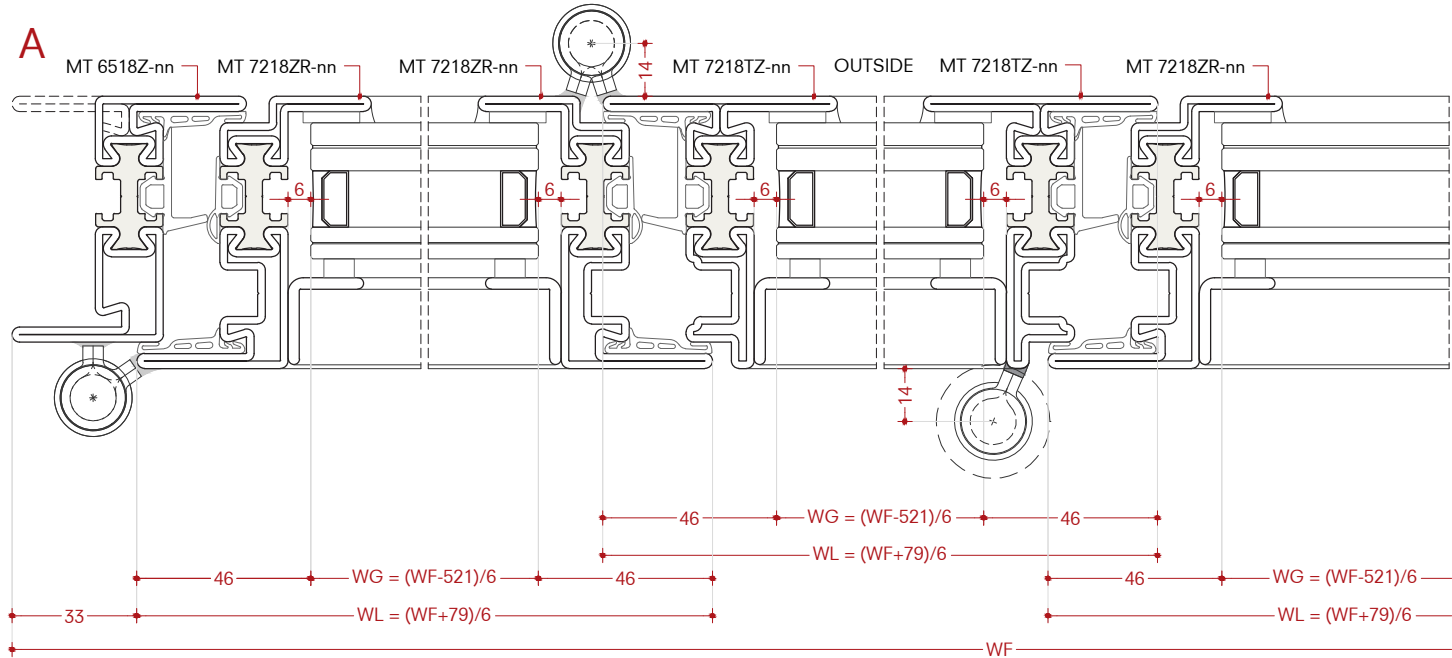
Bi-folding door system  
6 leaves (3+3 leaves)  
Open in

## Zuschnitt

Faltwand  
6-teilig (3+3 flügelig)  
Nach innen öffnend

## Découpe

Système de porte accordéon  
6 vantailes (3+3 vantailes)  
Ouverture intérieure



**Note:**

Cutting dimensions of the bi-folding door system only apply to this arrangement of profiles and hinges.

Further installation instructions can be obtained from the technical advisor.

**Anmerkung:**

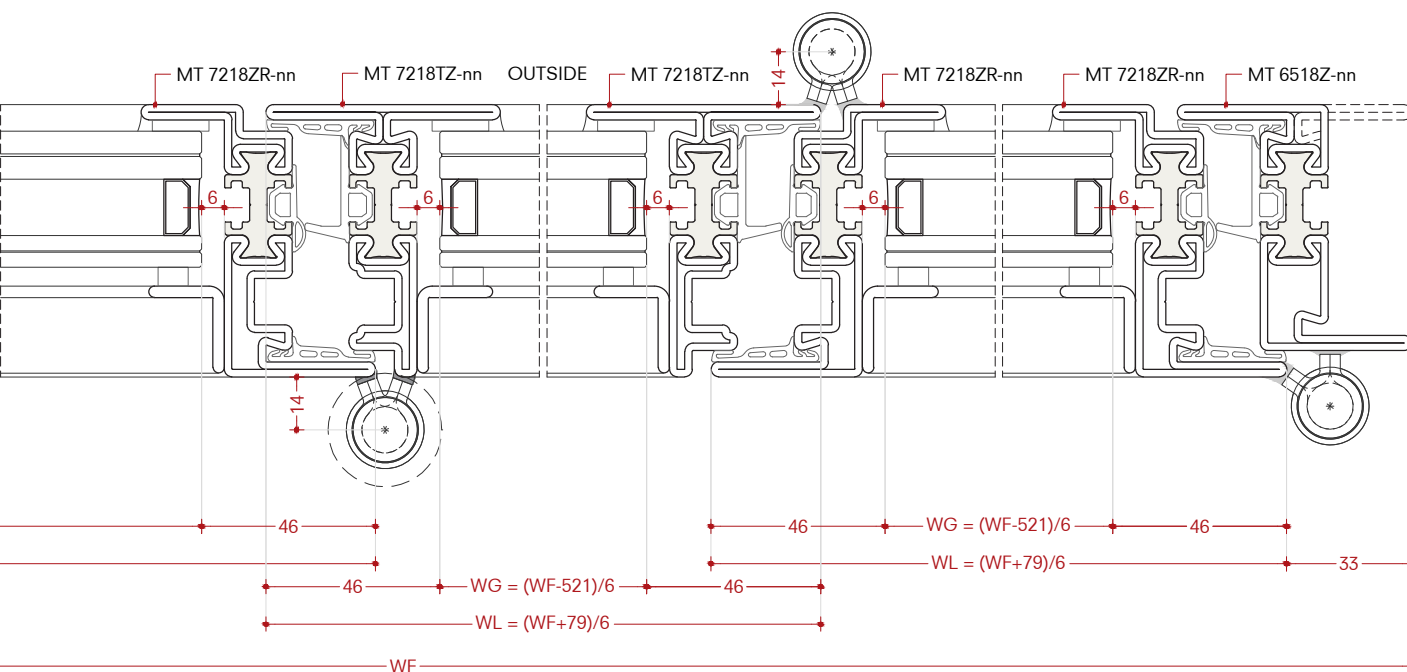
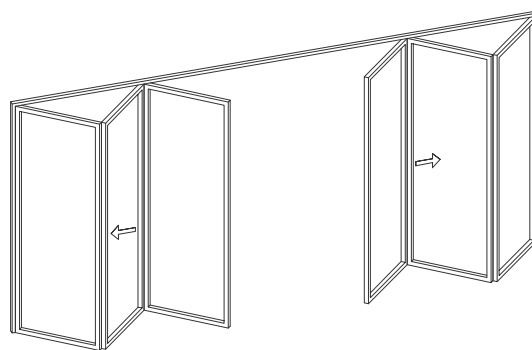
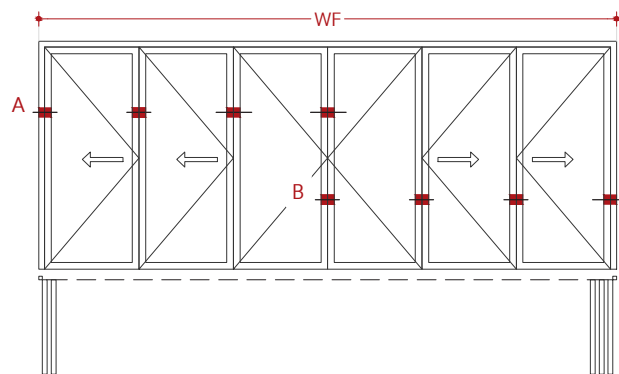
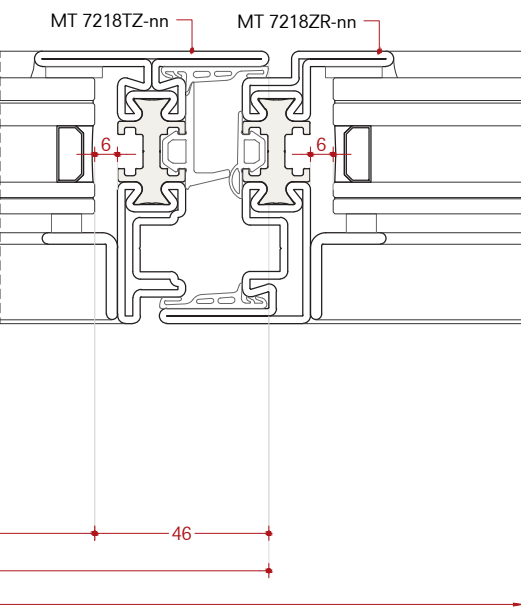
Zuschnittsmaße der faltwand gelten nur für diese Anordnung der Profile und Bänder.

Weitere Verarbeitungshinweise sind beim technischen Berater erhältlich.

**Remarque:**

Les dimensions de coupe du système de porte accordéon s'appliquent uniquement à cette disposition de profils et de paumelles.

Des instructions d'installation supplémentaires peuvent être obtenues auprès du conseiller technique.





## Welding

## Schweißen

## Soudage

5.3

### Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2  
☀ = Spot weld  
 = Welding  
CL = Cutting Length  
HF = Height Frame  
HG = Height Glass  
HL = Height Leaf  
WF = Width Frame  
WG = Width Glass  
WL = Width Leaf

### Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2  
☀ = Punktschweißung  
 = Schweißen  
CL = Zuschnitt  
HF = Höhe Rahmen  
HG = Höhe Glas  
HL = Höhe Flügel  
WF = Länge Rahmen  
WG = Länge Glas  
WL = Länge Flügel

### Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2  
☀ = Soudage par points  
 = Souder  
CL = Découpe  
HF = Hauteur dormant  
HG = Hauteur vitre  
HL = Hauteur ouvrant  
WF = Largeur dormant  
WG = Largeur vitre  
WL = Largeur ouvrant





## Welding

M65 TB profiles can be welded without taking any particular precautions, using the welding procedure according to the material to be welded:

- MAG or CMT welding for galvanized steel.
- TIG welding for stainless steel.
- MAG welding for Cor-Ten and bright steel.

We recommend using a smoke extraction system and ensuring sufficient ventilation of the room. Ensure the welding is thorough and clean.

Only M65 TB galvanized steel profiles (finishing -02) are coated with a special zinc-magnesium coating, which is suitable for welding and avoids unwanted pore formation.

The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments.

Keep minimum 3 mm distance from welding seam to polyamide web.

## Schweißen

M65 TB kann mit Schweißverfahren je nach zu schweißendem Material verwendet werden:

- Verwenden Sie für verzinkten Stahl MAG- oder CMT-Schweißen.
- Verwenden Sie für Edelstahl das WIG-Schweißen.
- Verwenden Sie für Cor-Ten- und Stahl blank das MAG-Schweißen.

Wir empfehlen beim Schweißen eine Rauchabzugsanlage zu verwenden und für eine ausreichende Raumbelüftung zu sorgen. Es sollte auf eine besonders gründliche und saubere Schweißung geachtet werden.

Nur verzinkte M65 TB Profile (Oberflächenausführungen -02) haben eine besondere Zink-Magnesium Beschichtung, die schweiß freundlich ist und unerwünschte Porenbildung unterbindet.

Die beim Schweißen von Profilen und Bänder entstehende Wärme muss mit Schweißzusätzen aus Messing, Kupfer und Aluminium abgeführt werden.

Halten Sie einen Mindestabstand von 3 mm zwischen Schweißnaht und Polyamid-Isolator ein.

## Soudage

Les profilés M65 TB peuvent être soudés sans précautions particulières utilisant le mode opératoire de soudage en fonction du matériau à souder:

- Pour l'acier galvanisé, utilisez le soudage MAG ou CMT.
- Pour l'acier inoxydable, utilisez le soudage TIG.
- Pour l'acier Cor-Ten et décapé, utilisez le soudage MAG.

Nous recommandons d'utiliser un système de désenfumage lors du soudage et d'assurer une ventilation adéquate de la pièce. Il convient de veiller à ce que le processus de soudage soit exécuté de manière particulièrement minutieuse et propre.

Seulement profils galvanisés M65 TB ( finition -02) ont un revêtement zinc-magnésium particulier réduisant les porosités.

La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium.

Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.

## Frame welding

1. Debur and bevel bar ends.
2. Assemble the frame on the welding table.
3. Check frame dimensions.
4. Check angularity.
5. Check diagonal dimensions.
6. Fix position with small welding spots.
7. Recheck diagonal dimensions.
8. Carry out the welding alternating from the inside to the outside.
9. Recheck diagonal dimensions.
10. Grind the corners, creating a flat and smooth surface.

## Schweißen der Rahmen

1. Profilenden entgraten und anfasen.
2. Rahmen auf dem Schweißtisch zusammensetzen.
3. Rahmenabmessungen überprüfen.
4. Winkligkeit überprüfen.
5. Diagonalen überprüfen.
6. Rahmenposition mit kleinen Schweißpunkten fixieren.
7. Diagonale erneut kontrollieren.
8. Schweißung von der Innenseite zur Außenseite abwechselnd durchführen.
9. Diagonale erneut kontrollieren.
10. Schweißnähte auf Ecken planschleifen.

## Soudage des châssis

1. Ébavurer et biseauter l'embout des profilés.
2. Assembler le châssis sur la table de soudure.
3. Contrôler les dimensions du châssis.
4. Contrôler les angles.
5. Contrôler les diagonales.
6. Fixer la position du châssis avec de petits points de soudure.
7. Vérifier à nouveau les diagonales.
8. Exécuter le soudage en alternance, en commençant du côté intérieur pour aller vers l'extérieur.
9. Vérifier à nouveau les diagonales.
10. Mouler les soudures des coins.

## Welding thermal break profiles made of zinc-magnesium steel, stainless steel, Cor-Ten steel.

The best results were achieved using the following welding procedures:

### MAG (metal-arc active gas)

Inert gas: CAR 18 (18% CO<sub>2</sub> and 82% Argon sec. EN 439 M21)

Welding rod for galvanized steel profiles (-02):

- DT-ZiRo, Ø0.8 mm (Dratec).
- TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Preparation of profile cut: bevel bar ends (ca. 1.5-2 mm x 45°). Do not bevel the last 5 mm of the outermost point in order to avoid burning away the sharp edge. Spot-weld the inner and outer corners, then draw a weld seam from the inside outward. When welding galvanized steel, tiny weld pores can occur occasionally. In the case that these pores need to be sealed for aesthetic reasons, we do not recommend secondary TIG welding. Instead, filling should be done using the TIG procedure or a temperature-resistant polyester putty (200°C). Excessive welding temperatures can be avoided by leaning special copper, brass or aluminium plates in the areas surrounding the welding area.

### MAG (metal-arc active gas)

Inert gas: CAR 18 (18% CO<sub>2</sub> and 82% Argon sec. EN 439 M21)

Welding rod for bright steel profiles (-12):

- NI-CO, Ø0.8 mm - Arroweld.
- ECO BRONZ, Ø0.8 mm - Arroweld (C: 0.070; Si: 0.850; Mn: 1.450; P: <0.020; S: <0.020).

Preparation of profile cut: bevel bar ends (ca. 1.5-2 mm x 45°). Do not bevel the last 5 mm of the outermost point in order to avoid burning away the sharp edge. Spot-weld the inner and outer corners, then draw a weld seam from the inside outward. Excessive welding temperatures can be avoided by leaning special copper, brass or aluminium plates in the areas surrounding the welding area.

### MAG (metal-arc active gas)

Inert gas: CAR 18 (18% CO<sub>2</sub> and 82% Argon sec. EN 439 M21)

Welding rod for Cor-Ten steel profiles (-07):

- CORTEN, Ø0.8 mm - Arroweld (C: 0.080; Si: 0.800; Mn: 1.500; Cr: 0.300; Ni: 0.400; Cu: 0.500).

Preparation of profile cut: bevel bar ends (ca. 1.5-2 mm x 45°). Do not bevel the last 5 mm of the outermost point in order to avoid burning away the sharp edge. Spot-weld the inner and outer corners, then draw a weld seam from the inside outward. Excessive welding temperatures can be avoided by leaning special copper, brass or aluminium plates in the areas surrounding the welding area.

## Verschweißen von thermisch getrennten profilen aus Zink-Magnesium Stahl, Edelstahl, Cor-Ten-Stahl.

Mit folgenden Schweißverfahren wurden die besten Ergebnisse erzielt:

### MAG (metal-arc active gas)

Schutzgas: CAR 18 (18% CO<sub>2</sub> e 82% Argon sec. EN 439 M21)

Schweißdraht für Stahl bandverzinkt Profile (-02):

- DT-ZiRo, Ø0.8 mm (Dratec).
- TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Vorbereitung der Profilausschnitte: Stabenden anfasen (ca. 1.5-2 mm x 45°). Die letzten 5 mm der außen liegenden Spitze nicht anfasen, um ein Wegbrennen der scharfen Kanten zu vermeiden. Die außen und innen liegende Ecken anpunkten, dann von innen nach außen Schweißnaht ziehen. Beim Verschweißen von verzinktem Stahl, können gelegentlich winzige Schweißporen auftreten. Falls diese Poren aus Gründen der Ästhetik geschlossen werden sollen, empfehlen wie diese nicht durch ein Nachschweißen mit MAG zu füllen sondern mit dem TIG verfahren oder mit einem temperaturbeständigen Polyester-Spachtel (200°C) zu verschließen. Übermäßige Schweißtemperaturen können vermieden werden, indem spezielle Kupfer-, Messing- oder Aluminiumplatten in die Umgebung des Schweißbereichs gelehnt werden.

### MAG (metal-arc active gas)

Schutzgas: CAR 18 (18% CO<sub>2</sub> e 82% Argon sec. EN 439 M21)

Schweißdraht für Stahl blank Profile (-12):

- NI-CO, Ø0.8 mm - Arroweld.
- ECO BRONZ, Ø0.8 mm - Arroweld (C: 0.070; Si: 0.850; Mn: 1.450; P: <0.020; S: <0.020).

Vorbereitung der Profilausschnitte: Stabenden anfasen (ca. 1.5-2 mm x 45°). Die letzten 5 mm der außen liegenden Spitze nicht anfasen, um ein Wegbrennen der scharfen Kanten zu vermeiden. Die außen und innen liegende Ecken anpunkten, dann von innen nach außen Schweißnaht ziehen. Übermäßige Schweißtemperaturen können vermieden werden, indem spezielle Kupfer-, Messing- oder Aluminiumplatten in die Umgebung des Schweißbereichs gelehnt werden.

### MAG (metal-arc active gas)

Schutzgas: CAR 18 (18% CO<sub>2</sub> e 82% Argon sec. EN 439 M21)

Schweißdraht für Cor-Ten-Stahl Profile (-07):

- CORTEN, Ø0.8 mm - Arroweld (C: 0.080; Si: 0.800; Mn: 1.500; Cr: 0.300; Ni: 0.400; Cu: 0.500).

Vorbereitung der Profilausschnitte: Stabenden anfasen (ca. 1.5-2 mm x 45°). Die letzten 5 mm der außen liegenden Spitze nicht anfasen, um ein Wegbrennen der scharfen Kanten zu vermeiden. Die außen und innen liegende Ecken anpunkten, dann von innen nach außen Schweißnaht ziehen. Übermäßige Schweißtemperaturen können vermieden werden, indem spezielle Kupfer-, Messing- oder Aluminiumplatten in die Umgebung des Schweißbereichs gelehnt werden.

## Soudage des profilés rupture thermique en acier à revêtement zinc-magnésium, inoxydable, Cor-ten.

Les procédés de soudage suivants ont permis d'obtenir les meilleurs résultats:

### MAG (metal-arc active gas)

Protection gazeuse: CAR 18 (18% de CO<sub>2</sub> et 82% d'argon selon EN 439 M21). Fil à souder pour profilés en acier galvanisé (-02):

- DT-ZiRo, Ø0.8 mm (Dratec).
- TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Préparation de la découpe de profilé: biseauter les extrémités de barre (env. 1.5-2 mm x 45°). Ne pas biseauter les 5 derniers millimètres de l'extrémité externe afin d'éviter de détruire l'arête vive. Souder par point les coins intérieurs et extérieurs puis appliquer le joint de soudure de l'intérieur vers l'extérieur. Lors du soudage d'acier galvanisé, il peut se produire à l'occasion de minuscules porosités. Si les porosités sont à exclure pour des raisons esthétiques, nous recommandons de les combler par reprise du soudage non pas selon le procédé MAG, mais selon le procédé TIG ou avec une spatule en polyester thermorésistante (200°C). Des températures de soudage excessives peuvent être évitées en plaçant des plaques spéciales en cuivre, en laiton ou en aluminium dans les zones entourant la zone de soudage.

### MAG (metal-arc active gas)

Protection gazeuse: CAR 18 (18% de CO<sub>2</sub> et 82% d'argon selon EN 439 M21). Fil à souder pour profilés en acier décapé (-12):

- NI-CO, Ø0.8 mm - Arroweld.
- ECO BRONZ, Ø0.8 mm - Arroweld (C: 0.070; Si: 0.850; Mn: 1.450; P: <0.020; S: <0.020).

Préparation de la découpe de profilé: biseauter les extrémités de barre (env. 1.5-2 mm x 45°). Ne pas biseauter les 5 derniers millimètres de l'extrémité externe afin d'éviter de détruire l'arête vive. Souder par point les coins intérieurs et extérieurs puis appliquer le joint de soudure de l'intérieur vers l'extérieur. Des températures de soudage excessives peuvent être évitées en plaçant des plaques spéciales en cuivre, en laiton ou en aluminium dans les zones entourant la zone de soudage.

### MAG (metal-arc active gas)

Protection gazeuse: CAR 18 (18% de CO<sub>2</sub> et 82% d'argon selon EN 439 M21). Fil à souder pour profilés en acier Cor-ten (-07):

- CORTEN, Ø0.8 mm - Arroweld (C: 0.080; Si: 0.800; Mn: 1.500; Cr: 0.300; Ni: 0.400; Cu: 0.500).

Préparation de la découpe de profilé: biseauter les extrémités de barre (env. 1.5-2 mm x 45°). Ne pas biseauter les 5 derniers millimètres de l'extrémité externe afin d'éviter de détruire l'arête vive. Souder par point les coins intérieurs et extérieurs puis appliquer le joint de soudure de l'intérieur vers l'extérieur. Des températures de soudage excessives peuvent être évitées en plaçant des plaques spéciales en cuivre, en laiton ou en aluminium dans les zones entourant la zone de soudage.

## CMT (cold metal transfer)

Type of gas: 100% Argon

Welding rod for galvanized steel profiles (-02):

- CuSi<sub>3</sub>, Ø0.8 mm - Dratec (Cu: Basis; Sn: 0.100; Si: 3.000; Mn: 1.000; Zn: 0.100; Fe: 0.070).
- DT-ZiRo, Ø0.8 mm - Dratec. TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Preparation of profile cut: bevel bar ends (ca. 1.5-2 mm x 45°). Do not bevel the last 5 mm of the outermost point in order to avoid burning away the sharp edge. Spot-weld the inner and outer corners, then draw a weld seam from the inside outward. The CMT welding procedure is well suited to welding thermal break steel profiles made of galvanized steel. Assuming the equipment (Fronius) is properly adjusted, neither splatter nor pores occur. One advantage of the CuSi<sub>3</sub> welding rod is that weld seams can be ground flat in a significantly shorter amount of time. This kind of rod also proves especially advantageous when dealing with stepped flanges. The mechanical resistance of CuSi<sub>3</sub> filling material is lower than that of DT-ZiRo/TS Zn Al, which means that it should not be used with very large casement windows or doors. The resistance of CuSi<sub>3</sub> corners is roughly comparable to welded architectural bronze or brass windows. Smaller and medium size window leaves can be welded with CuSi<sub>3</sub>. However, steel hinges should be welded only with DT-ZiRo/TS Zn Al filling material. Excessive welding temperatures can be avoided by leaning special copper, brass or aluminium plates in the areas surrounding the welding area.

## TIG (tungsten inert gas)

Type of gas: 100% Argon

Welding rod for stainless steel profiles (-05):

- stainless steel bars AISI 316L, Ø1.6mm

Preparation of profile cut: bevel bar ends (ca. 1.5 mm x 45°). Do not bevel the last 5 mm of the outermost point in order to avoid burning away the sharp edge. Spot-weld the inner and outer corners, then draw a weld seam from the inside outward. Excessive welding temperatures can be avoided by leaning special copper, brass or aluminium plates in the areas surrounding the welding area.

## CMT (cold metal transfer)

Schutzgas: 100% Argon

Schweißdraht für Stahl bandverzinkt Profile (-02):

- CuSi<sub>3</sub>, Ø0.8 mm - Dratec (Cu: Basis; Sn: 0.100; Si: 3.000; Mn: 1.000; Zn: 0.100; Fe: 0.070).
- DT-ZiRo, Ø0.8 mm - Dratec. TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Vorbereitung der Profilausschnitte: Stabenden anfasen (ca. 1.5-2 mm x 45°). Die letzten 5 mm der außen liegenden Spitze nicht anfasen, um ein Wegbrennen der scharfen Kanten zu vermeiden. Die außen und innen liegende Ecken anpunkten, dann von innen nach außen Schweißnaht ziehen. Das CMT Schweißverfahren eignet sich sehr gut zum Verschweißen von thermisch getrennten Stahlprofilen aus verzinktem Stahl. Bei korrekter Einstellung der Geräte (Fronius) entstehen weder Spritzer noch Poren. Der Schweißdraht CuSi<sub>3</sub> hat den Vorteil, dass sich die Schweißnähte mit einem wesentlich geringeren Zeitaufwand plan schleifen lassen. Besonders vorteilhaft erweist sich dieser weichere Draht bei stufenförmigen Flanschen. Der mechanische Kraftschluss des CuSi<sub>3</sub> Füllstoffs ist im Vergleich zum DT-ZiRo/TS Zn Al Füllstoff geringer, so dass dieser nicht bei sehr großen Fenster- oder Türflügeln verwendet werden soll. Der Kraftschluss der Ecken entspricht in etwa dem von geschweißten Baubronze bzw. Messing Fenstern. Kleinere und mittelgroße Fensterflügel sind bedenkenlos mit CuSi<sub>3</sub> Draht verschweißbar. Stahl Bänder sollten hingegen nur mit DT-ZiRo/TS Zn Al Füllstoff verschweißt werden.

## TIG (tungsten inert gas)

Schutzgas: 100% Argon

Schweißdraht für Edelstahl Profile (-05):

- Edelstahl Riegel AISI 316L, Ø1.6mm

Vorbereitung der Profilausschnitte: Stabenden anfasen (ca. 1.5 mm x 45°). Die letzten 5 mm der außen liegenden Spitze nicht anfasen, um ein Wegbrennen der scharfen Kanten zu vermeiden. Die außen und innen liegende Ecken anpunkten, dann von innen nach außen Schweißnaht ziehen. Übermäßige Schweißtemperaturen können vermieden werden, indem spezielle Kupfer-, Messing- oder Aluminiumplatten in die Umgebung des Schweißbereichs gelehnt werden.

## CMT (process de soudage à froid)

Protection gazeuse: 100% Argon

Fil à souder pour profilés en acier galvanisé (-02):

- CuSi<sub>3</sub>, Ø0.8 mm - Dratec (Cu: Basis; Sn: 0.100; Si: 3.000; Mn: 1.000; Zn: 0.100; Fe: 0.070).
- DT-ZiRo, Ø0.8 mm - Dratec. TS Zn Al, Ø0.8 mm - Arroweld (C: 0.060; Si: 0.500; Mn: 1.100; Ti: 0.100; Zr: 0.090; Al 0.100).

Préparation de la découpe de profilé: biseauter les extrémités de barre (env. 1.5-2 mm x 45°). Ne pas biseauter les 5 derniers millimètres de l'extrémité externe afin d'éviter de détruire l'arête vive.

Souder par point les coins intérieurs et extérieurs puis appliquer le joint de soudure de l'intérieur vers l'extérieur.

Le process de soudage CMT est très bien adapté à la soudure des profilés séparés thermiquement en acier galvanisé. Si les appareils (Fronius) sont correctement réglés, il n'y a ni projections ni porosités. Le fil à souder CuSi<sub>3</sub> a l'avantage de permettre de rectifier les soudures nettement plus rapidement. Ce fil plus souple se révèle particulièrement avantageux pour les ailes de recouvrement en gradins. L'adhérence mécanique de l'agent de charge CuSi<sub>3</sub> est inférieure à celle de DT-ZiRo/TS Zn Al, de sorte que celui-ci ne doit pas être utilisé pour les fenêtres à vantaux ou les portes très grandes. L'adhérence des coins correspond approximativement à celle des fenêtres soudées en bronze architectural ou en laiton. Les vantaux de petite taille ou de taille moyenne peuvent être soudés sans problème avec du fil CuSi<sub>3</sub>. Les charnières en acier ne doivent en revanche être soudées qu'avec l'agent de charge DT-ZiRo/TS Zn Al.

## TIG (tungsten inert gas)

Protection gazeuse: 100% Argon

Fil à souder pour profilés en acier inoxydable (-05):

- barres en acier inoxydable AISI 316L, Ø1.6mm

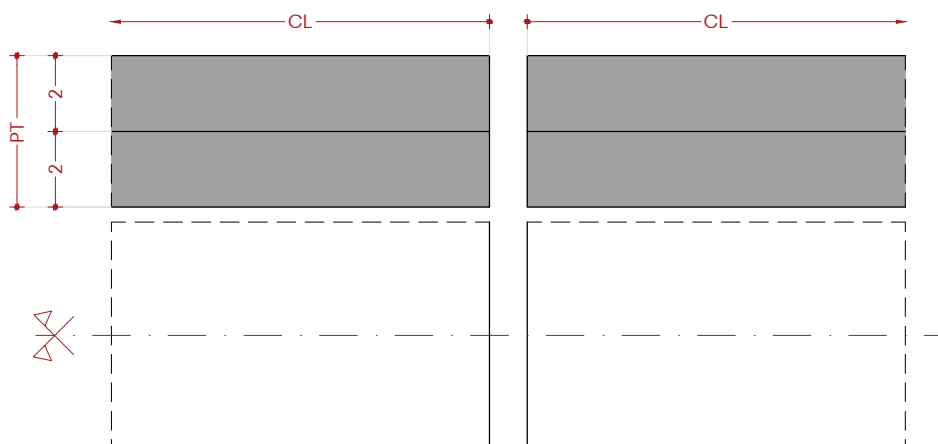
Préparation de la découpe de profilé: biseauter les extrémités de barre (env. 1.5 mm x 45°). Ne pas biseauter les 5 derniers millimètres de l'extrémité externe afin d'éviter de détruire l'arête vive.

Souder par point les coins intérieurs et extérieurs puis appliquer le joint de soudure de l'intérieur vers l'extérieur. Des températures de soudage excessives peuvent être évitées en plaçant des plaques spéciales en cuivre, en laiton ou en aluminium dans les zones entourant la zone de soudage.

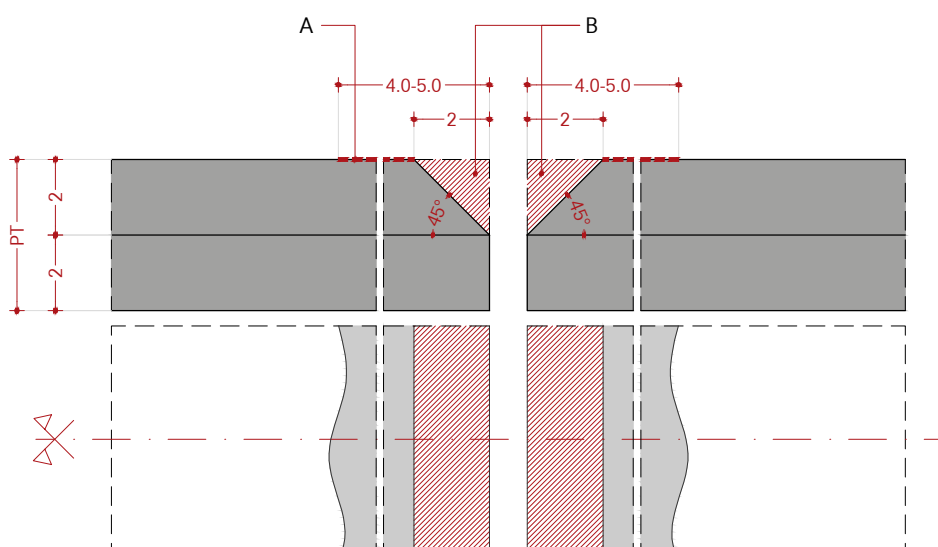
## WELDING INSTRUCTIONS

## SCHWEISSEMPFEHLUNG

## INSTRUCTIONS DE SOUDAGE

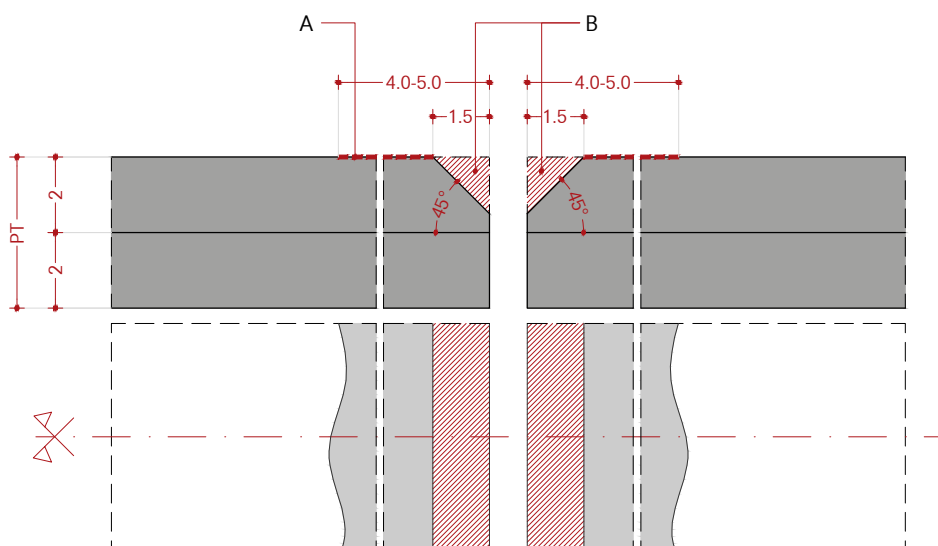


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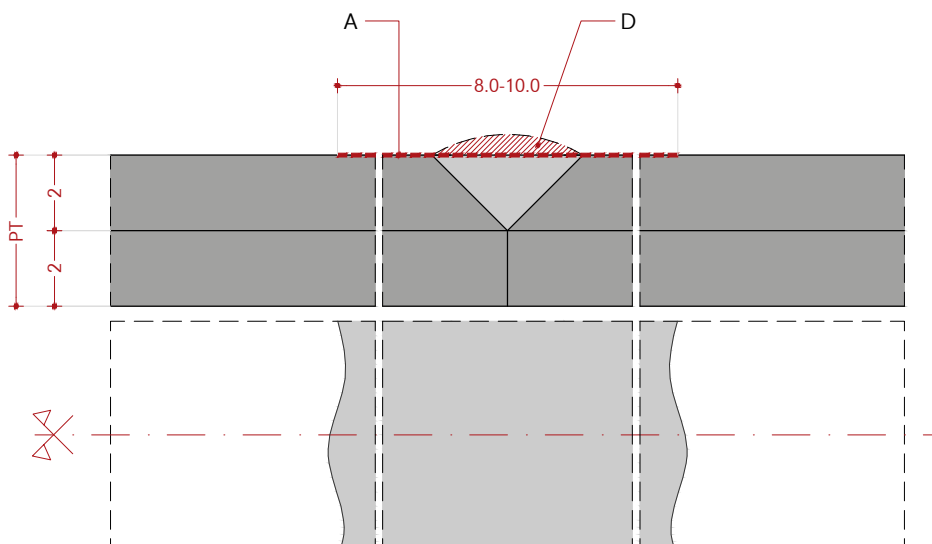
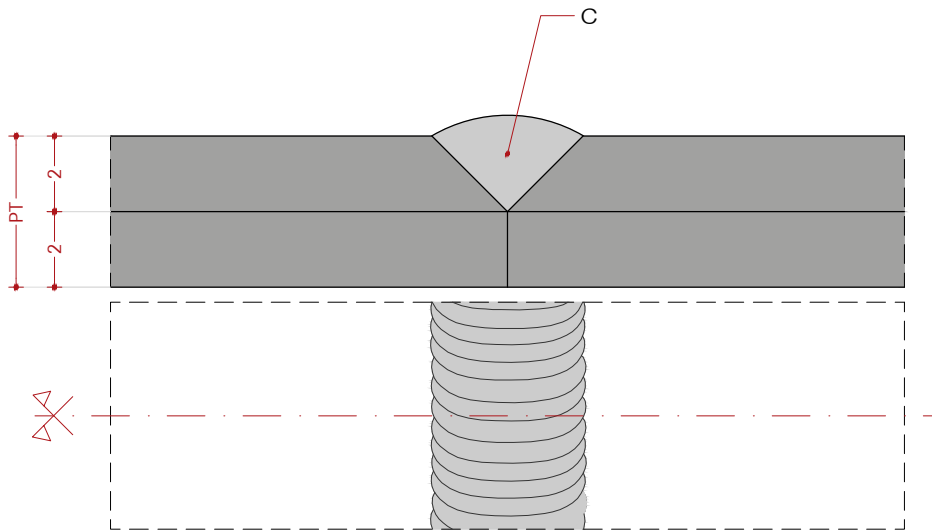
2-A

Only for galvanized steel  
(-02) profiles.  
Nur für Stahl bandverzinkt (-02)  
Profile.  
Seulement pour les profilés en  
acier galvanisé (-02).



2-B

Only for stainless steel  
(-05) profiles.  
Nur für Edelstahl  
(-05) Profile.  
Seulement pour les profilés en  
acier inoxydable (-05).



PT = Profile thickness

- A) Remove zinc coating approx (4.0-5.0 mm) next to welding seam.
- B) Chamfer
- C) Welding
- D) Grind excess part

PT = Wandungsdicke

- A) Bandverzinkung entfernen ca (4.0-5.0 mm) neben schweißnaht.
- B) Anfasung
- C) Schweißen
- D) überschüssiges Teil schmirgeln

PT = Epaisseur de la tôle d'acier

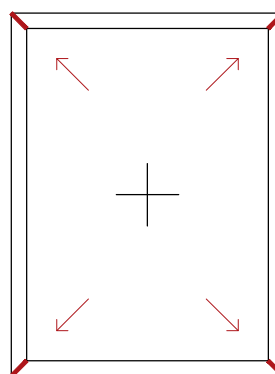
- A) Lisser la surface proche coupe (4.0-5.0 mm).
- B) Chanfreiner
- C) Soudure
- D) Émeriser la partie excédentaire

# **MT 6518L-nn / MT 6518L-nn**

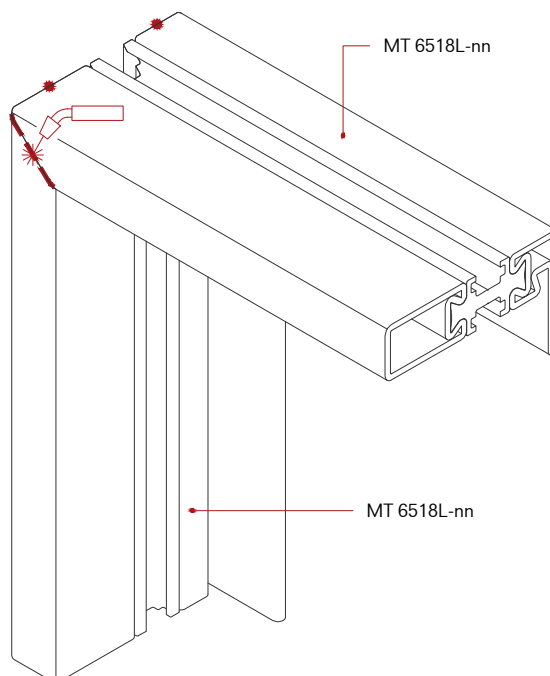
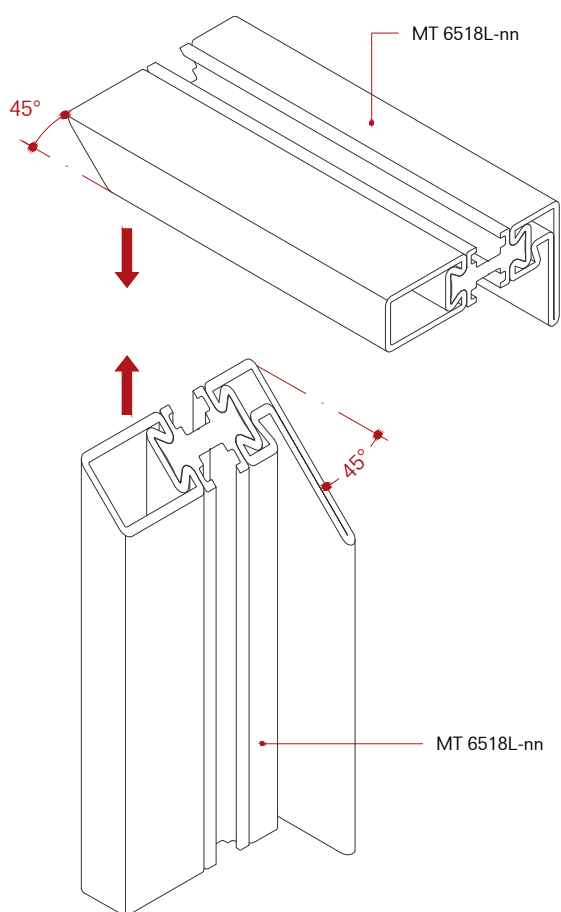
Fixed partition

Festverglasung

Fenêtre fixe



Internal view  
Ansicht von innen  
Vue intérieure

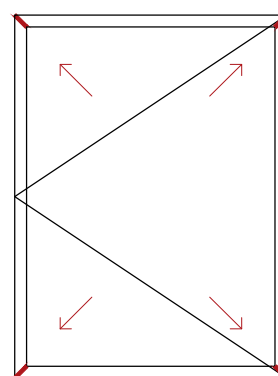


### MT 7218ZR-nn / MT 7218ZR-nn

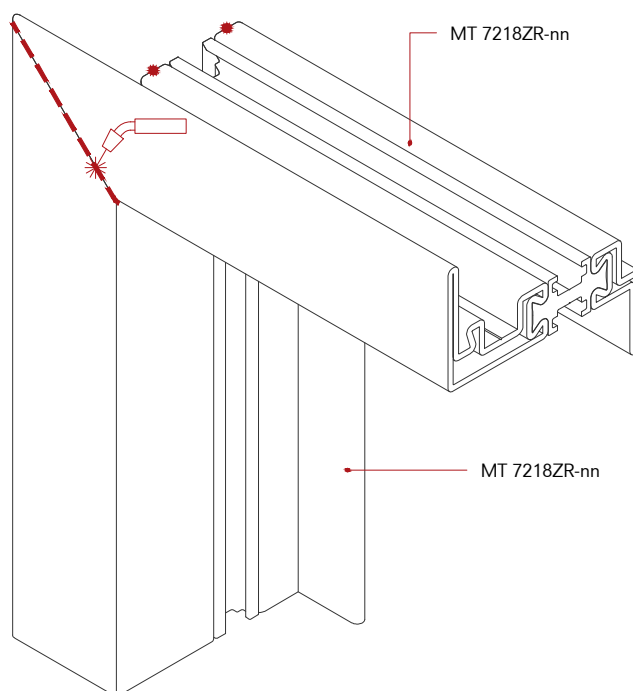
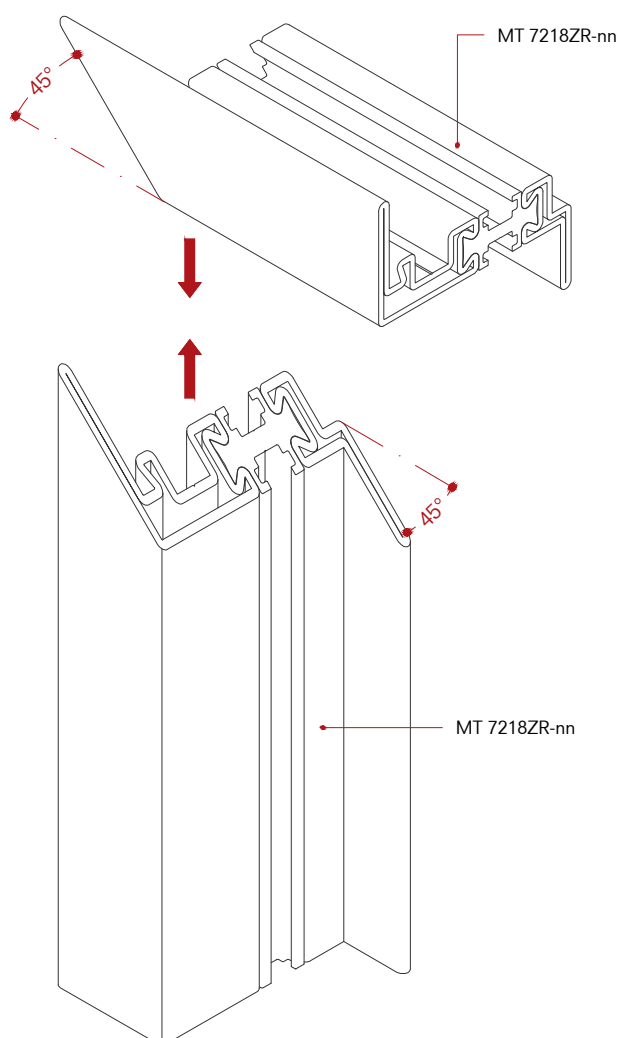
Single leaf window open in

Einflüglige Fenster nach innen öffnend

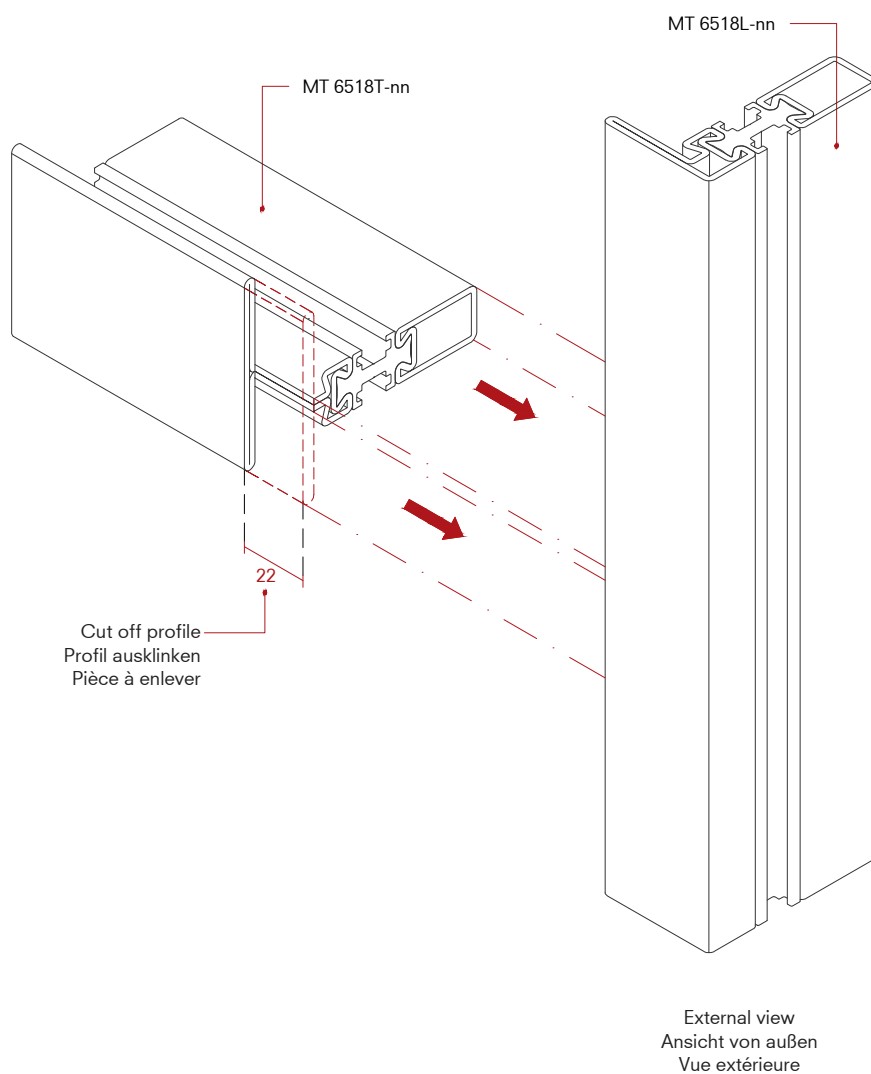
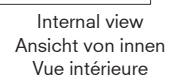
Fenêtre à un vantail ouverture intérieure



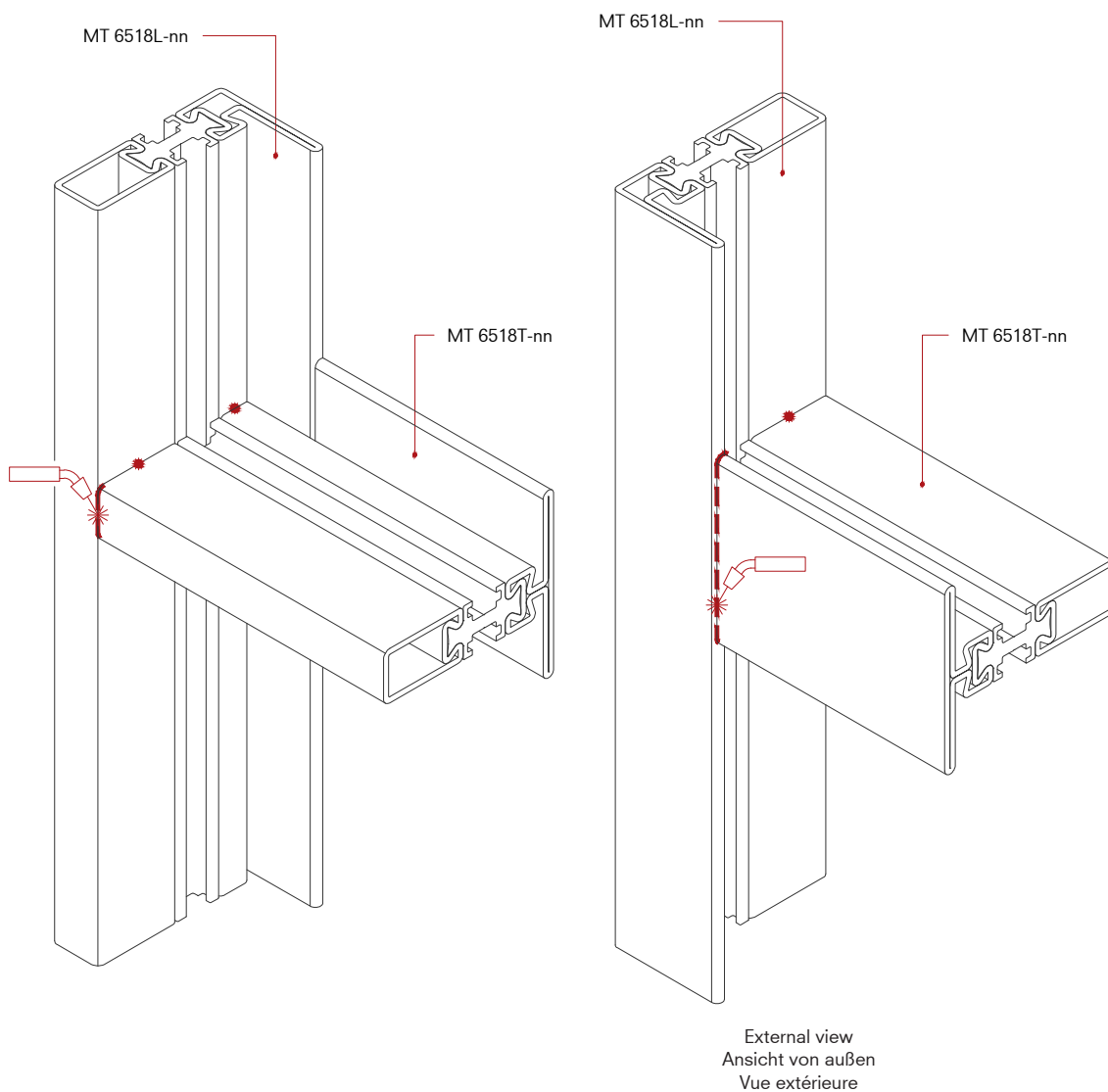
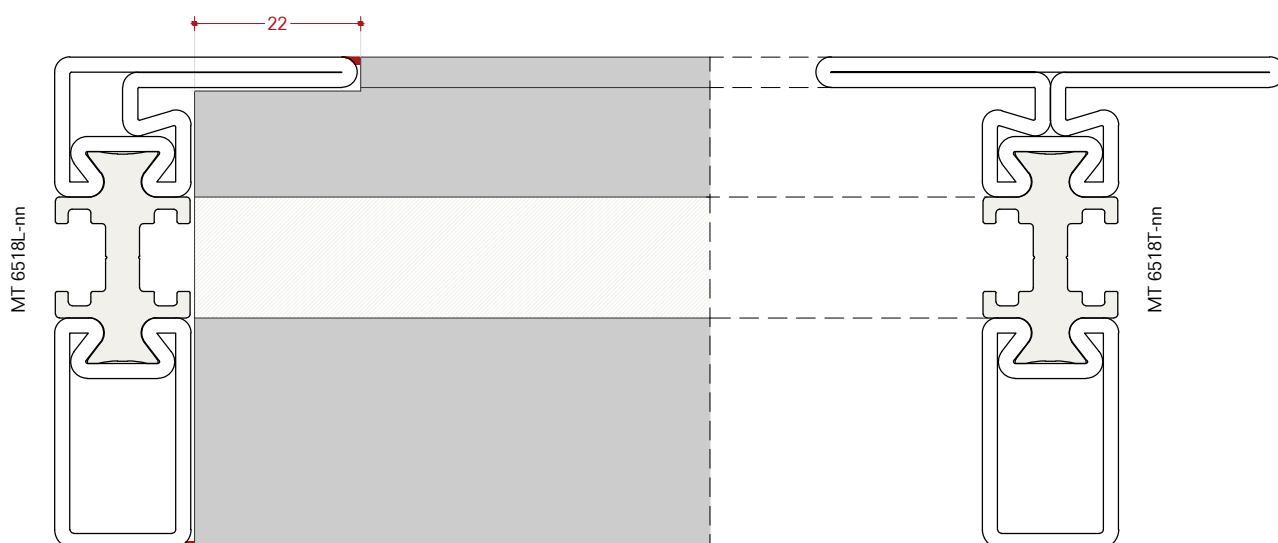
Internal view  
Ansicht von innen  
Vue intérieure



### Cloisons - chassis fixes





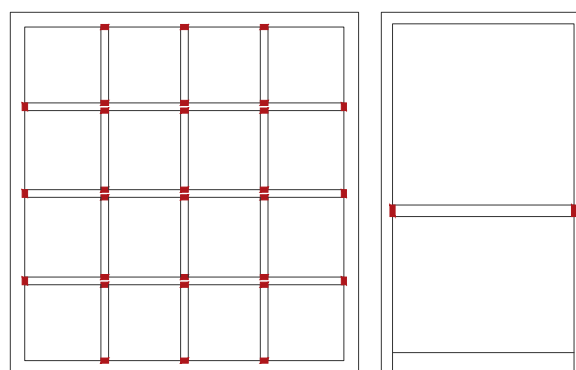


**MT 6518L-nn / MT 6507TR-nn (MT 6507TN-nn)**

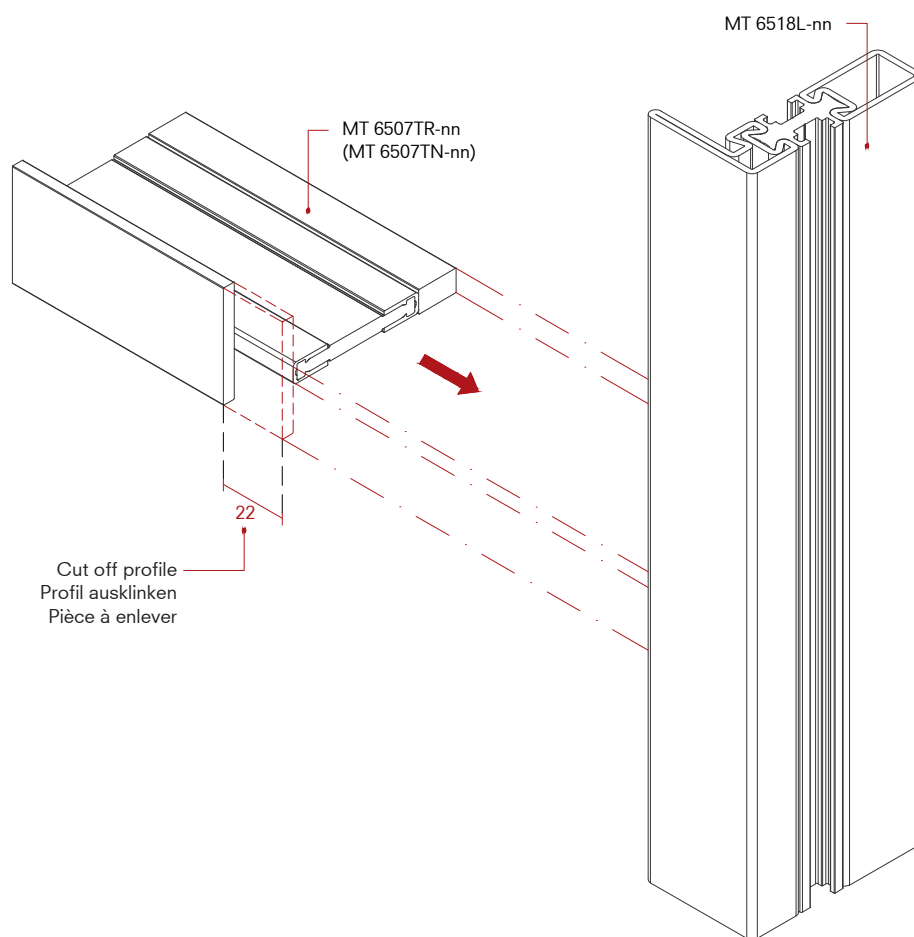
Fixed partitions

Festfeld

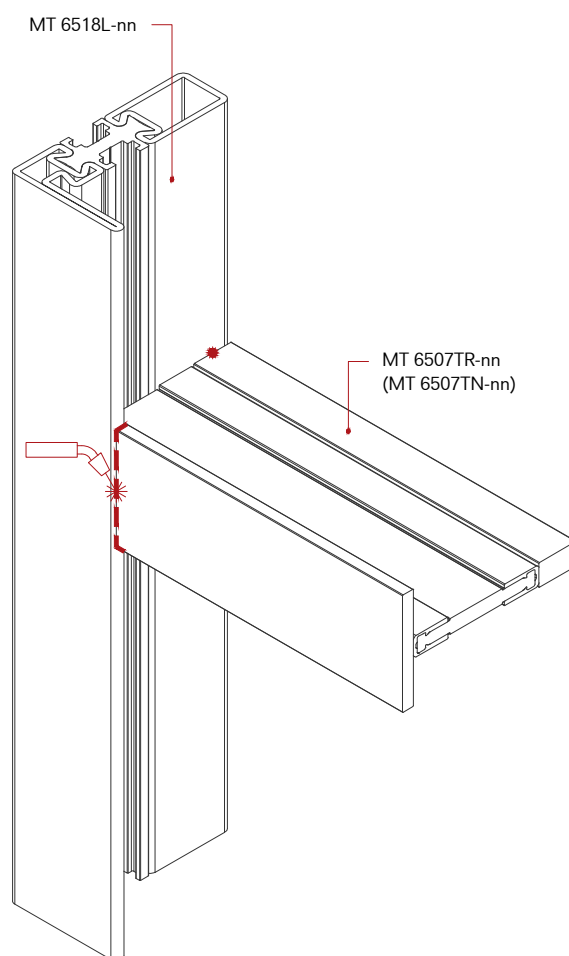
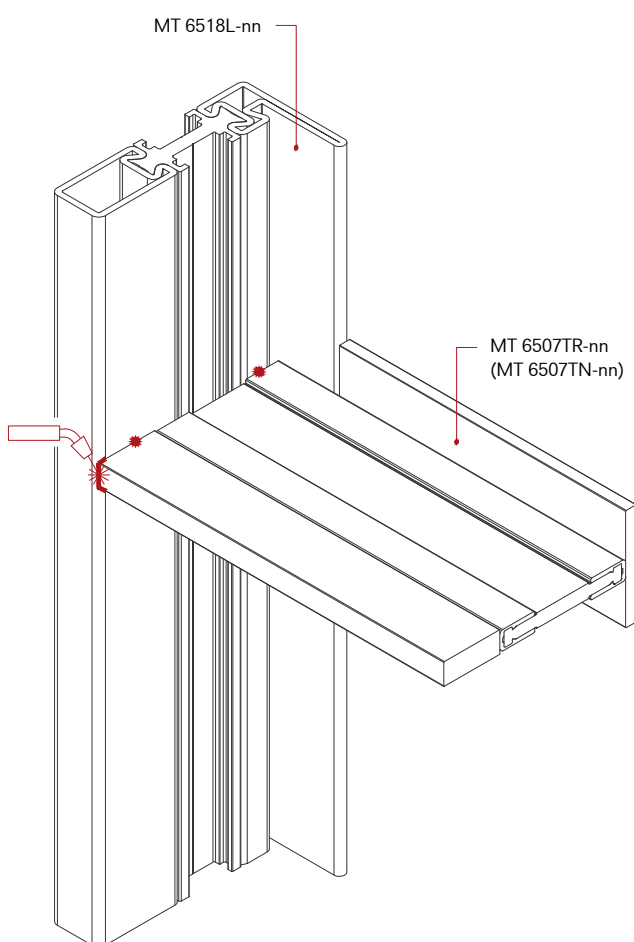
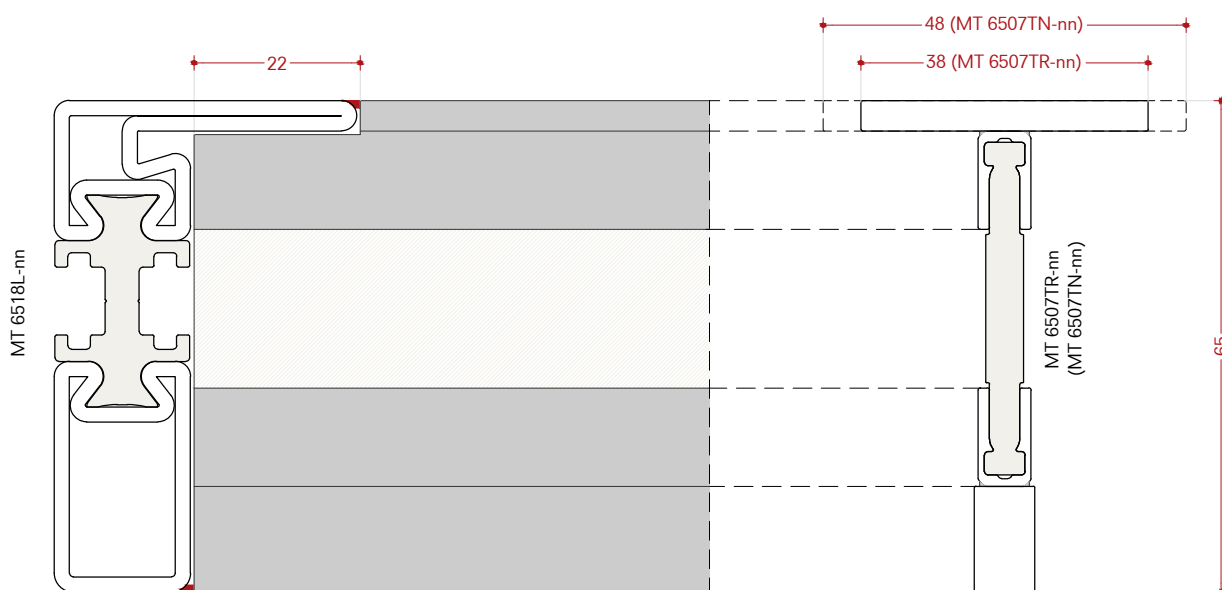
Cloisons - chassis fixes



Internal view  
Ansicht von innen  
Vue intérieure



External view  
Ansicht von außen  
Vue extérieure



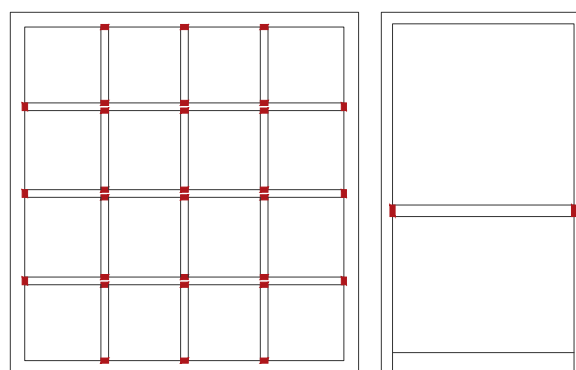
External view  
Ansicht von außen  
Vue extérieure

**MT 7218LF-nn / MT 7207TR-nn (MT 7207TN-nn)**

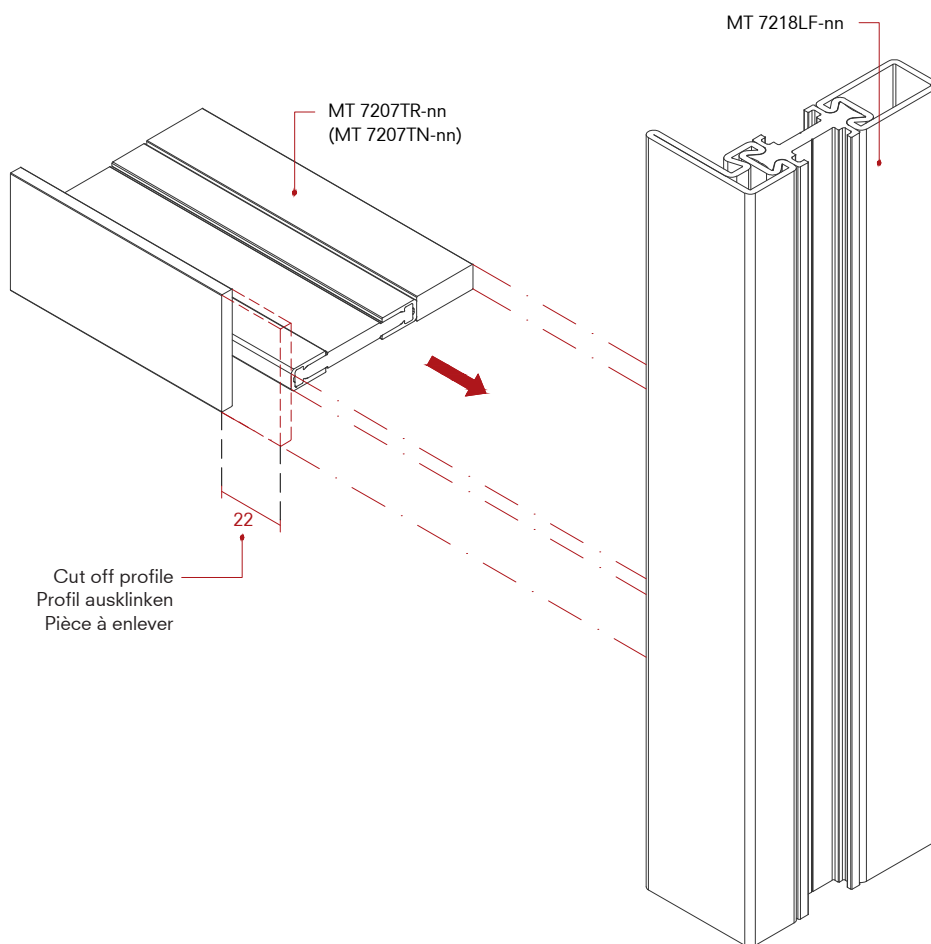
Fixed partitions

Festfeld

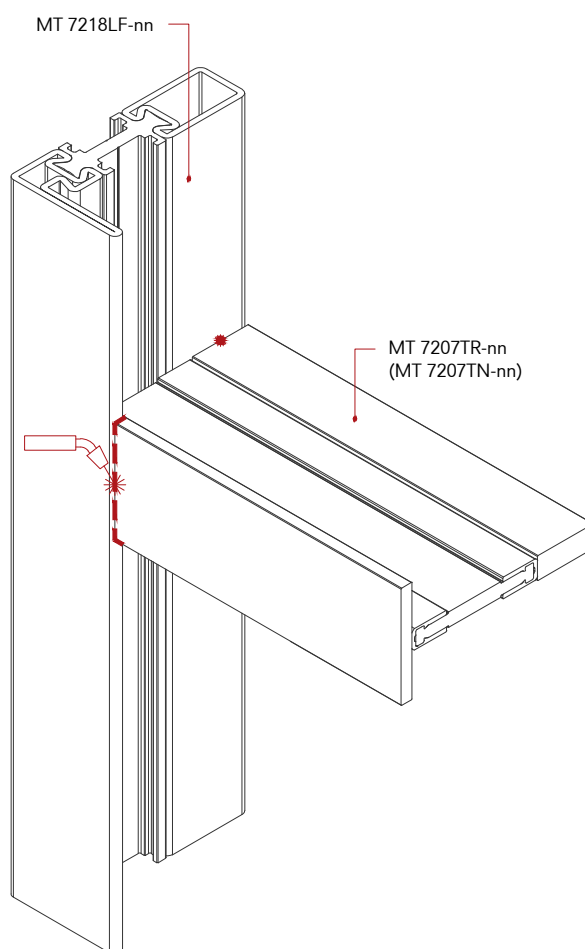
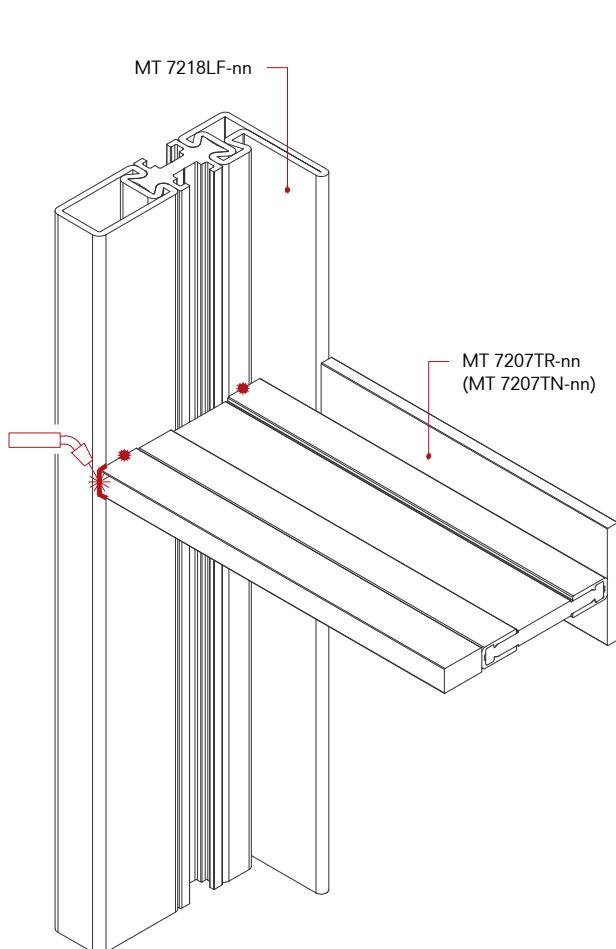
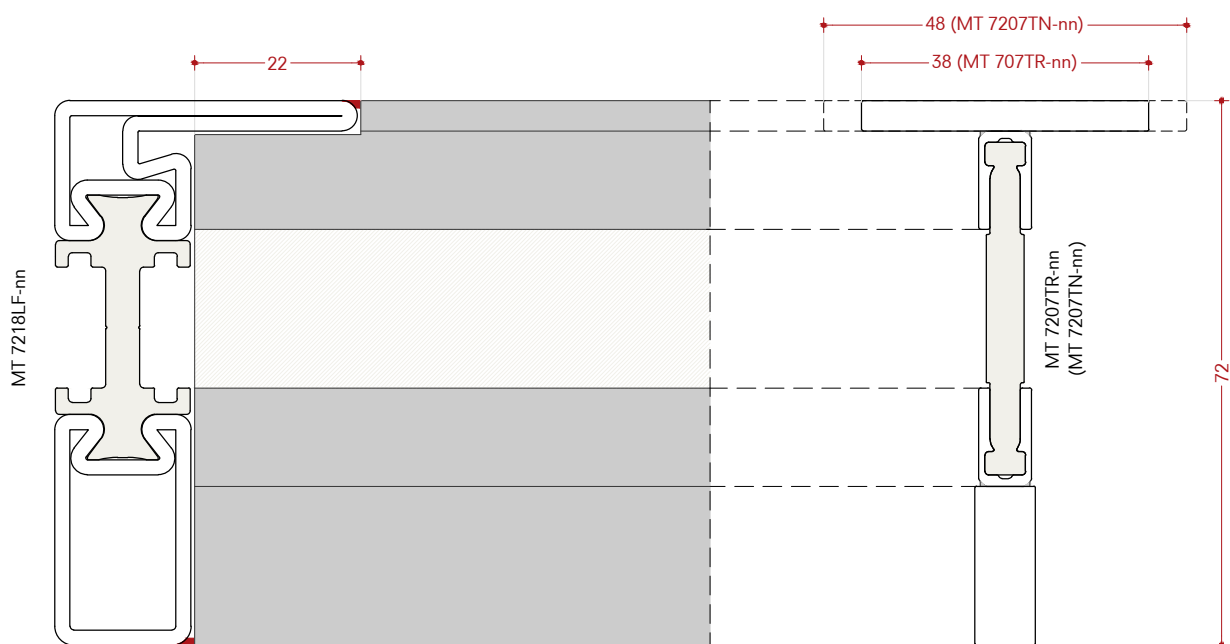
Cloisons - chassis fixes



Internal view  
Ansicht von innen  
Vue intérieure



External view  
Ansicht von außen  
Vue extérieure



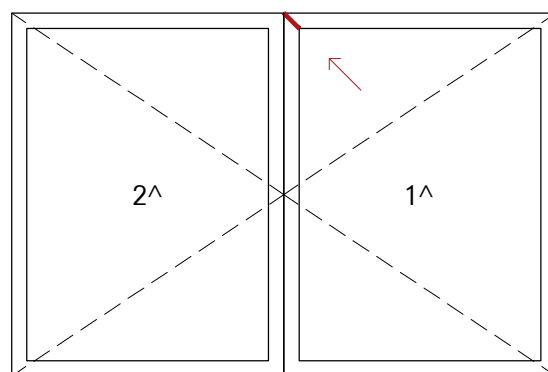
External view  
Ansicht von außen  
Vue extérieure

**MT 7218TZ-nn / MT 7218TZ-nn**

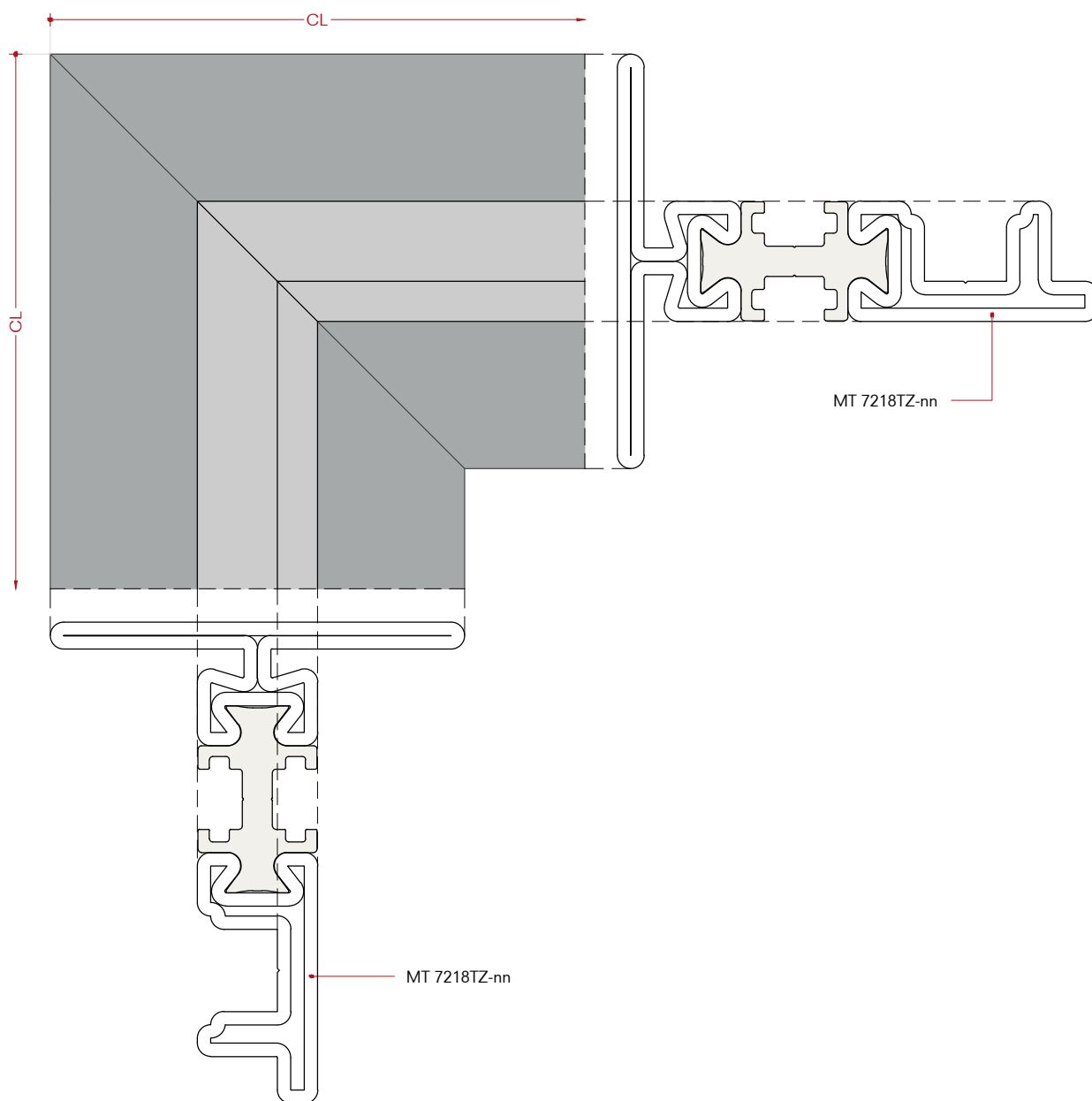
Double leaf window open out

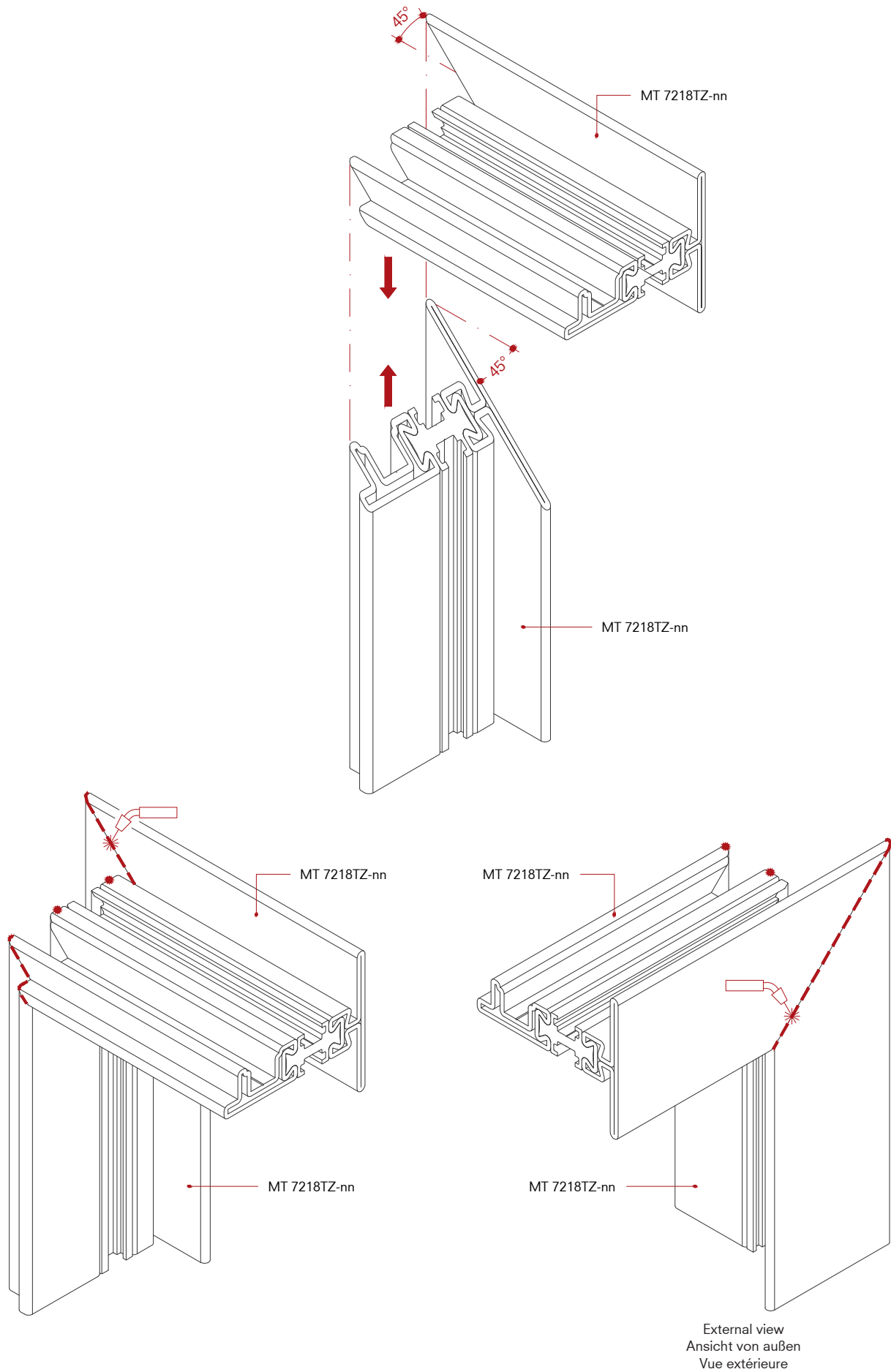
Zweiflügliges nach außen öffnend

Fenêtre à deux vantaux ouverture extérieure



Internal view  
Ansicht von innen  
Vue intérieure



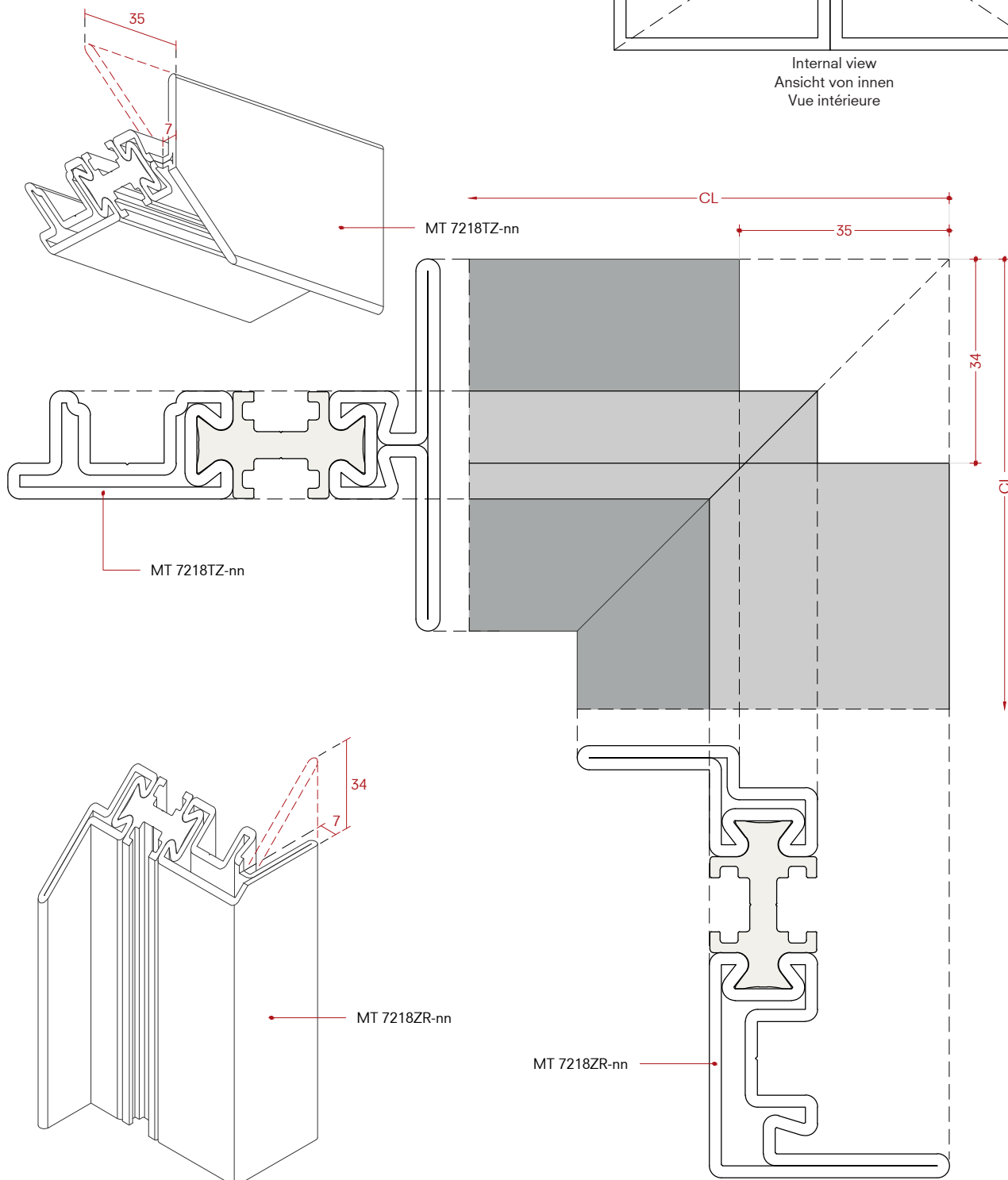


**MT 7218TZ-nn / MT 7218ZR-nn**

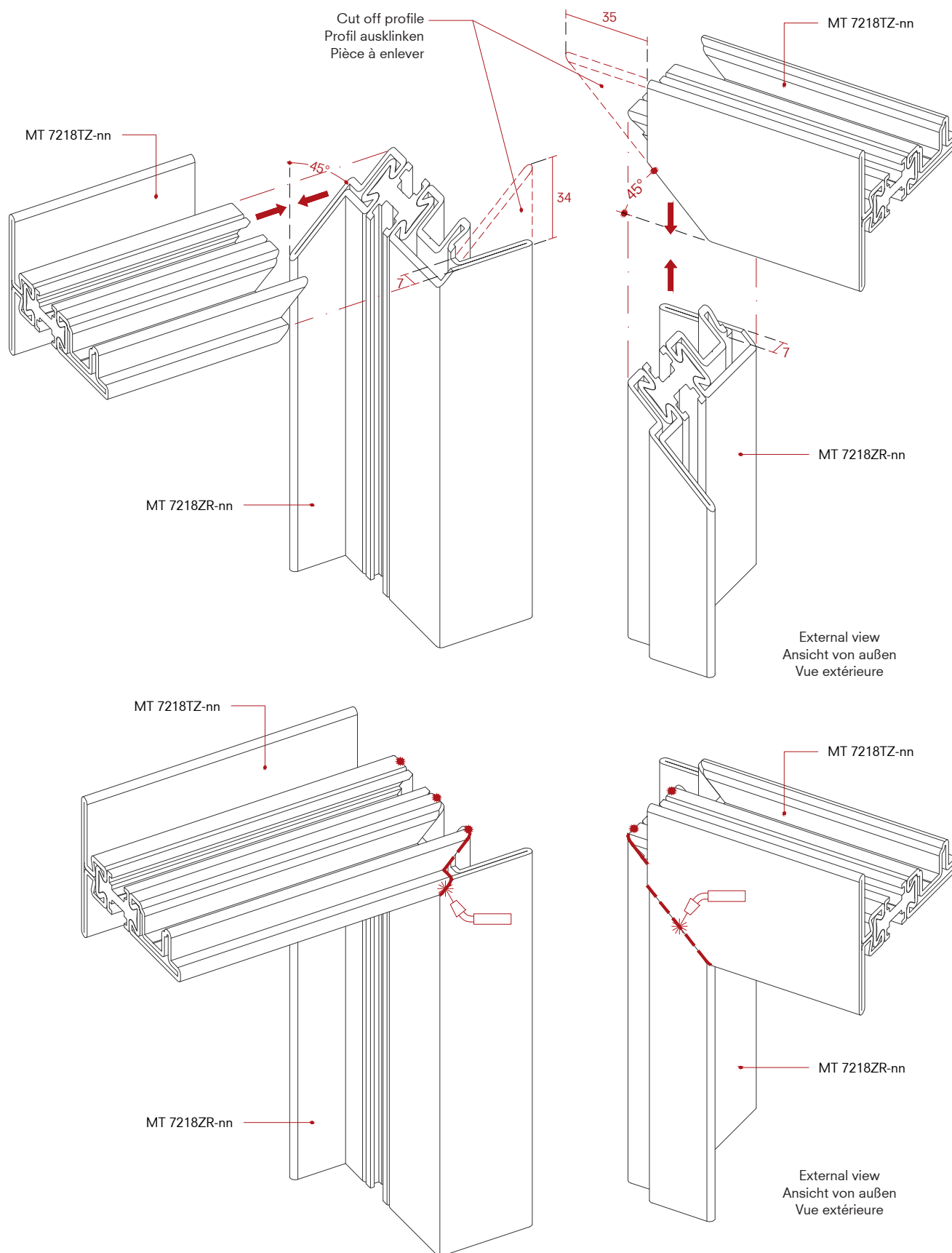
Double leaf window open out

Zweiflügliges nach außen öffnend

Fenêtre à deux vantaux ouverture extérieure





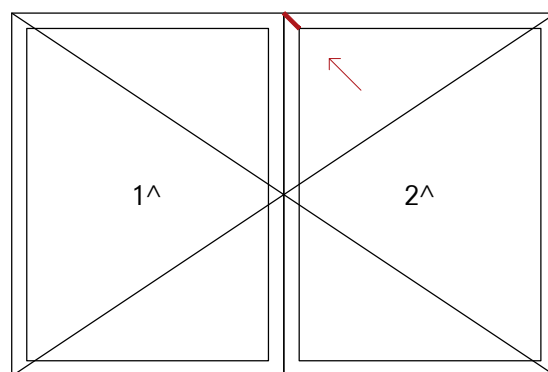


**MT 7218TZ-nn / MT 7218ZR-nn**

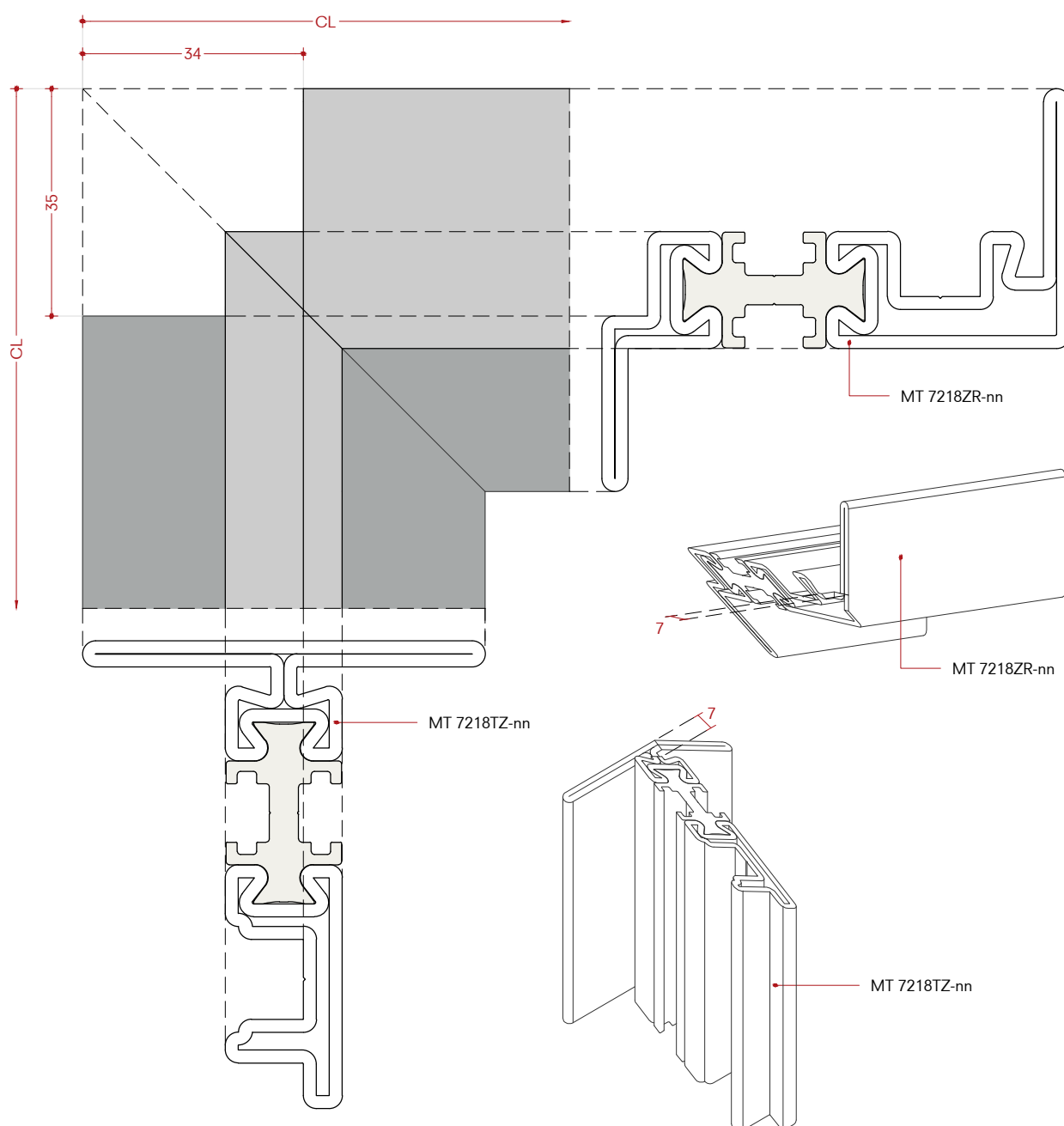
Double leaf window open in

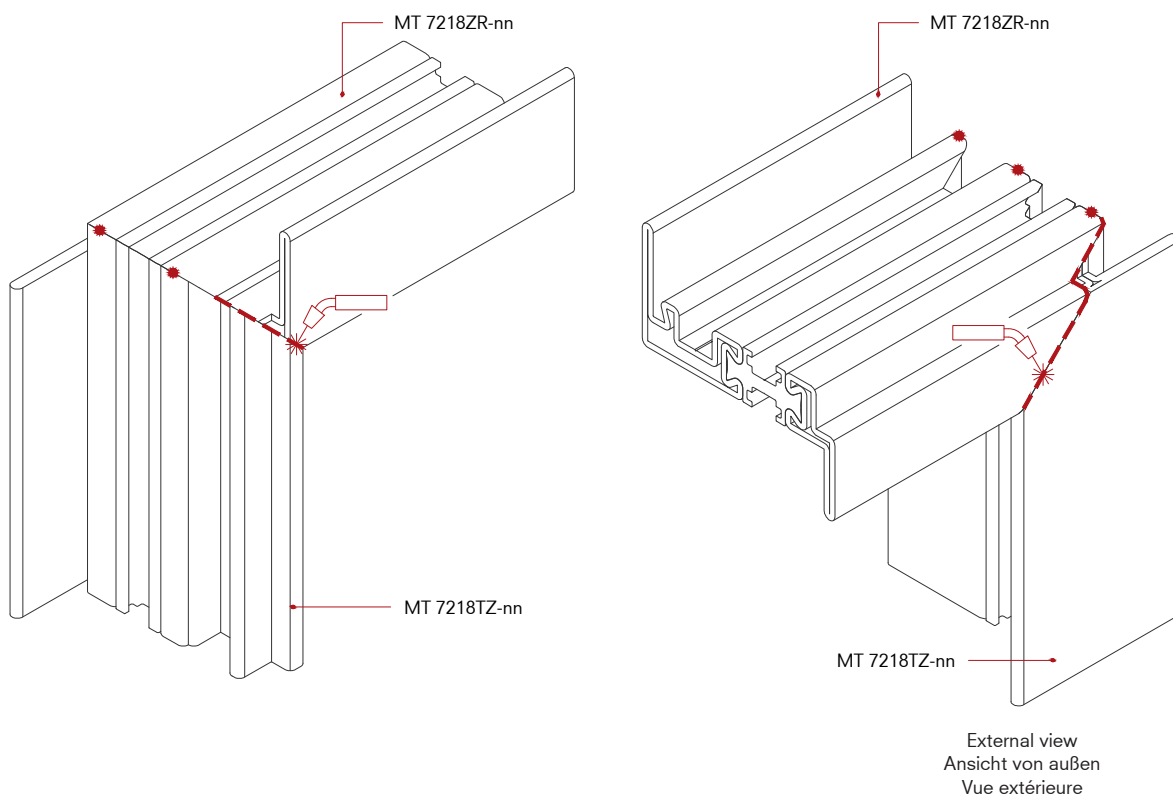
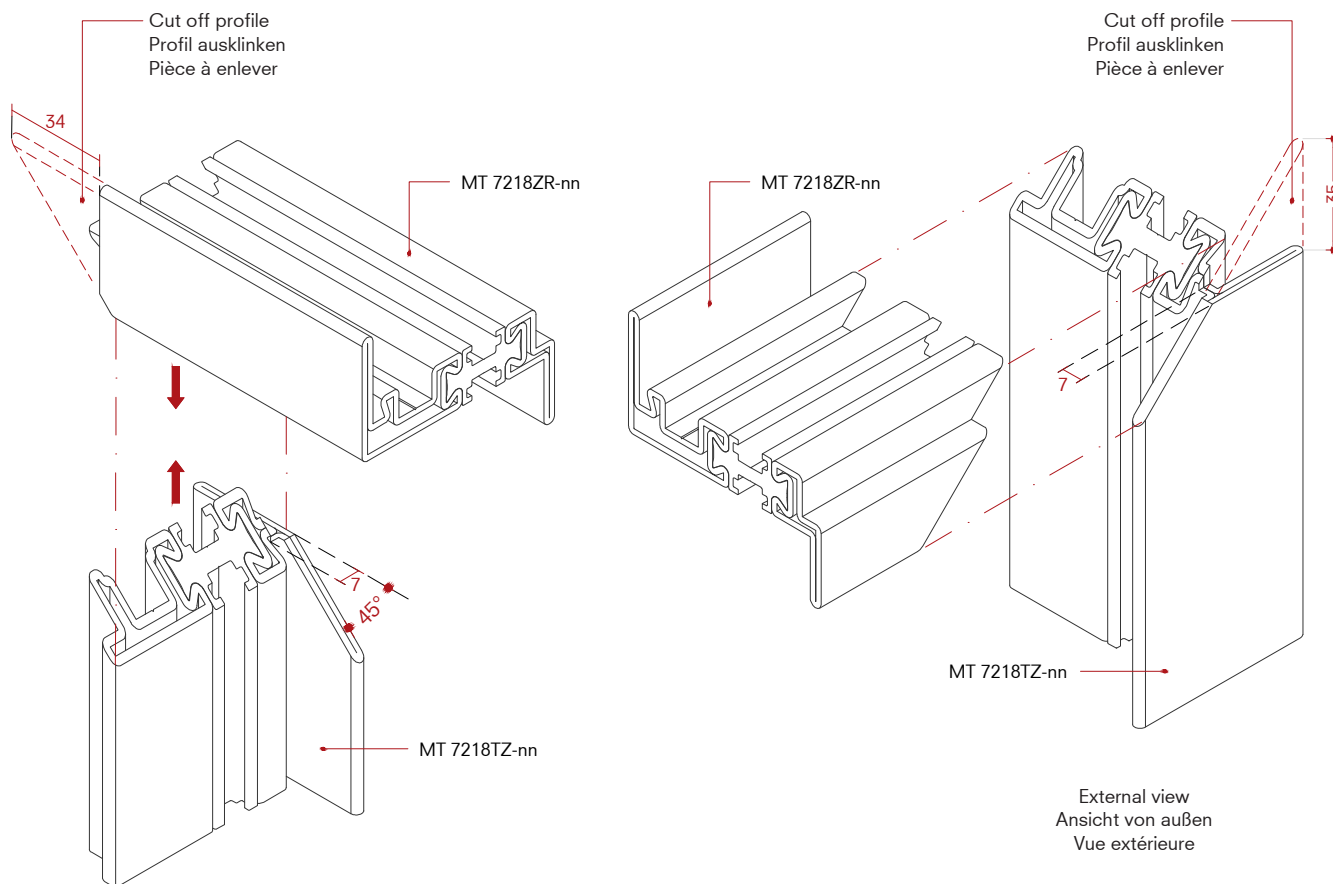
Zweiflügliges nach innen öffnend

Fenêtre à deux vantaux ouverture intérieure



Internal view  
Ansicht von innen  
Vue intérieure



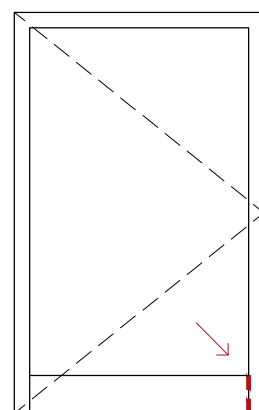


**MT 7218TZ-nn / MT 7218HZ-nn**

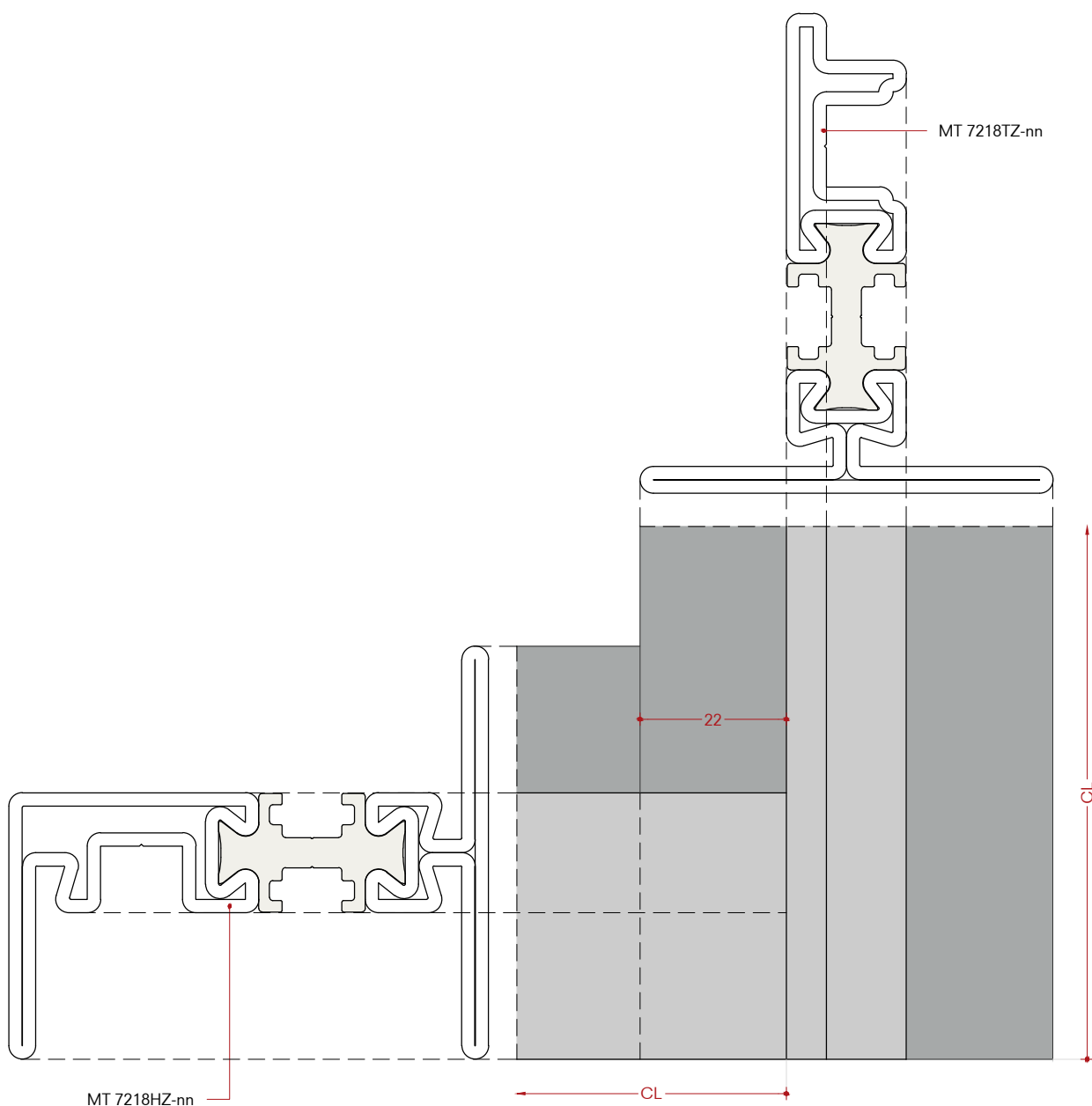
Single leaf door open out

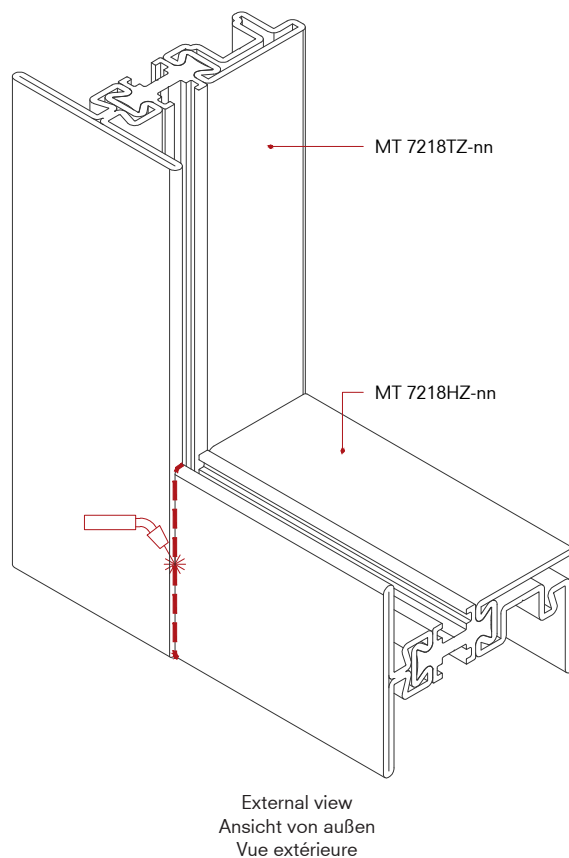
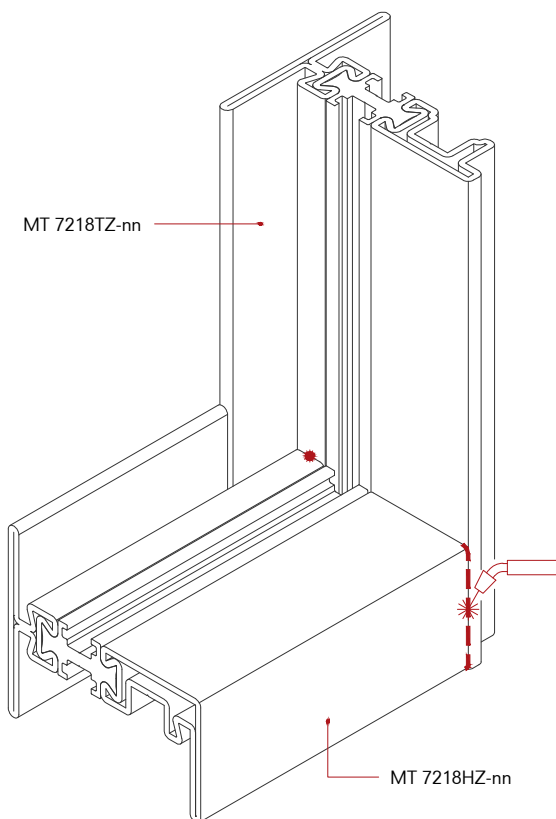
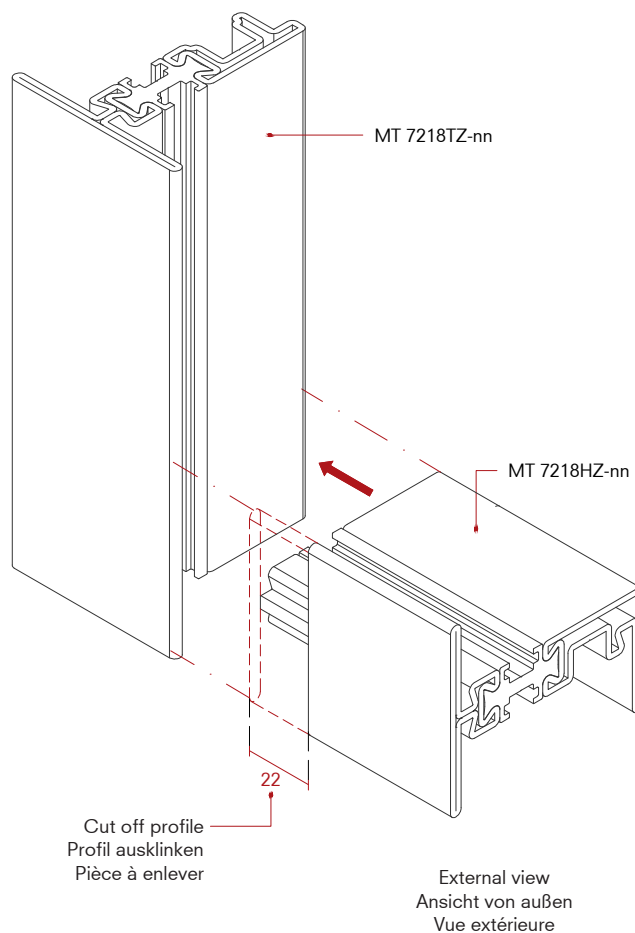
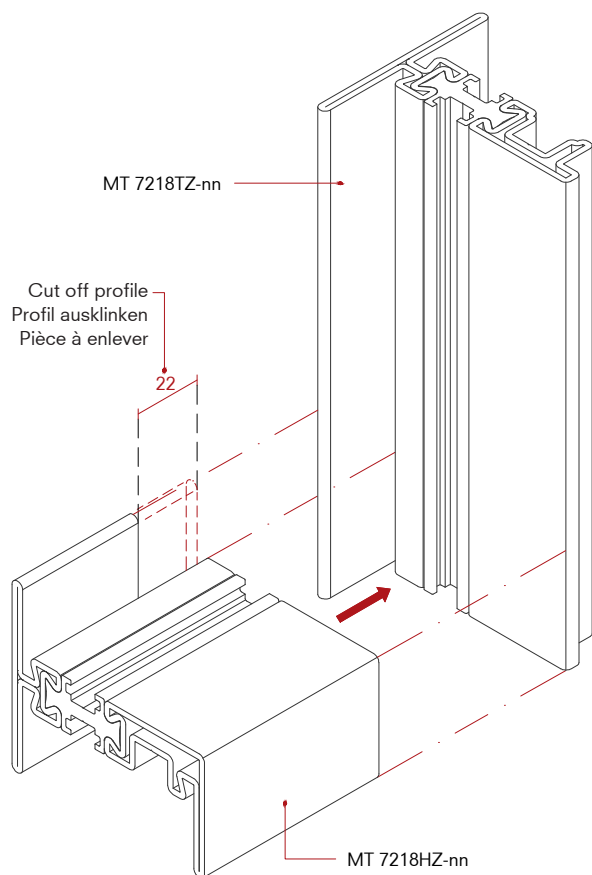
einflügliges Tür nach außen öffnend

Porte à un vantail ouverture extérieure



Internal view  
Ansicht von innen  
Vue intérieure



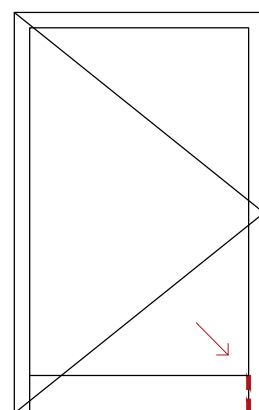


**MT 7218ZR-nn / MT 7218HZ-nn**

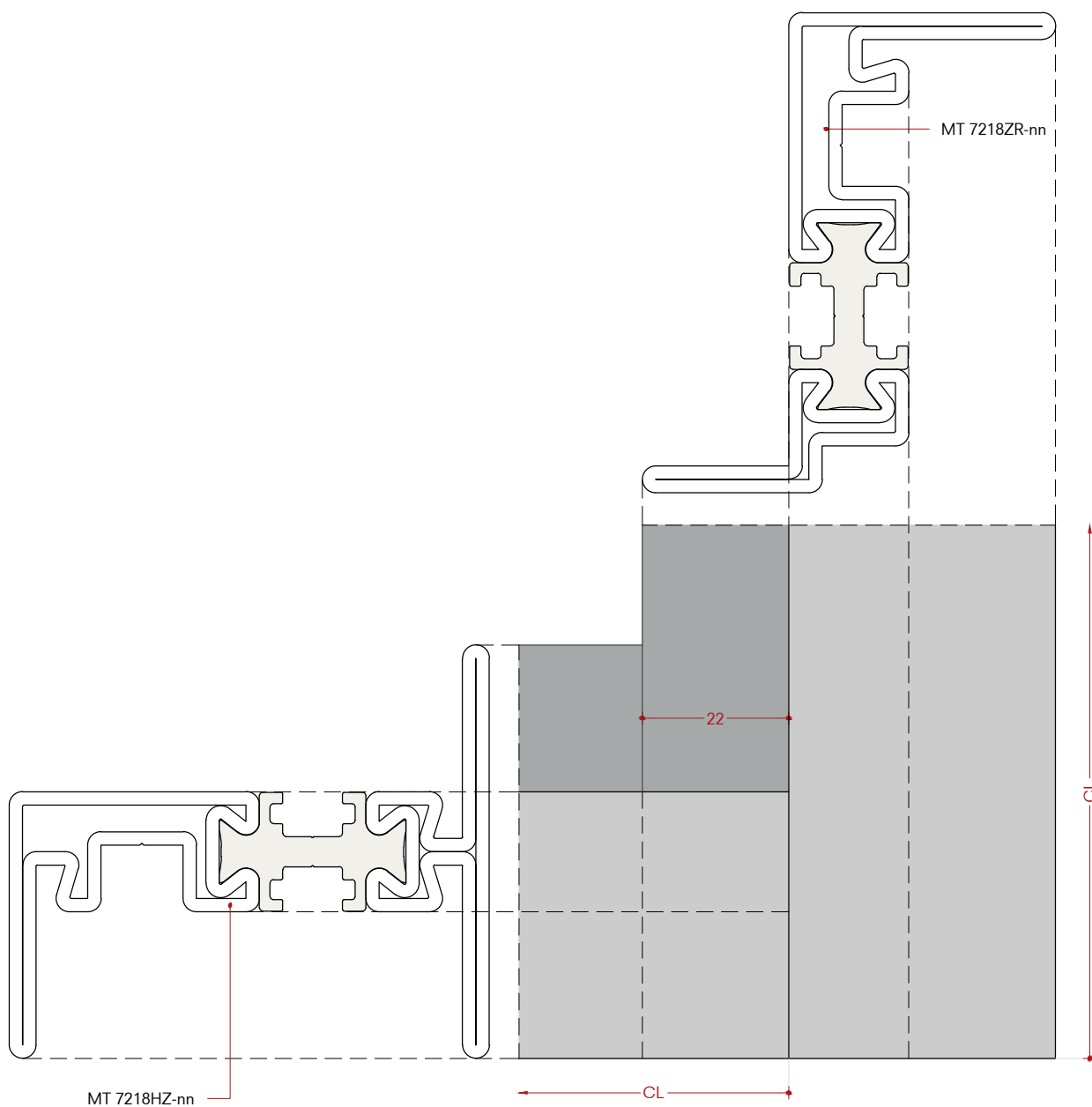
Single leaf door open in

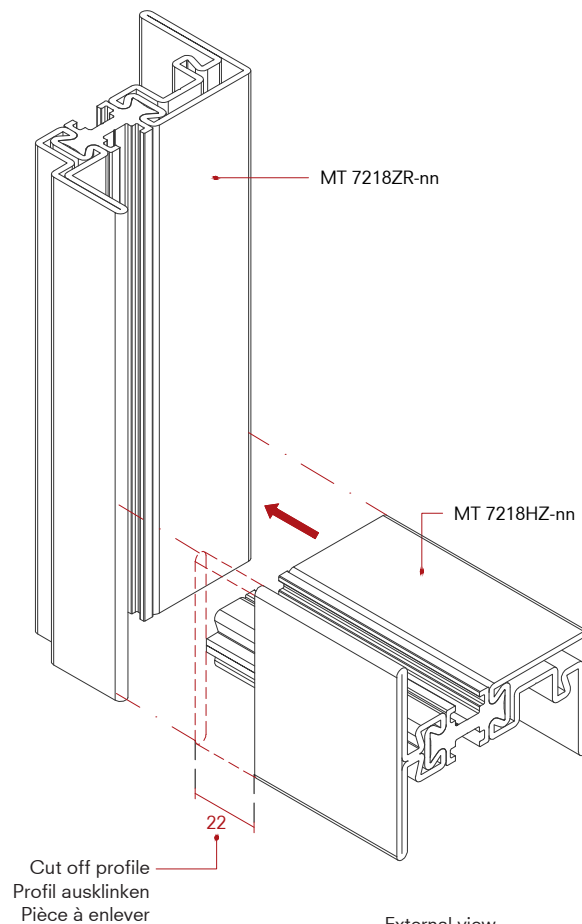
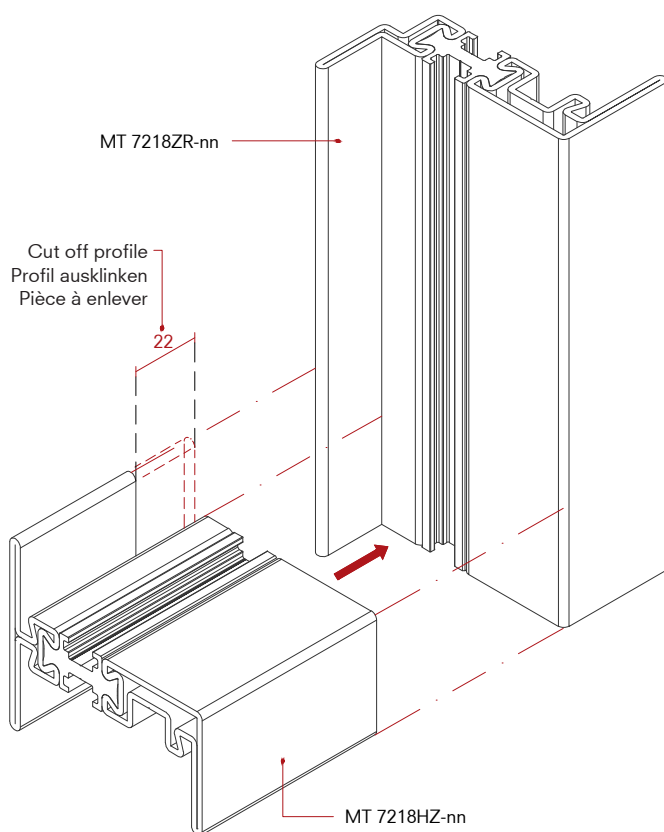
Einflüglige Tür nach innen öffnend

Porte à un vantail ouverture intérieure

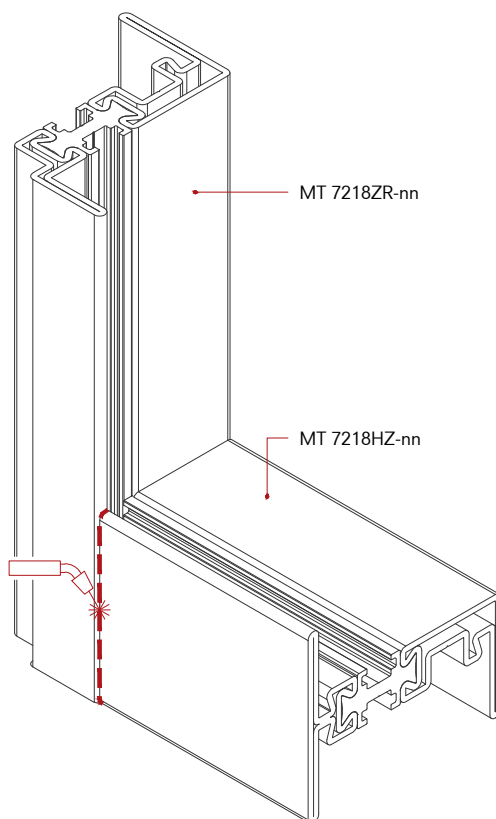
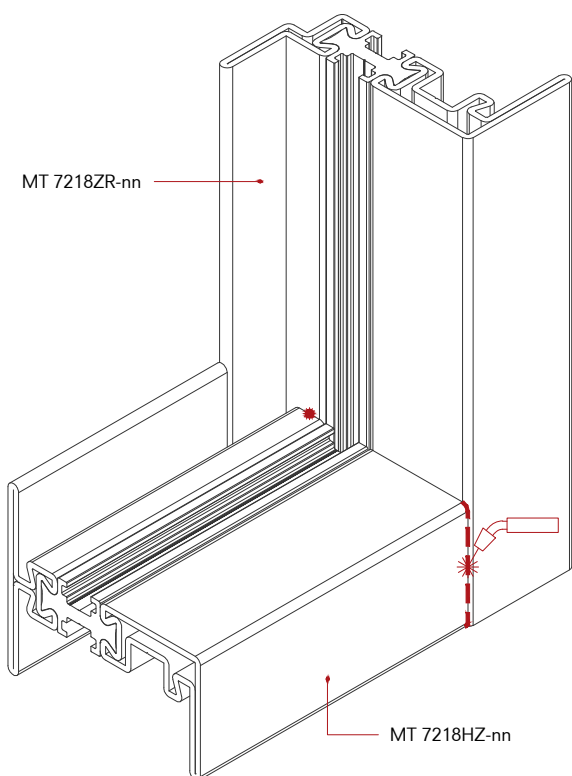


Internal view  
Ansicht von innen  
Vue intérieure





External view  
Ansicht von außen  
Vue extérieure



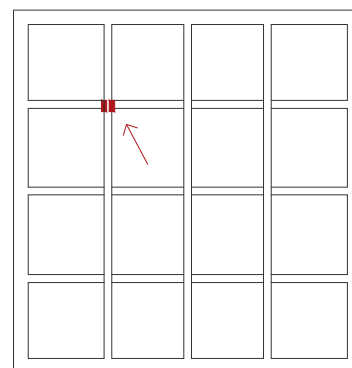
External view  
Ansicht von außen  
Vue extérieure

## MT 6518T-nn

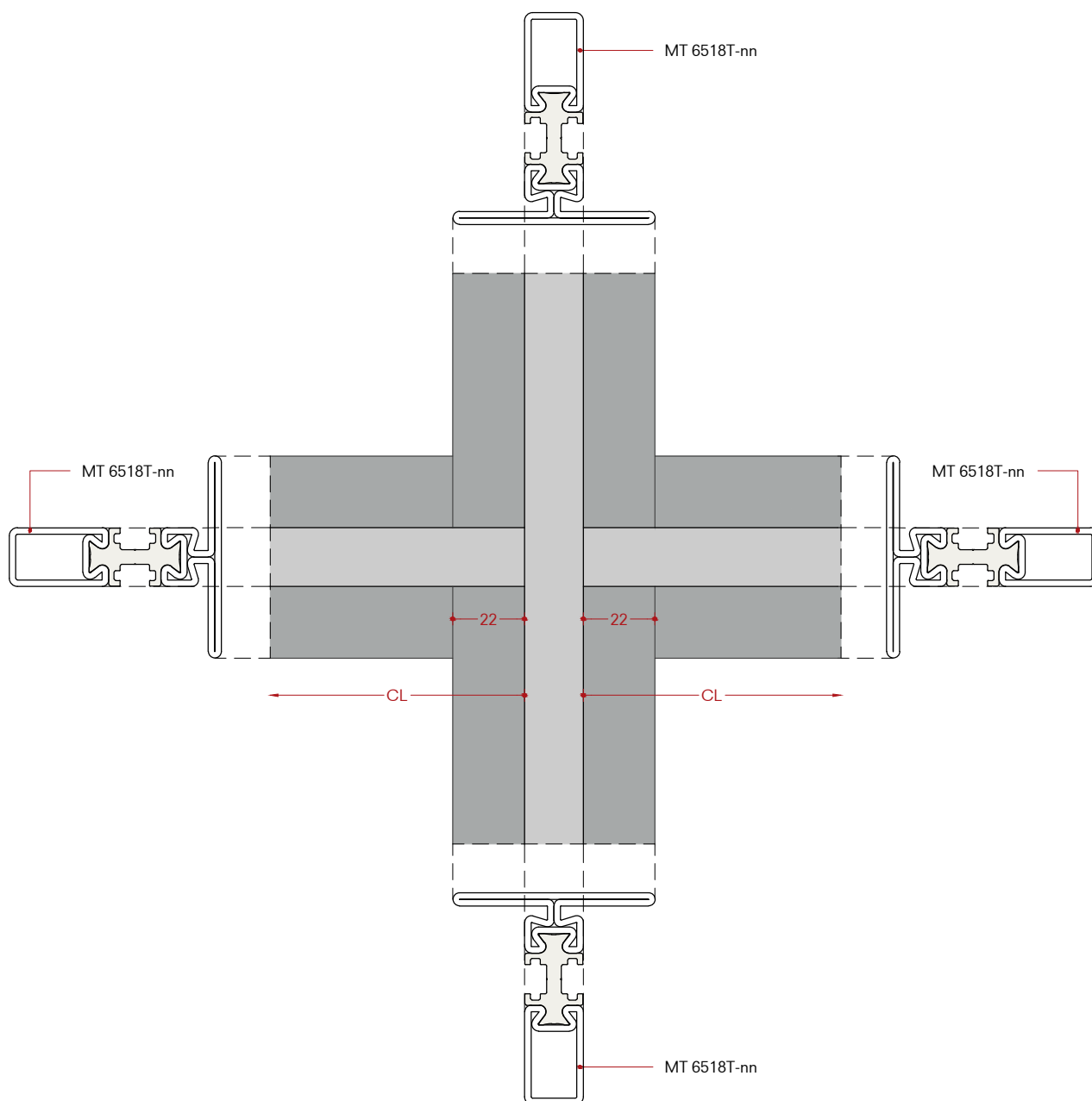
Fixed partitions

Festfeld

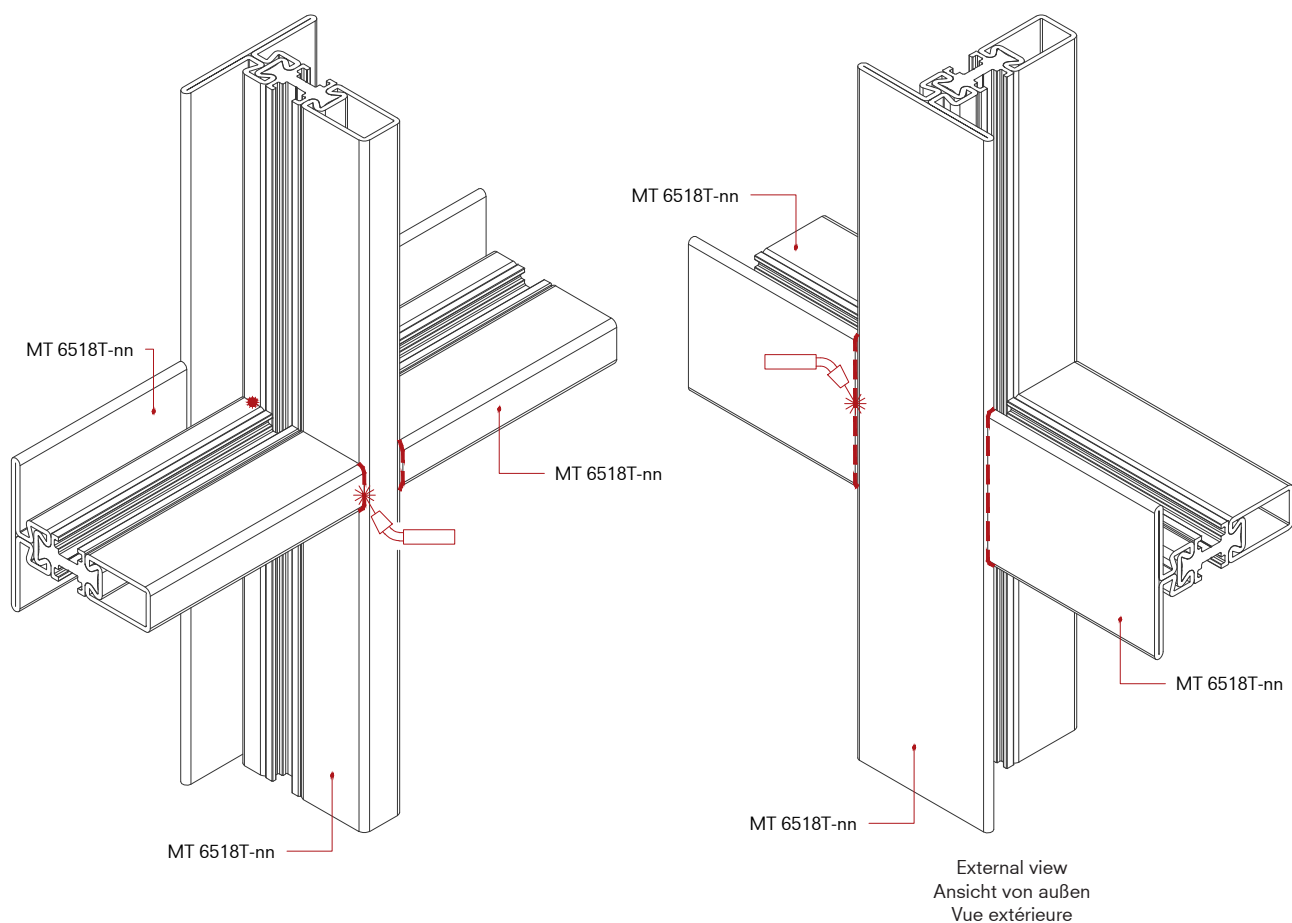
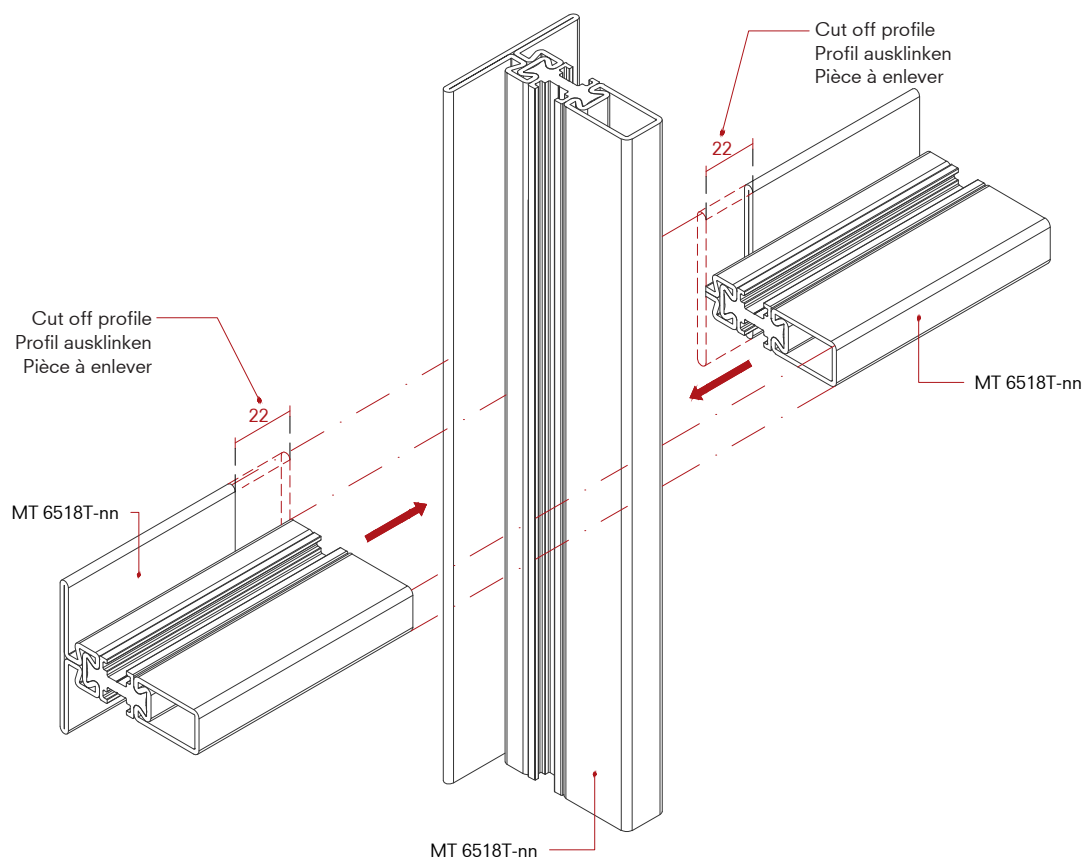
Fenêtre



Internal view  
Ansicht von innen  
Vue intérieure





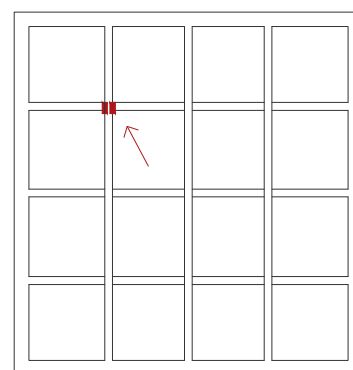
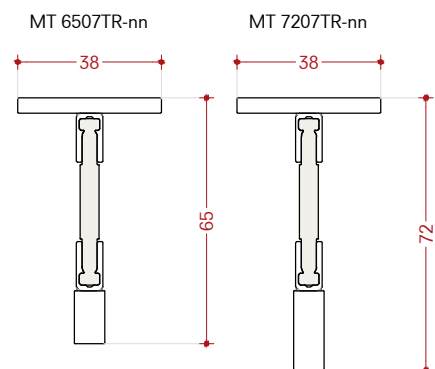


## MT 6507TR-nn - MT 7207TR-nn

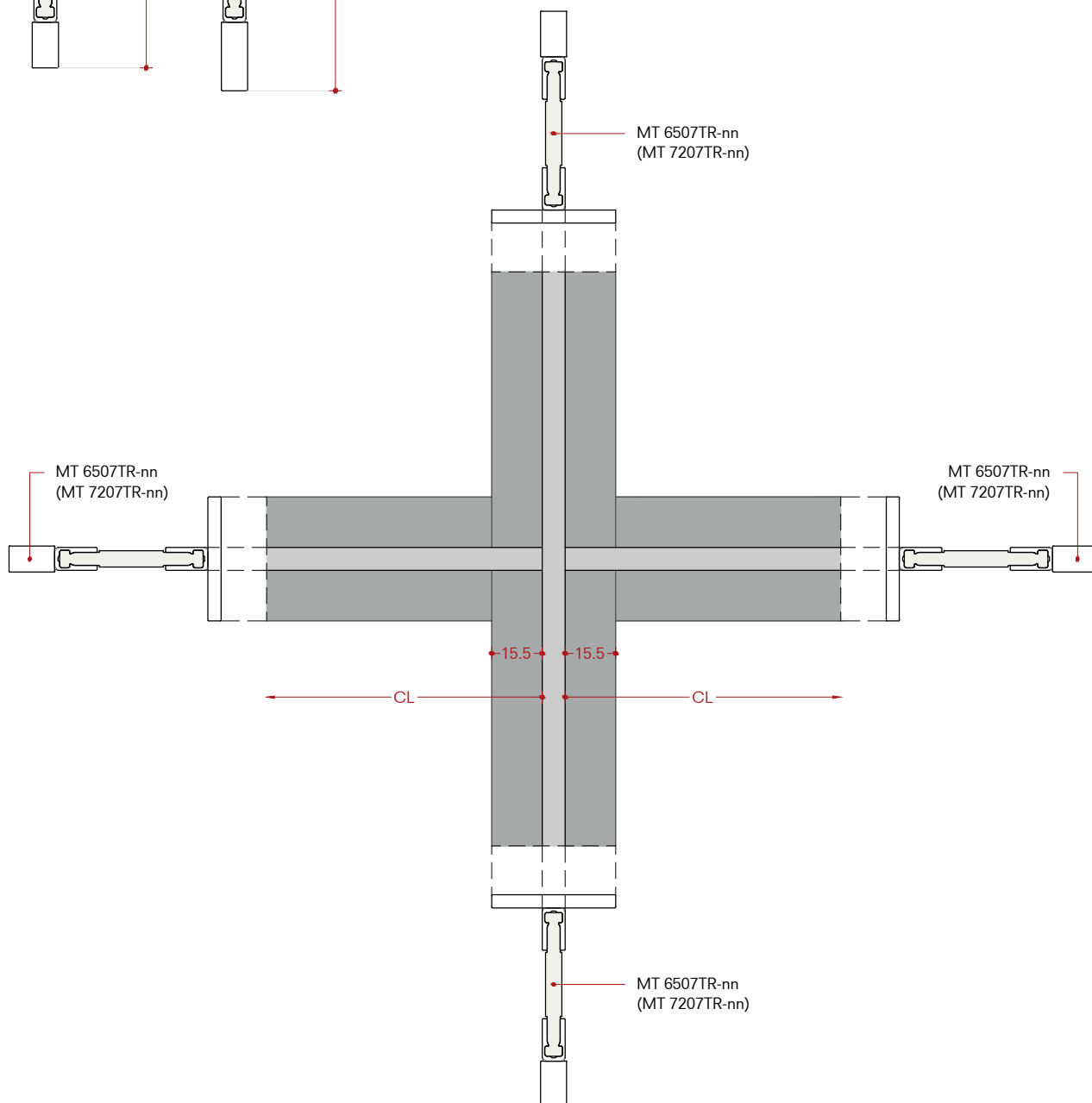
Fixed partitions

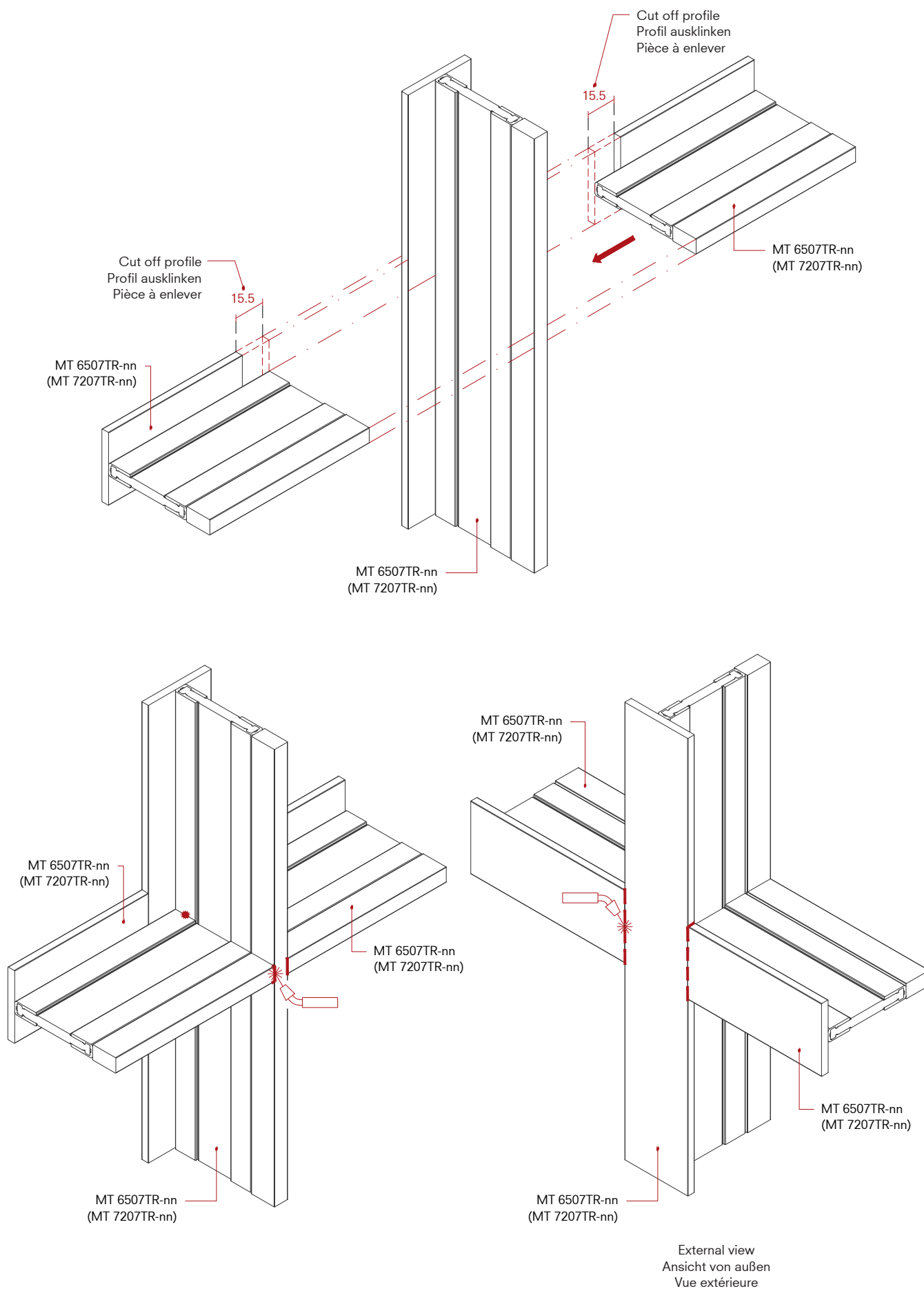
Festfeld

Fenêtre



Internal view  
Ansicht von innen  
Vue intérieure



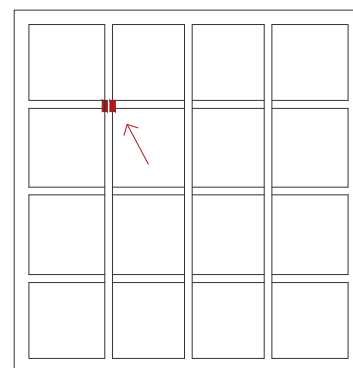
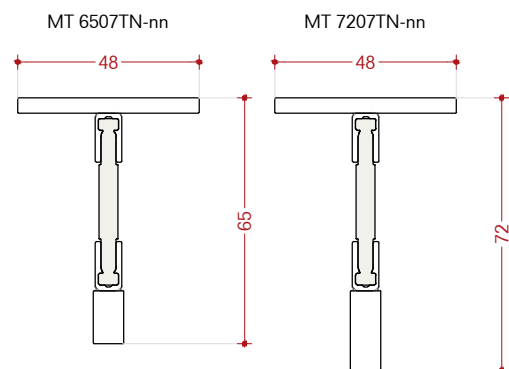


## MT 6507TN-nn - MT 7207TN-nn

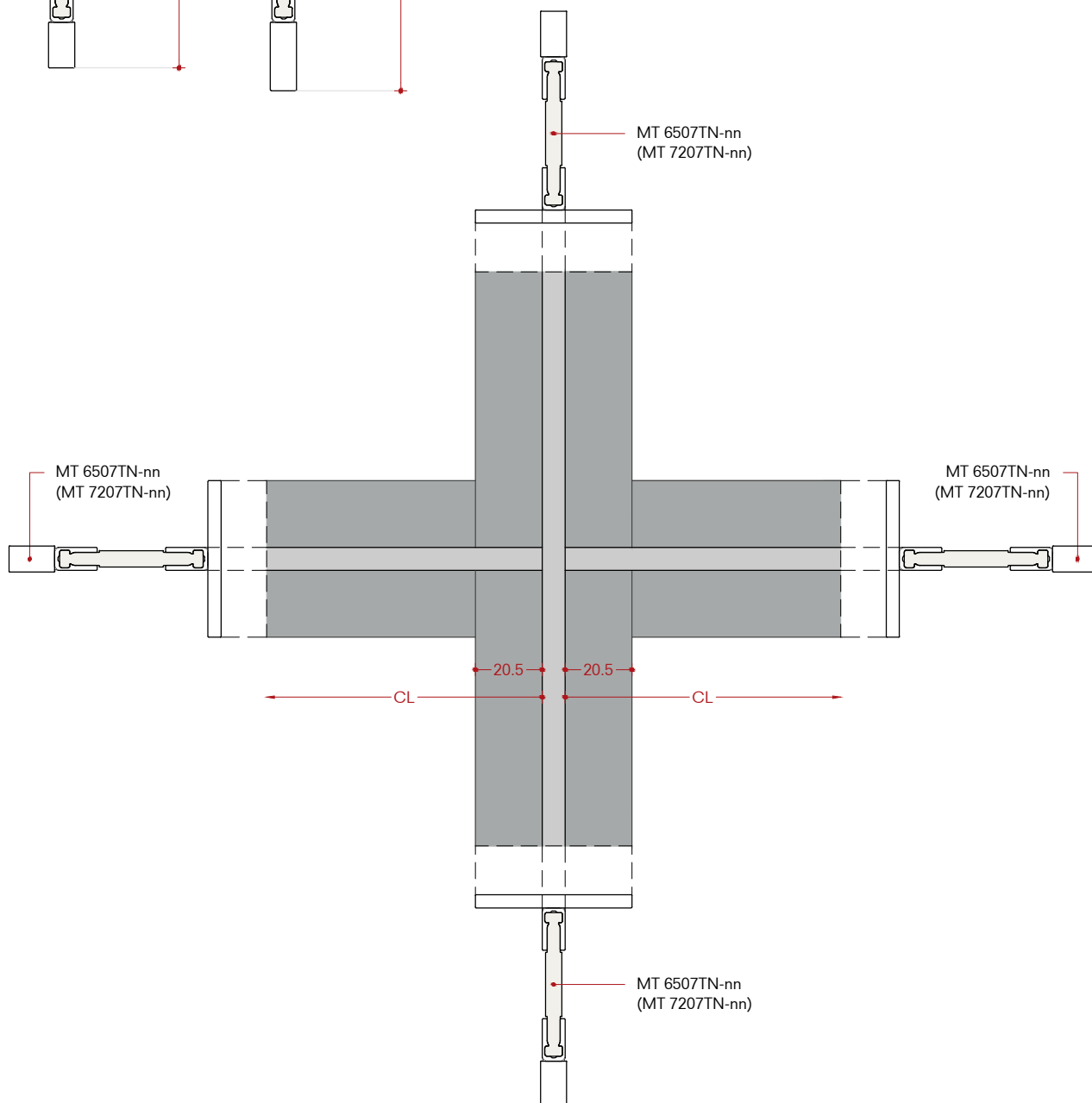
Fixed partitions

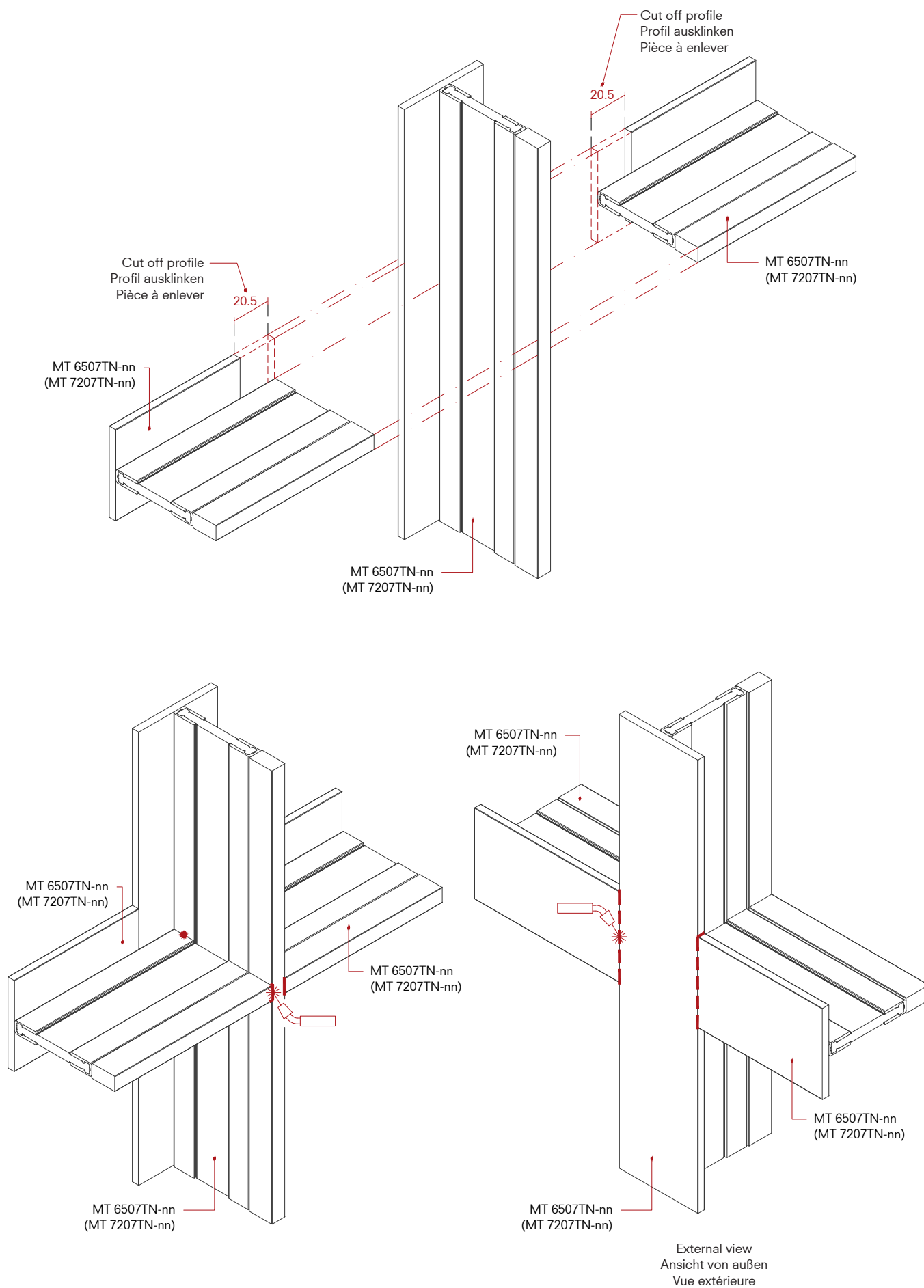
Festfeld

Fenêtre



Internal view  
Ansicht von innen  
Vue intérieure



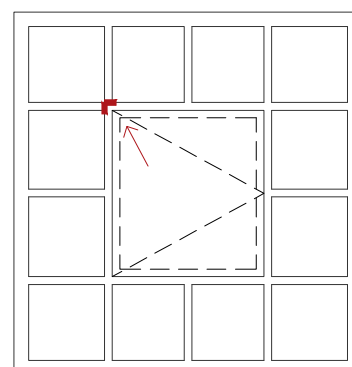


### MT 6518T-nn / MT 6518Z-nn

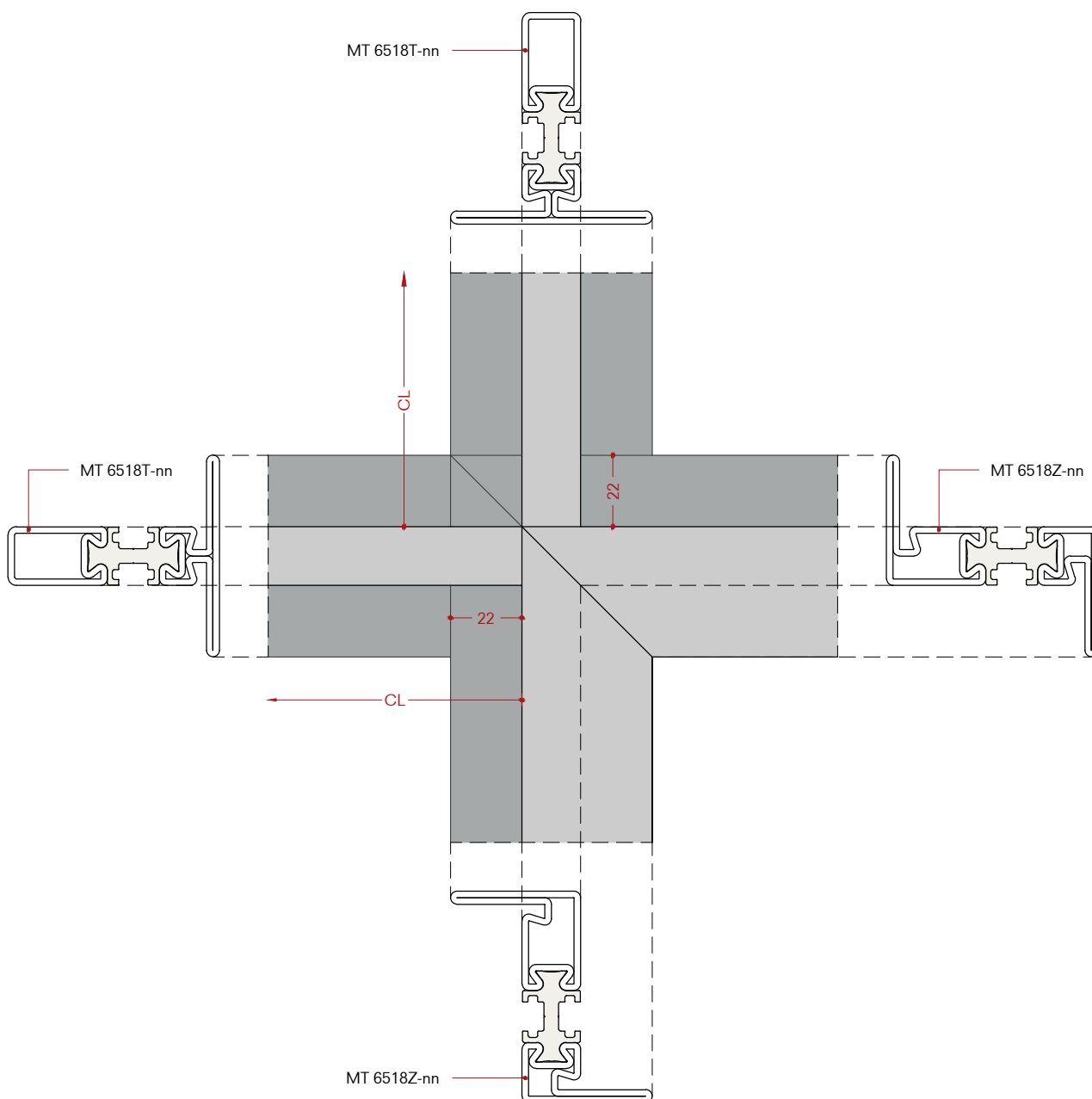
Window open out fixed partitions

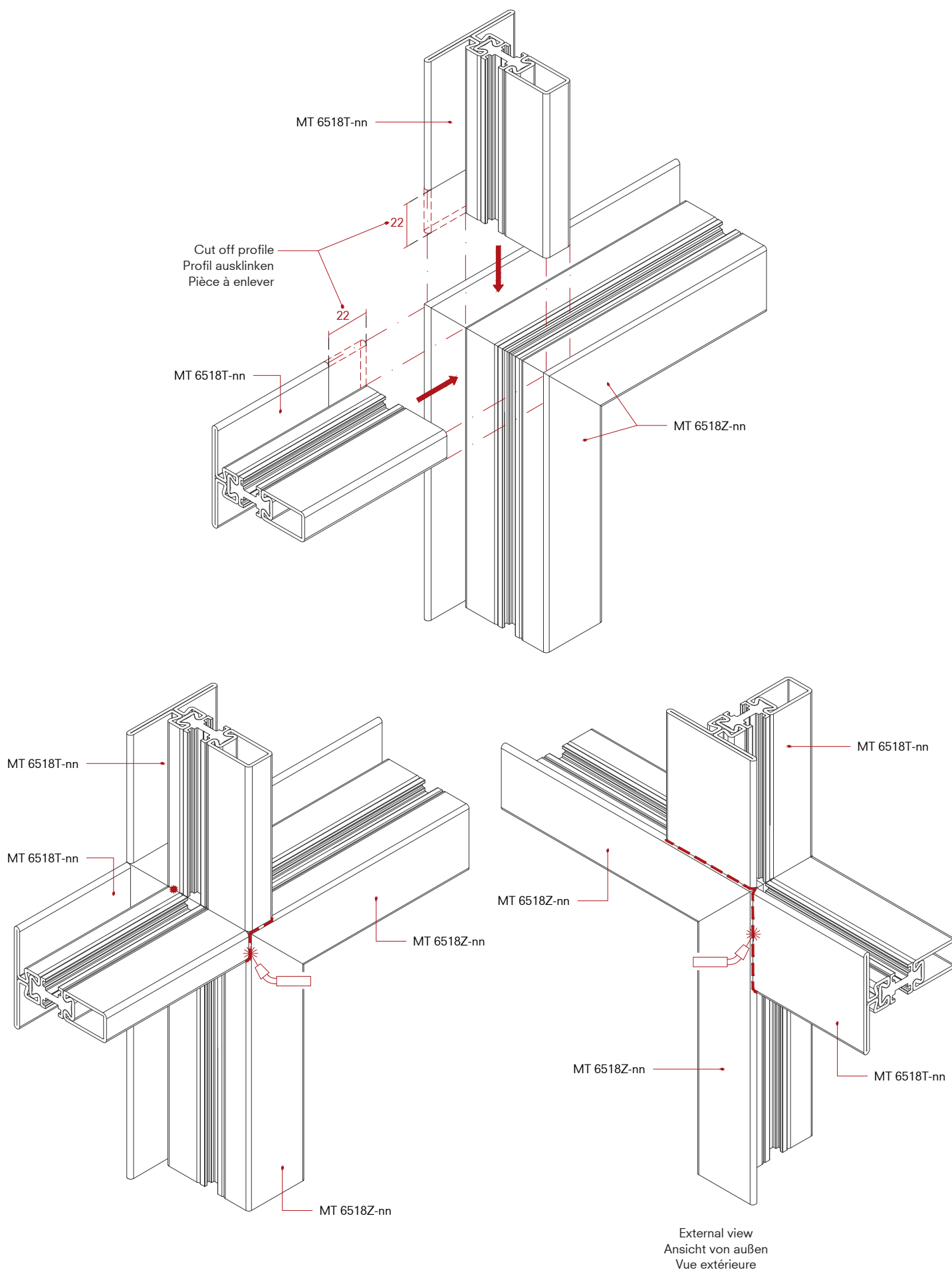
Fenster nach außen öffnend in Festfeld

Fenêtre ouverture extérieure



Internal view  
Ansicht von innen  
Vue intérieure



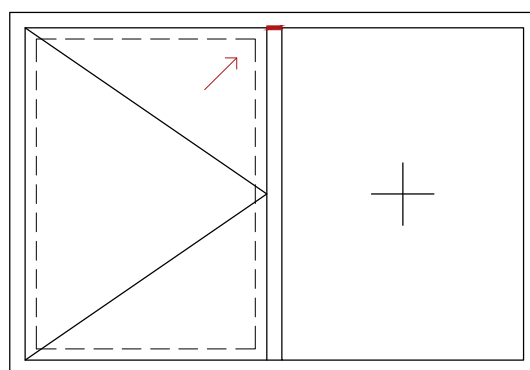


**MT 6518L-nn / MT 6518T-nn**

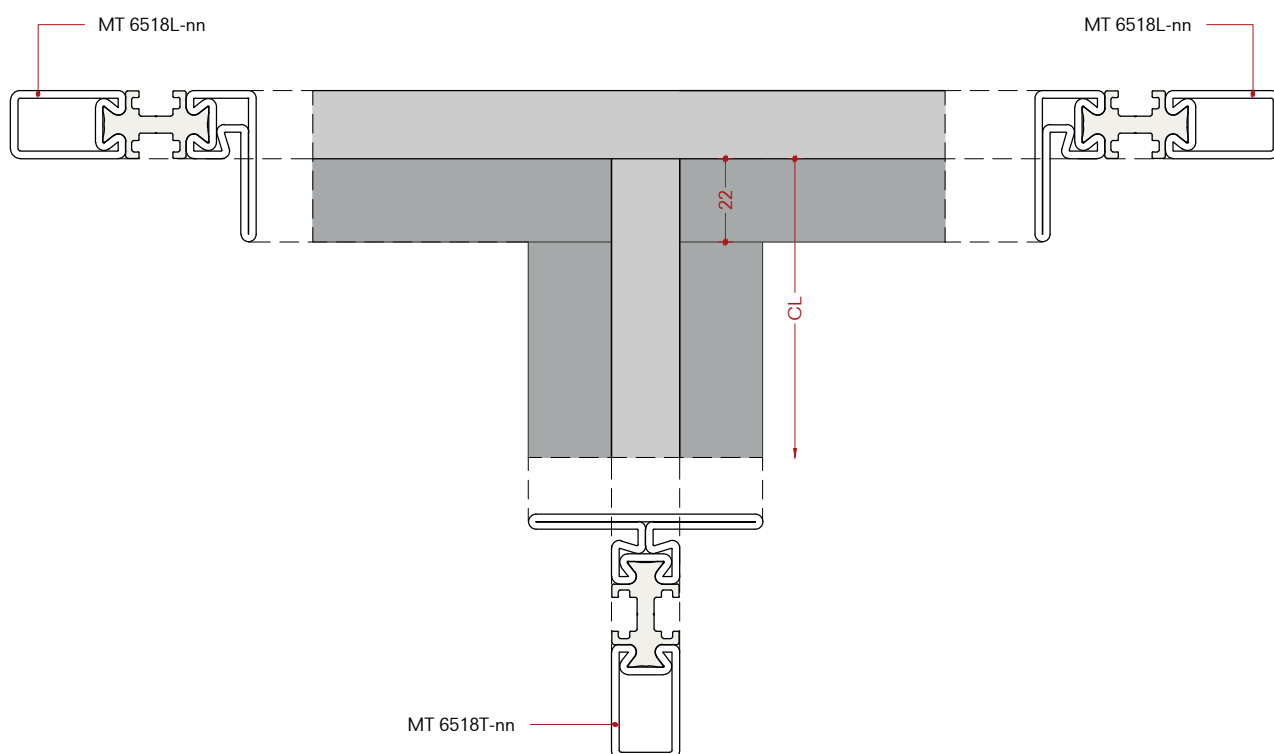
Window open in fixed partitions

Fenster nach innen öffnend in Festfeld

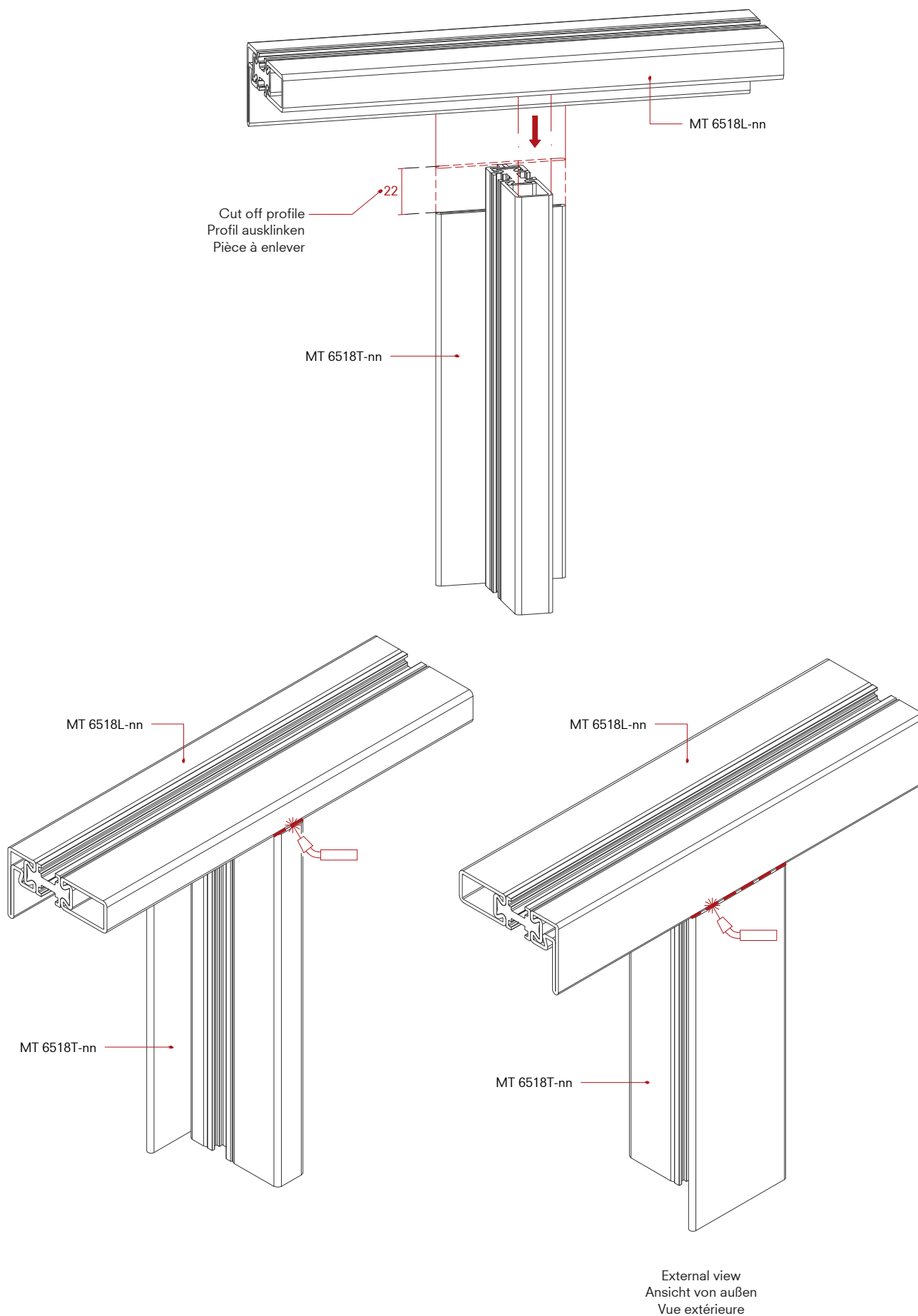
Fenêtre ouverture intérieure



Internal view  
Ansicht von innen  
Vue intérieure





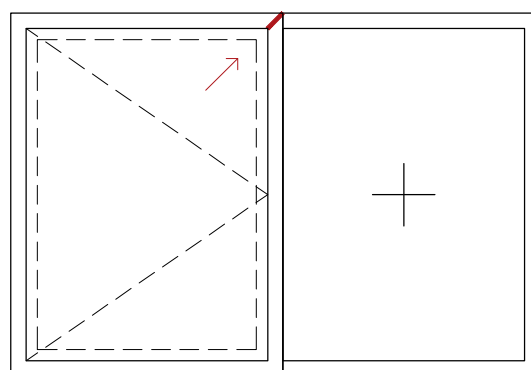


**MT 6518L-nn / MT 6518Z-nn**

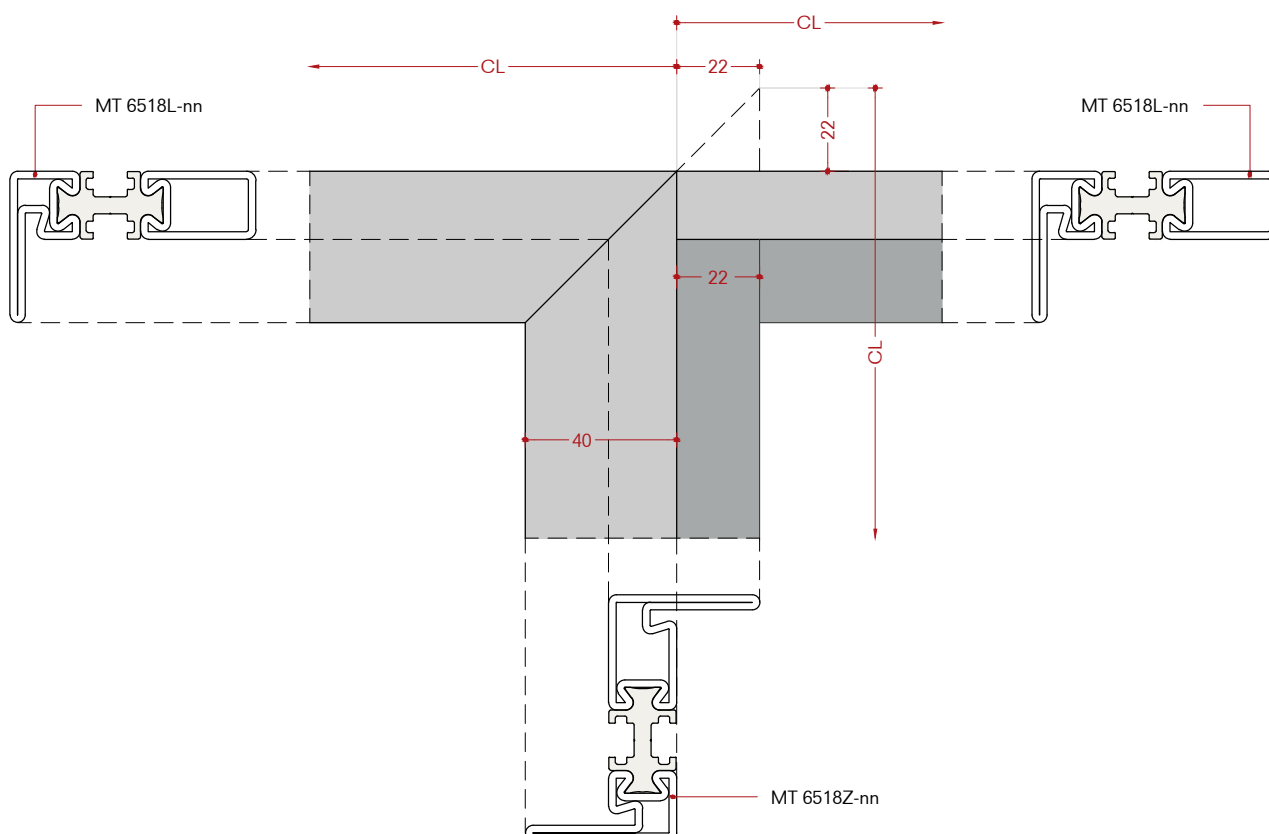
Window open out fixed partitions

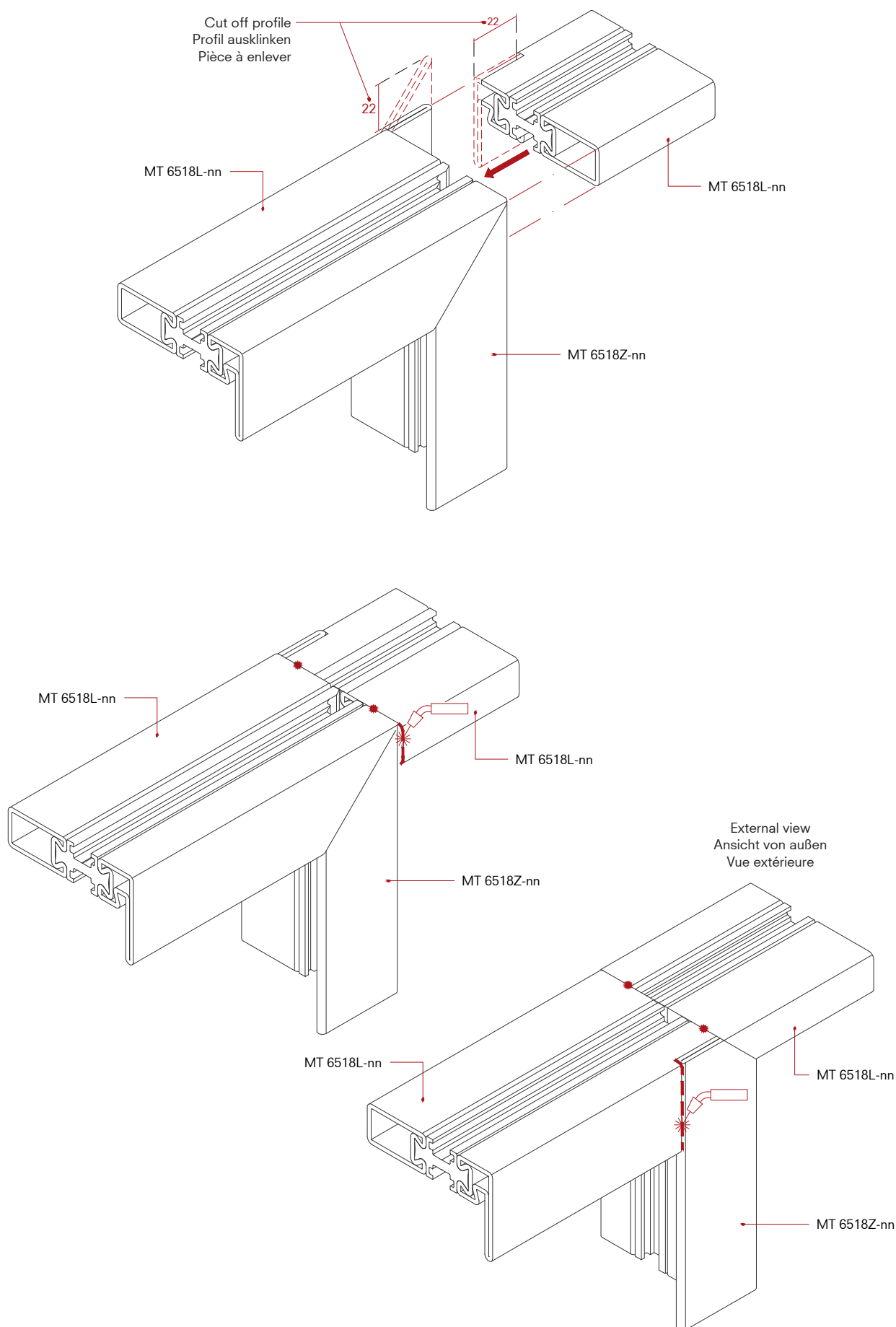
Fenster nach außen öffnend in Festfeld

Fenêtre ouverture extérieure



Internal view  
Ansicht von innen  
Vue intérieure



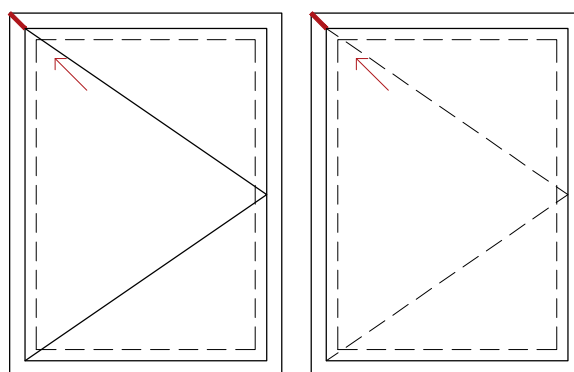


**MT 6518L-nn / MT 6518T-nn**

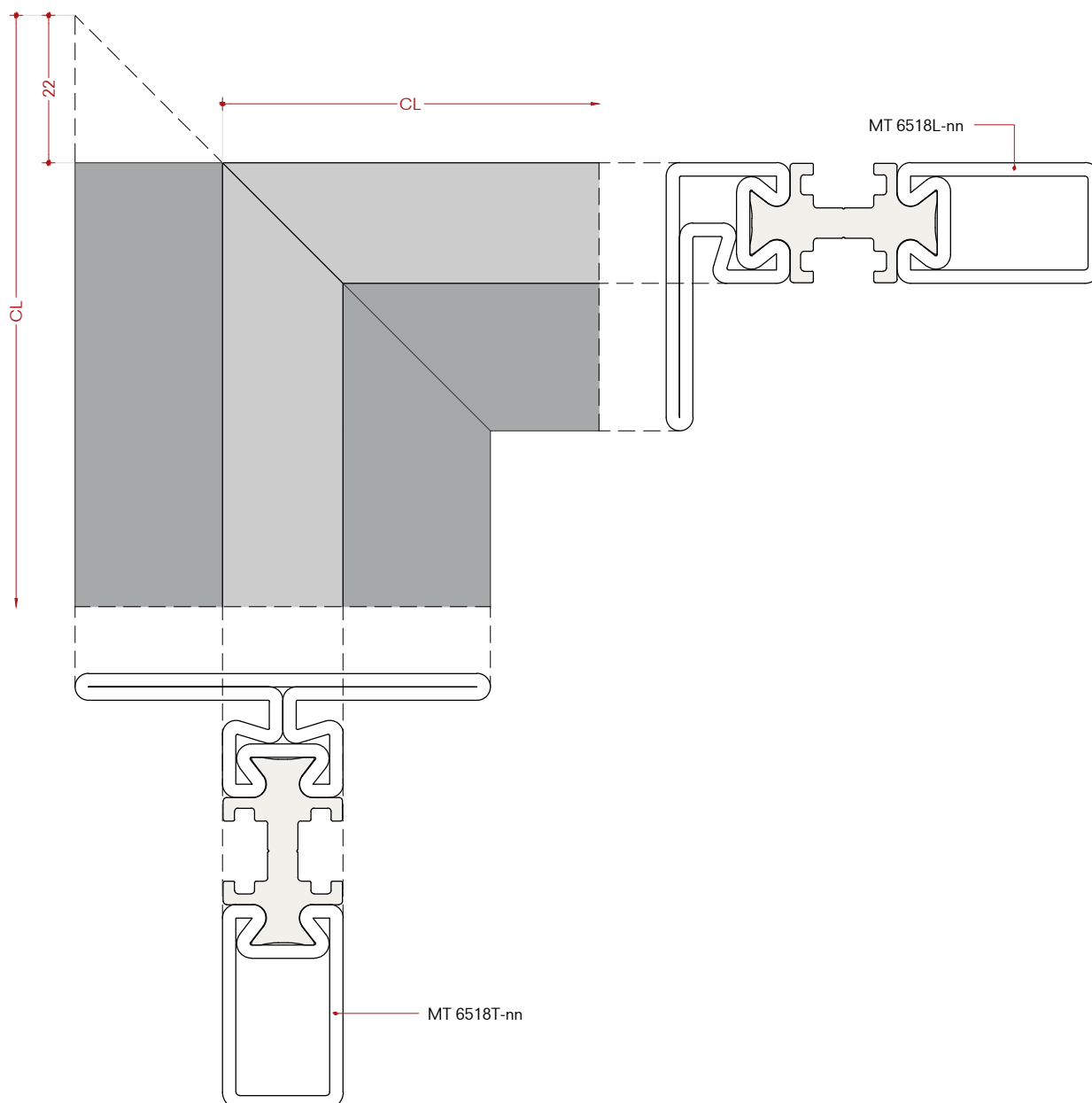
Window open in or open out

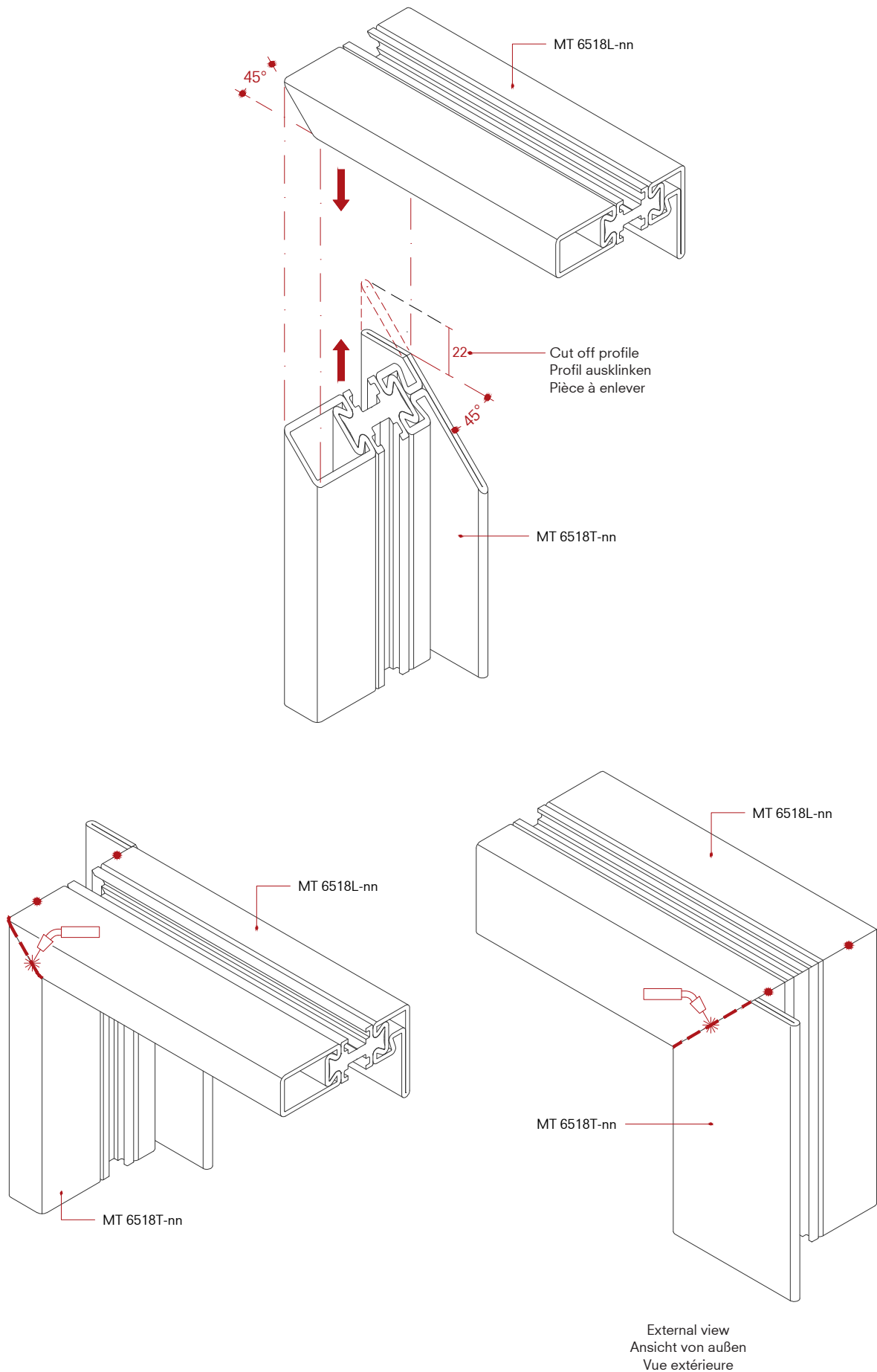
Fenster nach außen oder innen öffnend

Fenêtre ouverture intérieure ou extérieure



Internal view  
Ansicht von innen  
Vue intérieure



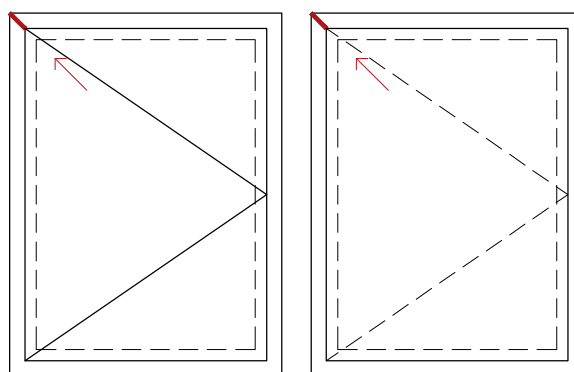


**MT 6518L-nn / MT 6518Z-nn**

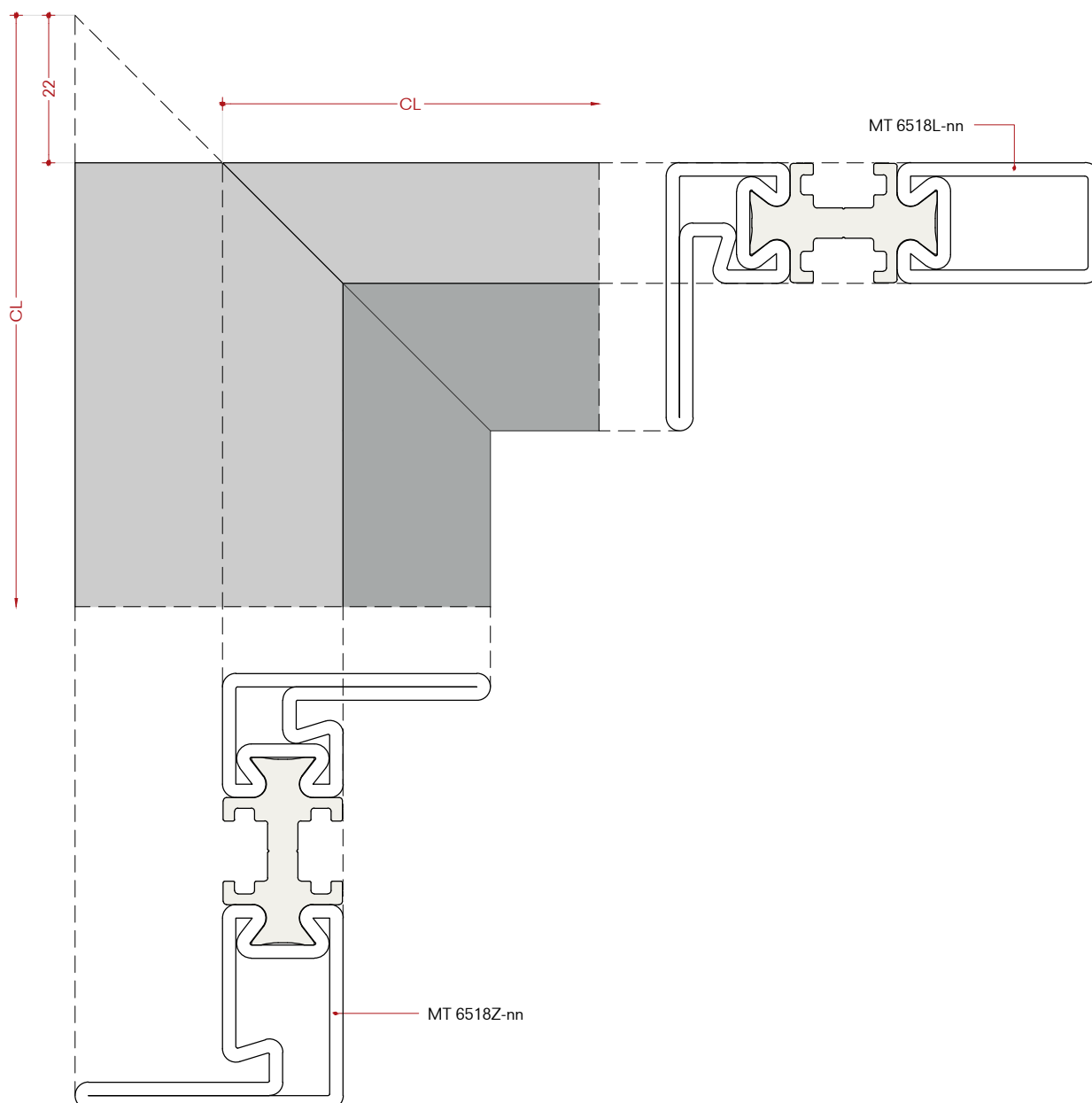
Window open in or open out

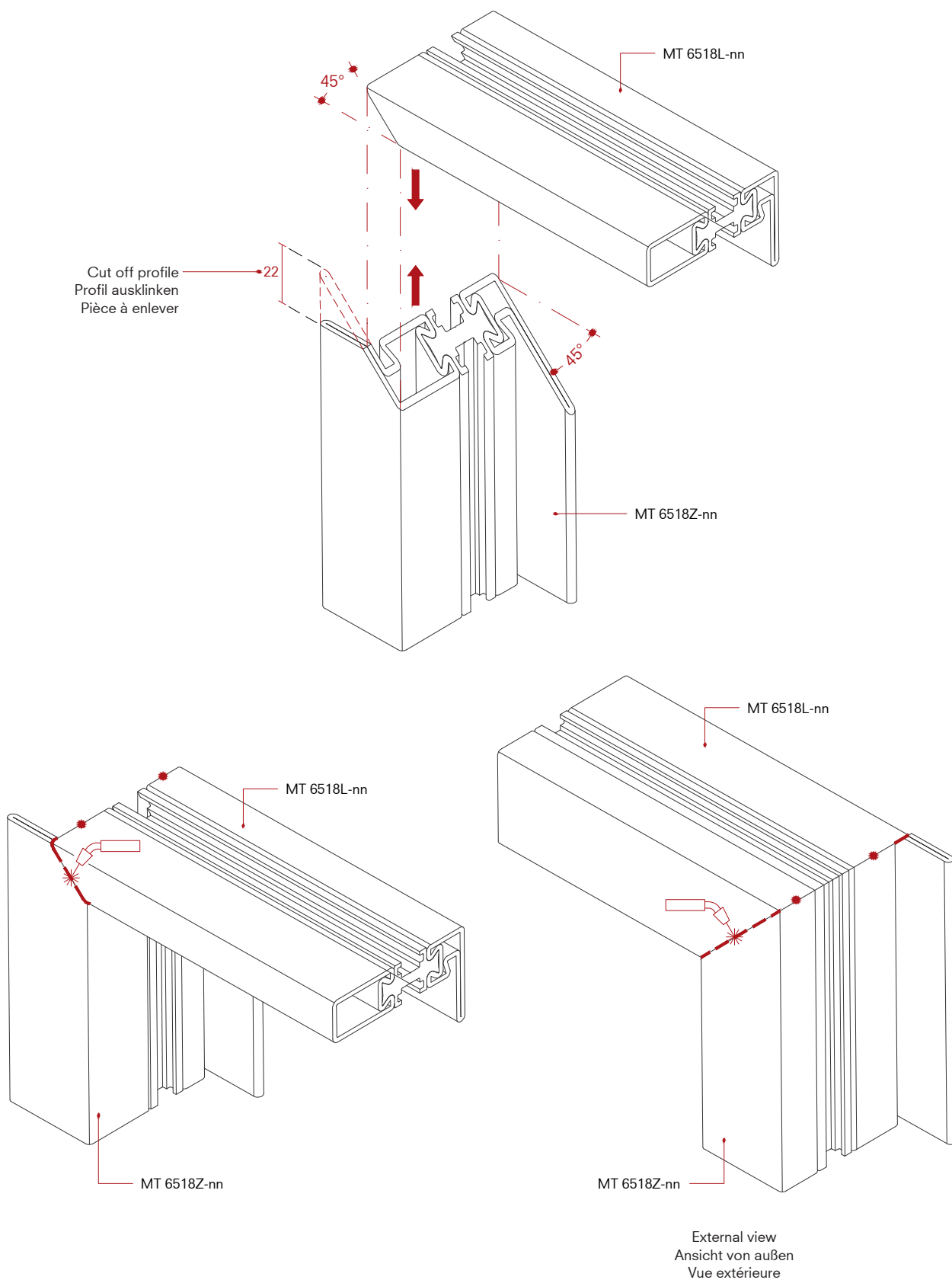
Fenster nach außen oder innen öffnend

Fenêtre ouverture intérieure ou extérieure



Internal view  
Ansicht von innen  
Vue intérieure



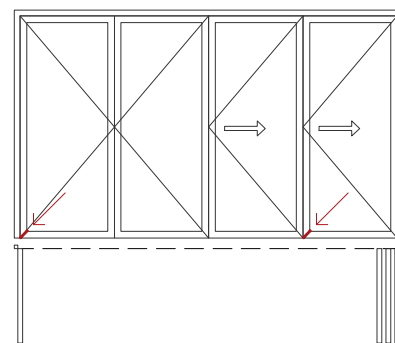


**MT 7218ZR-nn / MT 7218LR-nn**

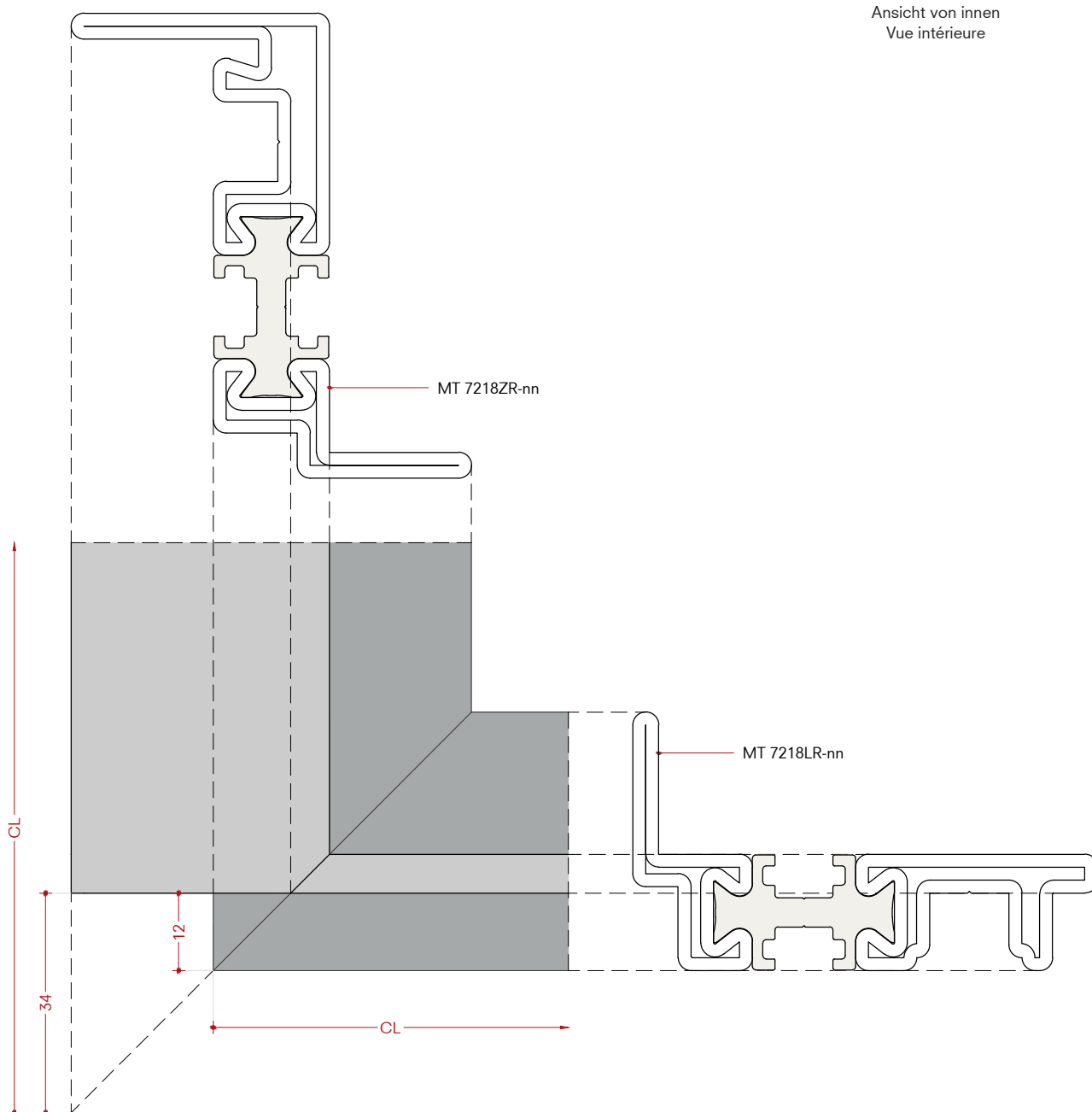
Bi-folding door system

Faltwand

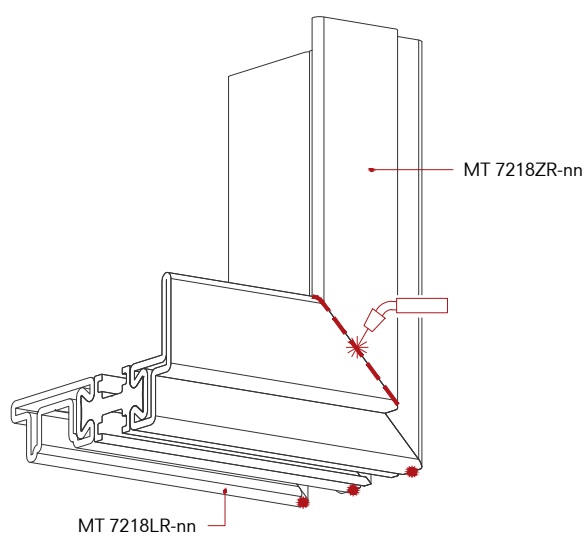
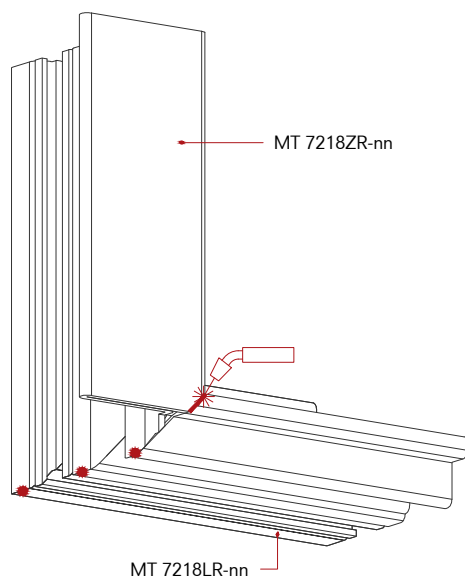
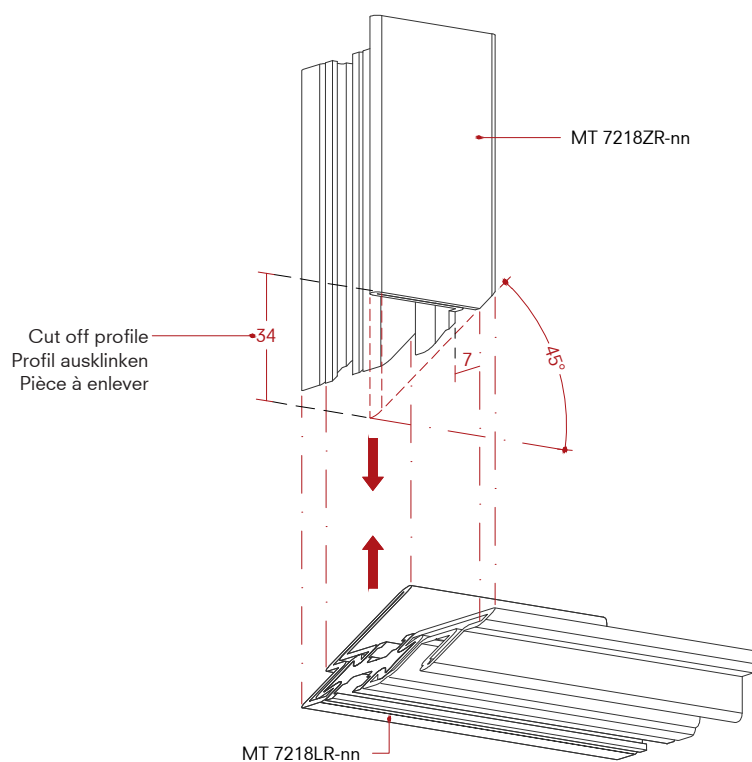
Système de porte accordéon



Internal view  
Ansicht von innen  
Vue intérieure







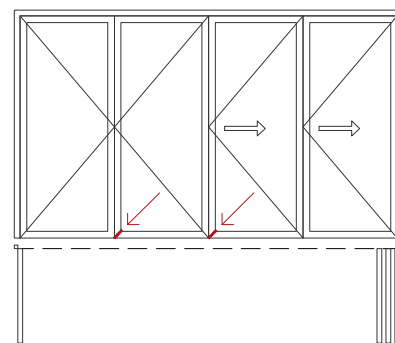
External view  
Ansicht von außen  
Vue extérieure

**MT 7218TZ-nn / MT 7218LR-nn**

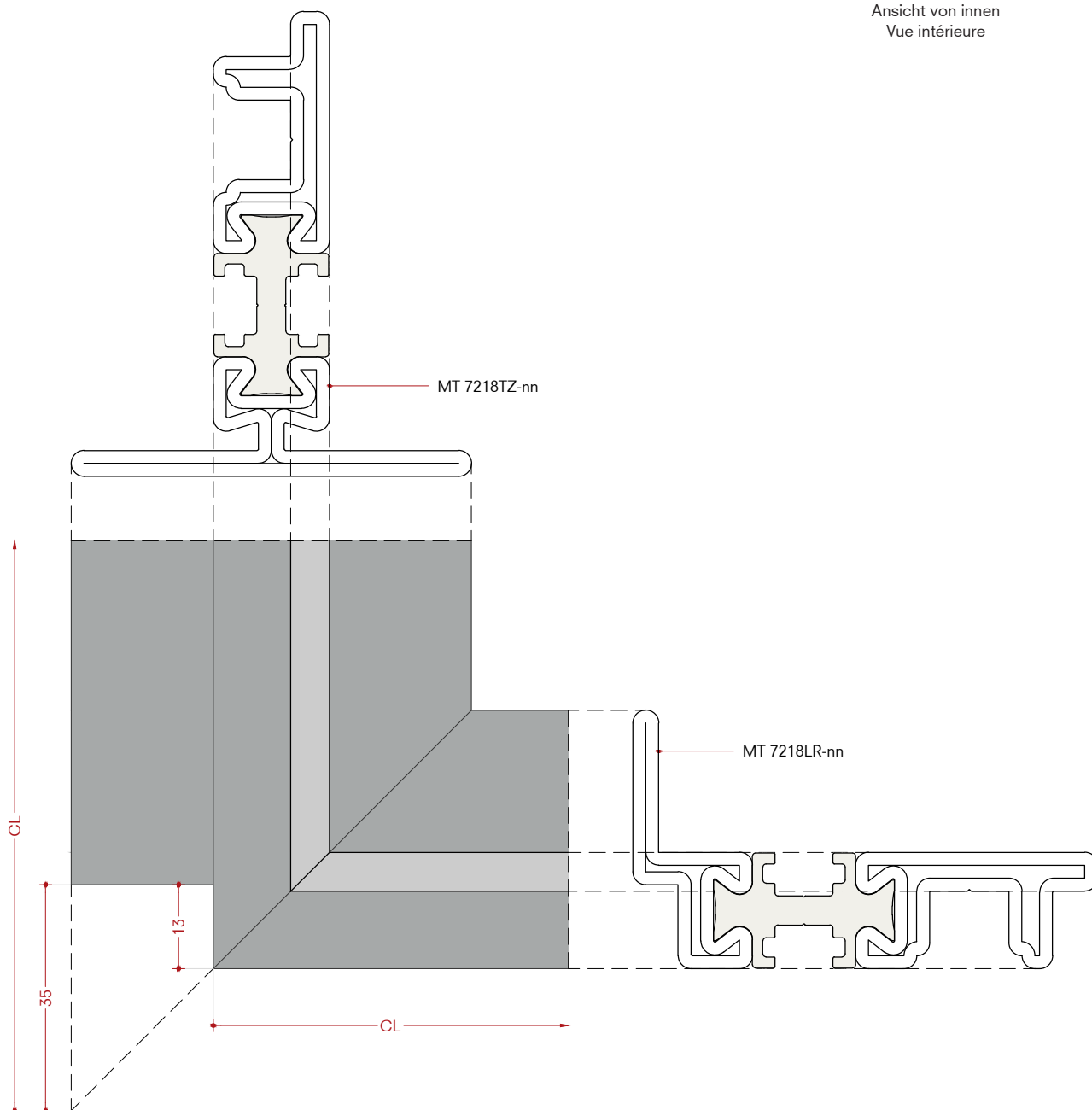
Bi-folding door system

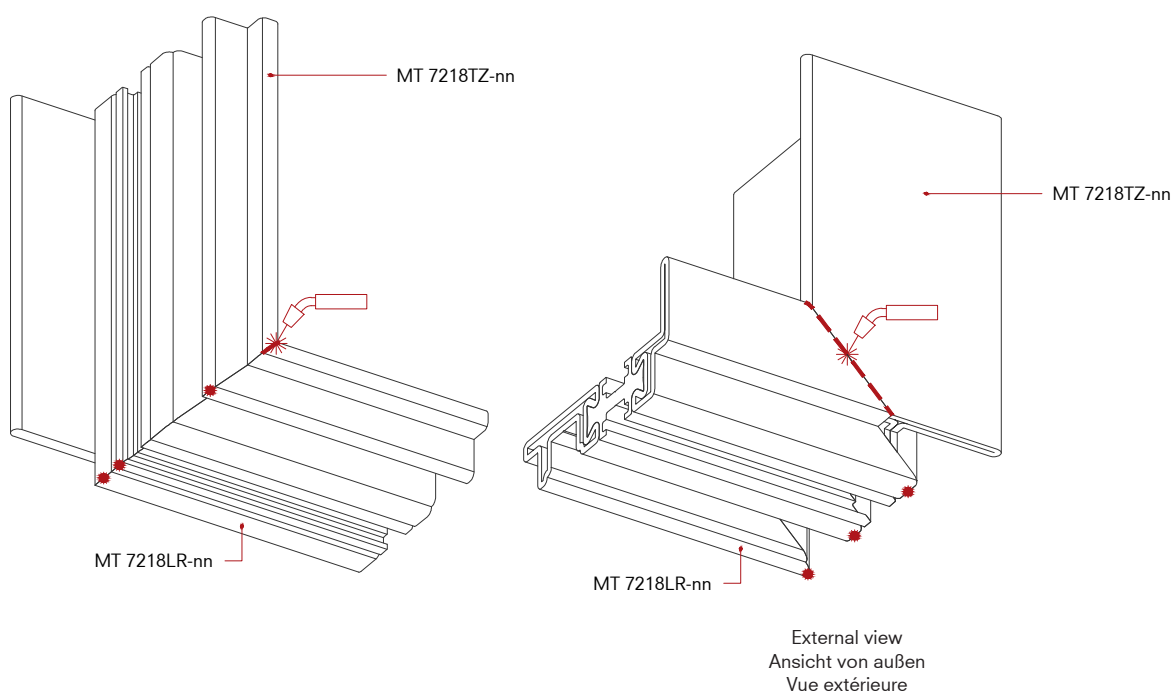
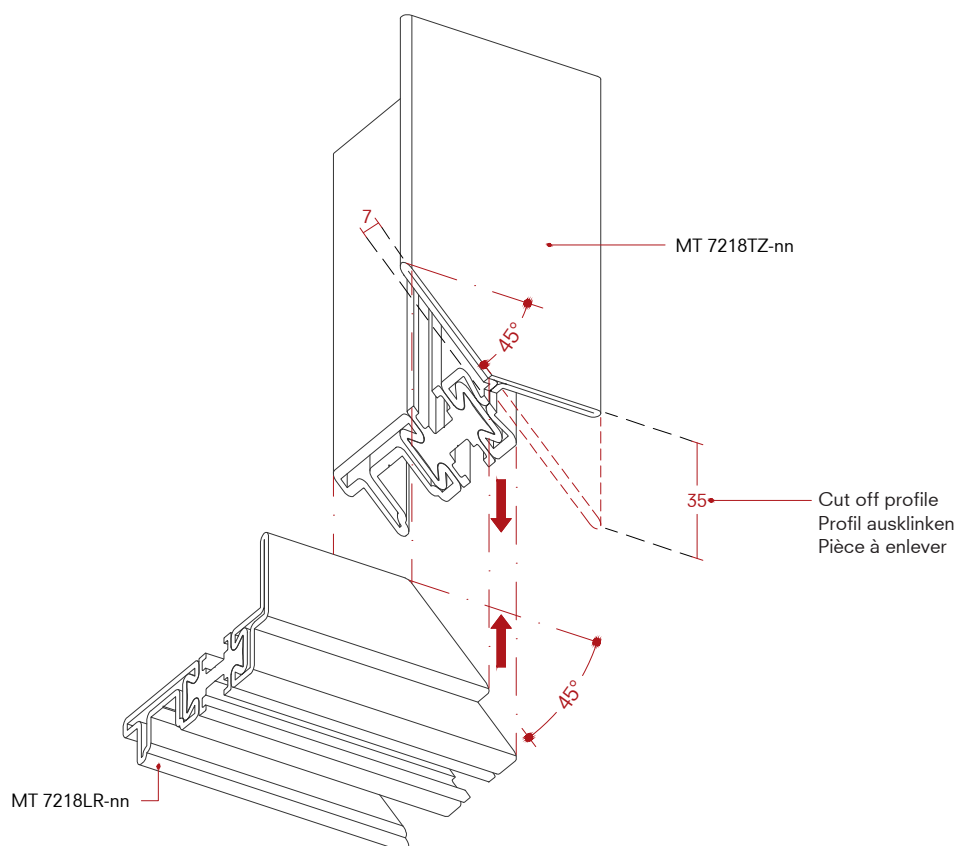
Faltwand

Système de porte accordéon



Internal view  
Ansicht von innen  
Vue intérieure







Accessories installation:

Montage Zubehör:

Montage accessoires:

Gaskets

Dichtungen

Joints

5.4

Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2  
CL = Cutting Length

Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2  
CL = Zuschnitt

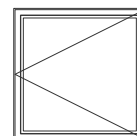
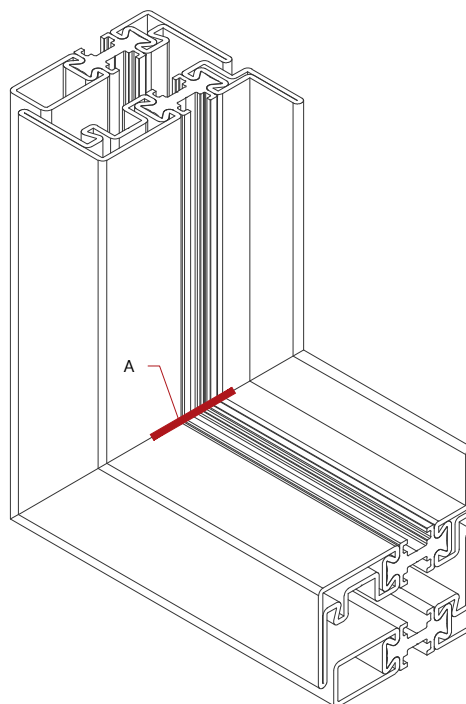
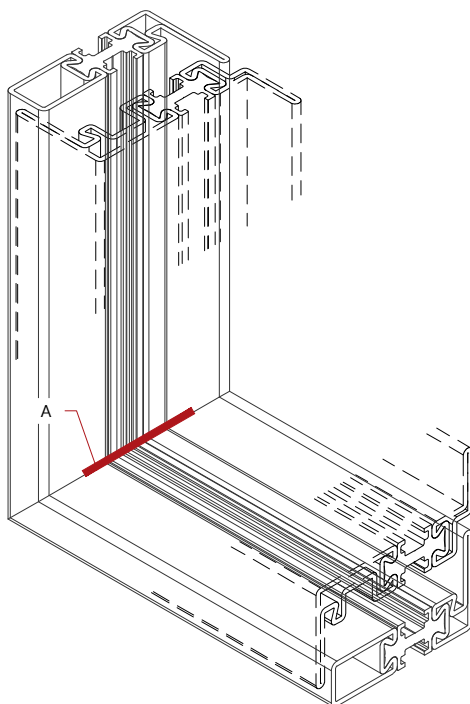
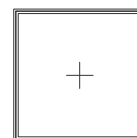
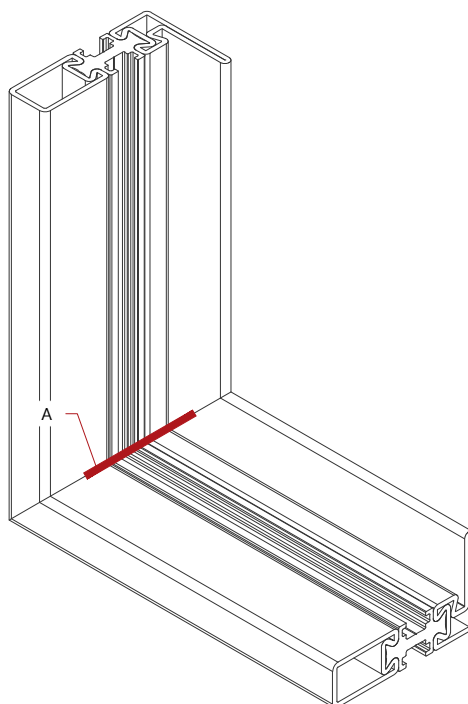
Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2  
CL = Découpe

**Sealing frame connections**  
Examples

**Abdichtung Rahmenverbindungen**  
Beispiele

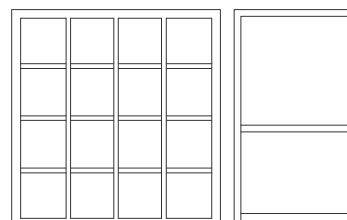
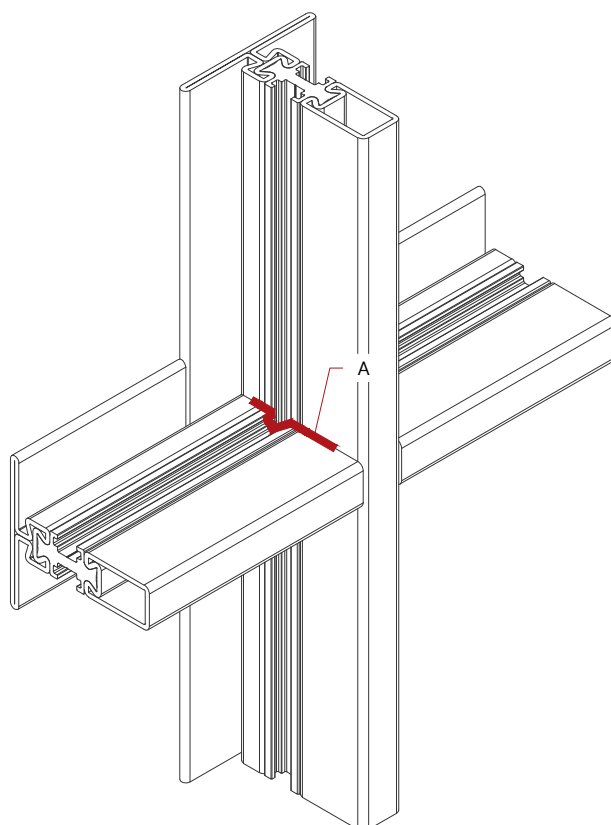
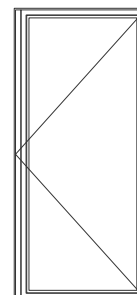
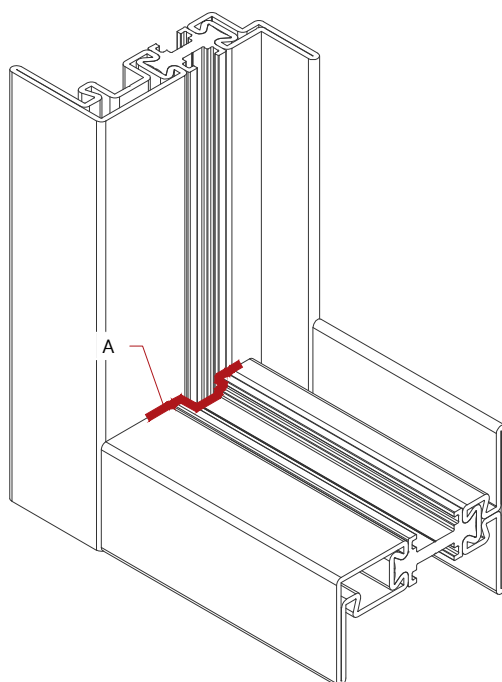
**Étanchéité de profilés**  
Exemples



A) For the closure of the zones not closed by welding in joined frame connections, we strongly recommend using a narrow joint sealant on thermal break, for 45° and 90° cuttings after the painting.

A) Für die Schließung der Zonen von nicht durch Schweißen geschlossenen Fügezonen bei Rahmenverbindungen (90° stumpf und 45° auf Gehrung) empfehlen wir dringend die Verwendung eines geeigneten dünnflüssigen Dichtstoffes bei Polyamid Isolator nach dem Gemälde.

A) Pour la fermeture des zones de joint qui ne sont pas fermées par soudage lors de l'assemblage (45° et 90°) des cadres, nous vous recommandons instamment d'utiliser le produit d'étanchéité sur polyamide, après la peinture.



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### Cutting

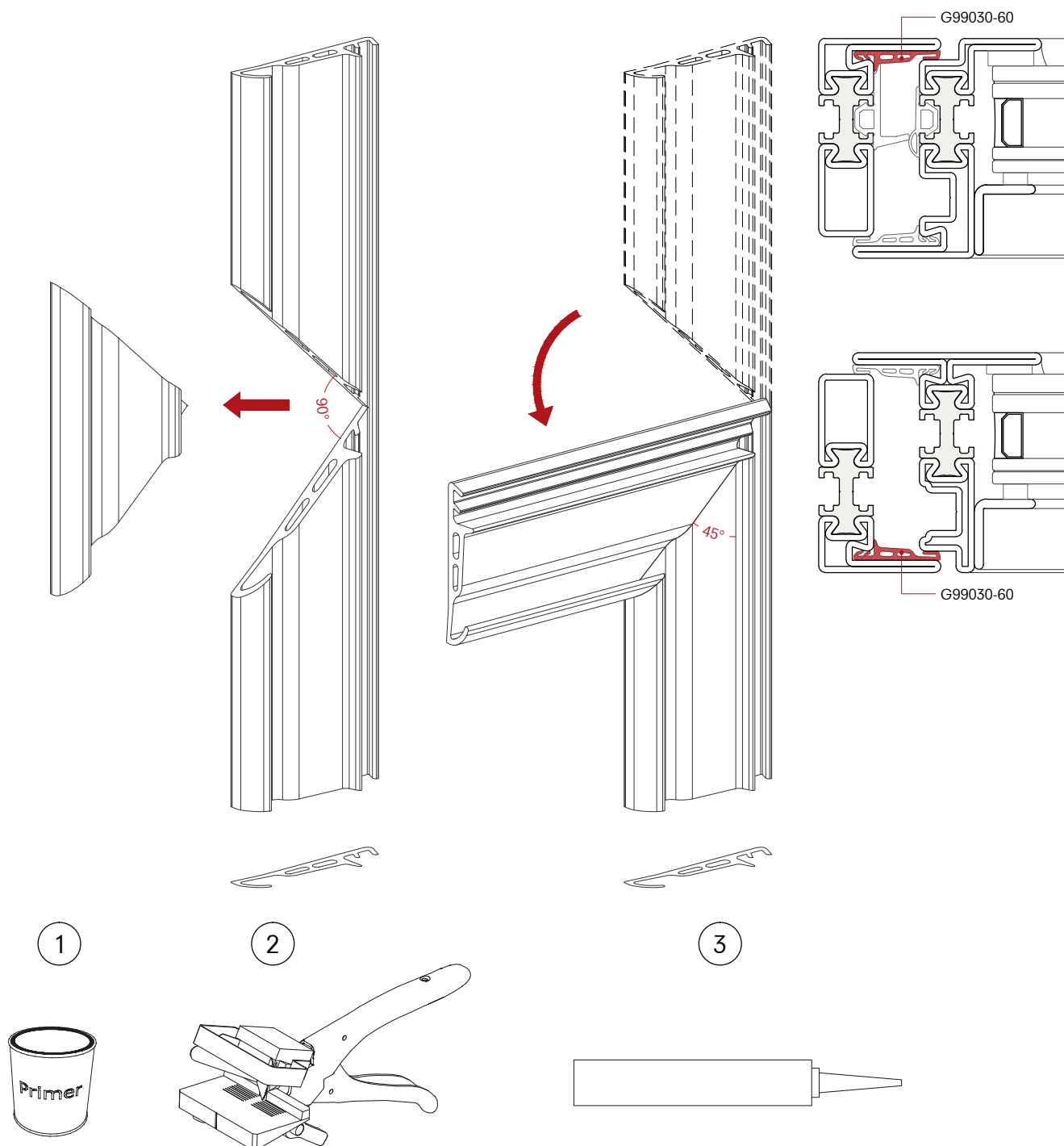
Rebate gasket G99030-60 at 45°  
Open in and open out  
Frame gasket all around

### Ausklükung

Anschlagdichtung G99030-60 auf 45°  
Nach innen und außen öffnend  
Rahmen Dichtung umlaufend

### Découpe

Joint de butée G99030-60 a 45°  
Ouverture intérieure et extérieure  
Cadre joint d'étanchéité tout autour



- 1) Clean surface and apply primer I99005-75
- 2) Use seal scissor D99543-02
- 3) Glue with sealant OS 364991

- 1) Oberfläche reinigen und Primer I99005-75 auftragen.
- 2) Verwenden sie die Dichtungsschere D99543-02
- 3) Mit Dichtstoff OS 364991 verkleben

- 1) Nettoyer la surface et appliquer le primaire I99005-75
- 2) Utiliser pinces pour joint d'étanchéité D99543-02
- 3) Sceller avec adhésif OS 364991



### Cutting

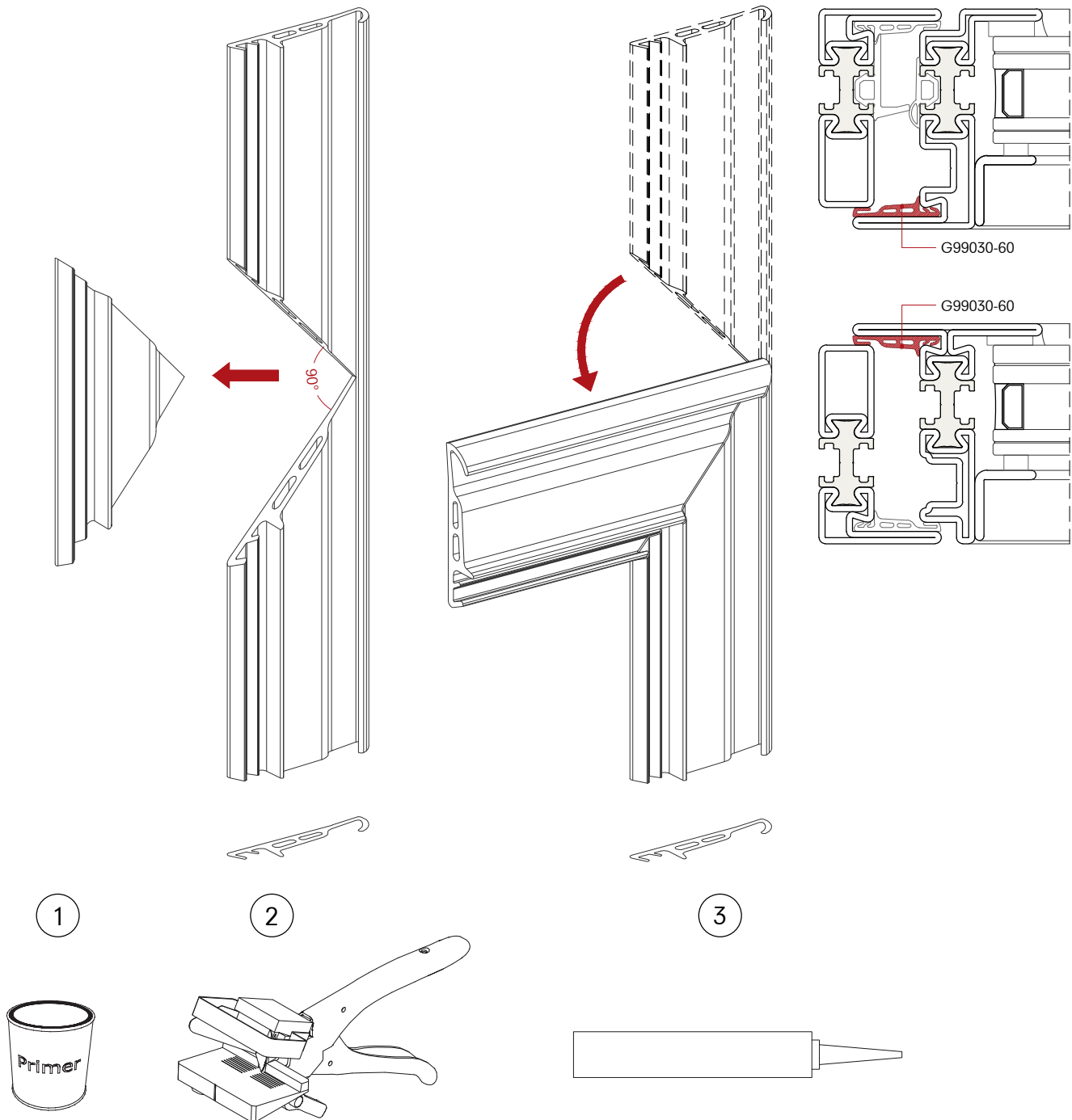
Rebate gasket G99030-60 at 45°  
Open in and open out  
Leaf gasket all around

### Ausklinkung

Anschlagdichtung G99030-60 auf 45°  
Nach innen und außen öffnend  
Flügel Dichtung umlaufend

### Découpe

Joint de butée G99030-60 a 45°  
Ouverture intérieure et extérieure  
Vantail joint d'étanchéité tout autour



- 1) Clean surface and apply primer I99005-75
- 2) Use seal scissor D99543-02
- 3) Glue with sealant OS 364991

- 1) Oberfläche reinigen und Primer I99005-75 auftragen.
- 2) Verwenden sie die Dichtungsschere D99543-02
- 3) Mit Dichtstoff OS 364991 verkleben

- 1) Nettoyer la surface et appliquer le primaire I99005-75
- 2) Utiliser pinces pour joint d'étanchéité D99543-02
- 3) Sceller avec adhésif OS 364991

### Cutting

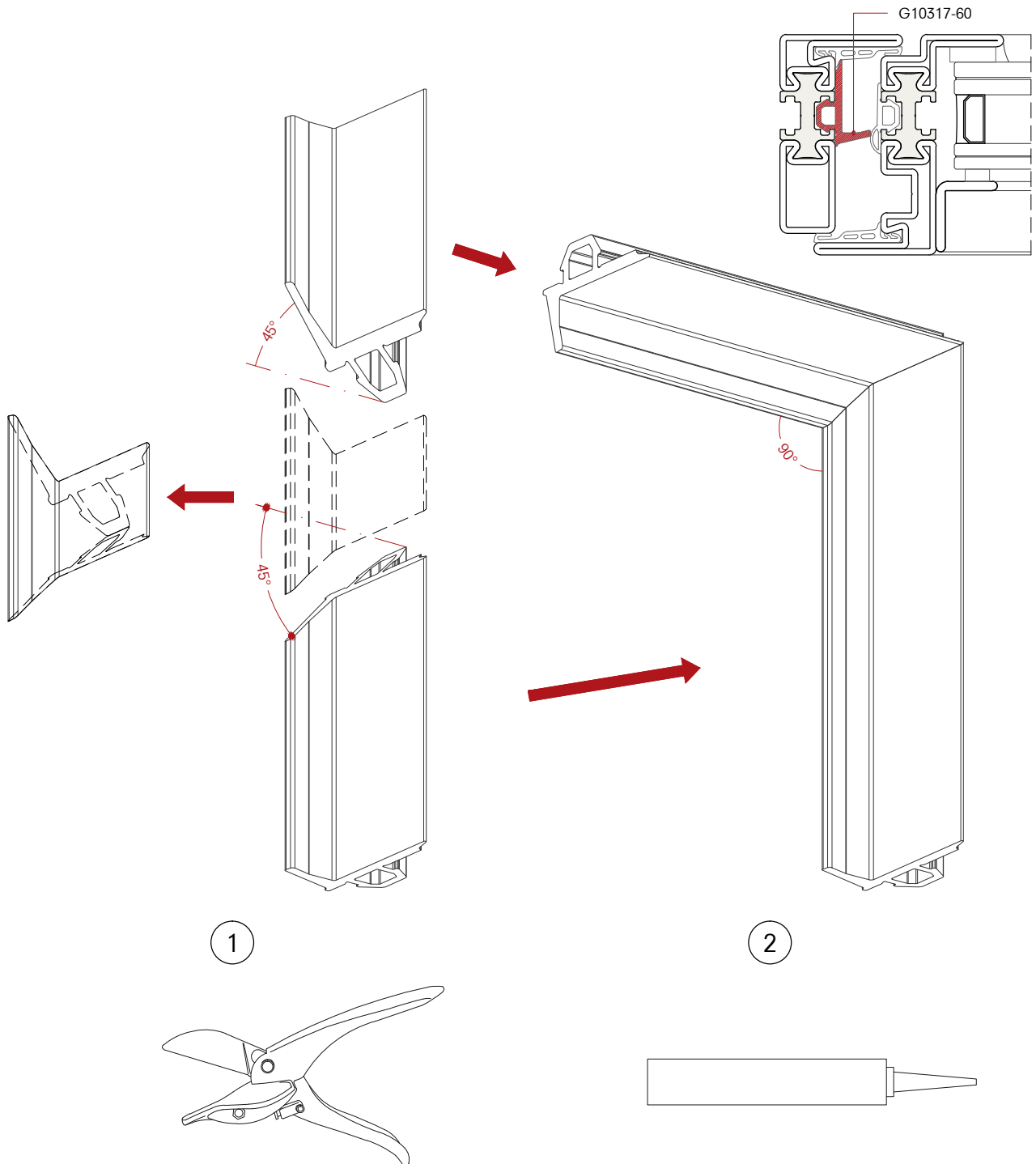
Middle stop profile G10317-60 at 45°  
Frame open in  
Gasket all around

### Ausklückung

Mittelanschlagprofils G10317-60 auf 45°  
Rahmen nach innen öffnend  
Dichtung umlaufend

### Découpe

Butée central G10317-60 à 45°  
Cadre ouverture intérieure  
Joint d'étanchéité tout autour



- 1) Use seal scissor D99540-02
- 2) Glue with sealant OS 364991

- 1) Verwenden sie die Dichtungsschere D99540-02
- 2) Mit Dichtstoff OS 364991 verkleben

- 1) Utiliser pinces pour joint d'étanchéité D99540-02
- 2) Sceller avec adhésif OS 364991

### Cutting

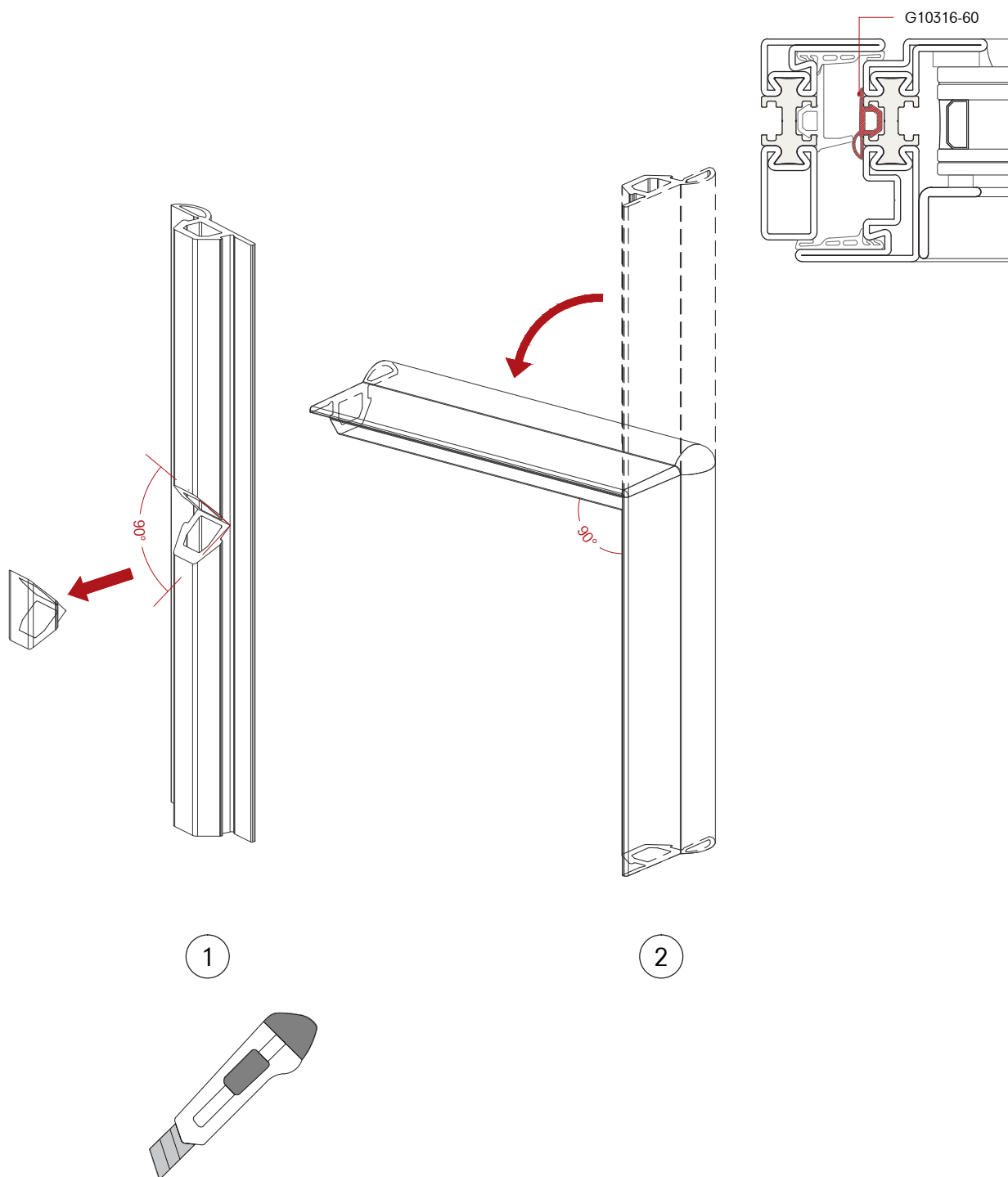
Middle stop profile G10317-60 at 45°  
Leaf open in  
Gasket all around

### Ausklükung

Mittelanschlagprofils G10317-60 auf 45°  
Flügel nach innen öffnend  
Dichtung umlaufend

### Découpe

Butée central G10317-60 a 45°  
Vantail ouverture intérieure  
Joint d'étanchéité tout autour



- 1) Use a standard cutter
- 2) Lay the gasket around the corner

- 1) Verwenden sie einen handelsüblichen cutter
- 2) Dichtung um die ecke legen

- 1) Utiliser un cutter classique
- 2) Tirer le joint d'étanchéité dans le coin

### Installation

Brush gasket G99402-62  
and brush support A99401-00

### Einbau

Bürstendichtung G99402-62 und  
bürstenaufnahmeprofil A99401-00

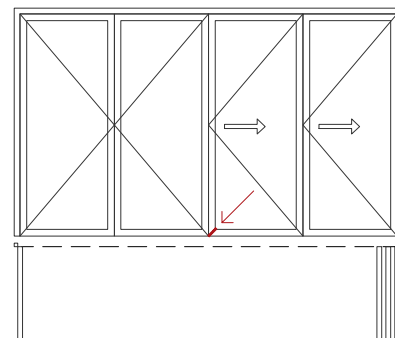
### Schéma de montage

Joint à brosse G99402-62  
et profilé maintien brosse A99401-00

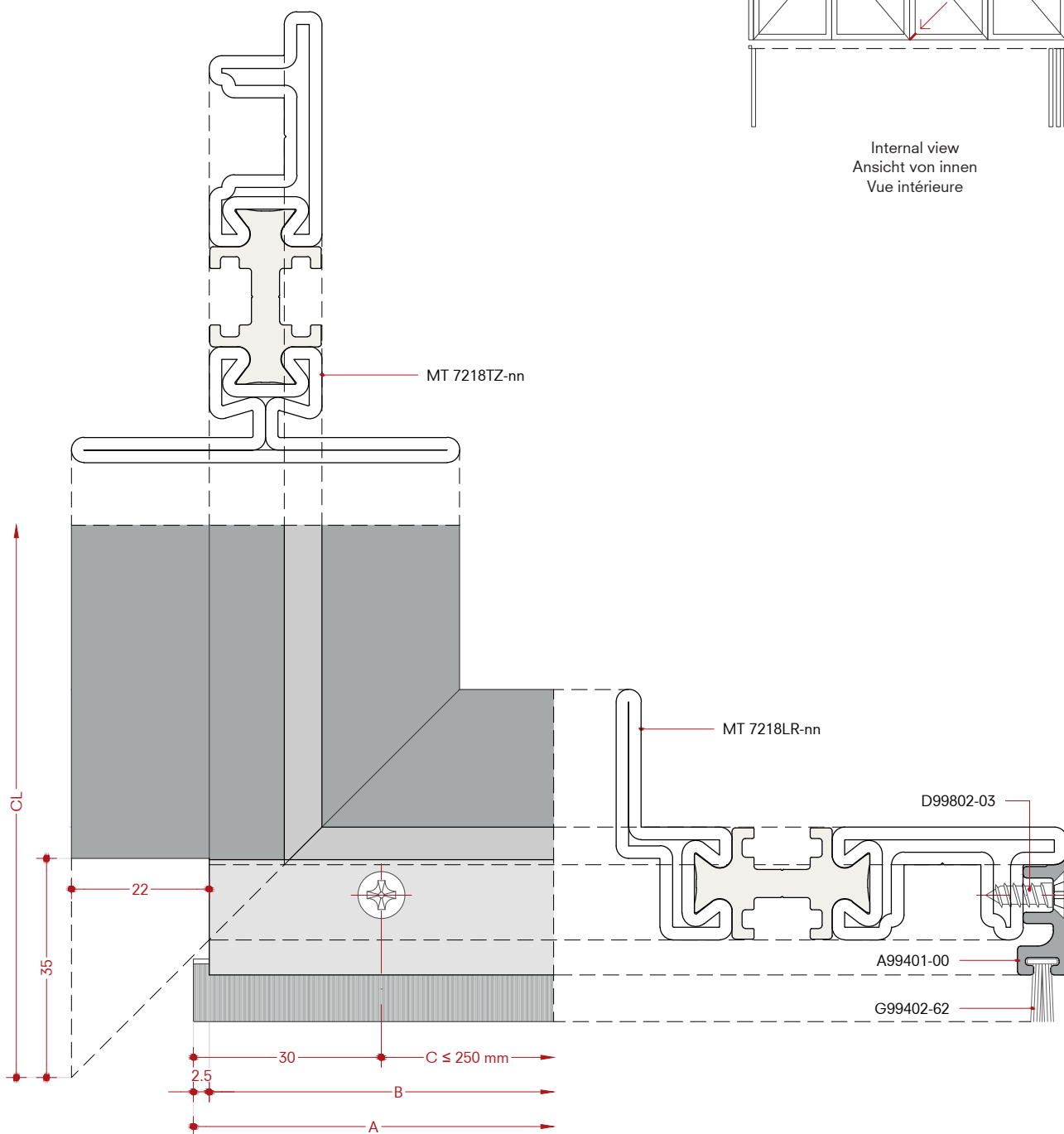
Bi-folding door system

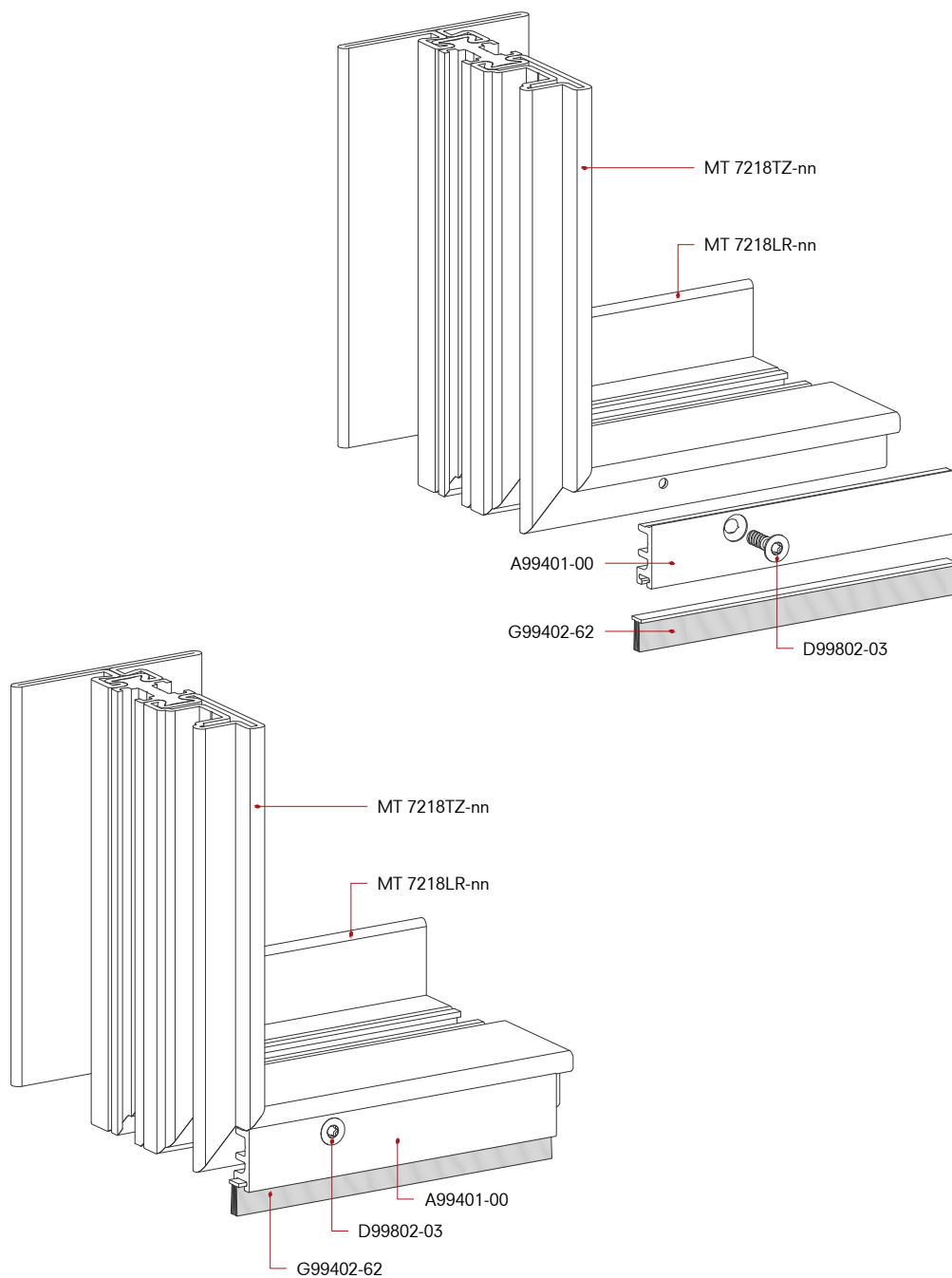
Faltwand

Système de porte accordéon



Internal view  
Ansicht von innen  
Vue intérieure





A) Cutting length brush gasket G99402-62  
B) Cutting length brush support A99401-00  
C) Screw joint distance D99802-03

A) Zuschnitt Bürstendichtung G99402-62  
B) Zuschnitt Bürstenaufnahmeprofil A99401-00  
C) Verschraubungsabstand D99802-03

A) Longueur découpe joint à brosse G99402-62  
B) Longueur découpe profilé maintien brosse A99401-00  
C) Distance entre les vis D99802-03

### Installation

Brush gasket G99402-62  
and brush support A99401-00  
And neoprene 15x15x5 mm

### Einbau

Bürstendichtung G99402-62 und  
bürstenaufnahmeprofil A99401-00  
Und Neopren 15x15x5 mm

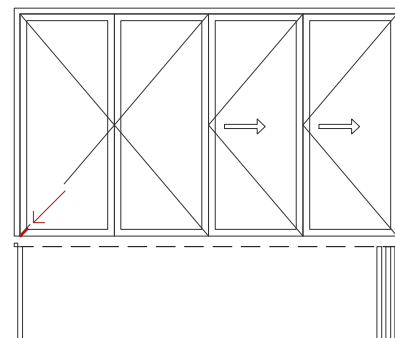
### Schéma de montage

Joint à brosse G99402-62 et profilé  
maintien brosse A99401-00  
Et néoprène 15x15x5 mm

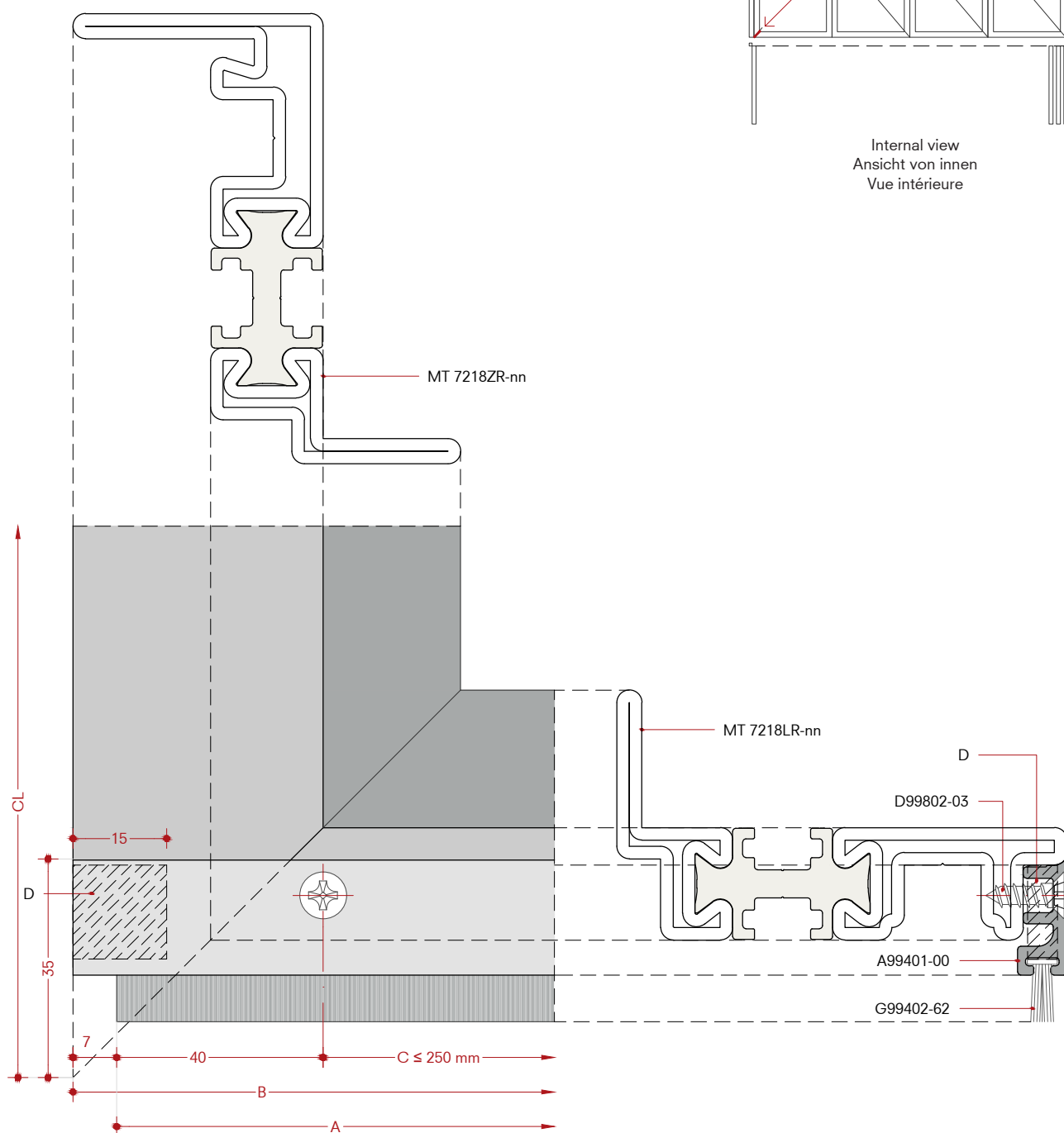
Bi-folding door system

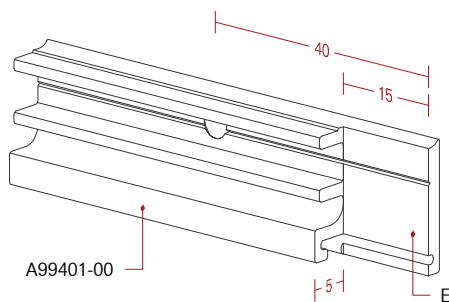
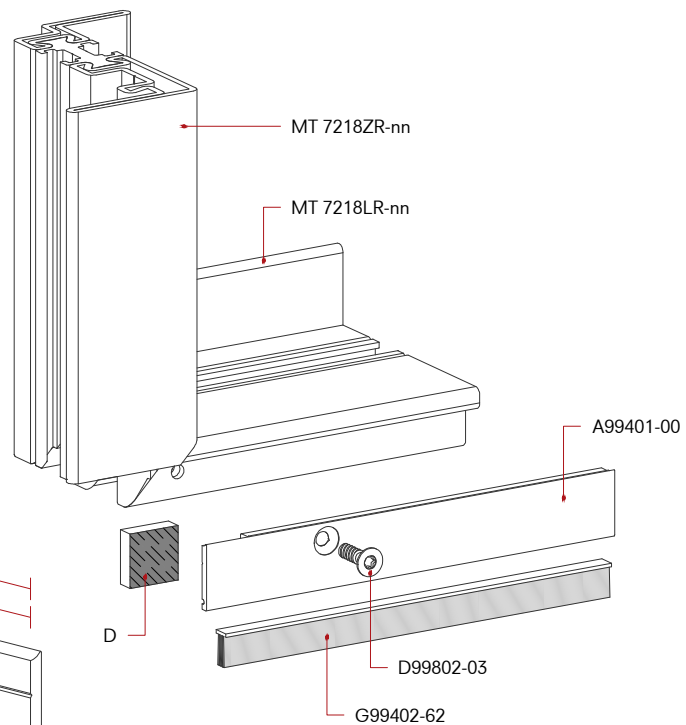
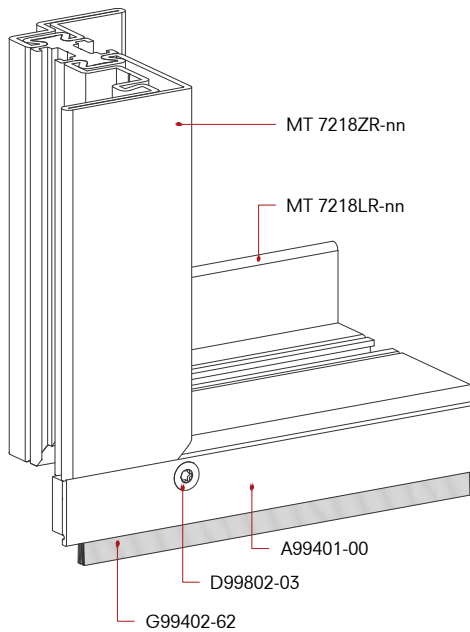
Faltwand

Système de porte accordéon



Internal view  
Ansicht von innen  
Vue intérieure





- A) Cutting length brush gasket G99402-62  
B) Cutting length brush support A99401-00  
C) Screw joint distance D99802-03  
D) Neoprene one-sided self-adhesive 15x15x5 mm in own production  
E) Cut off profile

- A) Zuschnitt Bürstendichtung G99402-62  
B) Zuschnitt Bürstenaufnahmeprofil A99401-00  
C) Verschraubungsabstand D99802-03  
D) Neopren einseitig selbstklebend 15x15x5 mm in Eigenfertigung  
E) Profil ausklinken

- A) Longueur découpe joint à brosse G99402-62  
B) Longueur découpe profilé maintien brosse A99401-00  
C) Distance entre les vis D99802-03  
D) Néoprène auto-adhésif sur une face 15x15x5 mm dans la production propre  
E) Pièce à enlever

### Installation

Brush gasket G99402-62  
and brush support A99401-00  
And neoprene 15x15x5 mm

### Einbau

Bürstendichtung G99402-62 und  
bürstenaufnahmeprofil A99401-00  
Und Neopren 15x15x5 mm

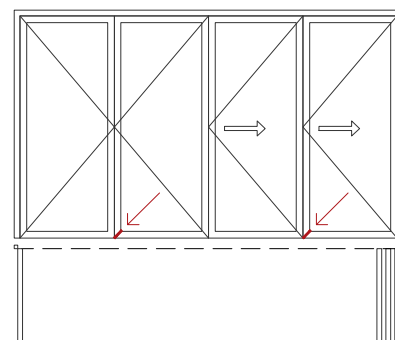
### Schéma de montage

Joint à brosse G99402-62 et profilé  
maintien brosse A99401-00  
Et néoprène 15x15x5 mm

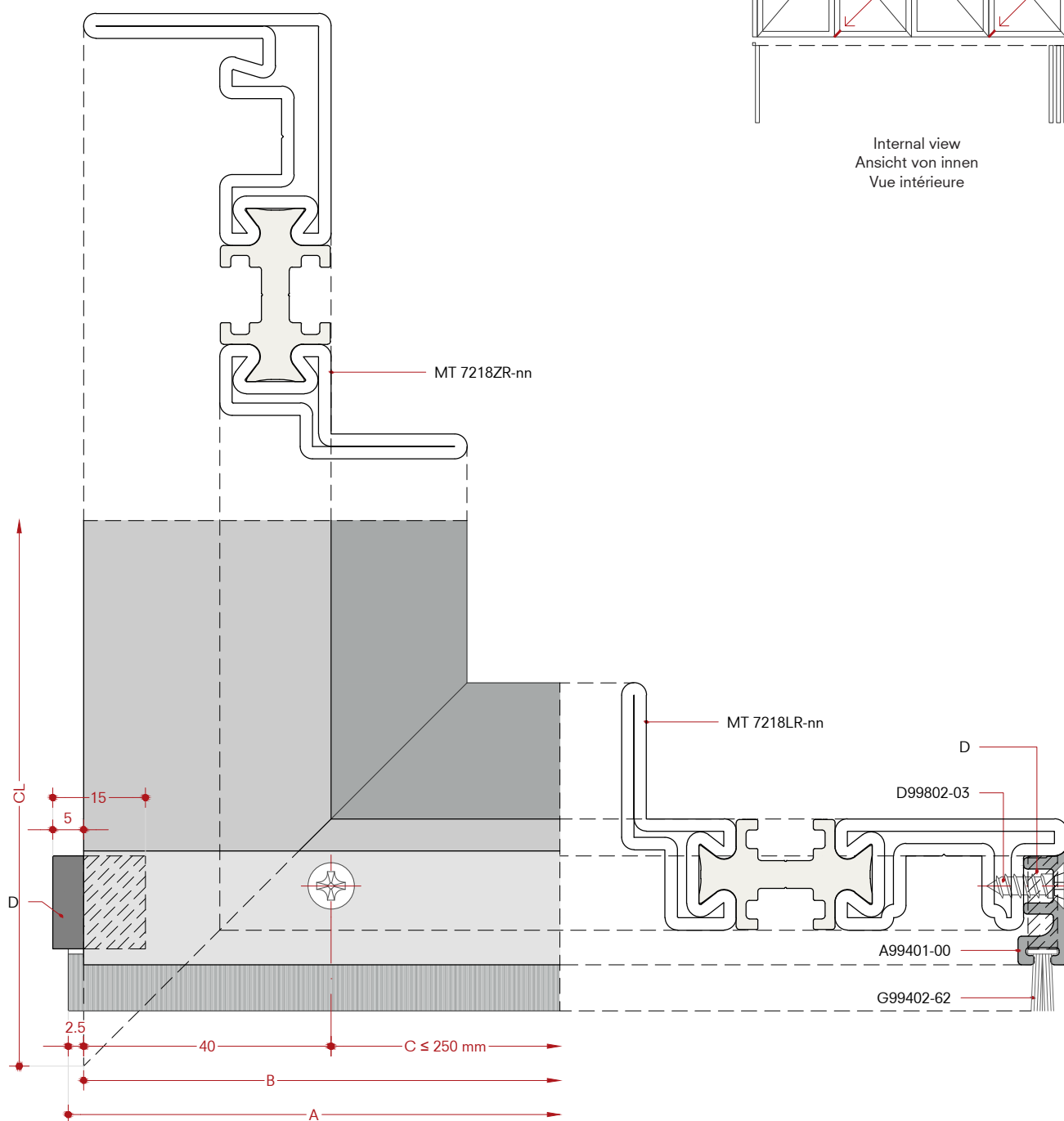
Bi-folding door system

Faltwand

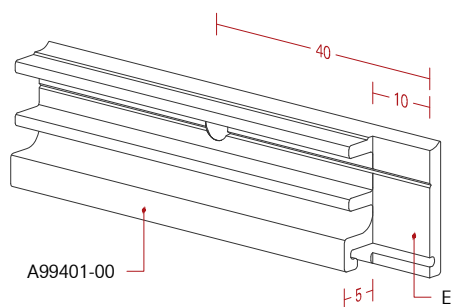
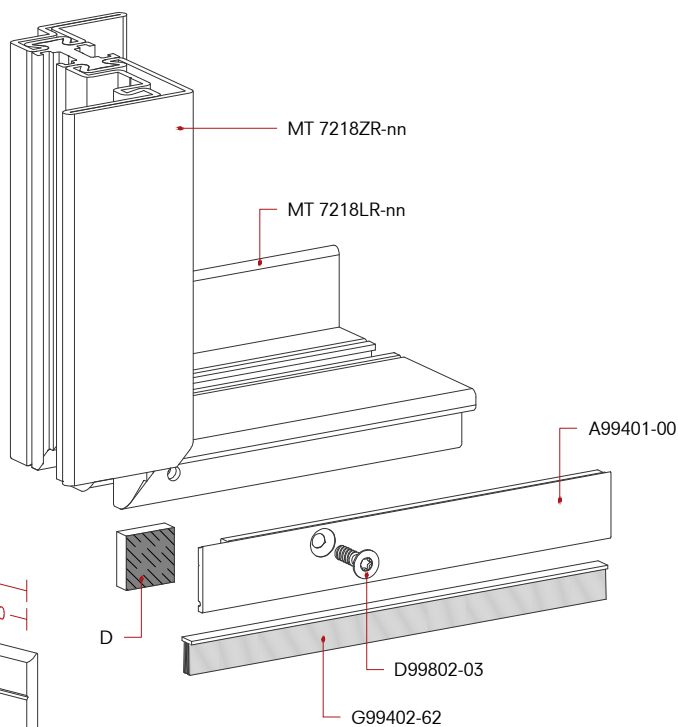
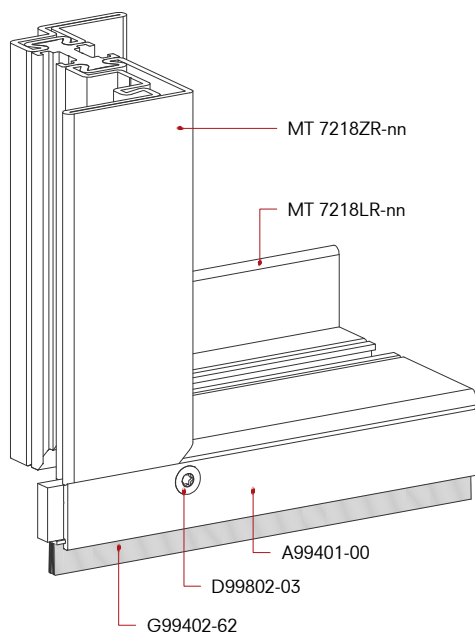
Système de porte accordéon



Internal view  
Ansicht von innen  
Vue intérieure







- A) Cutting length brush gasket G99402-62  
B) Cutting length brush support A99401-00  
C) Screw joint distance D99802-03  
D) Neoprene one-sided self-adhesive 15x15x5 mm in own production  
E) Cut off profile

- A) Zuschnitt Bürstendichtung G99402-62  
B) Zuschnitt Bürstenaufnahmeprofil A99401-00  
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- A) Longueur découpe joint à brosse G99402-62  
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C) Distance entre les vis D99802-03  
D) Néoprène auto-adhésif sur une face 15x15x5 mm dans la production propre  
E) Pièce à enlever



|                           |                  |                      |     |
|---------------------------|------------------|----------------------|-----|
| Accessories installation: | Montage Zubehör: | Montage accessoires: |     |
| System accessories        | Systemzubehör    | Accessoires système  | 5.5 |

### Processing and installation

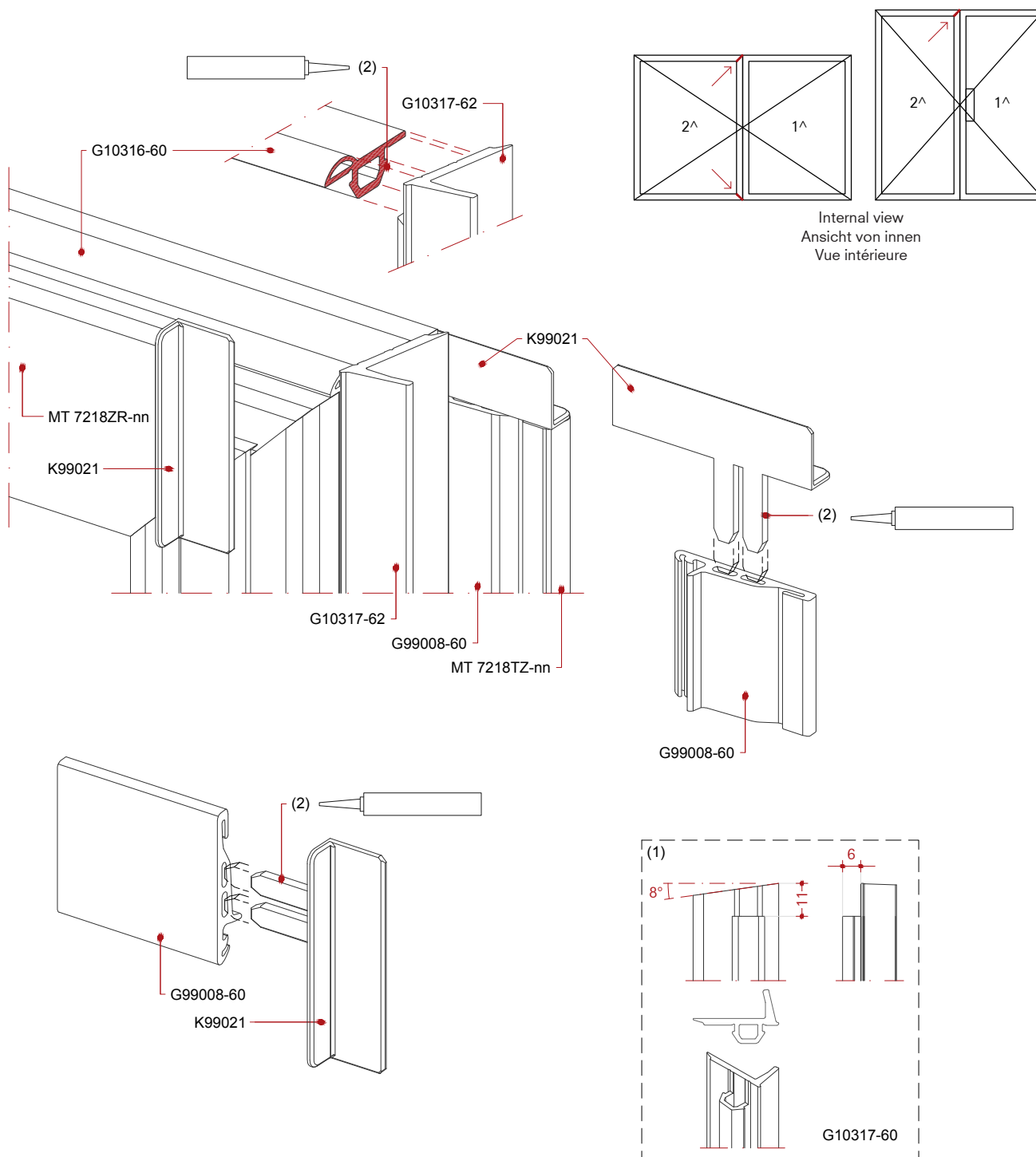
G10316-60, G10317-60 and K99021  
Double leaf open in

### Bearbeitung und Einbau

G10316-60, G10317-60 und K99021  
Stulpflügel innen öffnend

### Usinage et montage

G10316-60, G10317-60 et K99021  
Deux vantaux ouverture intérieure



- 1) Cutting of middle stop profile G10317-60
- 2) Glue with sealant OS 364991 (glue also on metal profile)

- 1) Bearbeitung mittelanschlagprofil G10317-60
- 2) Mit dichtstoff OS 364991 verkleben (auch auf das Metall des Profils kleben)

- 1) Découpe du butée central G10317-60
- 2) Sceller avec adhésif OS 364991 (aussi sceller sur le métal du profil)

## Processing and installation

G10316-60, G10317-60 and K99021

### Bi-folding door system

Open in

## Bearbeitung und Einbau

G10316-60, G10317-60 und K99021

## Faltwand

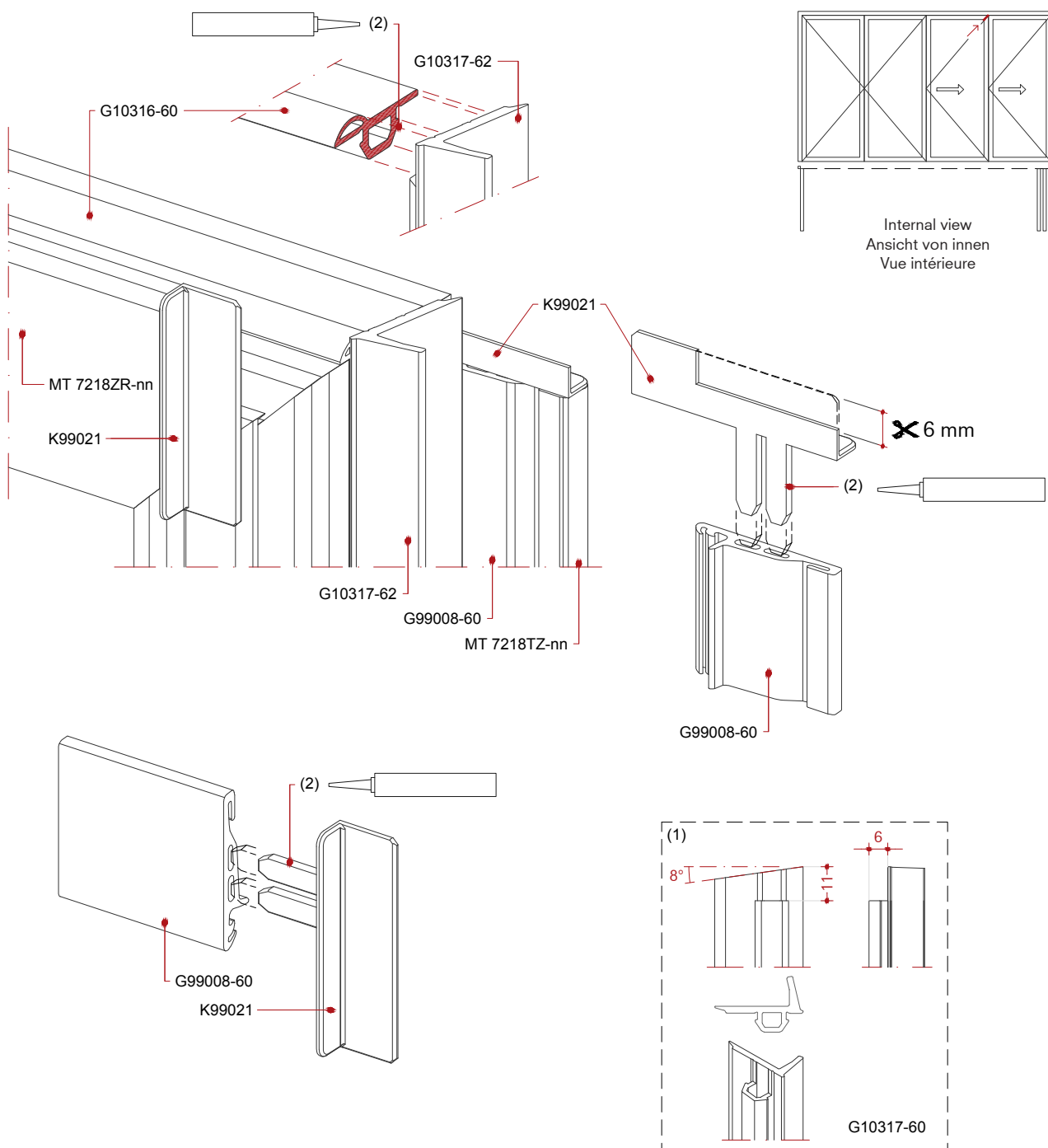
Nach innen öffnend

## Usinage et montage

G10316-60, G10317-60 et K99021

## Système de porte accordéon

### Ouverture intérieure



- 1) Cutting of middle stop profile G10317-60
- 2) Glue with sealant OS 364991 (glue also on metal profile)

- 1) Bearbeitung mittelanschlagprofil G10317-60
- 2) Mit dichtstoff OS 364991 verkleben (auch auf das Metall des Profils kleben)

- 1) Découpe du butée central G10317-60
- 2) Sceller avec adhésif OS 364991 (aussi sceller sur le métal du profil)

### Assembling

Cover cap A99201-35  
Open in  
Drain holes with cover caps.

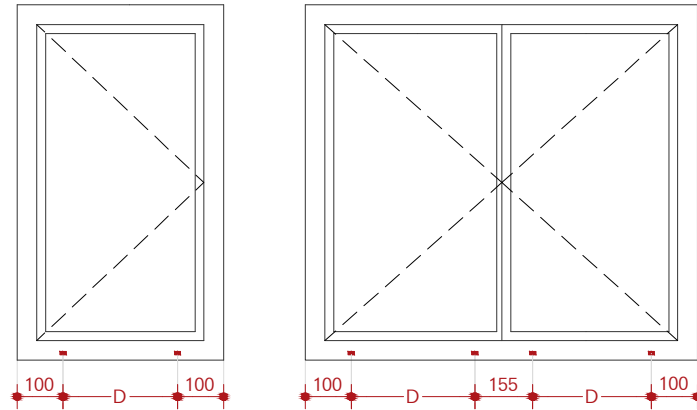
### Montage

Abdeckkappe A99201-35  
Nach innen öffnend  
Entwässerungsbohrungen mit  
abdeckkappen.

### Schéma de montage

Capuchon A99201-35  
Ouverture intérieure  
Trous de drainage.

Outside view / Ansicht von außen / Vue de l'extérieur



Min. n°02 drain holes/cover caps  
For single leaf window

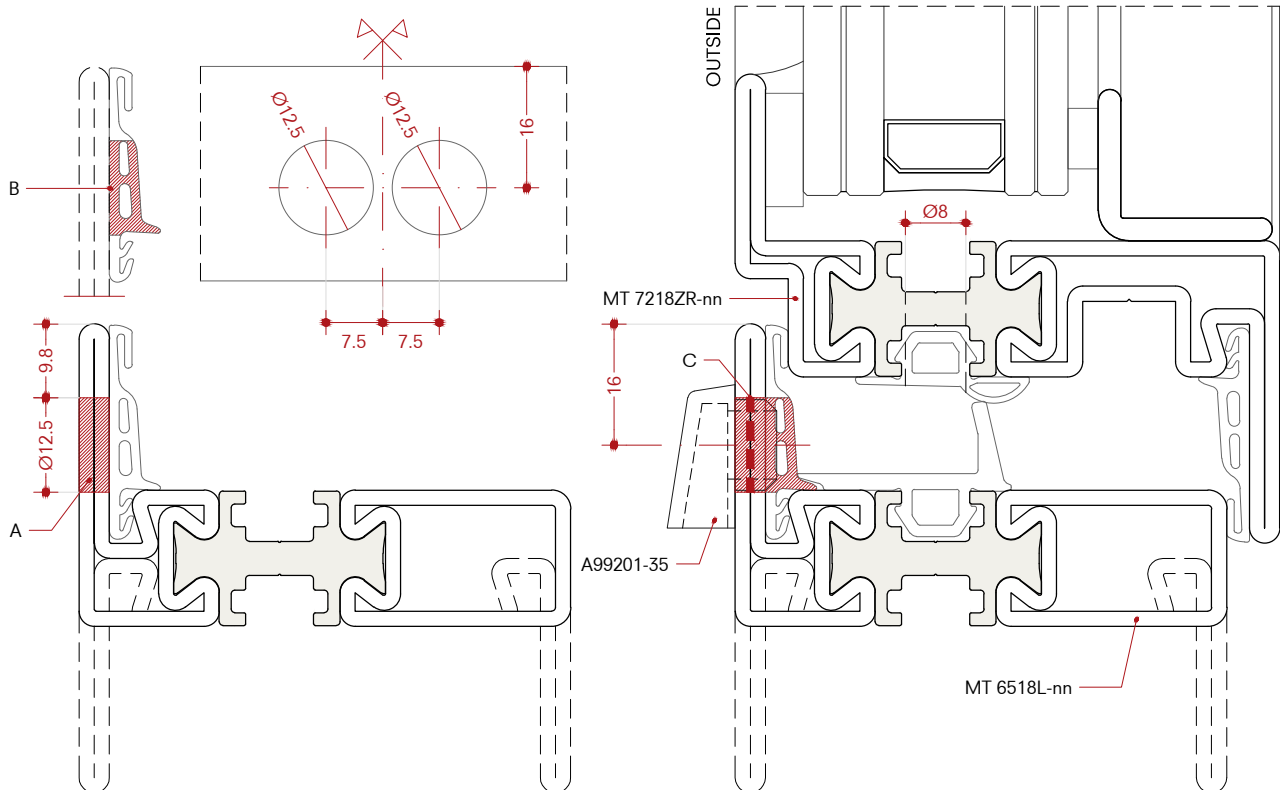
Mind 2x Entwässerungsbohrungen/  
Abdeckkappe bei einflügeligen Fenster

Installer n°02 trous/capuchons min.  
Pour fenêtre à un vantail

Min. n°04 drain holes/cover caps  
For double leaf window

Mind 4x Entwässerungsbohrungen/  
Abdeckkappe bei zweiflügeligen Fenster

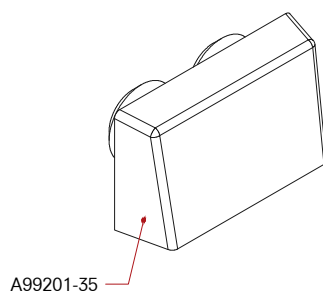
Installer n°04 trous/capuchons min.  
Pour fenêtre à deux vantaux



A) n°02 holes Ø12.5 mm frame profile  
B) n°02 holes Ø12.5 mm gasket  
C) Sealing between cover cap and frame profile  
D) Max. distance between drains 800 mm

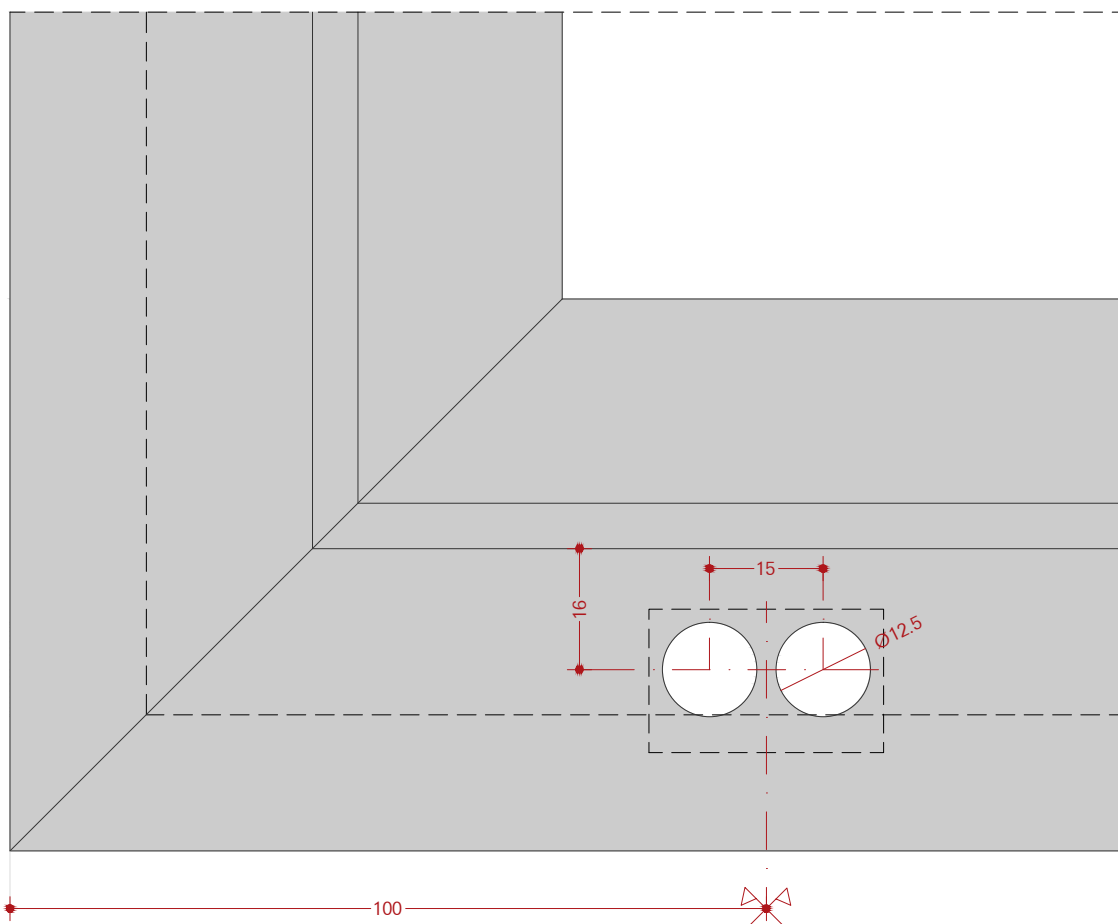
A) 2x Bohrungen Ø12.5 mm Rahmenprofil  
B) 2x Bohrungen Ø12.5 mm Dichtung  
C) Abdichtung zwischen Abdeckkappe und  
Rahmenprofil  
D) Max. Abstand der Entwässerungen 800 mm

A) n°02 trous Ø12.5 mm profilé cadre  
B) n°02 trous Ø12.5 mm joint  
C) Sceau entre capuchon et profilé  
D) Espacement max. de drainage 800 mm



A99201-35

Position of drainage holes  
Lage Entwässerungsbohrungen  
Positionnement du capuchons



**Note:**

At least 2 cover caps up to leaf width of 1000 mm  
At least 4 cover caps up to leaf of 2000 mm

**Anmerkung:**

Mindestens 2x Abdeckkappen bis 1000 mm Flügelbreite  
Mindestens 4x Abdeckkappen bis 2000 mm Flügelbreite

**Remarque:**

Au moins 2 capuchons pour des largeurs de vantail jusqu'à 1000 mm  
Au moins 4 capuchons jusqu'à 2000 mm de largeur d'aile

### Assembling

Drainage pipe A99286-83  
Open in  
Drainage downwards.

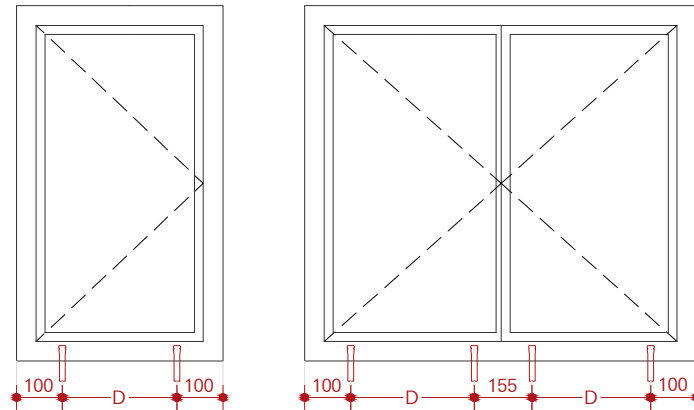
### Montage

Entwässerungsröhrchen A99286-83  
Nach innen öffnend  
Entwässerung nach unten.

### Schéma de montage

Tube drainage A99286-83  
Ouverture intérieure  
Drainage vers le bas.

Outside view / Ansicht von außen / Vue de l'extérieur



Min. n°02 drain holes/pipes  
For single leaf window

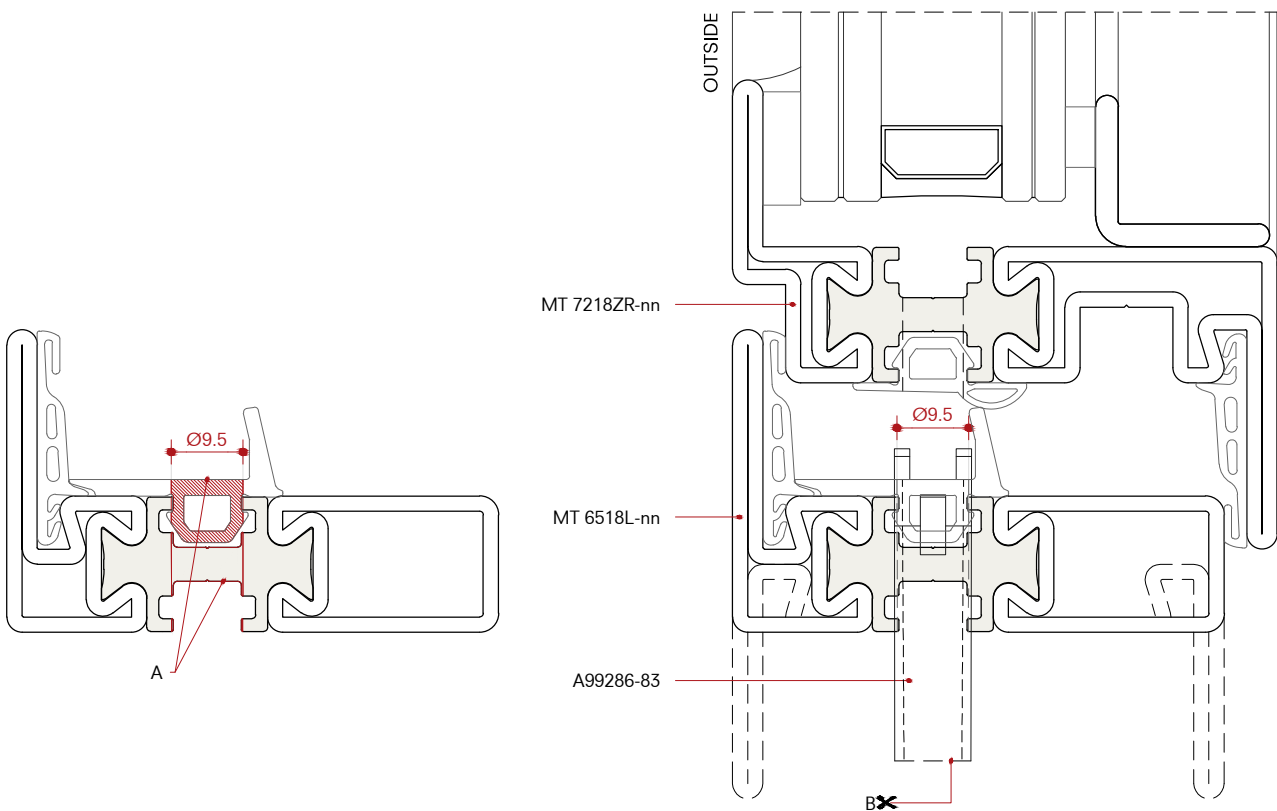
Mind 2x Entwässerungsbohrungen/  
Entwässerungsröhrchen bei einflügeligem Fenster

Installer n°02 trous/tubes min.  
Pour fenêtre à un vantail

Min. n°04 drain holes/pipes  
For double leaf window

Mind 4x Entwässerungsbohrungen/  
Entwässerungsröhrchen bei zweiflügeligen  
Fenster

Installer n°04 trous/tubes min.  
Pour fenêtre à deux vantaux

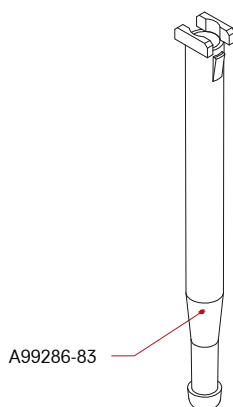


A) Drill or punch out the profile frame and centre gasket (Ø9.5 mm)  
B) Push the Tube drainage A99286-83 through and cut off at the bottom

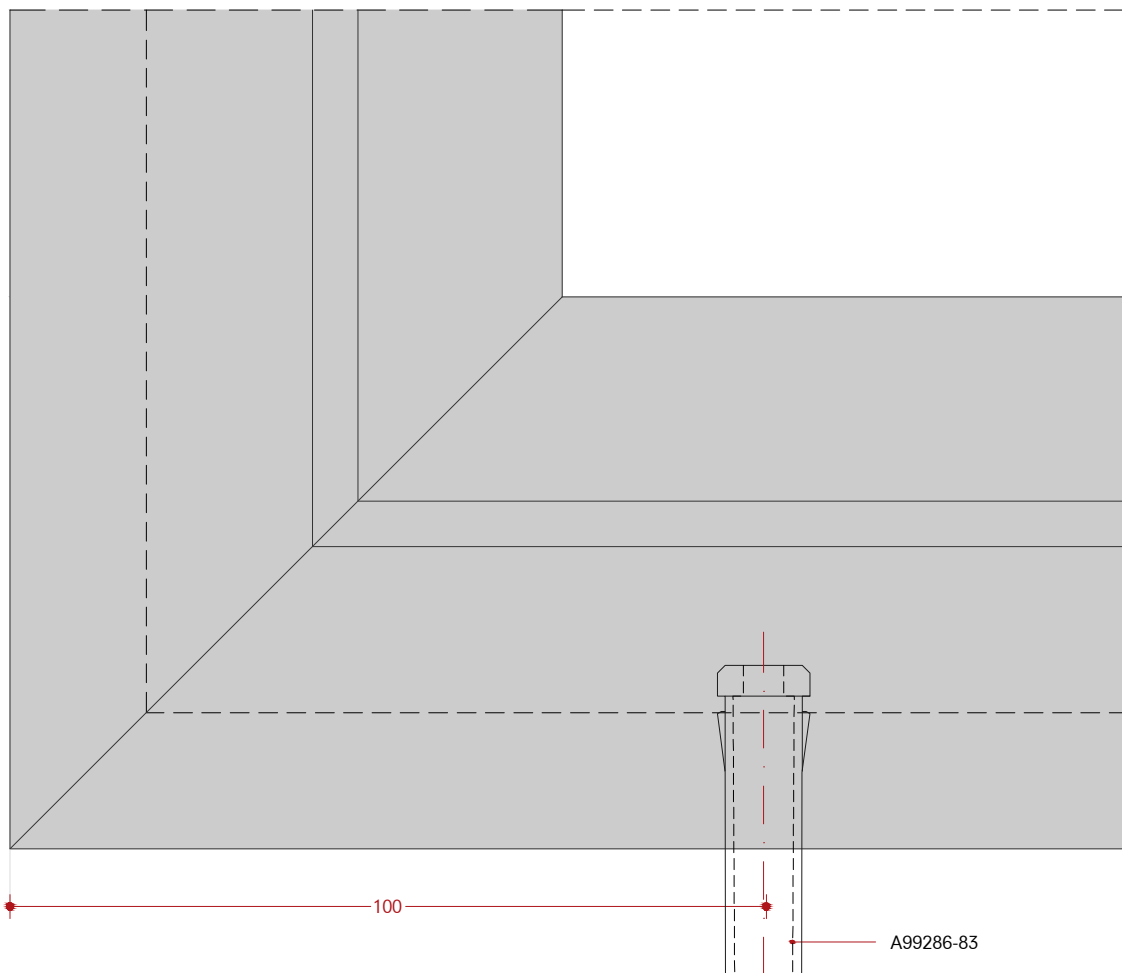
A) Profilrahmen und Mitteldichtung aufbohren bzw. aufstanzen (Ø9.5 mm)  
B) Entwässerungsröhrchen A99286-83 durchstecken und unten abschneiden.

A) Percez ou poinçonnez le cadre du profil et le joint central (Ø9.5 mm)  
B) Insérez le tube de drainage A99286-83 et coupez-le en bas.





Position of drainage holes  
Lage Entwässerungsbohrungen  
Positionnement du capuchons



**Note:**

At least 2 cover caps up to leaf width of 1000 mm  
At least 4 cover caps up to leaf of 2000 mm

**Anmerkung:**

Mindestens 2x Abdeckkappen bis 1000 mm Flügelbreite  
Mindestens 4x Abdeckkappen bis 2000 mm Flügelbreite

**Remarque:**

Au moins 2 capuchons pour des largeurs de vantail jusqu'à 1000 mm  
Au moins 4 capuchons jusqu'à 2000 mm de largeur d'aile

### Pressure equalisation and drainage

Open in  
Pressure compensation on the side  
and on top.

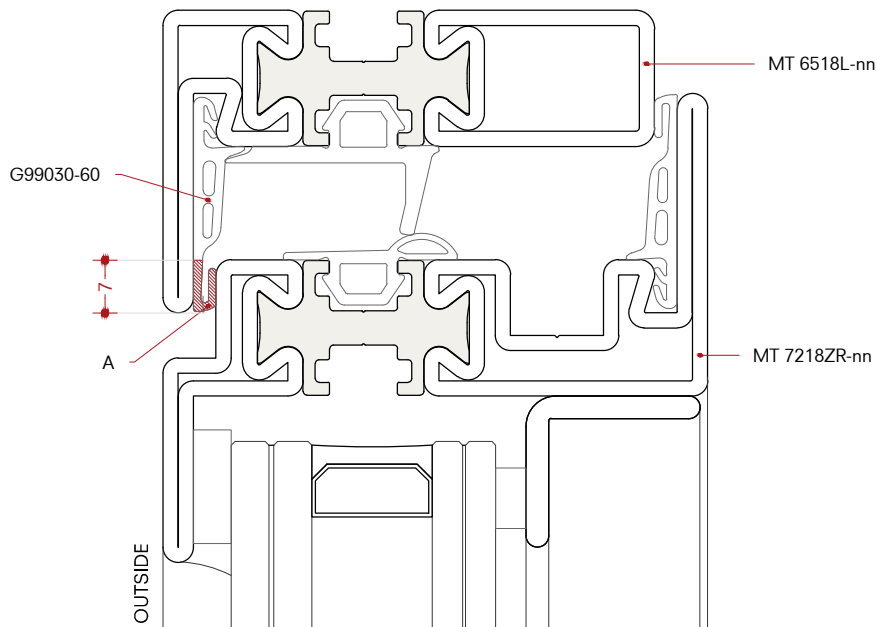
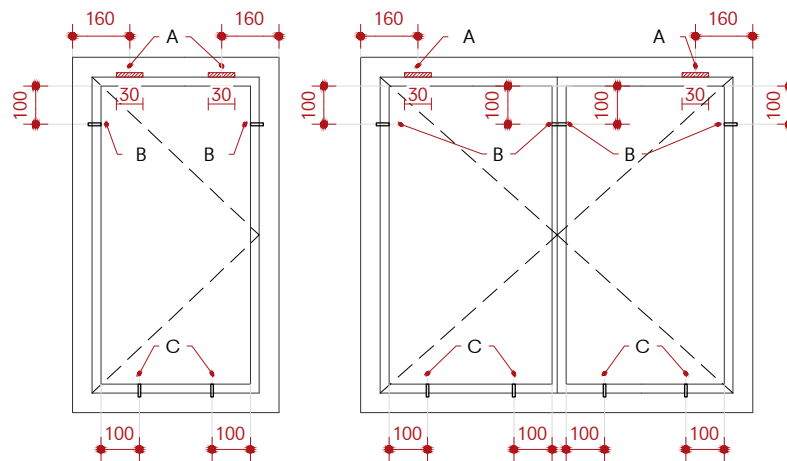
### Druckausgleich und entwässerung

Nach innen öffnend  
Druckausgleich an der seitlich und  
oben.

### Compensation de pression et drainage

Ouverture intérieure  
Compensation de pression sur le  
côté et sur le dessus.

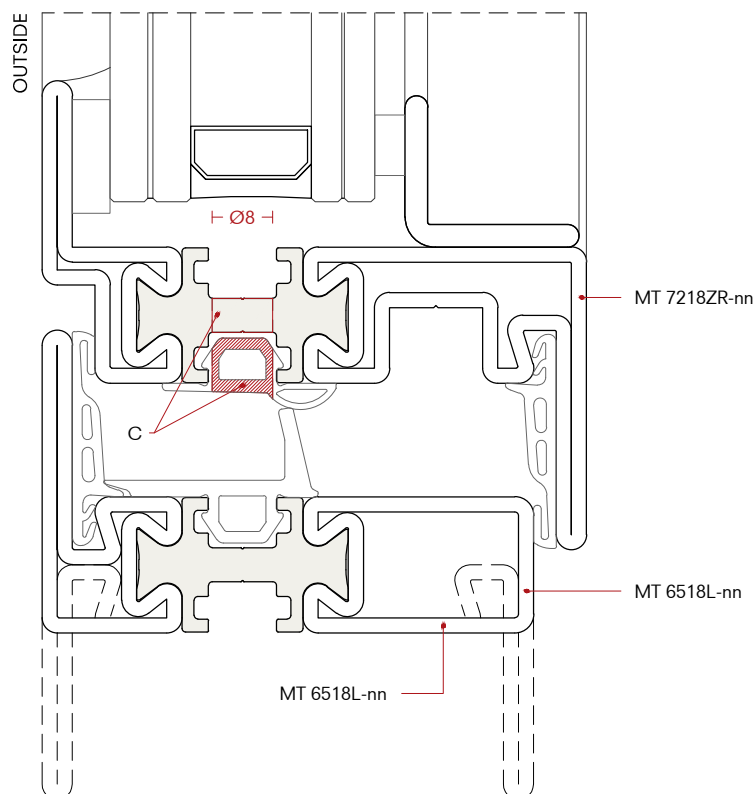
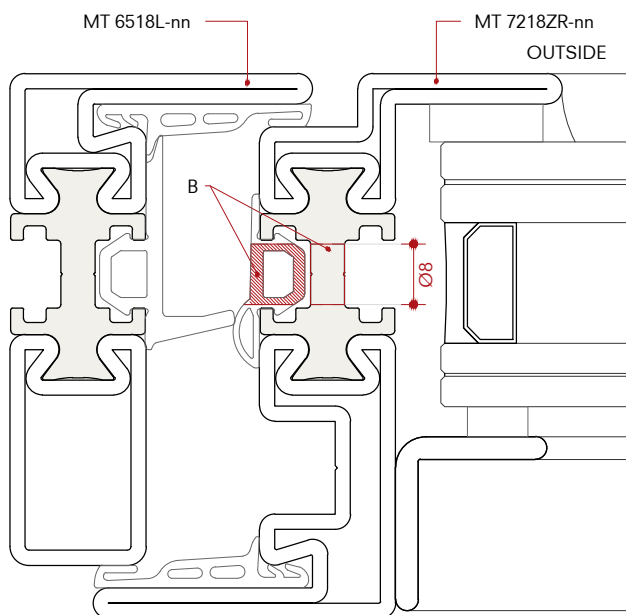
Outside view / Ansicht von außen / Vue de l'extérieur



- A) Cut out weatherstripping gasket G99030-60 top right and left (7x30 mm)
- B) For pressure compensation, drill or punch out the window leaf and centre gasket (Ø8 mm)
- C) For drainage at the bottom, drill or punch out the window leaf and centre gasket (Ø8 mm)

- A) Anschlagdichtung G99030-60 oben Rechts und Links ausklinken (7x30 mm)
- B) Zum Druckausgleich Fensterflügel und Mitteldichtung seitlich aufbohren bzw. aufstanzen (Ø8 mm)
- C) Zur Entwässerung unten Fensterflügel und Mitteldichtung aufbohren bzw. aufstanzen (Ø8 mm)

- A) Découpe du joint de butée G99030-60 en haut à droite et à gauche (7x30 mm)
- B) Pour compenser la pression, percez ou poinçonnez le vantail de fenêtre et le joint central latéralement (Ø8 mm)
- C) Pour le drainage du fond, percez ou poinçonnez le vantail de fenêtre et le joint central (Ø8 mm)



### Installation

Weather bar A99001-00

Open in

Single-leaf and double-leaf windows

### Einbau

Wetterschutzschiene A99001-00

Nach innen öffnend

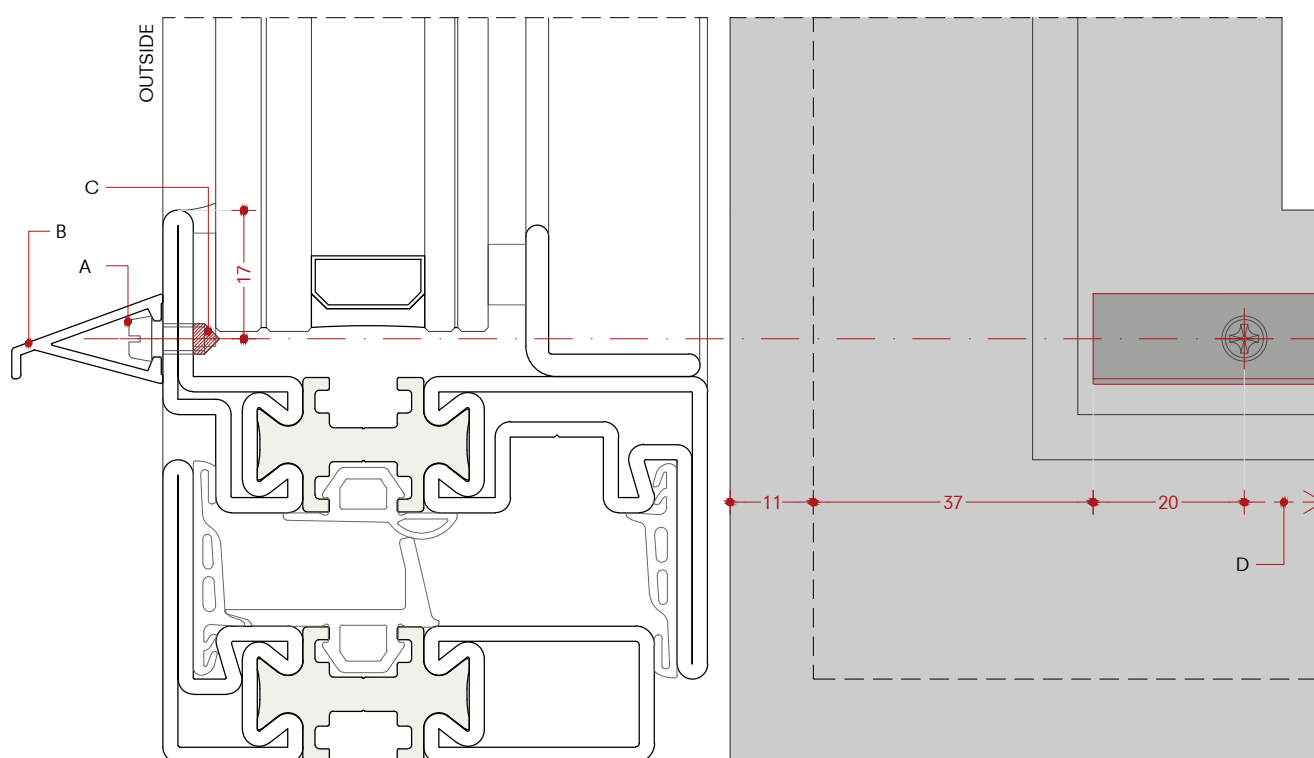
Ein- und Zweiflüglige Fenster

### Schéma de montage

Renvoi d'eau A99001-00

Ouvrant vers l'intérieur

Fenêtres un et deux vantaux

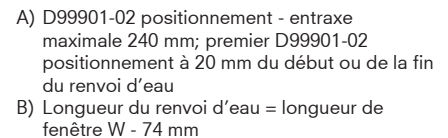


- A) Fastening with screws D99901-02
- B) A99001-00 weather bar
- C) Cut the screw flush and paint the frame
- D) Maximum pitch 240 mm

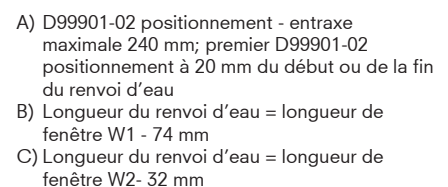
- A) Befestigungsschrauben D99901-02
- B) A99001-00 Wetterschenkel
- C) Befestigungsschraube kürzen und in Elementfarbe beschichten
- D) Maximaler Befestigungsabstand 240 mm

- A) Fixation avec vis D99901-02
- B) Renvoi d'eau A99001-00
- C) Couper la vis et peindre le cadre
- D) Distance maximale 240 mm

### Fenêtre à un vantail



Fenêtre à deux vantaux



### Installation

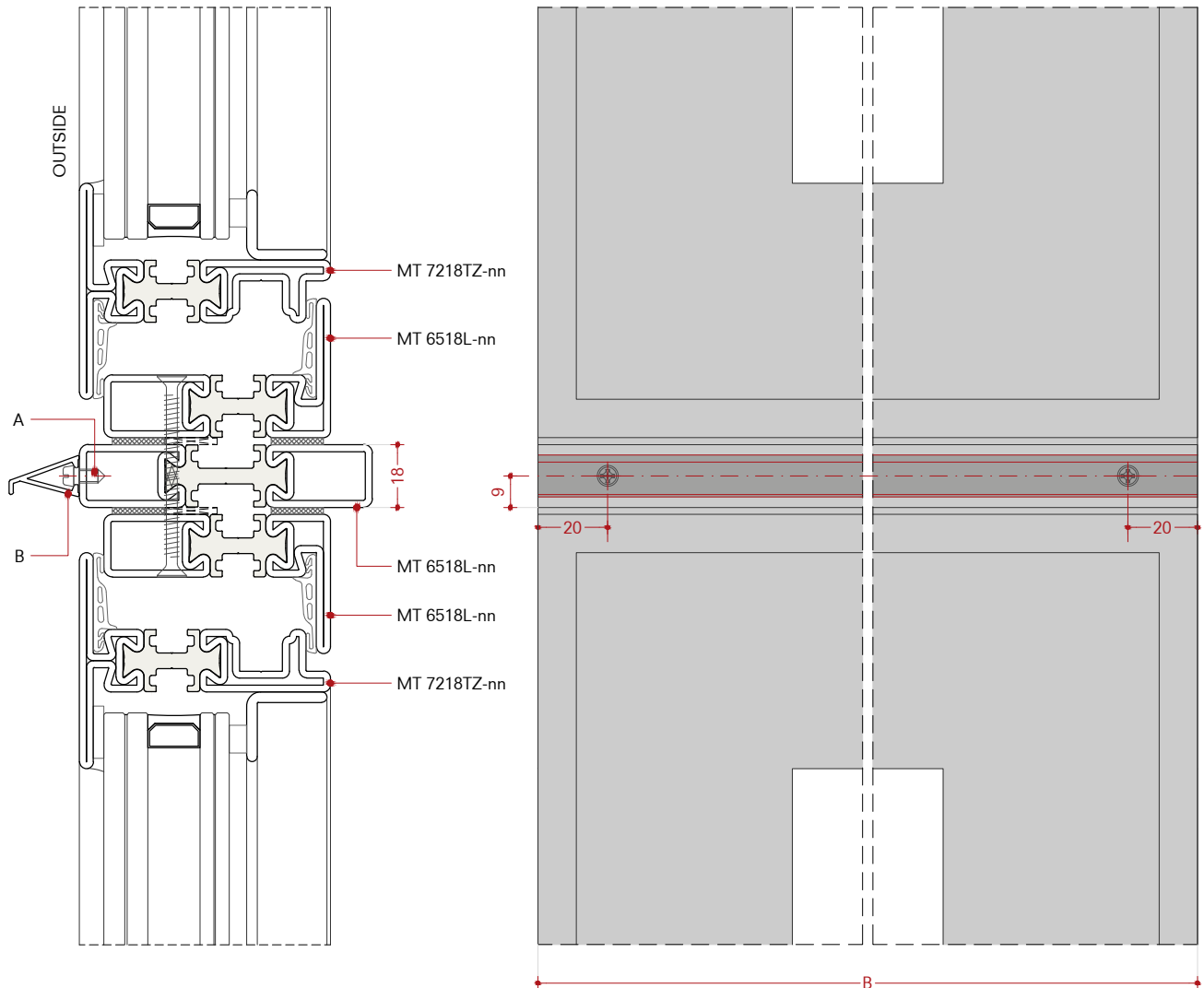
Weather bar A99001-00  
Open out

### Einbau

Wetterschutzschiene A99001-00  
Nach außen öffnend

### Schéma de montage

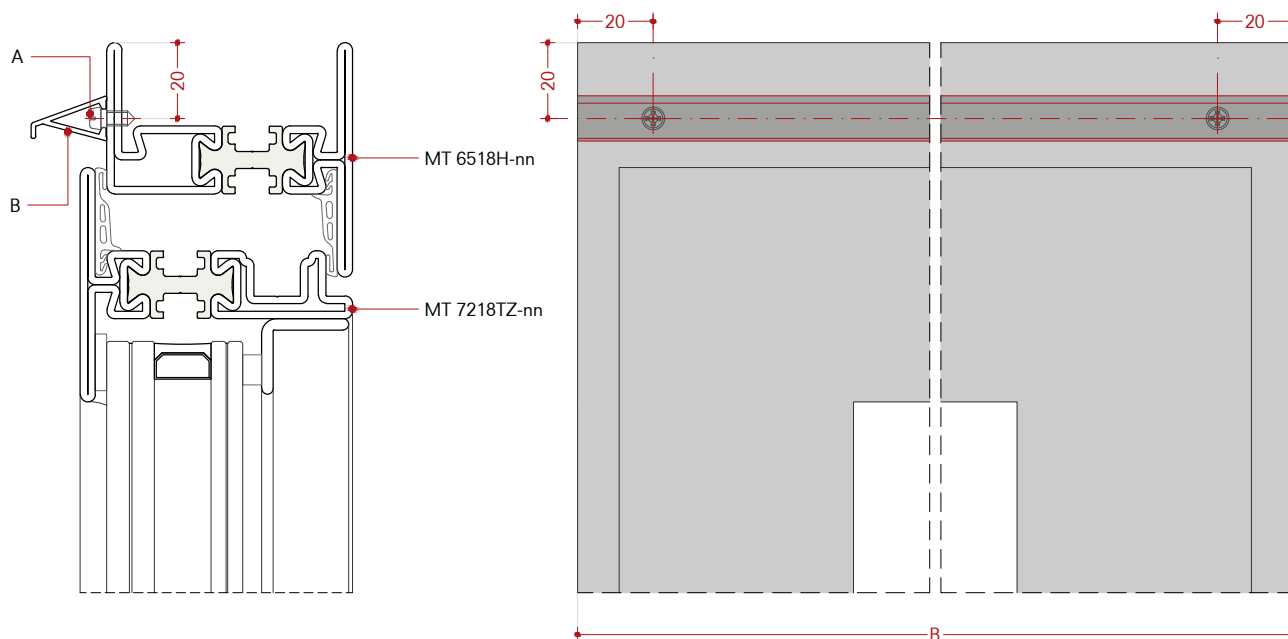
Renvoi d'eau A99001-00  
Ouvrant vers l'extérieur



A) D99901-02 positioning - maximum pitch 240 mm; first D99901-02 at 20 mm from ending of the weather bar  
B) Weather bar lenght = frame width

A) D99901-02 Positionierung - maximale Entfernung 240 mm; erste D99901-02 Positionierung 20 mm von Anfang bzw. Ende des wetterschenkel  
B) Länge Wetterschenkel = rahmenbreite

A) D99901-02 positionnement - entraxe maximale 240 mm; premier D99901-02 positionnement à 20 mm du début ou de la fin du renvoi d'eau  
B) Longueur du renvoi d'eau = longueur du cadre



- A) D99901-02 positioning - maximum pitch 240 mm; first D99901-02 at 20 mm from ending of the weather bar  
B) Weather bar lenght = frame width

- A) D99901-02 Positionierung - maximale Entfernung 240 mm; erste D99901-02 Positionierung 20 mm von Anfang bzw. Ende des wetterschenkels  
B) Länge Wetterschenkel = rahmenbreite

- A) D99901-02 positionnement - entraxe maximale 240 mm; premier D99901-02 positionnement à 20 mm du début ou de la fin du renvoi d'eau  
B) Longueur du renvoi d'eau = longueur du cadre

### Installation

Weather bar A99007-nn

Open in

Single-leaf and double-leaf windows

### Einbau

Wetterschutzschiene A99007-nn

Nach innen öffnend

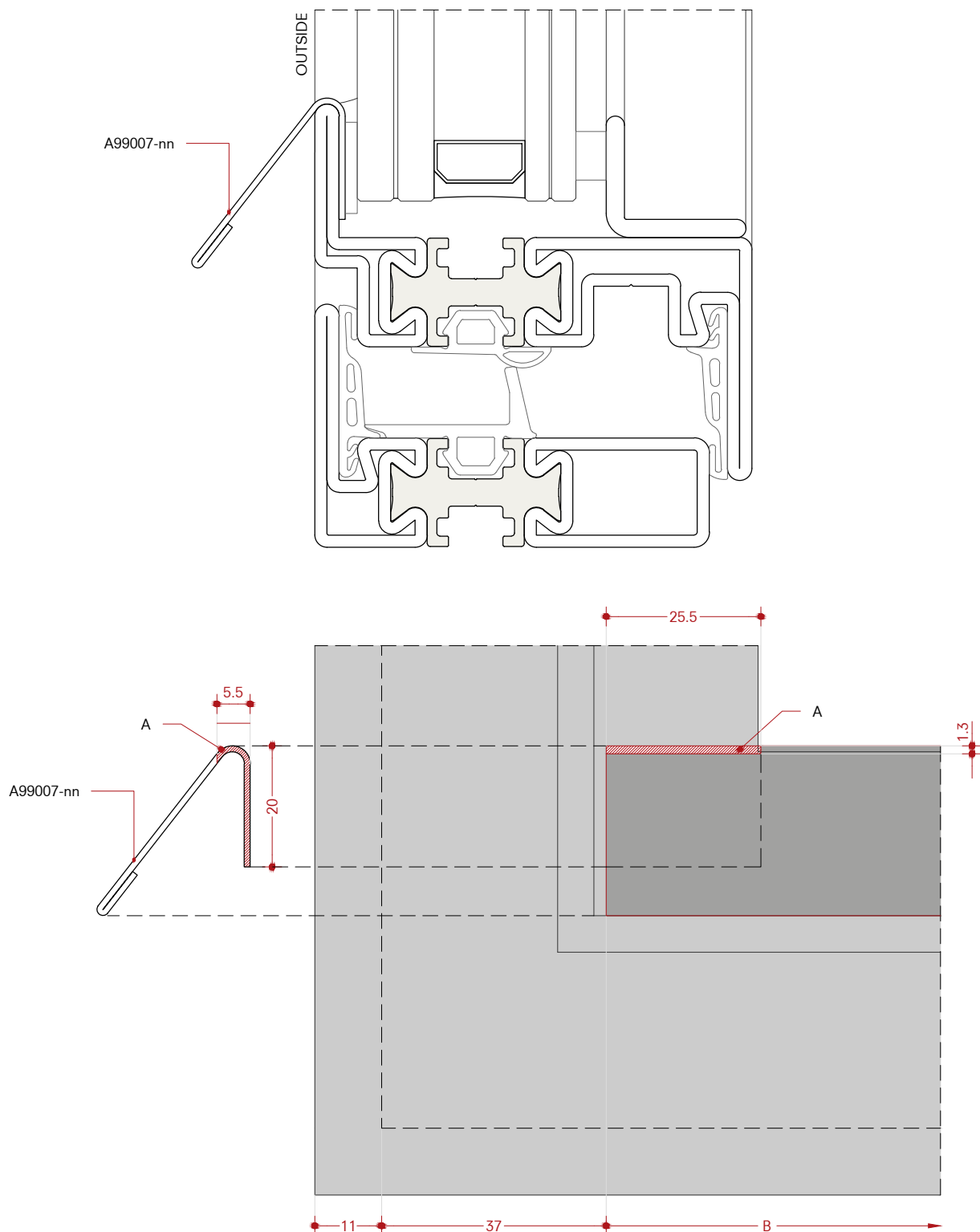
Ein- und Zweiflüglige Fenster

### Schéma de montage

Renvoi d'eau A99007-nn

Ouvrant vers l'intérieur

Fenêtres un et deux vantaux



A) Cut out 25.5x5.5 mm weather bar A99007-nn  
B) Cutting length

A) Ausfräsung 25.5x5.5 mm Wetterschenkel A99007-nn  
B) Zuschnitt

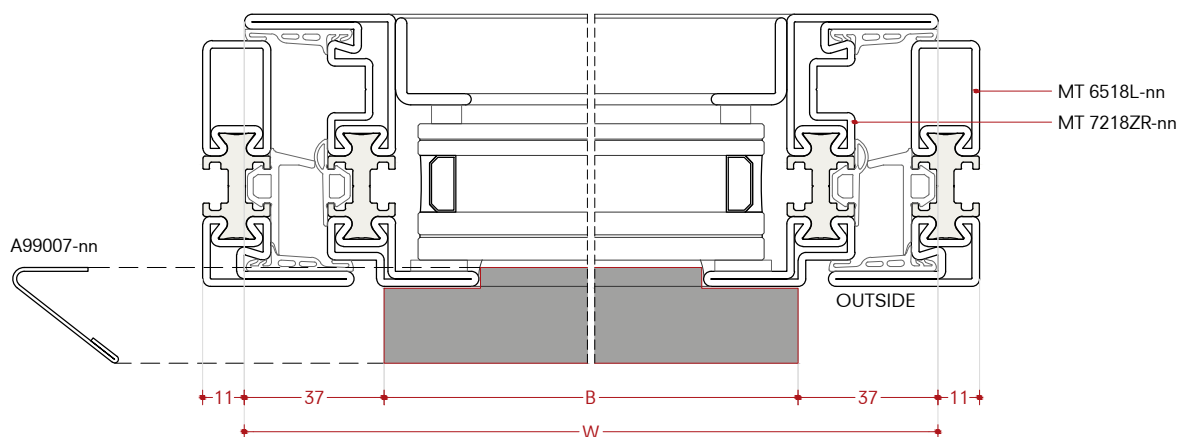
A) Fraisage 25.5x5.5 mm sur renvoi d'eau A99007-nn  
B) Longueur de coupe



Single leaf window

Einflüglige Fenster

Fenêtre à un vantail



B) Weather bar length = leaf width W - 74 mm  
W) Leaf width

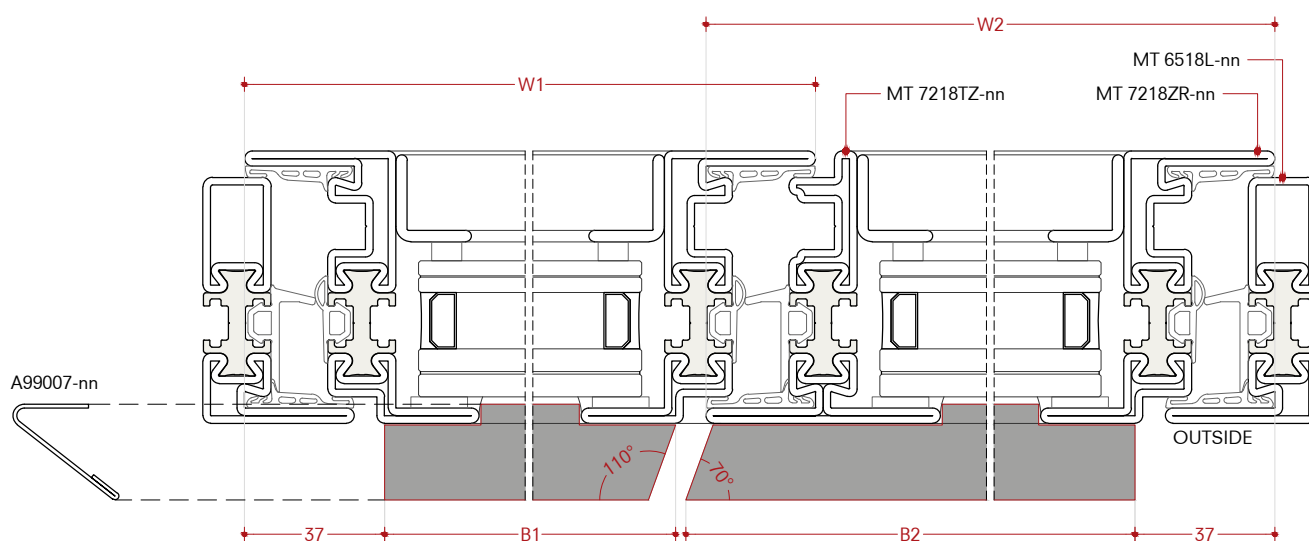
B) Länge Wetterschenkel = flügelbreite W - 74 mm  
W) Flügelbreite

B) Longueur du renvoi d'eau = longueur de fenêtre W - 74 mm  
W) Longueur de fenêtre

Double leaf window

Zweiflügliges Fenster

Fenêtre à deux vantaux



B1) Weather bar length = leaf width W1 - 74 mm  
B2) Weather bar length = leaf width W2 - 32 mm

B1) Länge Wetterschenkel = flügelbreite W1 - 74 mm  
B2) Länge Wetterschenkel = flügelbreite W2 - 32 mm

B1) Longueur du renvoi d'eau = longueur de fenêtre W1 - 74 mm  
B2) Longueur du renvoi d'eau = longueur de fenêtre W2 - 32 mm

## Installation

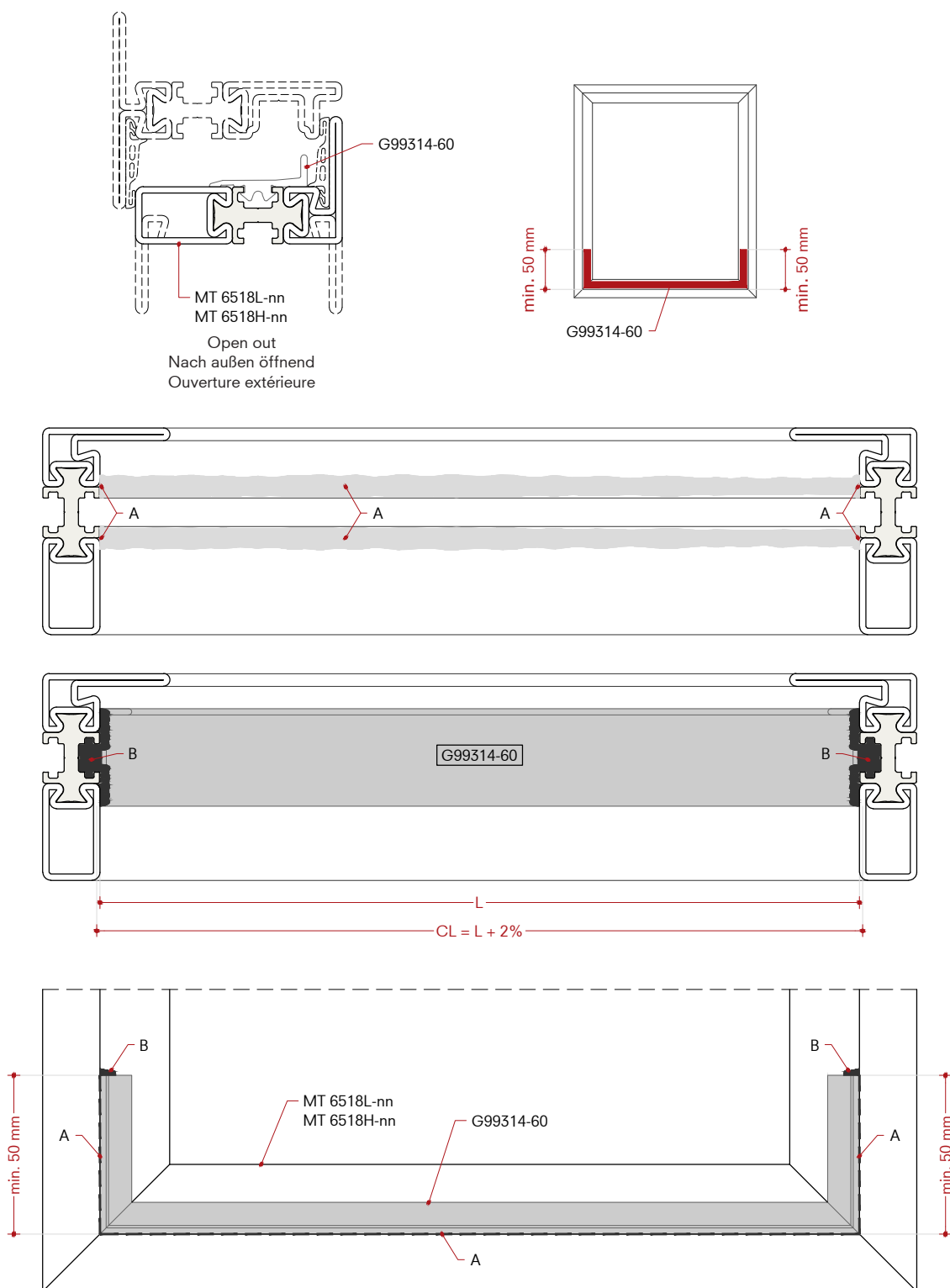
Condensate collection tray  
G99314-60

## Einbau

Kondensatsammelschale  
G99314-60

## Schéma de montage

Bac de récupération des condensats  
G99314-60



A) Sealant under the gasket  
B) Sealant

A) Dichtstoff unter der Dichtung  
B) Dichtstoff

A) Silicon sous le joint  
B) Silicon

### Installation

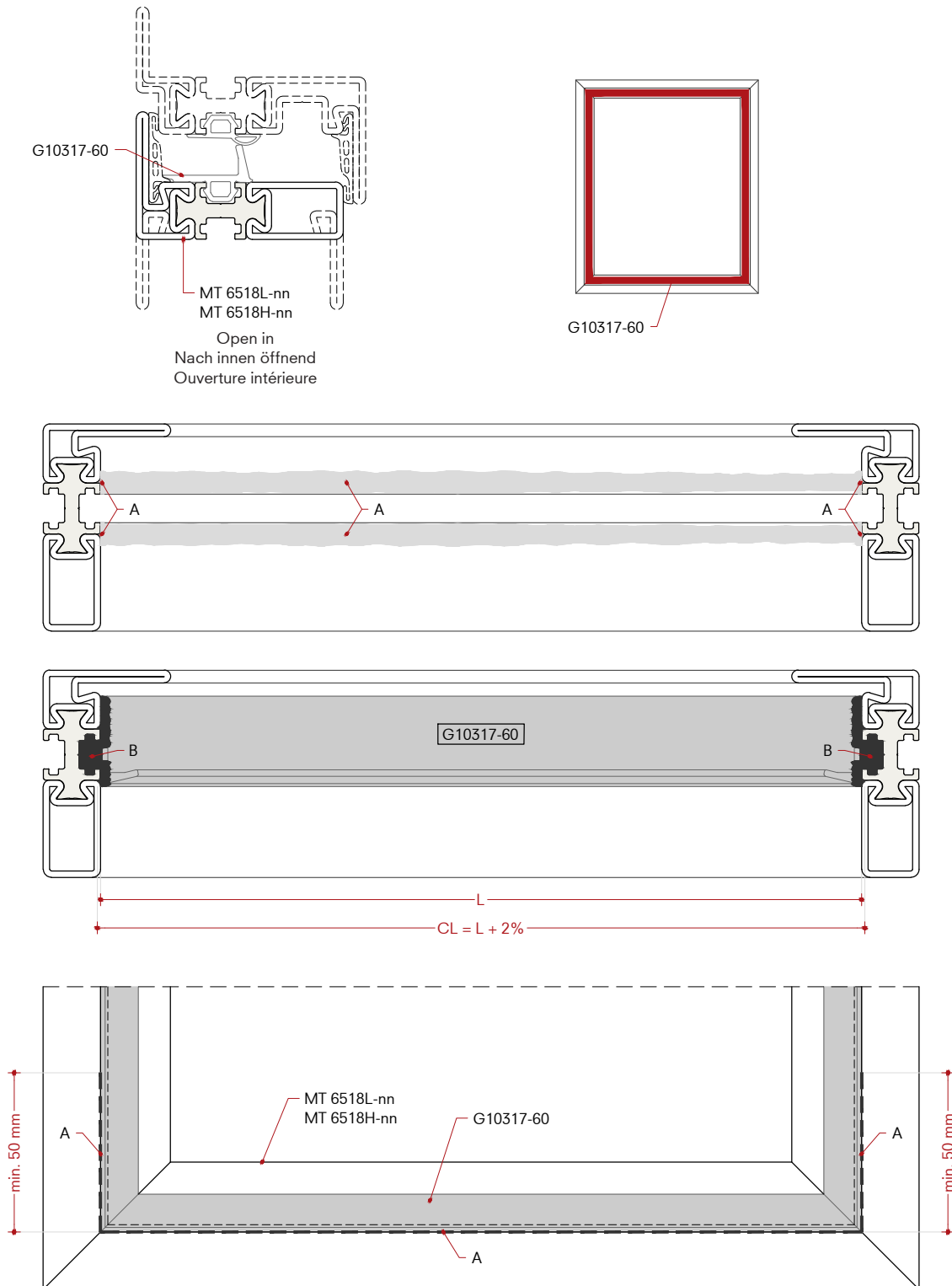
Middle stop profile G19317-60  
in drainage zone

### Einbau

Mittelanschlagprofil G10301-60  
im Entwässerungsbereich

### Schéma de montage

Joint renvoi d'eau G10317-60



### Note

Install the middle stop profile G10317-60 after the rebate gasket G99030-60.

- A) Sealant under the gasket  
B) Sealant

### Hinweis

Mittelanschlagprofil G10317-60 erst nach der Anschlagdichtung G99030-60 einkleben.

- A) Dichtstoff unter der Dichtung  
B) Dichtstoff

### Remarque

Installez le joint G10317-60 après les joints de butée.

- A) Silicon sous le joint  
B) Silicon

### Installation

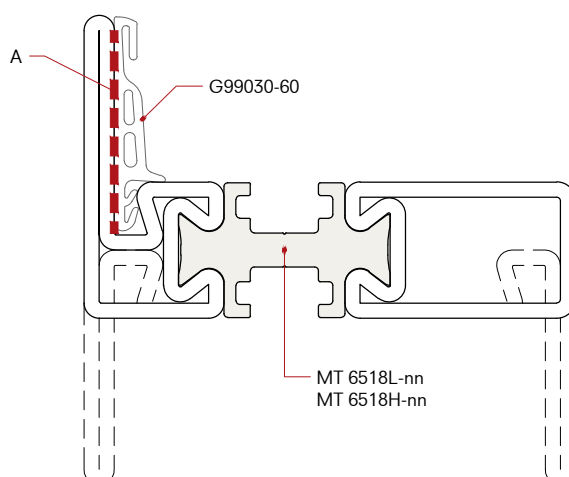
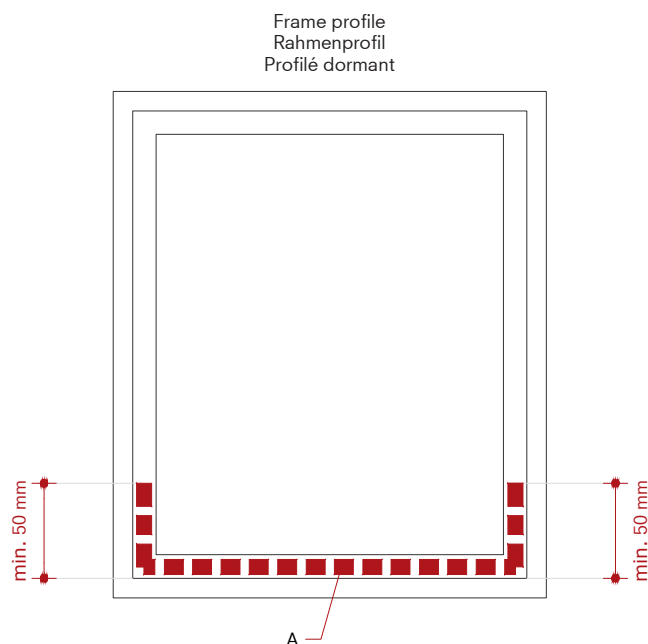
Rebate gasket G99030-60  
on frame profile

### Einbau

Anschlagdichtung G99030-60  
am Rahmenprofil

### Schéma de montage

Joint de butée G99030-60  
sur profilé dormant



A) Sealant under the gasket also vertically at  
least 50 mm on both sides

A) Dichtstoff unter der Fuge auch die Vertikale  
auf beiden Seiten mindestens 50 mm

A) Silicon sous le joint de butée pour la verticale  
sur au moins 50 mm des deux côtés





**Accessories installation:**

**Hinges**

**Montage Zubehör:**

**Bänder**

**Montage accessoires:**

**Paumelles**

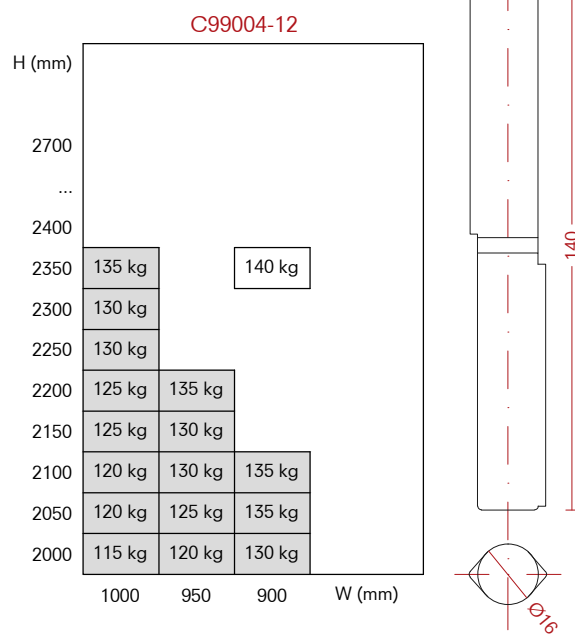
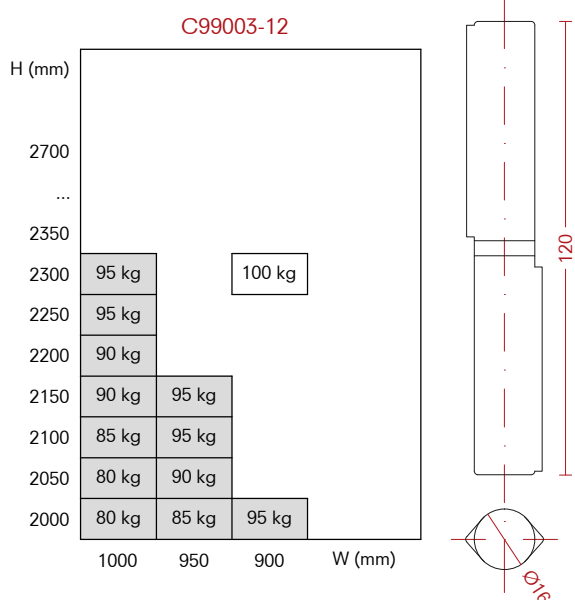
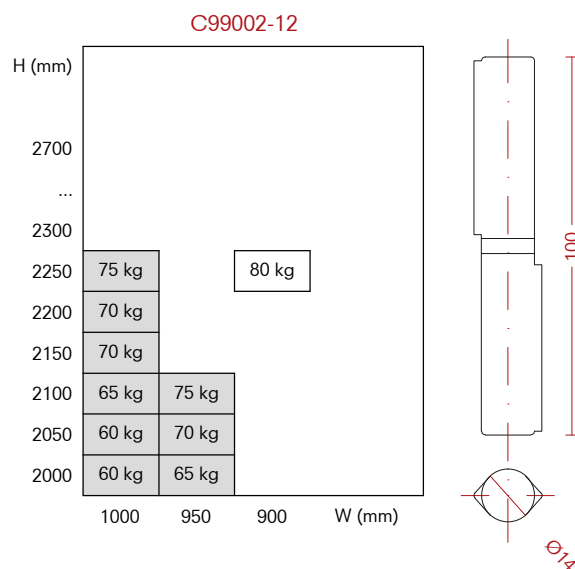
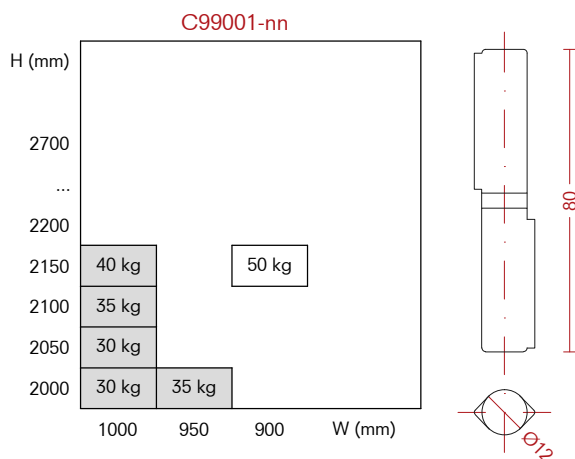
5.6

**Load capacity tables**  
Weld-on hinges

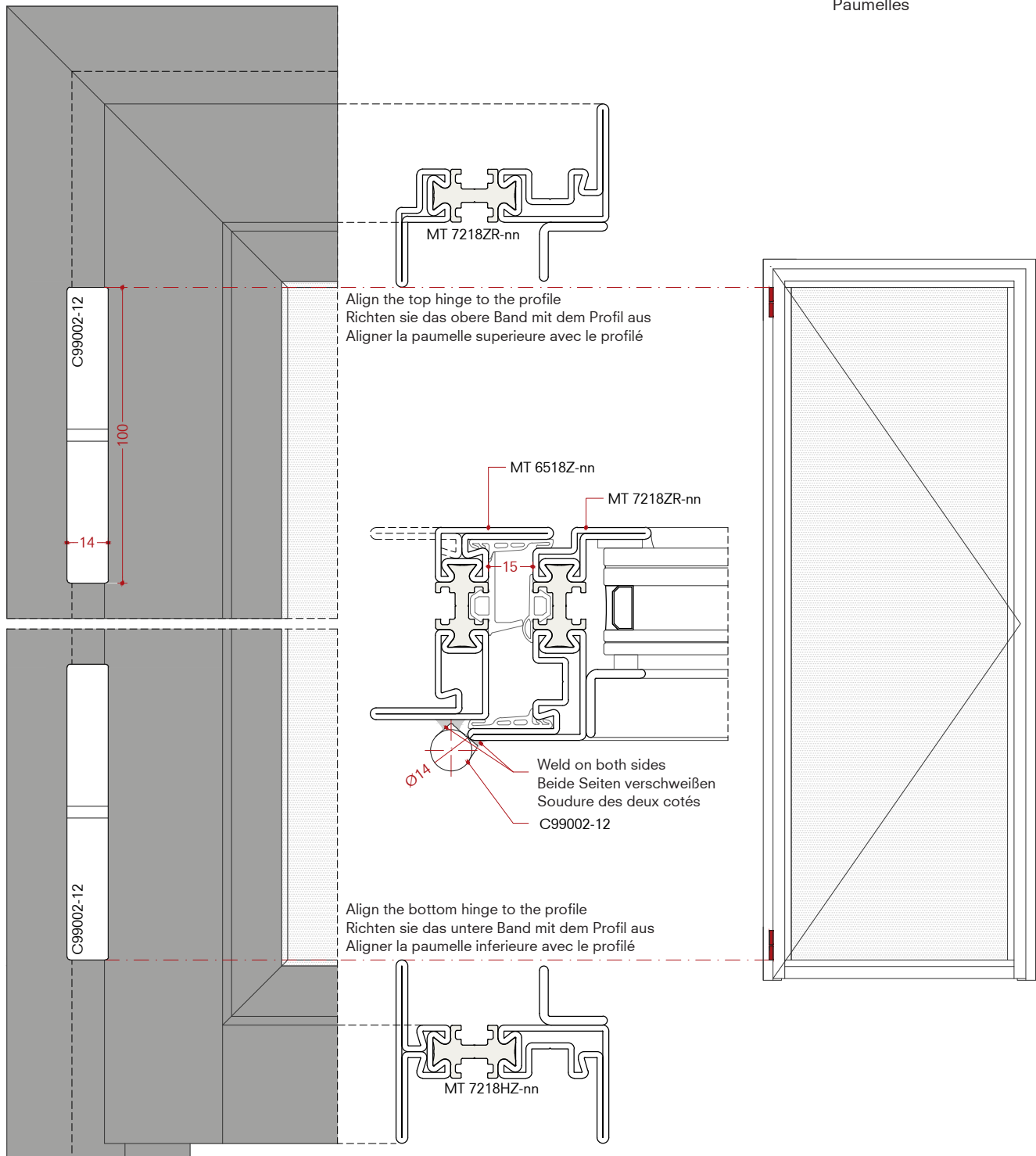
**Gewichtstabellen**  
Anschweißbänder

**Capacité maximale**  
Paumelles a souder

|                  | Material<br>Werkstoff<br>Matériel                                                                                       | Diameter<br>Durchmesser<br>Diamètre | Length<br>Länge<br>Longueur | Capacity (pair)<br>Tragkraft (Paar)<br>Capacité (paire) |
|------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|---------------------------------------------------------|
| <b>C99001-nn</b> | -03 Stainless steel<br>-03 Edelstahl<br>-03 Acier inoxydable<br>-12 Bright steel<br>-12 Stahl blank<br>-12 Acier décapé | Ø = 12 mm                           | 80 mm                       | 50 kg                                                   |
| <b>C99002-12</b> | Bright steel<br>Stahl blank<br>Acier décapé                                                                             | Ø = 14 mm                           | 100 mm                      | 80 kg                                                   |
| <b>C99003-12</b> | Bright steel<br>Stahl blank<br>Acier décapé                                                                             | Ø = 16 mm                           | 120 mm                      | 100 kg                                                  |
| <b>C99004-12</b> | Bright steel<br>Stahl blank<br>Acier décapé                                                                             | Ø = 16 mm                           | 140 mm                      | 140 kg                                                  |







### Note

For smaller sash heights two hinges are sufficient. From a sash height  $\geq 2200$  mm, 3 hinges must be used.

When welding, care must be taken to avoid overheating the profiles. We recommend the use of heat sinks located in close proximity of the welded area, as well as to proceed in small segment, always waiting for the profile to cool down. The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments. Keep minimum 3 mm distance from welding seam to polyamide web.

### Hinweis

Bei kleineren Flügelhöhen sind zwei Bänder ausreichend. Ab einer Flügelhöhe  $\geq 2200$  mm müssen 3 Bänder verwendet werden.

Beim Schweißen muss darauf geachtet werden, dass die Profile nicht überhitzt werden. Wir empfehlen die Verwendung von Kühlkörpern, die sich in unmittelbarer Nähe des geschweißten Bereichs befinden, sowie in kleinen Abschnitten vorzugehen und immer zu warten, bis das Profil abgekühlt ist. Die beim Schweißen von Profilen und Bändern entstehende Wärme muss mit Schweißzusätzen aus Messing, Kupfer und Aluminium abgeführt werden. Halten Sie einen Mindestabstand von 3 mm zwischen Schweißnaht und Polyamid-Isolator ein.

### Remarque

Pour des hauteurs de vantail plus petites, deux charnières suffisent. A partir d'une hauteur d'ouvrant de  $\geq 2200$  mm, 3 paumelles doivent être utilisées.

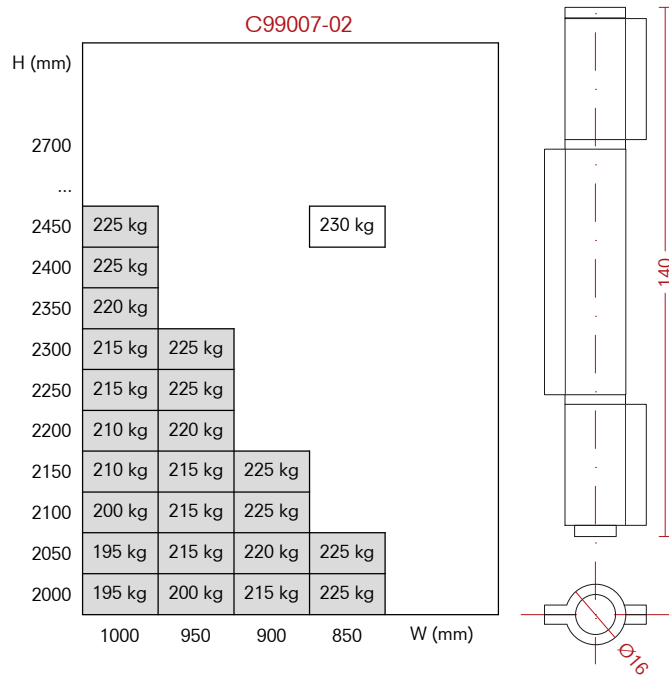
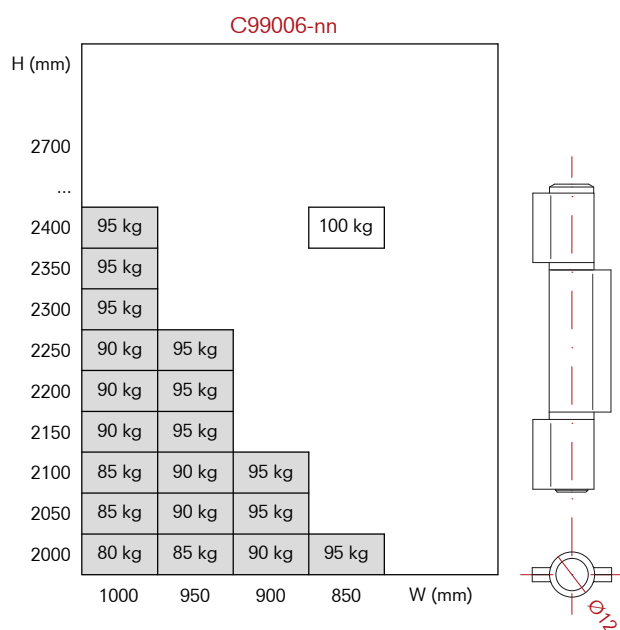
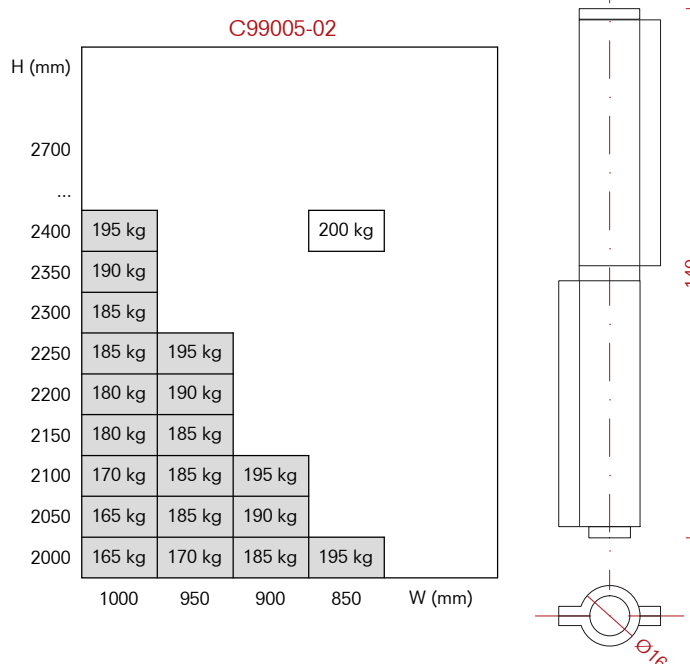
Lors du soudage, il faut veiller à ne pas surchauffer les profilés. Nous recommandons l'utilisation de dissipateurs thermiques situés à proximité de la zone soudée, ainsi que de procéder par petits segments, en attendant toujours que le profilé refroidisse. La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium. Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.

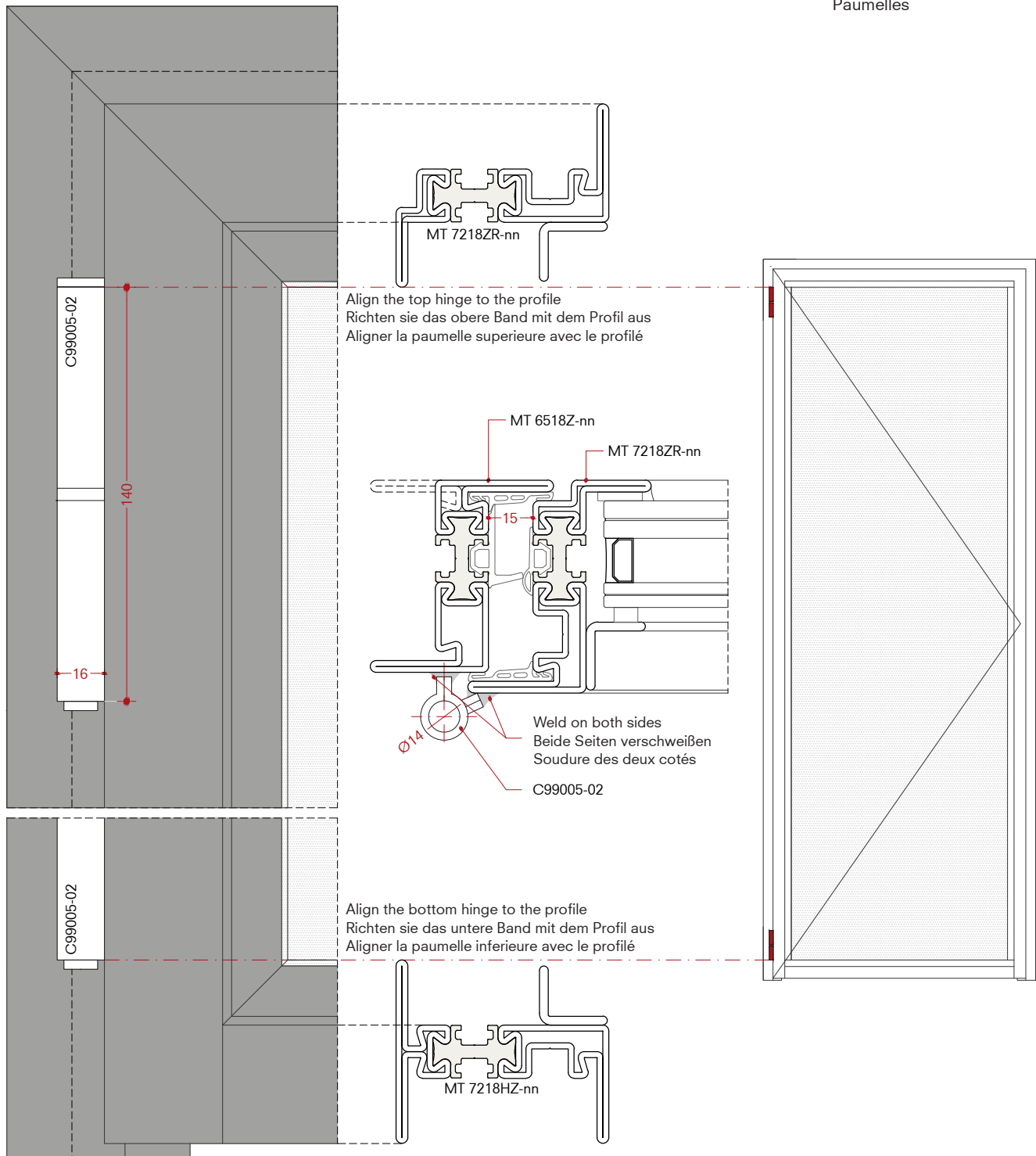
**Load capacity tables**  
Weld-on hinges

**Gewichtstabellen**  
Anschweißbänder

**Capacité maximale**  
Paumelles a souder

|                  | Material<br>Werkstoff<br>Matériel                                                                                                     | Diameter<br>Durchmesser<br>Diamètre | Length<br>Länge<br>Longueur | Capacity (pair)<br>Tragkraft (Paar)<br>Capacité (paire) |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|---------------------------------------------------------|
| <b>C99005-02</b> | Galvanized steel<br>Stahl bandverzinkt<br>Acier galvanisé                                                                             | Ø = 16 mm                           | 140 mm                      | 200 kg                                                  |
| <b>C99006-nn</b> | -02 Galvanized steel<br>-02 Stahl bandverzinkt<br>-02 Acier galvanisé<br>-03 Stainless steel<br>-03 Edelstahl<br>-03 Acier inoxydable | Ø = 12 mm                           | 83 mm                       | 100 kg                                                  |
| <b>C99007-02</b> | Galvanized steel<br>Stahl bandverzinkt<br>Acier galvanisé                                                                             | Ø = 16 mm                           | 140 mm                      | 230 kg                                                  |





### Note

For smaller sash heights two hinges are sufficient. From a sash height  $\geq 2200$  mm, 3 hinges must be used.

When welding, care must be taken to avoid overheating the profiles. We recommend the use of heat sinks located in close proximity of the welded area, as well as to proceed in small segment, always waiting for the profile to cool down. The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments. Keep minimum 3 mm distance from welding seam to polyamide web.

### Hinweis

Bei kleineren Flügelhöhen sind zwei Bänder ausreichend. Ab einer Flügelhöhe  $\geq 2200$  mm müssen 3 Bänder verwendet werden.

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### Remarque

Pour des hauteurs de vantail plus petites, deux charnières suffisent. A partir d'une hauteur d'ouvrant de  $\geq 2200$  mm, 3 paumelles doivent être utilisées.

Lors du soudage, il faut veiller à ne pas surchauffer les profilés. Nous recommandons l'utilisation de dissipateurs thermiques situés à proximité de la zone soudée, ainsi que de procéder par petits segments, en attendant toujours que le profilé refroidisse. La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium. Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.

**Load capacity tables**  
Weld-on hinges

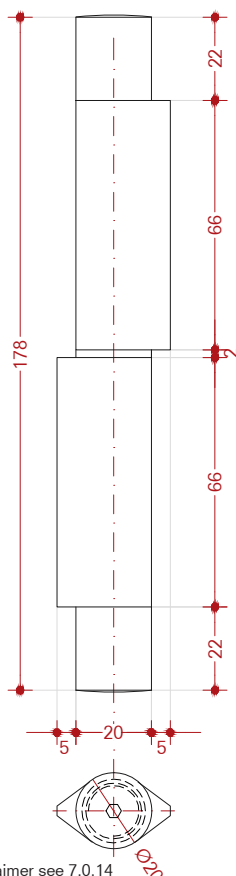
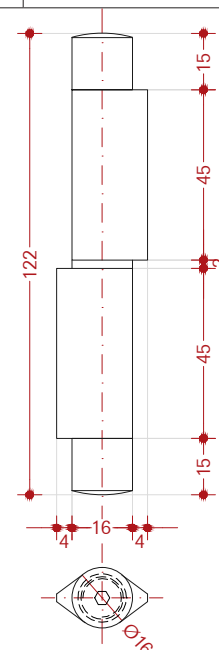
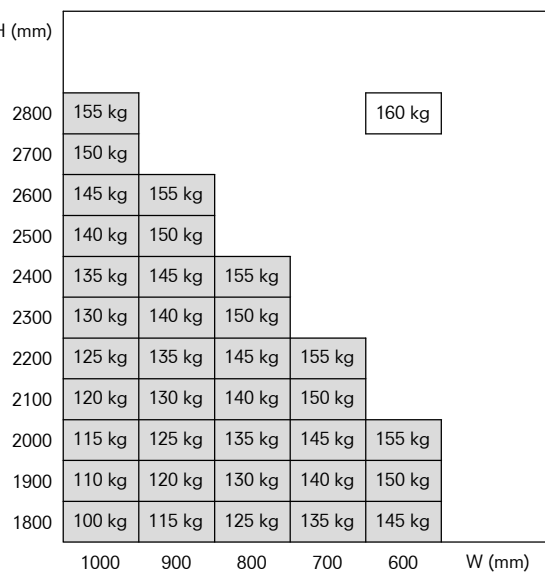
**Gewichtstabellen**  
Anschweißbänder

**Capacité maximale**  
Paumelles a souder

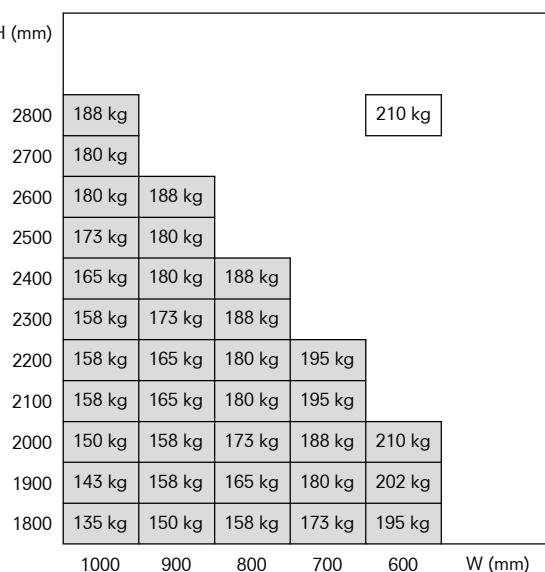
|                                                                                        | Material<br>Werkstoff<br>Matériel                                                                                       | Diameter<br>Durchmesser<br>Diamètre | Length<br>Länge<br>Longueur | Capacity (pair)<br>Tragkraft (Paar)<br>Capacité (paire) |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|---------------------------------------------------------|
| <b>C99008-04</b><br><b>C99008-12</b><br>ADJUSTABLE 3D<br>3D EINSTELLBAR<br>3D RÉGLABLE | -04 Stainless steel<br>-04 Edelstahl<br>-04 Acier inoxydable<br>-12 Bright steel<br>-12 Stahl blank<br>-12 Acier décapé | Ø = 16 mm                           | 122 mm                      | 160 kg                                                  |
| <b>C99009-04</b><br><b>C99009-12</b><br>ADJUSTABLE 3D<br>3D EINSTELLBAR<br>3D RÉGLABLE | -04 Stainless steel<br>-04 Edelstahl<br>-04 Acier inoxydable<br>-12 Bright steel<br>-12 Stahl blank<br>-12 Acier décapé | Ø = 20 mm                           | 178 mm                      | 210 kg                                                  |

C99008-nn

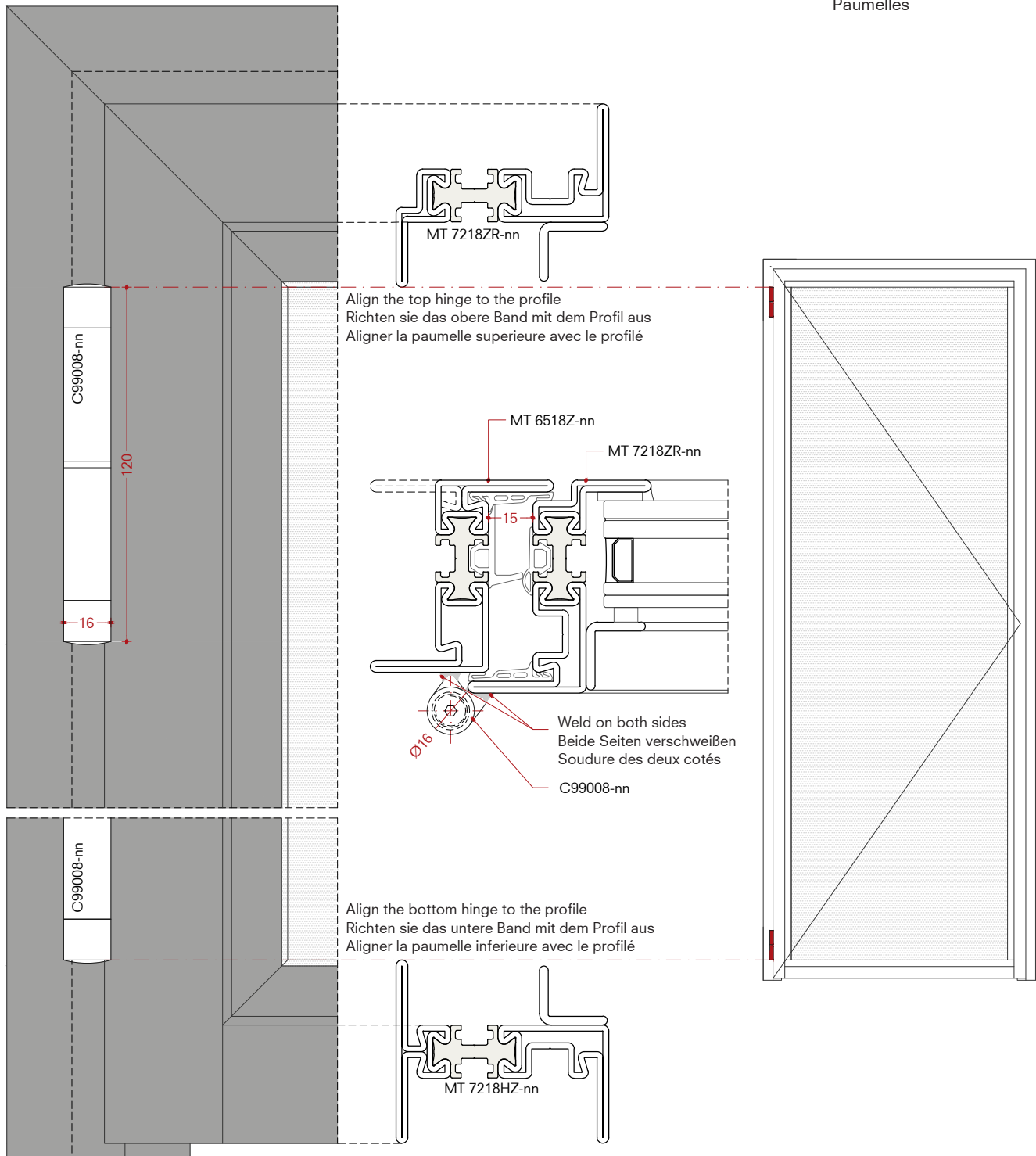
H (mm)



H (mm)



C99009-nn



### Note

For smaller sash heights two hinges are sufficient. From a sash height  $\geq 2200$  mm, 3 hinges must be used.

When welding, care must be taken to avoid overheating the profiles. We recommend the use of heat sinks located in close proximity of the welded area, as well as to proceed in small segment, always waiting for the profile to cool down. The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments. Keep minimum 3 mm distance from welding seam to polyamide web.

### Hinweis

Bei kleineren Flügelhöhen sind zwei Bänder ausreichend. Ab einer Flügelhöhe  $\geq 2200$  mm müssen 3 Bänder verwendet werden.

Beim Schweißen muss darauf geachtet werden, dass die Profile nicht überhitzt werden. Wir empfehlen die Verwendung von Kühlkörpern, die sich in unmittelbarer Nähe des geschweißten Bereichs befinden, sowie in kleinen Abschnitten vorzugehen und immer zu warten, bis das Profil abgekühlt ist. Die beim Schweißen von Profilen und Bändern entstehende Wärme muss mit Schweißzusätzen aus Messing, Kupfer und Aluminium abgeführt werden. Halten Sie einen Mindestabstand von 3 mm zwischen Schweißnaht und Polyamid-Isolator ein.

### Remarque

Pour des hauteurs de vantail plus petites, deux charnières suffisent. A partir d'une hauteur d'ouvrant de  $\geq 2200$  mm, 3 paumelles doivent être utilisées.

Lors du soudage, il faut veiller à ne pas surchauffer les profilés. Nous recommandons l'utilisation de dissipateurs thermiques situés à proximité de la zone soudée, ainsi que de procéder par petits segments, en attendant toujours que le profilé refroidisse. La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium. Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.

### Installation

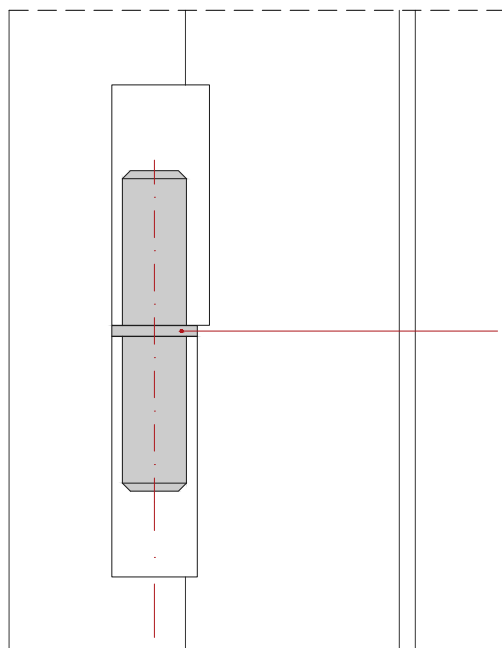
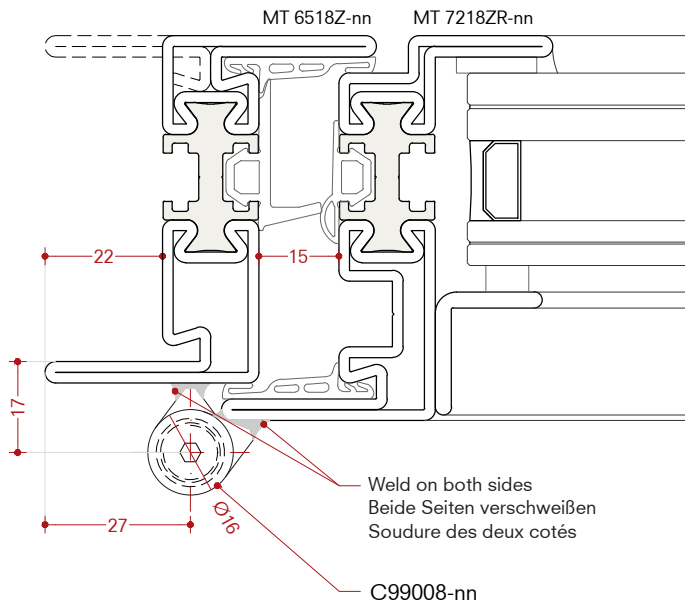
Adjustable 3D weld-on hinge  
C99008-nn

### Einbau

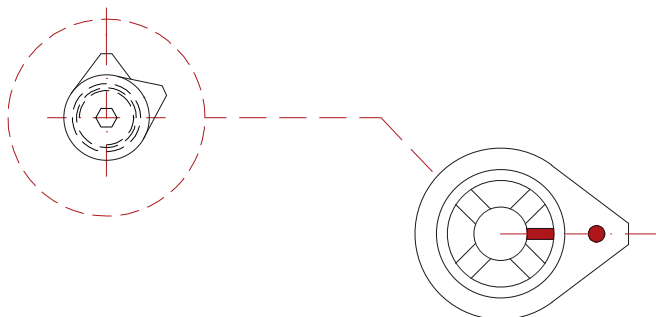
Einstellbares 3D Band  
C99008-nn

### Schéma de montage

Paumelle réglable 3D  
C99008-nn



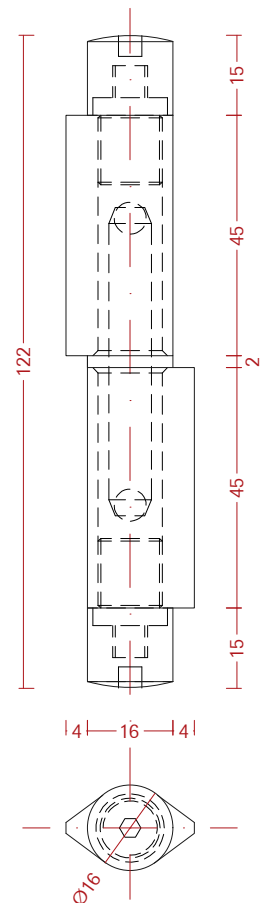
Alignment pin for welding  
(D99401-03, not included)  
Ausrichtungsstift zum schweißen  
(D99401-03, nicht enthalten)  
Gabarit d'alignement pour le soudage  
(D99401-03, non inclus)



The hinge may only be welded on  
without brass bushings.

Das Band darf nur ohne Buchsen  
angeschweißt werden.

la paumelle ne peut être soudée sans  
bagues, sinon la couche anti-blocage  
peut être endommagée.



To adjust the brass bushing, use the D99501-03  
adjusting tool. Adjust the top and bottom hinge before  
hooking the sash.

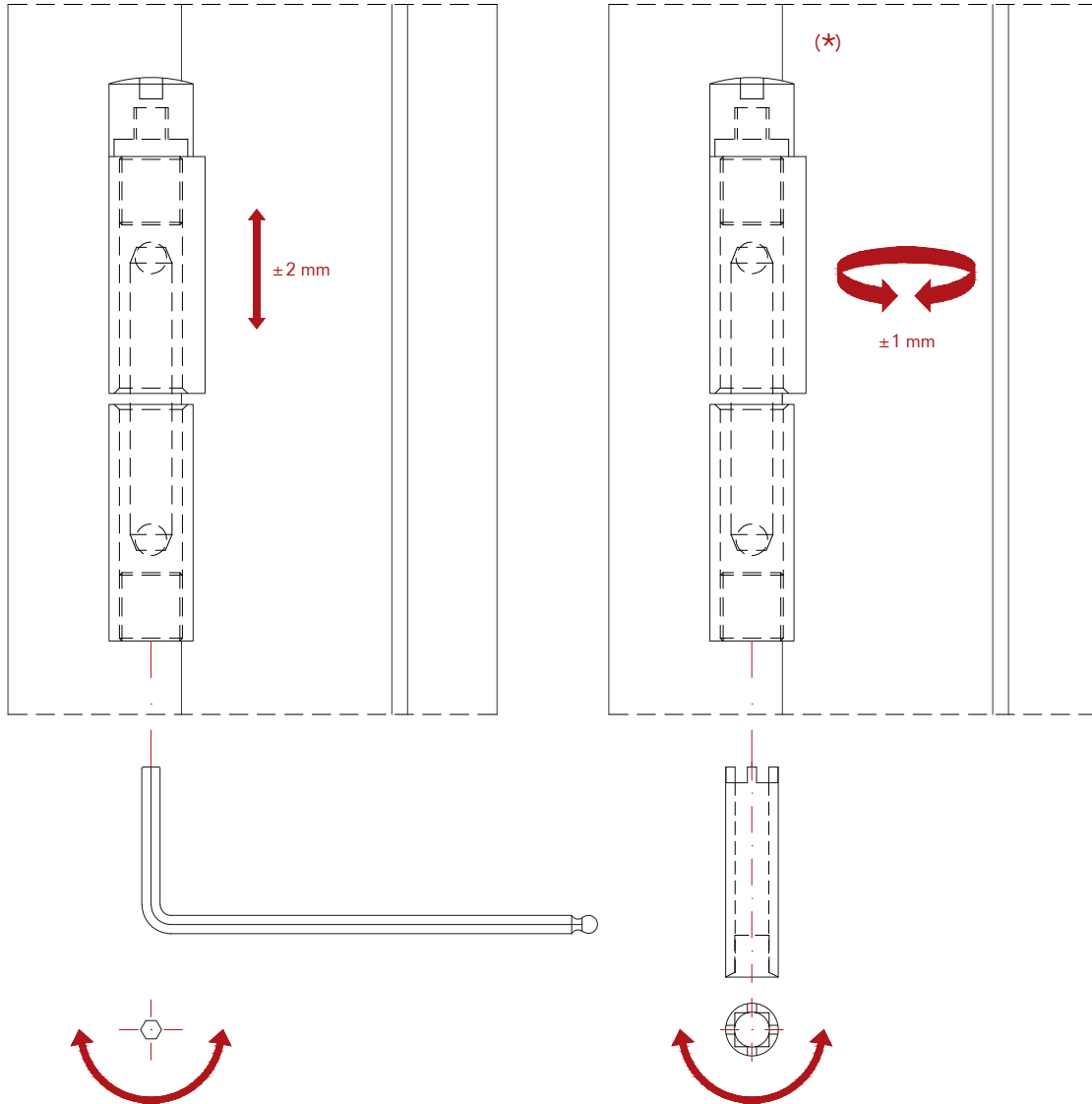
Um die Bronzebuchse zu verstellen den justierschlüssel  
D99501-03 verwenden. Oberes und unteres Band  
einstellen bevor der Flügel eingehängt wird.

Aligner la douille en laiton en utilisant la clé D99501-03  
sur la ligne marquée sur les paumelles  
(en haut et en bas) avant l'installation du vantail.

Setting on site

Einstellung vor Ort

Ajustement en chantier



Use an allen key (4 mm, not included)  
for the upward and downward setting

Verwenden Sie den Inbusschlüssel  
(4 mm, nicht enthalten) für die  
Einstellung nach oben und unten

Utiliser la clé hexagonale allen  
(4 mm, non inclus) pour le réglage haut et bas

Use 1/4" allen key adjusting tool D99501-03  
(Not included) for left and right setting

Verwenden Sie für die linke und rechte Einstellung einen 1/4"  
Inbusschlüssel auf D99501-03 (Eigenfertigung)

Utiliser la clé 1/4" D99501-03 (non inclus)  
pour réglage a gauche et a droite

**Note:**

(\*) After the installation mount all of the parts  
of the hinges to stop the adjustments and  
fix the caps.

**Anmerkung:**

(\*) Nach der Installation montieren Sie alle Teile  
der Bänder, Um die Einstellungen zu fixieren  
und befestigen sie die Kappen.

**Remarque:**

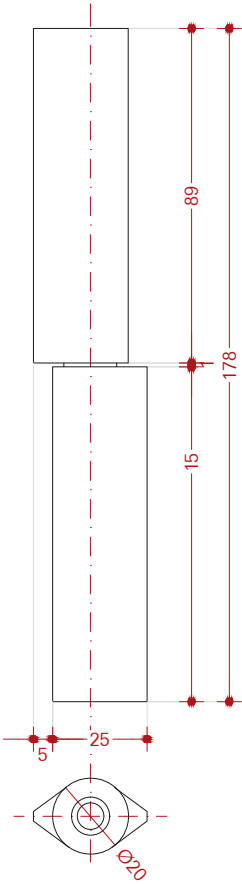
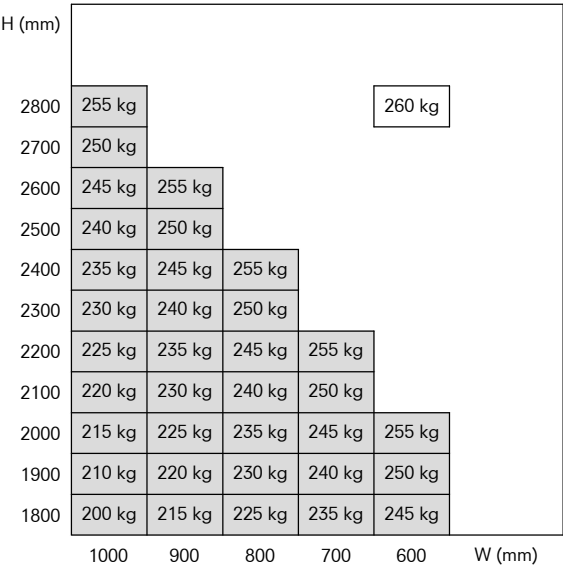
(\*) Après l'installation, montez toutes les parties  
des paumelles pour arrêter les réglages et  
fixer les bouchons.

Load capacity tables  
Weld-on hinges

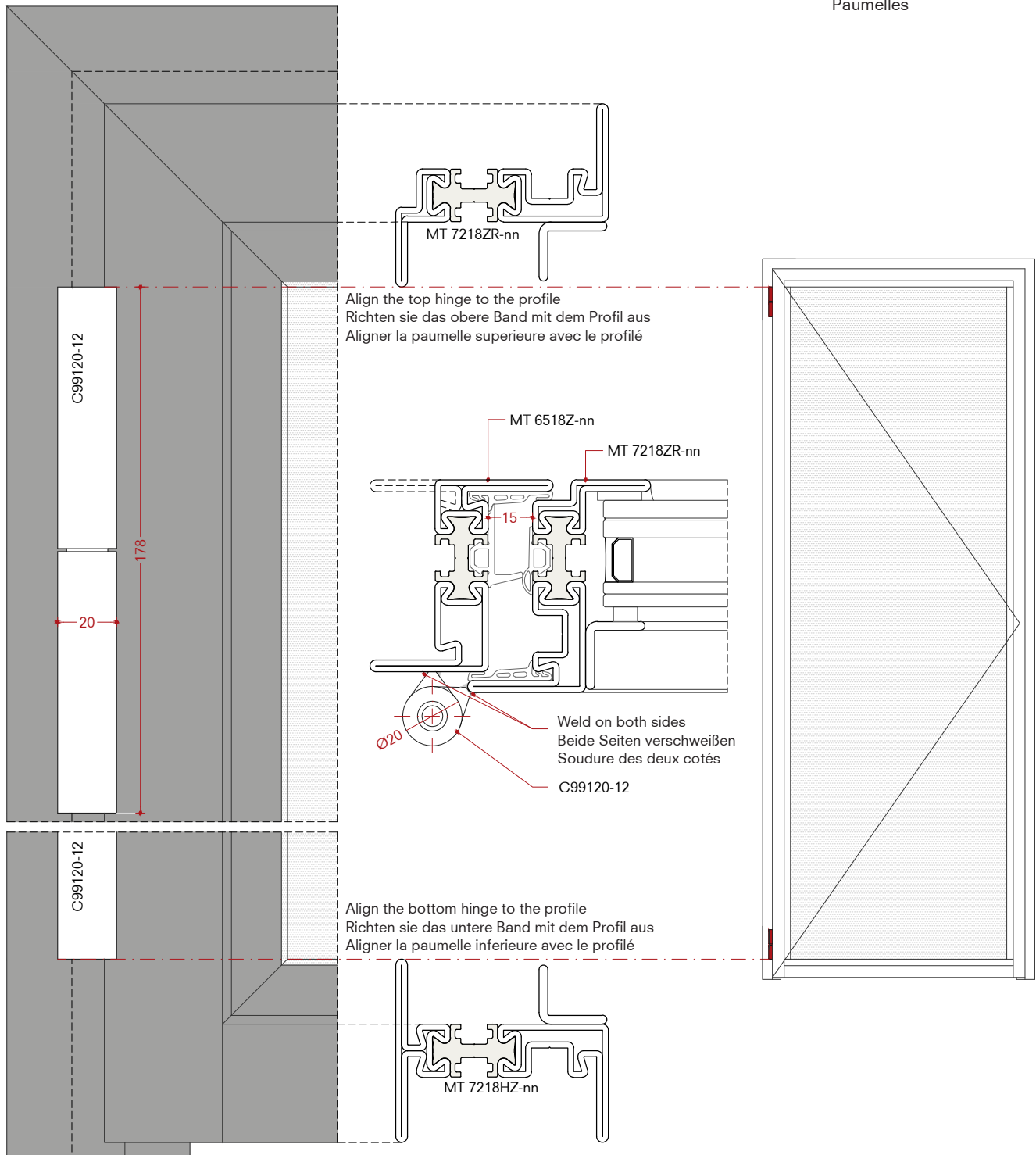
Gewichtstabellen  
Anschweißbänder

Capacité maximale  
Paumelles a souder

|           | Material<br>Werkstoff<br>Matériel                       | Diameter<br>Durchmesser<br>Diamètre | Length<br>Länge<br>Longueur | Capacity (pair)<br>Tragkraft (Paar)<br>Capacité (paire) |
|-----------|---------------------------------------------------------|-------------------------------------|-----------------------------|---------------------------------------------------------|
| C99120-12 | -12 Bright steel<br>-12 Stahl blank<br>-12 Acier décapé | Ø = 20 mm                           | 178 mm                      | 260 kg                                                  |







### Note

For smaller sash heights two hinges are sufficient. From a sash height  $\geq 2200$  mm, 3 hinges must be used.

When welding, care must be taken to avoid overheating the profiles. We recommend the use of heat sinks located in close proximity of the welded area, as well as to proceed in small segment, always waiting for the profile to cool down. The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments. Keep minimum 3 mm distance from welding seam to polyamide web.

### Hinweis

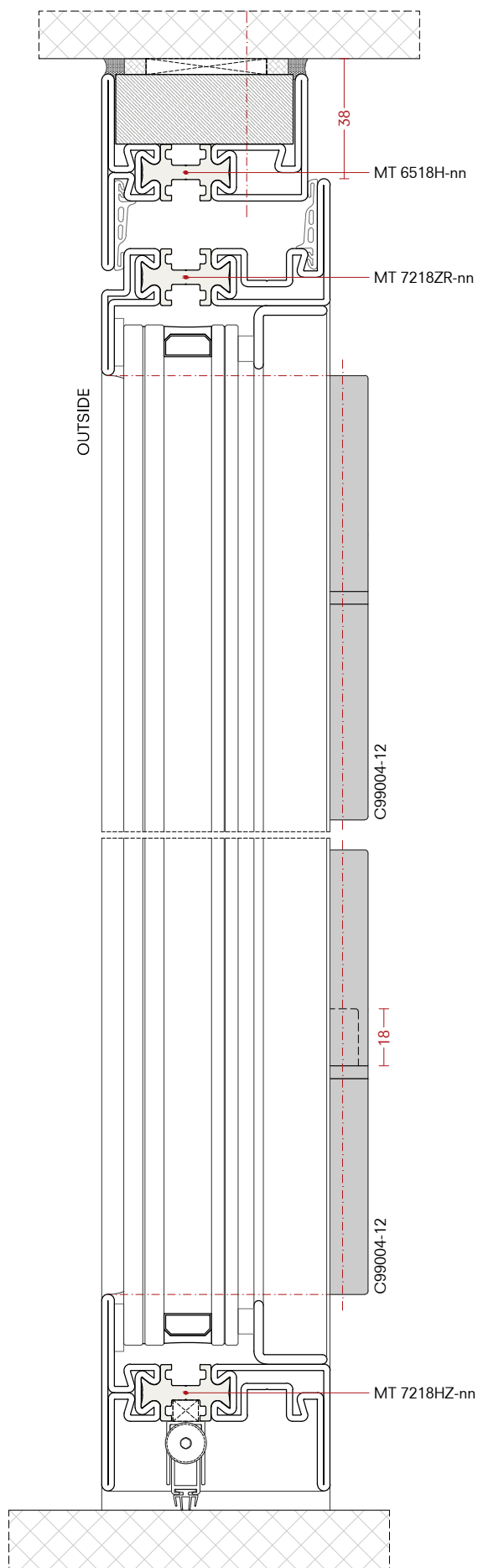
Bei kleineren Flügelhöhen sind zwei Bänder ausreichend. Ab einer Flügelhöhe  $\geq 2200$  mm müssen 3 Bänder verwendet werden.

Beim Schweißen muss darauf geachtet werden, dass die Profile nicht überhitzt werden. Wir empfehlen die Verwendung von Kühlkörpern, die sich in unmittelbarer Nähe des geschweißten Bereichs befinden, sowie in kleinen Abschnitten vorzugehen und immer zu warten, bis das Profil abgekühlt ist. Die beim Schweißen von Profilen und Bändern entstehende Wärme muss mit Schweißzusätzen aus Messing, Kupfer und Aluminium abgeführt werden. Halten Sie einen Mindestabstand von 3 mm zwischen Schweißnaht und Polyamid-Isolator ein.

### Remarque

Pour des hauteurs de vantail plus petites, deux charnières suffisent. A partir d'une hauteur d'ouvrant de  $\geq 2200$  mm, 3 paumelles doivent être utilisées.

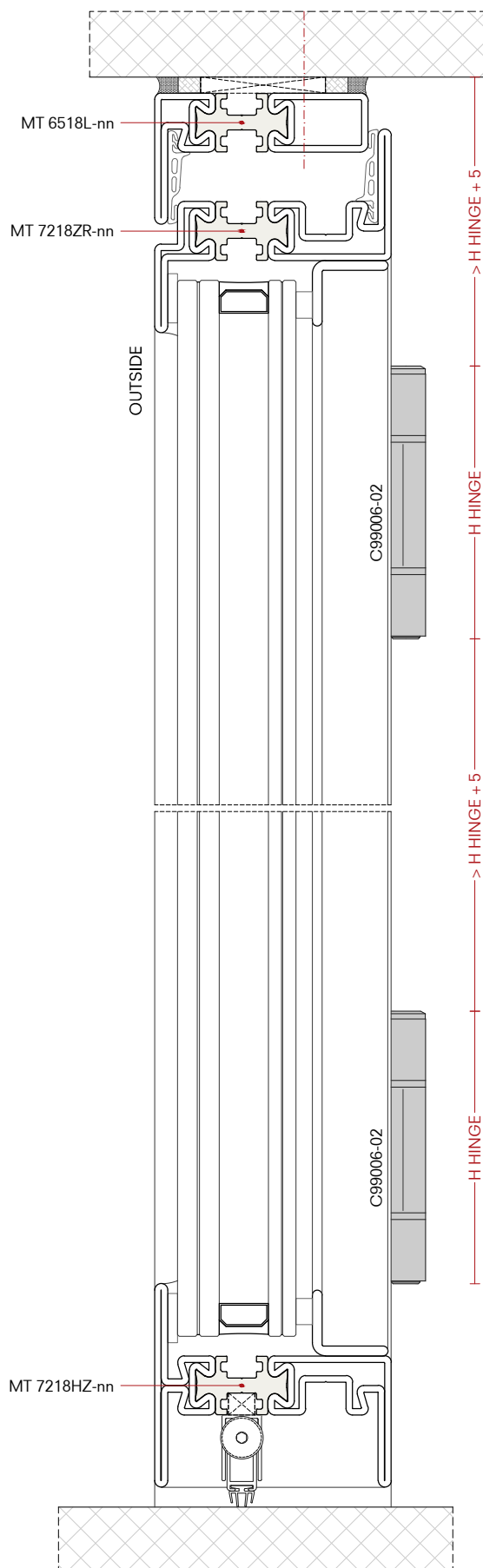
Lors du soudage, il faut veiller à ne pas surchauffer les profilés. Nous recommandons l'utilisation de dissipateurs thermiques situés à proximité de la zone soudée, ainsi que de procéder par petits segments, en attendant toujours que le profilé refroidisse. La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium. Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.



For weld-on hinges C99001-nn, C99002-12, C99003-12 and C99004-12, please use a frame extension (top)  
E.G. MT 6518H-nn to unhook the leaf after installing.

Bei der verwendung der anschweißbänder C99001-nn, C99002-12, C99003-12 Sowie C99004-12 bitte eine Rahmenverbreiterung (oben)  
Z.B. MT 6518H-nn, verwenden um den Flügel nach der Montage in einer Laibung noch Aushängen zu können.

Lors de l'utilisation des bandes à souder C99001-nn, C99002-12, C99003-12 et C99004-12, veuillez employer un cadre élargi (ci-dessus),  
P. Ex. MT 6518H-nn, afin de pouvoir accrocher le vantail après la pose en tunnel du cadre dormant.



Leave at least H hinges + 5 mm  
on top to remove the pin and the leaf.  
Hinges code: C99005-02, C99006-02, C99007-02

Mindestens H hinges + 5 mm  
oben Platz lassen, um bolzen und Flügel zu entfernen.  
Bandnummern: C99005-02, C99006-02, C99007-02

Laissez au moins H paumelles + 5 mm  
sur le dessus pour enlever la goupille et l'aile.  
Ref. paumelles: C99005-02, C99006-02, C99007-02

## Rules for third hinge

## Regeln für drittes Türband

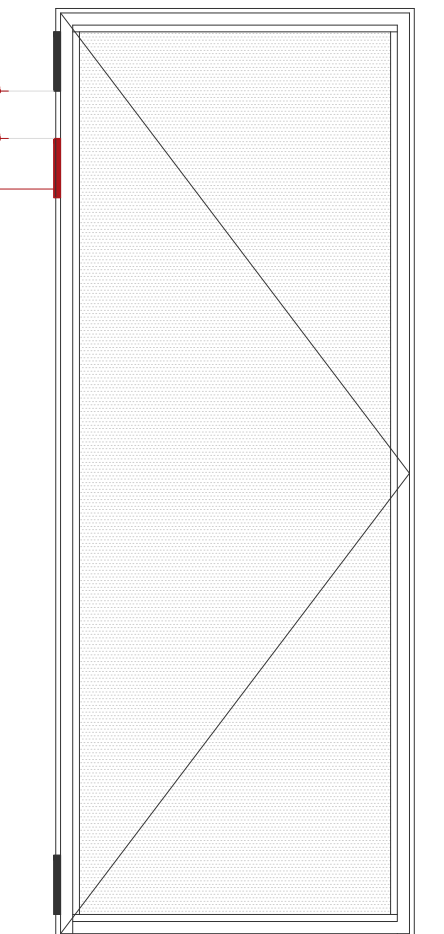
## Règles pour la troisième paumelle

Third hinge at 150 mm  
Drittes Band 150 mm  
Troisième paumelle à 150 mm

The third hinge increases the load-bearing capacity by 15%

Ein 3. Band erhöht die Tragkraft um 15%

La troisième paumelle augmente le capacité du 15%



Use the third hinge if:  
3. Band verwenden wenn:  
Conditions d'utilisation:

**A**

Doors equipped with overhead door closer  
Türen mit Obertürschließer  
Portes équipées avec ferme porte en partie haute

**B**

Doors with panic bar (EN1125)  
Türen mit Panikstange (EN1125)  
Portes avec barre anti-panique (EN1125)

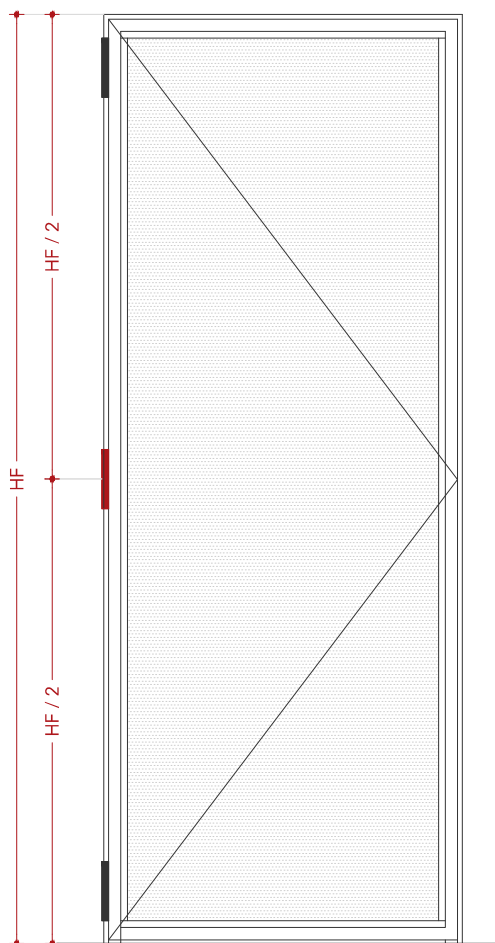
**C**

Doors for intensive uses (schools, hospitals, ...)  
Stark frequentierte Türen (Schulen, Krankenhäuser, ...)  
Portes pour usages intensifs (écoles, hôpitaux, ...)

## Rules for middle hinge

## Regeln für mittleres Türband

## Règles pour la paumelle centrale



Middle hinge needed if:  
Mittleres Band erforderlich wenn:  
Paumelle centrale nécessaire si:

Doors height is more than 2200 mm

Die Türhöhe beträgt mehr als 2200 mm

La porte hauteur est supérieure à 2200 mm

### Note for all hinges:

Please ensure that it is possible to unhinge the door leaf after installation. This should be taken into account during the planning.

HF = Height Frame

### Hinweis für alle Anschweißbänder:

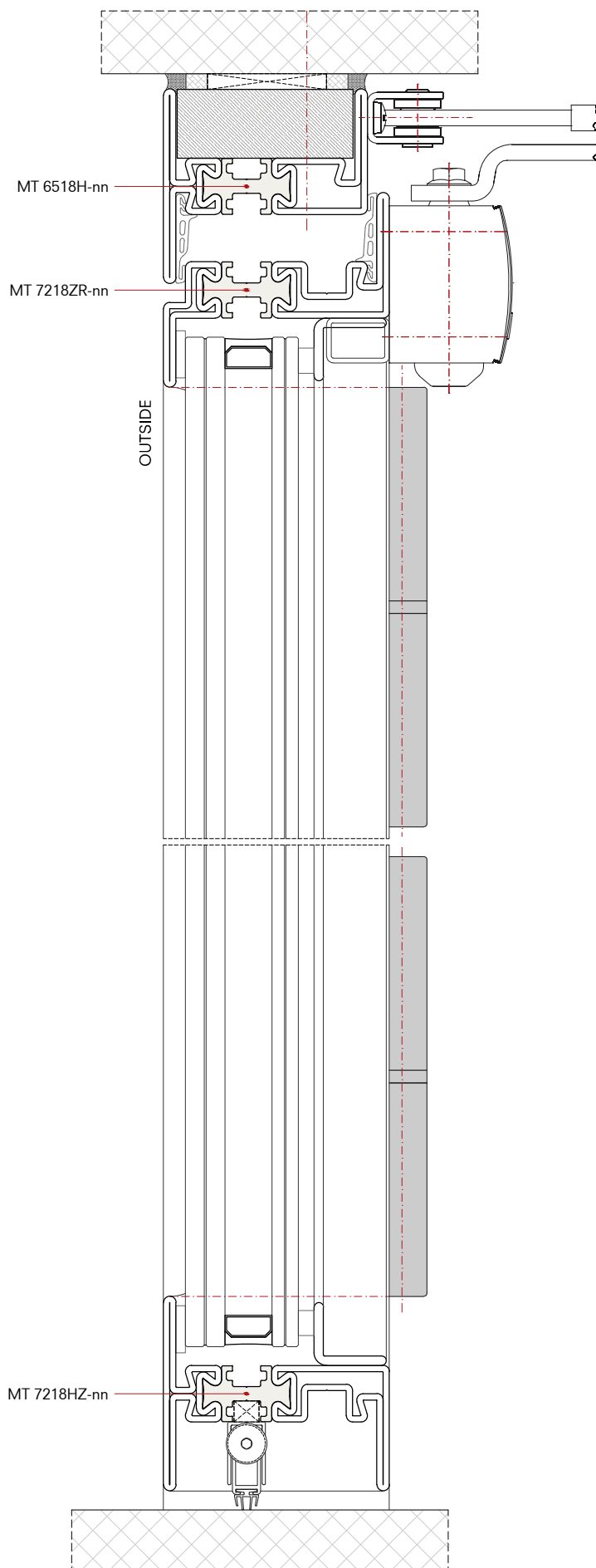
Bitte sicherstellen, dass die Möglichkeit besteht den Türflügel nach der Montage aushängen zu können. Dies sollte schon bei Planung Berücksichtigung finden.

HF = Höhe Rahmen

### Remarque pour toutes les paumelles:

Veuillez vous assurer qu'il est possible de déverrouiller la porte feuille après l'installation. Cela doit être pris en compte pendant la planification.

HF = Hauteur dormant



Use frame MT 6518H-nn on top  
to install door closers.

Verwenden sie den rahmen MT 6518H-nn oben,  
um türschliesser zu installieren.

Utilisez le cadre MT 6518H-nn  
au-dessus de l'installation du ferme-porte.

**Accessories installation:**

**Flush bolts**

**Montage Zubehör:**

**Kantriegel**

**Montage accessoires:**

**Verrou a bascule**

5.7

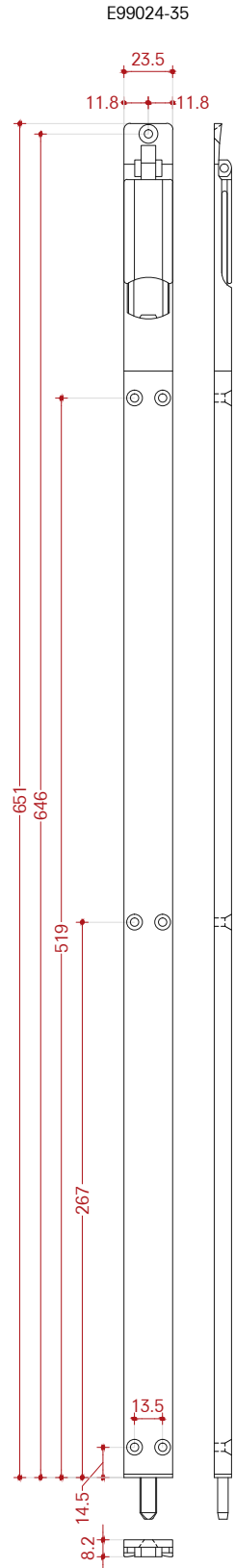
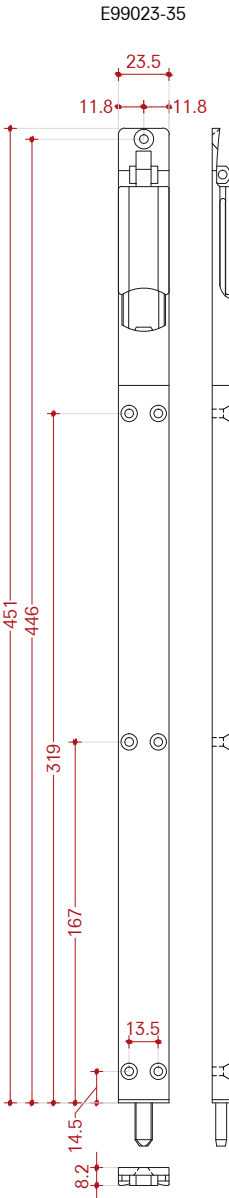
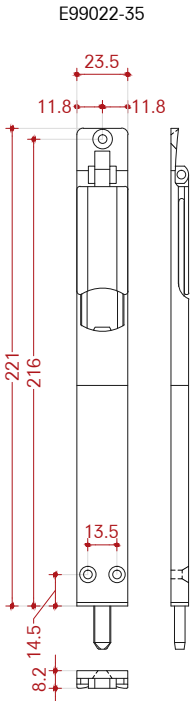
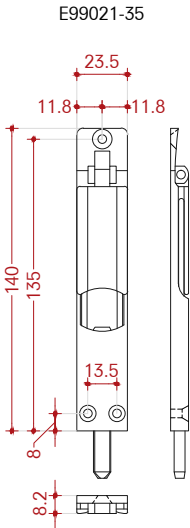




Flush bolt with lever  
For doors

Kantriegel mit Hebel  
Für Türen

Verrou à levier  
Pour portes



### Installation

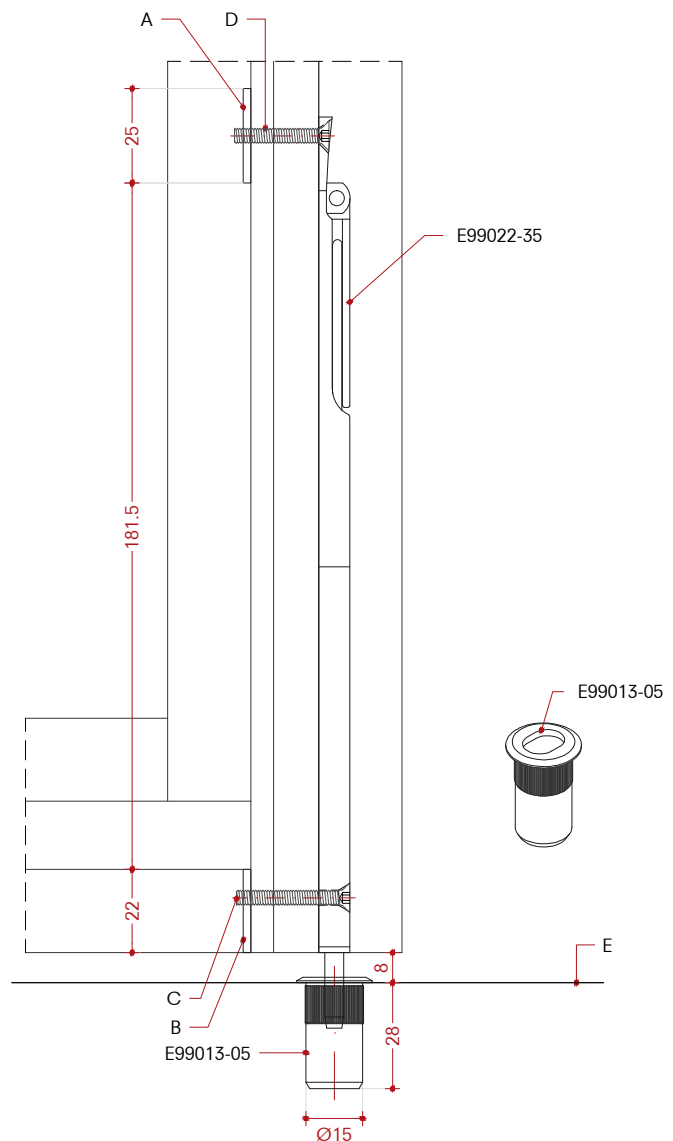
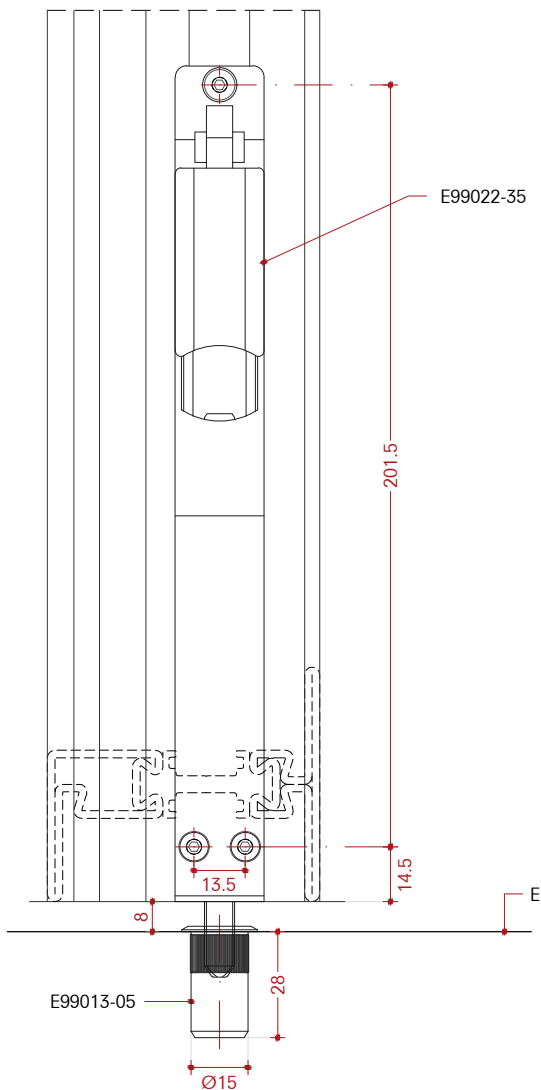
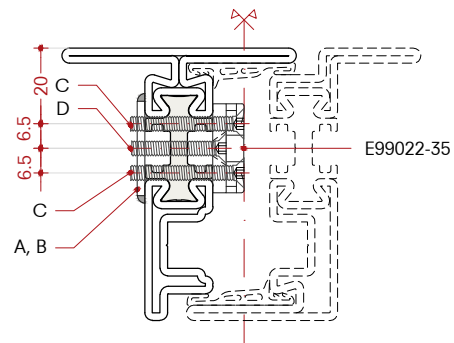
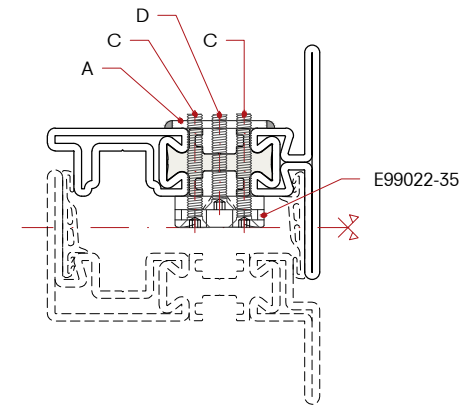
Flush bolt with lever E99022-35  
For doors with single latch lock

### Einbau

Kantriegel mit Hebel E99022-35  
Für Türen mit Einfallenschloss

### Schéma de montage

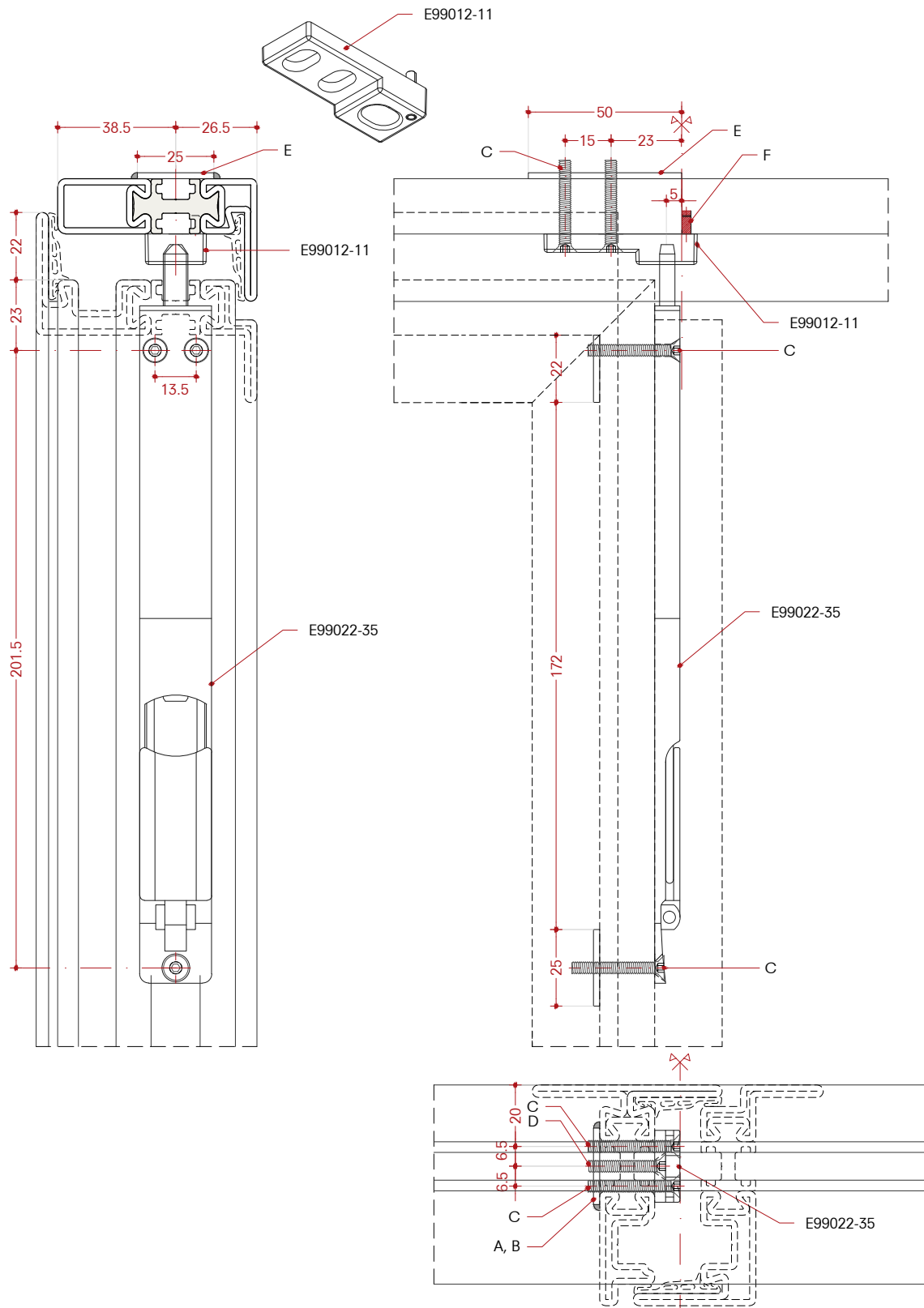
Verrou à levier E99022-35  
Avec serrure à verrou unique



- A) Plate 25x25x2 mm welded on profile (not provided)
- B) Plate 25x22x2 mm welded on profile (not provided)
- C) Fastening with M4x30 ISO10642 screws
- D) Fastening with M4x25 ISO10642 screws
- E) Finished floor

- A) Platte 25x25x2 mm am Profil angeschweisst (Eigenfertigung)
- B) Platte 25x22x2 mm am Profil angeschweisst (Eigenfertigung)
- C) Befestigungsschrauben M4x30 ISO10642
- D) Befestigungsschrauben M4x25 ISO10642
- E) Fertigfußboden

- A) Plaque 25x25x2 mm (non inclus) soudé sur le profilé
- B) Plaque 25x22x2 mm (non inclus) soudé sur le profilé
- C) Fixation avec vis M4x30 ISO10642
- D) Fixation avec vis M4x25 ISO10642
- E) Sol fini



- A) Plate 25x25x2 mm welded on profile (not provided)
- B) Plate 25x22x2 mm welded on profile (not provided)
- C) Fastening with M4x30 ISO10642 screws
- D) Fastening with M4x25 ISO10642 screws
- E) Plate 50x25x2 mm welded on profile (not provided)
- F) Ø3 mm hole on profile

- A) Platte 25x25x2 mm am Profil angeschweisst (Eigenfertigung)
- B) Platte 25x22x2 mm am Profil angeschweisst (Eigenfertigung)
- C) Befestigungsschrauben M4x30 ISO10642
- D) Befestigungsschrauben M4x25 ISO10642
- E) Platte 50x25x2 mm am Profil angeschweisst (Eigenfertigung)
- F) Profil mit Ø3 mm aufbohren

- A) Plaque 25x25x2 mm (non inclus) soudé sur le profilé
- B) Plaque 25x22x2 mm (non inclus) soudé sur le profilé
- C) Fixation avec vis M4x30 ISO10642
- D) Fixation avec vis M4x25 ISO10642
- E) Plaque 50x25x2 mm (non inclus) soudé sur le profilé
- F) Trou Ø3 mm sur profilé



|                                  |                            |                             |            |
|----------------------------------|----------------------------|-----------------------------|------------|
| <b>Accessories installation:</b> | <b>Montage Zubehör:</b>    | <b>Montage accessoires:</b> |            |
| <b>General fittings</b>          | <b>Beschläge Allgemein</b> | <b>Ferrures générales</b>   | <b>5.8</b> |

### Installation

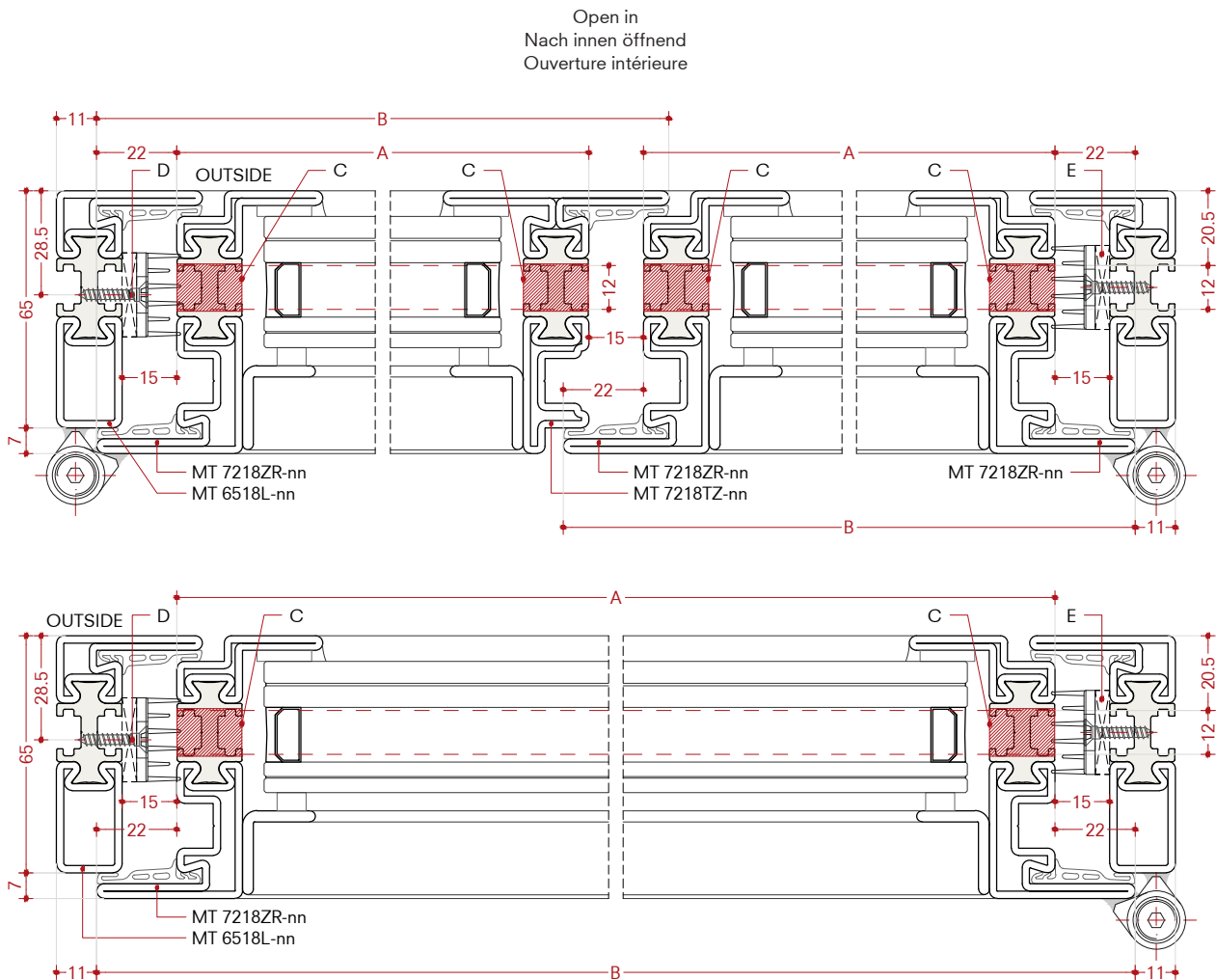
Automatic door seal  
Single and double leaf door  
Open in and open out

### Einbau

Automatische Bodendichtung  
Einf gliche und Zweif gliche T r  
Nach innen und au en  ffnend

### S ch ma de montage

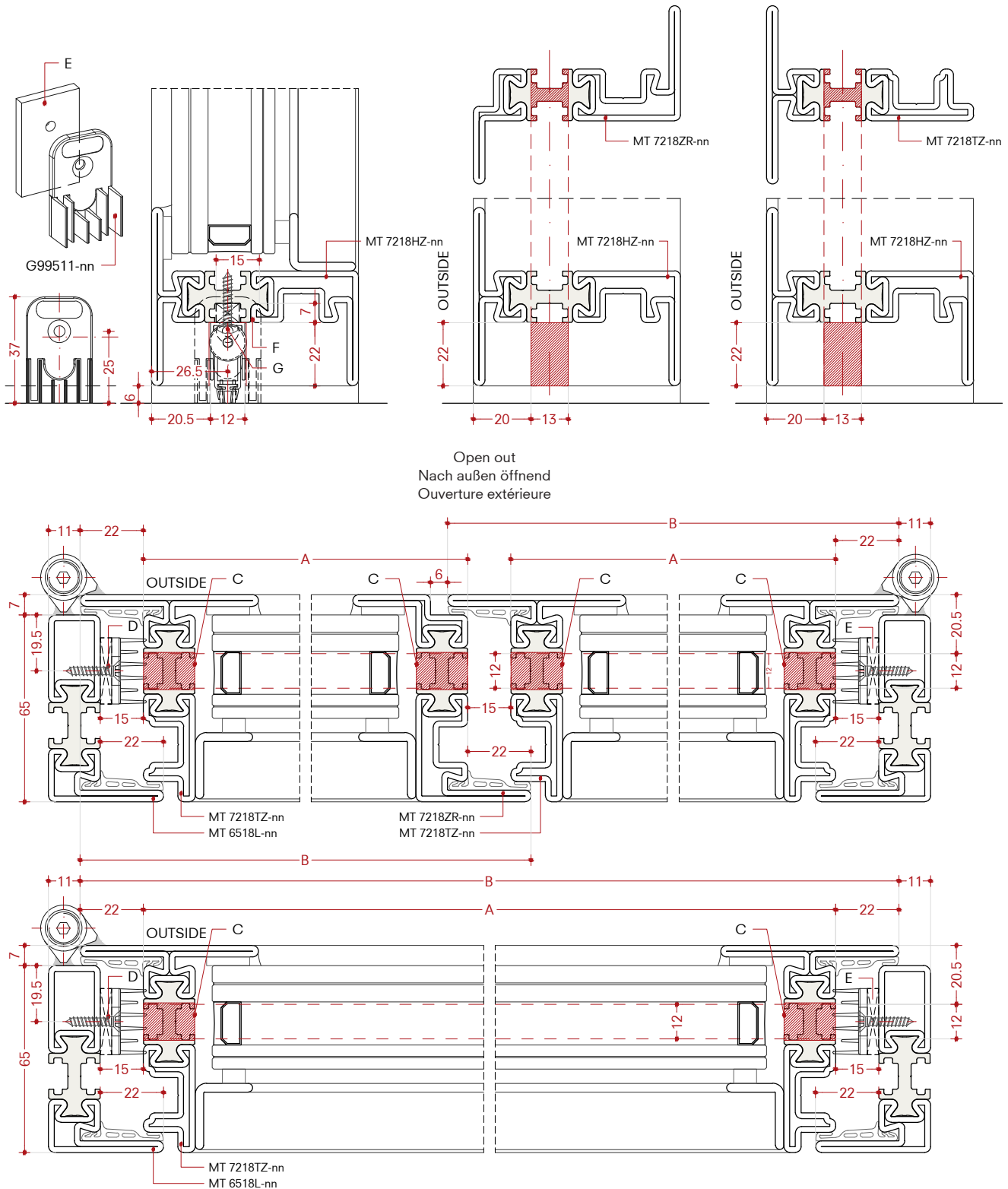
Joint de seuil automatique  
Porte   un et deux vantaux  
Ouvrant vers l'int rieur et ext rieur



- A) Automatic drop seal (aluminium profile)
- B) Door leaf
- C) 13x20 mm cutout
- D) Fastening of G99511-nn with  3.5x19 mm ISO7050 screws
- E) 23x4 L=37 mm PVC plate (not provided)

- A) Automatische Bodendichtung (Aluminiumprofil)
- B) T rfl gel
- C) 13x20 mm Ausnehmung
- D) Befestigung von G99511-nn mit  3.5x19 mm ISO7050 Schrauben
- E) 23x4 L=37 mm PVC-Platte (Eigenfertigung)

- A) Joint de seuil automatique (profil  en aluminium)
- B) Porte
- C) 13x20 mm pi ce   enlever
- D) Fixation du G99511-nn avec vis  3.5x19 mm ISO7050
- E) 23x4 L=37 mm plat PVC (non inclus)



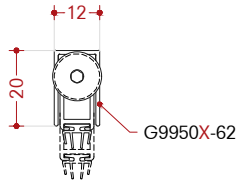
- A) Automatic drop seal (aluminium profile)
- B) Door leaf
- C) 13x20 mm cutout
- D) Fastening of G99511-nn with Ø3.5x19 mm ISO7050 screws
- E) 23x4 L=37 mm PVC plate (not provided)
- F) 15x7 mm L=MT 7218HZ-nn PVC plate (not provided)
- G) G995XX-62 bottom profile fastening with Ø3.5x19 mm ISO7049 screws

- A) Automatische Bodendichtung (Aluminiumprofil)
- B) Türflügel
- C) 13x20 mm Ausnehmung
- D) Befestigung von G99511-nn mit Ø3.5x19 mm ISO7050 Schrauben
- E) 23x4 L=37 mm PVC-platte (Eigenfertigung)
- F) 15x7 mm L=MT 7218HZ-nn PVC-Platte (Eigenfertigung)
- G) G995XX-62 Befestigung am Sockelprofil mit Ø3.5x19 mm ISO7049

- A) Joint de seuil automatique (profilé en aluminium)
- B) Porte
- C) 13x20 mm pièce à enlever
- D) Fixation du G99511-nn avec vis Ø3.5x19 mm ISO7050
- E) 23x4 L=37 mm plat PVC (non inclus)
- F) 15x7 mm L=MT 7218HZ-nn plat PVC (non inclus)
- G) G995XX-62 fixation au profil de socle avec Ø3.5x19 mm ISO7049

### Installation

Automatic door seal  
G995XX-62 cut off profile



|           | A    | B   |
|-----------|------|-----|
| G99501-62 | 330  | 50  |
| G99502-62 | 430  | 135 |
| G99503-62 | 530  | 200 |
| G99504-62 | 630  | 200 |
| G99505-62 | 730  | 200 |
| G99506-62 | 830  | 200 |
| G99507-62 | 930  | 200 |
| G99508-62 | 1030 | 200 |
| G99509-62 | 1130 | 200 |
| G99510-62 | 1230 | 200 |

### Einbau

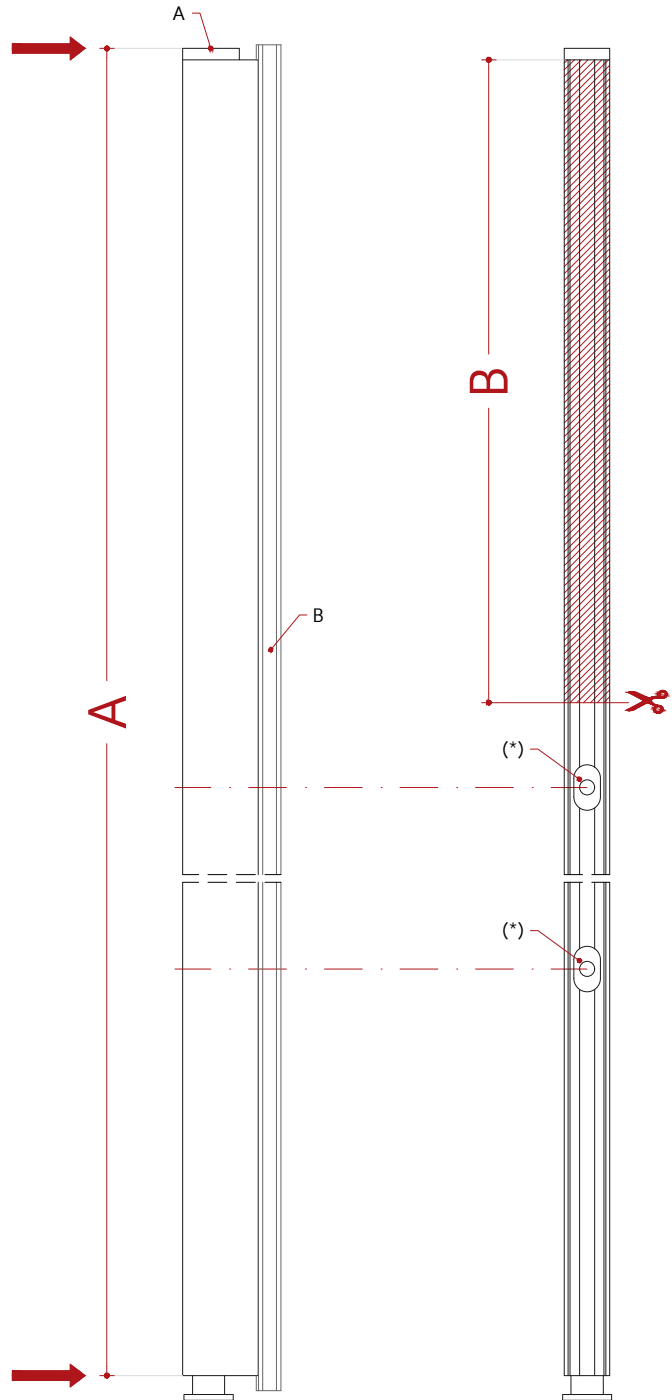
Automatische Bodendichtung  
G9950X-62 Profil ausklinken

Lock side  
Schlosseite  
Ct serrure

Hinge side  
Bandseite  
Ct paumelle

### Schma de montage

Joint de seuil automatique  
Pice  enlever G9950X-62

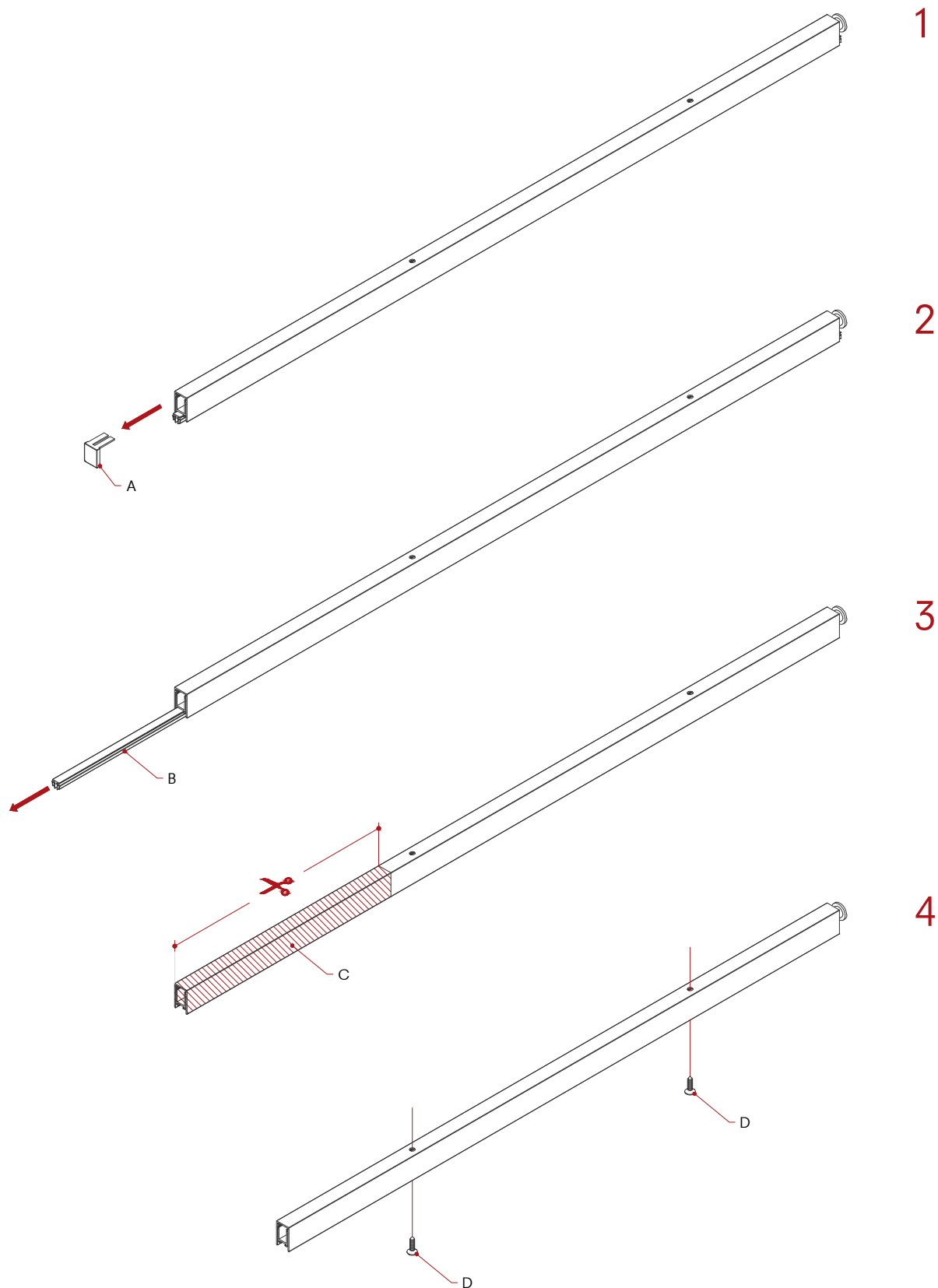


A) Remove the cap  
B) Remove the gasket  
(\*) Existing hole

A) Entfernen Sie die Kappe  
B) Entfernen Sie die Dichtung  
(\*) Vorhandenes bohrung

A) Retirer le bouchon  
B) Retirer le joint  
(\*) Trou existant





A) Remove the cap  
B) Remove the gasket  
C) Cut off profile  
D) Fastening with selftapping  $\varnothing 3.2$  mm ISO14585 screws

A) Entfernen Sie die Kappe  
B) Entfernen Sie die Dichtung  
C) Profil ausklinken  
D) Befestigungsschrauben  $\varnothing 3.2$  mm ISO14585

A) Retirer le bouchon  
B) Retirer le joint  
C) Pice  enlever  
D) Fixation avec vis autotaraudeuses  $\varnothing 3.2$  mm ISO14585

## Installation

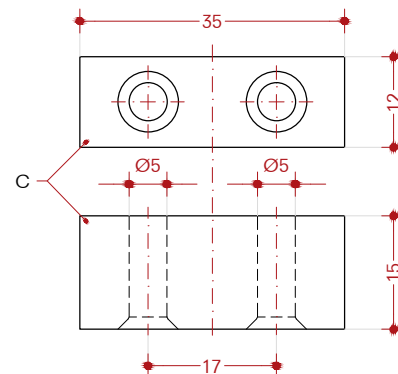
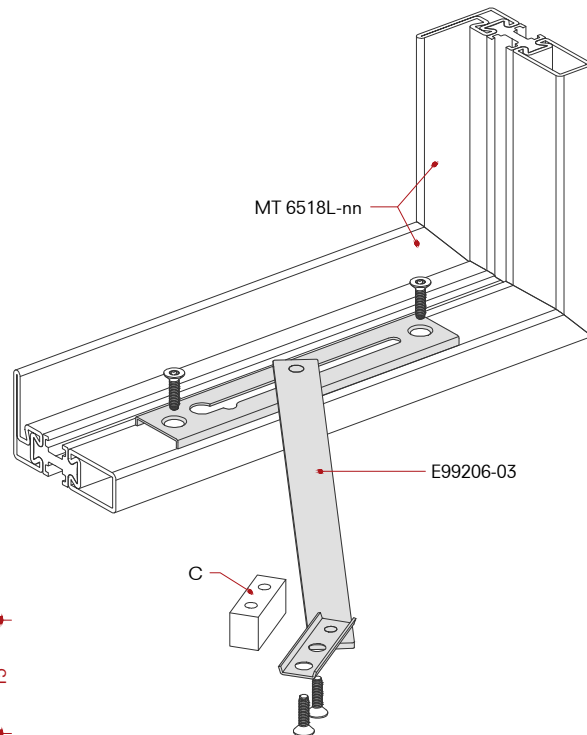
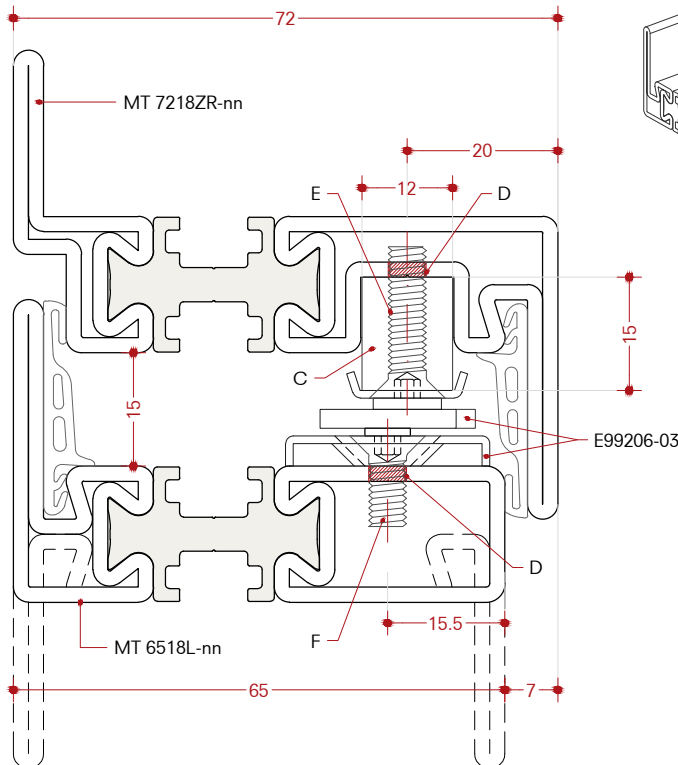
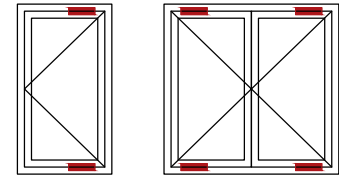
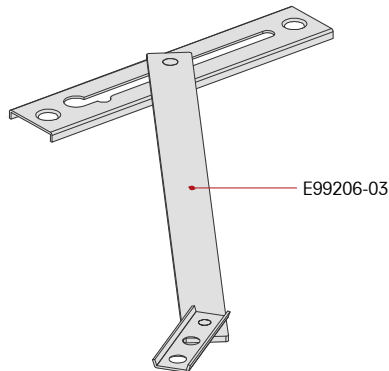
Opening restrictor E99206-03  
Open in

## Einbau

Öffnungsbegrenzer E99206-03  
Nach innen öffnend

## Schéma de montage

limiteur d'ouverture E99206-03  
Ouverture intérieure



Drawing represents right opening / Installation below - left opening / Installation top is the mirror image

- A) Frame
- B) Leaf
- C) Plate (not included)
- D) M5 hole
- E) M5x20 ISO10642 screw
- F) M5x12 ISO10642 screw

- X) To reduce the opening angle, increase the dimension "Y"
- Y) Variable
- Z) Position to unlock the restrictors

Dargestellt DIN rechts / Einbau unten - DIN links / Einbau oben spiegelbildlich

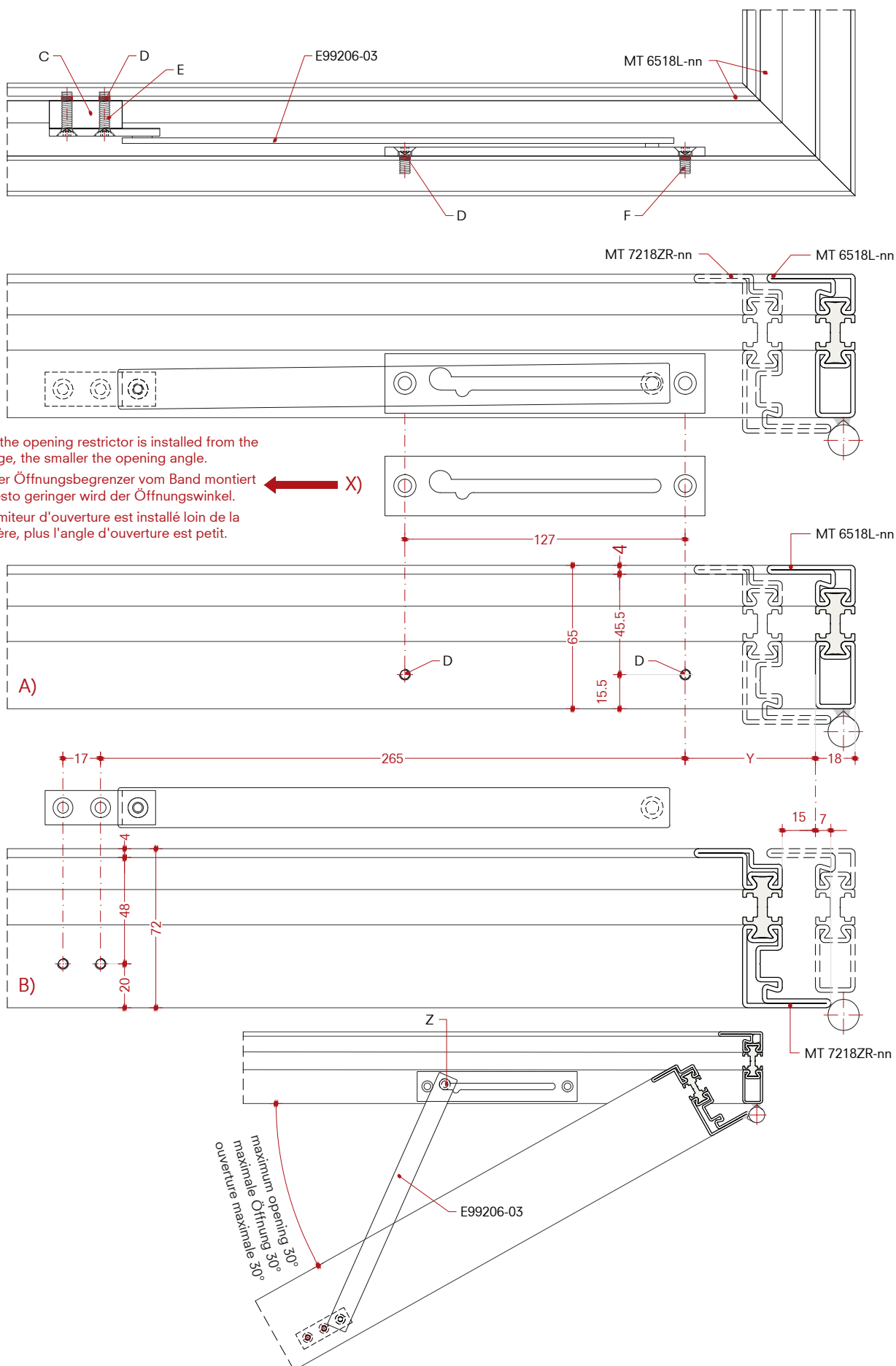
- A) Rahmen
- B) Flügel
- C) Unterlage (Eigenfertigung)
- D) M5 Gewindebohrung I
- E) Senkschraube M5x20 ISO10642
- F) Senkschraube M5x12 ISO10642

- X) Um den Öffnungswinkel zu reduzieren, vergrößern Sie das Maß "Y"
- Y) Variabel
- Z) Position um den Öffnungsbegrenzer zu entsperren

Montré ouverture droite / Installation en bas - ouverture gauche / Installation dessus inversé en miroir

- A) Dormant
- B) Ouvrant
- C) Plat 8 mm (non inclus)
- D) Trou M5
- E) Vis M5x20 ISO10642
- F) Vis M5x12 ISO10642

- X) Pour réduire l'angle d'ouverture, augmentez la dimension "Y"
- Y) Variable
- Z) Position pour déverrouiller le limiteur



## Installation

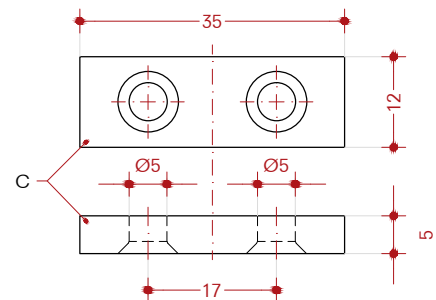
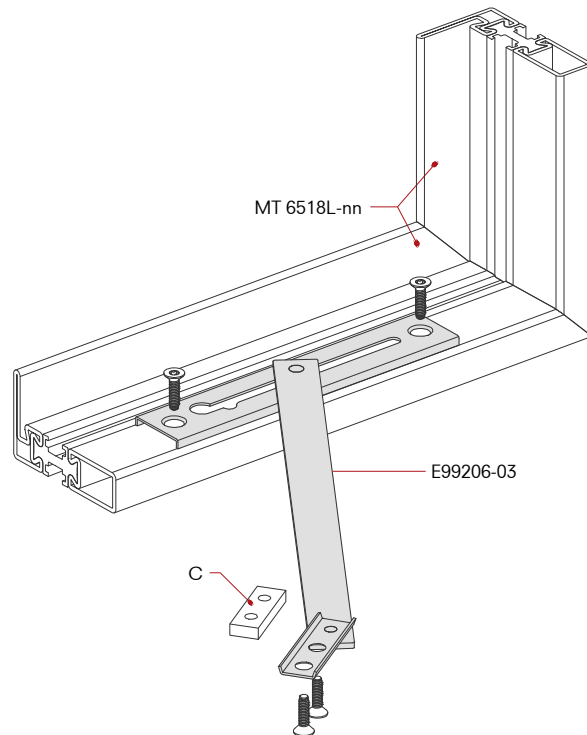
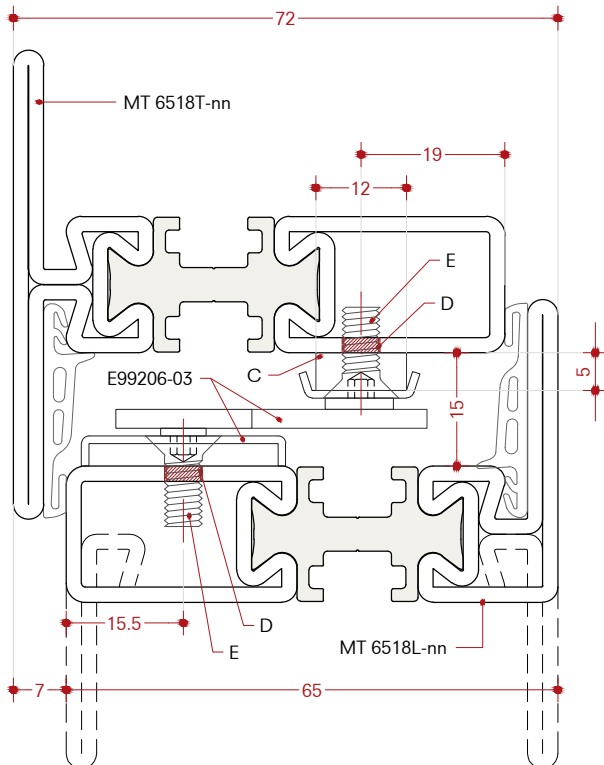
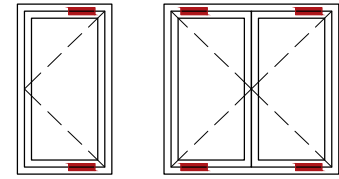
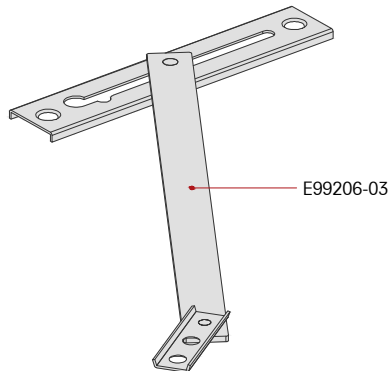
Opening restrictor E99206-03  
Open out

## Einbau

ffnungsbegrenzer E99206-03  
Nach auen ffnend

## Schma de montage

limiteur d'ouverture E99206-03  
Ouverture extrieure



Drawing represents right opening / Installation below - left opening / Installation top is the mirror image

- A) Frame
- B) Leaf
- C) Plate (not included)
- D) M5 hole
- E) M5x12 ISO10642 screw

- X) To reduce the opening angle, increase the dimension "Y"
- Y) Variable
- Z) Position to unlock the restrictors

Dargestellt DIN rechts / Einbau unten - DIN links / Einbau oben spiegelbildlich

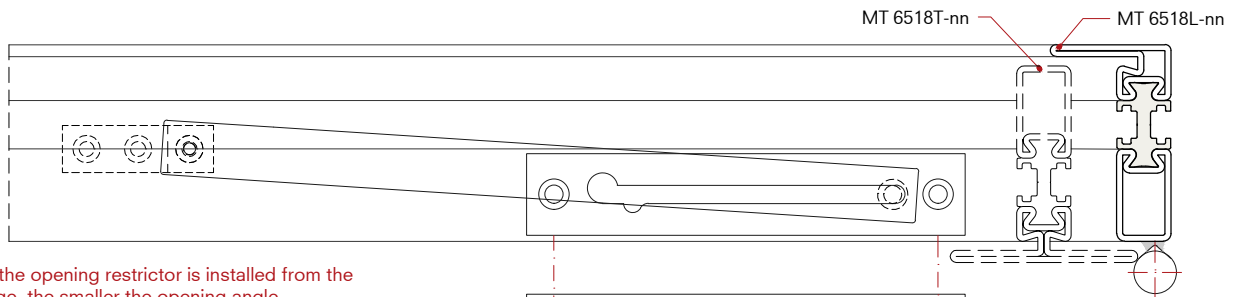
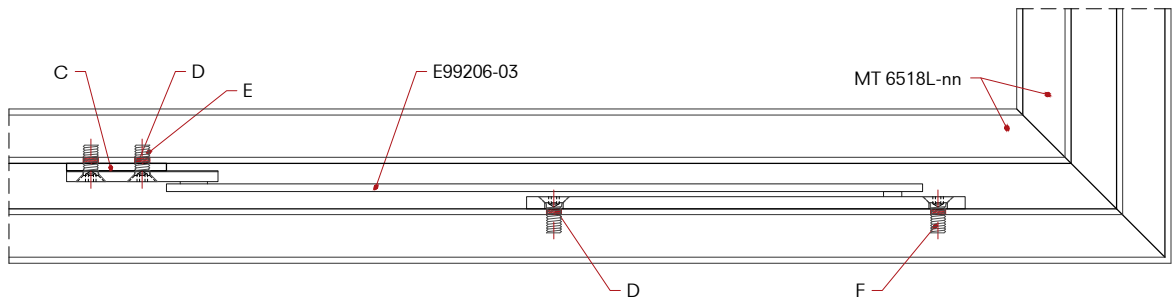
- A) Rahmen
- B) Flgel
- C) Unterlage (Eigenfertigung)
- D) M5 Gewindebohrung I
- E) Senkschraube M5x12 ISO10642

- X) Um den ffnungswinkel zu reduzieren, vergrern Sie das Ma "Y"
- Y) Variabel
- Z) Position um den ffnungsbegrenzer zu entsperren

Montr ouverture droite / Installation en bas - ouverture gauche / Installation dessus invers en miroir

- A) Dormant
- B) Ouvrant
- C) Plat 8 mm (non inclus)
- D) Trou M5
- E) Vis M5x12 ISO10642

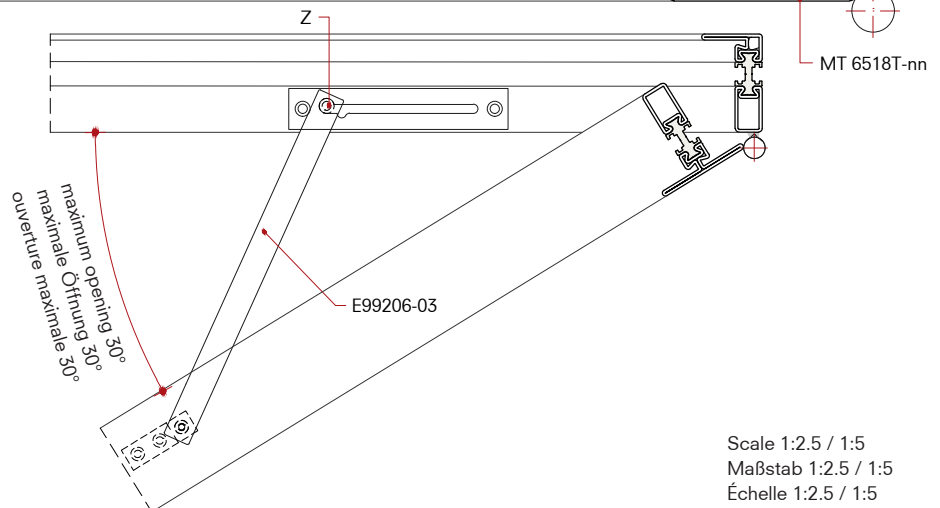
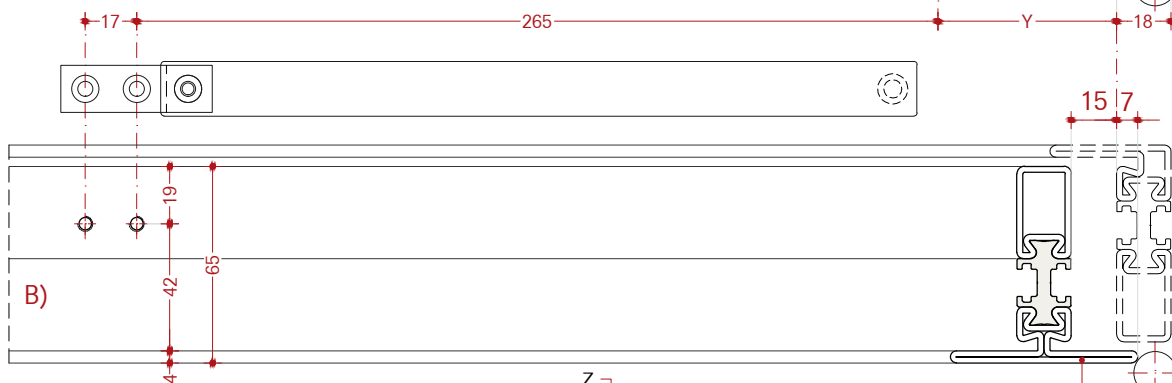
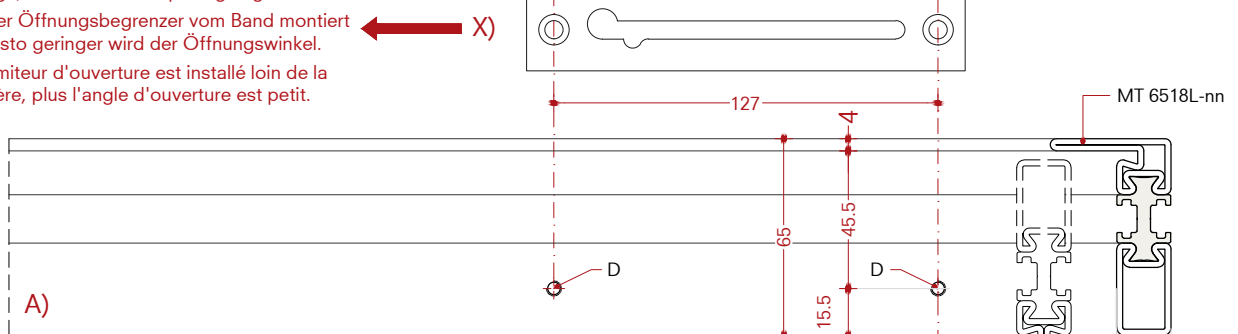
- X) Pour rduire l'angle d'ouverture, augmentez la dimension "Y"
- Y) Variable
- Z) Position pour dverrouiller le limiteur



The further the opening restrictor is installed from the hinge, the smaller the opening angle.

Je weiter der  ffnungsbegrenzer vom Band montiert wird, desto geringer wird der  ffnungswinkel.

Plus le limiteur d'ouverture est install  loin de la charni re, plus l'angle d'ouverture est petit.



Scale 1:2.5 / 1:5  
Ma stab 1:2.5 / 1:5  
 chelle 1:2.5 / 1:5



Accessories installation:

Installation Tilt&Turn  
fittings

Montage Zubehör:

Einbau Dreh-Kippfenster  
Beschlge

Montage accessoires:

Montage fnetre oscillo-  
battant accessoires

5.9

Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2

Legende

+ = Fixed  
— = Innen ffnend  
- - - = Auen ffnend  
Einheit in: mm  
Mastab 1:1 - 1:2

Lgende

+ = Fixe  
— = Ouvr. intrieur  
- - - = Ouvr. extrieur  
Dimensions en: mm  
chelle 1:1 - 1:2

**Tilt&Turn windows  
with visible hinge**

Basic kits

K88001  
Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Grundgarnitur

K88001  
Standardfenster

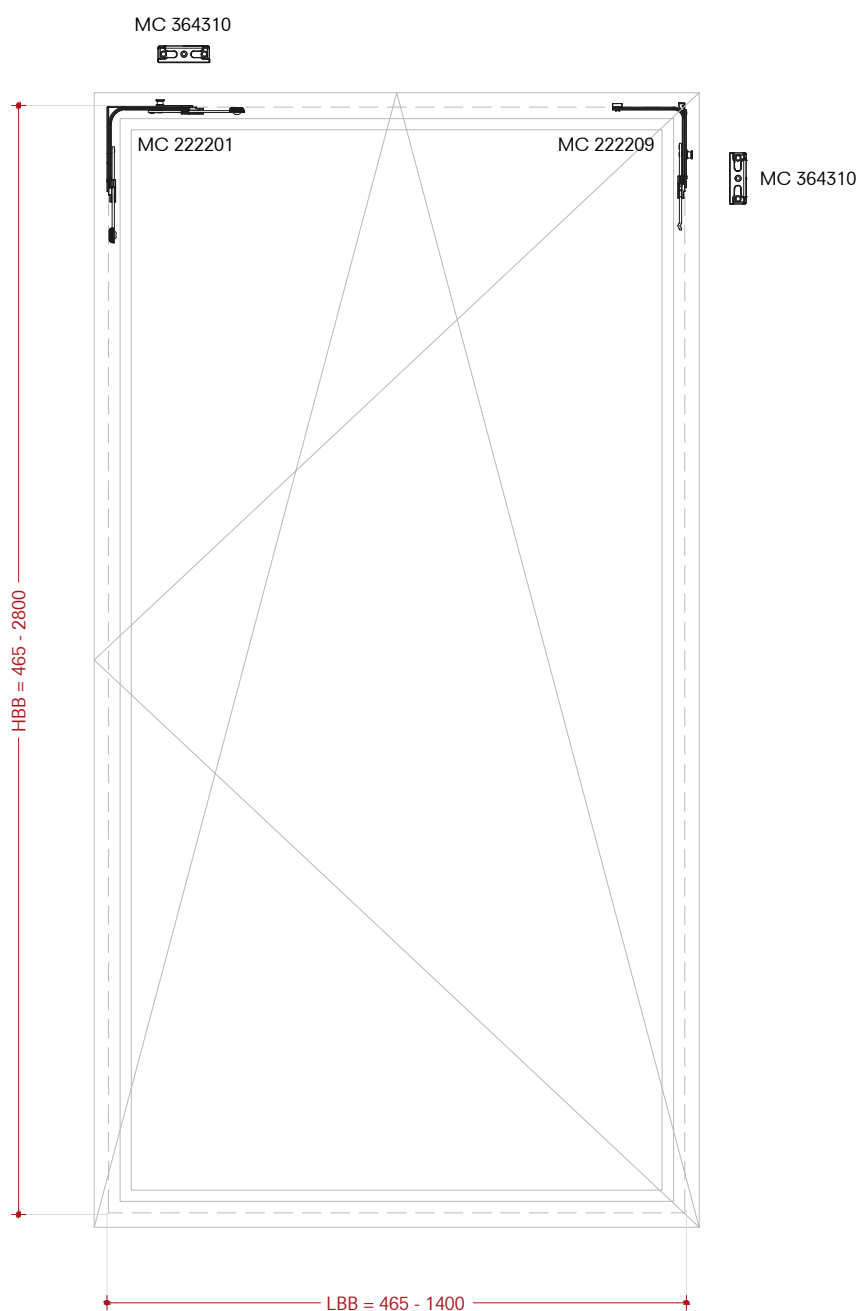
LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

**Fênêtrre oscillo-battant  
avec paumelle visible**

Kits de base

K88001  
Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm





**Tilt&Turn windows  
with visible hinge**

Basic kits

K88002

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Grundgarnitur

K88002

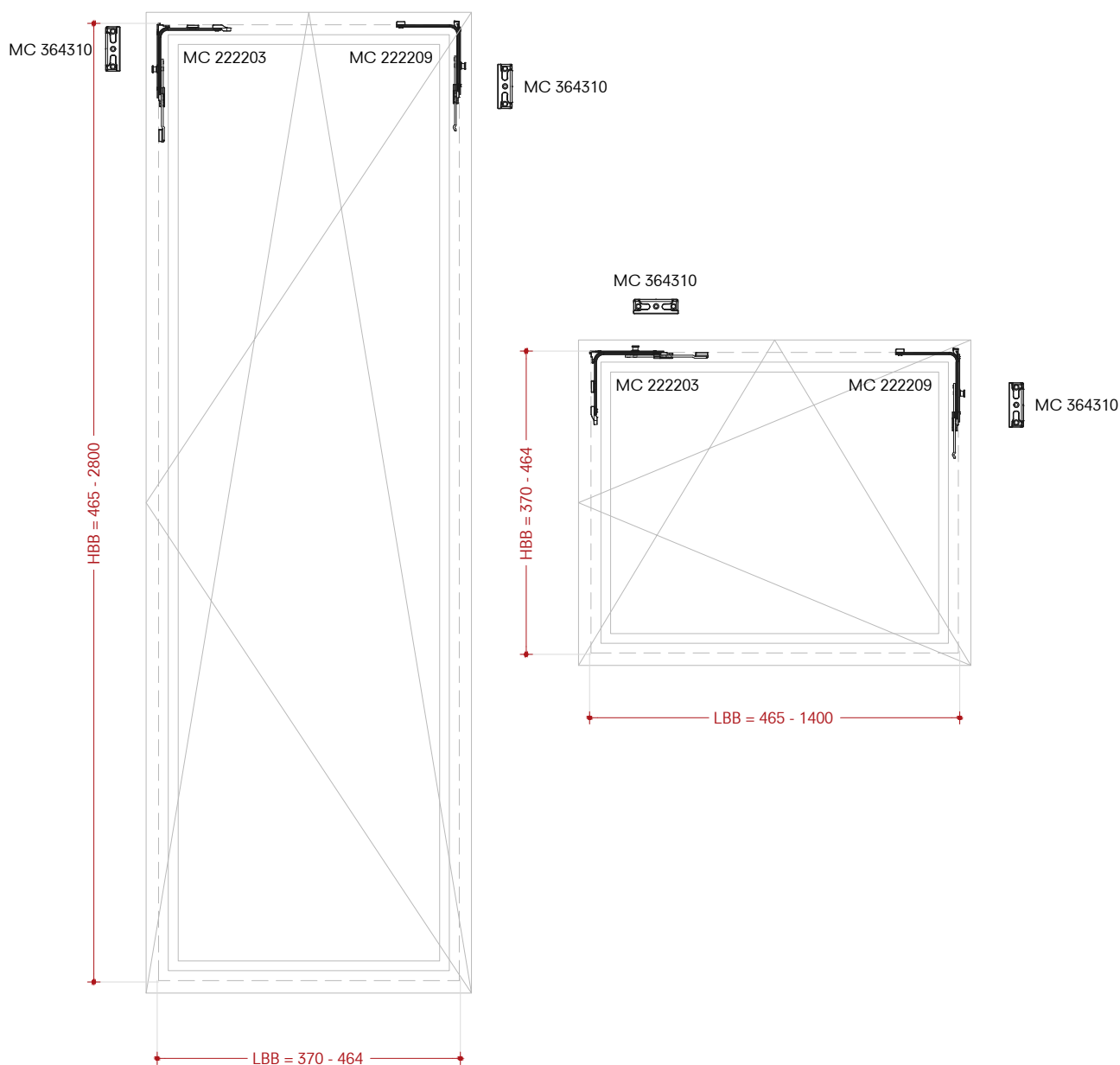
LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

**Fênêtrê oscillo-battant  
avec paumelle visible**

Kits de base

K88002

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm



**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

Gear kits

Garnitur Getriebe

Kits d'équipement

**K88003**

HH = 190 mm  
HBB = 340 - 1608 mm

MC 202206 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°01 piece

**K88004**

HH = 300 mm  
HBB = 661 - 1790 mm

MC 202207 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

**K88005**

HH = 400 mm  
HBB = 841 - 2040 mm

MC 202208 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

**K88006**

HH = 500 mm  
HBB = 1091 - 2290 mm

MC 202209 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

MC 202216 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces

**K88008**

HH = 700 mm  
HBB = 1591 - 2650 mm

MC 207305 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces

**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

MC 202737 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces

**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm

MC 202738 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces

**K88003**

HH = 190 mm  
HBB = 340 - 1608 mm

**K88004**

HH = 300 mm  
HBB = 661 - 1790 mm

**K88005**

HH = 400 mm  
HBB = 841 - 2040 mm

**K88006**

HH = 500 mm  
HBB = 1091 - 2290 mm

**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

**K88008**

HH = 700 mm  
HBB = 1591 - 2650 mm

**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm

**K88003**

HH = 190 mm  
HBB = 340 - 1608 mm

**K88004**

HH = 300 mm  
HBB = 661 - 1790 mm

**K88005**

HH = 400 mm  
HBB = 841 - 2040 mm

**K88006**

HH = 500 mm  
HBB = 1091 - 2290 mm

**K88007**

HH = 600 mm  
HBB = 1341 - 2540 mm

**K88008**

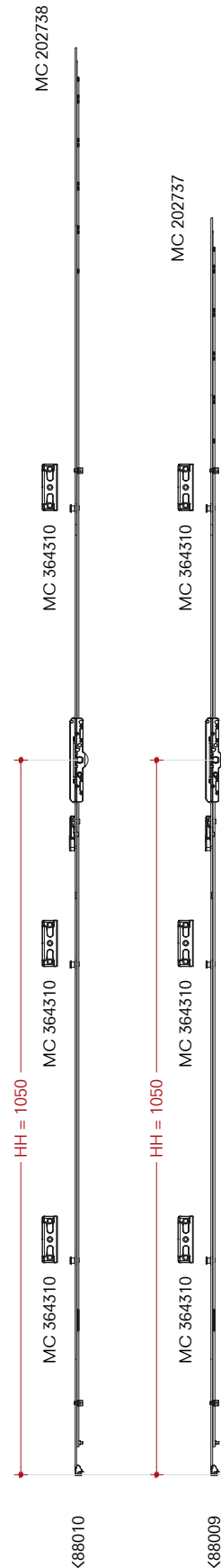
HH = 700 mm  
HBB = 1591 - 2650 mm

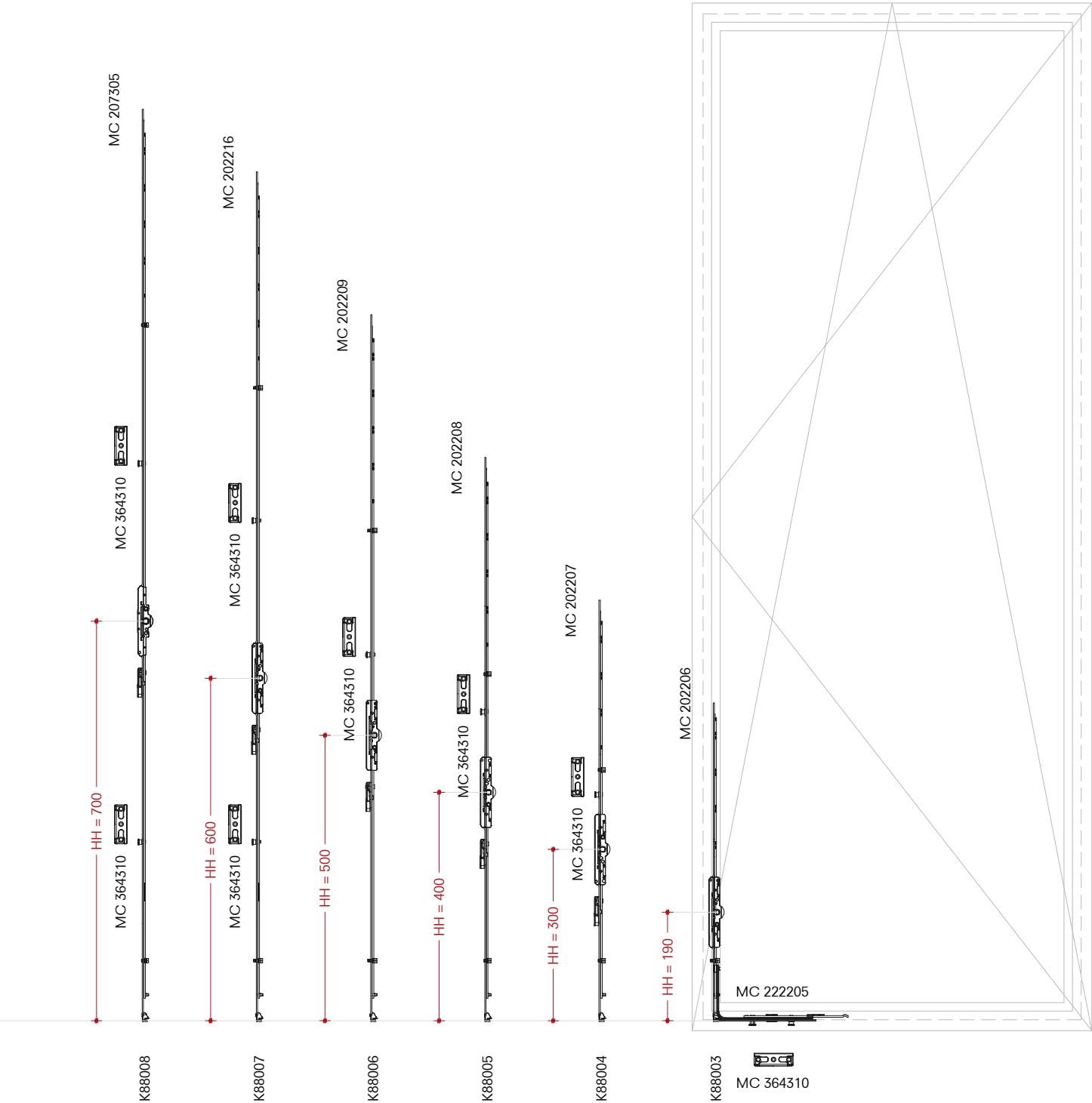
**K88009**

HH = 1050 mm  
HBB = 1701 - 2900 mm

**K88010**

HH = 1050 mm  
HBB = 1951 - 3150 mm





**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

Double croppable gear kits

Beidseitig kürzbare Garnitur

Kits d'équipement à double recadrage

K88109

K88109

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88110

K88110

K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88111

K88111

K88111

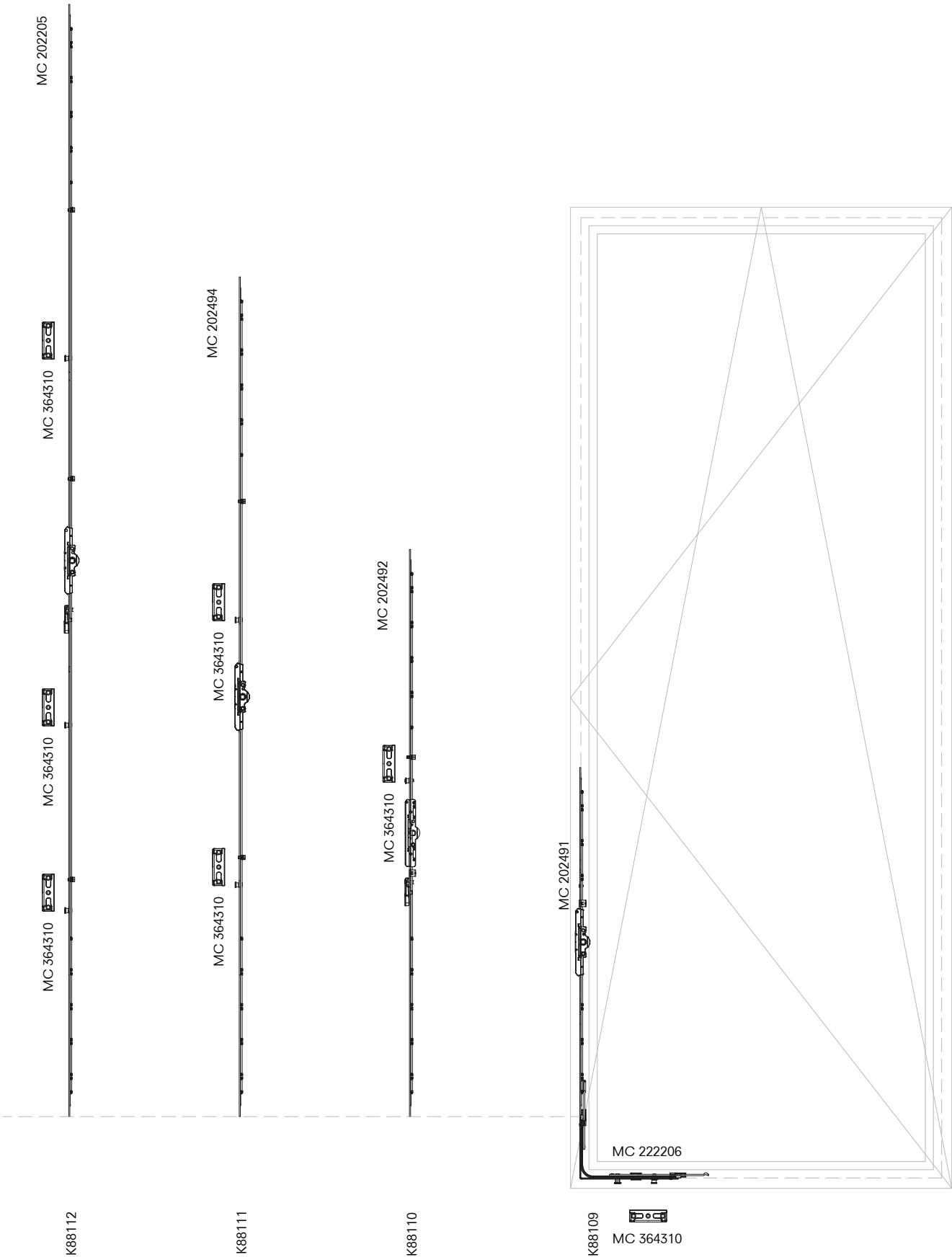
MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

K88112

K88112

K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces



**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88016

K88060

K88012

141 - 235 mm

MC 201750 n°01 piece  
MC 364310 n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm

MC 201840

MC 201750

K88059

236 - 375 mm

MC 201750 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm

MC 364310

MC 364310

MC 206630

K88013

376 - 470 mm

MC 201840 n°01 piece  
MC 364310 n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm

MC 201840

MC 201840

K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88014

471 - 610 mm

K88014

471 - 610 mm

MC 364310

MC 364310

K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88015

611 - 705 mm

K88015

611 - 705 mm

K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88060

706 - 845 mm

K88060

706 - 845 mm

K88016

846 - 940 mm

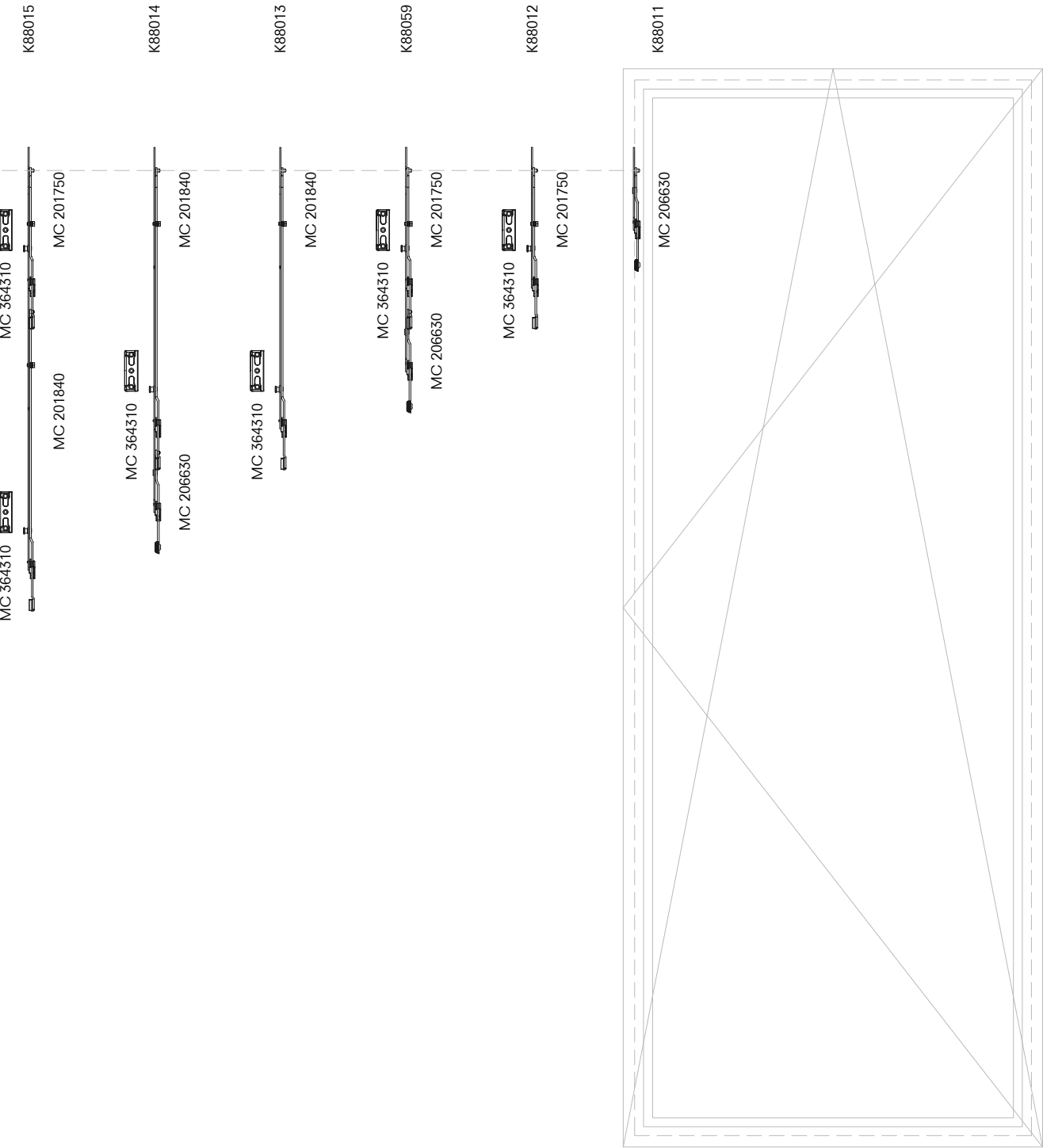
MC 201840 n°02 pieces  
MC 364310 n°02 pieces

K88016

846 - 940 mm

K88016

846 - 940 mm



### Tilt&Turn windows with visible hinge

Scissors and hinges kits  
Right opening

K88078

LBB = 370 - 400 mm

MC 211694 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

### Dreh-Kippfenster mit Aufgesetzter Beschlag

Garnitur Scheren und Bänder  
DIN rechts

K88078

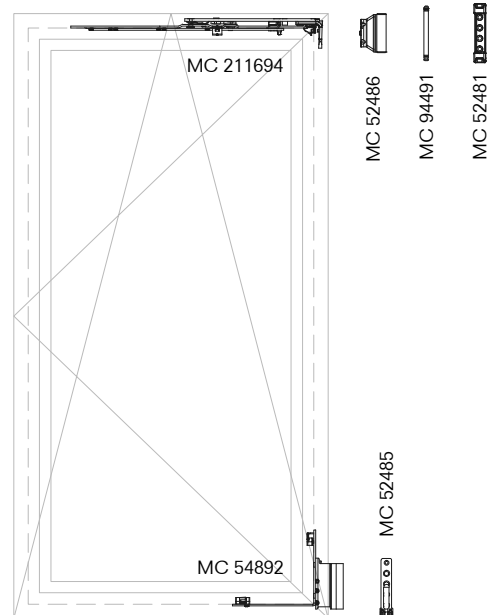
LBB = 370 - 400 mm

### Fênêtre oscillo-battant avec paumelle visible

Kits pinces et paumelles  
Ouverture droite

K88078

LBB = 370 - 400 mm



K88079

LBB = 401 - 600 mm

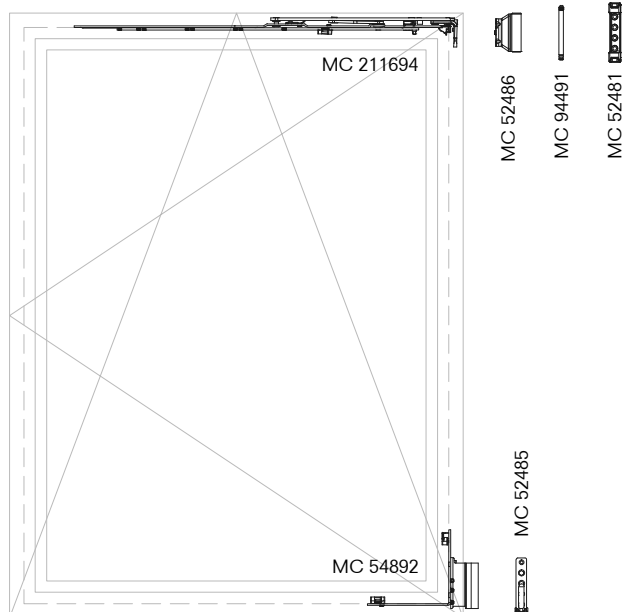
MC 211695 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

K88079

LBB = 401 - 600 mm

K88079

LBB = 401 - 600 mm





K88080

LBB = 601 - 800 mm

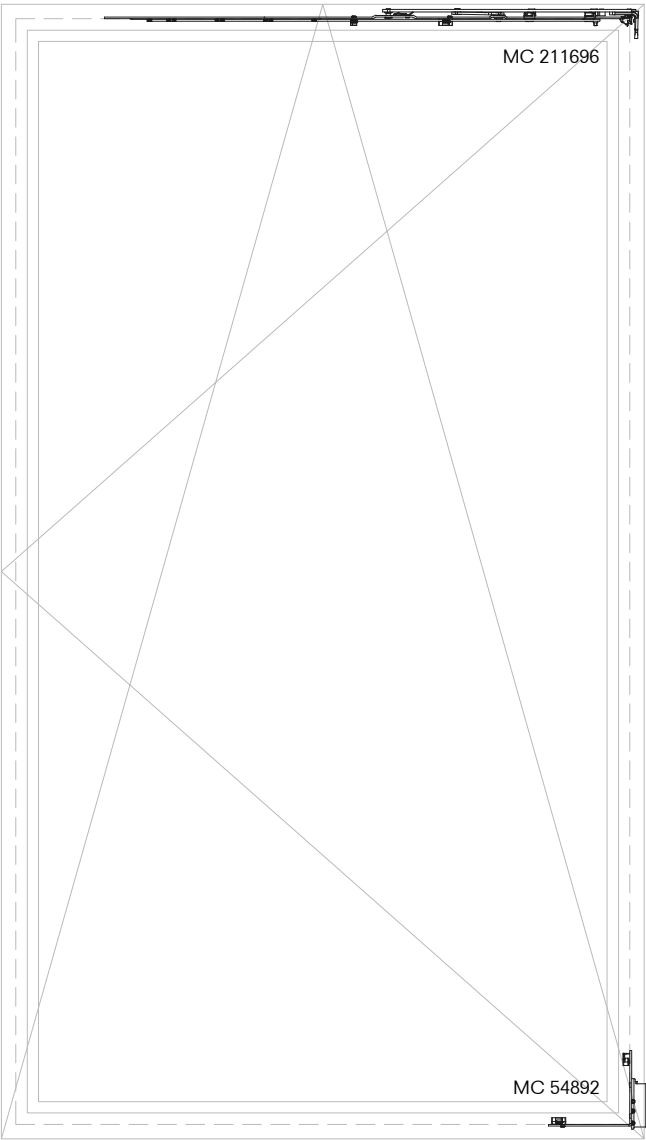
MC 211696 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

K88080

LBB = 601 - 800 mm

K88080

LBB = 601 - 800 mm



MC 52486

MC 94491

MC 52481

MC 52485

**Tilt&Turn windows  
with visible hinge**

Scissors and hinges kits  
Right opening

K88081

LBB = 801 - 1050 mm

MC 211905 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 364310 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Garnitur Scheren und Bänder  
DIN rechts

K88081

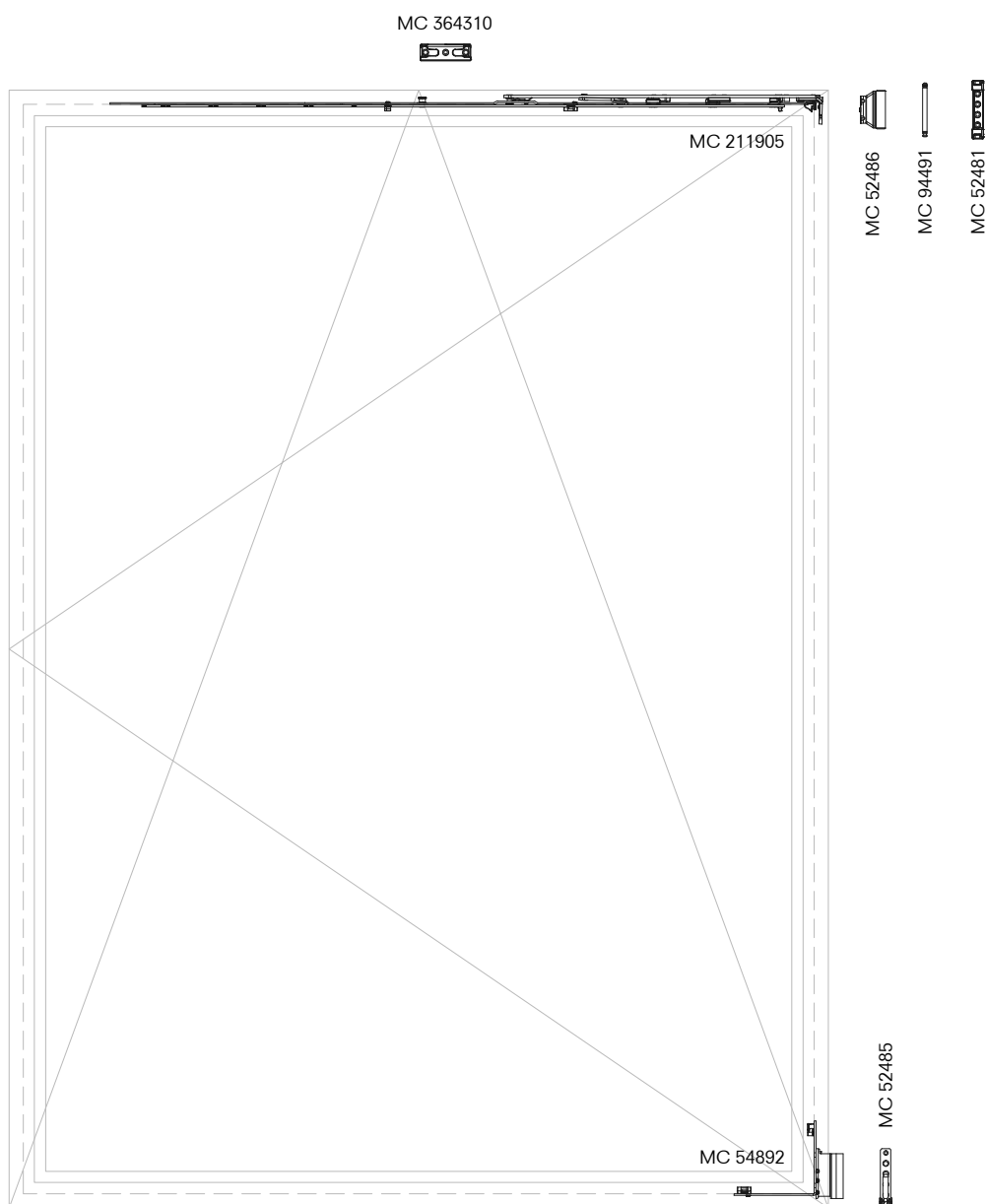
LBB = 801 - 1050 mm

K88081

LBB = 801 - 1050 mm

**Fênêtre oscillo-battant  
avec paumelle visible**

Kits pinces et paumelles  
Ouverture droite



K88082

LBB = 1051 - 1300 mm

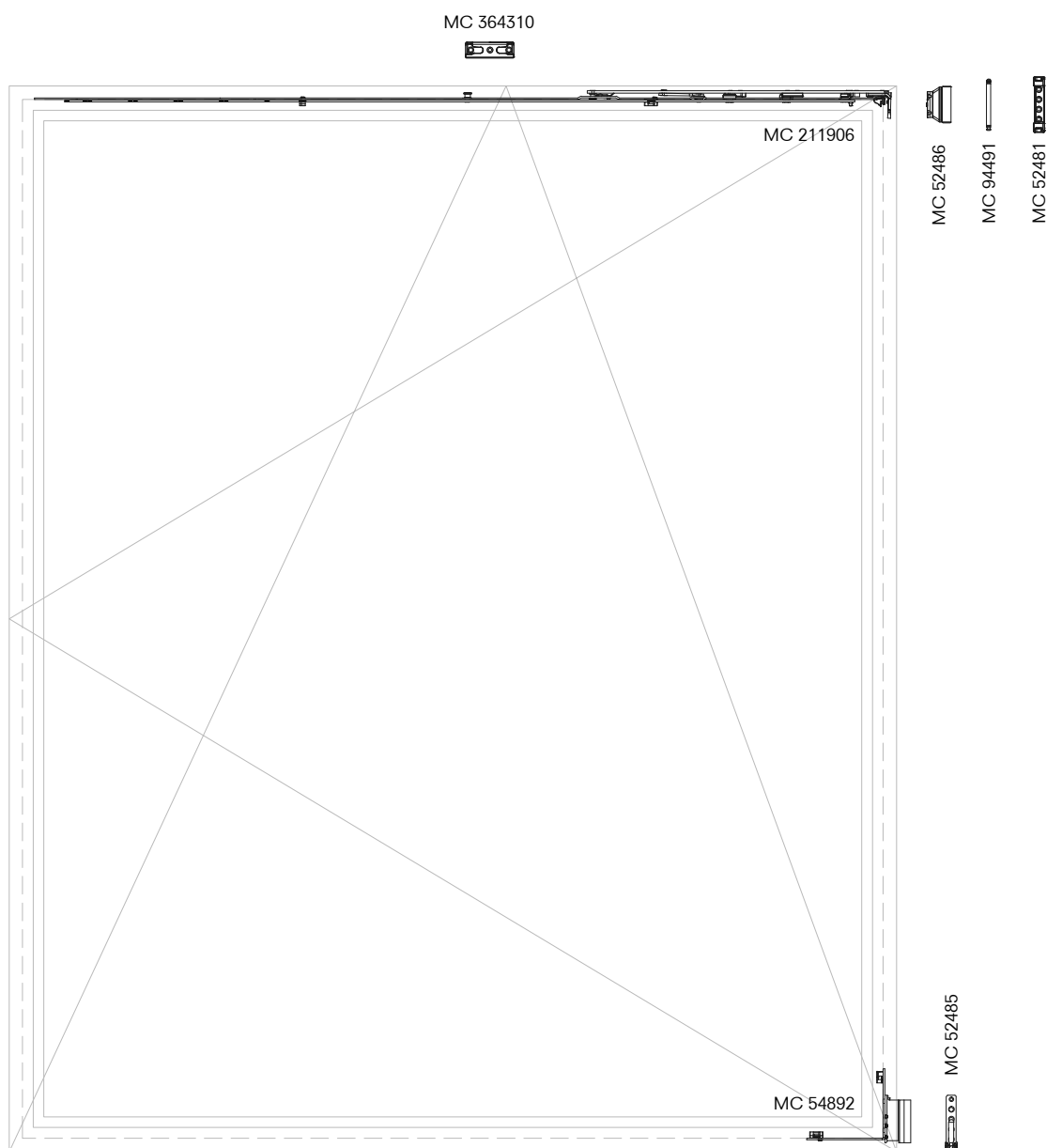
MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 364310 n°01 piece

K88082

LBB = 1051 - 1300 mm

K88082

LBB = 1051 - 1300 mm



**Tilt&Turn windows  
with visible hinge**

Scissors and hinges kits  
Right opening

K88083

LBB = 1301 - 1400 mm

MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece  
MC 52794 n°01 piece  
MC 213043 n°01 piece  
MC 364310 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Garnitur Scheren und Bänder  
DIN rechts

K88083

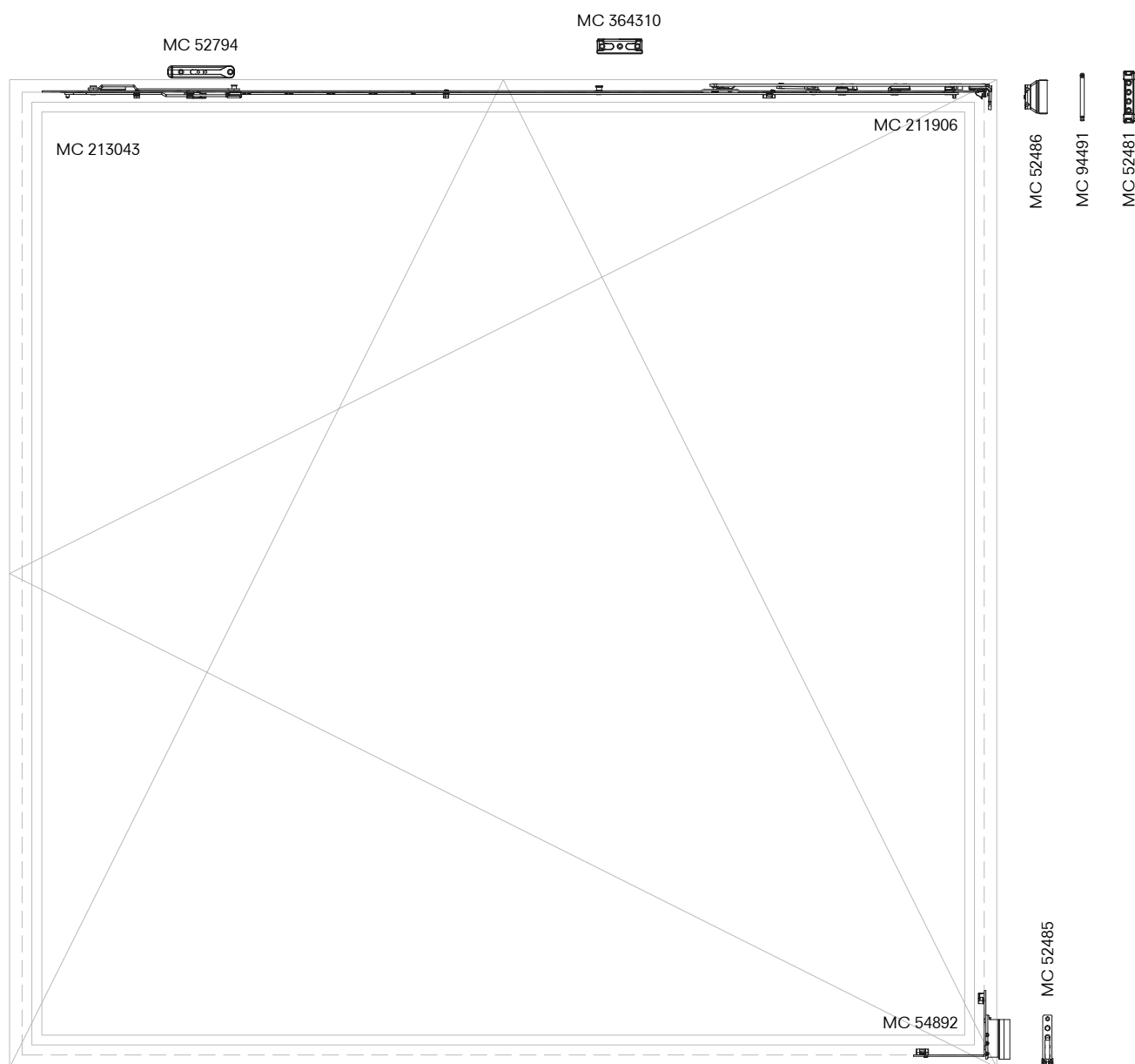
LBB = 1301 - 1400 mm

**Fênêtre oscillo-battant  
avec paumelle visible**

Kits pinces et paumelles  
Ouverture droite

K88083

LBB = 1301 - 1400 mm



### Tilt&Turn windows with visible hinge

Scissors and hinges kits  
Left opening

K88084

LBB = 370 - 400 mm

MC 211694 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

### Dreh-Kippfenster mit Aufgesetzter Beschlag

Garnitur Scheren und Bänder  
DIN links

K88084

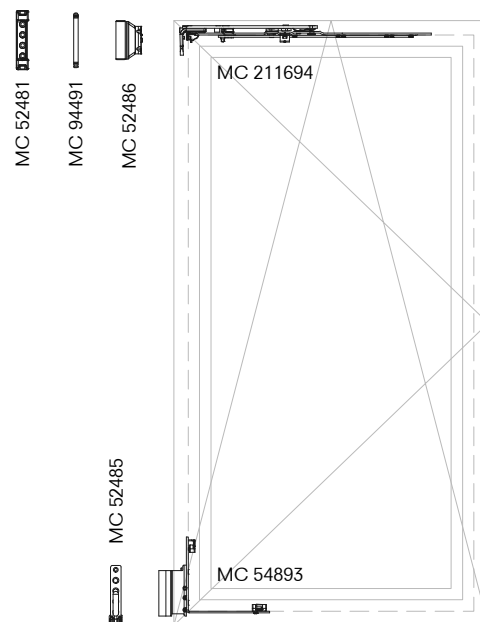
LBB = 370 - 400 mm

K88084

LBB = 370 - 400 mm

### Fênêtre oscillo-battant avec paumelle visible

Kits pinces et paumelles  
Ouverture gauche



K88085

LBB = 401 - 600 mm

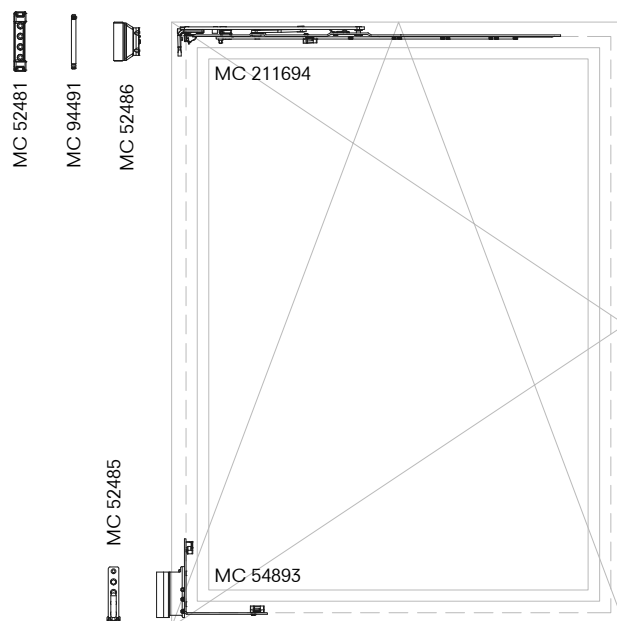
MC 211695 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

K88085

LBB = 401 - 600 mm

K88085

LBB = 401 - 600 mm



**Tilt&Turn windows  
with visible hinge**

Scissors and hinges kits  
Left opening

K88086

LBB = 601 - 800 mm

MC 211696 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Garnitur Scheren und Bänder  
DIN links

K88086

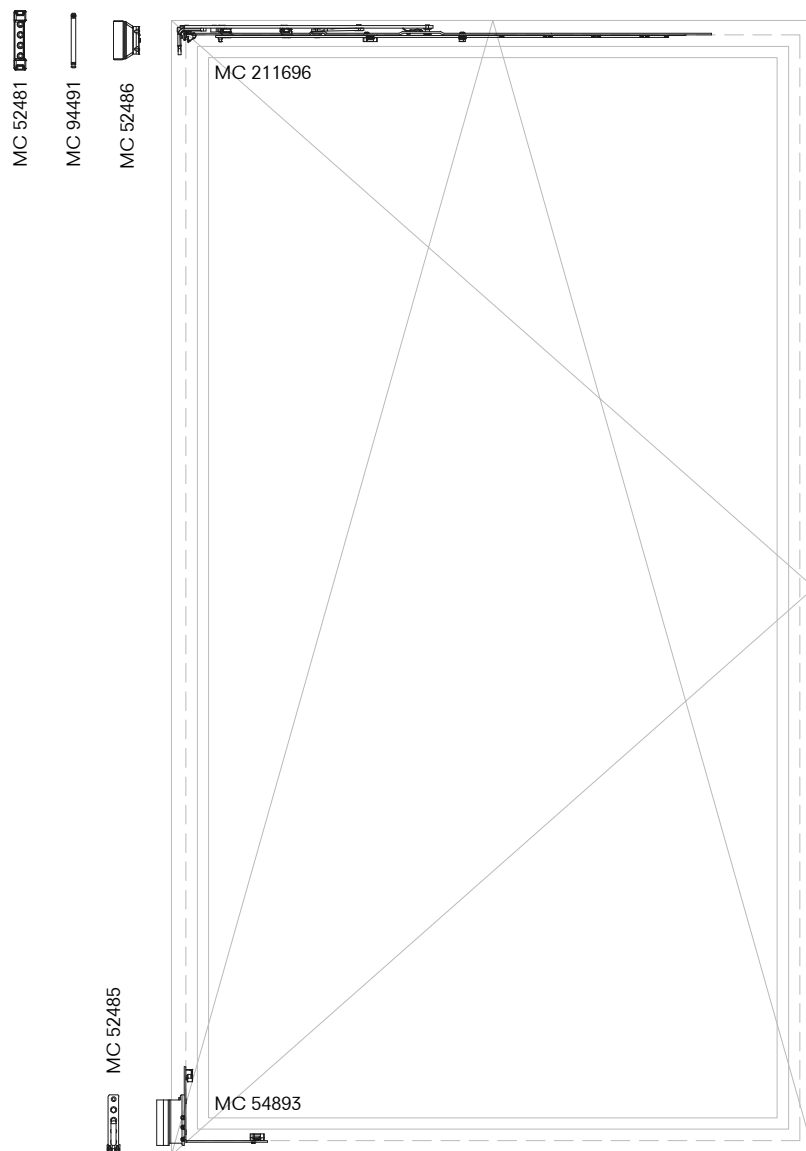
LBB = 601 - 800 mm

**Fênêtre oscillo-battant  
avec paumelle visible**

Kits pinces et paumelles  
Ouverture gauche

K88086

LBB = 601 - 800 mm



K88087

LBB = 801 - 1050 mm

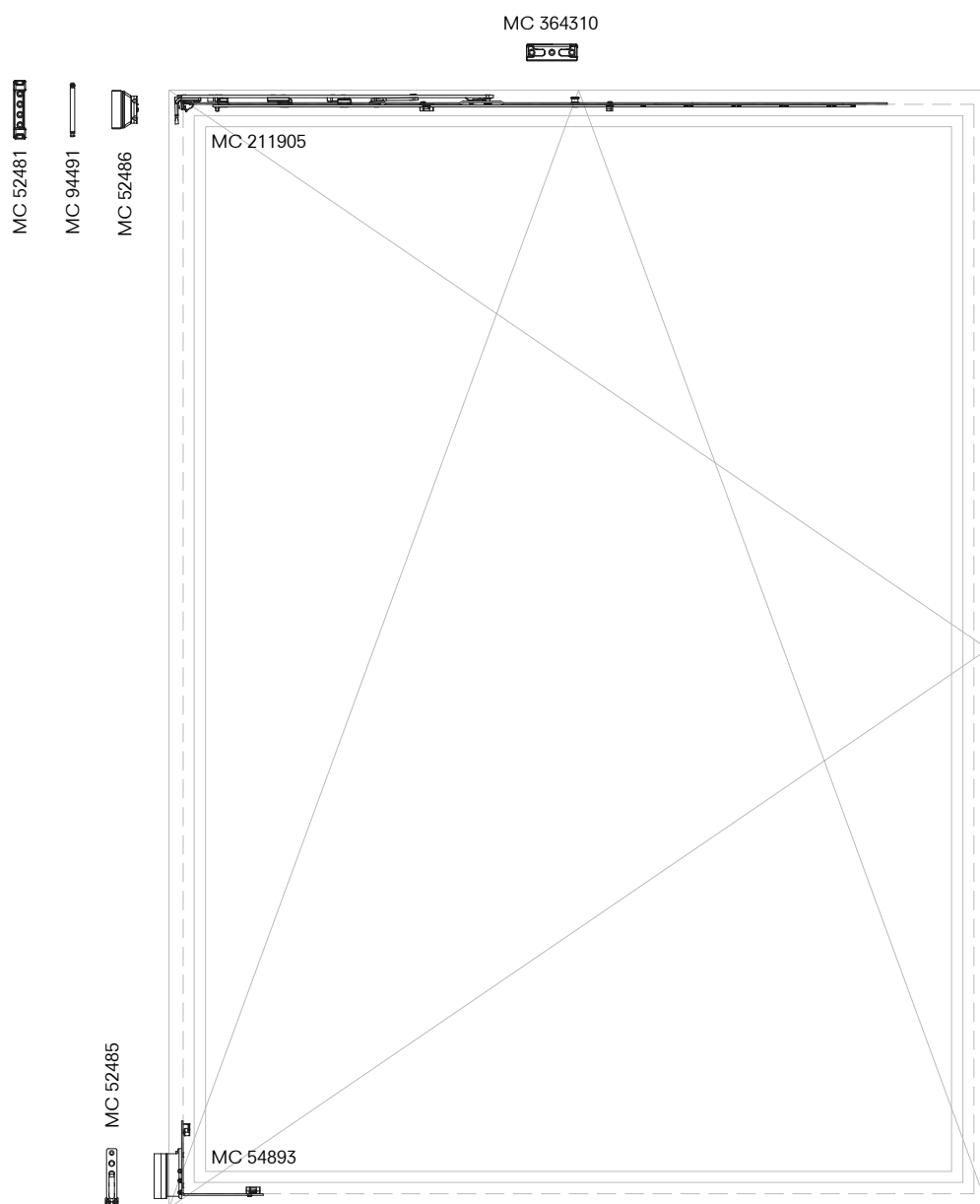
MC 211905 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 364310 n°01 piece

K88087

LBB = 801 - 1050 mm

K88087

LBB = 801 - 1050 mm



### Tilt&Turn windows with visible hinge

Scissors and hinges kits  
Left opening

K88088

LBB = 1051 - 1300 mm

MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 364310 n°01 piece

### Dreh-Kippfenster mit Aufgesetzter Beschlag

Garnitur Scheren und Bänder  
DIN links

K88088

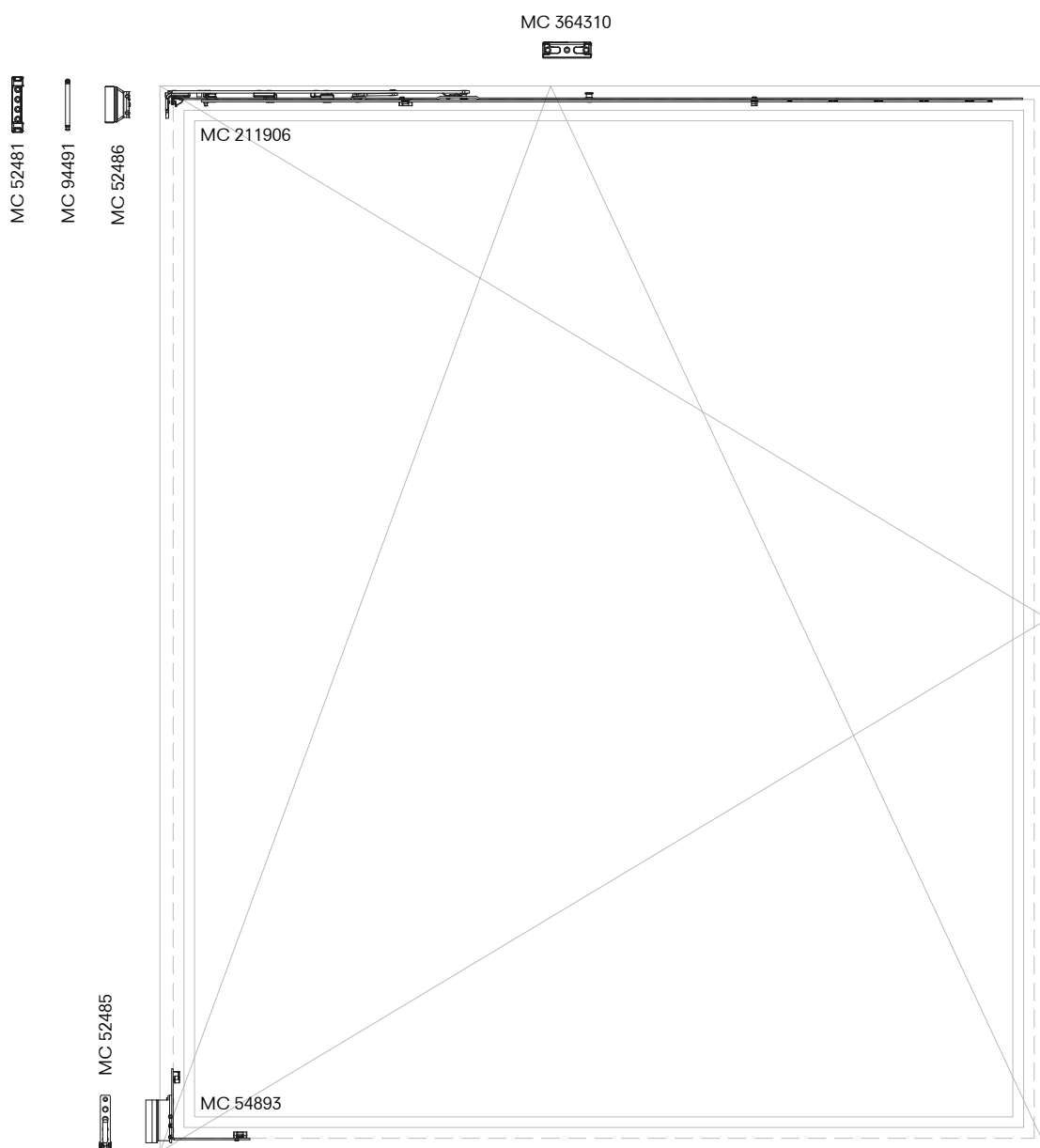
LBB = 1051 - 1300 mm

K88088

LBB = 1051 - 1300 mm

### Fênêtre oscillo-battant avec paumelle visible

Kits pinces et paumelles  
Ouverture gauche





K88089

LBB = 1301 - 1400 mm

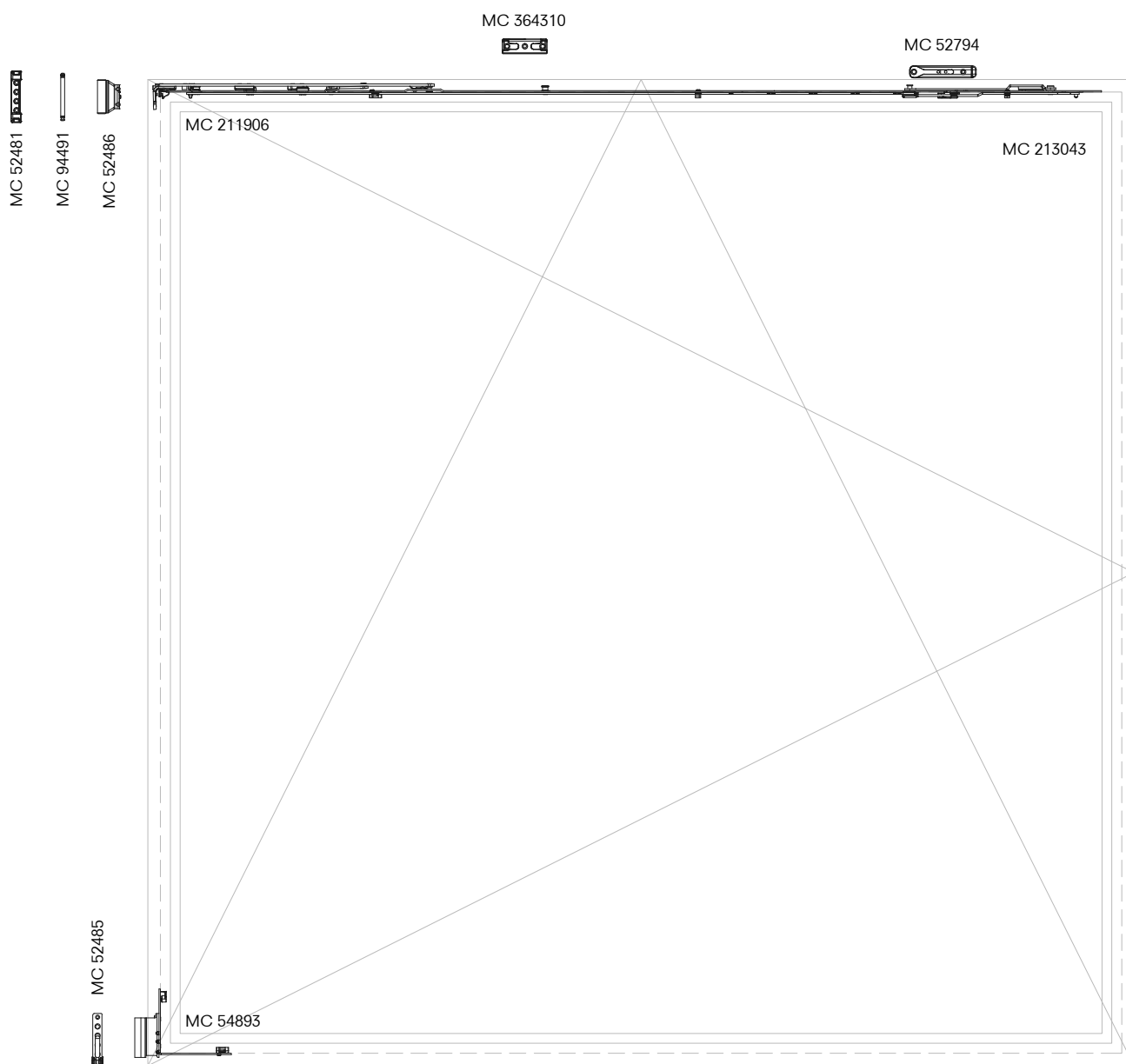
MC 211906 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece  
MC 52794 n°01 piece  
MC 213043 n°01 piece  
MC 364310 n°01 piece

K88089

LBB = 1301 - 1400 mm

K88089

LBB = 1301 - 1400 mm



**Tilt&Turn windows  
with visible hinge**

Additional hinge side  
locking point

K88027

HBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

K88028

HBB = 1281 - 1500 mm

MC 201752 n°01 piece  
MC 364310 n°01 piece

K88029

HBB = 1501 - 1700 mm

MC 201840 n°01 piece  
MC 201753 n°01 piece  
MC 364310 n°02 pieces

K88030

HBB = 1701 - 2800 mm

MC 201754 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Garnitur Zusatzverriegelung  
Bandseite

K88027

HBB = 801 - 1280 mm

K88028

HBB = 1281 - 1500 mm

K88029

HBB = 1501 - 1700 mm

K88030

HBB = 1701 - 2800 mm

K88027

HBB = 801 - 1280 mm

K88028

HBB = 1281 - 1500 mm

K88029

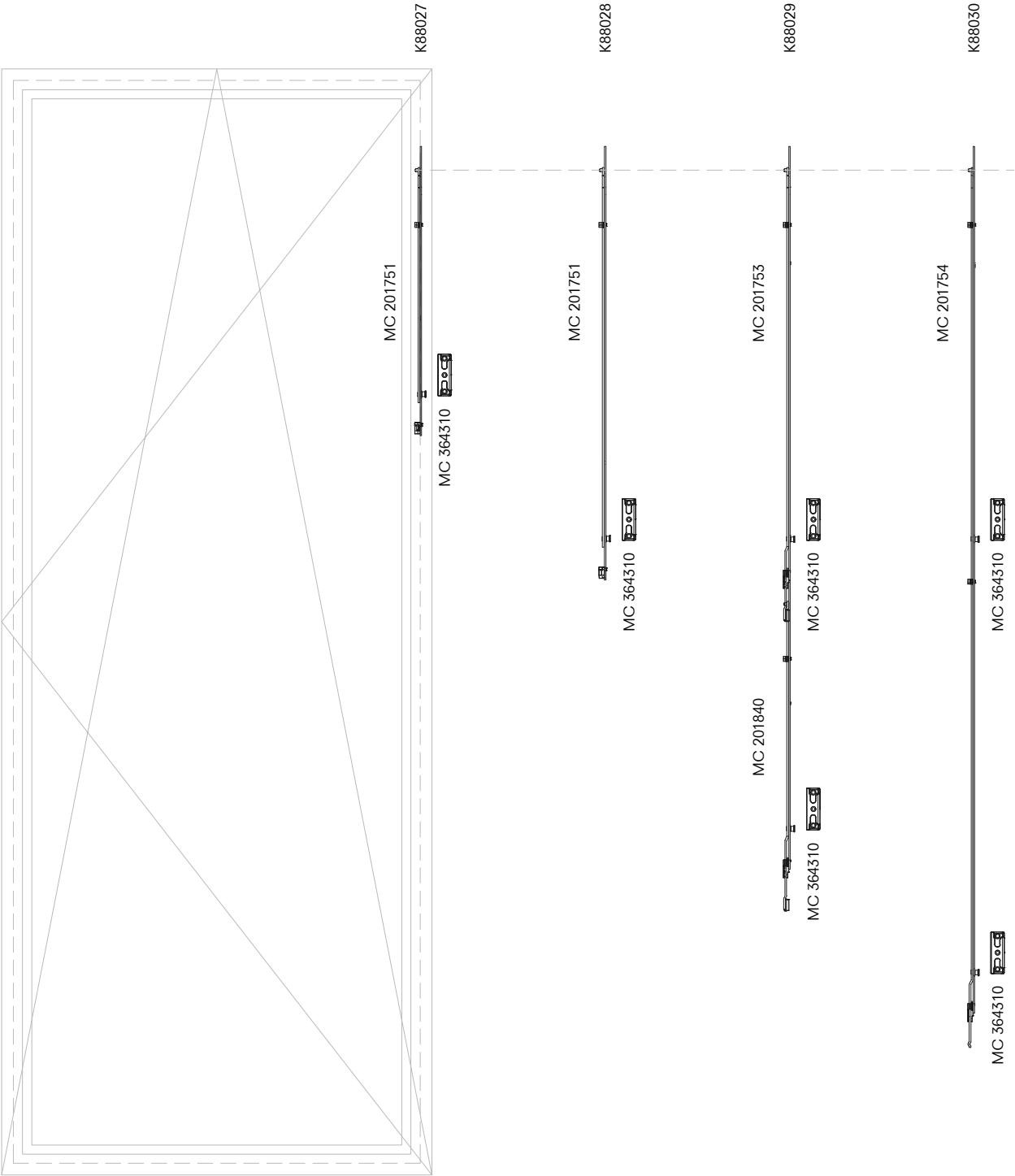
HBB = 1501 - 1700 mm

K88030

HBB = 1701 - 2800 mm

**Fênetre oscillo-battant  
avec paumelle visible**

Point de verrouillage supplémentaire  
côté paumelle



**Tilt&Turn windows  
with visible hinge**

Hinges kits 2nd leaf

K88090

Right hinges

MC 52462 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Garnitur Scheren-  
und Bandlager Standflügel

K88090

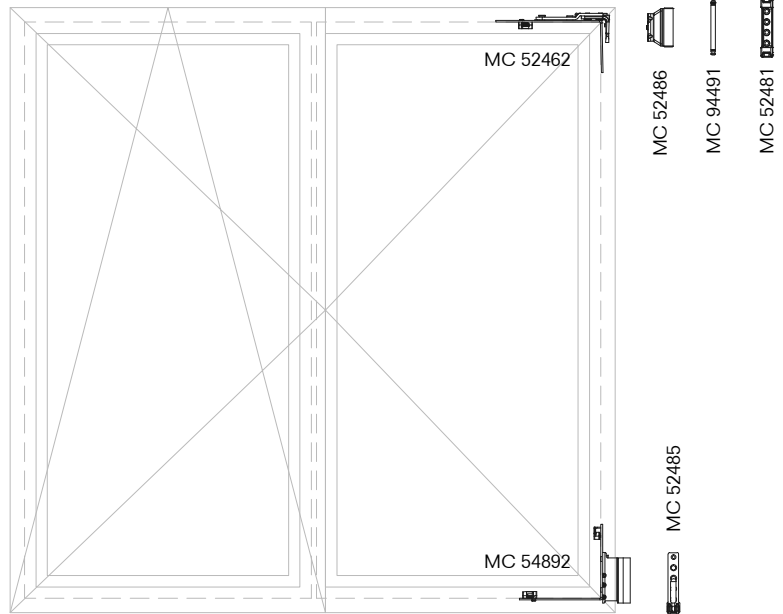
Recht Band

**Fênêtre oscillo-battant  
avec paumelle visible**

Kits paumelles 2e ouvrant

K88090

Droite paumelles



K88091

Left hinges

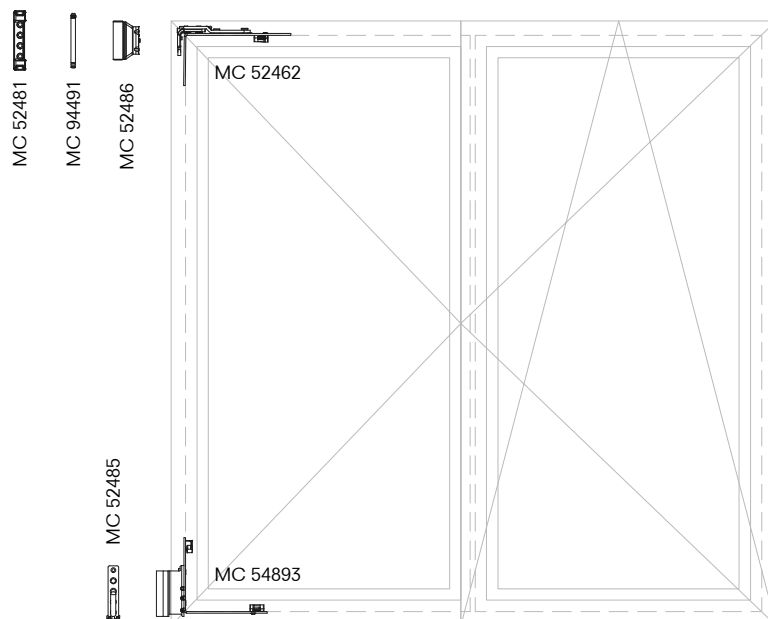
MC 52462 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

K88091

Link Band

K88091

Gauche paumelles



**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênetre oscillo-battant  
avec paumelle visible**

Concealed compression locks kits

Anpressverschluss verdeckt

Kits de serrures à compression cachée

K88036

HBB = 1280 - 2000 mm

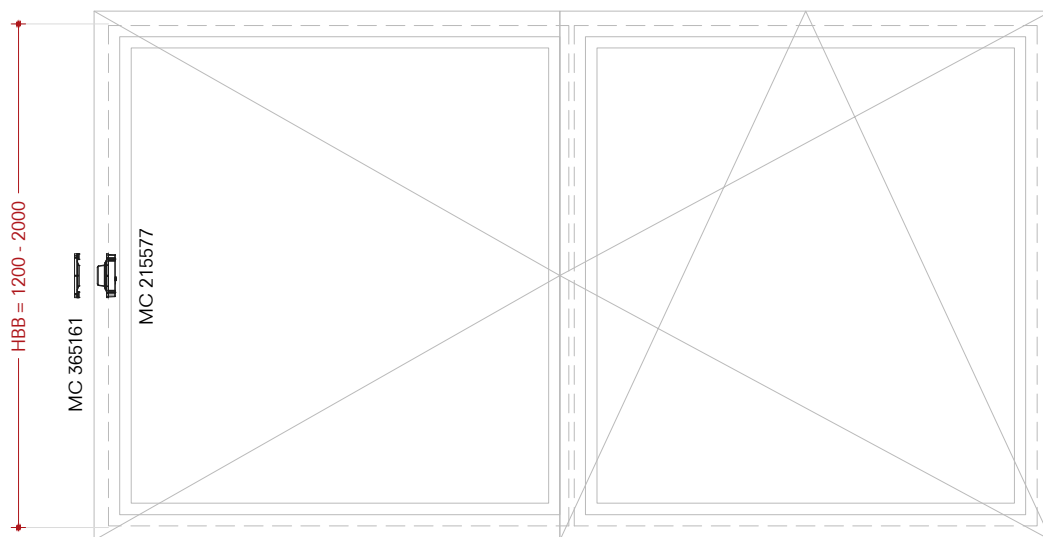
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88036

HBB = 1280 - 2000 mm

K88036

HBB = 1280 - 2000 mm



K88037

HBB = 2001 - 2800 mm

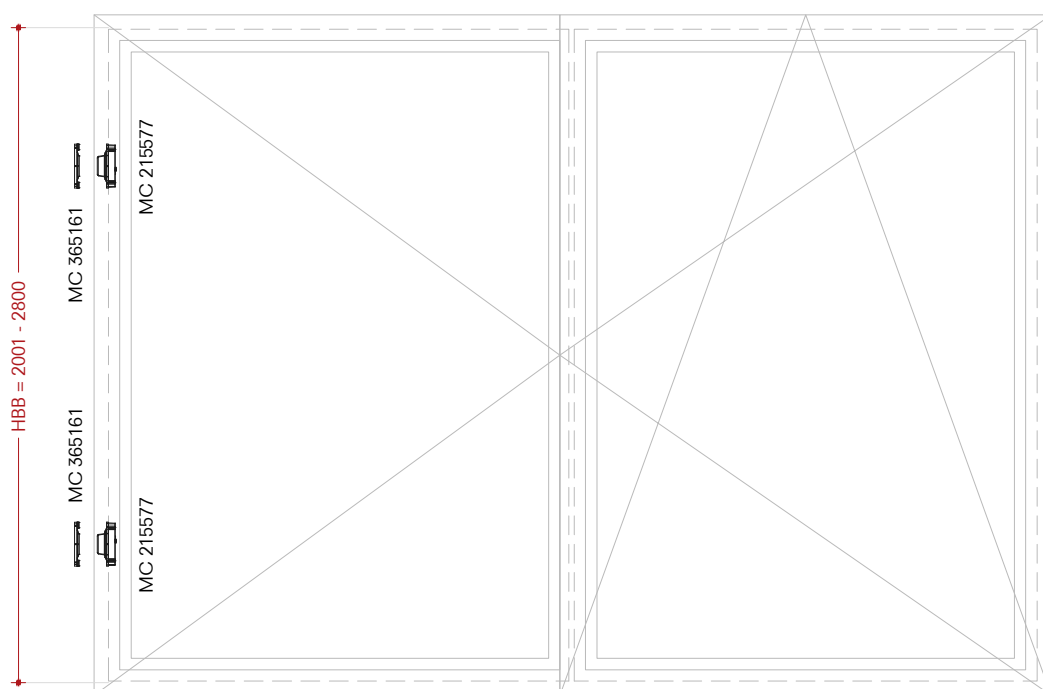
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037

HBB = 2001 - 2800 mm

K88037

HBB = 2001 - 2800 mm



**Tilt&Turn windows  
with visible hinge**

Additional bottom side  
locking point

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Zusätzliche Verriegelungen  
Unterseite

**Fênêtre oscillo-battant  
avec paumelle visible**

Point de verrouillage  
supplémentaire côté inférieur

K88031

LBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

K88031

LBB = 801 - 1280 mm

K88031

LBB = 801 - 1280 mm

K88032

LBB = 1281 - 1400 mm

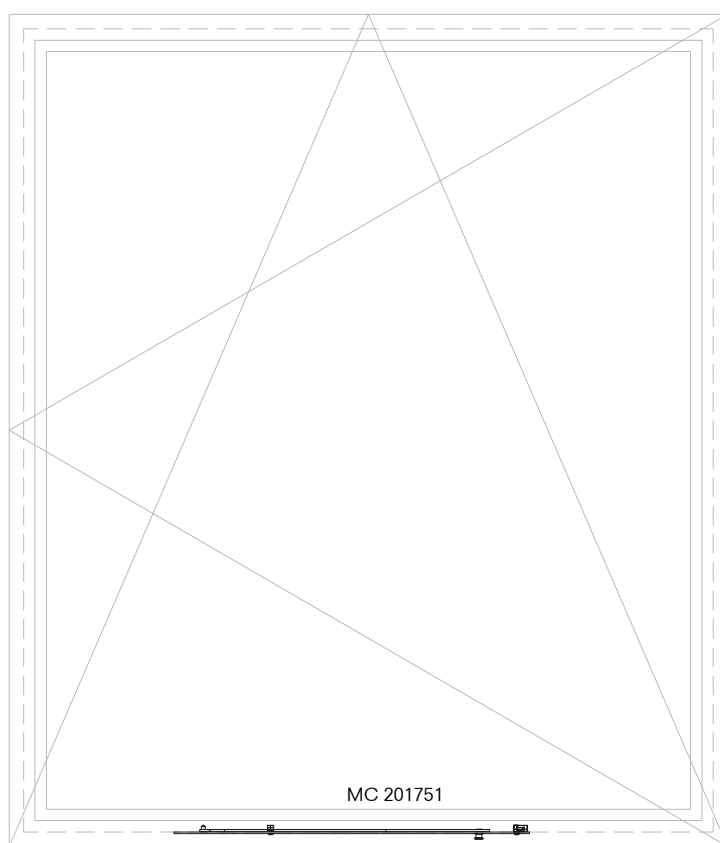
MC 201752 n°01 piece  
MC 364310 n°01 piece

K88032

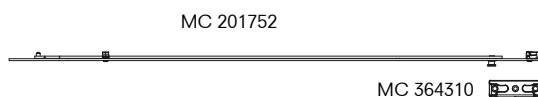
LBB = 1281 - 1400 mm

K88032

LBB = 1281 - 1400 mm



K88031



K88032

**Tilt&Turn windows  
with visible hinge**

Lifting component  
Only for single leaf window

K88047

Right hinges

MC 361004 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Hebekomponente  
Nur für Einflügliges Fenster

K88047

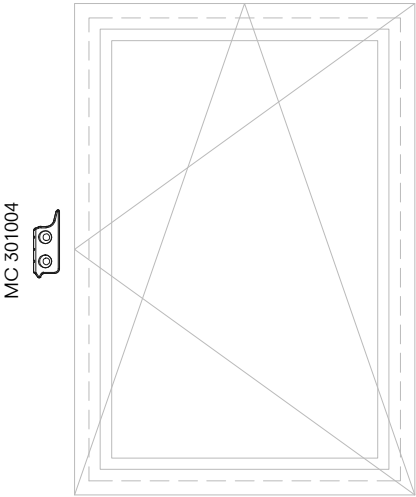
Recht Band

**Fênetre oscillo-battant  
avec paumelle visible**

Composant de levage  
Seulement pour fenêtre à un vantail

K88047

Droite paumelles



K88048

Left hinges

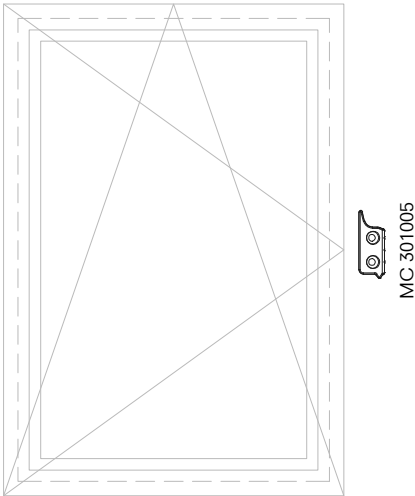
MC 361005 n°01 piece

K88048

Link Band

K88048

Gauche paumelles



**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88062

HH = 190 mm

MC 202873 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

MC 221901 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88064

HH = 400 mm

MC 221902 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88065

HH = 500 mm

MC 221903 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88066

HH = 600 mm

MC 221906 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88067

HH = 700 mm

MC 207242 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88068

HH = 1050 mm

MC 221907 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88069

HH = 1050 mm

MC 221908 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

HH = 700 mm

K88068

HH = 1050 mm

K88069

HH = 1050 mm

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

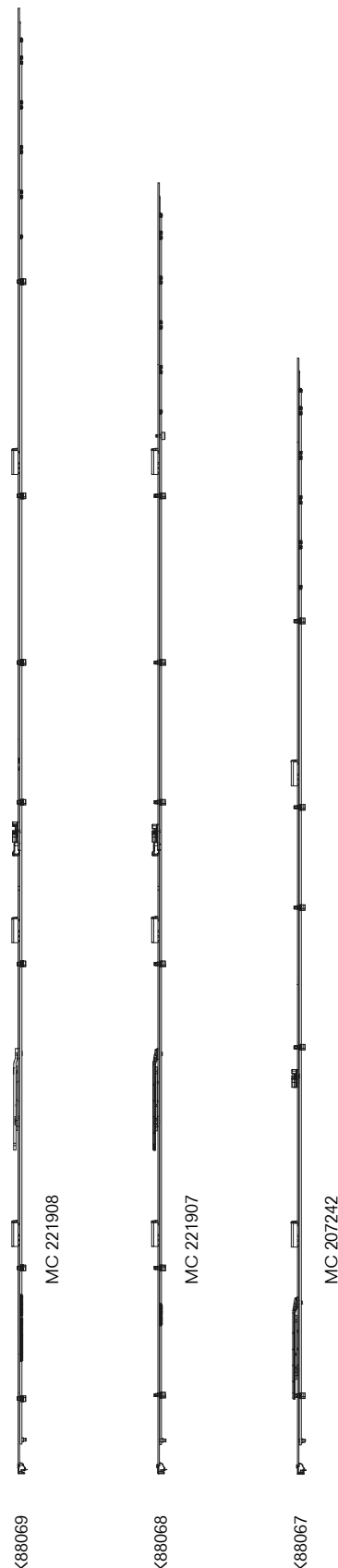
HH = 700 mm

K88068

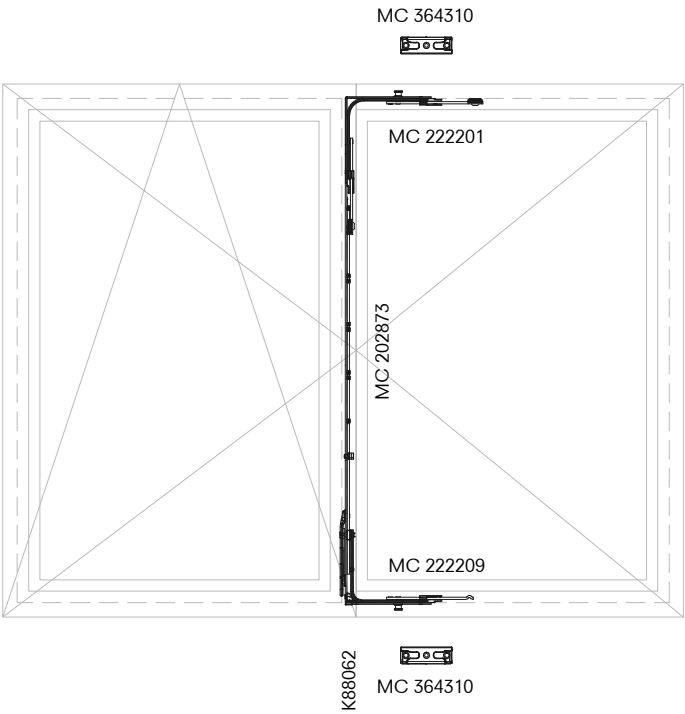
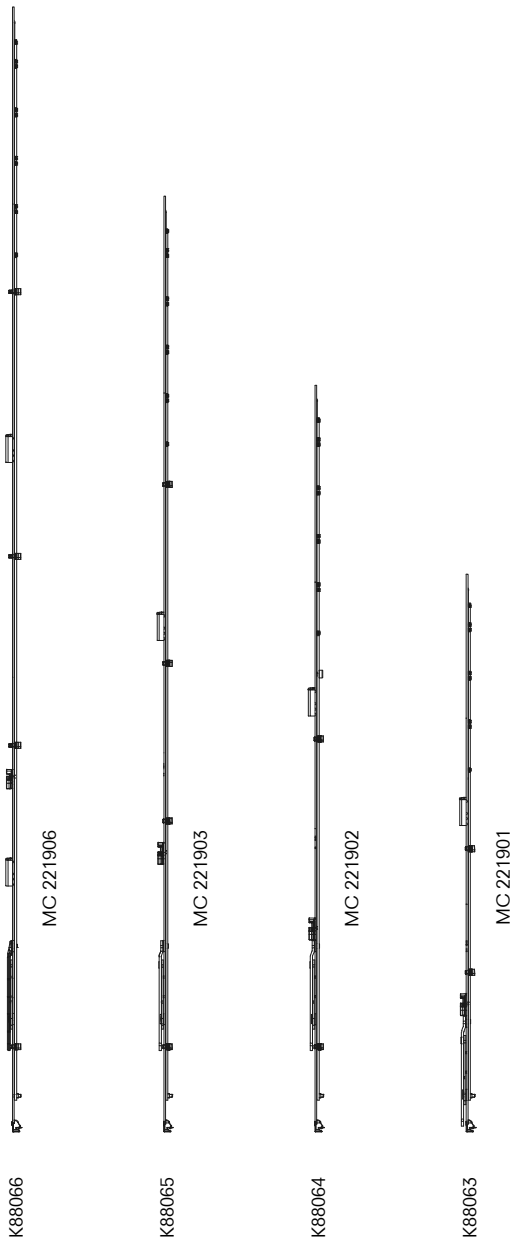
HH = 1050 mm

K88069

HH = 1050 mm







**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88113

K88113

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88114

K88114

K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88115

K88115

K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

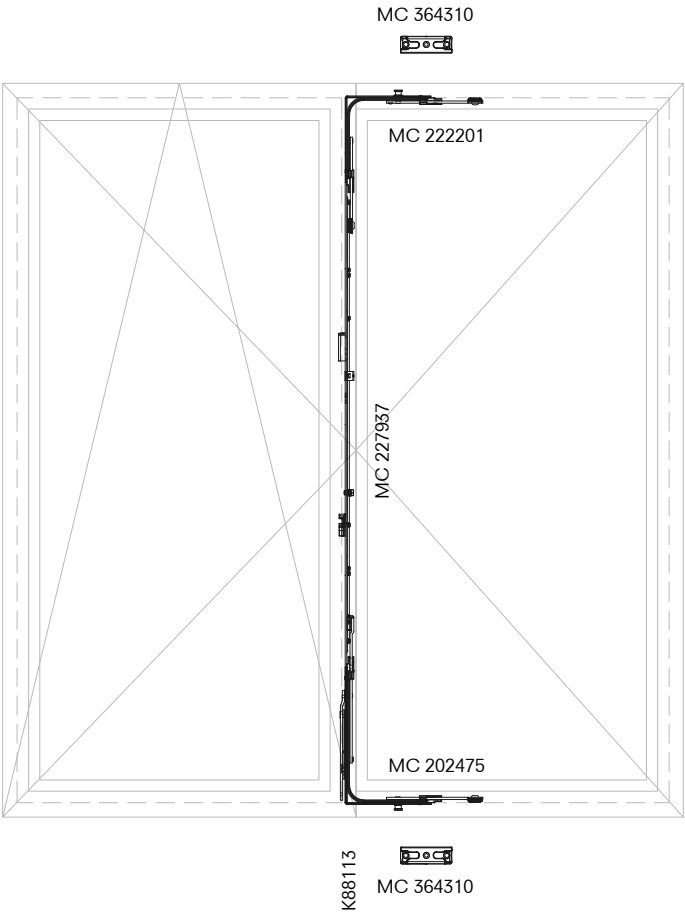
K88116

K88116

K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces





**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre oscillo-battant  
avec paumelle visible**

French casement drive  
extension kits

Stulpflügelgetriebe

Kit d'extension Crémone

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88076

K88076

K88075

K88071

141 - 235 mm

MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm

K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm

K88074

471 - 610 mm

MC 208333 n°01 piece  
MC 206630 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm

K88075

611 - 705 mm

MC 208333 n°01 piece  
MC 203810 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm

K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm

K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm

K88074



MC 206630

MC 208333

K88073



MC 208333

K88072



MC 203810

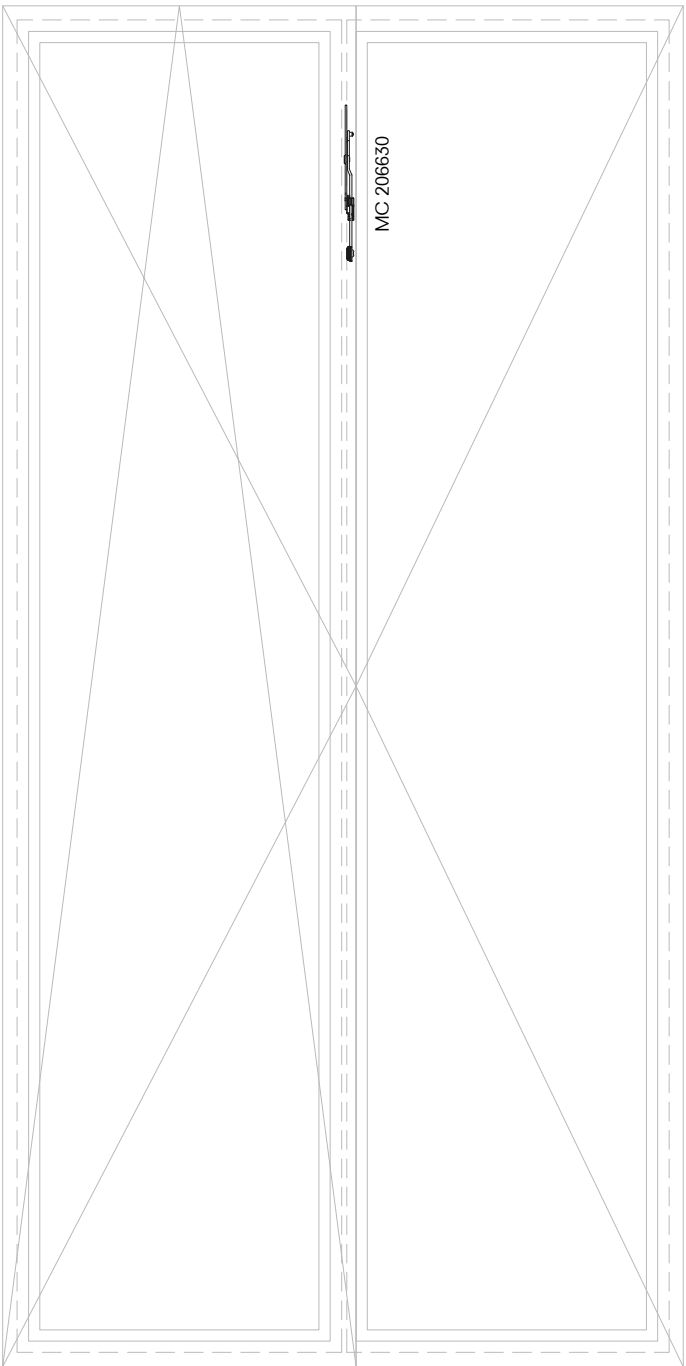
MC 206630

K88071



MC 203810

K88011



MC 206630

**Tilt&Turn windows  
with visible hinge**

Door catch

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Türverschluss

K88061

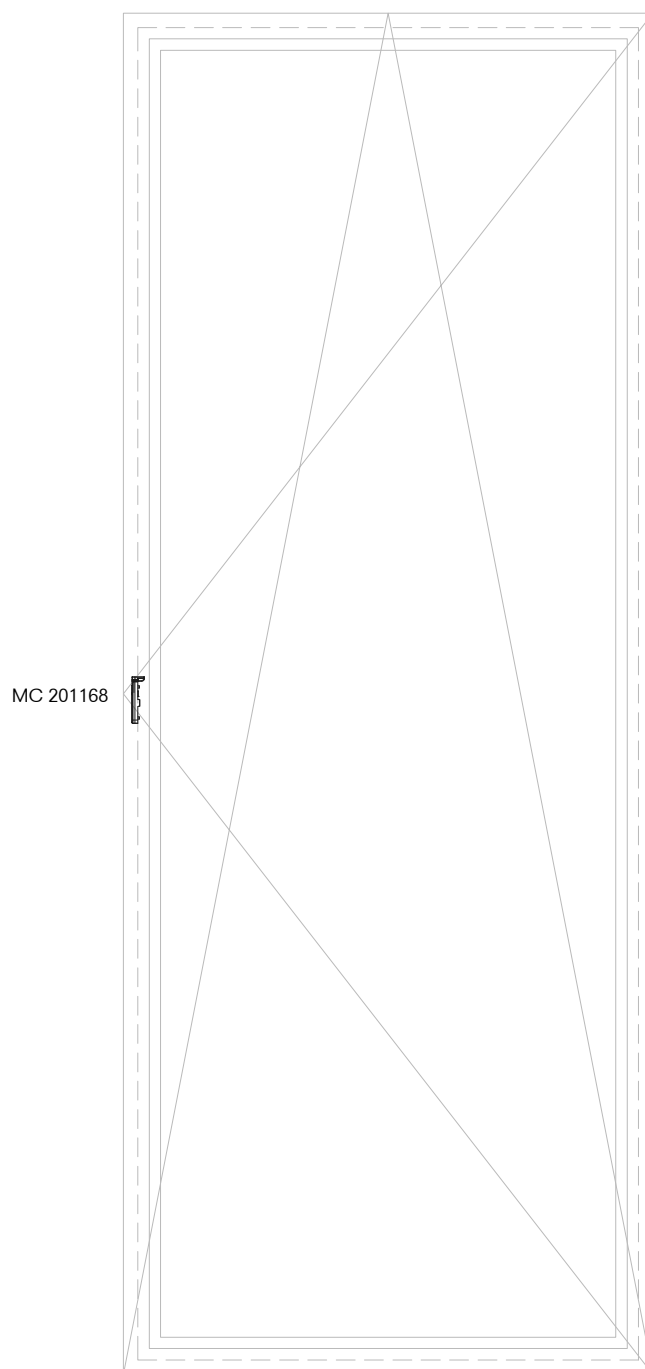
HBB = 661 - 2800 mm

**Fênêtre oscillo-battant  
avec paumelle visible**

Loquet de porte

K88061

HBB = 661 - 2800 mm



**Tilt&Turn windows  
with visible hinge**

Alarm contact

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

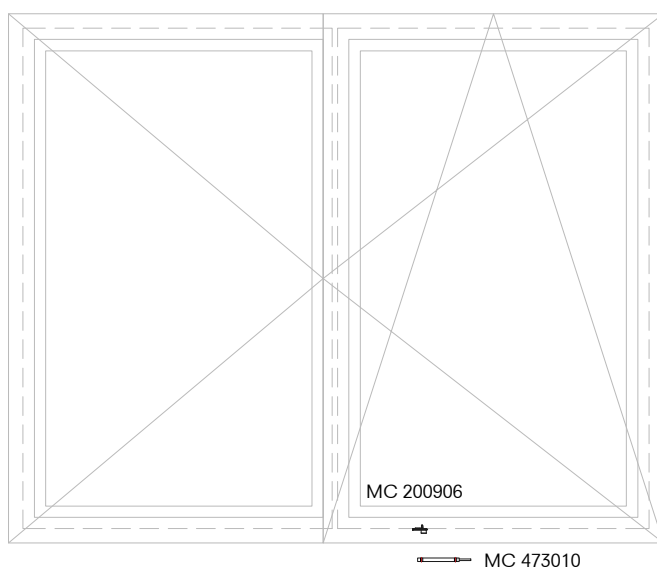
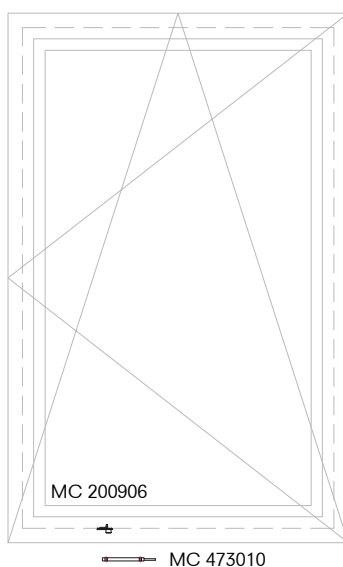
Alarmkontakt

K99062

**Fênêtre oscillo-battant  
avec paumelle visible**

Contact d'alarme

K99062



**Tilt&Turn windows  
with visible hinge**

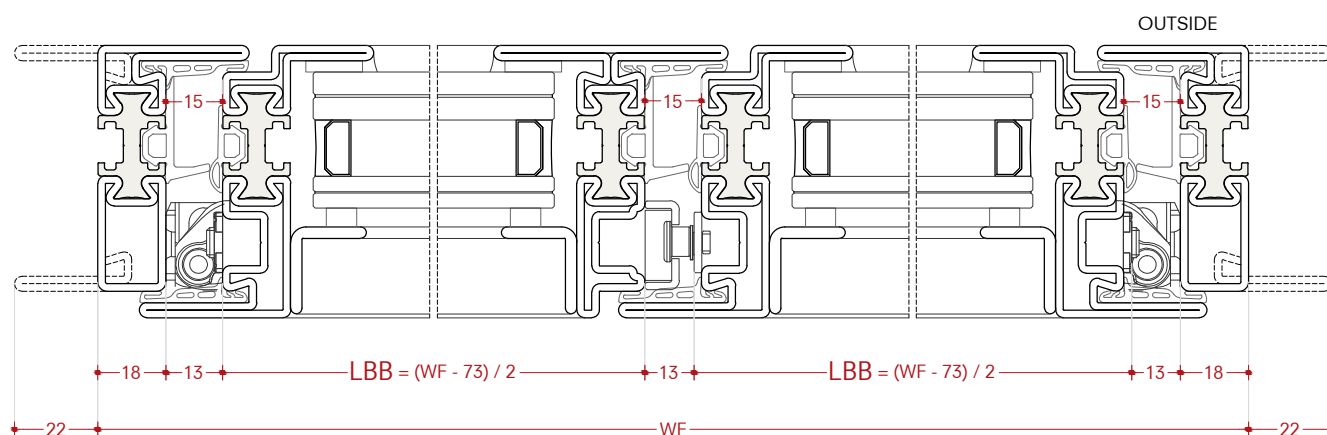
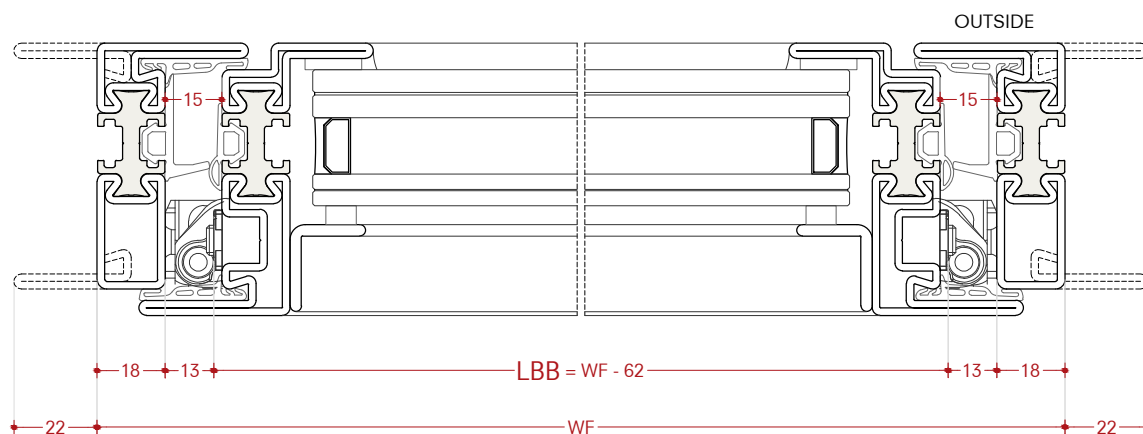
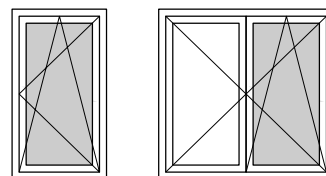
Determination of LBB  
(Groove Hardware Lenght)

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre oscillo-battant  
avec paumelle visible**

Détermination du LBB  
(largeur de rainure de quincaillerie)





**Tilt&Turn windows  
with visible hinge**

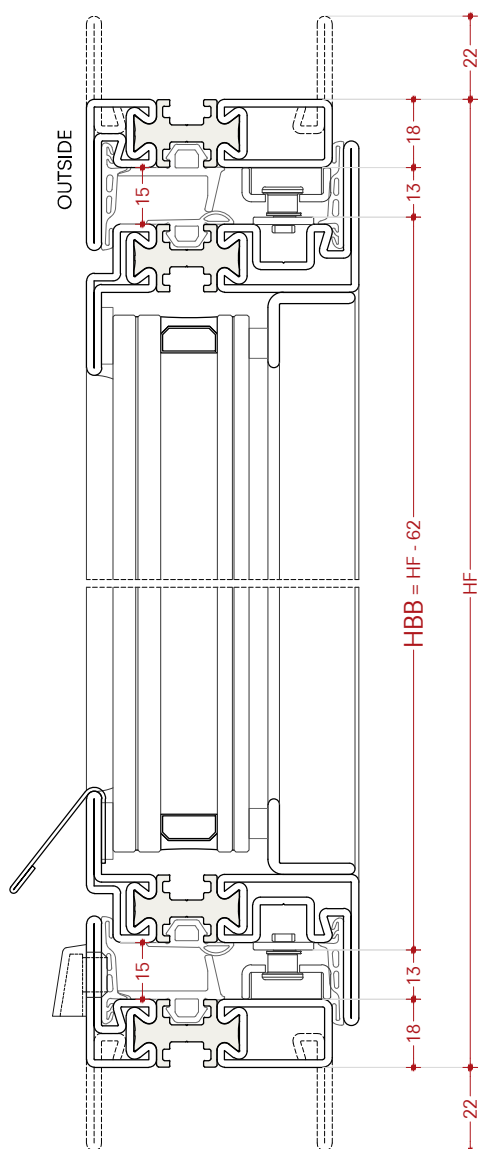
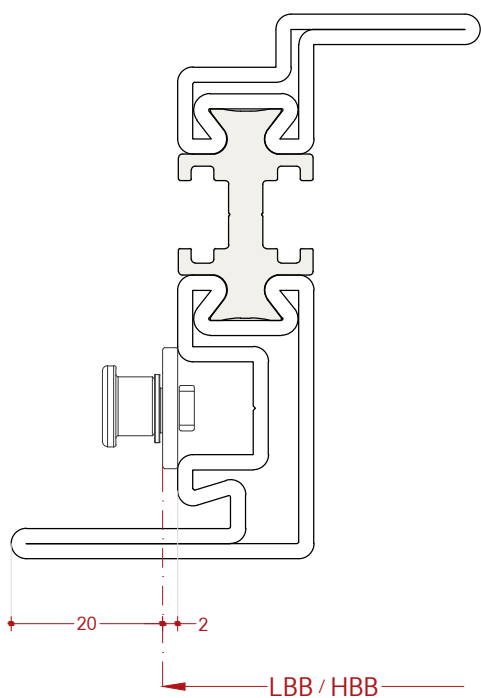
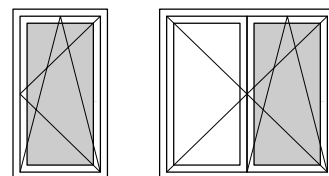
Determination of HBB  
(Groove Hardware Height)

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre oscillo-battant  
avec paumelle visible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



Tilt&Turn windows  
with visible hinge

Dreh-Kippfenster  
mit Aufgesetzter Beschlag

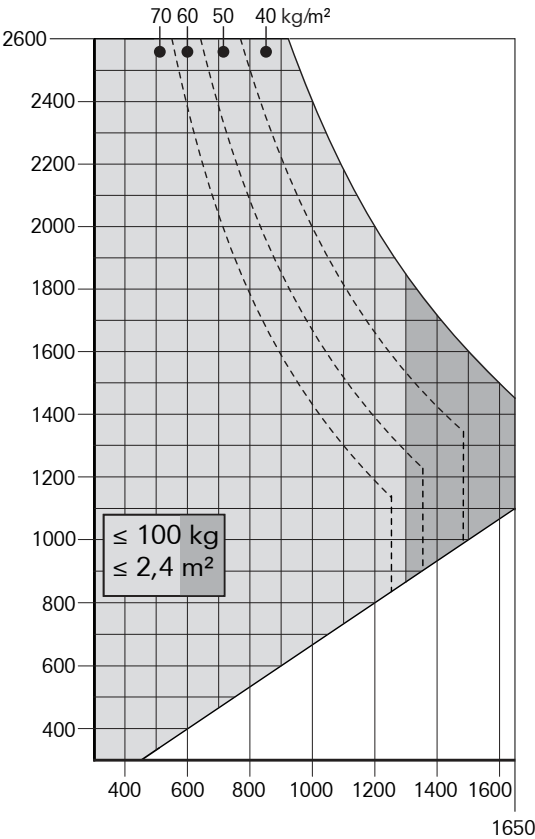
Fênetre oscillo-battant  
avec paumelle visible

Load capacity tables

Gewichtstabellen

Capacité maximale

T&T window visible accessories capacity  
Dreh-Kipp-Fensterzubehör Aufgesetzter Beschlag  
Fênetre oscillo-battant accessoires visible



Standard handle height

Standard-Griffhöhe

Hauteur de poignée standard

|               | HBB min | HBB max | H handle |
|---------------|---------|---------|----------|
| <b>K88003</b> | 370     | 660     | 190      |
| <b>K88004</b> | 661     | 840     | 300      |
| <b>K88005</b> | 841     | 1090    | 400      |
| <b>K88006</b> | 1091    | 1340    | 500      |
| <b>K88007</b> | 1341    | 1590    | 600      |
| <b>K88008</b> | 1591    | 1700    | 700      |
| <b>K88009</b> | 1701    | 1950    | 1050     |
| <b>K88010</b> | 1951    | 2200    | 1050     |

**Tilt&Turn windows  
with visible hinge**

**Dreh-Kippfenster  
mit Aufgesetzter Beschlag**

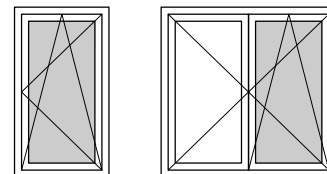
**Fênêtre oscillo-battant  
avec paumelle visible**

Step #1 - Basic kit choice

Schritt #1 - Auswahl Grdundgarnitur

Étape #1 - Choix de kit de base

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88001</b> | 370     | 1400    | 455     | 2800    |
| <b>K88002</b> | 370     | 815     | 370     | 454     |



LBB = Groove Hardware Lenght  
HBB = Groove Hardware Height

LBB = Beschlagnutbreite  
HBB = Höhe der Beschlagnut

LBB = largeur de rainure de quincaillerie  
HBB = hauteur de rainure de quincaillerie

Step #2 - Gear kit choice

Schritt #2 - Garnitur Getriebe

Étape #2 - Choix de kit d'équipement

|               | HH   | HDG    | CRP   | HCRN  | HBB min | HBB max<br>(without extension) | HBB max<br>(with extension) |
|---------------|------|--------|-------|-------|---------|--------------------------------|-----------------------------|
| <b>K88003</b> | 190  | 555    | 220   | 5     | 370     | 454                            | 2335                        |
| <b>K88003</b> | 190  | 555    | 220   | 113.5 | 455     | 660                            | 2540                        |
| <b>K88004</b> | 300  | 736.5  | 190.5 | 113.5 | 661     | 840                            | 2720                        |
| <b>K88005</b> | 400  | 986.5  | 260.5 | 113.5 | 841     | 1090                           | 2970 (*)                    |
| <b>K88006</b> | 500  | 1236.5 | 260.5 | 113.5 | 1091    | 1340                           | 3150 (*)                    |
| <b>K88007</b> | 600  | 1486.5 | 260.5 | 113.5 | 1341    | 1590                           | 3150 (*)                    |
| <b>K88008</b> | 700  | 1596.5 | 260.5 | 113.5 | 1591    | 1700                           | 3150 (*)                    |
| <b>K88009</b> | 1050 | 1846.5 | 260.5 | 113.5 | 1701    | 1950                           | 3150 (*)                    |
| <b>K88010</b> | 1050 | 2096.5 | 260.5 | 113.5 | 1951    | 2200                           | 3150 (*)                    |

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

(\*) = Over 2800 mm technical department  
confirmation needed.

(\*) = Bestätigung der technischen Abteilung  
erforderlich für Abmessungen größer 2800  
mm

(\*) = Confirmation du service technique  
nécessaire pour les dimensions supérieures  
à 2800 mm

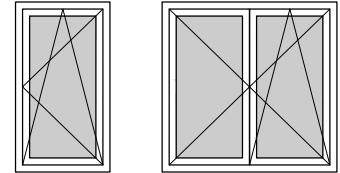
Step #3 - Extension kits choice

Schritt #3 - Garnitur  
Getriebeverlängerung

Étape #3 - Choix de kit extension  
d'équipement

**HBB \* - HCRN - HDG =** Extension kit lenght  
Getriebeverlängerung Länge  
largeur kit extension

|                        | MinL | MaxL |
|------------------------|------|------|
| <b>K88011</b>          | 0    | 140  |
| <b>K88012</b>          | 141  | 235  |
| <b>K88059</b>          | 236  | 375  |
| <b>K88013</b>          | 376  | 470  |
| <b>K88014</b>          | 471  | 610  |
| <b>K88015</b>          | 611  | 705  |
| <b>K88060</b>          | 706  | 845  |
| <b>K88016</b>          | 846  | 940  |
| <b>K88016 / K88011</b> | 941  | 1080 |
| <b>K88016 / K88012</b> | 1081 | 1175 |
| <b>K88016 / K88059</b> | 1176 | 1315 |
| <b>K88016 / K88013</b> | 1316 | 1410 |
| <b>K88016 / K88014</b> | 1411 | 1550 |
| <b>K88016 / K88015</b> | 1551 | 1650 |
| <b>K88016 / K88060</b> | 1651 | 1785 |
| <b>K88016 / K88016</b> | 1786 | 1880 |



\* See HBB information page

MinL = Min Lenght (mm)  
MaxL = Max Lenght (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = Min Länge (mm)  
MaxL = Max Länge (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = largeur minimal (mm)  
MaxL = largeur maximum (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

Step #4 - Scissors and hinges kit  
choice

Schritt #4 - Garnitur Scheren und  
Bänder

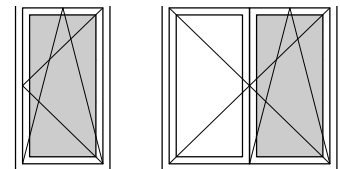
Étape #4 - Choix de kit pinces et  
paumelles

Left / Link / Gauche

Right / Recht / Gauche

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88084</b> | 370     | 400     |
| <b>K88085</b> | 401     | 600     |
| <b>K88086</b> | 601     | 800     |
| <b>K88087</b> | 801     | 1050    |
| <b>K88088</b> | 1051    | 1300    |
| <b>K88089</b> | 1301    | 1400    |

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88078</b> | 370     | 400     |
| <b>K88079</b> | 401     | 600     |
| <b>K88080</b> | 601     | 800     |
| <b>K88081</b> | 801     | 1050    |
| <b>K88082</b> | 1051    | 1300    |
| <b>K88083</b> | 1301    | 1400    |

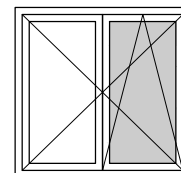
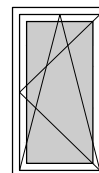


Step #5 - Additional hinge side  
locking point choice

Schritt #5 - Garnitur Zusatzverriegelung  
Bandseite

Étape #5 - Choix point de verrouillage  
supplémentaire côté paumelle

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88027</b> | 801     | 1280    |
| <b>K88028</b> | 1281    | 1500    |
| <b>K88029</b> | 1501    | 1700    |
| <b>K88030</b> | 1701    | 2800    |

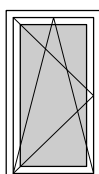


Step #6 - Lifting component  
Only for single leaf window

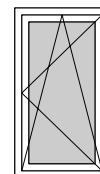
Schritt #6 - Hebekomponente  
Nur für Einflügliges Fenster

Étape #6 - Composant de levage  
Seulement pour fenêtre à un  
vantal

**K88048**



**K88047**

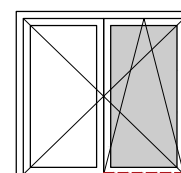
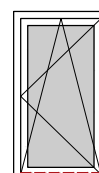


Step #7 - Additional bottom side  
locking point choice

Schritt #7 - Garnitur Zusatzverriegelung  
Bandunterseite

Étape #7 - Choix point de verrouillage  
supplémentaire côté inférieur

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88031</b> | 800     | 1280    |
| <b>K88032</b> | 1281    | 1400    |



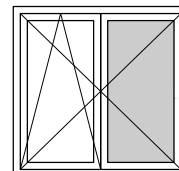
Step #8 - 2nd leaf hinges kit choice

Schritt #8 - Garnitur Scheren und  
Bänder Standflügel

Étape #8 - Choix kit paumelles  
2e ouvrant

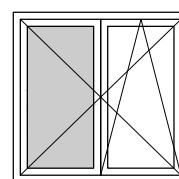
Right / Recht / Droite

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88090</b> | 370     | 1400    | 370     | 2800    |



Left / Link / Gauche

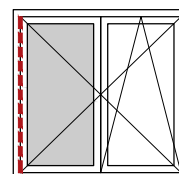
|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88091</b> | 370     | 1400    | 370     | 2800    |



Step #9 - Compression lock kit choice  
for 2nd leaf

Schritt #9 - Standflügel Anpressverschluss  
Étape #9 - Choix kit de serrure à  
compression pour 2e ouvrant

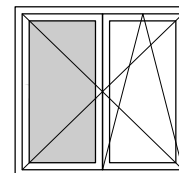
|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88036</b> | 1280    | 2000    |
| <b>K88037</b> | 2001    | 2800    |



Step #10 - French casement drive  
and extension kit choice

Schritt #10 - Erweiterungssets  
Stulpflügelgetriebe

Étape #10 - Choix kit Crémone  
et d'extension



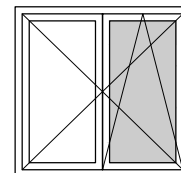
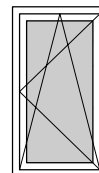
| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| K88003         | → | K88062                    |  | K88011                     | → | K88011                              |
| K88004         | → | K88063                    |  | K88012                     | → | K88071                              |
| K88005         | → | K88064                    |  | K88059                     | → | K88072                              |
| K88006         | → | K88065                    |  | K88013                     | → | K88073                              |
| K88007         | → | K88066                    |  | K88014                     | → | K88074                              |
| K88008         | → | K88067                    |  | K88015                     | → | K88075                              |
| K88009         | → | K88068                    |  | K88060                     | → | K88076                              |
| K88010         | → | K88069                    |  | K88016                     | → | K88077                              |
|                |   |                           |  | K88016<br>K88011           | → | K88077<br>K88011                    |
|                |   |                           |  | K88016<br>K88012           | → | K88077<br>K88071                    |
|                |   |                           |  | K88016<br>K88059           | → | K88077<br>K88072                    |
|                |   |                           |  | K88016<br>K88013           | → | K88077<br>K88073                    |
|                |   |                           |  | K88016<br>K88014           | → | K88077<br>K88074                    |
|                |   |                           |  | K88016<br>K88015           | → | K88077<br>K88075                    |
|                |   |                           |  | K88016<br>K88060           | → | K88077<br>K88076                    |
|                |   |                           |  | K88016<br>K88016           | → | K88077<br>K88077                    |

Step #11 - Door catch choice

Schritt #11 - Türverschluss

Étape #11 - Choix loquet de porte

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88061</b> | 661     | 2800    |

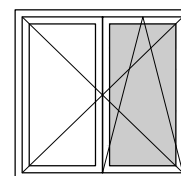
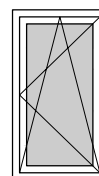


Step #12 - Alarm contact choice

Schritt #12 - Alarmkontakt

Étape #12 - Choix contact d'alarme

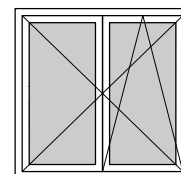
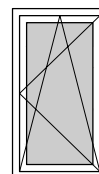
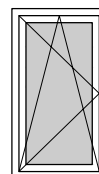
|               |
|---------------|
| <b>K99062</b> |
|---------------|



Step #13 - Hinge cover

Schritt #13 - Bandabdeckung

Étape #13 - Couvercle de paumelle



| Right Link<br>Droite | Surface finishes<br>Oberflächen Ausführungen<br>Finitions de surface |
|----------------------|----------------------------------------------------------------------|
| <b>K88092</b>        | Silver<br>Silber<br>Argent                                           |
| <b>K88093</b>        | White<br>Weiß<br>Blanc                                               |
| <b>K88094</b>        | Black<br>Schwarz<br>Argent                                           |
| <b>K88095</b>        | Brown<br>Braun<br>Marron                                             |
| <b>K88096 (*)</b>    | Titanium<br>Titan<br>Titane                                          |

| Left Link<br>Gauche | Surface finishes<br>Oberflächen Ausführungen<br>Finitions de surface |
|---------------------|----------------------------------------------------------------------|
| <b>K88097</b>       | Silver<br>Silber<br>Argent                                           |
| <b>K88098</b>       | White<br>Weiß<br>Blanc                                               |
| <b>K88099</b>       | Black<br>Schwarz<br>Argent                                           |
| <b>K880100</b>      | Brown<br>Braun<br>Marron                                             |
| <b>K880101 (*)</b>  | Titanium<br>Titan<br>Titane                                          |

\*On request  
\*Auf Anfrage  
\*Sur demande





Step #14 - Double croppable gear kits choice

Schritt #14 - Beidseitig kürzbare Garnitur

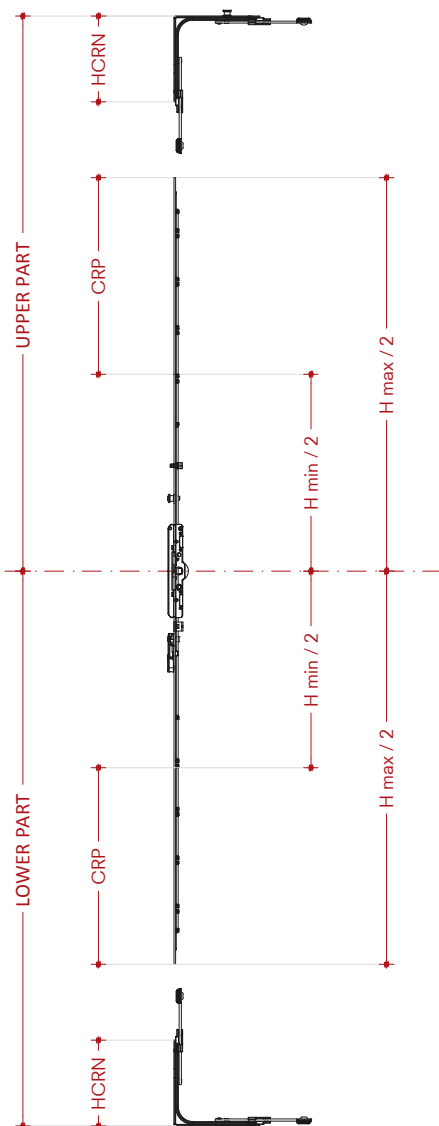
Étape #14 - Choix Kits d'équipement à double recadrage

(Instead of Step #3 and #4)

(Anstelle von Schritt #3 und #4)

(Au lieu des étapes #3 et #4)

|               | h min handle | HDG    | H min / 2 | H max / 2 | CRP       | HCRN  | HBB min |
|---------------|--------------|--------|-----------|-----------|-----------|-------|---------|
| <b>K88109</b> | 265          | 640.5  | 151       | 260       | 170 + 170 | 113.5 | 527.5   |
| <b>K88110</b> | 375          | 1040.5 | 261       | 510       | 260 + 260 | 113.5 | 747.5   |
| <b>K88111</b> | 625          | 1540.5 | 511       | 760       | 260 + 260 | 113.5 | 1247.5  |
| <b>K88112</b> | 875          | 2040.5 | 761       | 1020      | 260 + 260 | 113.5 | 1747.5  |



$$\text{UPPER PART} = \text{HBB} - \text{HH} - \text{HCRN}$$

$$\text{LOWER PART} = \text{HH} - \text{HCRN}$$

Choose the smallest value and find the right gear kit between Hmin/2 and Hmax/2 range columns.

Wählen Sie den kleinsten Wert und finden Sie das passende Garnitur Getriebe zwischen den Bereichsspalten Hmin/2 und Hmax/2

Choisissez la plus petite valeur et trouvez le bon kit d'équipement entre les colonnes de plage Hmin/2 et Hmax/2

EXTENSION KIT:

$$\text{UPPER}^* = \text{HBB} - \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

$$\text{LOWER}^* = \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

CHECK ON THE  
EXTENSION TABLE  
(STEP 3)

\* with negative value extension are not needed.

\* Bei negativem Wert werden keine Verlängerungen benötigt.

\* avec une valeur négative, aucune extension n'est nécessaire.

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

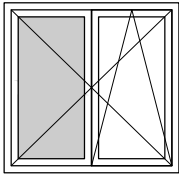
HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

Step #15 - French casement drive and extension kit choice

Schritt #15 - Verlängerungsets Stulpflügelgetriebe

Étape #15 - Choix kit Crémone et d'extension



| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| K88109         | → | K88113                    |  | K88011                     | → | K88011                              |
| K88110         | → | K88114                    |  | K88012                     | → | K88071                              |
| K88111         | → | K88115                    |  | K88059                     | → | K88072                              |
| K88112         | → | K88116                    |  | K88013                     | → | K88073                              |
|                |   |                           |  | K88014                     | → | K88074                              |
|                |   |                           |  | K88015                     | → | K88075                              |
|                |   |                           |  | K88060                     | → | K88076                              |
|                |   |                           |  | K88016                     | → | K88077                              |
|                |   |                           |  | K88016<br>K88011           | → | K88077<br>K88011                    |
|                |   |                           |  | K88016<br>K88012           | → | K88077<br>K88071                    |
|                |   |                           |  | K88016<br>K88059           | → | K88077<br>K88072                    |
|                |   |                           |  | K88016<br>K88013           | → | K88077<br>K88073                    |
|                |   |                           |  | K88016<br>K88014           | → | K88077<br>K88074                    |
|                |   |                           |  | K88016<br>K88015           | → | K88077<br>K88075                    |
|                |   |                           |  | K88016<br>K88060           | → | K88077<br>K88076                    |
|                |   |                           |  | K88016<br>K88016           | → | K88077<br>K88077                    |

**Tilt&Turn windows  
with concealed hinge**

Basic kits

K88001  
Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Grundgarnitur

K88001  
Standardfenster

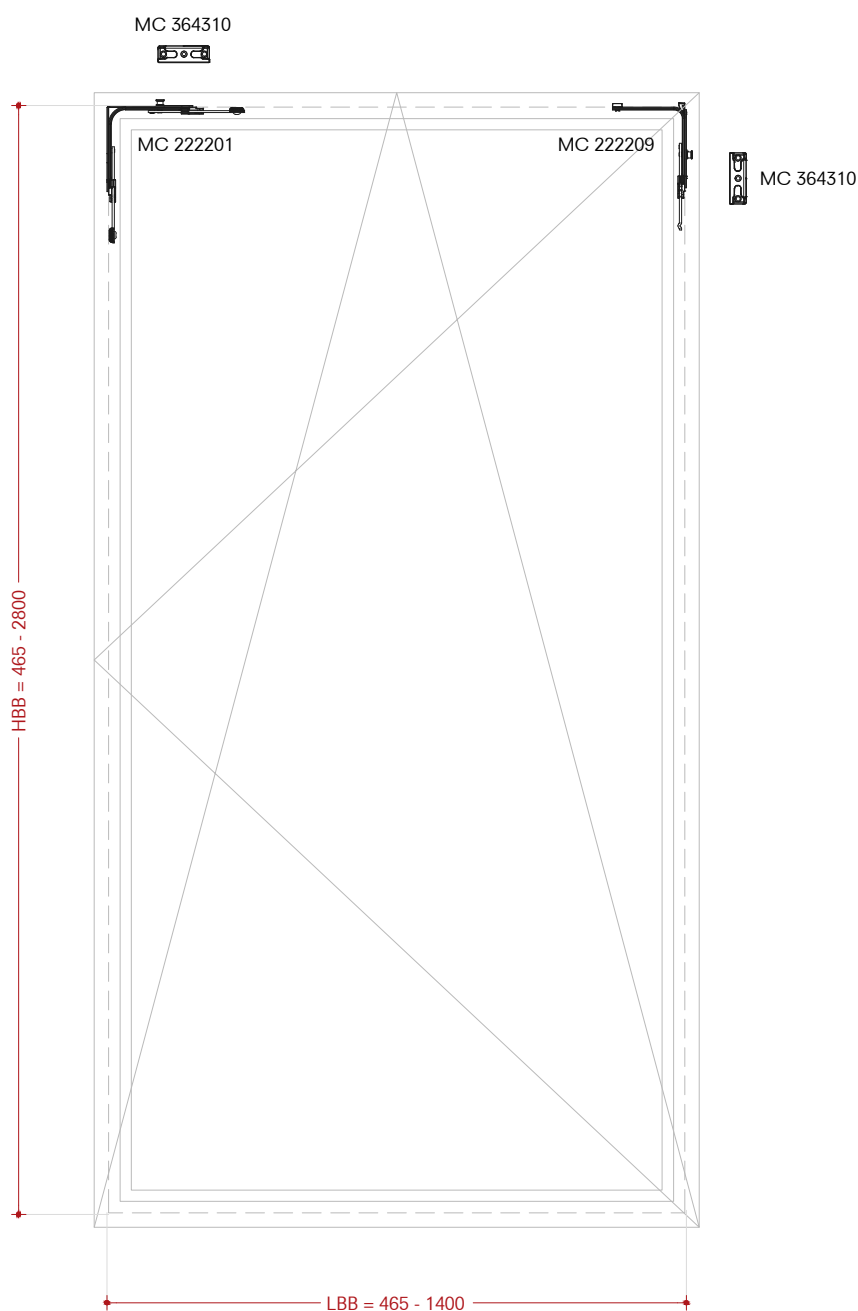
LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

K88001  
Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

**Fênêtrê oscillo-battant  
avec paumelle invisible**

Kits de base



**Tilt&Turn windows  
with concealed hinge**

Basic kits

K88002

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Grundgarnitur

K88002

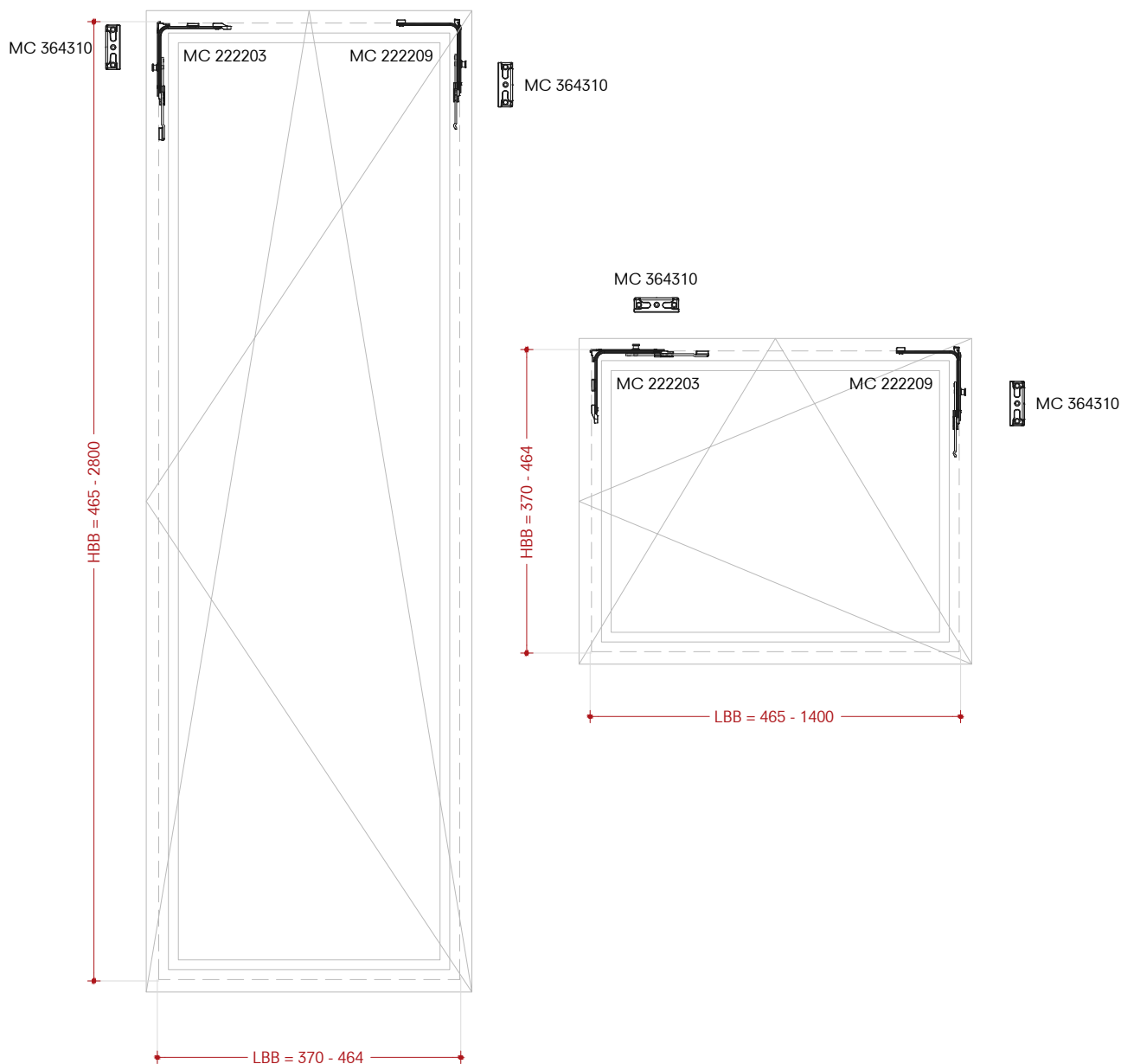
LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

**Fênêtrê oscillo-battant  
avec paumelle invisible**

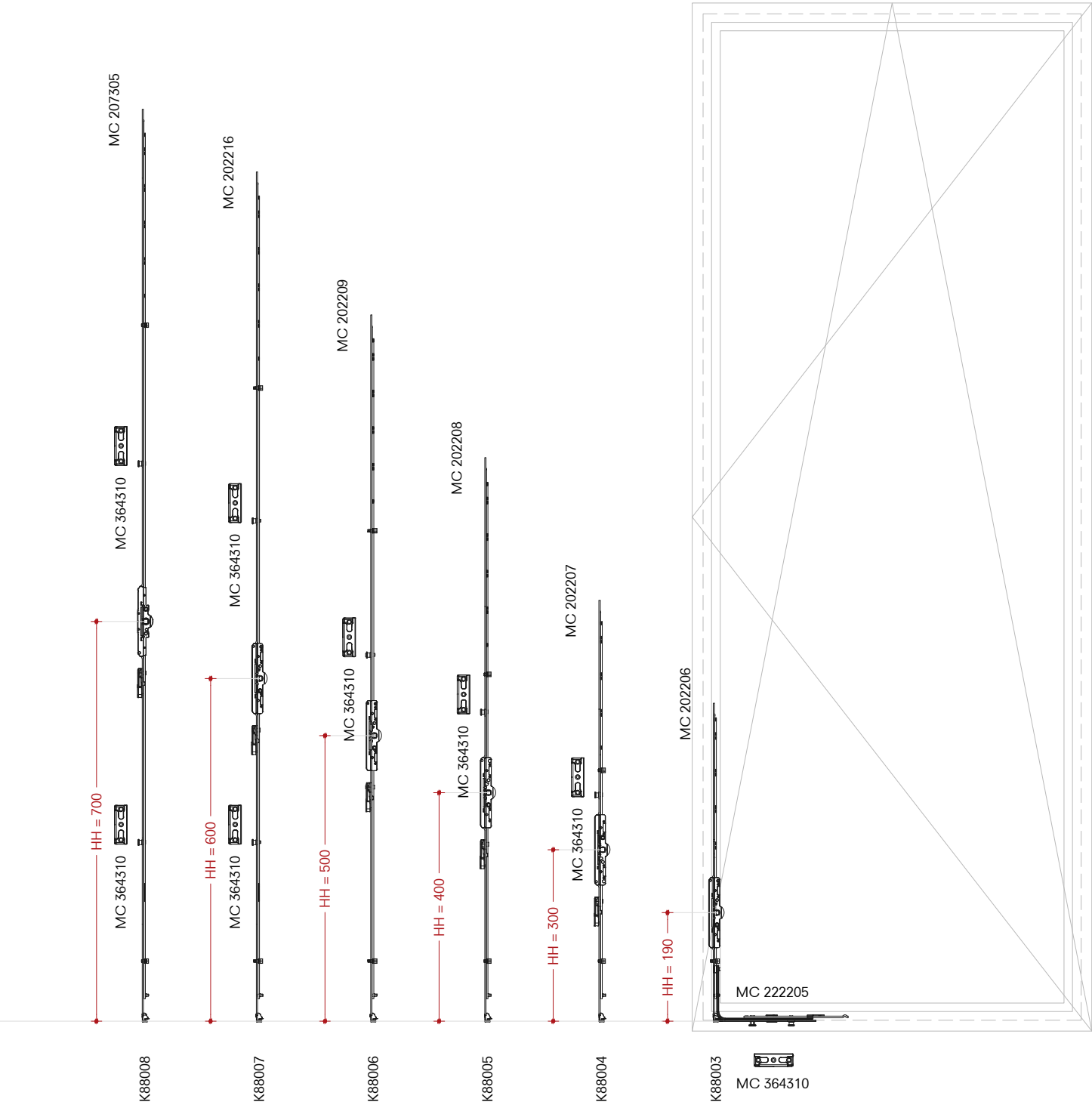
Kits de base

K88002

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm







**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtre oscillo-battant  
avec paumelle invisible**

Double croppable gear kits

Beidseitig kürzbare Garnitur

Kits d'équipement à double recadrage

K88109

K88109

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88110

K88110

K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88111

K88111

K88111

MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

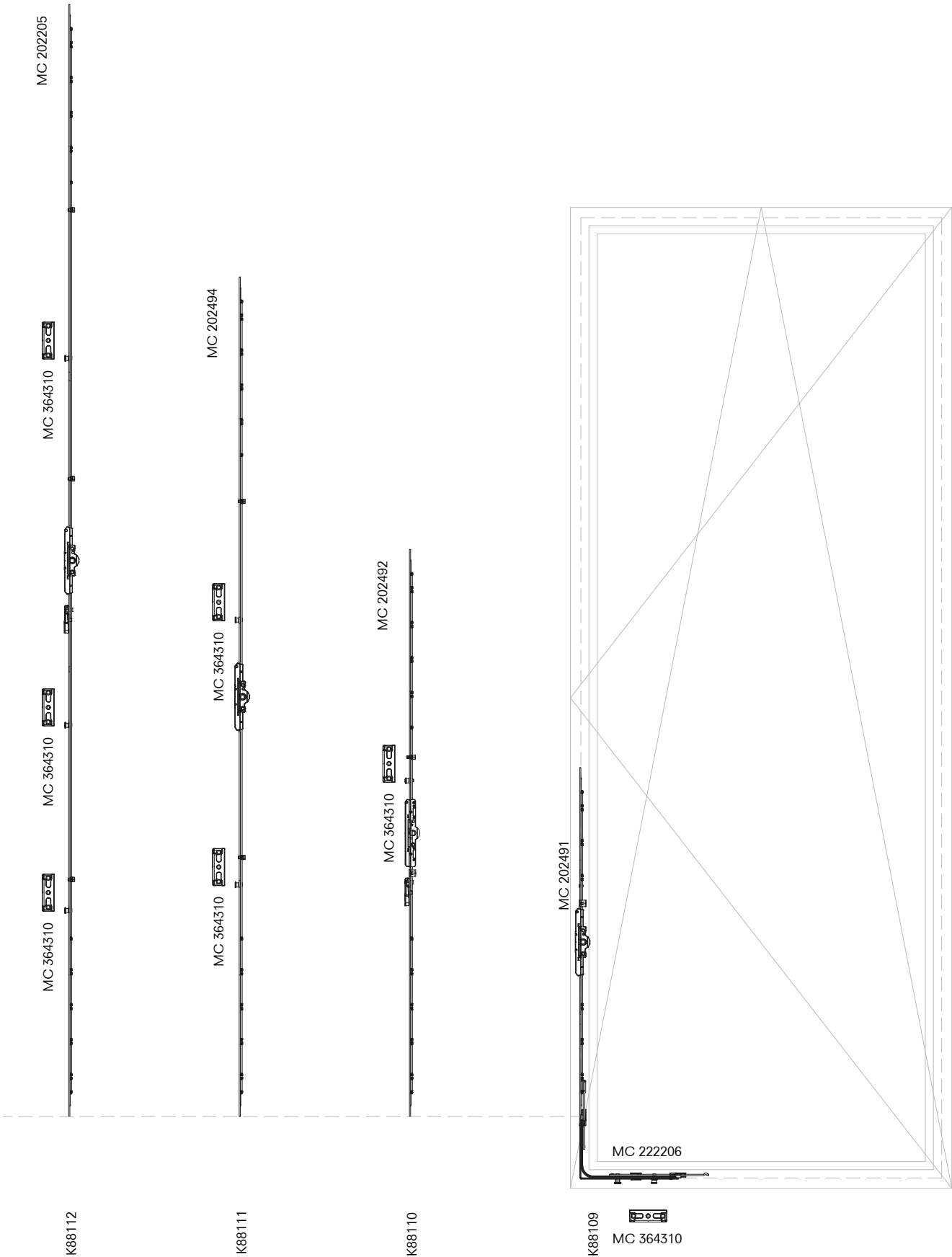
K88112

K88112

K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces





**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtre oscillo-battant  
avec paumelle invisible**

Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88016

K88060

K88012

141 - 235 mm

MC 201750 n°01 piece  
MC 364310 n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm

MC 201840

MC 201750

K88059

236 - 375 mm

MC 201750 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm

MC 364310

MC 364310

MC 206630

K88013

376 - 470 mm

MC 201840 n°01 piece  
MC 364310 n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm

MC 201840

MC 201840

K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88014

471 - 610 mm

K88014

471 - 610 mm

MC 364310

MC 364310

K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88015

611 - 705 mm

K88015

611 - 705 mm

K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88060

706 - 845 mm

K88060

706 - 845 mm

K88016

846 - 940 mm

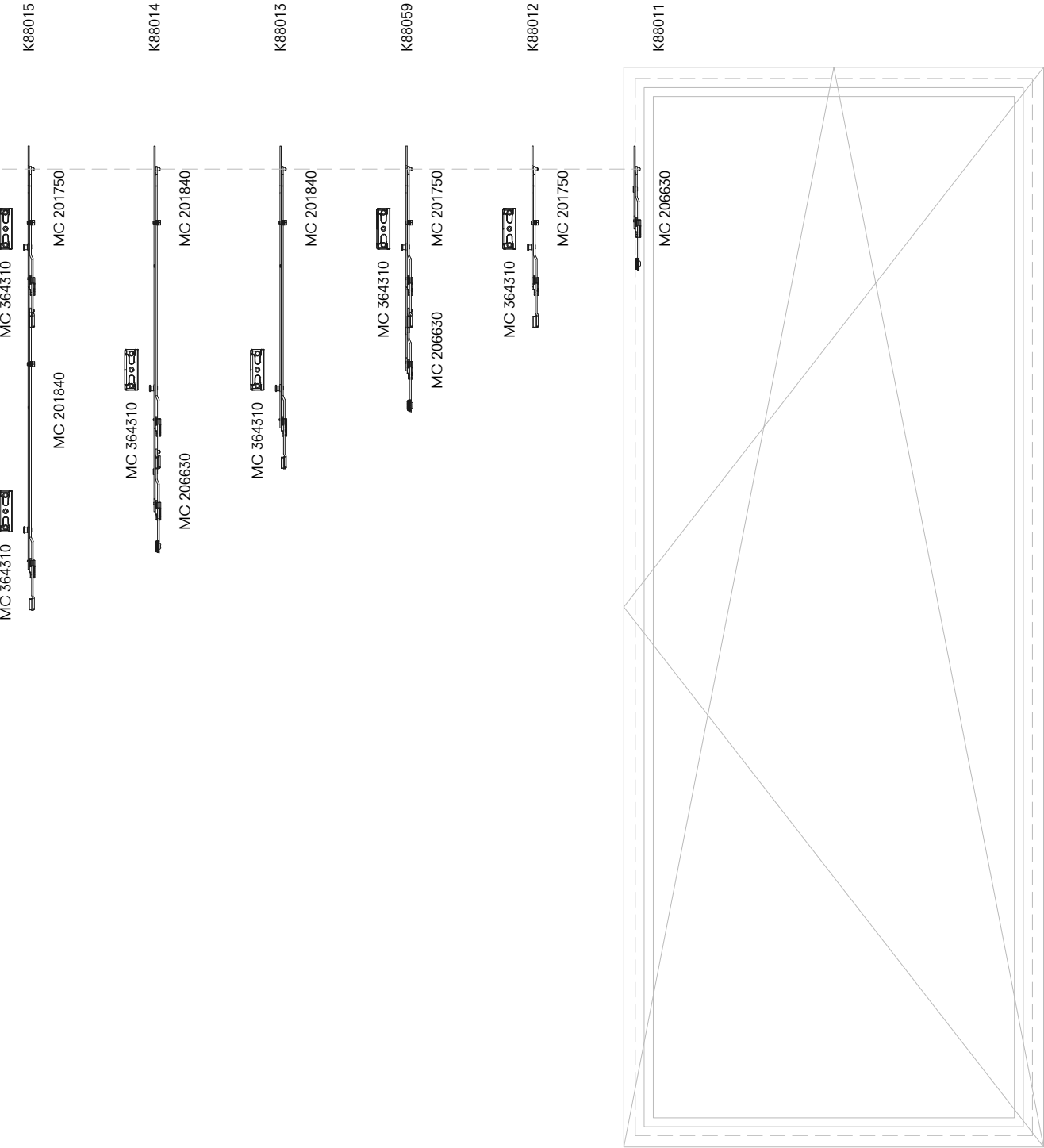
MC 201840 n°02 pieces  
MC 364310 n°02 pieces

K88016

846 - 940 mm

K88016

846 - 940 mm



### Tilt&Turn windows with concealed hinge

Scissors and hinges kits  
Right opening

K88017

LBB = 370 - 600 mm

MC 217470 n°01 piece  
MC 217346 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece

### Dreh-Kippfenster mit Verdecktliegende Bänder

Garnitur Scheren und Bänder  
DIN rechts

K88017

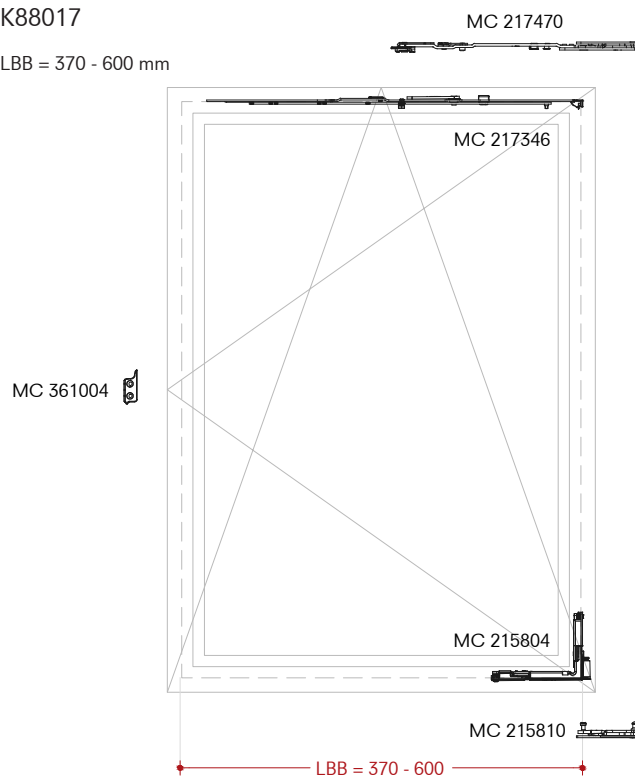
LBB = 370 - 600 mm

### Fênêtre oscillo-battant avec paumelle invisible

Kits pinces et paumelles  
Ouverture droite

K88017

LBB = 370 - 600 mm



K88018

LBB = 601 - 800 mm

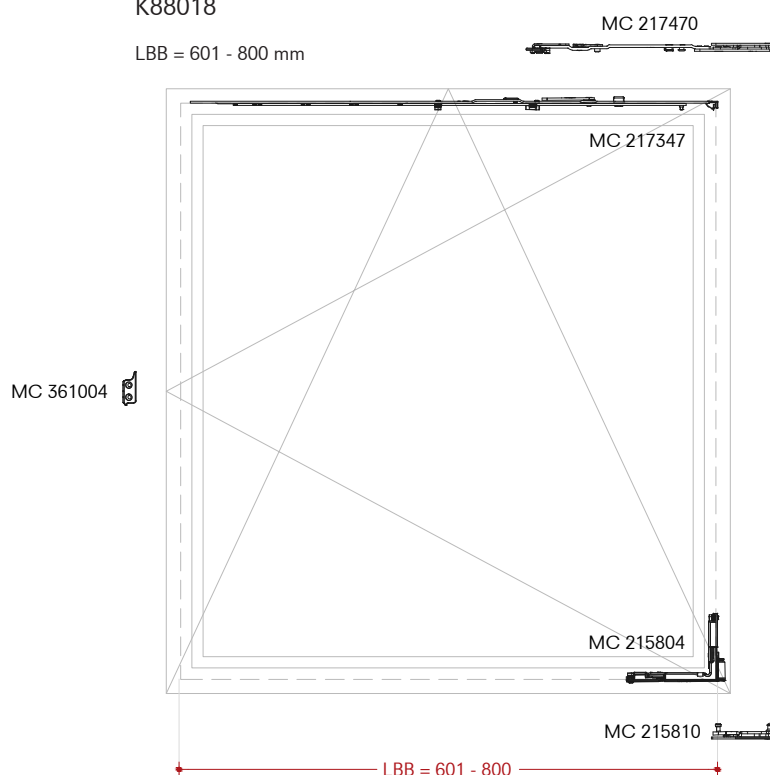
MC 217470 n°01 piece  
MC 217347 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece

K88018

LBB = 601 - 800 mm

K88018

LBB = 601 - 800 mm



## K88019

LBB = 801 - 1050 mm

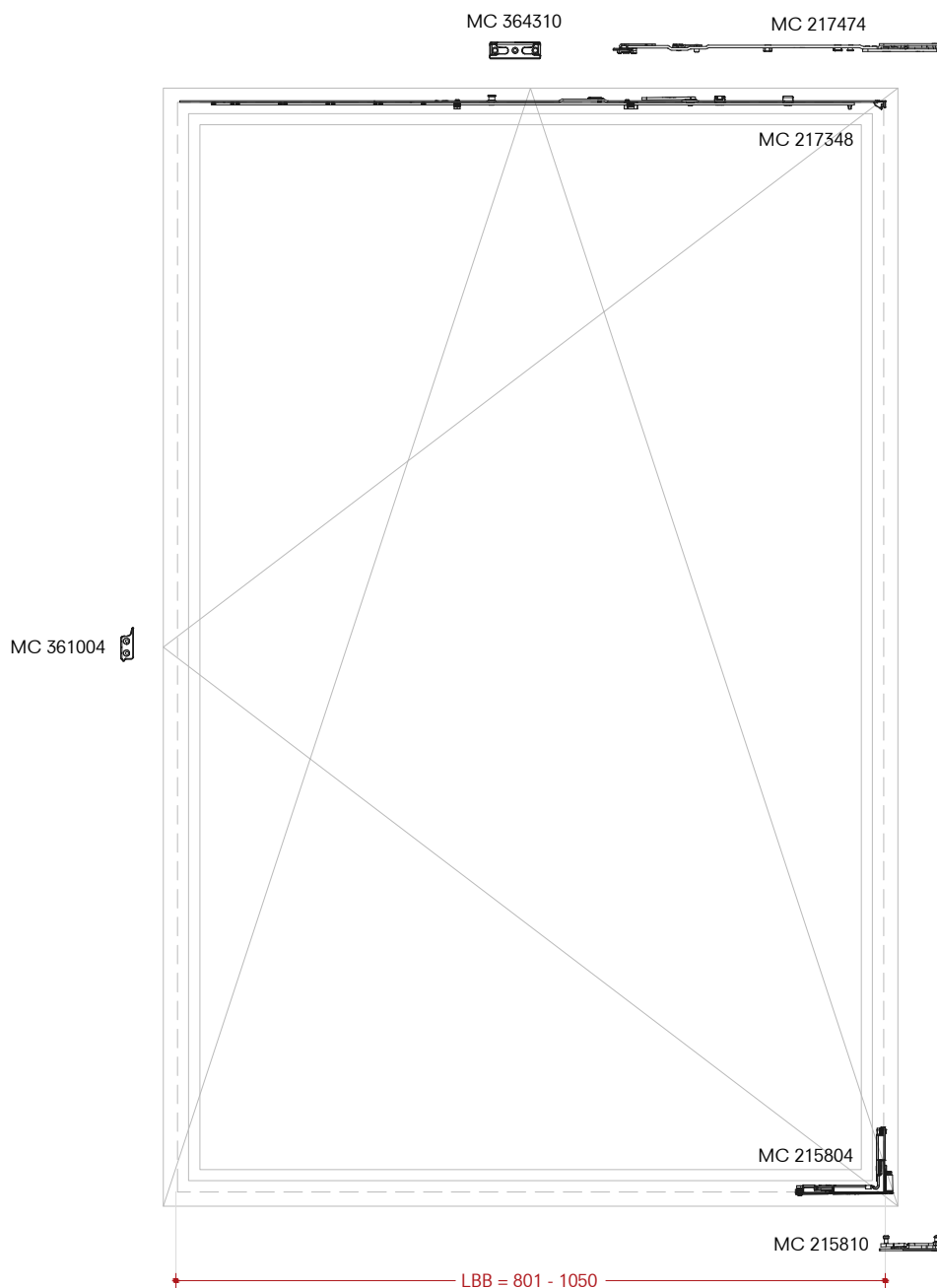
MC 217474 n°01 piece  
MC 217348 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

## K88019

LBB = 801 - 1050 mm

## K88019

LBB = 801 - 1050 mm



**Tilt&Turn windows  
with concealed hinge**

Scissors and hinges kits  
Right opening

K88020

LBB = 1051 - 1285 mm

MC 217474 n°01 piece  
MC 217348 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Garnitur Scheren und Bänder  
DIN rechts

K88020

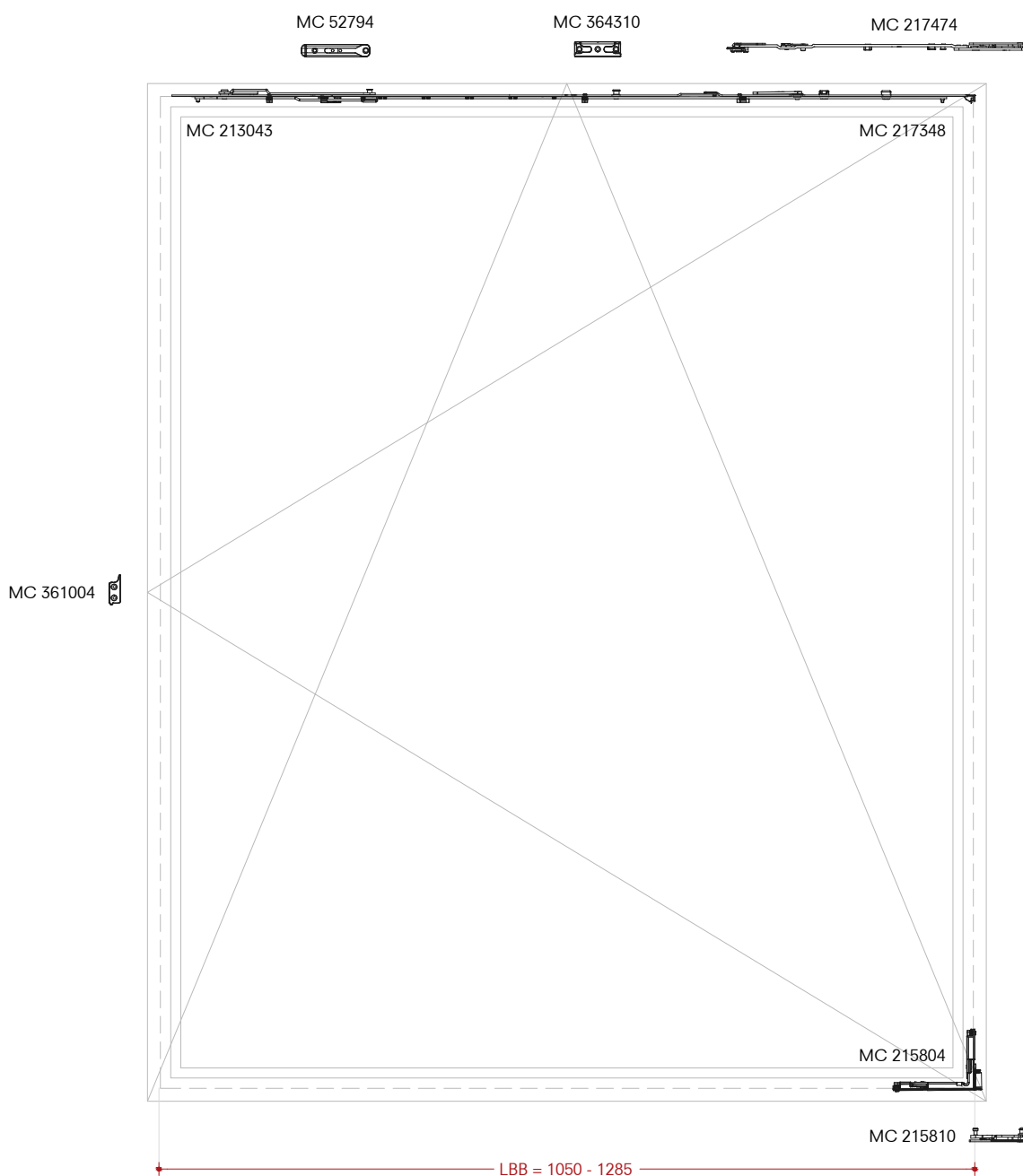
LBB = 1051 - 1285 mm

**Fênêtre oscillo-battant  
avec paumelle invisible**

Kits pinces et paumelles  
Ouverture droite

K88020

LBB = 1051 - 1285 mm



K88021

LBB = 1286 - 1400 mm

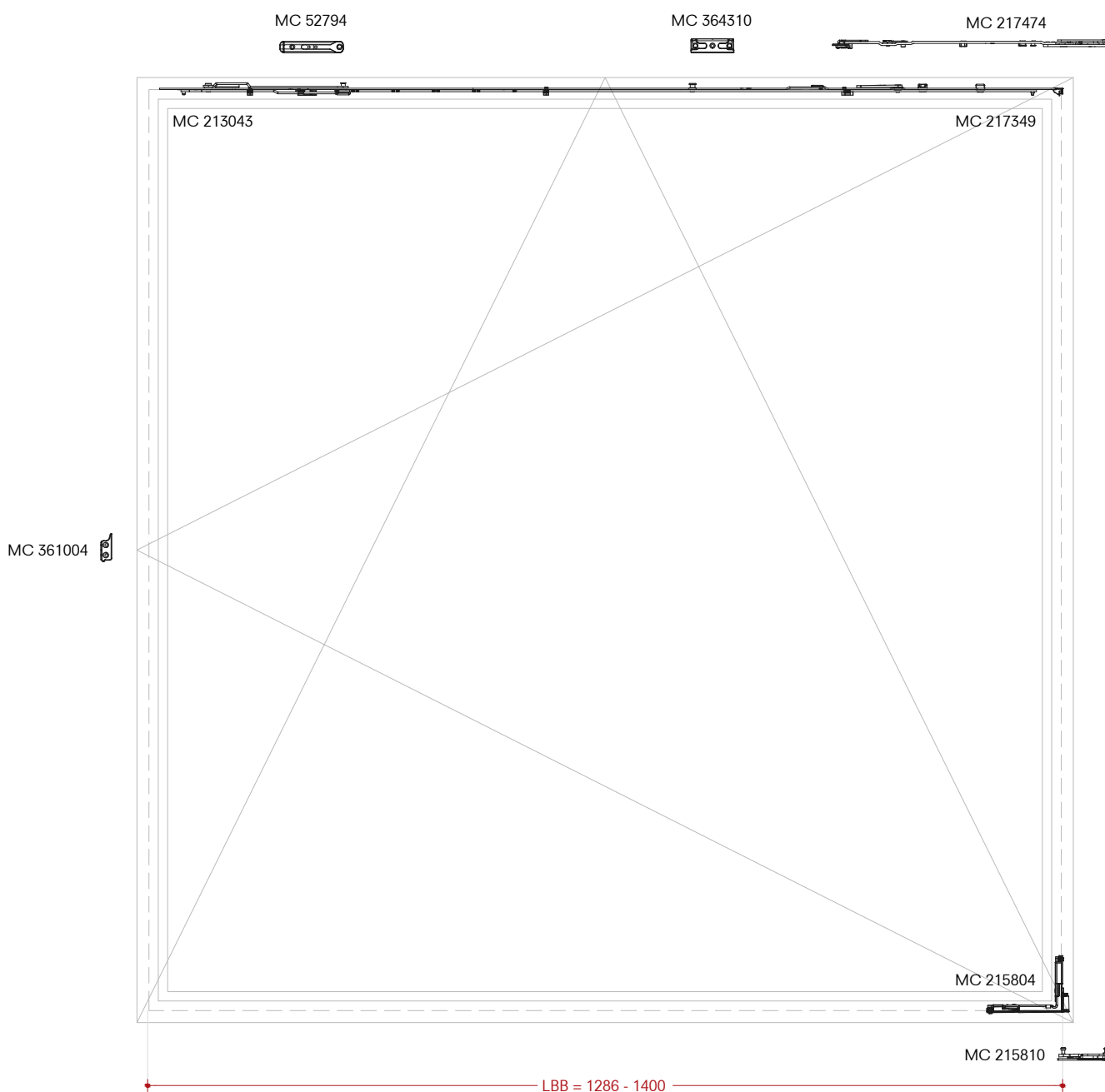
MC 217474 n°01 piece  
MC 217349 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece  
MC 361004 n°01 piece  
MC 364310 n°01 piece

K88021

LBB = 1286 - 1400 mm

K88021

LBB = 1286 - 1400 mm



### Tilt&Turn windows with concealed hinge

Scissors and hinges kits  
Left opening

K88022

LBB = 370 - 600 mm

MC 217471 n°01 piece  
MC 217346 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece

### Dreh-Kippfenster mit Verdecktliegende Bänder

Garnitur Scheren und Bänder  
DIN links

K88022

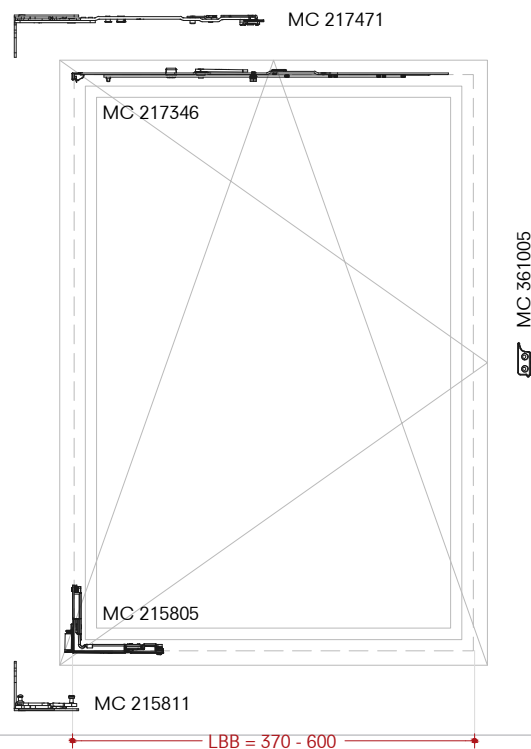
LBB = 370 - 600 mm

### Fênêtre oscillo-battant avec paumelle invisible

Kits pinces et paumelles  
Ouverture gauche

K88022

LBB = 370 - 600 mm



K88023

LBB = 601 - 800 mm

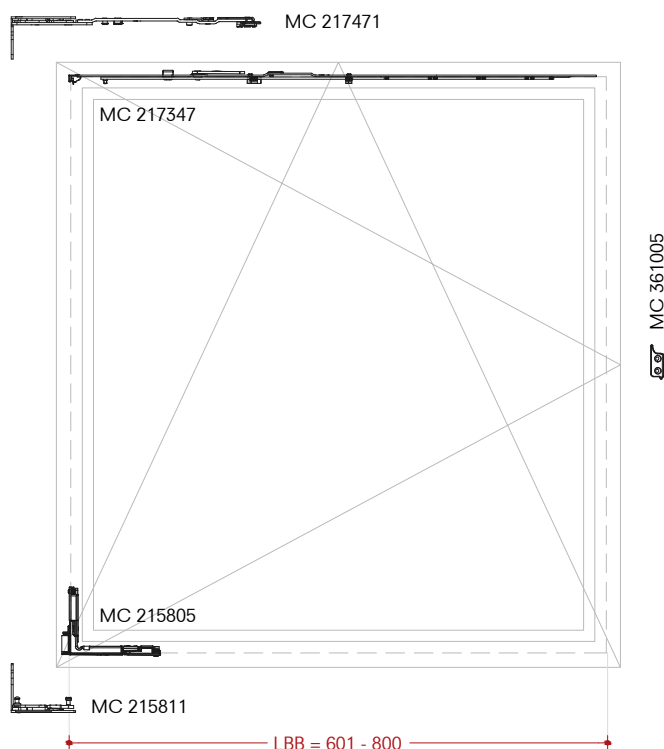
MC 217471 n°01 piece  
MC 217347 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece

K88023

LBB = 601 - 800 mm

K88023

LBB = 601 - 800 mm





K88024

LBB = 801 - 1050 mm

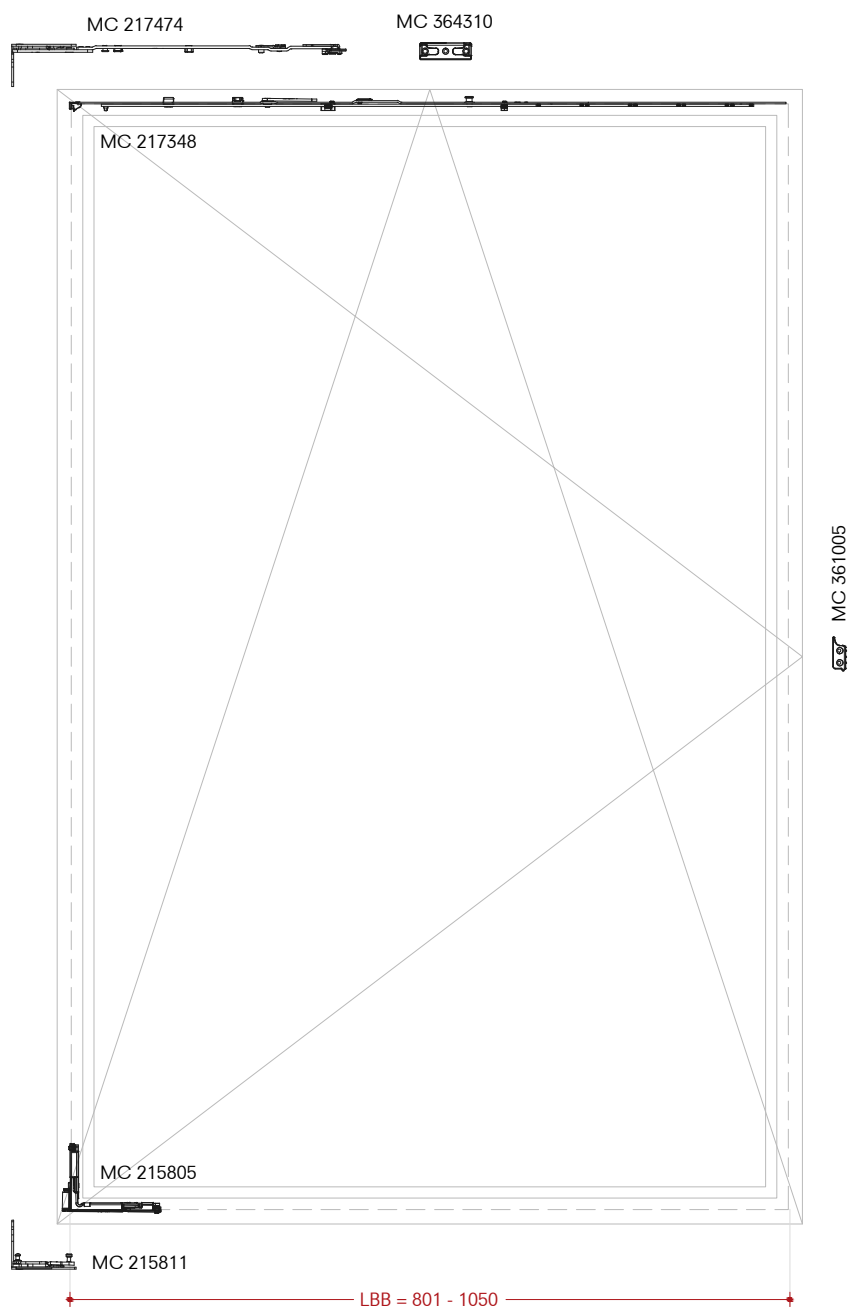
MC 217475 n°01 piece  
MC 217348 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

K88024

LBB = 801 - 1050 mm

K88024

LBB = 801 - 1050 mm



**Tilt&Turn windows  
with concealed hinge**

Scissors and hinges kits  
Left opening

K88025

LBB = 1051 - 1285 mm

MC 217475 n°01 piece  
MC 217348 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Garnitur Scheren und Bänder  
DIN links

K88025

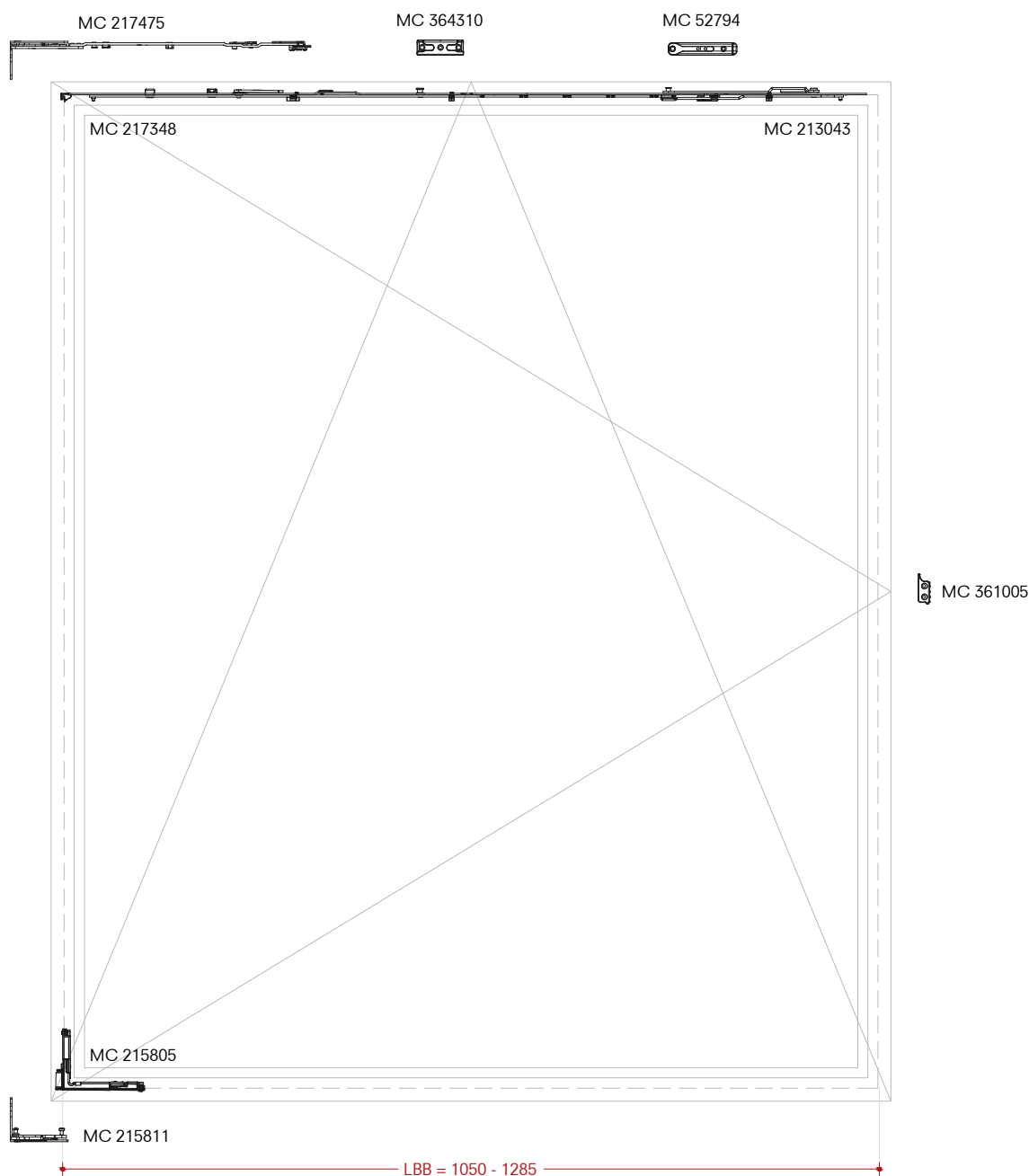
LBB = 1051 - 1285 mm

**Fênêtre oscillo-battant  
avec paumelle invisible**

Kits pinces et paumelles  
Ouverture gauche

K88025

LBB = 1051 - 1285 mm



K88026

LBB = 1286 - 1400 mm

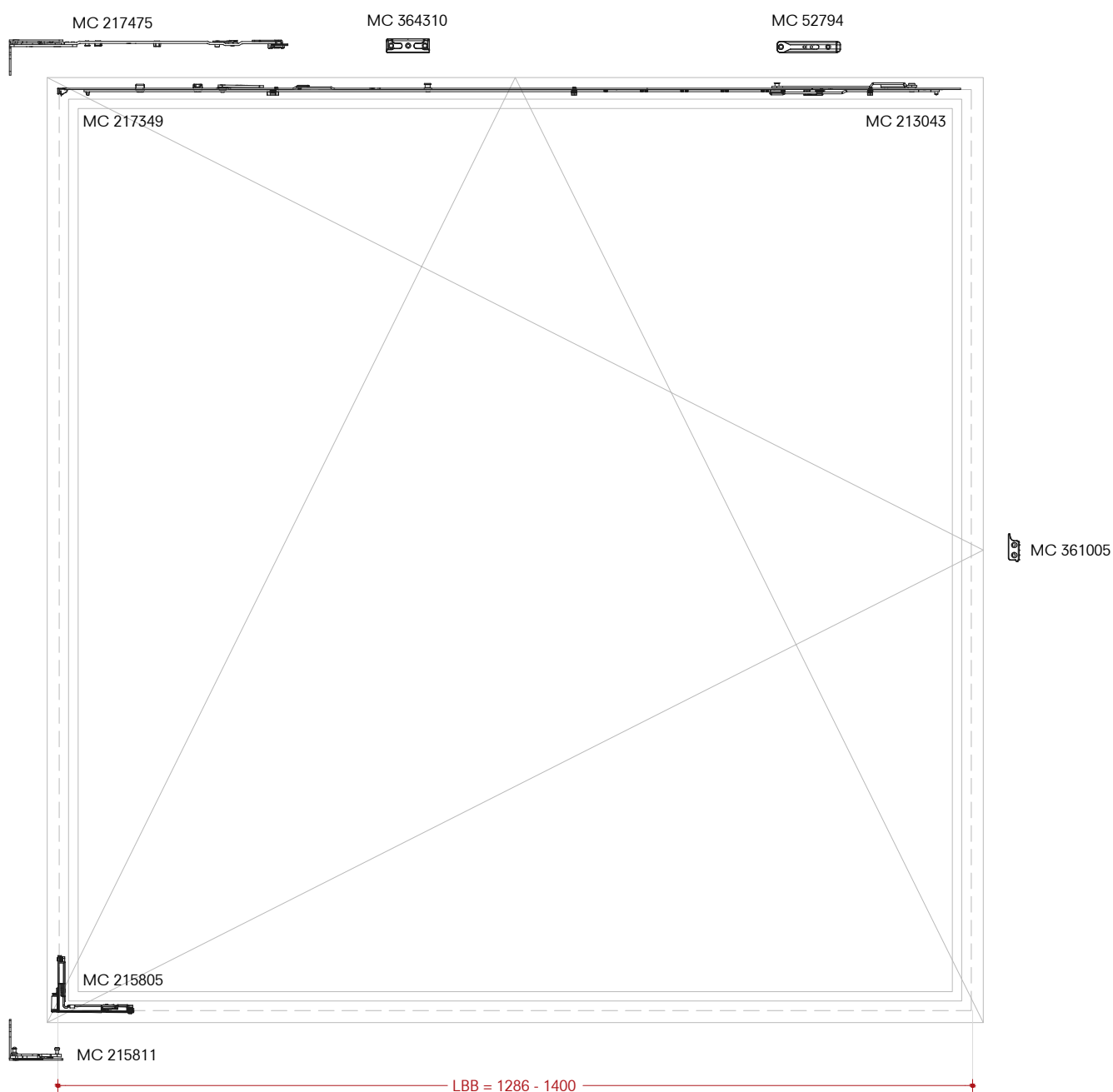
MC 217475 n°01 piece  
MC 217349 n°01 piece  
MC 213043 n°01 piece  
MC 52794 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece  
MC 361005 n°01 piece  
MC 364310 n°01 piece

K88026

LBB = 1286 - 1400 mm

K88026

LBB = 1286 - 1400 mm



**Tilt&Turn windows  
with concealed hinge**

Additional hinge side  
locking point

K88027

HBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

K88028

HBB = 1281 - 1500 mm

MC 201752 n°01 piece  
MC 364310 n°01 piece

K88029

HBB = 1501 - 1700 mm

MC 201840 n°01 piece  
MC 201753 n°01 piece  
MC 364310 n°02 pieces

K88030

HBB = 1701 - 2800 mm

MC 201754 n°01 piece  
MC 364310 n°02 pieces

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Garnitur Zusatzverriegelung  
Bandseite

K88027

HBB = 801 - 1280 mm

K88028

HBB = 1281 - 1500 mm

K88029

HBB = 1501 - 1700 mm

K88030

HBB = 1701 - 2800 mm

K88027

HBB = 801 - 1280 mm

K88028

HBB = 1281 - 1500 mm

K88029

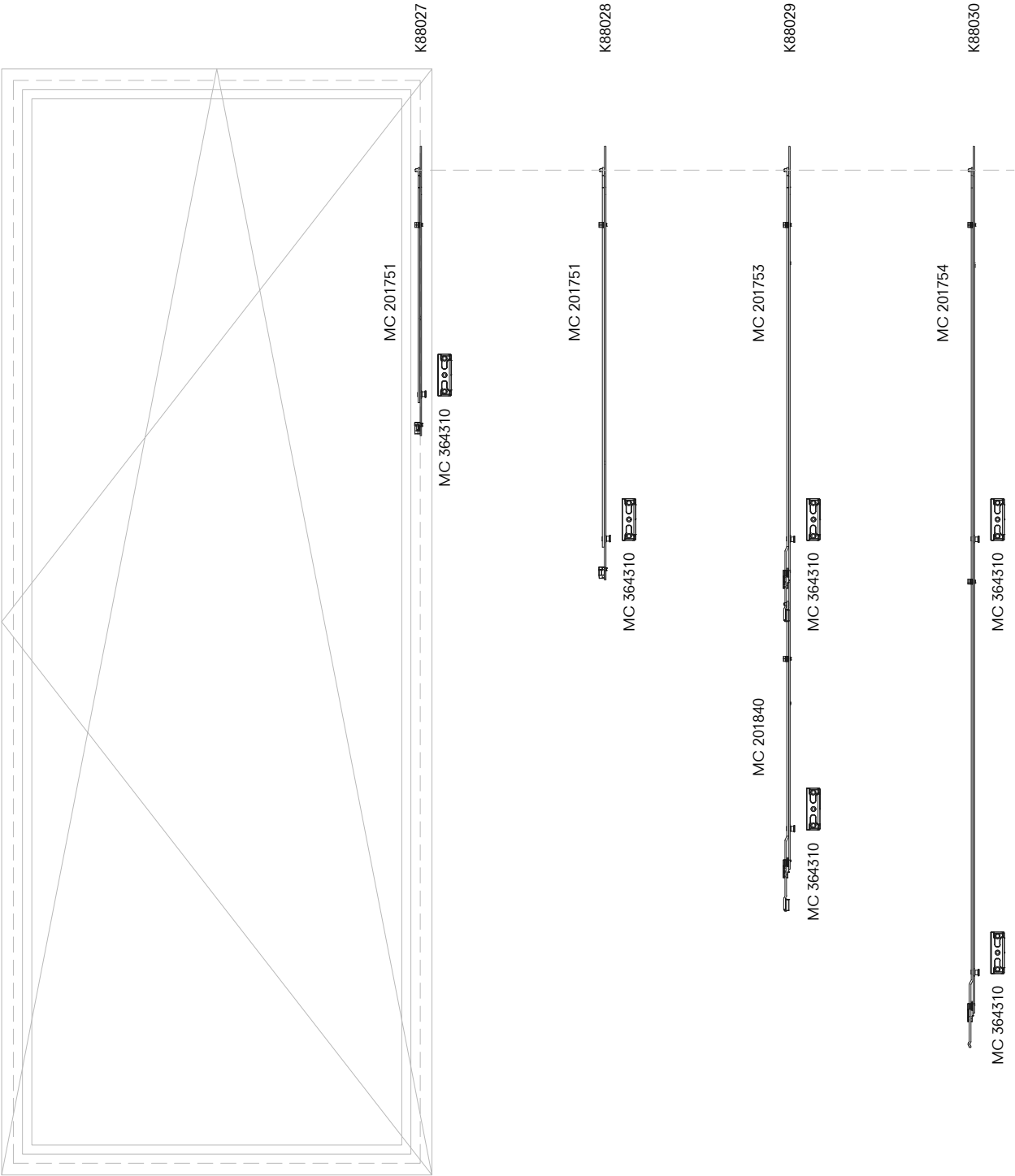
HBB = 1501 - 1700 mm

K88030

HBB = 1701 - 2800 mm

**Fênetre oscillo-battant  
avec paumelle invisible**

Point de verrouillage supplémentaire  
côté paumelle



**Tilt&Turn windows  
with concealed hinge**

Additional bottom side  
locking point

K88031

LBB = 801 - 1280 mm

MC 201751 n°01 piece  
MC 364310 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Zusätzliche Verriegelungen  
Unterseite

K88031

LBB = 801 - 1280 mm

K88031

LBB = 801 - 1280 mm

**Fênetre oscillo-battant  
avec paumelle invisible**

Point de verrouillage  
supplémentaire côté inférieur

K88032

LBB = 1281 - 1400 mm

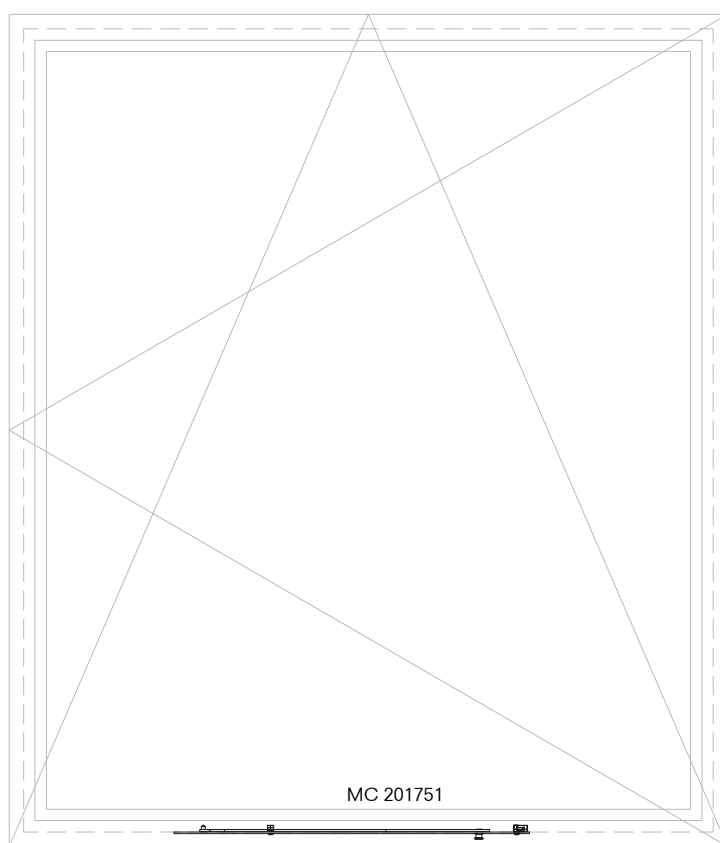
MC 201752 n°01 piece  
MC 364310 n°01 piece

K88032

LBB = 1281 - 1400 mm

K88032

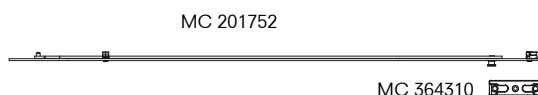
LBB = 1281 - 1400 mm



MC 201751

MC 364310

K88031



MC 201752

MC 364310

K88032

**Tilt&Turn windows  
with concealed hinge**

Hinges kits 2nd leaf

K88034

Right hinges

MC 217691 n°01 piece  
MC 217729 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Garnitur Scheren-  
und Bandlager Standflügel

K88034

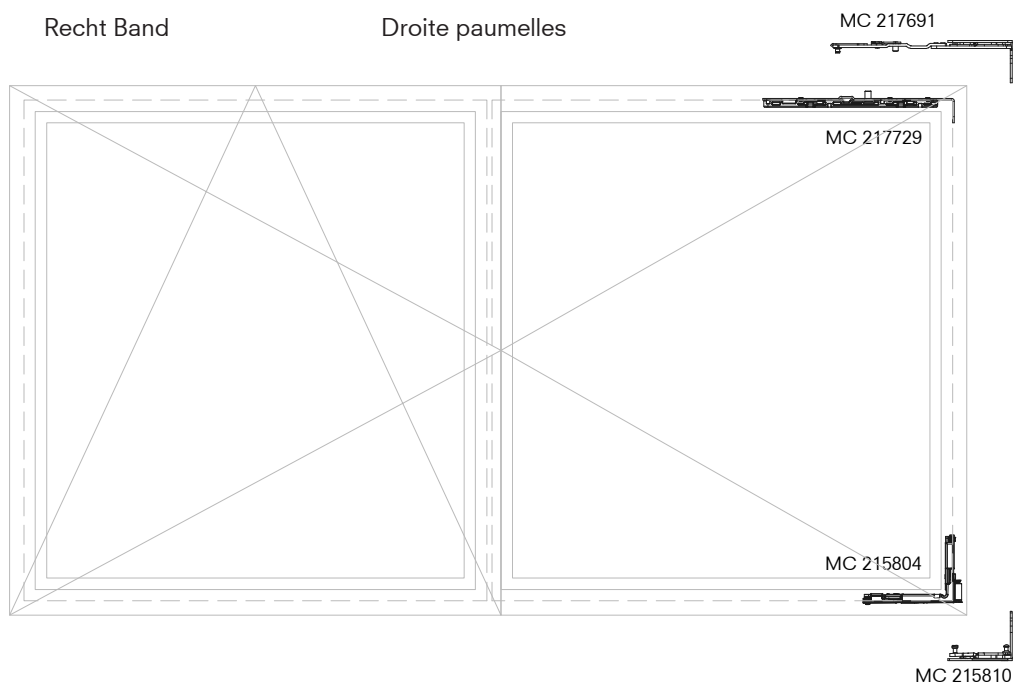
Recht Band

K88034

Droite paumelles

**Fênêtre oscillo-battant  
avec paumelle invisible**

Kits paumelles 2e ouvrant



K88035

Left hinges

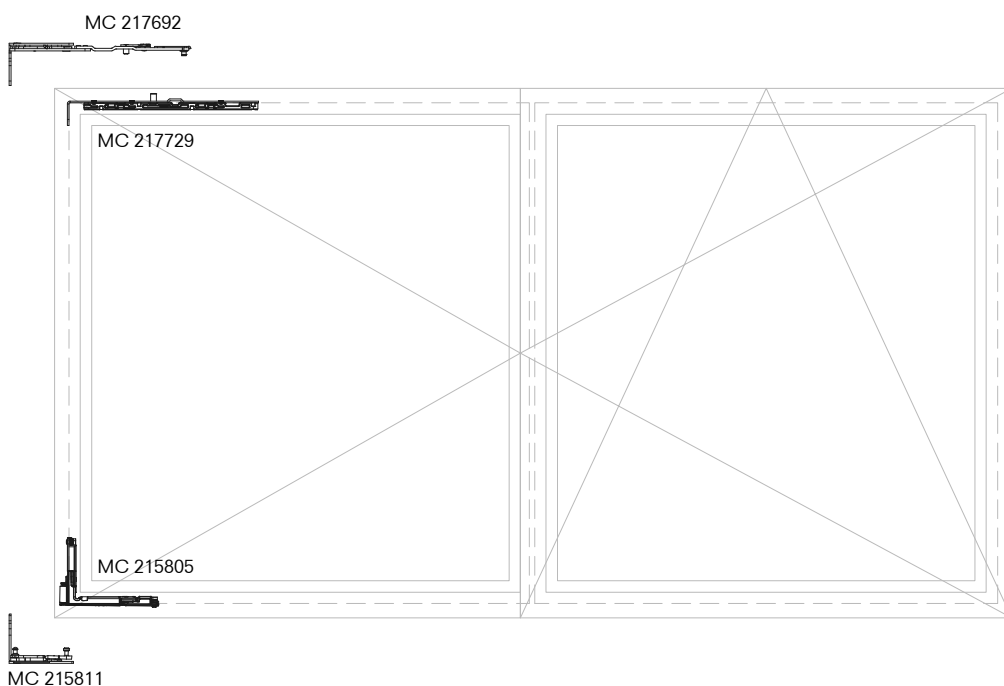
MC 217692 n°01 piece  
MC 217729 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece

K88035

Link Band

K88035

Gauche paumelles



**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênetre oscillo-battant  
avec paumelle invisible**

Concealed compression locks kits

Anpressverschluss verdeckt

Kits de serrures à compression cachée

K88036

HBB = 1280 - 2000 mm

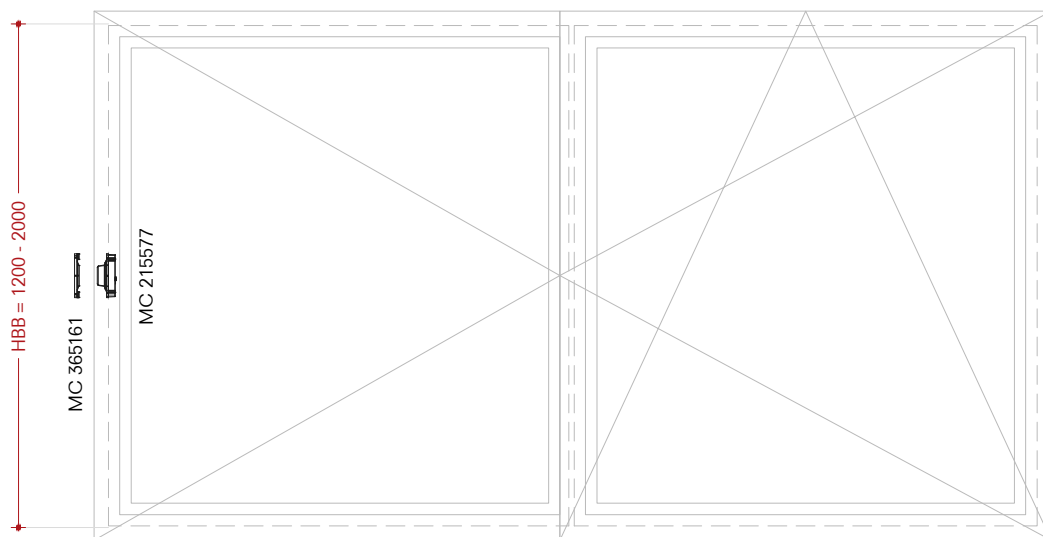
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88036

HBB = 1280 - 2000 mm

K88036

HBB = 1280 - 2000 mm



K88037

HBB = 2001 - 2800 mm

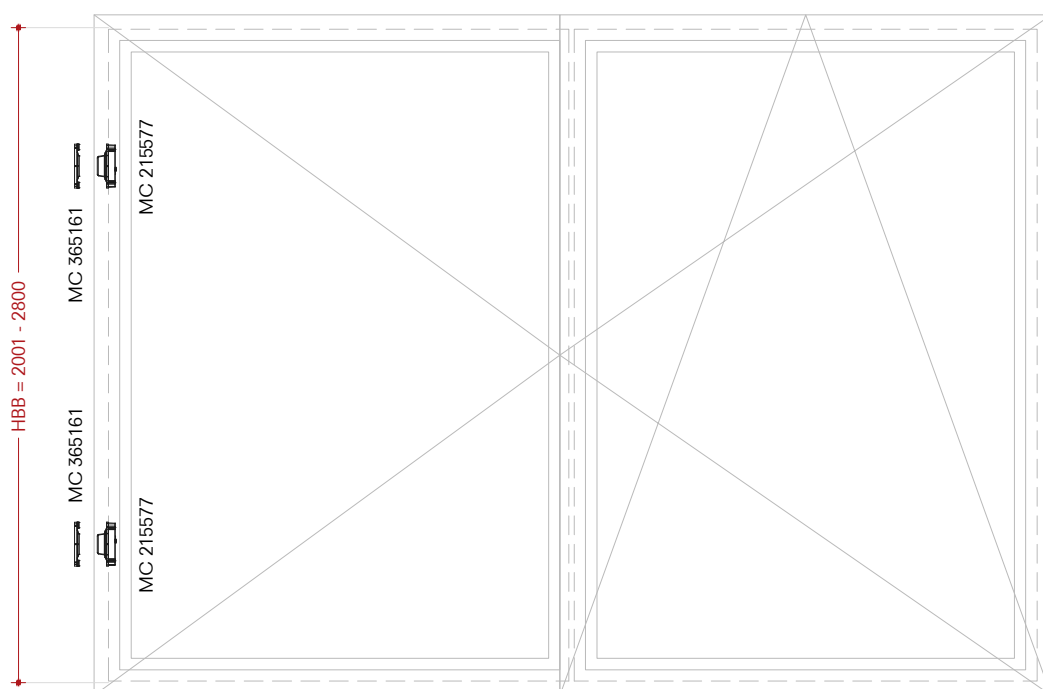
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037

HBB = 2001 - 2800 mm

K88037

HBB = 2001 - 2800 mm







**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtre oscillo-battant  
avec paumelle invisible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88062

HH = 190 mm

MC 202873 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

MC 221901 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88064

HH = 400 mm

MC 221902 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88065

HH = 500 mm

MC 221903 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88066

HH = 600 mm

MC 221906 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88067

HH = 700 mm

MC 207242 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88068

HH = 1050 mm

MC 221907 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88069

HH = 1050 mm

MC 221908 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

HH = 700 mm

K88068

HH = 1050 mm

K88069

HH = 1050 mm

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

HH = 700 mm

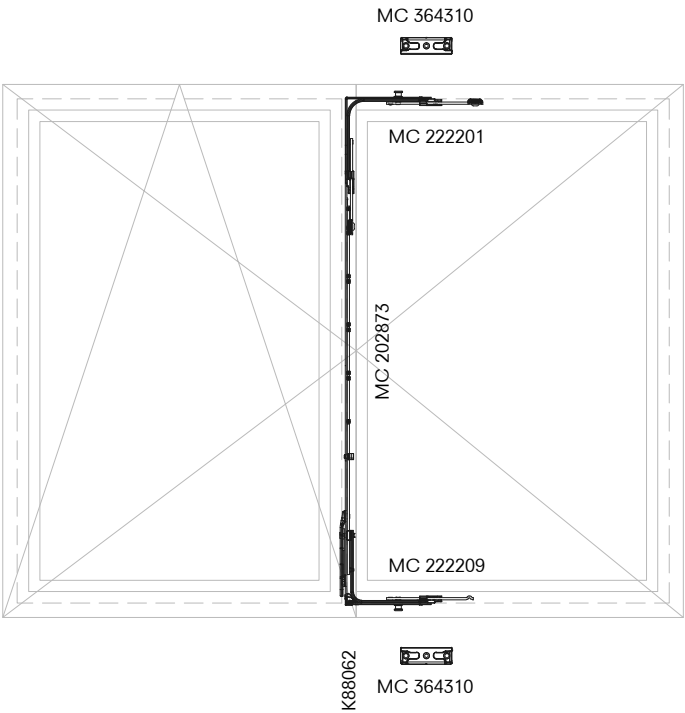
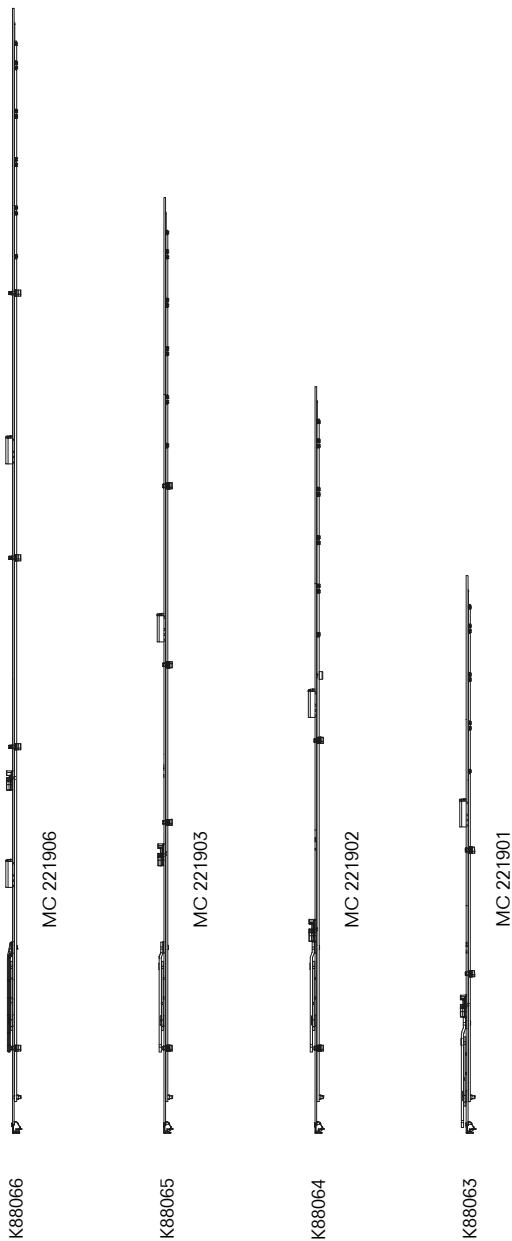
K88068

HH = 1050 mm

K88069

HH = 1050 mm





**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtre oscillo-battant  
avec paumelle invisible**

French casement drive  
extension kits

Stulpflügelgetriebe

Kit d'extension Crémone

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88076

K88076

K88075

K88071

141 - 235 mm

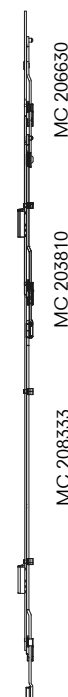
MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm

K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm

K88074

471 - 610 mm

MC 208333 n°01 piece  
MC 206630 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm

K88075

611 - 705 mm

MC 208333 n°01 piece  
MC 203810 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm

K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm

K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm

K88074



MC 206630

MC 208333

K88073



MC 208333

K88072



MC 203810

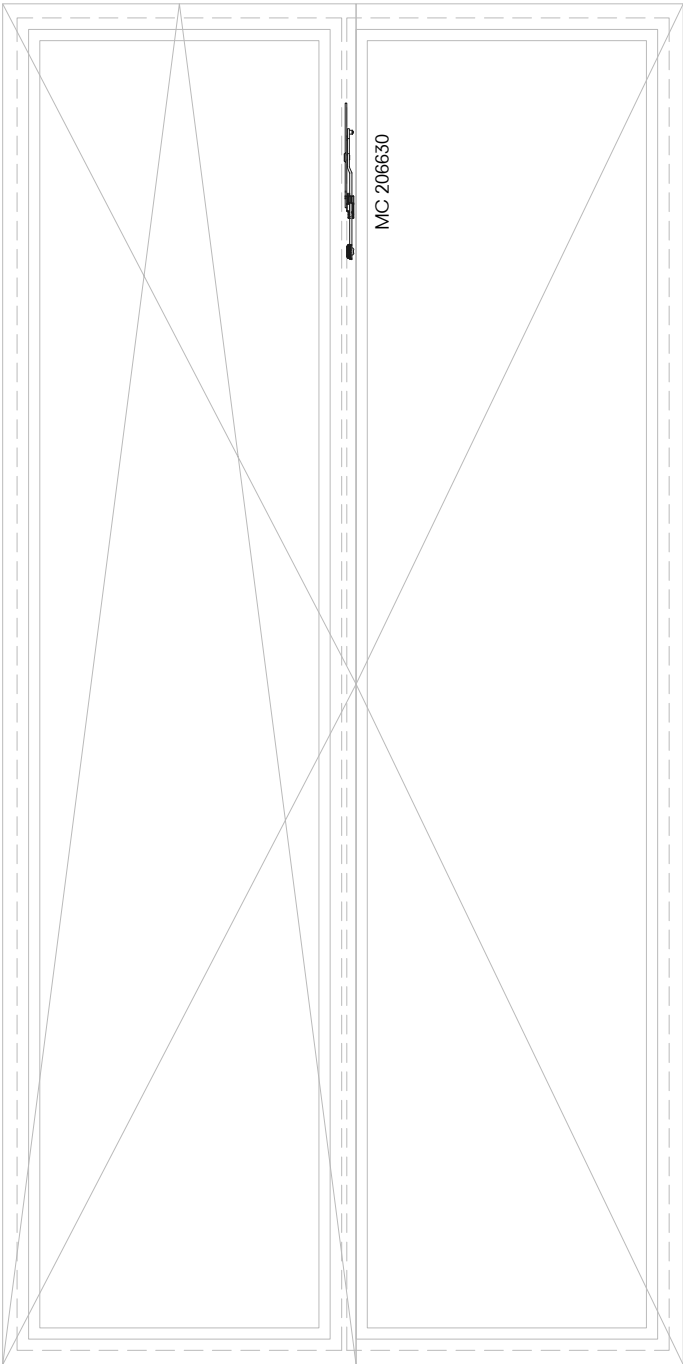
MC 206630

K88071



MC 203810

K88011



**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtre oscillo-battant  
avec paumelle invisible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88113

K88113

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88114

K88114

K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88115

K88115

K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

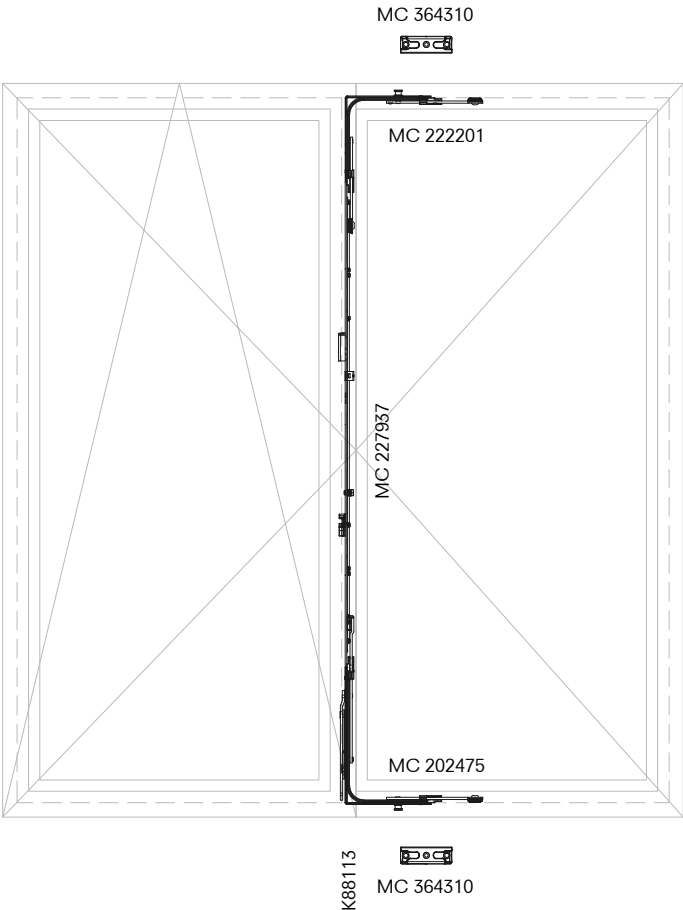
K88116

K88116

K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces





**Tilt&Turn windows  
with concealed hinge**

Door catch

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Türverschluss

K88061

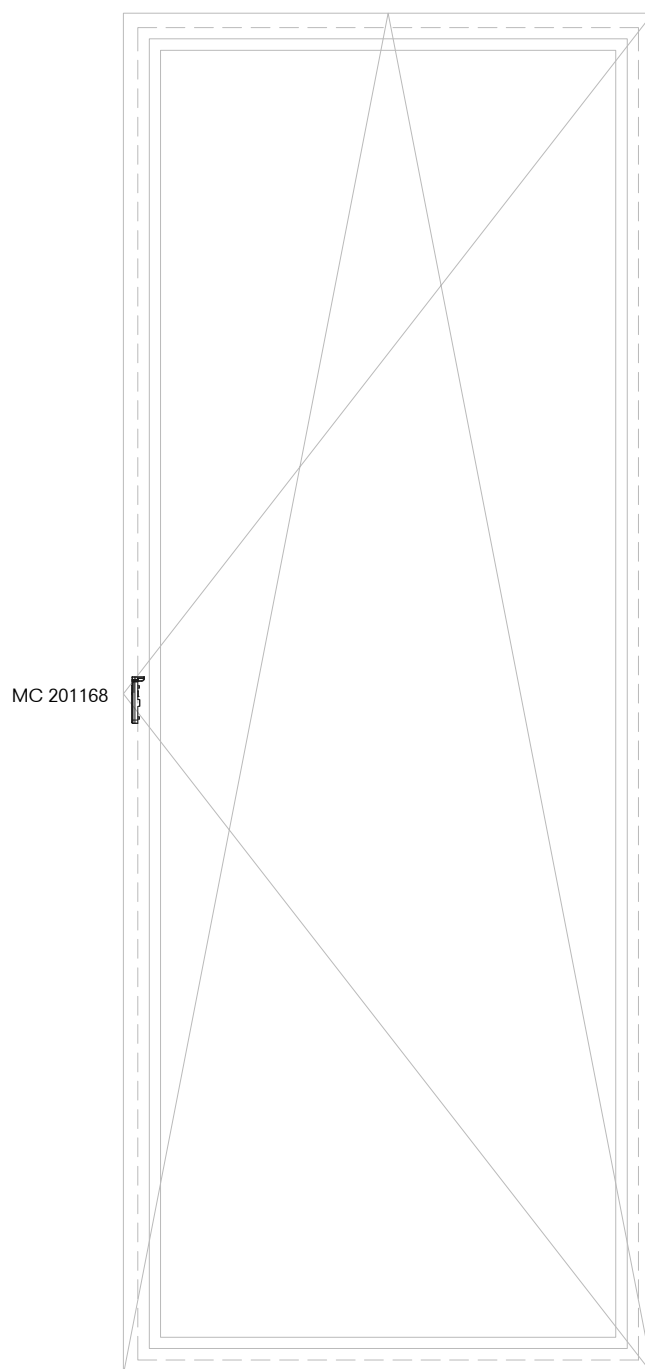
HBB = 661 - 2800 mm

**Fênêtre oscillo-battant  
avec paumelle invisible**

Loquet de porte

K88061

HBB = 661 - 2800 mm





**Tilt&Turn windows  
with concealed hinge**

Opening restrictor

K88033

LBB = 490 - 1400 mm

MC 103623 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Öffnungsbegrenzer

K88033

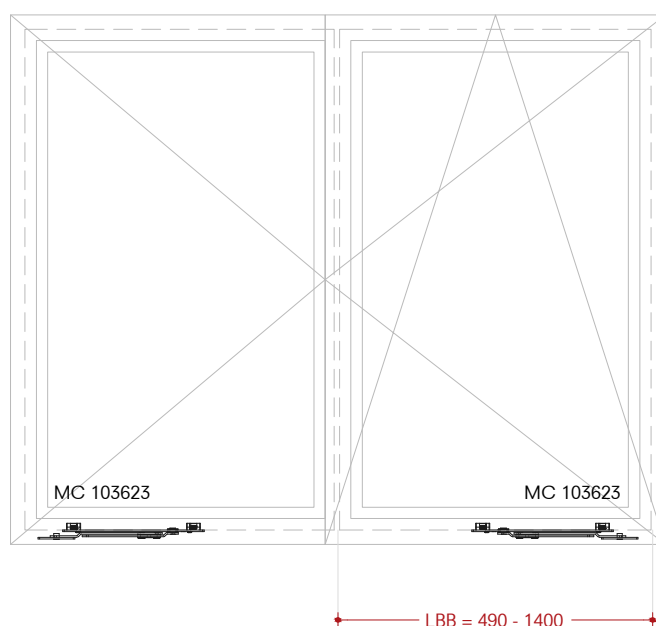
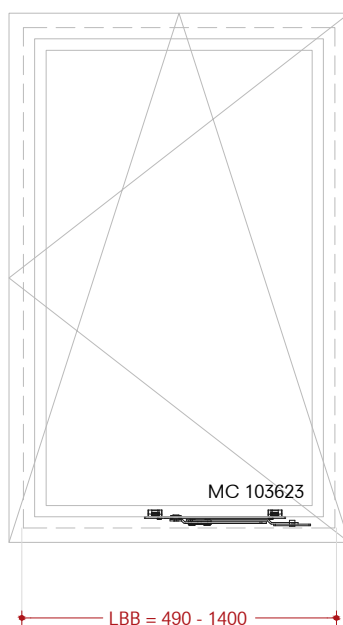
LBB = 490 - 1400 mm

K88033

LBB = 490 - 1400 mm

**Fênêtre oscillo-battant  
avec paumelle invisible**

Compas de limitation d'ouverture



**Tilt&Turn windows  
with concealed hinge**

Load transfer 180 kg

E99510-02

Right

MC 105336 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Lastabtragung 180 kg

E99510-02

Recht

E99510-02

Droite

**Fênêtrê oscillo-battant  
avec paumelle invisible**

Tige de support 180 kg

E99511-02

Left

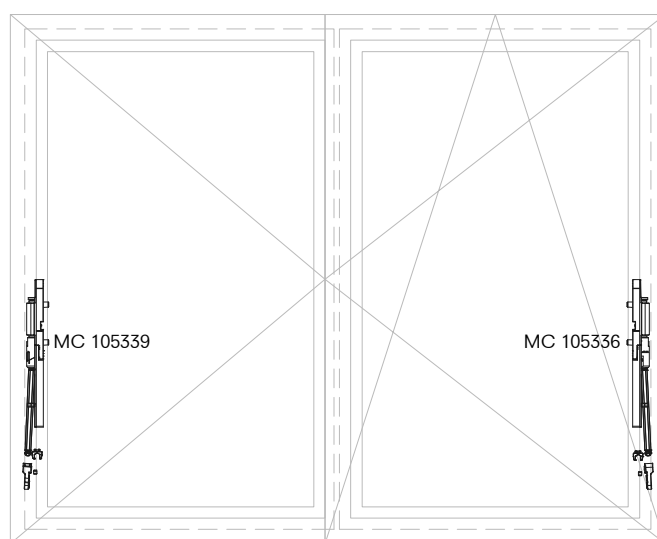
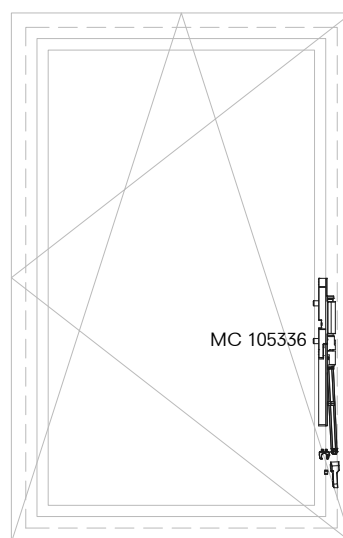
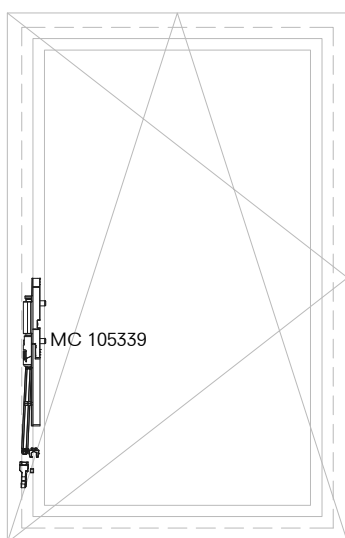
MC 105339 n°01 piece

E99511-02

Link

E99511-02

Gauche



**Tilt&Turn windows  
with concealed hinge**

Alarm contact

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

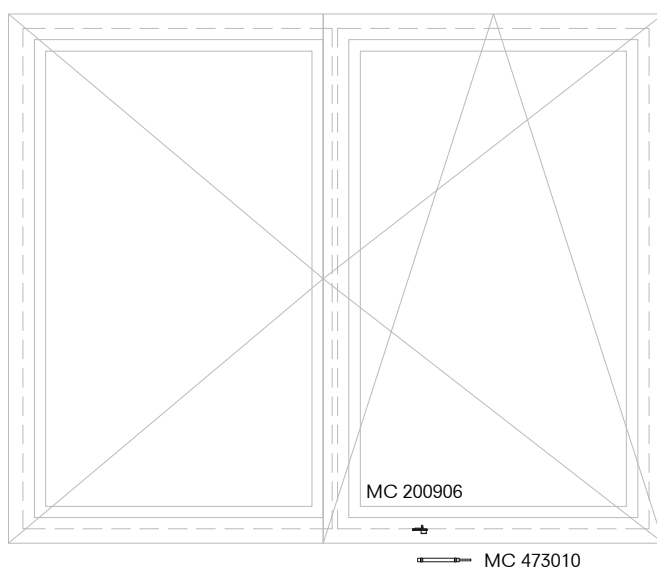
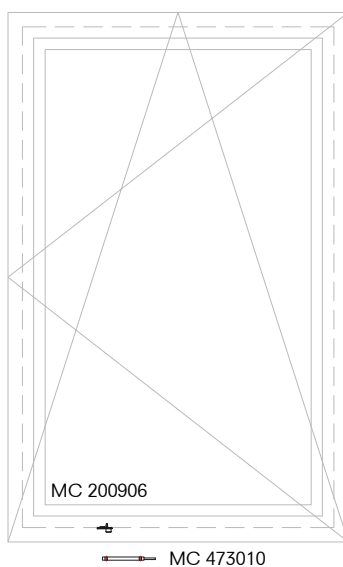
Alarmkontakt

K99062

**Fênêtre oscillo-battant  
avec paumelle invisible**

Contact d'alarme

K99062



**Tilt&Turn windows  
with concealed hinge**

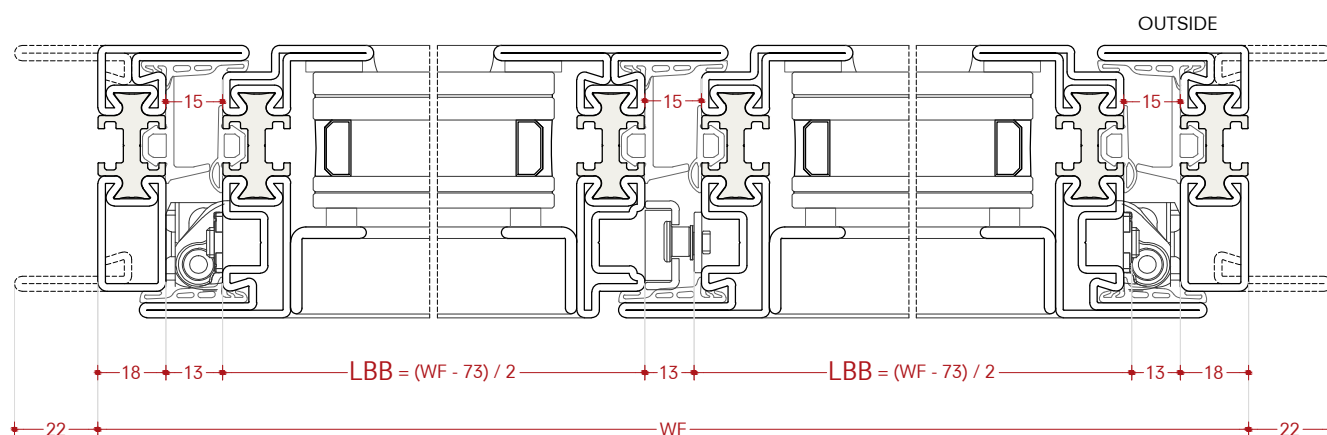
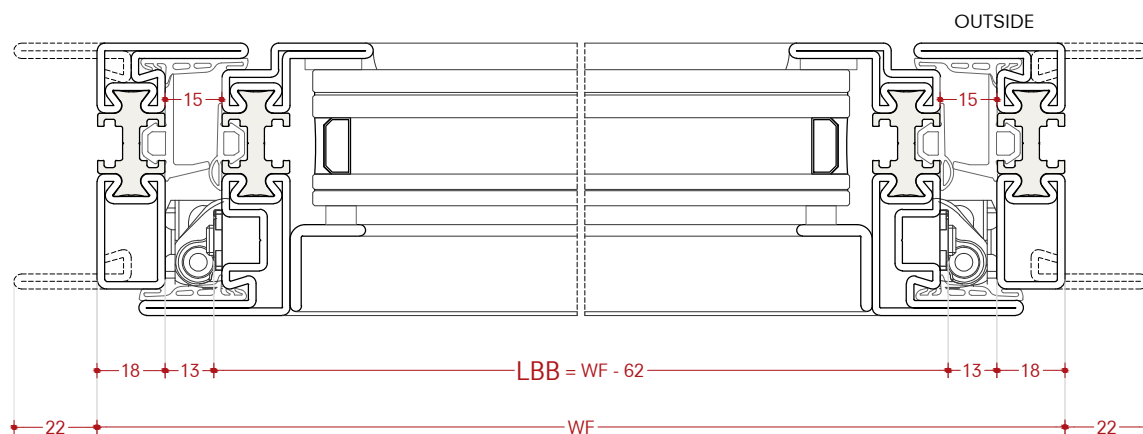
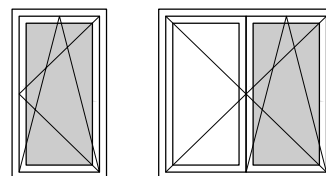
Determination of LBB  
(Groove Hardware Lenght)

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre oscillo-battant  
avec paumelle invisible**

Détermination du LBB  
(largeur de rainure de quincaillerie)



**Tilt&Turn windows  
with concealed hinge**

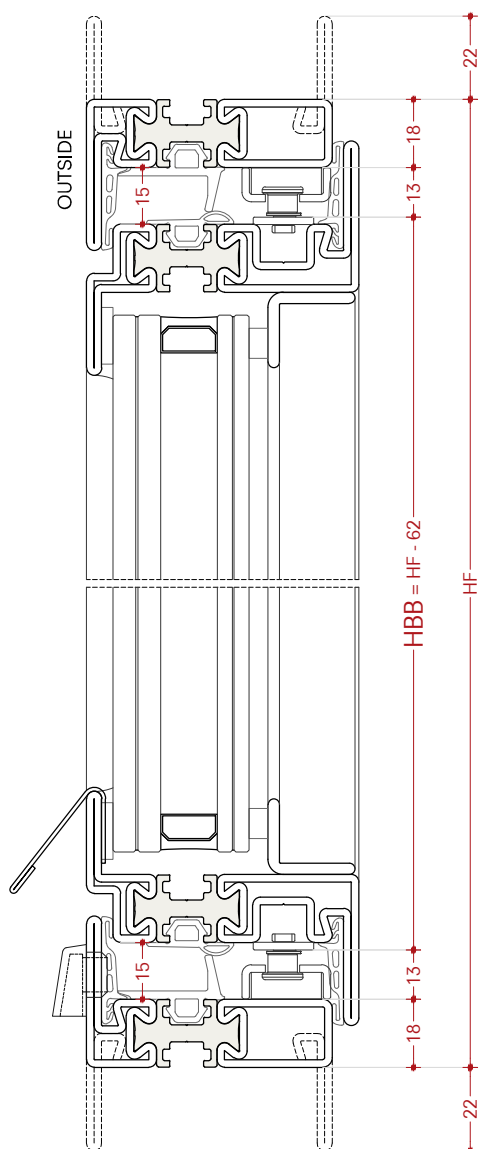
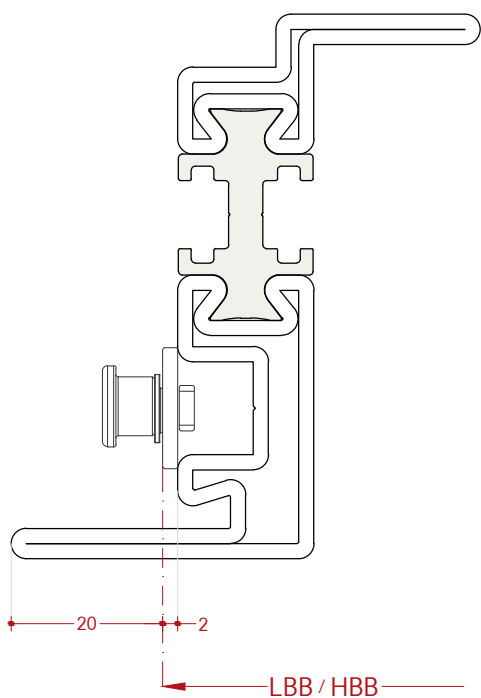
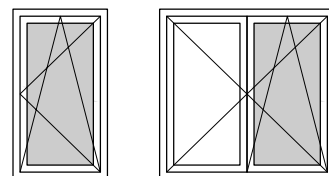
Determination of HBB  
(Groove Hardware Height)

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre oscillo-battant  
avec paumelle invisible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

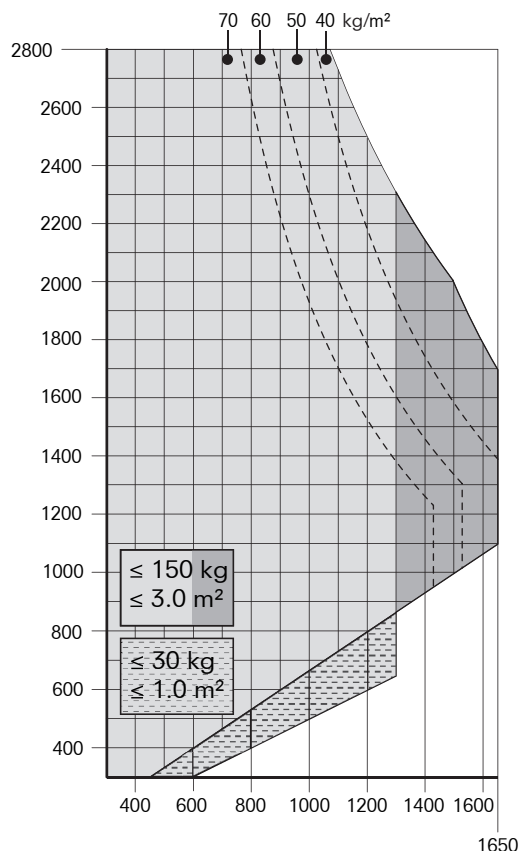
**Fênêtre oscillo-battant  
avec paumelle invisible**

Load capacity tables

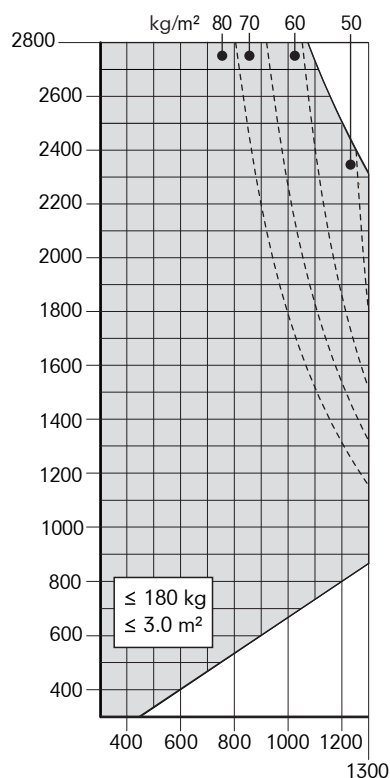
Gewichtstabellen

Capacité maximale

T&T window concealed accessories capacity  
Dreh-Kipp-Fensterzubehör verdeckt  
Fênêtre oscillo-battant accessoires cachée



T&T window concealed accessories capacity  
with support rod E99510-02 / E99511-02  
Dreh-Kipp-Fensterzubehör verdeckt  
mit Lastabtragung E99510-02 / E99511-02  
Fênêtre oscillo-battant accessoires cachée  
avec tige de support E99510-02 / E99511-02



Standard handle height

Standard-Griffhöhe

Hauteur de poignée standard

|               | HBB min | HBB max | H handle |
|---------------|---------|---------|----------|
| <b>K88003</b> | 370     | 660     | 190      |
| <b>K88004</b> | 661     | 840     | 300      |
| <b>K88005</b> | 841     | 1090    | 400      |
| <b>K88006</b> | 1091    | 1340    | 500      |
| <b>K88007</b> | 1341    | 1590    | 600      |
| <b>K88008</b> | 1591    | 1700    | 700      |
| <b>K88009</b> | 1701    | 1950    | 1050     |
| <b>K88010</b> | 1951    | 2200    | 1050     |

**Tilt&Turn windows  
with concealed hinge**

**Dreh-Kippfenster  
mit Verdecktliegende Bänder**

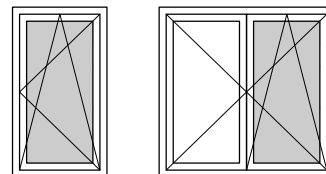
**Fênêtre oscillo-battant  
avec paumelle invisible**

Step #1 - Basic kit choice

Schritt #1 - Auswahl Grdundgarnitur

Étape #1 - Choix de kit de base

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88001</b> | 465     | 1400    | 455     | 2800    |
| <b>K88002</b> | 370     | 464     | 455     | 2800    |
| <b>K88002</b> | 465     | 815     | 370     | 454     |



LBB = Groove Hardware Lenght  
HBB = Groove Hardware Height

LBB = Beschlagnutbreite  
HBB = Höhe der Beschlagnut

LBB = largeur de rainure de quincaillerie  
HBB = hauteur de rainure de quincaillerie

Step #2 - Gear kit choice

Schritt #2 - Garnitur Getriebe

Étape #2 - Choix de kit d'équipement

|               | HH   | HDG    | CRP   | HCRN  | HBB min | HBB max<br>(without extension) | HBB max<br>(with extension) |
|---------------|------|--------|-------|-------|---------|--------------------------------|-----------------------------|
| <b>K88003</b> | 190  | 555    | 220   | 5     | 370     | 454                            | 2335                        |
| <b>K88003</b> | 190  | 555    | 220   | 113.5 | 455     | 660                            | 2540                        |
| <b>K88004</b> | 300  | 736.5  | 190.5 | 113.5 | 661     | 840                            | 2720                        |
| <b>K88005</b> | 400  | 986.5  | 260.5 | 113.5 | 841     | 1090                           | 2970 (*)                    |
| <b>K88006</b> | 500  | 1236.5 | 260.5 | 113.5 | 1091    | 1340                           | 3150 (*)                    |
| <b>K88007</b> | 600  | 1486.5 | 260.5 | 113.5 | 1341    | 1590                           | 3150 (*)                    |
| <b>K88008</b> | 700  | 1596.5 | 260.5 | 113.5 | 1591    | 1700                           | 3150 (*)                    |
| <b>K88009</b> | 1050 | 1846.5 | 260.5 | 113.5 | 1701    | 1950                           | 3150 (*)                    |
| <b>K88010</b> | 1050 | 2096.5 | 260.5 | 113.5 | 1951    | 2200                           | 3150 (*)                    |

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

(\*) = Over 2800 mm technical department  
confirmation needed.

(\*) = Bestätigung der technischen Abteilung  
erforderlich für Abmessungen größer 2800  
mm

(\*) = Confirmation du service technique  
nécessaire pour les dimensions supérieures  
à 2800 mm

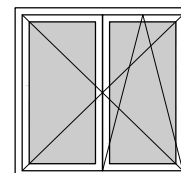
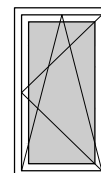
Step #3 - Extension kits choice

Schritt #3 - Garnitur  
Getriebeverlängerung

Étape #3 - Choix de kit extension  
d'équipement

**HBB \* - HCRN - HDG =** Extension kit lenght  
Getriebeverlängerung Länge  
largeur kit extension

|                        | MinL | MaxL |
|------------------------|------|------|
| <b>K88011</b>          | 0    | 140  |
| <b>K88012</b>          | 141  | 235  |
| <b>K88059</b>          | 236  | 375  |
| <b>K88013</b>          | 376  | 470  |
| <b>K88014</b>          | 471  | 610  |
| <b>K88015</b>          | 611  | 705  |
| <b>K88060</b>          | 706  | 845  |
| <b>K88016</b>          | 846  | 940  |
| <b>K88016 / K88011</b> | 941  | 1080 |
| <b>K88016 / K88012</b> | 1081 | 1175 |
| <b>K88016 / K88059</b> | 1176 | 1315 |
| <b>K88016 / K88013</b> | 1316 | 1410 |
| <b>K88016 / K88014</b> | 1411 | 1550 |
| <b>K88016 / K88015</b> | 1551 | 1650 |
| <b>K88016 / K88060</b> | 1651 | 1785 |
| <b>K88016 / K88016</b> | 1786 | 1880 |



\* See HBB information page

MinL = Min Lenght (mm)  
MaxL = Max Lenght (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ----> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ----> K88014

MinL = Min Länge (mm)  
MaxL = Max Länge (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ----> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ----> K88014

MinL = largeur minimal (mm)  
MaxL = largeur maximum (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ----> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ----> K88014

Step #4 - Scissors and hinges kit  
choice

Schritt #4 - Garnitur Scheren und  
Bänder

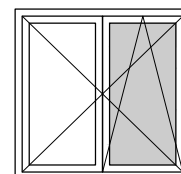
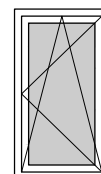
Étape #4 - Choix de kit pinces et  
paumelles

Left / Link / Gauche

Right / Recht / Gauche

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88022</b> | 370     | 600     |
| <b>K88023</b> | 601     | 800     |
| <b>K88024</b> | 801     | 1050    |
| <b>K88025</b> | 1051    | 1285    |
| <b>K88026</b> | 1286    | 1400    |

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88017</b> | 370     | 600     |
| <b>K88018</b> | 601     | 800     |
| <b>K88019</b> | 801     | 1050    |
| <b>K88020</b> | 1051    | 1285    |
| <b>K88021</b> | 1286    | 1400    |



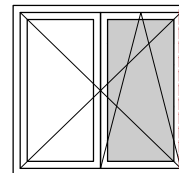
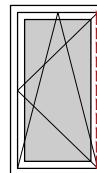


Step #5 - Additional hinge side  
locking point choice

Schritt #5 - Garnitur Zusatzverriegelung  
Bandseite

Étape #5 - Choix point de verrouillage  
supplémentaire côté paumelle

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88027</b> | 801     | 1280    |
| <b>K88028</b> | 1281    | 1500    |
| <b>K88029</b> | 1501    | 1700    |
| <b>K88030</b> | 1701    | 2800    |

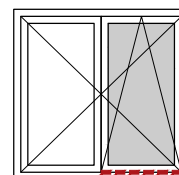
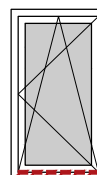


Step #6 - Additional bottom side  
locking point choice

Schritt #6 - Garnitur Zusatzverriegelung  
Bandunterseite

Étape #6 - Choix point de verrouillage  
supplémentaire côté inférieur

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88031</b> | 800     | 1280    |
| <b>K88032</b> | 1281    | 1400    |



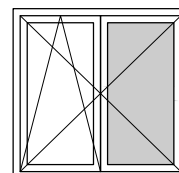
Step #7 - 2nd leaf hinges kit choice

Schritt #7 - Garnitur Scheren und  
Bänder Standflügel

Étape #7 - Choix kit paumelles  
2e ouvrant

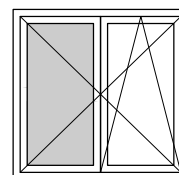
Right / Recht / Droite

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88034</b> | 370     | 1400    | 370     | 2800    |



Left / Link / Gauche

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88035</b> | 370     | 1400    | 370     | 2800    |

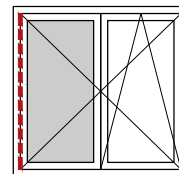


Step #8 - Concealed compression lock  
kit choice for 2nd leaf

Schritt #8 - Standflügel  
Anpressverschluss  
verdeckt

Étape #8 - Choix kit de serrure à  
compression caché pour  
2e ouvrant

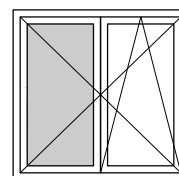
|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88036</b> | 1280    | 2000    |
| <b>K88037</b> | 2001    | 2800    |



Step #9 - French casement drive  
and extension kit choice

Schritt #9 - Getriebeverlängerung  
Stulpflügelgetriebe

Étape #9 - Choix kit Crémone  
et d'extension



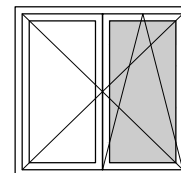
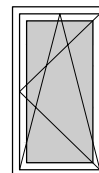
| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| <b>K88003</b>  | → | <b>K88062</b>             |  | <b>K88011</b>              | → | <b>K88011</b>                       |
| <b>K88004</b>  | → | <b>K88063</b>             |  | <b>K88012</b>              | → | <b>K88071</b>                       |
| <b>K88005</b>  | → | <b>K88064</b>             |  | <b>K88059</b>              | → | <b>K88072</b>                       |
| <b>K88006</b>  | → | <b>K88065</b>             |  | <b>K88013</b>              | → | <b>K88073</b>                       |
| <b>K88007</b>  | → | <b>K88066</b>             |  | <b>K88014</b>              | → | <b>K88074</b>                       |
| <b>K88008</b>  | → | <b>K88067</b>             |  | <b>K88015</b>              | → | <b>K88075</b>                       |
| <b>K88009</b>  | → | <b>K88068</b>             |  | <b>K88060</b>              | → | <b>K88076</b>                       |
| <b>K88010</b>  | → | <b>K88069</b>             |  | <b>K88016</b>              | → | <b>K88077</b>                       |
|                |   |                           |  | <b>K88016<br/>K88011</b>   | → | <b>K88077<br/>K88011</b>            |
|                |   |                           |  | <b>K88016<br/>K88012</b>   | → | <b>K88077<br/>K88071</b>            |
|                |   |                           |  | <b>K88016<br/>K88059</b>   | → | <b>K88077<br/>K88072</b>            |
|                |   |                           |  | <b>K88016<br/>K88013</b>   | → | <b>K88077<br/>K88073</b>            |
|                |   |                           |  | <b>K88016<br/>K88014</b>   | → | <b>K88077<br/>K88074</b>            |
|                |   |                           |  | <b>K88016<br/>K88015</b>   | → | <b>K88077<br/>K88075</b>            |
|                |   |                           |  | <b>K88016<br/>K88060</b>   | → | <b>K88077<br/>K88076</b>            |
|                |   |                           |  | <b>K88016<br/>K88016</b>   | → | <b>K88077<br/>K88077</b>            |

Step #10 - Door catch choice

Schritt #10 - Türverschluss

Étape #10 - Choix loquet de porte

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88061</b> | 661     | 2800    |

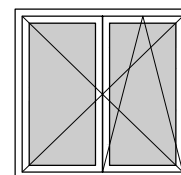
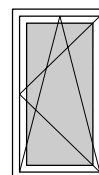


Step #11 - Opening restrictor choice

Schritt #11 - Öffnungsbegrenzer

Étape #11 - Choix compas de limitation d'ouverture

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88033</b> | 490     | 1400    |

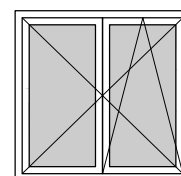
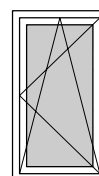


Step #12 - Load transfer 180 kg choice

Schritt #12 - Lastabtragung 180 kg

Étape #12 - Choix tige de support 180 kg

|                  |              | HBB min | HBB max |
|------------------|--------------|---------|---------|
| <b>E99510-02</b> | <b>Right</b> | 2000    | 2800    |
| <b>E99511-02</b> | <b>Left</b>  | 2000    | 2800    |

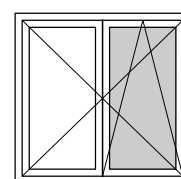
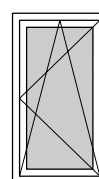


Step #13 - Alarm contact choice

Schritt #13 - Alarmkontakt

Étape #13 - Choix contact d'alarme

**K99062**



Step #14 - Double croppable gear kits choice

Schritt #14 - Beidseitig kürzbare Garnitur

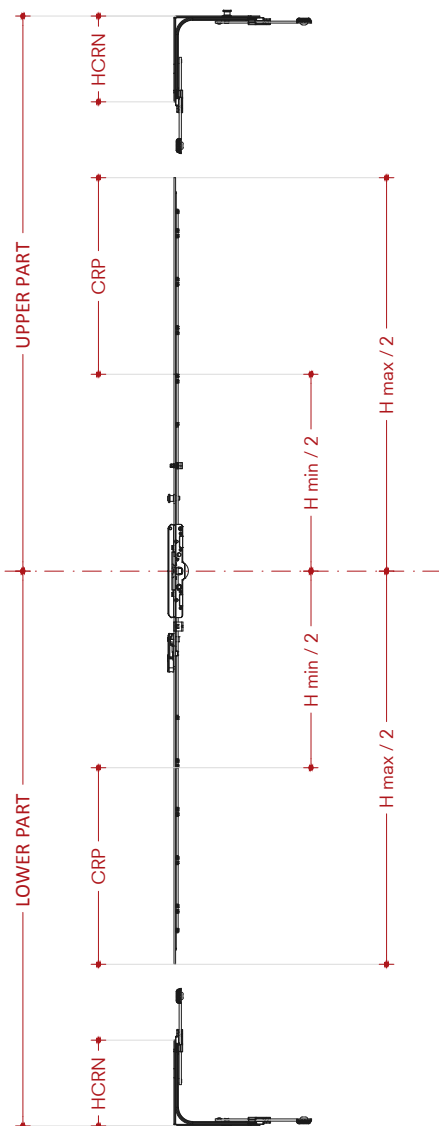
Étape #14 - Choix Kits d'équipement à double recadrage

(Instead of Step #3 and #4)

(Anstelle von Schritt #3 und #4)

(Au lieu des étapes #3 et #4)

|               | h min handle | HDG    | H min / 2 | H max / 2 | CRP       | HCRN  | HBB min |
|---------------|--------------|--------|-----------|-----------|-----------|-------|---------|
| <b>K88109</b> | 265          | 640.5  | 151       | 260       | 170 + 170 | 113.5 | 527.5   |
| <b>K88110</b> | 375          | 1040.5 | 261       | 510       | 260 + 260 | 113.5 | 747.5   |
| <b>K88111</b> | 625          | 1540.5 | 511       | 760       | 260 + 260 | 113.5 | 1247.5  |
| <b>K88112</b> | 875          | 2040.5 | 761       | 1020      | 260 + 260 | 113.5 | 1747.5  |



$$\text{UPPER PART} = \text{HBB} - \text{HH} - \text{HCRN}$$

$$\text{LOWER PART} = \text{HH} - \text{HCRN}$$

Choose the smallest value and find the right gear kit between Hmin/2 and Hmax/2 range columns.

Wählen Sie den kleinsten Wert und finden Sie das passende Garnitur Getriebe zwischen den Bereichsspalten Hmin/2 und Hmax/2

Choisissez la plus petite valeur et trouvez le bon kit d'équipement entre les colonnes de plage Hmin/2 et Hmax/2

EXTENSION KIT:

$$\text{UPPER}^* = \text{HBB} - \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

$$\text{LOWER}^* = \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

CHECK ON THE  
EXTENSION TABLE  
(STEP 3)

\* with negative value extension are not needed.

\* Bei negativem Wert werden keine Verlängerungen benötigt.

\* avec une valeur négative, aucune extension n'est nécessaire.

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

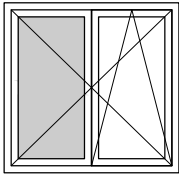
HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

Step #15 - French casement drive and extension kit choice

Schritt #15 - Verlängerungsets Stulpflügelgetriebe

Étape #15 - Choix kit Crémone et d'extension



| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| K88109         | → | K88113                    |  | K88011                     | → | K88011                              |
| K88110         | → | K88114                    |  | K88012                     | → | K88071                              |
| K88111         | → | K88115                    |  | K88059                     | → | K88072                              |
| K88112         | → | K88116                    |  | K88013                     | → | K88073                              |
|                |   |                           |  | K88014                     | → | K88074                              |
|                |   |                           |  | K88015                     | → | K88075                              |
|                |   |                           |  | K88060                     | → | K88076                              |
|                |   |                           |  | K88016                     | → | K88077                              |
|                |   |                           |  | K88016<br>K88011           | → | K88077<br>K88011                    |
|                |   |                           |  | K88016<br>K88012           | → | K88077<br>K88071                    |
|                |   |                           |  | K88016<br>K88059           | → | K88077<br>K88072                    |
|                |   |                           |  | K88016<br>K88013           | → | K88077<br>K88073                    |
|                |   |                           |  | K88016<br>K88014           | → | K88077<br>K88074                    |
|                |   |                           |  | K88016<br>K88015           | → | K88077<br>K88075                    |
|                |   |                           |  | K88016<br>K88060           | → | K88077<br>K88076                    |
|                |   |                           |  | K88016<br>K88016           | → | K88077<br>K88077                    |

## Side hung windows with visible hinge

Basic kits

K88043

Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

MC 222201 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

## Drehfenster mit Aufgesetzter Beschlag

Grundgarnitur

K88043

Standardfenster

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

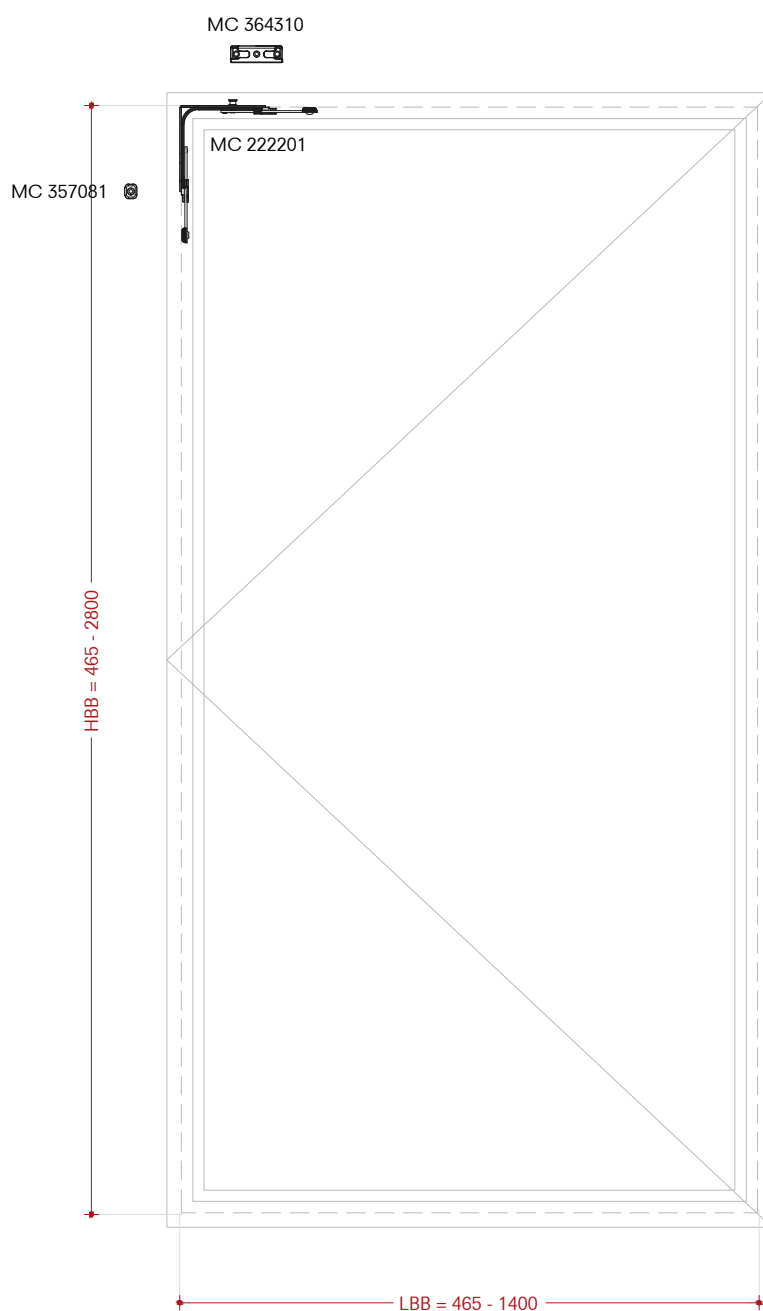
## Fênêtre battante avec paumelle visible

Kits de base

K88043

Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm



## Side hung windows with visible hinge

Basic kits

K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

## Drehfenster mit Aufgesetzter Beschlag

Grundgarnitur

K88044

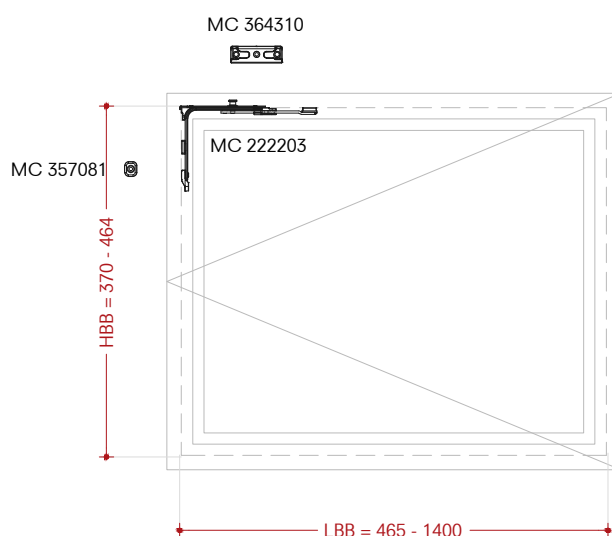
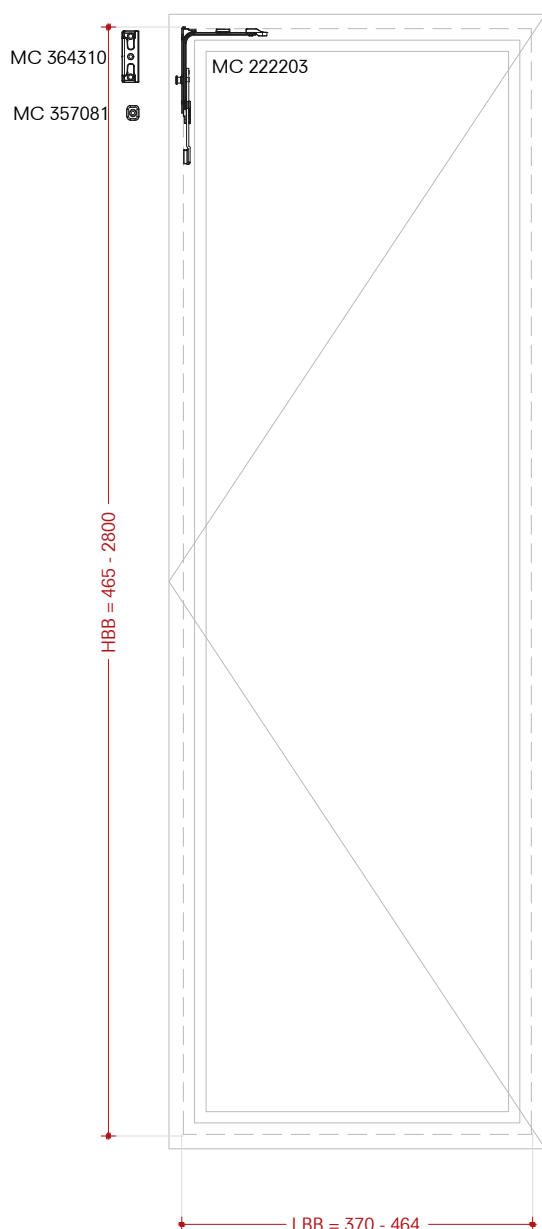
LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

## Fênêtre battante avec paumelle visible

Kits de base

K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm



**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

Gear kits

Garnitur Getriebe

Kits d'équipement

K88003

HH = 190 mm  
HBB = 340 - 1608 mm

MC 202206 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°01 piece

K88004

HH = 300 mm  
HBB = 661 - 1790 mm

MC 202207 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

K88005

HH = 400 mm  
HBB = 841 - 2040 mm

MC 202208 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

MC 202209 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°02 pieces

K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

MC 202216 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces

K88008

HH = 700 mm  
HBB = 1591 - 2650 mm

MC 207305 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°03 pieces

K88009

HH = 1050 mm  
HBB = 1701 - 2900 mm

MC 202737 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces

K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm

MC 202738 n°01 piece  
MC 222205 n°01 piece  
MC 364310 n°04 pieces

K88003

HH = 190 mm  
HBB = 340 - 1608 mm

K88004

HH = 300 mm  
HBB = 661 - 1790 mm

K88005

HH = 400 mm  
HBB = 841 - 2040 mm

K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

K88008

HH = 700 mm  
HBB = 1591 - 2650 mm

K88009

HH = 1050 mm  
HBB = 1701 - 2900 mm

K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm

K88003

HH = 190 mm  
HBB = 340 - 1608 mm

K88004

HH = 300 mm  
HBB = 661 - 1790 mm

K88005

HH = 400 mm  
HBB = 841 - 2040 mm

K88006

HH = 500 mm  
HBB = 1091 - 2290 mm

K88007

HH = 600 mm  
HBB = 1341 - 2540 mm

K88008

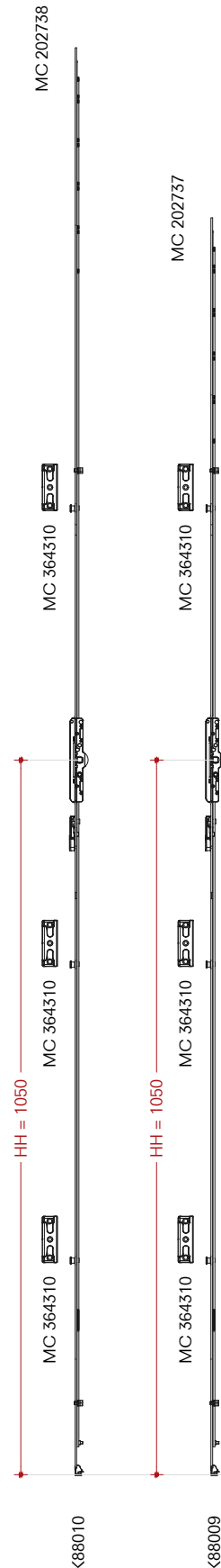
HH = 700 mm  
HBB = 1591 - 2650 mm

K88009

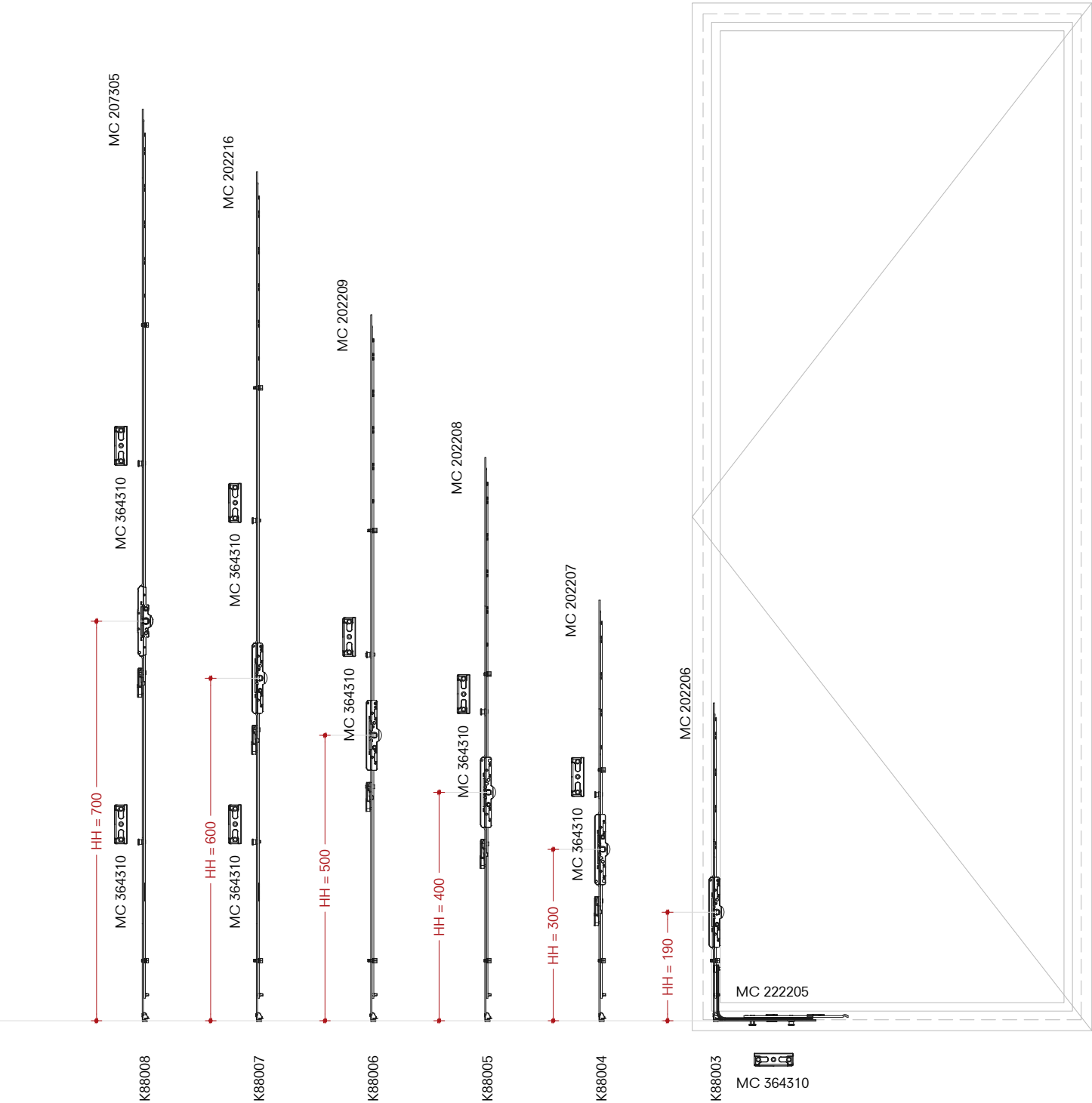
HH = 1050 mm  
HBB = 1701 - 2900 mm

K88010

HH = 1050 mm  
HBB = 1951 - 3150 mm







**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

Double croppable gear kits

Beidseitig kürzbare Garnitur

Kits d'équipement à double recadrage

K88109

K88109

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88110

K88110

K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88111

K88111

K88111

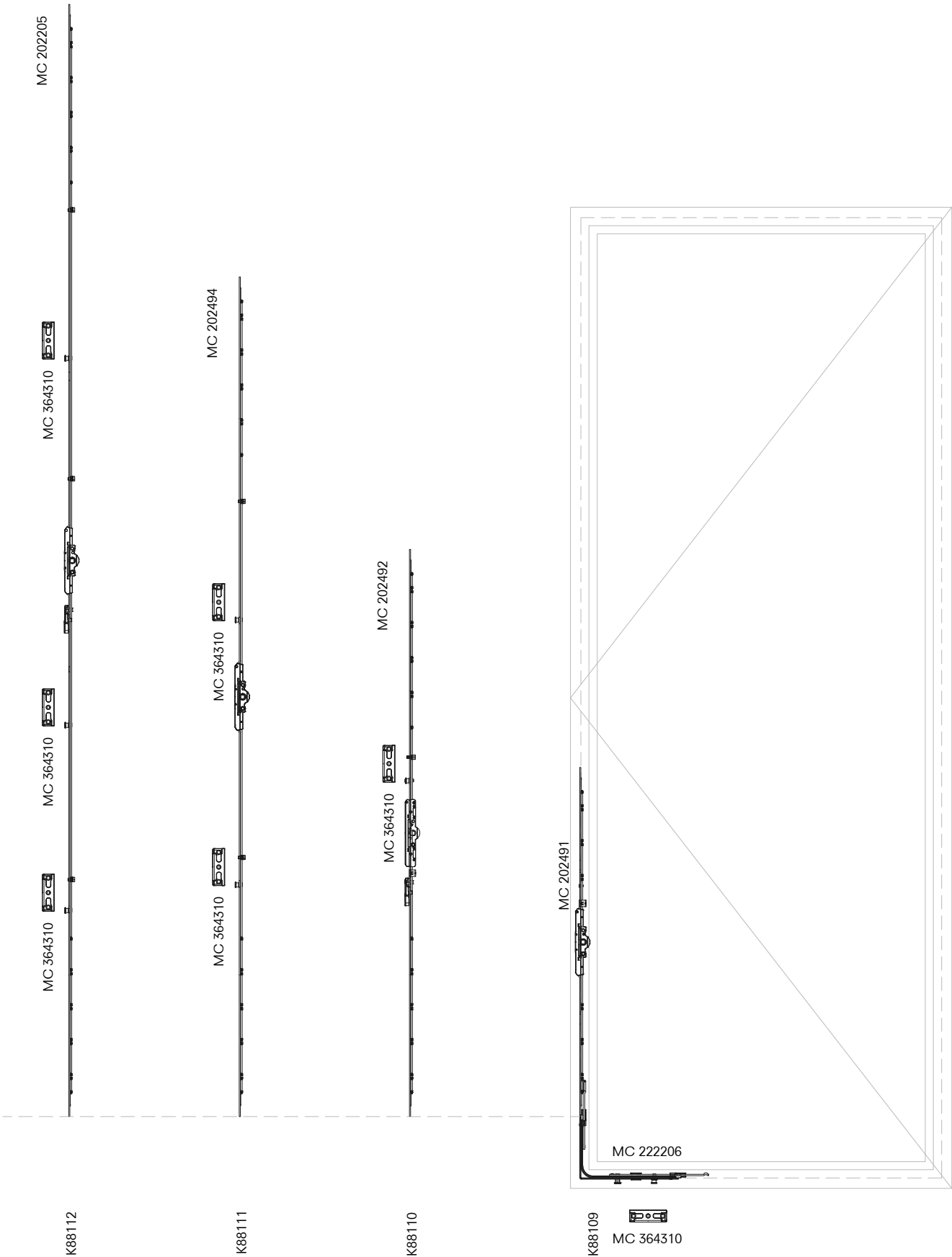
MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

K88112

K88112

K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces



**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88016

K88060

K88012

141 - 235 mm

MC 201750 n°01 piece  
MC 364310 n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm

MC 201840

MC 201750

K88059

236 - 375 mm

MC 201750 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm

MC 364310

MC 364310

MC 206630

K88013

376 - 470 mm

MC 201840 n°01 piece  
MC 364310 n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm

MC 201840

MC 201840

K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88014

471 - 610 mm

K88014

471 - 610 mm

MC 364310

MC 364310

K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88015

611 - 705 mm

K88015

611 - 705 mm

K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88060

706 - 845 mm

K88060

706 - 845 mm

K88016

846 - 940 mm

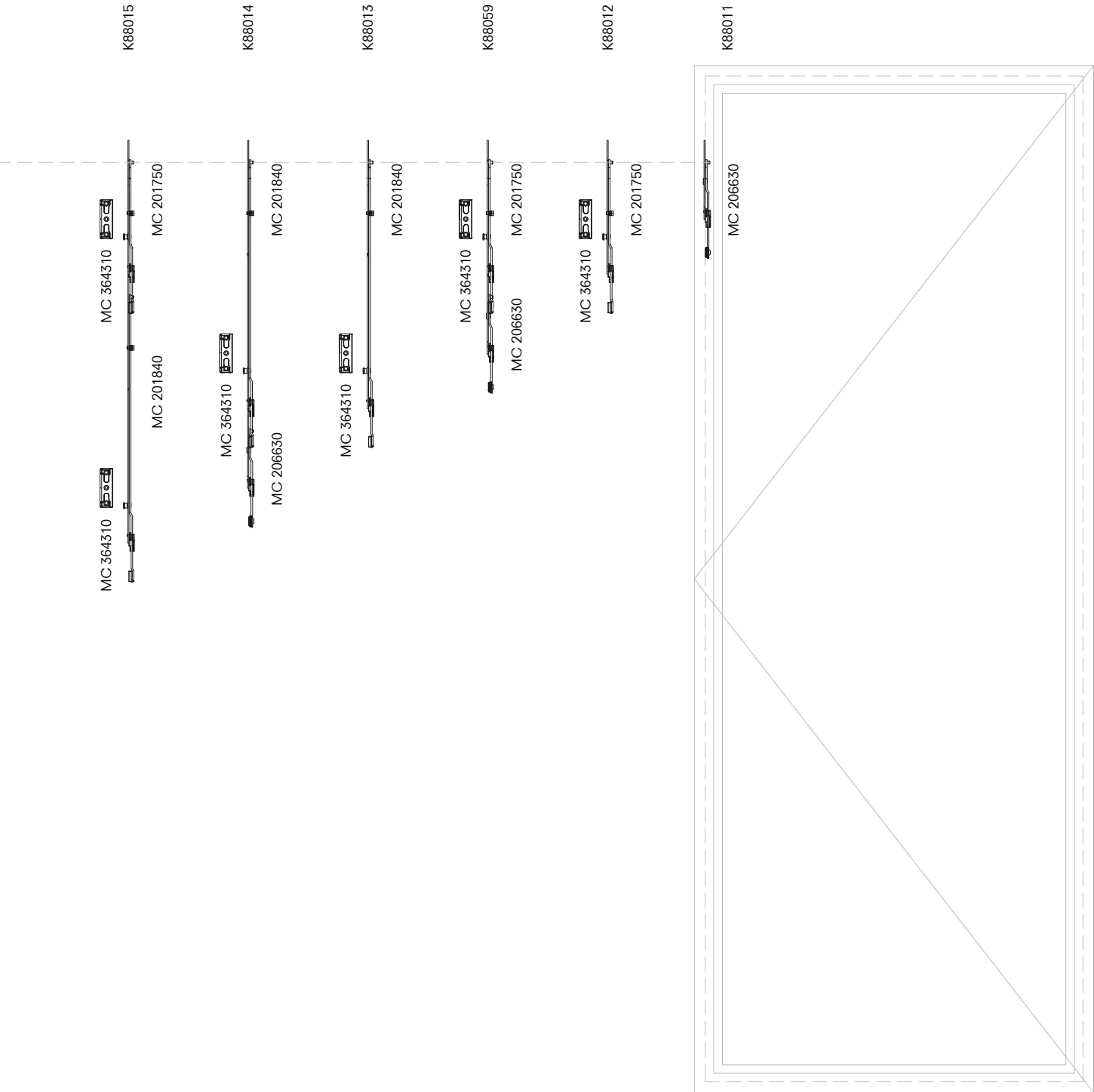
MC 201840 n°02 pieces  
MC 364310 n°02 pieces

K88016

846 - 940 mm

K88016

846 - 940 mm



## Side hung windows with visible hinge

Hinges kits

K88090

Right hinges

MC 52462 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54892 n°01 piece

## Drehfenster mit Aufgesetzter Beschlag

Garnitur Bänder

K88090

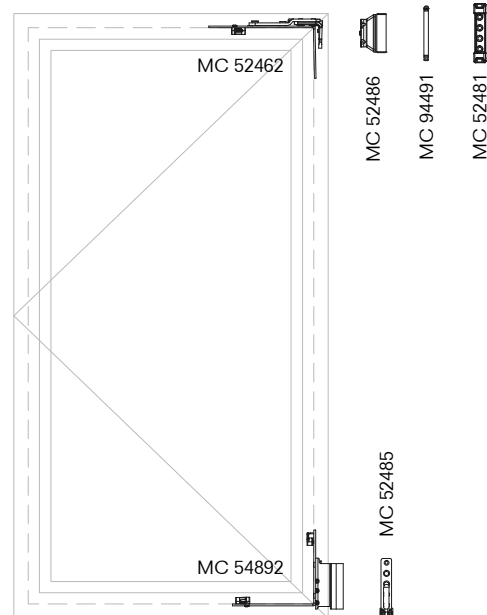
Recht Band

## Fênêtre battante avec paumelle visible

Kits paumelles

K88090

Droite paumelles



K88091

Left hinges

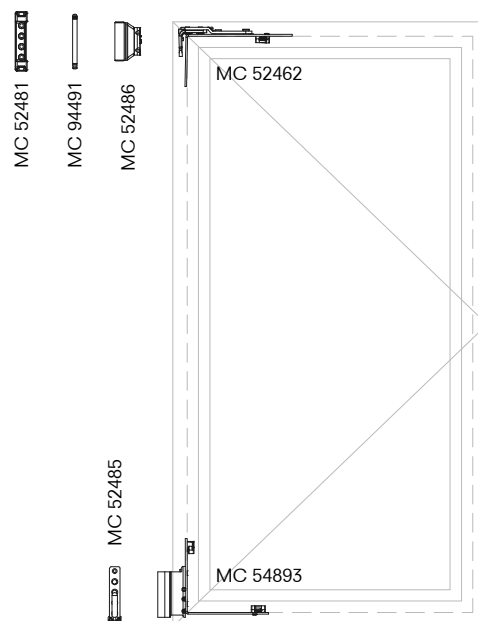
MC 52462 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece  
MC 52485 n°01 piece  
MC 54893 n°01 piece

K88091

Link Band

K88091

Gauche paumelles



**Side hung windows  
with visible hinge**

Lifting component

K88047

Right hinges

MC 361004 n°01 piece

**Drehfenster  
mit Aufgesetzter Beschlag**

Hebekomponente

K88047

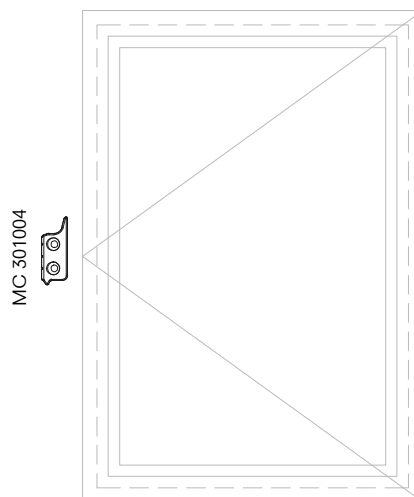
Recht Band

**Fênêtre battante  
avec paumelle visible**

Composant de levage

K88047

Droite paumelles



K88048

Left hinges

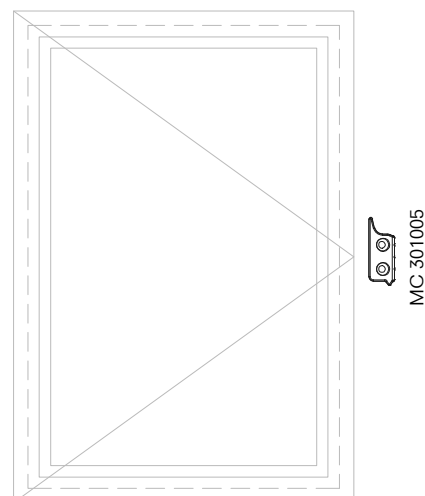
MC 361005 n°01 piece

K88048

Link Band

K88048

Gauche paumelles



**Side hung windows  
with visible hinge**

Additional top and bottom  
locking point

K88045

LBB = 801 - 1280 mm

MC 201751 n°02 pieces  
MC 364310 n°02 pieces

**Drehfenster  
mit Aufgesetzter Beschlag**

Zusätzlich oben und unten  
Verriegelungspunkt

K88045

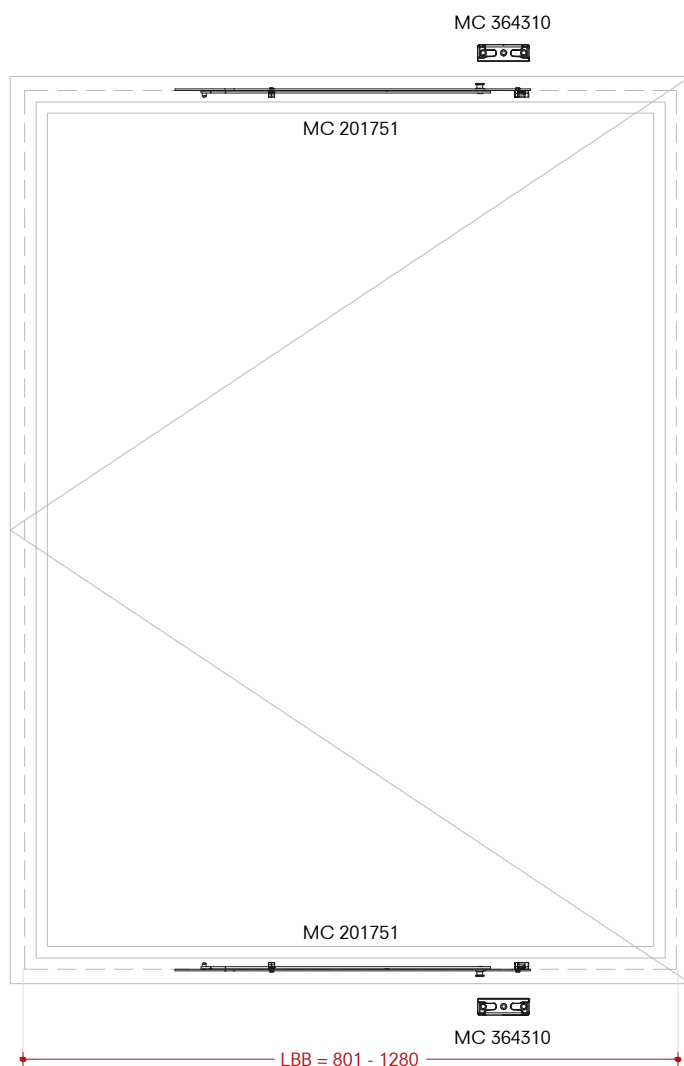
LBB = 801 - 1280 mm

K88045

LBB = 801 - 1280 mm

**Fênêtrre battante  
avec paumelle visible**

Haut et bas supplémentaires  
point de verrouillage





K88046

LBB = 1281 - 1400 mm

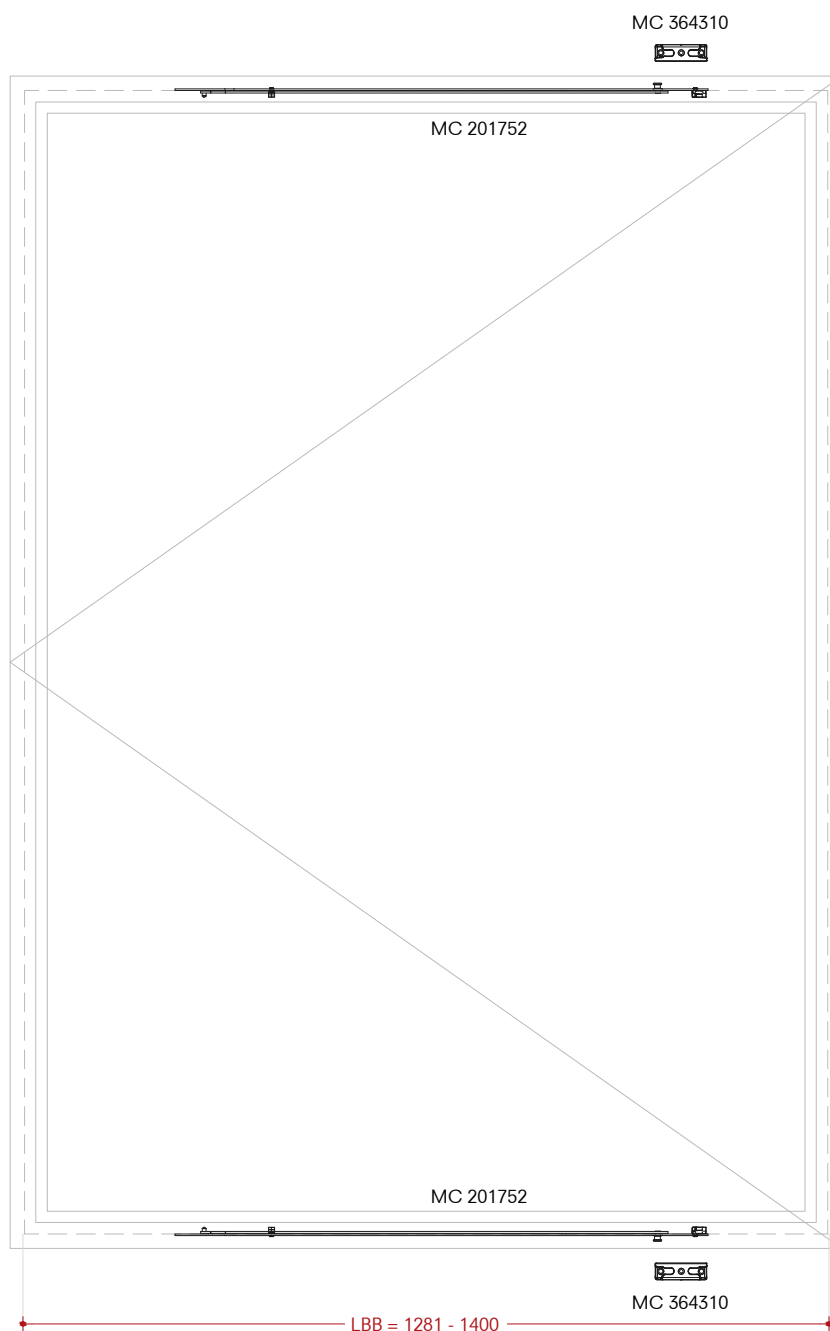
MC 201752 n°02 pieces  
MC 364310 n°02 pieces

K88046

LBB = 1281 - 1400 mm

K88046

LBB = 1281 - 1400 mm



**Side hung windows  
with visible hinge**

Concealed compression locks kits

K88036  
n°1 kit per leaf

HBB = 1280 - 2000 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

**Drehfenster  
mit Aufgesetzter Beschlag**

Anpressverschluss verdeckt

K88036  
1x Kit pro Flügel

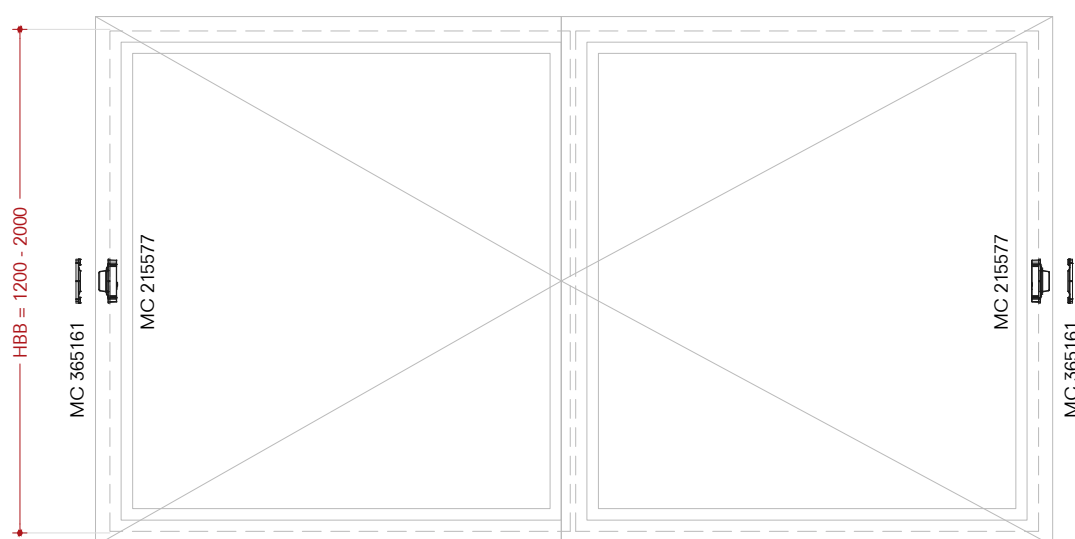
HBB = 1280 - 2000 mm

**Fênêtre battante  
avec paumelle visible**

Kits de serrures à compression cachée

K88036  
n°1 kit par vantail

HBB = 1280 - 2000 mm



K88037  
n°1 kit per leaf

HBB = 2001 - 2800 mm

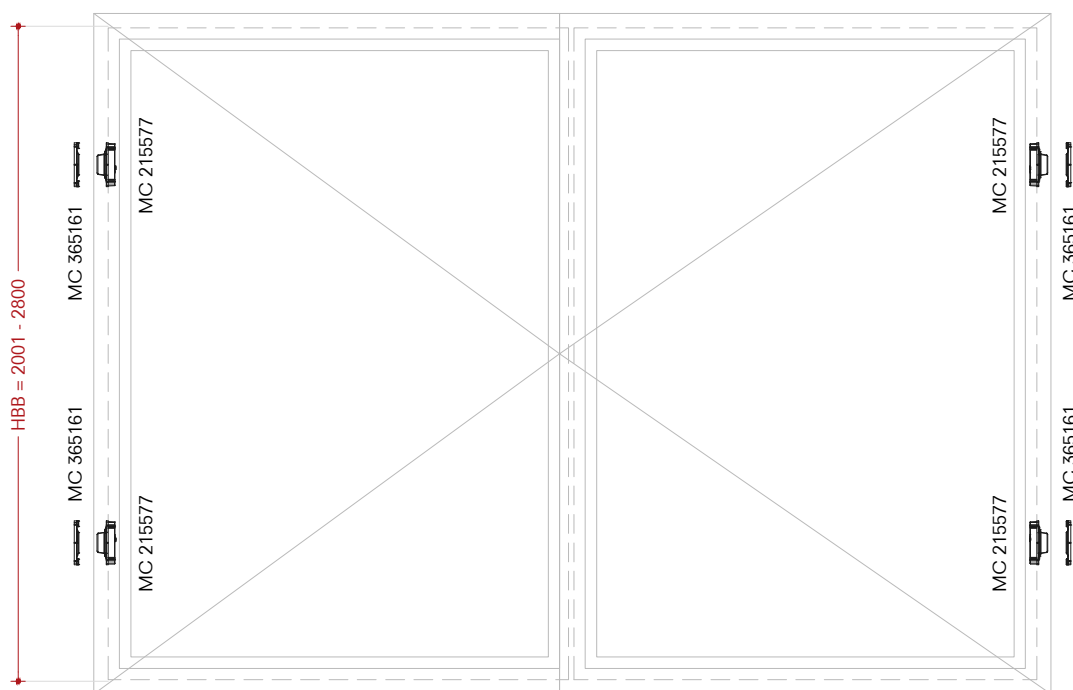
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037  
1x Kit pro Flügel

HBB = 2001 - 2800 mm

K88037  
n°1 kit par vantail

HBB = 2001 - 2800 mm



**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88062

HH = 190 mm

MC 202873 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

MC 221901 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88064

HH = 400 mm

MC 221902 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88065

HH = 500 mm

MC 221903 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88066

HH = 600 mm

MC 221906 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88067

HH = 700 mm

MC 207242 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88068

HH = 1050 mm

MC 221907 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88069

HH = 1050 mm

MC 221908 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

HH = 700 mm

K88068

HH = 1050 mm

K88069

HH = 1050 mm

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

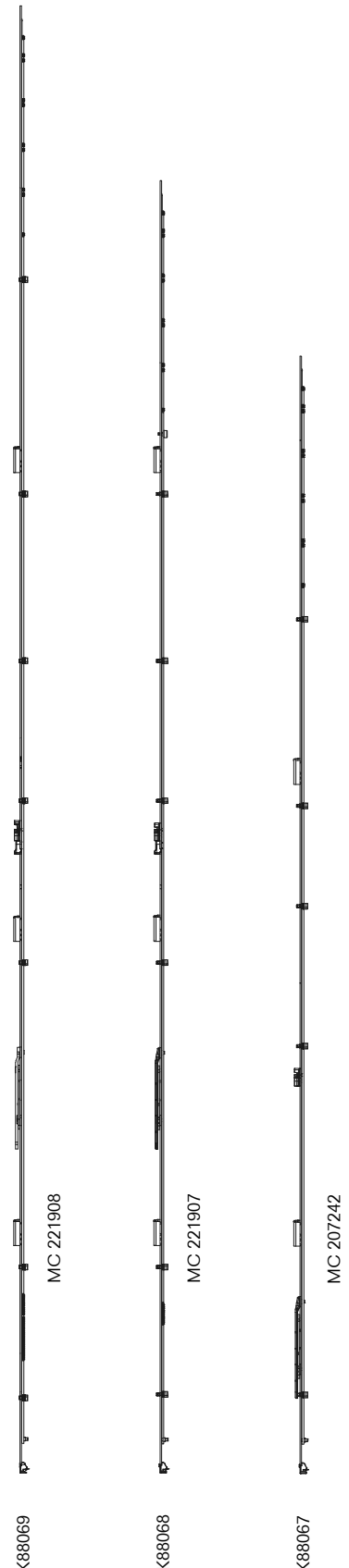
HH = 700 mm

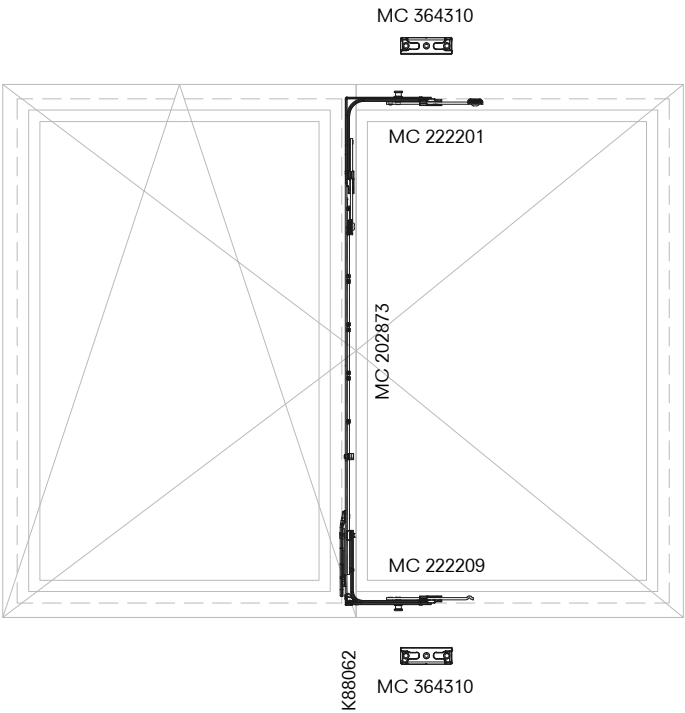
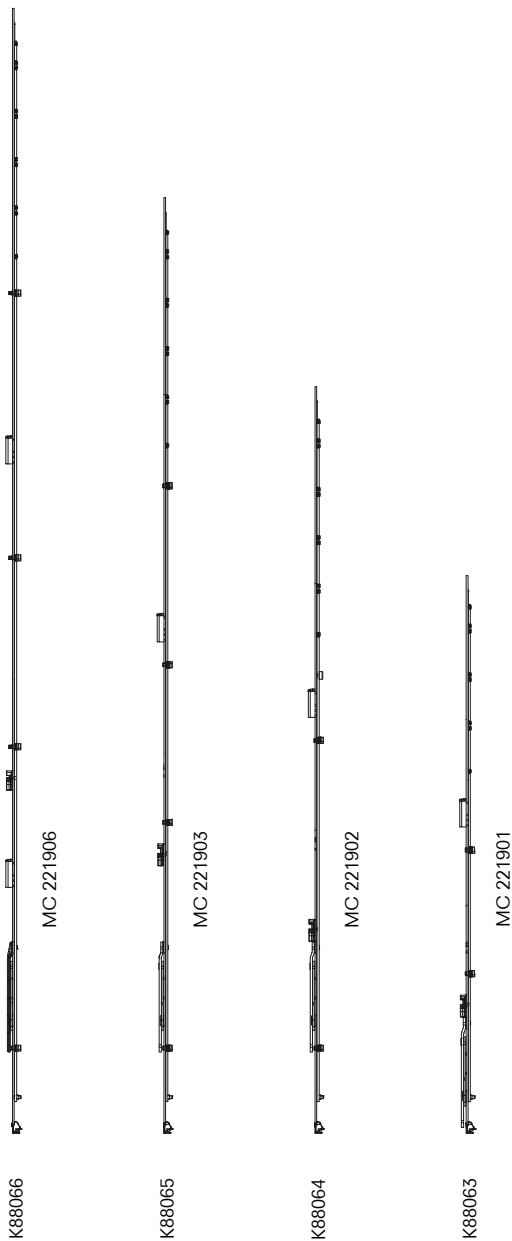
K88068

HH = 1050 mm

K88069

HH = 1050 mm





**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88113

K88113

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88114

K88114

K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88115

K88115

K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

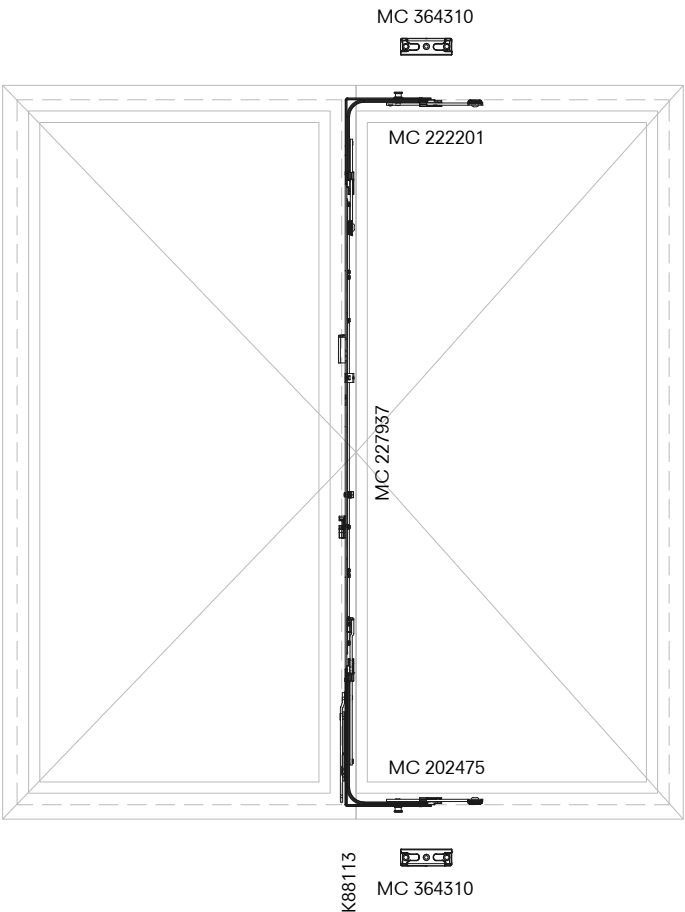
K88116

K88116

K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces





**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

**Fênêtre battante  
avec paumelle visible**

French casement drive  
extension kits

Stulpflügelgetriebe

Kit d'extension Crémone

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88076

K88076

K88075

K88071

141 - 235 mm

MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm

K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm

K88074

471 - 610 mm

MC 208333 n°01 piece  
MC 206630 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm

K88075

611 - 705 mm

MC 208333 n°01 piece  
MC 203810 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm

K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm

K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm



K88074



MC 208333

MC 206630

K88073



MC 208333

K88072



MC 206630

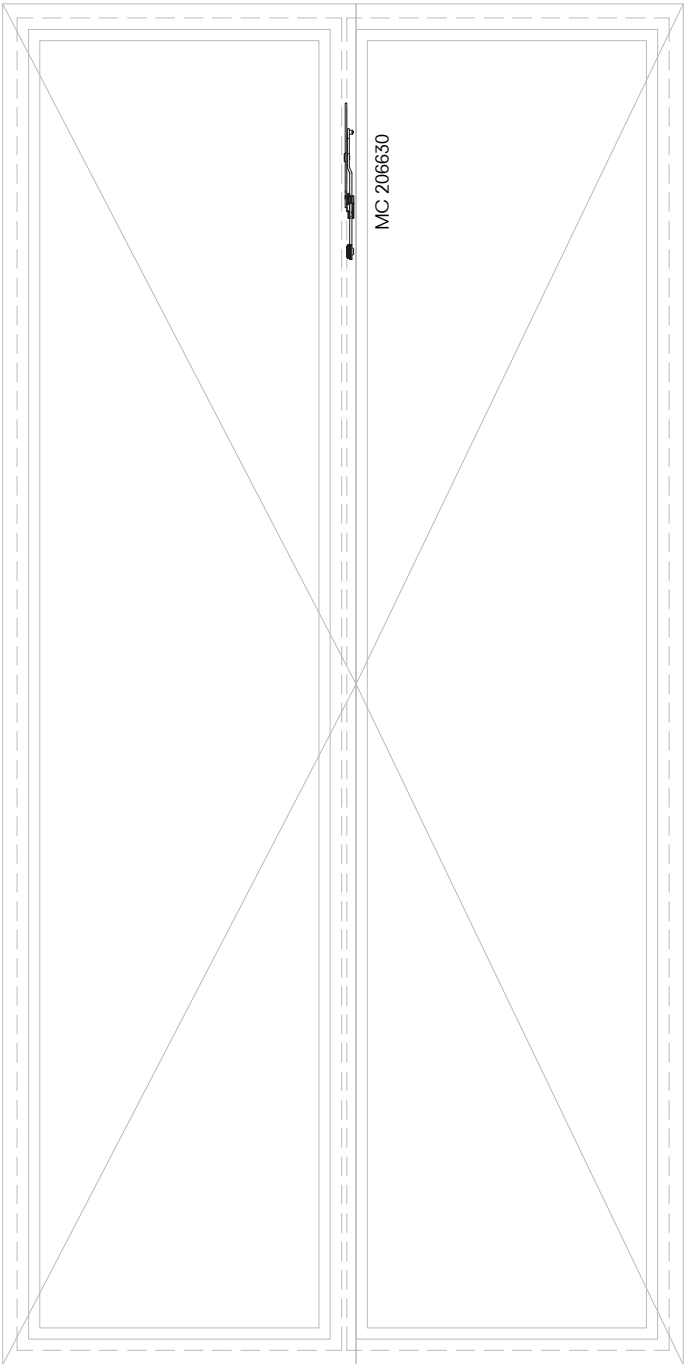
MC 203810

K88071



MC 203810

K88011



MC 206630

**Side hung windows  
with visible hinge**

Door catch

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

**Drehfenster  
mit Aufgesetzter Beschlag**

Türverschluss

K88061

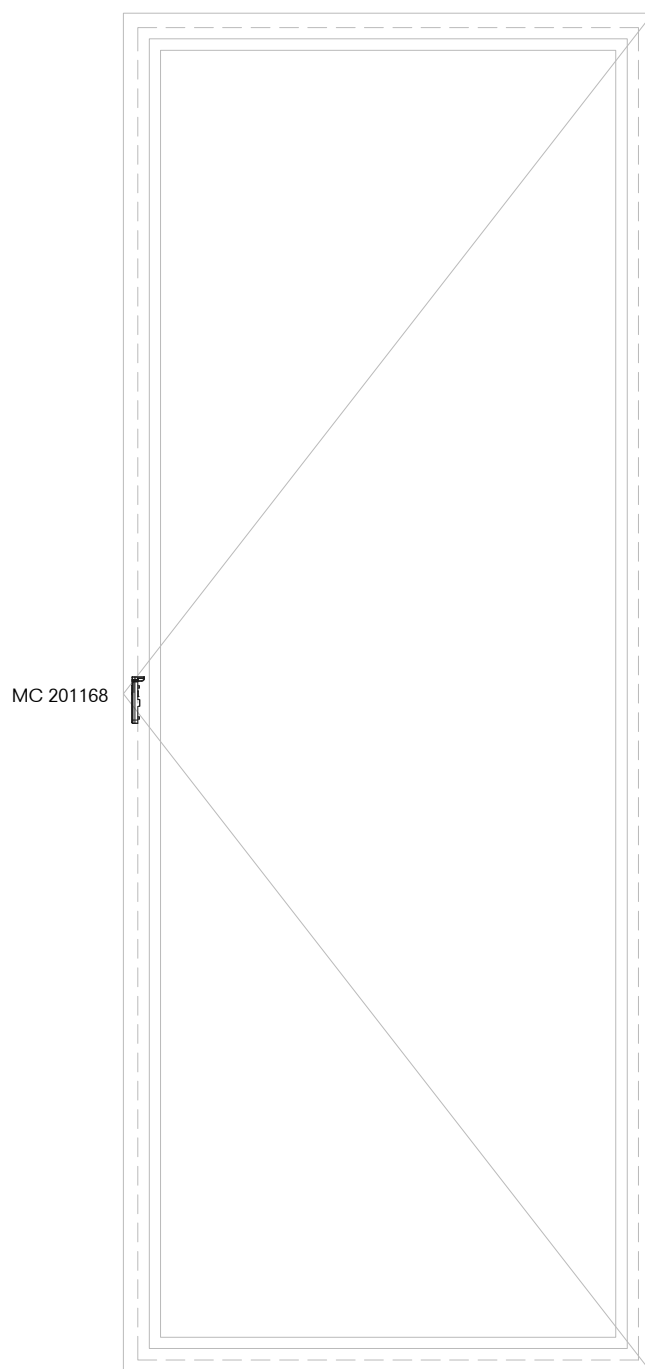
HBB = 661 - 2800 mm

**Fênêtre battante  
avec paumelle visible**

Loquet de porte

K88061

HBB = 661 - 2800 mm



**Side hung windows  
with visible hinge**

Alarm contact

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

**Drehfenster  
mit Aufgesetzter Beschlag**

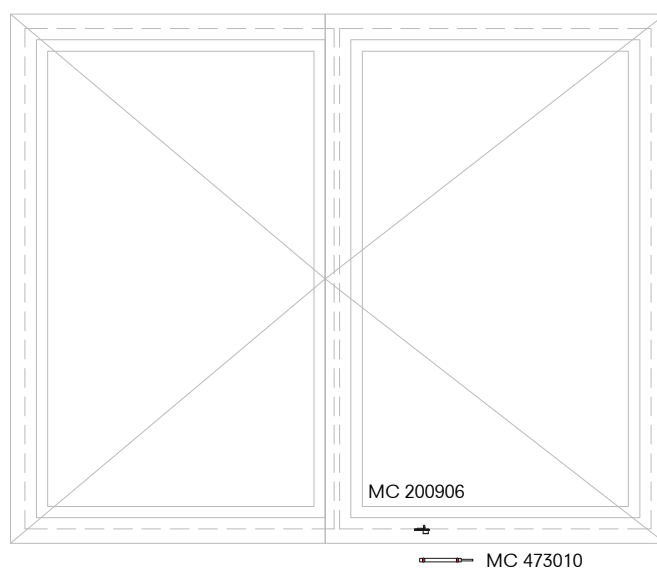
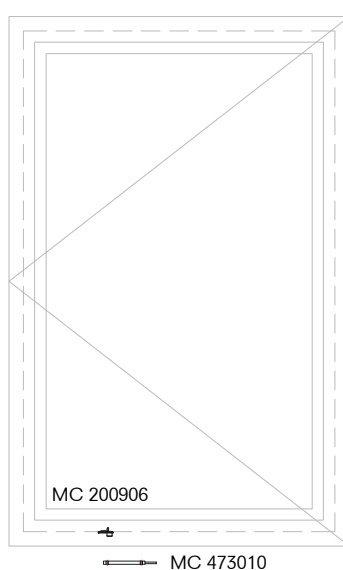
Alarmkontakt

K99062

**Fênêtre battante  
avec paumelle visible**

Contact d'alarme

K99062



**Side hung windows  
with visible hinge**

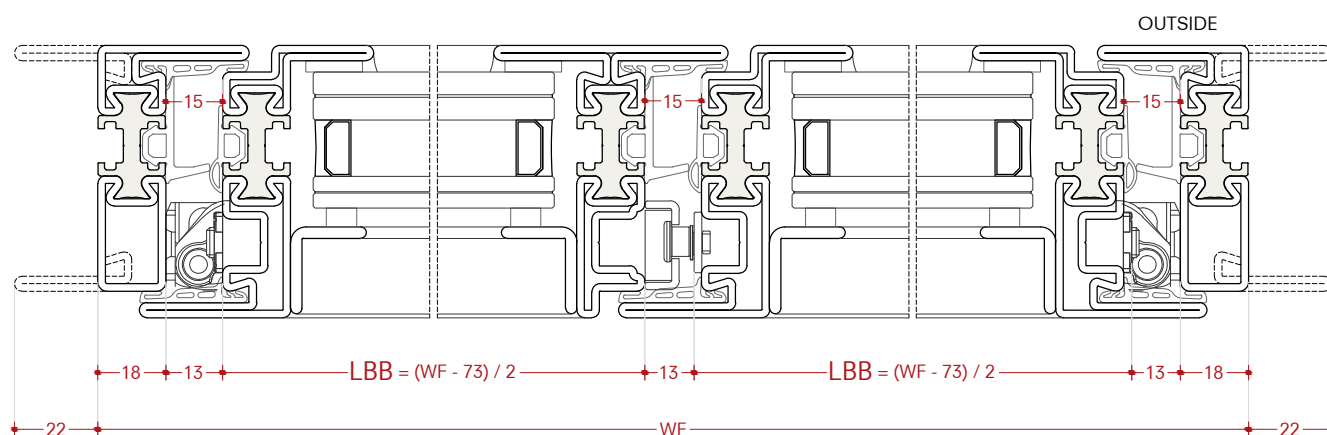
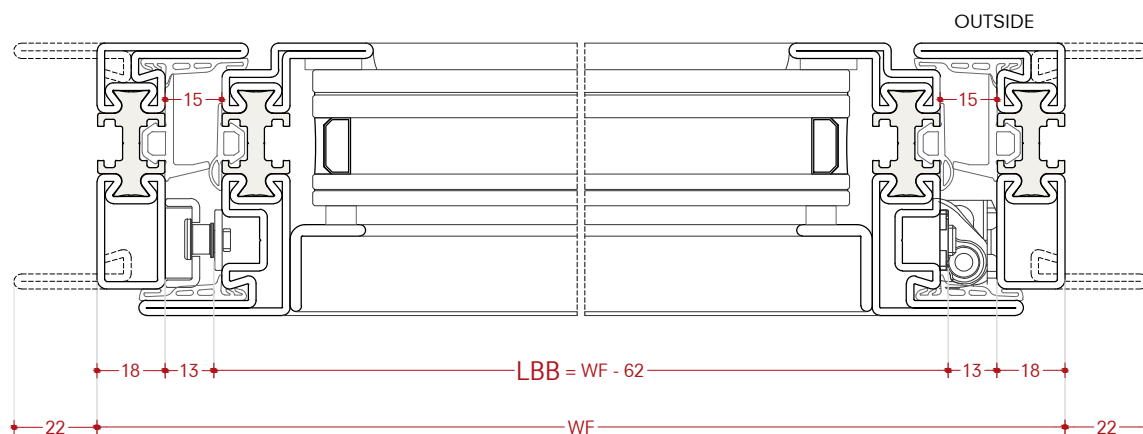
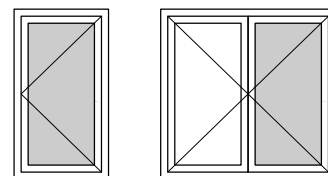
Determination of LBB  
(Groove Hardware Lenght)

**Drehfenster  
mit Aufgesetzter Beschlag**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre battante  
avec paumelle visible**

Détermination du LBB  
(largeur de rainure de quincaillerie)



**Side hung windows  
with visible hinge**

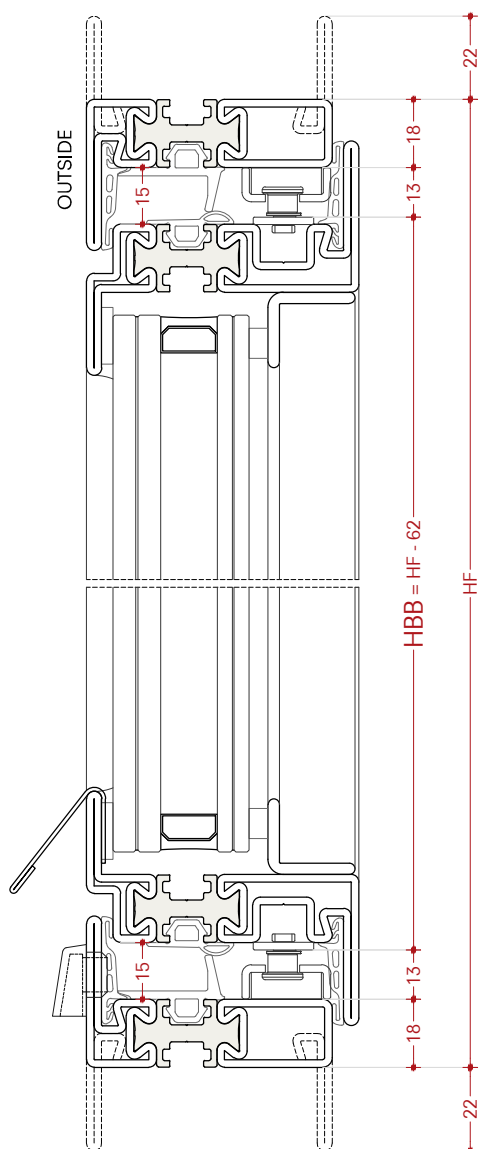
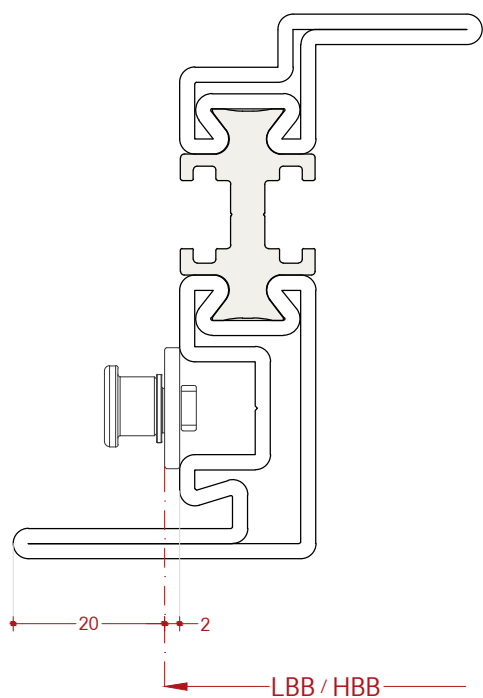
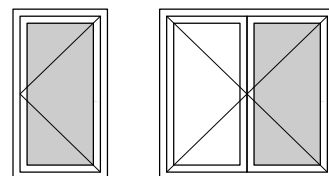
Determination of HBB  
(Groove Hardware Height)

**Drehfenster  
mit Aufgesetzter Beschlag**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre battante  
avec paumelle visible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

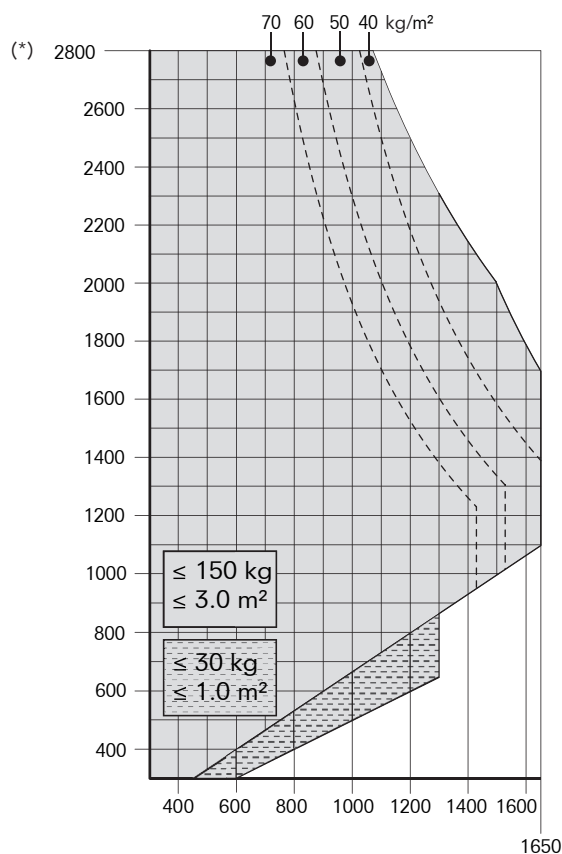
**Fênêtre battante  
avec paumelle visible**

Load capacity tables

Gewichtstabellen

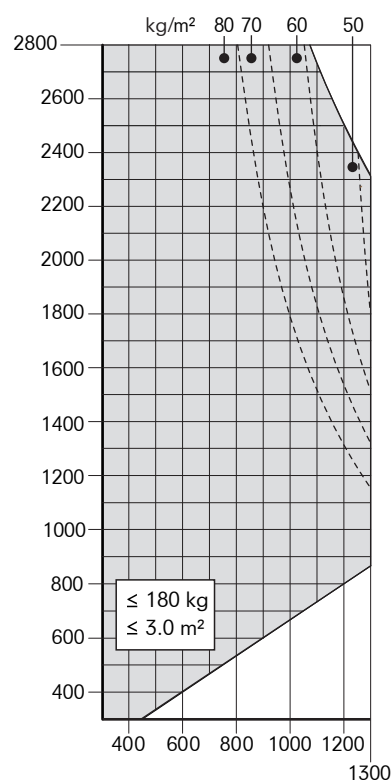
Capacité maximale

Side hung window concealed accessories capacity  
Zubehör verdeckt Drehfenster  
Fênêtre à vantail accessoires cachée



(\*) Extendable to a height of 3000 mm using weld-on hinges.

Side hung window concealed accessories capacity  
with support rod E99510-02 / E99511-02  
Drehfenster verdeckt mit Lastabtragung E99510-02 / E99511-02  
Fênêtre à vantail accessoires cachée  
avec tige de support E99510-02 / E99511-02



(\*) Extensible jusqu'à une hauteur de 3000 mm grâce à des paumelles à souder.

Standard handle height

Standard-Griffhöhe

Hauteur de poignée standard

|               | HBB min | HBB max | H handle |
|---------------|---------|---------|----------|
| <b>K88003</b> | 370     | 660     | 190      |
| <b>K88004</b> | 661     | 840     | 300      |
| <b>K88005</b> | 841     | 1090    | 400      |
| <b>K88006</b> | 1091    | 1340    | 500      |
| <b>K88007</b> | 1341    | 1590    | 600      |
| <b>K88008</b> | 1591    | 1700    | 700      |
| <b>K88009</b> | 1701    | 1950    | 1050     |
| <b>K88010</b> | 1951    | 2200    | 1050     |

**Side hung windows  
with visible hinge**

**Drehfenster  
mit Aufgesetzter Beschlag**

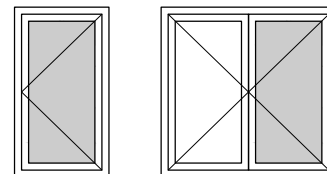
**Fênêtre battante  
avec paumelle visible**

Step #1 - Basic kit choice

Schritt #1 - Auswahl Grdundgarnitur

Étape #1 - Choix de kit de base

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88043</b> | 370     | 1400    | 455     | 2800    |
| <b>K88044</b> | 370     | 815     | 370     | 454     |



LBB = Groove Hardware Lenght  
HBB = Groove Hardware Height

LBB = Beschlagnutbreite  
HBB = Höhe der Beschlagnut

LBB = largeur de rainure de quincaillerie  
HBB = hauteur de rainure de quincaillerie

Step #2 - Gear kit choice

Schritt #2 - Garnitur Getriebe

Étape #2 - Choix de kit d'équipement

|               | HH   | HDG    | CRP   | HCRN  | HBB min | HBB max<br>(without extension) | HBB max<br>(with extension) |
|---------------|------|--------|-------|-------|---------|--------------------------------|-----------------------------|
| <b>K88003</b> | 190  | 555    | 220   | 5     | 370     | 454                            | 2335                        |
| <b>K88003</b> | 190  | 555    | 220   | 113.5 | 455     | 660                            | 2540                        |
| <b>K88004</b> | 300  | 736.5  | 190.5 | 113.5 | 661     | 840                            | 2720                        |
| <b>K88005</b> | 400  | 986.5  | 260.5 | 113.5 | 841     | 1090                           | 2970 (*)                    |
| <b>K88006</b> | 500  | 1236.5 | 260.5 | 113.5 | 1091    | 1340                           | 3150 (*)                    |
| <b>K88007</b> | 600  | 1486.5 | 260.5 | 113.5 | 1341    | 1590                           | 3150 (*)                    |
| <b>K88008</b> | 700  | 1596.5 | 260.5 | 113.5 | 1591    | 1700                           | 3150 (*)                    |
| <b>K88009</b> | 1050 | 1846.5 | 260.5 | 113.5 | 1701    | 1950                           | 3150 (*)                    |
| <b>K88010</b> | 1050 | 2096.5 | 260.5 | 113.5 | 1951    | 2200                           | 3150 (*)                    |

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

(\*) = Over 2800 mm technical department  
confirmation needed.

(\*) = Bestätigung der technischen Abteilung  
erforderlich für Abmessungen größer 2800  
mm

(\*) = Confirmation du service technique  
nécessaire pour les dimensions supérieures  
à 2800 mm

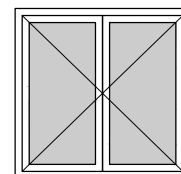
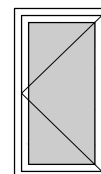
Step #3 - Extension kits choice

Schritt #3 - Garnitur  
Getriebeverlängerung

Étape #3 - Choix de kit extension  
d'équipement

**HBB \* - HCRN - HDG =** Extension kit length  
Getriebeverlängerung Länge  
largeur kit extension

|                        | MinL | MaxL |
|------------------------|------|------|
| <b>K88011</b>          | 0    | 140  |
| <b>K88012</b>          | 141  | 235  |
| <b>K88059</b>          | 236  | 375  |
| <b>K88013</b>          | 376  | 470  |
| <b>K88014</b>          | 471  | 610  |
| <b>K88015</b>          | 611  | 705  |
| <b>K88060</b>          | 706  | 845  |
| <b>K88016</b>          | 846  | 940  |
| <b>K88016 / K88011</b> | 941  | 1080 |
| <b>K88016 / K88012</b> | 1081 | 1175 |
| <b>K88016 / K88059</b> | 1176 | 1315 |
| <b>K88016 / K88013</b> | 1316 | 1410 |
| <b>K88016 / K88014</b> | 1411 | 1550 |
| <b>K88016 / K88015</b> | 1551 | 1650 |
| <b>K88016 / K88060</b> | 1651 | 1785 |
| <b>K88016 / K88016</b> | 1786 | 1880 |



\* See HBB information page

MinL = Min Length (mm)  
MaxL = Max Length (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = Min Länge (mm)  
MaxL = Max Länge (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = largeur minimal (mm)  
MaxL = largeur maximum (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

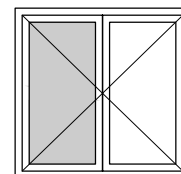
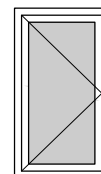
Step #4 - Hinges kit choice  
n°1 kit per leaf

Schritt #4 - Garnitur Bänder  
1x Kit pro Flügel

Étape #4 - Choix kit paumelles  
n°1 kit par vantail

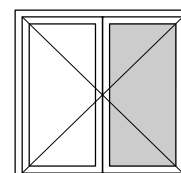
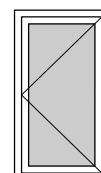
Left / Link / Droite

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88091</b> | 370     | 1400    | 365     | 2800    |



Right / Recht / Gauche

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88090</b> | 370     | 1400    | 365     | 2800    |



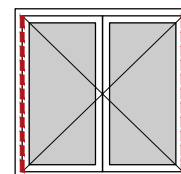
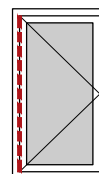


Step #5 - Concealed compression lock  
kit choice for 2nd leaf  
n°1 kit per leaf

Schritt #5 - Standflügel Anpressverschluss  
verdeckt  
1x Kit pro Flügel

Étape #5 - Choix kit de serrure à  
compression caché  
pour 2e ouvrant  
n°1 kit par vantail

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88036</b> | 1280    | 2000    |
| <b>K88037</b> | 2001    | 2800    |

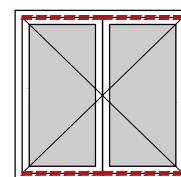
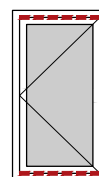


Step #6 - Additional top and bottom  
locking point choice  
n°1 kit per leaf

Schritt #6 - Zusätzlich oben und unten  
Verriegelungspunkt  
1x Kit pro Flügel

Étape #6 - Choix haut et bas  
supplémentaires point de  
verrouillage  
n°1 kit par vantail

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88045</b> | 801     | 1280    |
| <b>K88046</b> | 1281    | 1400    |

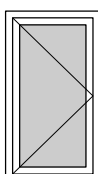


Step #7 - Lifting component  
Only for single leaf window

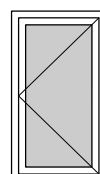
Schritt #7 - Hebekomponente  
Nur für Einflügliges Fenster

Étape #7 - Composant de levage  
Seulement pour fenêtre  
à un vantail

**K88048**



**K88047**



Step #8 - French casement drive  
and extension kit choice

Schritt #8 - Erweiterungssets  
Stulpflügelgetriebe

Étape #8 - Choix kit Crémone  
et d'extension

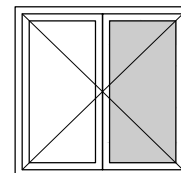
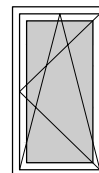
| Drive gear kit |   | French casement<br>drive kit |  | Extension kit<br>for 1st leaf |   | French casement<br>drive extension kit |
|----------------|---|------------------------------|--|-------------------------------|---|----------------------------------------|
| K88003         | → | K88062                       |  | K88011                        | → | K88011                                 |
| K88004         | → | K88063                       |  | K88012                        | → | K88071                                 |
| K88005         | → | K88064                       |  | K88059                        | → | K88072                                 |
| K88006         | → | K88065                       |  | K88013                        | → | K88073                                 |
| K88007         | → | K88066                       |  | K88014                        | → | K88074                                 |
| K88008         | → | K88067                       |  | K88015                        | → | K88075                                 |
| K88009         | → | K88068                       |  | K88060                        | → | K88076                                 |
| K88010         | → | K88069                       |  | K88016                        | → | K88077                                 |
|                |   |                              |  | K88016<br>K88011              | → | K88077<br>K88011                       |
|                |   |                              |  | K88016<br>K88012              | → | K88077<br>K88071                       |
|                |   |                              |  | K88016<br>K88059              | → | K88077<br>K88072                       |
|                |   |                              |  | K88016<br>K88013              | → | K88077<br>K88073                       |
|                |   |                              |  | K88016<br>K88014              | → | K88077<br>K88074                       |
|                |   |                              |  | K88016<br>K88015              | → | K88077<br>K88075                       |
|                |   |                              |  | K88016<br>K88060              | → | K88077<br>K88076                       |
|                |   |                              |  | K88016<br>K88016              | → | K88077<br>K88077                       |

Step #9 - Door catch choice

Schritt #9 - Türverschluss

Étape #9 - Choix loquet de porte

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88061</b> | 661     | 2800    |

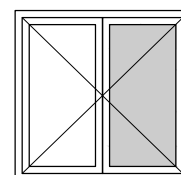
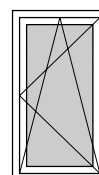


Step #10 - Alarm contact choice

Schritt #10 - Alarmkontakt

Étape #10 - Choix contact d'alarme

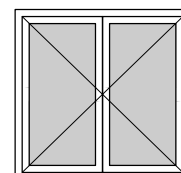
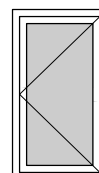
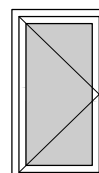
|               |
|---------------|
| <b>K99062</b> |
|---------------|



Step #11 - Hinge cover

Schritt #11 - Bandabdeckung

Étape #11 - Couvercle de paumelle



| Right Link<br>Droite | Surface finishes<br>Oberflächen Ausführungen<br>Finitions de surface |
|----------------------|----------------------------------------------------------------------|
| <b>K88092</b>        | Silver<br>Silber<br>Argent                                           |
| <b>K88093</b>        | White<br>Weiß<br>Blanc                                               |
| <b>K88094</b>        | Black<br>Schwarz<br>Argent                                           |
| <b>K88095</b>        | Brown<br>Braun<br>Marron                                             |
| <b>K88096 (*)</b>    | Titanium<br>Titan<br>Titane                                          |

| Left Link<br>Gauche | Surface finishes<br>Oberflächen Ausführungen<br>Finitions de surface |
|---------------------|----------------------------------------------------------------------|
| <b>K88097</b>       | Silver<br>Silber<br>Argent                                           |
| <b>K88098</b>       | White<br>Weiß<br>Blanc                                               |
| <b>K88099</b>       | Black<br>Schwarz<br>Argent                                           |
| <b>K880100</b>      | Brown<br>Braun<br>Marron                                             |
| <b>K880101 (*)</b>  | Titanium<br>Titan<br>Titane                                          |

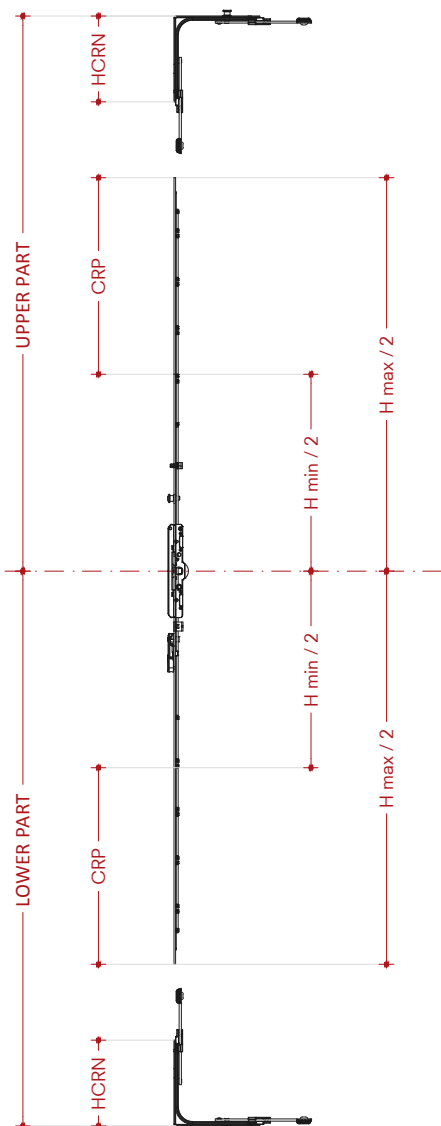
\*On request  
\*Auf Anfrage  
\*Sur demande

Step #12 - Double croppable gear  
kits choice  
(Instead of Step #3 and #4)

Schritt #12 - Beidseitig kürzbare  
Garnitur  
(Anstelle von Schritt #3 und #4)

Étape #12 - Choix Kits d'équipement à  
double recadrage  
(Au lieu des étapes #3 et #4)

|               | h min handle | HDG    | H min / 2 | H max / 2 | CRP       | HCRN  | HBB min |
|---------------|--------------|--------|-----------|-----------|-----------|-------|---------|
| <b>K88109</b> | 265          | 640.5  | 151       | 260       | 170 + 170 | 113.5 | 527.5   |
| <b>K88110</b> | 375          | 1040.5 | 261       | 510       | 260 + 260 | 113.5 | 747.5   |
| <b>K88111</b> | 625          | 1540.5 | 511       | 760       | 260 + 260 | 113.5 | 1247.5  |
| <b>K88112</b> | 875          | 2040.5 | 761       | 1020      | 260 + 260 | 113.5 | 1747.5  |



$$\text{UPPER PART} = \text{HBB} - \text{HH} - \text{HCRN}$$

$$\text{LOWER PART} = \text{HH} - \text{HCRN}$$

Choose the smallest value and find the right gear kit  
between Hmin/2 and Hmax/2 range columns.

Wählen Sie den kleinsten Wert und finden Sie das passende Garnitur Getriebe  
zwischen den Bereichsspalten Hmin/2 und Hmax/2

Choisissez la plus petite valeur et trouvez le bon kit d'équipement  
entre les colonnes de plage Hmin/2 et Hmax/2

#### EXTENSION KIT:

$$\text{UPPER}^* = \text{HBB} - \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

$$\text{LOWER}^* = \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

CHECK ON THE  
EXTENSION TABLE  
(STEP 3)

\* with negative value extension are not needed.

\* Bei negativem Wert werden keine Verlängerungen benötigt.

\* avec une valeur négative, aucune extension n'est nécessaire.

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

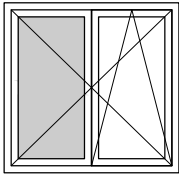
HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

Step #13 - French casement drive and extension kit choice

Schritt #13 - Verlängerungssets Stulpflügelgetriebe

Étape #13 - Choix kit Crémone et d'extension



| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| K88109         | → | K88113                    |  | K88011                     | → | K88011                              |
| K88110         | → | K88114                    |  | K88012                     | → | K88071                              |
| K88111         | → | K88115                    |  | K88059                     | → | K88072                              |
| K88112         | → | K88116                    |  | K88013                     | → | K88073                              |
|                |   |                           |  | K88014                     | → | K88074                              |
|                |   |                           |  | K88015                     | → | K88075                              |
|                |   |                           |  | K88060                     | → | K88076                              |
|                |   |                           |  | K88016                     | → | K88077                              |
|                |   |                           |  | K88016<br>K88011           | → | K88077<br>K88011                    |
|                |   |                           |  | K88016<br>K88012           | → | K88077<br>K88071                    |
|                |   |                           |  | K88016<br>K88059           | → | K88077<br>K88072                    |
|                |   |                           |  | K88016<br>K88013           | → | K88077<br>K88073                    |
|                |   |                           |  | K88016<br>K88014           | → | K88077<br>K88074                    |
|                |   |                           |  | K88016<br>K88015           | → | K88077<br>K88075                    |
|                |   |                           |  | K88016<br>K88060           | → | K88077<br>K88076                    |
|                |   |                           |  | K88016<br>K88016           | → | K88077<br>K88077                    |

## Side hung windows with concealed hinge

Basic kits

K88043

Standard windows

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

MC 222201 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

## Drehfenster mit Verdecktliegende Bänder

Grundgarnitur

K88043

Standardfenster

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm

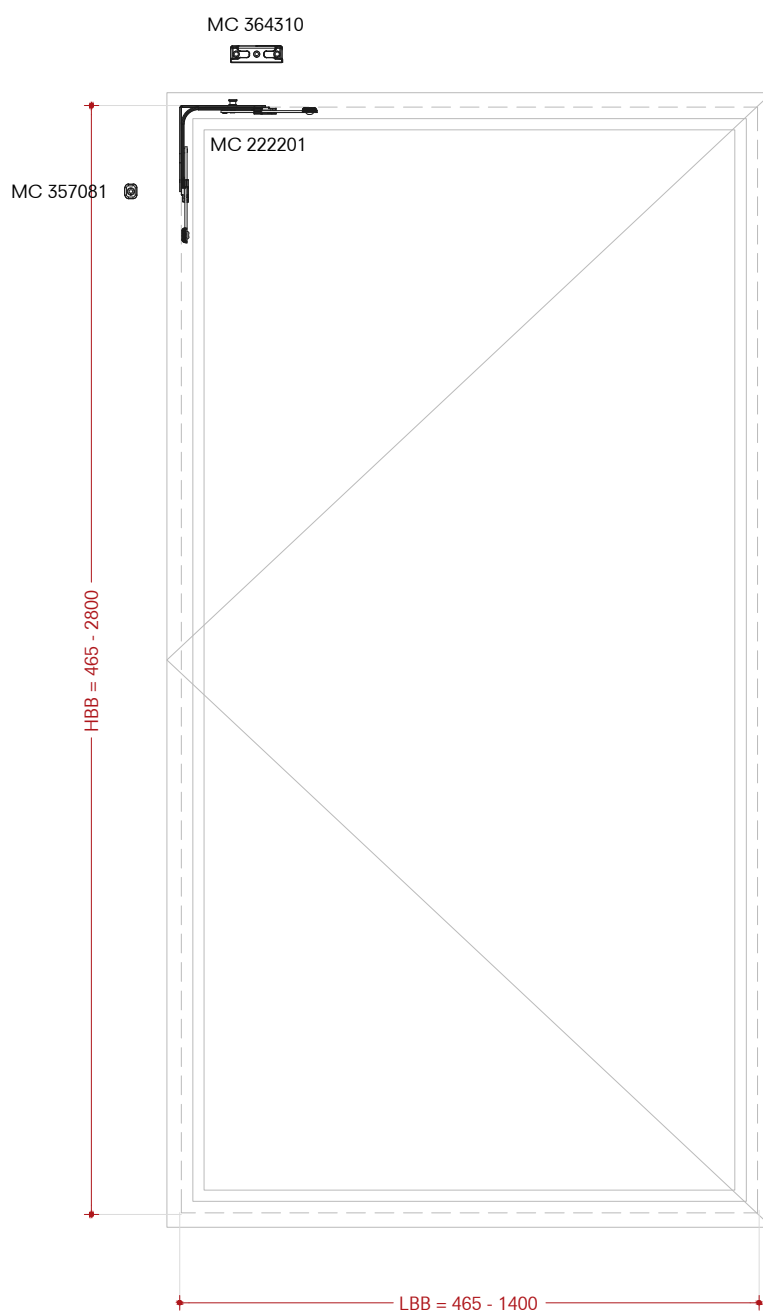
## Fênêtre battante avec paumelle invisible

Kits de base

K88043

Fenêtres standards

LBB = 465 - 1400 mm  
HBB = 455 - 2800 mm



## Side hung windows with concealed hinge

Basic kits

K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

MC 222203 n°01 piece  
MC 357081 n°01 piece  
MC 364310 n°01 piece

## Drehfenster mit Verdecktliegende Bänder

Grundgarnitur

K88044

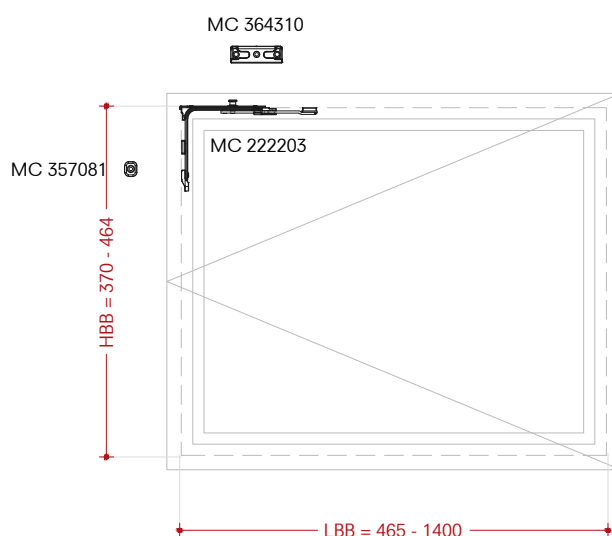
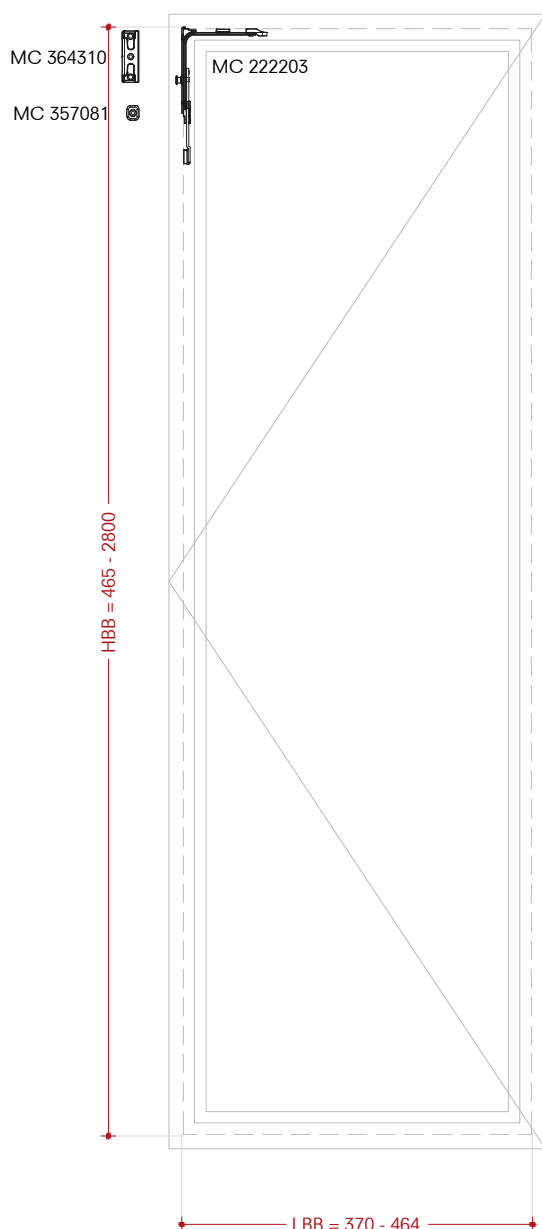
LBB = 370 - 464 mm  
HBB = 455 - 2800 mm

## Fênêtre battante avec paumelle invisible

Kits de base

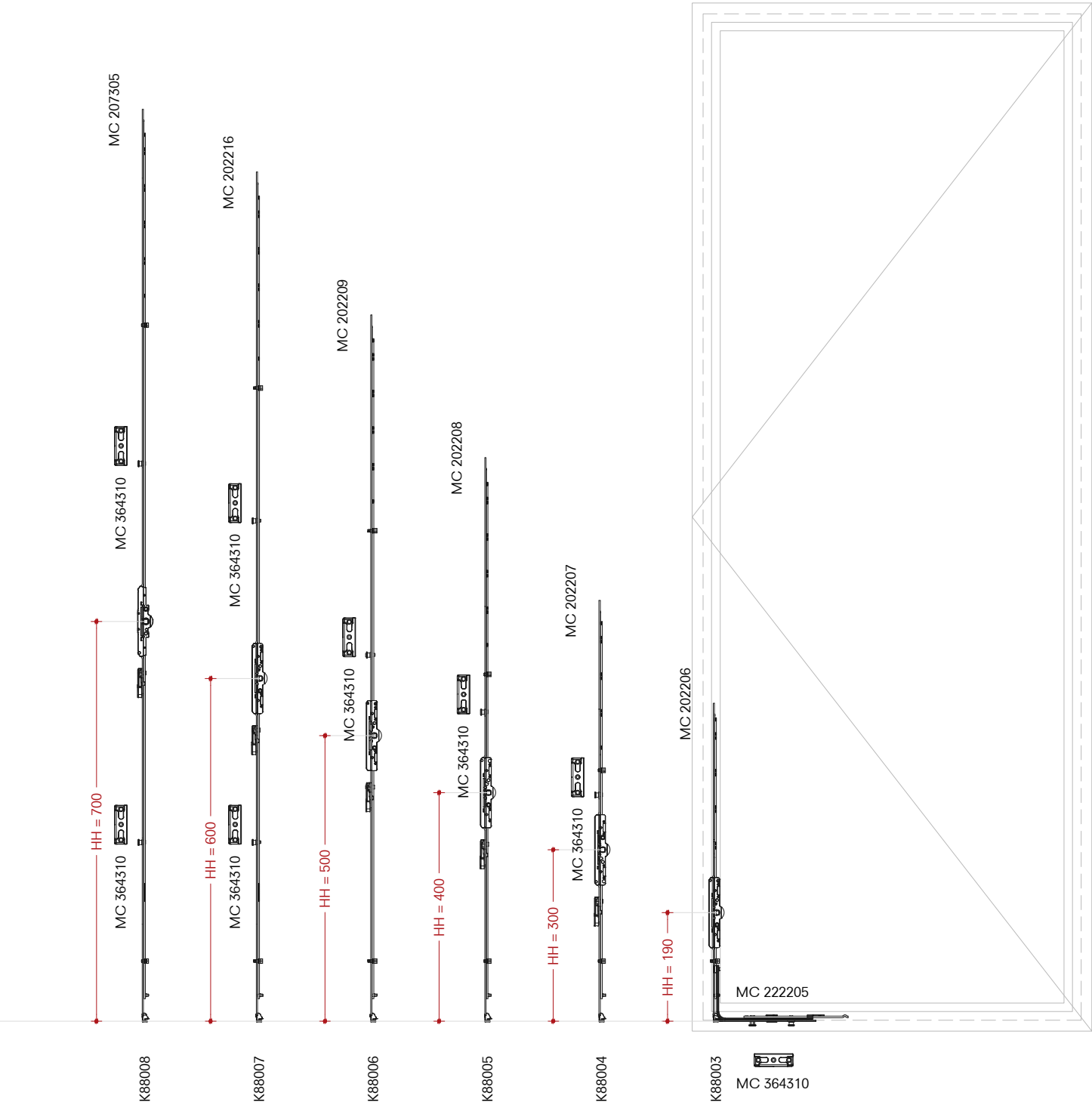
K88044

LBB = 370 - 464 mm  
HBB = 455 - 2800 mm









**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

**Fênêtrê battante  
avec paumelle invisible**

Double croppable gear kits

Beidseitig kürzbare Garnitur

Kits d'équipement à double recadrage

K88109

K88109

K88109

MC 202491 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°01 piece

K88110

K88110

K88110

MC 202492 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°02 pieces

K88111

K88111

K88111

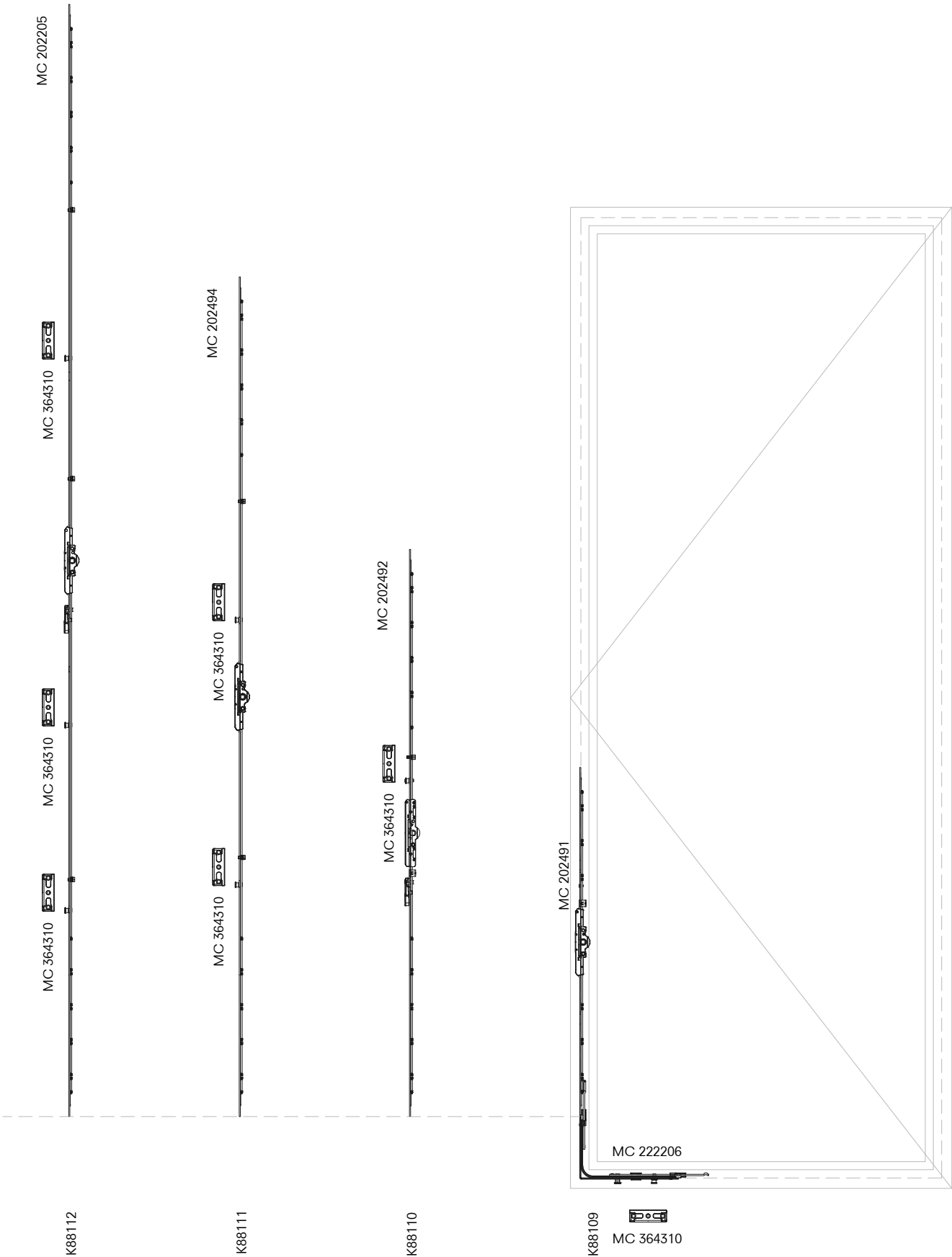
MC 202494 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°03 pieces

K88112

K88112

K88112

MC 202205 n°01 piece  
MC 222206 n°01 piece  
MC 364310 n°04 pieces



**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

**Fênêtre battante  
avec paumelle invisible**

Extension kits

Garnitur Getriebeverlängerung

Kits extension d'équipement

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88016

K88060

K88012

141 - 235 mm

MC 201750 n°01 piece  
MC 364310 n°01 piece

K88012

141 - 235 mm

K88012

141 - 235 mm

MC 201840

MC 201750

K88059

236 - 375 mm

MC 201750 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88059

236 - 375 mm

K88059

236 - 375 mm

MC 364310

MC 364310

MC 206630

K88013

376 - 470 mm

MC 201840 n°01 piece  
MC 364310 n°01 piece

K88013

376 - 470 mm

K88013

376 - 470 mm

MC 201840

MC 201840

K88014

471 - 610 mm

MC 201840 n°01 piece  
MC 206630 n°01 piece  
MC 364310 n°01 piece

K88014

471 - 610 mm

K88014

471 - 610 mm

MC 364310

MC 364310

K88015

611 - 705 mm

MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88015

611 - 705 mm

K88015

611 - 705 mm

K88060

706 - 845 mm

MC 206630 n°01 piece  
MC 201750 n°01 piece  
MC 201840 n°01 piece  
MC 364310 n°02 pieces

K88060

706 - 845 mm

K88060

706 - 845 mm

K88016

846 - 940 mm

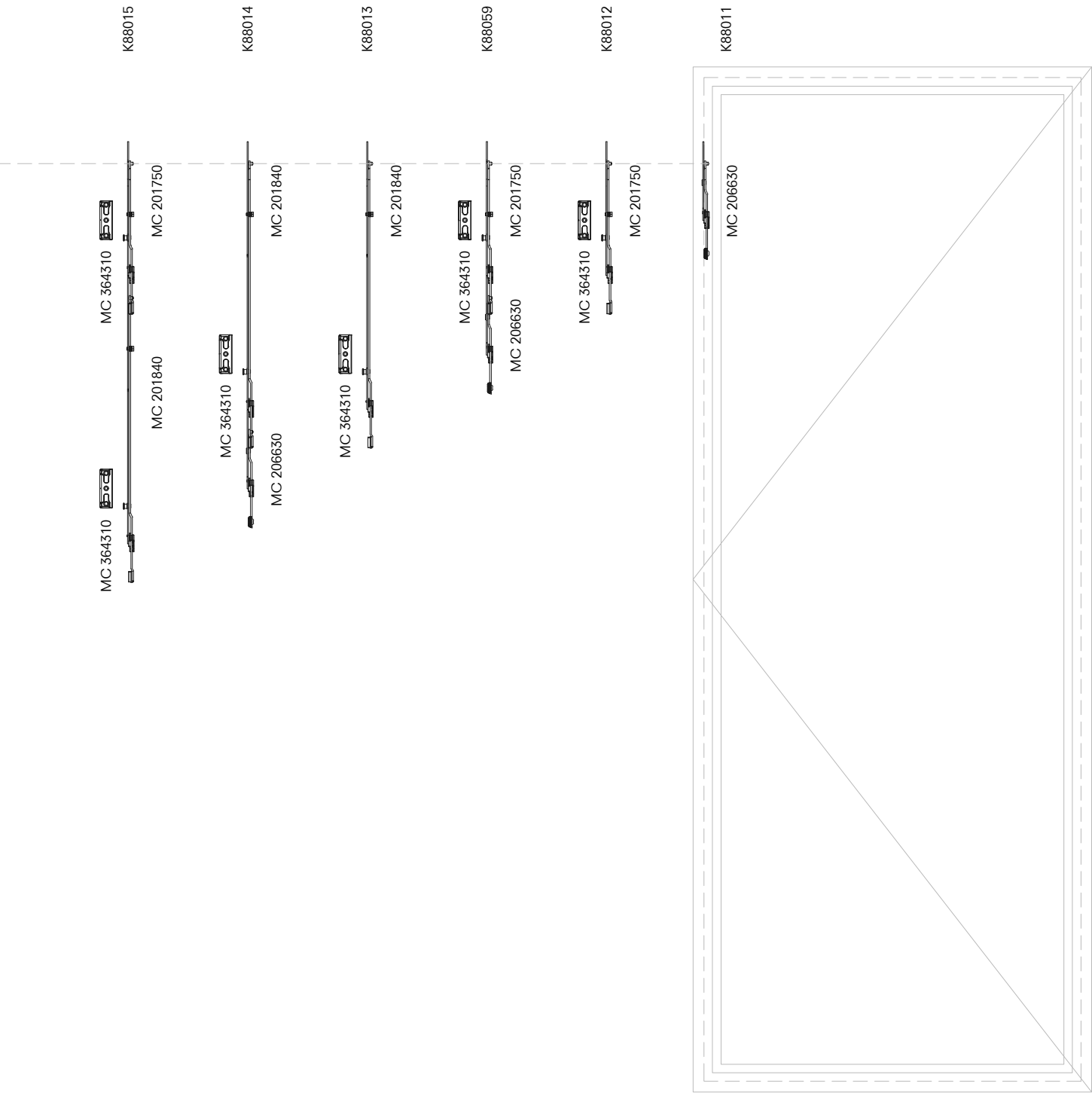
MC 201840 n°02 pieces  
MC 364310 n°02 pieces

K88016

846 - 940 mm

K88016

846 - 940 mm



**Side hung windows  
with concealed hinge**

Hinges kits

K88034

Right hinges

MC 217691 n°01 piece  
MC 217729 n°01 piece  
MC 215804 n°01 piece  
MC 215810 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

Garnitur Bänder

K88034

Recht Band

**Fênêtre battante  
avec paumelle invisible**

Kits paumelles

K88034

Droite paumelles

K88035

Left hinges

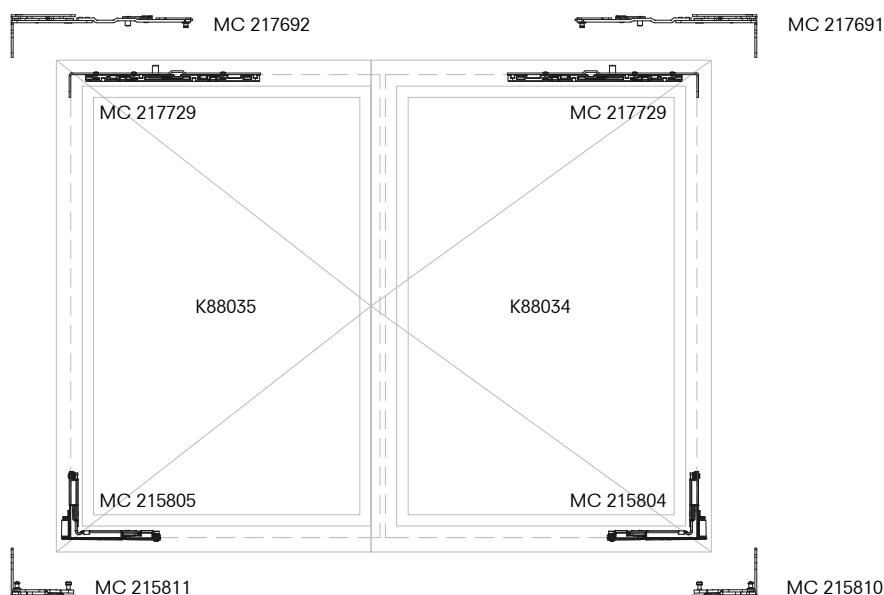
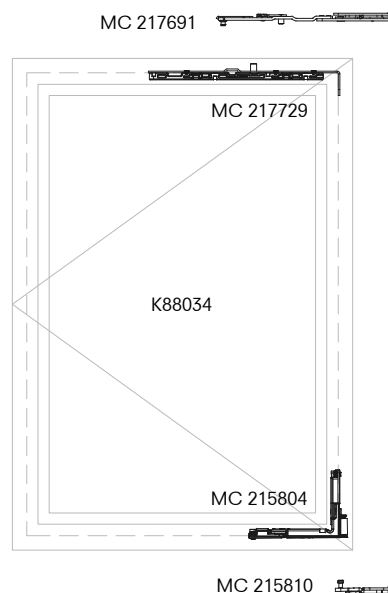
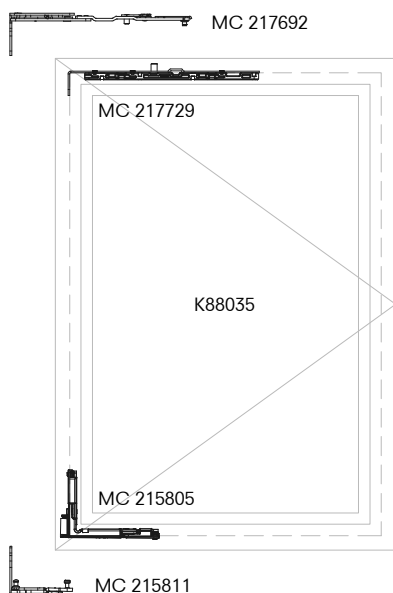
MC 217692 n°01 piece  
MC 217729 n°01 piece  
MC 215805 n°01 piece  
MC 215811 n°01 piece

K88035

Link Band

K88035

Gauche paumelles



Side hung windows  
with concealed hinge

Drehfenster  
mit Verdecktliegende Bänder

Fênêtre battante  
avec paumelle invisible

Lifting component

Hebekomponente

Composant de levage

K88047

K88047

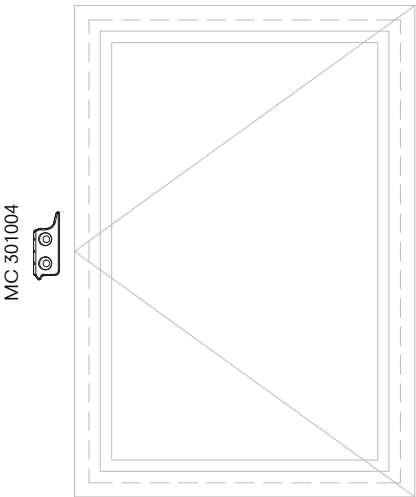
K88047

Right hinges

Recht Band

Droite paumelles

MC 361004 n°01 piece



K88048

K88048

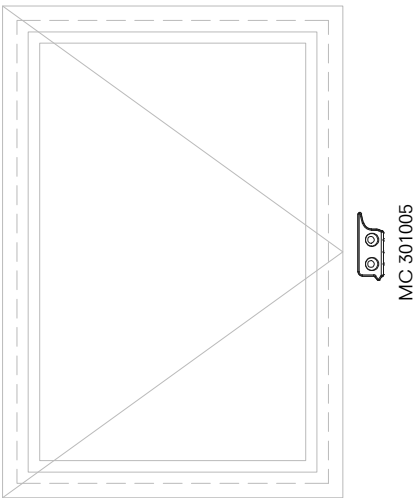
K88048

Left hinges

Link Band

Gauche paumelles

MC 361005 n°01 piece



**Side hung windows  
with concealed hinge**

Additional top and bottom  
locking point

K88045

LBB = 801 - 1280 mm

MC 201751 n°02 pieces  
MC 364310 n°02 pieces

**Drehfenster  
mit Verdecktliegende Bänder**

Zusätzlich oben und unten  
Verriegelungspunkt

K88045

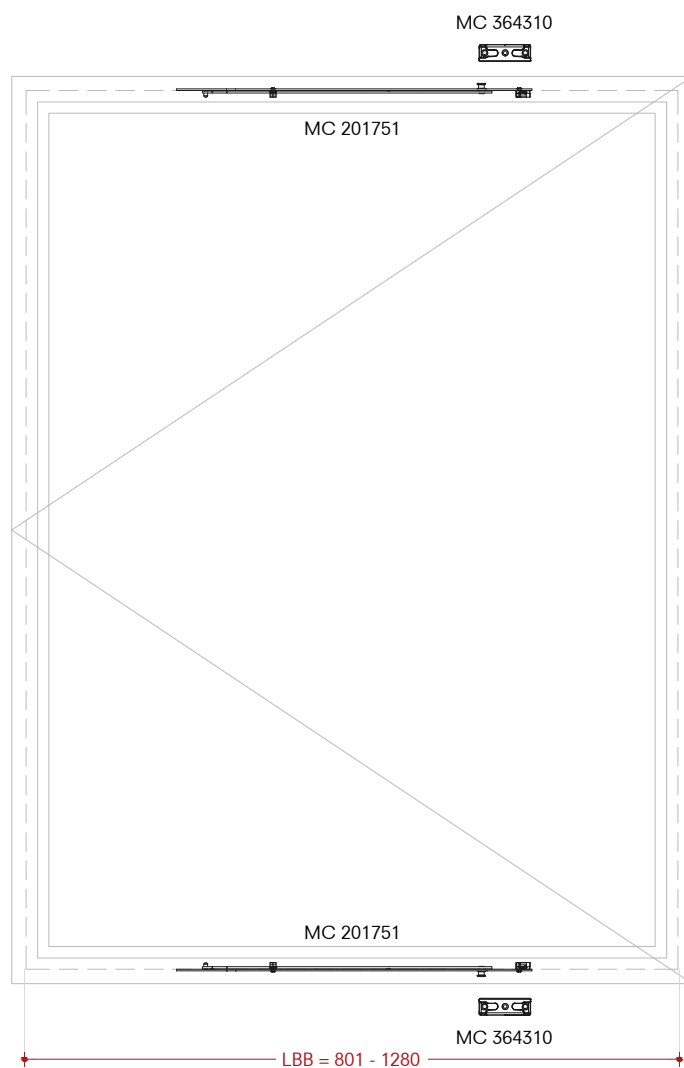
LBB = 801 - 1280 mm

K88045

LBB = 801 - 1280 mm

**Fênêtre battante  
avec paumelle invisible**

Haut et bas supplémentaires  
point de verrouillage





K88046

LBB = 1281 - 1400 mm

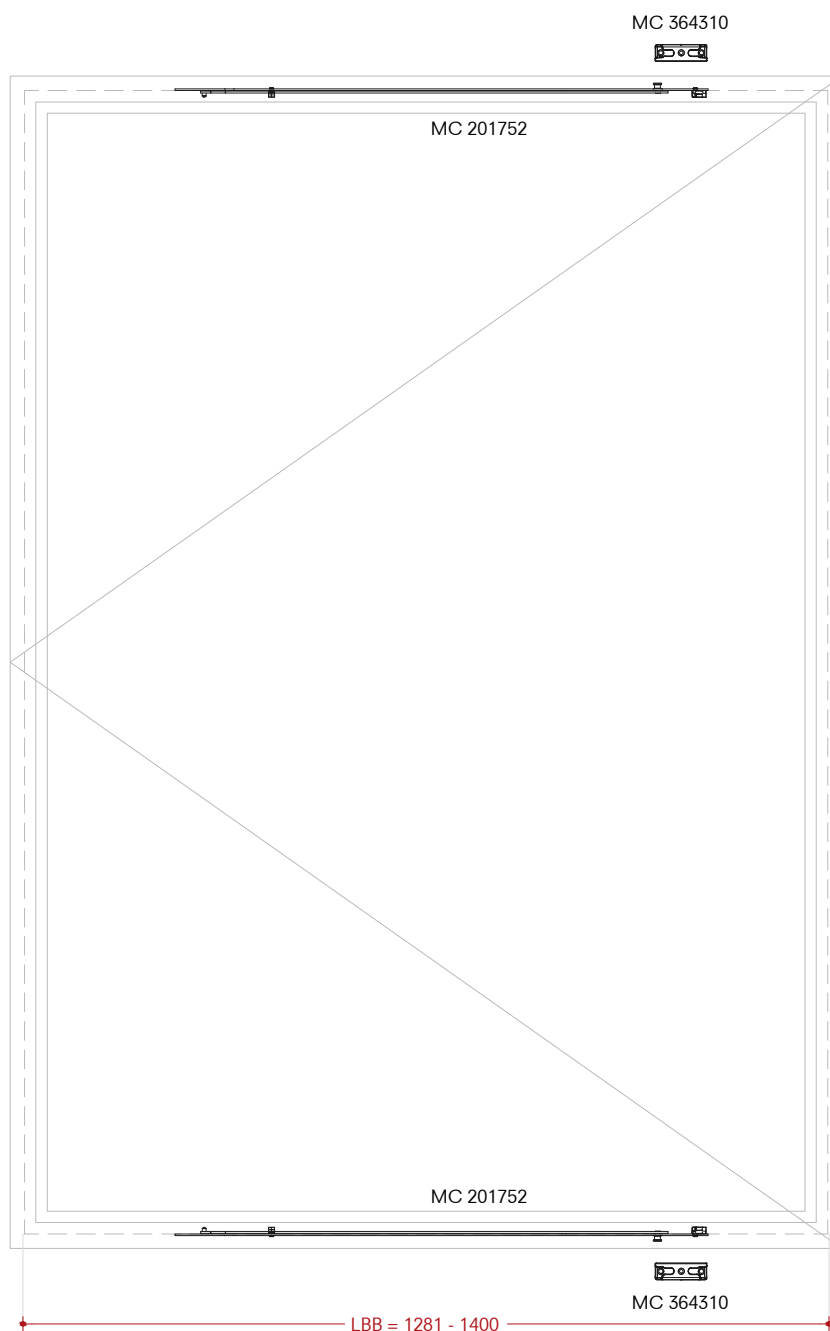
MC 201752 n°02 pieces  
MC 364310 n°02 pieces

K88046

LBB = 1281 - 1400 mm

K88046

LBB = 1281 - 1400 mm



**Side hung windows  
with concealed hinge**

Concealed compression locks kits

K88036  
n°1 kit per leaf

HBB = 1280 - 2000 mm

MC 215577 n°01 piece  
MC 365161 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

Anpressverschluss verdeckt

K88036  
1x Kit pro Flügel

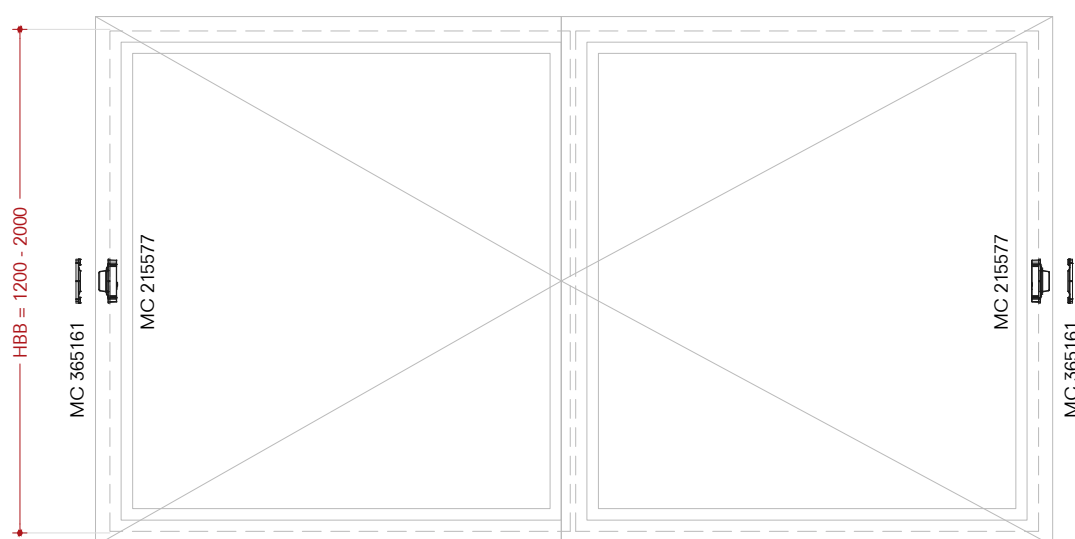
HBB = 1280 - 2000 mm

**Fênêtre battante  
avec paumelle invisible**

Kits de serrures à compression cachée

K88036  
n°1 kit par vantail

HBB = 1280 - 2000 mm



K88037  
n°1 kit per leaf

HBB = 2001 - 2800 mm

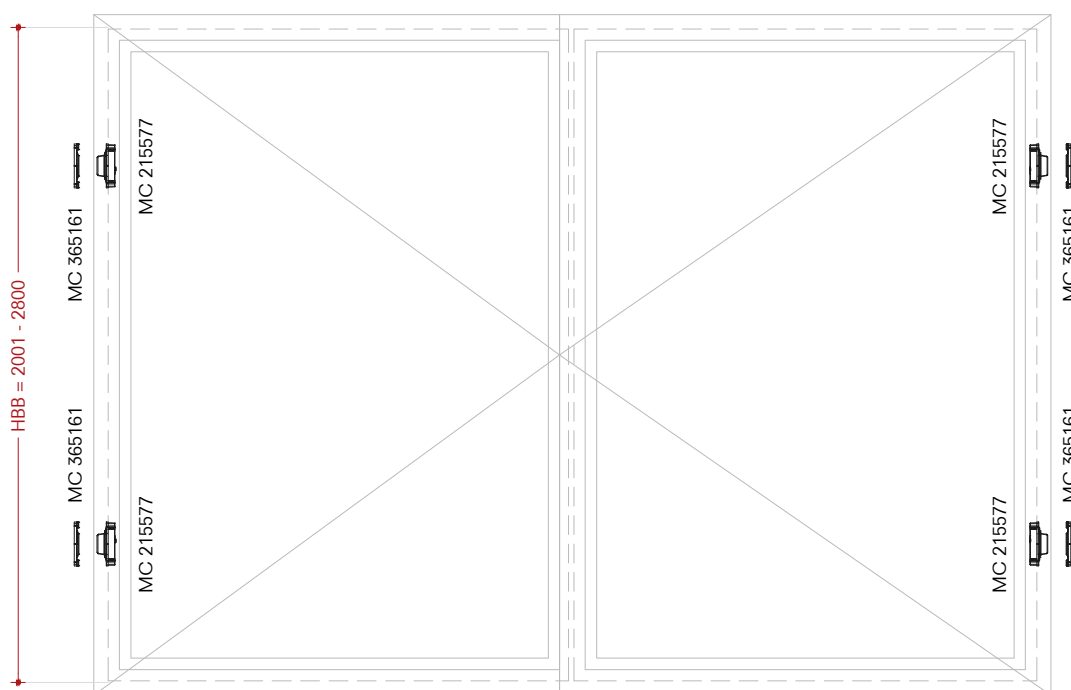
MC 215577 n°01 piece  
MC 365161 n°01 piece

K88037  
1x Kit pro Flügel

HBB = 2001 - 2800 mm

K88037  
n°1 kit par vantail

HBB = 2001 - 2800 mm



**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

**Fênêtre battante  
avec paumelle invisible**

French casement drive kits

Stulpflügelgetriebe

Crémone

K88062

HH = 190 mm

MC 202873 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88063

HH = 300 mm

MC 221901 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88064

HH = 400 mm

MC 221902 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88065

HH = 500 mm

MC 221903 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88066

HH = 600 mm

MC 221906 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88067

HH = 700 mm

MC 207242 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88068

HH = 1050 mm

MC 221907 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88069

HH = 1050 mm

MC 221908 n°01 piece  
MC 222201 n°01 piece  
MC 222209 n°01 piece  
MC 364310 n°02 pieces

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

HH = 700 mm

K88068

HH = 1050 mm

K88069

HH = 1050 mm

K88062

HH = 190 mm

K88063

HH = 300 mm

K88064

HH = 400 mm

K88065

HH = 500 mm

K88066

HH = 600 mm

K88067

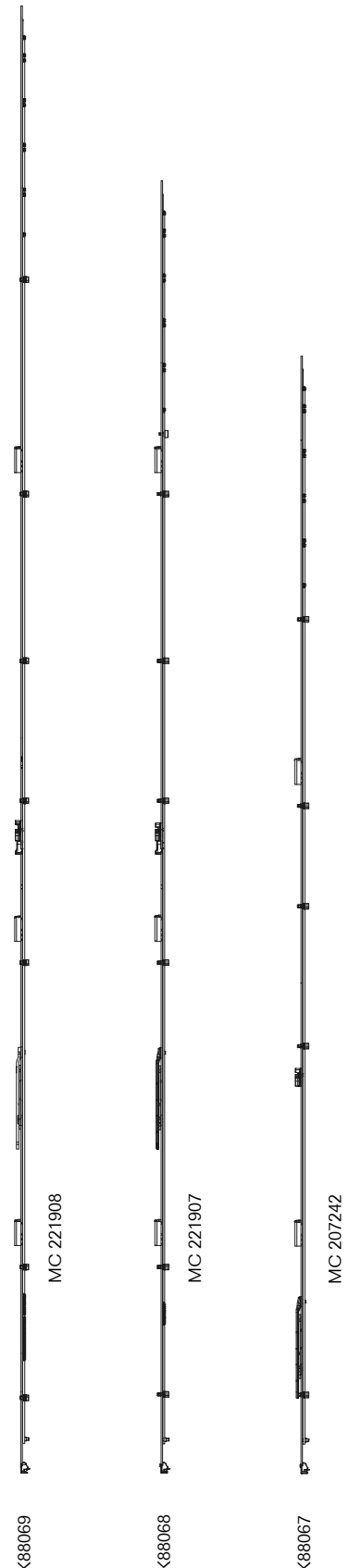
HH = 700 mm

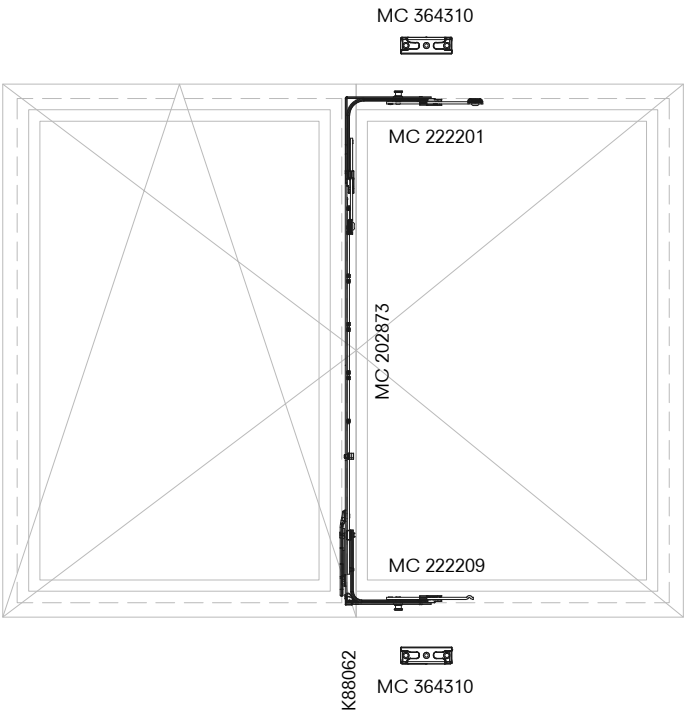
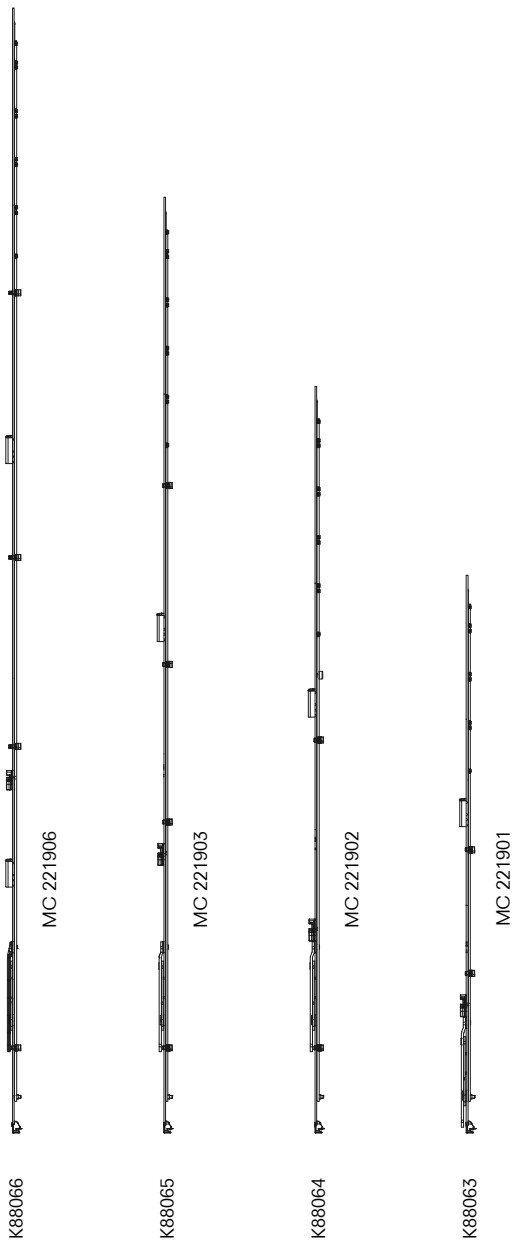
K88068

HH = 1050 mm

K88069

HH = 1050 mm





**Side hung windows  
with concealed hinge**

French casement drive kits

K88113

MC 227937 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88114

MC 202471 n°01 piece  
MC 202475 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88115

MC 202472 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

K88116

MC 202473 n°01 piece  
MC 222201 n°01 piece  
MC 364310 n°02 pieces

**Drehfenster  
mit Verdecktliegende Bänder**

Stulpflügelgetriebe

K88113

K88113

K88114

K88114

K88115

K88115

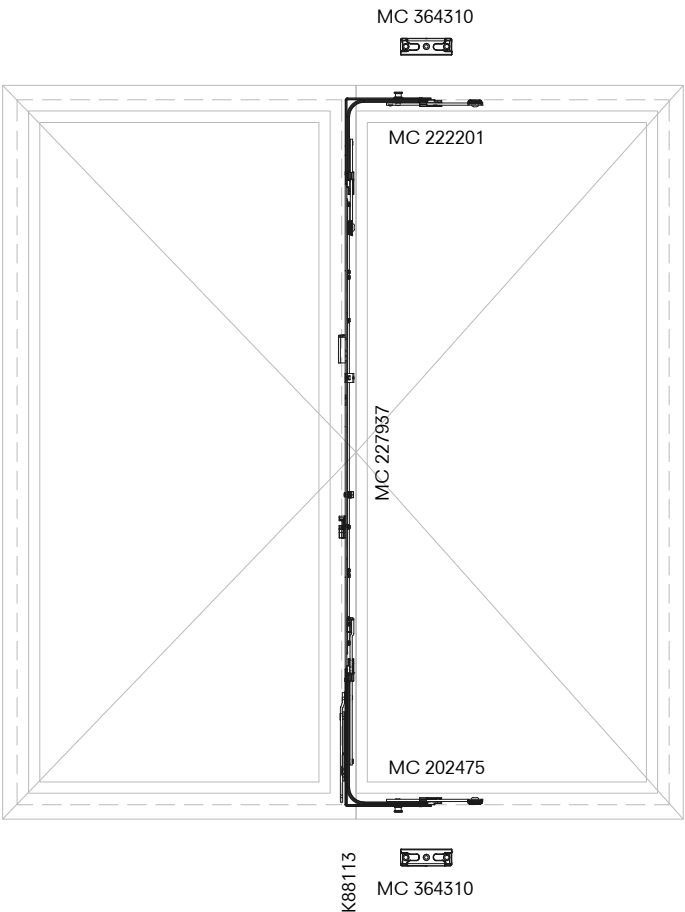
K88116

K88116

**Fênetre battante  
avec paumelle invisible**

Crémone





**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

**Fênêtre battante  
avec paumelle invisible**

French casement drive  
extension kits

Stulpflügelgetriebe

Kit d'extension Crémone

K88011

0 - 140 mm

MC 206630 n°01 piece

K88011

0 - 140 mm

K88011

0 - 140 mm

K88076

K88076

K88075

K88071

141 - 235 mm

MC 203810 n°01 piece

K88071

141 - 235 mm

K88071

141 - 235 mm



K88072

236 - 375 mm

MC 203810 n°01 piece  
MC 206630 n°01 piece

K88072

236 - 375 mm

K88072

236 - 375 mm

K88073

376 - 470 mm

MC 208333 n°01 piece

K88073

376 - 470 mm

K88073

376 - 470 mm

K88074

471 - 610 mm

MC 208333 n°01 piece  
MC 206630 n°01 piece

K88074

471 - 610 mm

K88074

471 - 610 mm

K88075

611 - 705 mm

MC 208333 n°01 piece  
MC 203810 n°01 piece

K88075

611 - 705 mm

K88075

611 - 705 mm

K88076

706 - 845 mm

MC 206630 n°01 piece  
MC 203810 n°01 piece  
MC 208333 n°01 piece

K88076

706 - 845 mm

K88076

706 - 845 mm

K88077

846 - 940 mm

MC 208333 n°02 pieces

K88077

846 - 940 mm

K88077

846 - 940 mm



K88074



K88073



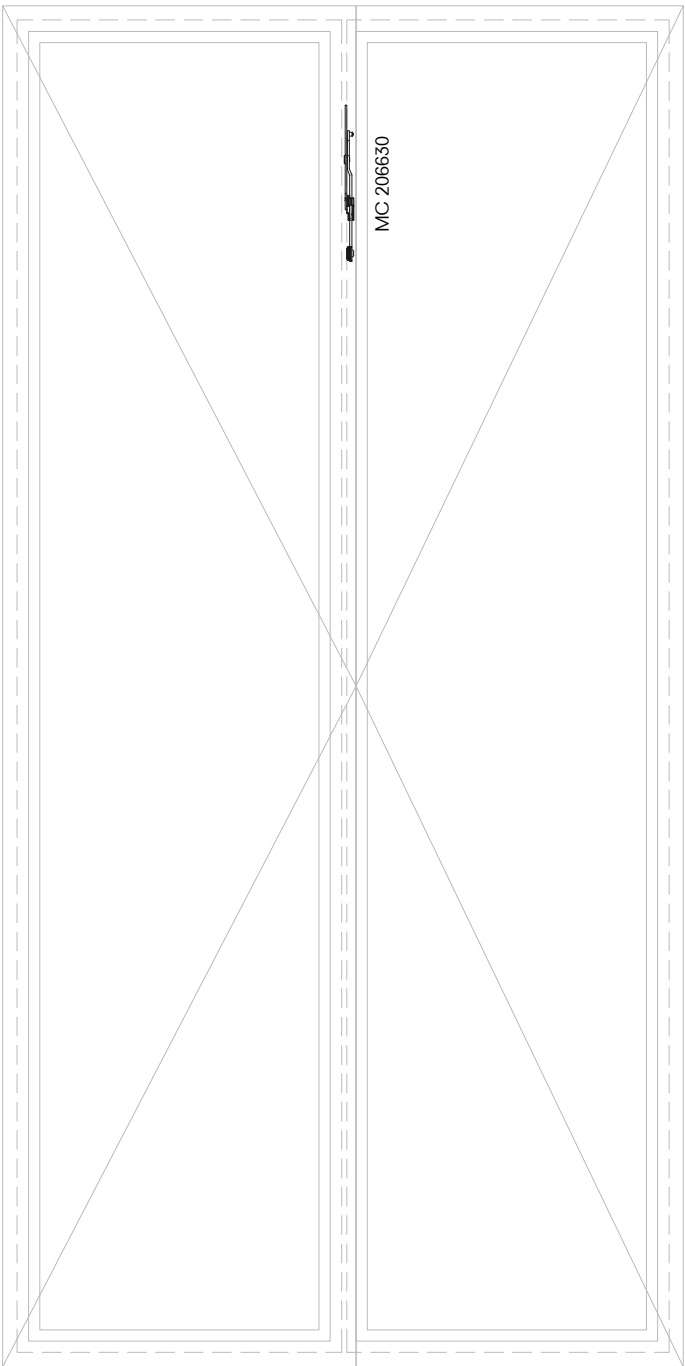
K88072



K88071



K88011



**Side hung windows  
with concealed hinge**

Door catch

K88061

HBB = 661 - 2800 mm

MC 201168 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

Türverschluss

K88061

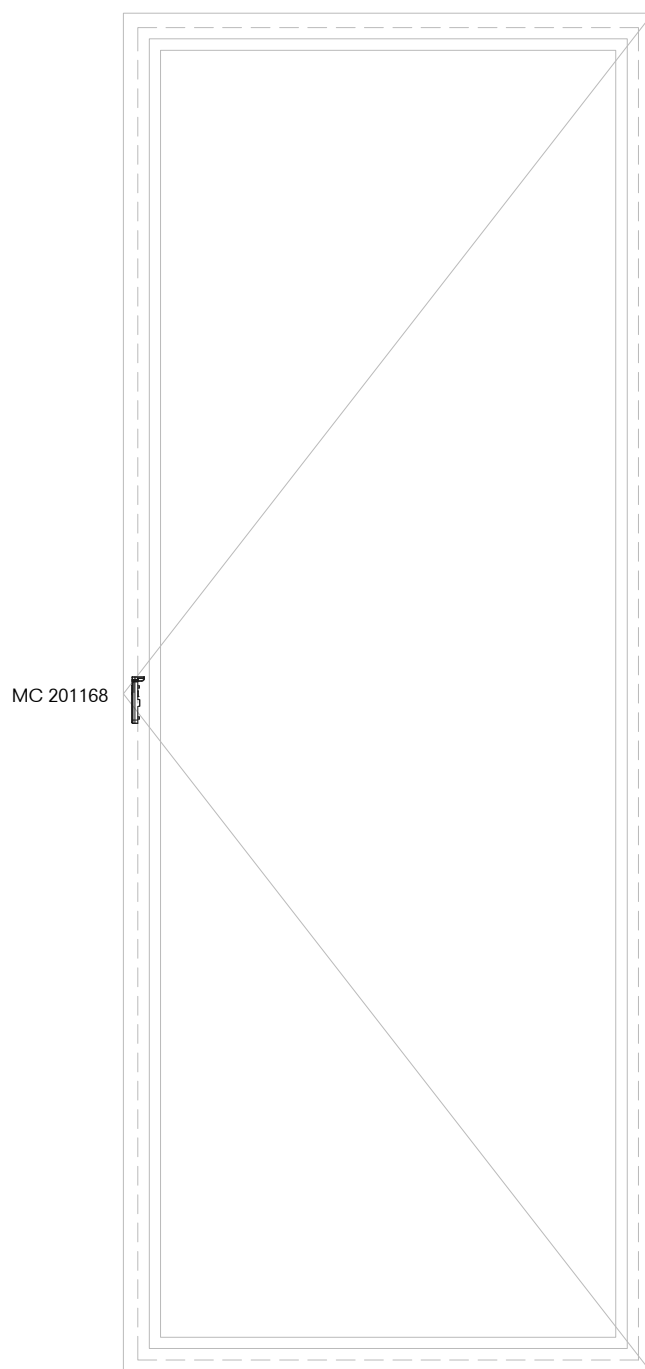
HBB = 661 - 2800 mm

**Fênêtrê battante  
avec paumelle invisible**

Loquet de porte

K88061

HBB = 661 - 2800 mm



**Side hung windows  
with concealed hinge**

Opening restrictor

K88033

LBB = 490 - 1400 mm

MC 103623 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

Öffnungsbegrenzer

K88033

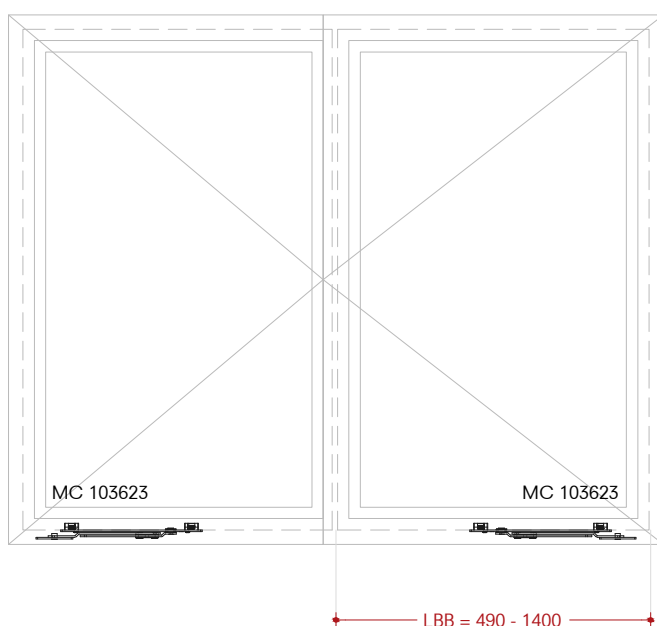
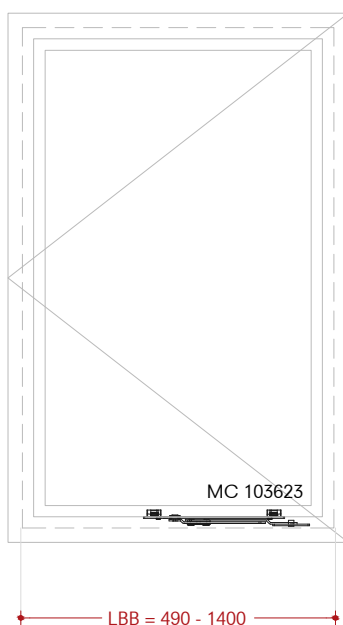
LBB = 490 - 1400 mm

K88033

LBB = 490 - 1400 mm

**Fênêtre battante  
avec paumelle invisible**

Compas de limitation d'ouverture



**Side hung windows  
with concealed hinge**

Load transfer 180 kg

E99510-02

Right

MC 105336 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

Lastabtragung 180 kg

E99510-02

Recht

E99510-02

Droite

**Fênêtre battante  
avec paumelle invisible**

Tige de support 180 kg

E99511-02

Left

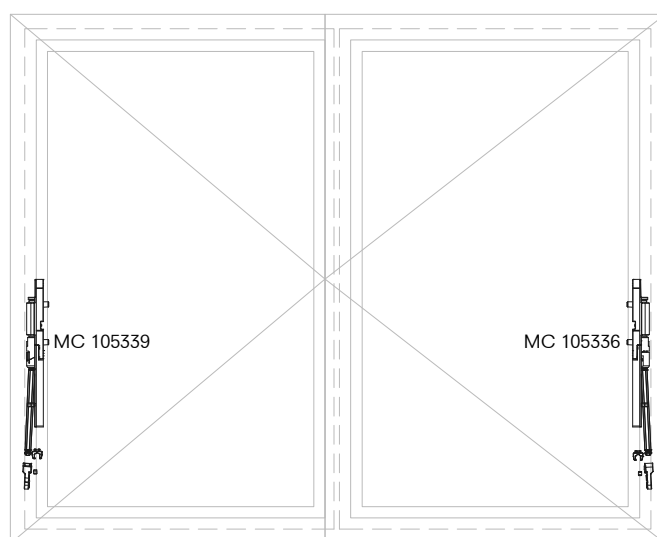
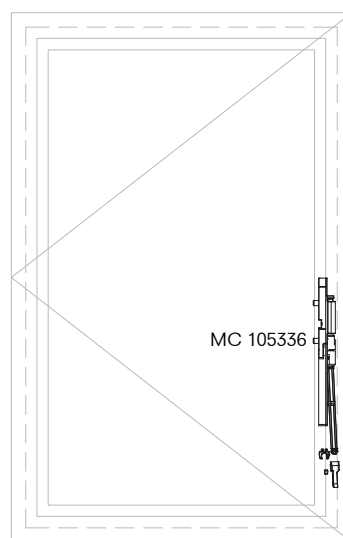
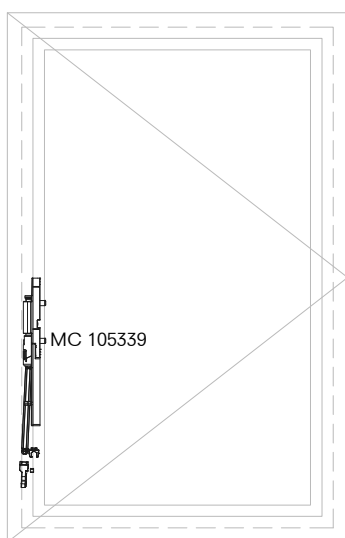
MC 105339 n°01 piece

E99511-02

Link

E99511-02

Gauche



**Side hung windows  
with concealed hinge**

Alarm contact

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

**Drehfenster  
mit Verdecktliegende Bänder**

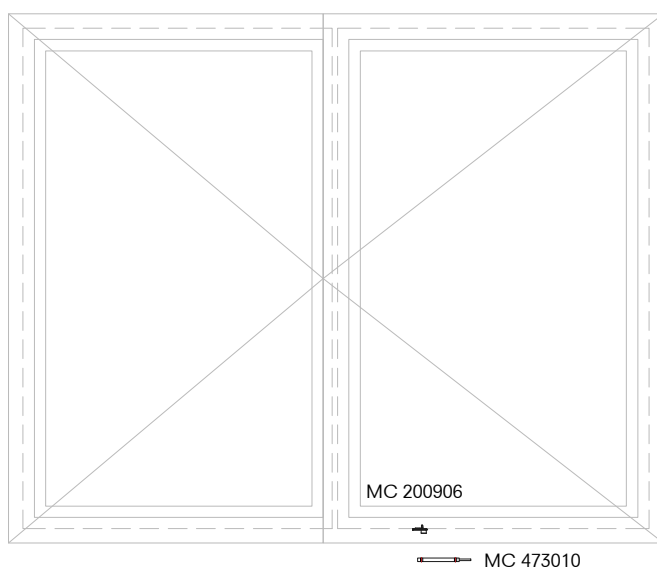
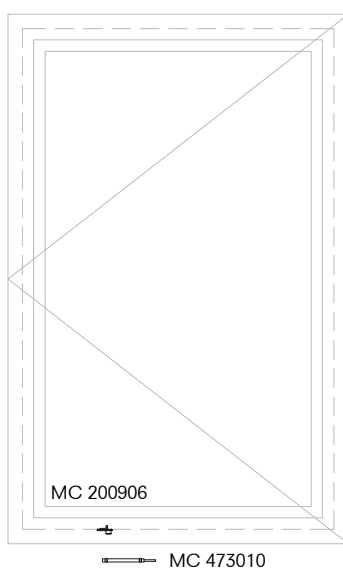
Alarmkontakt

K99062

**Fênêtre battante  
avec paumelle invisible**

Contact d'alarme

K99062



**Side hung windows  
with concealed hinge**

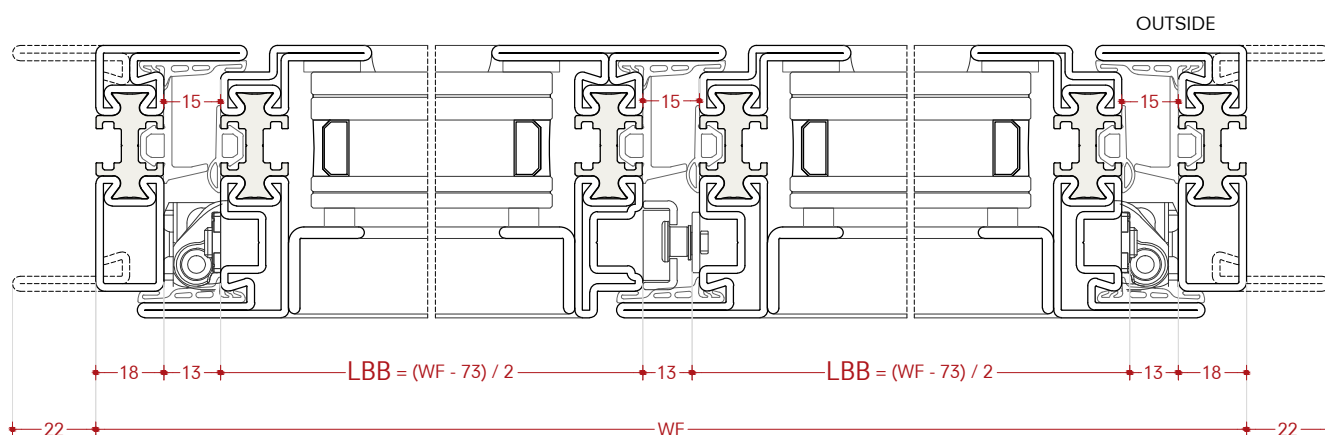
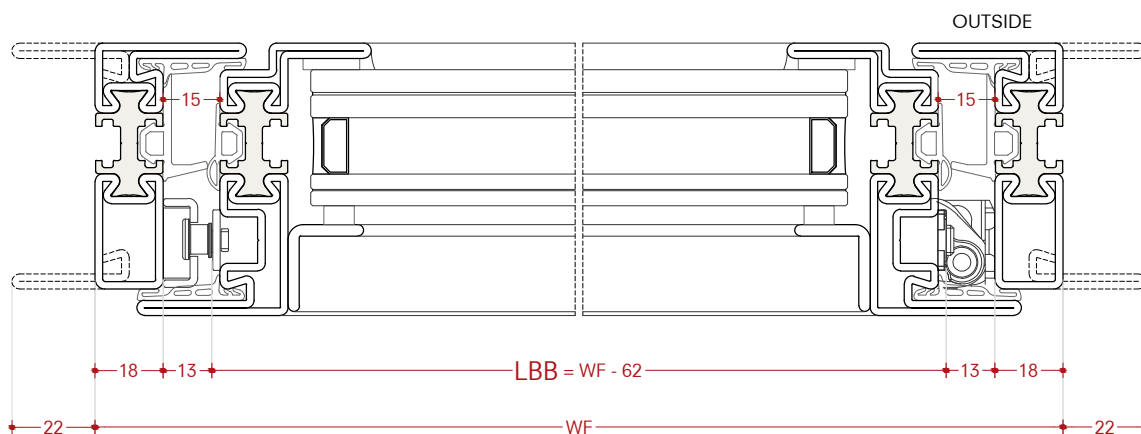
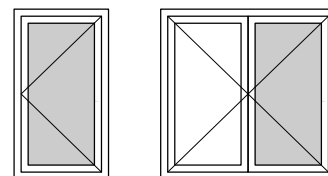
Determination of LBB  
(Groove Hardware Lenght)

**Drehfenster  
mit Verdecktliegende Bänder**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre battante  
avec paumelle invisible**

Détermination du LBB  
(largeur de rainure de quincaillerie)



**Side hung windows  
with concealed hinge**

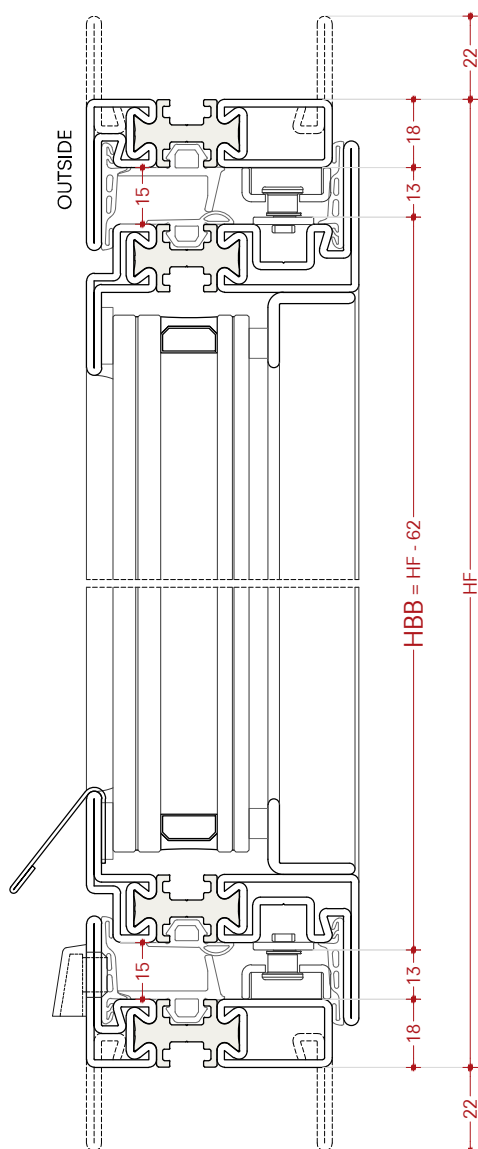
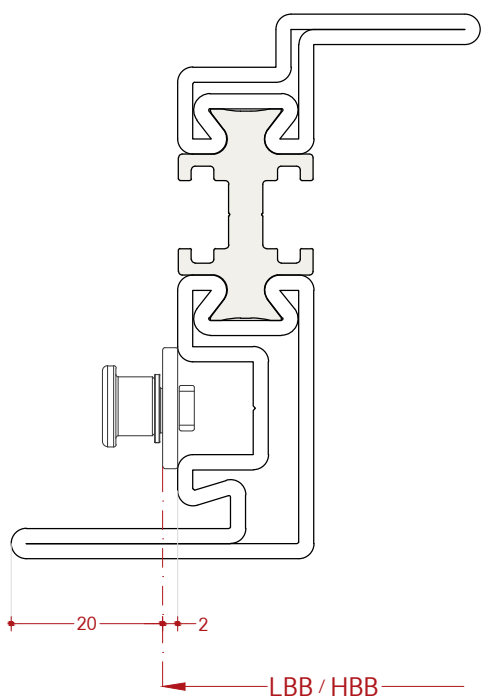
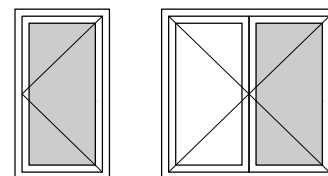
Determination of HBB  
(Groove Hardware Height)

**Drehfenster  
mit Verdecktliegende Bänder**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre battante  
avec paumelle invisible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

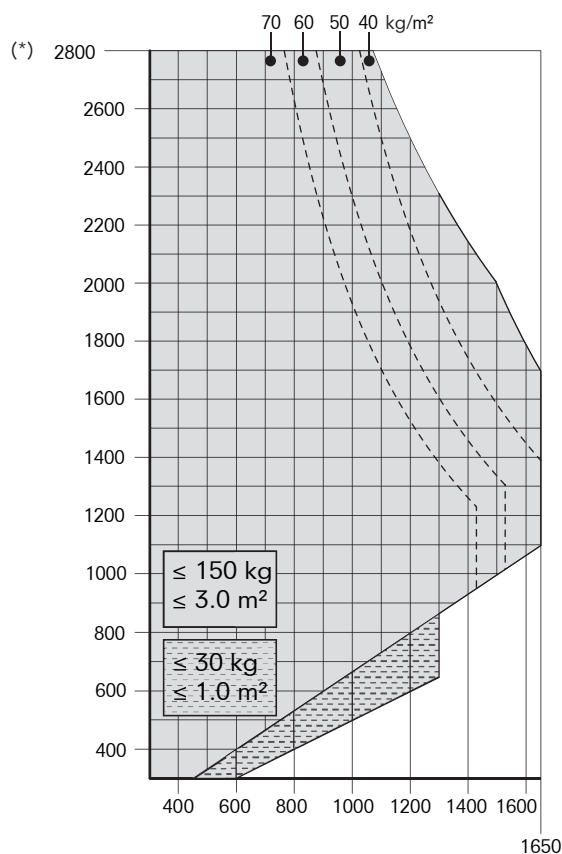
**Fênêtre battante  
avec paumelle invisible**

**Load capacity tables**

**Gewichtstabellen**

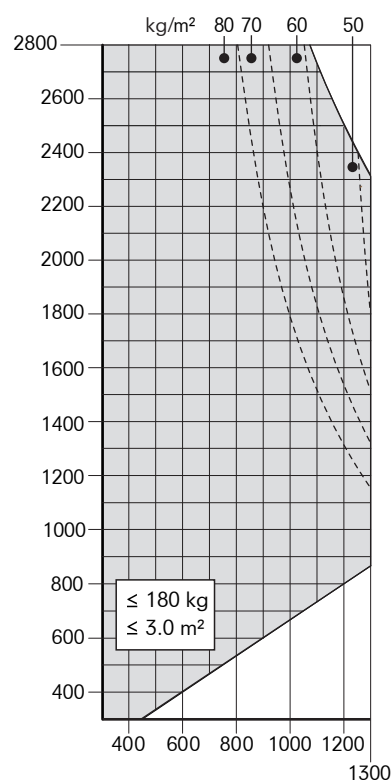
**Capacité maximale**

Side hung window concealed accessories capacity  
Zubehör verdeckt Drehfenster  
Fênêtre à vantail accessoires cachée



(\*) Extendable to a height of 3000 mm using weld-on hinges.

Side hung window concealed accessories capacity  
with support rod E99510-02 / E99511-02  
Drehfenster verdeckt mit Lastabtragung E99510-02 / E99511-02  
Fênêtre à vantail accessoires cachée  
avec tige de support E99510-02 / E99511-02



(\*) Durch Anschweißbänder auf eine Höhe von 3000 mm erweiterbar.

(\*) Extensible jusqu'à une hauteur de 3000 mm grâce à des paumelles à souder.

**Standard handle height**

**Standard-Griffhöhe**

**Hauteur de poignée standard**

|               | HBB min | HBB max | H handle |
|---------------|---------|---------|----------|
| <b>K88003</b> | 370     | 660     | 190      |
| <b>K88004</b> | 661     | 840     | 300      |
| <b>K88005</b> | 841     | 1090    | 400      |
| <b>K88006</b> | 1091    | 1340    | 500      |
| <b>K88007</b> | 1341    | 1590    | 600      |
| <b>K88008</b> | 1591    | 1700    | 700      |
| <b>K88009</b> | 1701    | 1950    | 1050     |
| <b>K88010</b> | 1951    | 2200    | 1050     |



**Side hung windows  
with concealed hinge**

**Drehfenster  
mit Verdecktliegende Bänder**

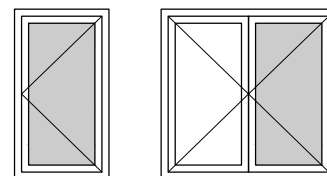
**Fênêtre battante  
avec paumelle invisible**

Step #1 - Basic kit choice

Schritt #1 - Auswahl Grdundgarnitur

Étape #1 - Choix de kit de base

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88043</b> | 465     | 1400    | 455     | 2800    |
| <b>K88044</b> | 370     | 464     | 455     | 2800    |
| <b>K88044</b> | 465     | 815     | 370     | 454     |



LBB = Groove Hardware Lenght  
HBB = Groove Hardware Height

LBB = Beschlagnutbreite  
HBB = Höhe der Beschlagnut

LBB = largeur de rainure de quincaillerie  
HBB = hauteur de rainure de quincaillerie

Step #2 - Gear kit choice

Schritt #2 - Garnitur Getriebe

Étape #2 - Choix de kit d'équipement

|               | HH   | HDG    | CRP   | HCRN  | HBB min | HBB max<br>(without extension) | HBB max<br>(with extension) |
|---------------|------|--------|-------|-------|---------|--------------------------------|-----------------------------|
| <b>K88003</b> | 190  | 555    | 220   | 5     | 370     | 454                            | 2335                        |
| <b>K88003</b> | 190  | 555    | 220   | 113.5 | 455     | 660                            | 2540                        |
| <b>K88004</b> | 300  | 736.5  | 190.5 | 113.5 | 661     | 840                            | 2720                        |
| <b>K88005</b> | 400  | 986.5  | 260.5 | 113.5 | 841     | 1090                           | 2970 (*)                    |
| <b>K88006</b> | 500  | 1236.5 | 260.5 | 113.5 | 1091    | 1340                           | 3150 (*)                    |
| <b>K88007</b> | 600  | 1486.5 | 260.5 | 113.5 | 1341    | 1590                           | 3150 (*)                    |
| <b>K88008</b> | 700  | 1596.5 | 260.5 | 113.5 | 1591    | 1700                           | 3150 (*)                    |
| <b>K88009</b> | 1050 | 1846.5 | 260.5 | 113.5 | 1701    | 1950                           | 3150 (*)                    |
| <b>K88010</b> | 1050 | 2096.5 | 260.5 | 113.5 | 1951    | 2200                           | 3150 (*)                    |

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

(\*) = Over 2800 mm technical department  
confirmation needed.

(\*) = Bestätigung der technischen Abteilung  
erforderlich für Abmessungen größer 2800  
mm

(\*) = Confirmation du service technique  
nécessaire pour les dimensions supérieures  
à 2800 mm

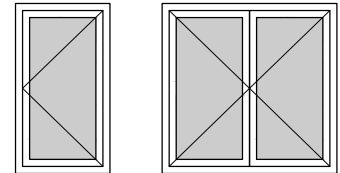
Step #3 - Extension kits choice

Schritt #3 - Garnitur  
Getriebeverlängerung

Étape #3 - Choix de kit extension  
d'équipement

**HBB \* - HCRN - HDG =** Extension kit length  
Getriebeverlängerung Länge  
largeur kit extension

|                        | MinL | MaxL |
|------------------------|------|------|
| <b>K88011</b>          | 0    | 140  |
| <b>K88012</b>          | 141  | 235  |
| <b>K88059</b>          | 236  | 375  |
| <b>K88013</b>          | 376  | 470  |
| <b>K88014</b>          | 471  | 610  |
| <b>K88015</b>          | 611  | 705  |
| <b>K88060</b>          | 706  | 845  |
| <b>K88016</b>          | 846  | 940  |
| <b>K88016 / K88011</b> | 941  | 1080 |
| <b>K88016 / K88012</b> | 1081 | 1175 |
| <b>K88016 / K88059</b> | 1176 | 1315 |
| <b>K88016 / K88013</b> | 1316 | 1410 |
| <b>K88016 / K88014</b> | 1411 | 1550 |
| <b>K88016 / K88015</b> | 1551 | 1650 |
| <b>K88016 / K88060</b> | 1651 | 1785 |
| <b>K88016 / K88016</b> | 1786 | 1880 |



\* See HBB information page

MinL = Min Length (mm)  
MaxL = Max Length (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = Min Länge (mm)  
MaxL = Max Länge (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

MinL = largeur minimal (mm)  
MaxL = largeur maximum (mm)

Example:  
HBB = 1780 mm; HM = 300 mm  
1780 - 113.5 - 736.5 = 930 mm ---> K88016

HBB = 2700 mm; HM = 1050 mm  
2700 - 113.5 - 2096.5 = 490 mm ---> K88014

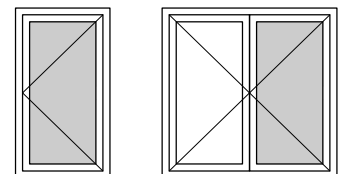
Step #4 - Hinges kit choice  
n°1 kit per leaf

Schritt #4 - Garnitur Bänder  
1x Kit pro Flügel

Étape #4 - Choix kit paumelles  
n°1 kit par vantail

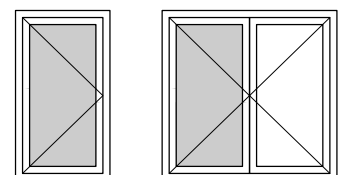
Left / Link / Droite

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88035</b> | 370     | 1400    | 365     | 2800    |



Right / Recht / Gauche

|               | LBB min | LBB max | HBB min | HBB max |
|---------------|---------|---------|---------|---------|
| <b>K88034</b> | 370     | 1400    | 365     | 2800    |

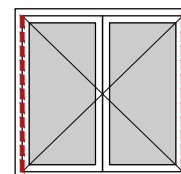
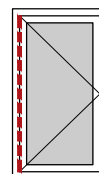


Step #5 - Concealed compression lock  
kit choice for 2nd leaf  
n°1 kit per leaf

Schritt #5 - Standflügel Anpressverschluss  
verdeckt  
1x Kit pro Flügel

Étape #5 - Choix kit de serrure à  
compression caché  
pour 2e ouvrant  
n°1 kit par vantail

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88036</b> | 1280    | 2000    |
| <b>K88037</b> | 2001    | 2800    |

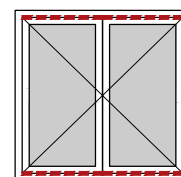
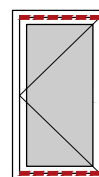


Step #6 - Additional top and bottom  
locking point choice  
n°1 kit per leaf

Schritt #6 - Zusätzlich oben und unten  
Verriegelungspunkt  
1x Kit pro Flügel

Étape #6 - Choix haut et bas  
supplémentaires point de  
verrouillage  
n°1 kit par vantail

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88045</b> | 801     | 1280    |
| <b>K88046</b> | 1281    | 1400    |

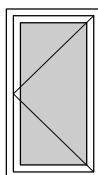


Step #7 - Lifting component  
Only for single leaf window

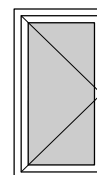
Schritt #7 - Hebekomponente  
Nur für Einflügliges Fenster

Étape #7 - Composant de levage  
Seulement pour fenêtre  
à un vantail

**K88047**



**K88048**



Step #8 - French casement drive  
and extension kit choice

Schritt #8 - Erweiterungssets  
Stulpflügelgetriebe

Étape #8 - Choix kit Crémone  
et d'extension

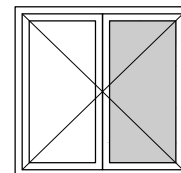
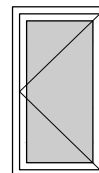
| Drive gear kit |   | French casement<br>drive kit |  | Extension kit<br>for 1st leaf |   | French casement<br>drive extension kit |
|----------------|---|------------------------------|--|-------------------------------|---|----------------------------------------|
| K88003         | → | K88062                       |  | K88011                        | → | K88011                                 |
| K88004         | → | K88063                       |  | K88012                        | → | K88071                                 |
| K88005         | → | K88064                       |  | K88059                        | → | K88072                                 |
| K88006         | → | K88065                       |  | K88013                        | → | K88073                                 |
| K88007         | → | K88066                       |  | K88014                        | → | K88074                                 |
| K88008         | → | K88067                       |  | K88015                        | → | K88075                                 |
| K88009         | → | K88068                       |  | K88060                        | → | K88076                                 |
| K88010         | → | K88069                       |  | K88016                        | → | K88077                                 |
|                |   |                              |  | K88016<br>K88011              | → | K88077<br>K88011                       |
|                |   |                              |  | K88016<br>K88012              | → | K88077<br>K88071                       |
|                |   |                              |  | K88016<br>K88059              | → | K88077<br>K88072                       |
|                |   |                              |  | K88016<br>K88013              | → | K88077<br>K88073                       |
|                |   |                              |  | K88016<br>K88014              | → | K88077<br>K88074                       |
|                |   |                              |  | K88016<br>K88015              | → | K88077<br>K88075                       |
|                |   |                              |  | K88016<br>K88060              | → | K88077<br>K88076                       |
|                |   |                              |  | K88016<br>K88016              | → | K88077<br>K88077                       |

Step #9 - Door catch choice

Schritt #9 - Türverschluss

Étape #9 - Choix loquet de porte

|               | HBB min | HBB max |
|---------------|---------|---------|
| <b>K88061</b> | 661     | 2800    |

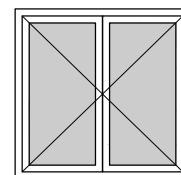
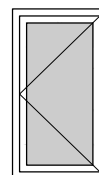


Step #10 - Opening restrictor choice

Schritt #10 - Öffnungsbegrenzer

Étape #10 - Choix compas de limitation d'ouverture

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88033</b> | 490     | 1400    |

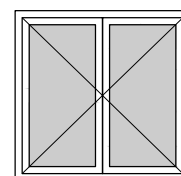
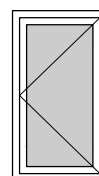


Step #11 - Load transfer 180 kg choice

Schritt #11 - Lastabtragung 180 kg

Étape #11 - Choix tige de support 180 kg

|                  |              | HBB min | HBB max |
|------------------|--------------|---------|---------|
| <b>E99510-02</b> | <b>Right</b> | 2000    | 2800    |
| <b>E99511-02</b> | <b>Left</b>  | 2000    | 2800    |

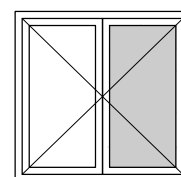
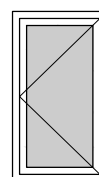


Step #12 - Alarm contact choice

Schritt #12 - Alarmkontakt

Étape #12 - Choix contact d'alarme

|               |
|---------------|
| <b>K99062</b> |
|---------------|

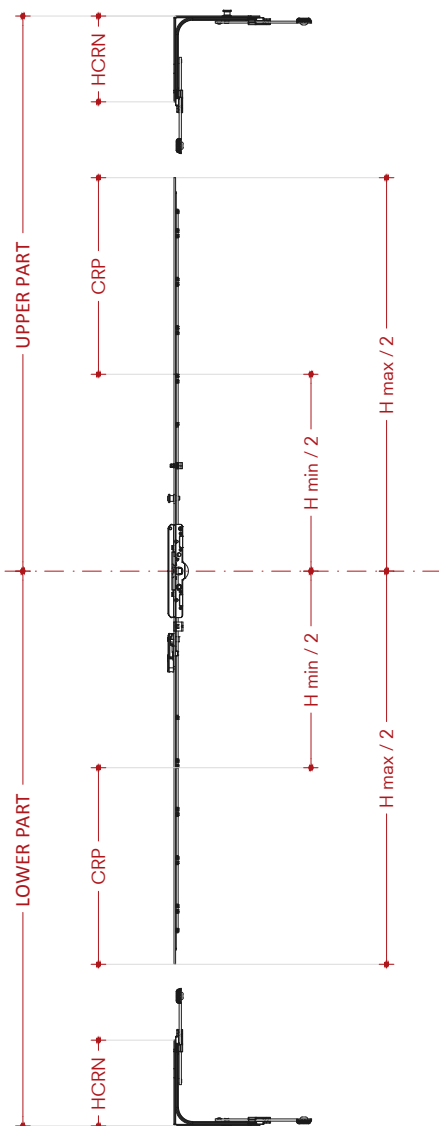


Step #12 - Double croppable gear  
kits choice  
(Instead of Step #3 and #4)

Schritt #12 - Beidseitig kürzbare  
Garnitur  
(Anstelle von Schritt #3 und #4)

Étape #12 - Choix Kits d'équipement à  
double recadrage  
(Au lieu des étapes #3 et #4)

|               | h min handle | HDG    | H min / 2 | H max / 2 | CRP       | HCRN  | HBB min |
|---------------|--------------|--------|-----------|-----------|-----------|-------|---------|
| <b>K88109</b> | 265          | 640.5  | 151       | 260       | 170 + 170 | 113.5 | 527.5   |
| <b>K88110</b> | 375          | 1040.5 | 261       | 510       | 260 + 260 | 113.5 | 747.5   |
| <b>K88111</b> | 625          | 1540.5 | 511       | 760       | 260 + 260 | 113.5 | 1247.5  |
| <b>K88112</b> | 875          | 2040.5 | 761       | 1020      | 260 + 260 | 113.5 | 1747.5  |



$$\text{UPPER PART} = \text{HBB} - \text{HH} - \text{HCRN}$$

$$\text{LOWER PART} = \text{HH} - \text{HCRN}$$

Choose the smallest value and find the right gear kit  
between Hmin/2 and Hmax/2 range columns.

Wählen Sie den kleinsten Wert und finden Sie das passende Garnitur Getriebe  
zwischen den Bereichsspalten Hmin/2 und Hmax/2

Choisissez la plus petite valeur et trouvez le bon kit d'équipement  
entre les colonnes de plage Hmin/2 et Hmax/2

#### EXTENSION KIT:

$$\text{UPPER}^* = \text{HBB} - \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

$$\text{LOWER}^* = \text{HH} - \text{HCRN} - \text{H max} / 2 \rightarrow$$

CHECK ON THE  
EXTENSION TABLE  
(STEP 3)

\* with negative value extension are not needed.

\* Bei negativem Wert werden keine Verlängerungen benötigt.

\* avec une valeur négative, aucune extension n'est nécessaire.

HH = Height Handle  
HDG = Height Drive Gear  
CRP = Cropping measures  
HCRN = Height Corner  
HBB = Groove Hardware Height

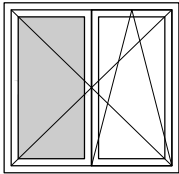
HH = Griffsitz Mittig  
HDG = Gangführungshöhe  
CRP = Schnittmaß  
HCRN = Eckhöhe  
HBB = Höhe der Beschlagnut

HH = hauteur de la poignée  
HDG = hauteur du guide de vitesse  
CRP = mesure de coupe  
HCRN = hauteur d'angle  
HBB = hauteur de rainure de quincaillerie

Step #13 - French casement drive and extension kit choice

Schritt #13 - Verlängerungssets Stulpflügelgetriebe

Étape #13 - Choix kit Crémone et d'extension



| Drive gear kit |   | French casement drive kit |  | Extension kit for 1st leaf |   | French casement drive extension kit |
|----------------|---|---------------------------|--|----------------------------|---|-------------------------------------|
| K88109         | → | K88113                    |  | K88011                     | → | K88011                              |
| K88110         | → | K88114                    |  | K88012                     | → | K88071                              |
| K88111         | → | K88115                    |  | K88059                     | → | K88072                              |
| K88112         | → | K88116                    |  | K88013                     | → | K88073                              |
|                |   |                           |  | K88014                     | → | K88074                              |
|                |   |                           |  | K88015                     | → | K88075                              |
|                |   |                           |  | K88060                     | → | K88076                              |
|                |   |                           |  | K88016                     | → | K88077                              |
|                |   |                           |  | K88016 K88011              | → | K88077 K88011                       |
|                |   |                           |  | K88016 K88012              | → | K88077 K88071                       |
|                |   |                           |  | K88016 K88059              | → | K88077 K88072                       |
|                |   |                           |  | K88016 K88013              | → | K88077 K88073                       |
|                |   |                           |  | K88016 K88014              | → | K88077 K88074                       |
|                |   |                           |  | K88016 K88015              | → | K88077 K88075                       |
|                |   |                           |  | K88016 K88060              | → | K88077 K88076                       |
|                |   |                           |  | K88016 K88016              | → | K88077 K88077                       |

**Bottom hung windows  
with visible hinge**

**Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre à soufflet  
avec paumelle visible**

Gear kits

Garnitur Getriebe

Kits d'équipement

K88049

LBB = 390 - 500 mm

MC 208323 n°01 piece  
MC 364310 n°02 pieces

K88049

LBB = 390 - 500 mm

K88049

LBB = 390 - 500 mm

K88050

LBB = 501 - 700 mm

MC 208324 n°01 piece  
MC 364310 n°02 pieces

K88050

LBB = 501 - 700 mm

K88050

LBB = 501 - 700 mm

K88051

LBB = 701 - 1000 mm

MC 208325 n°01 piece  
MC 364310 n°02 pieces

K88051

LBB = 701 - 1000 mm

K88051

LBB = 701 - 1000 mm

K88052

LBB = 1001 - 1400 mm

MC 208326 n°01 piece  
MC 364310 n°03 pieces

K88052

LBB = 1001 - 1400 mm

K88052

LBB = 1001 - 1400 mm

K88053

LBB = 1401 - 1800 mm

MC 208327 n°01 piece  
MC 364310 n°03 pieces

K88053

LBB = 1401 - 1800 mm

K88053

LBB = 1401 - 1800 mm

K88054

LBB = 1801 - 2250 mm

MC 202497 n°01 piece  
MC 212211 n°02 pieces  
MC 364310 n°05 pieces

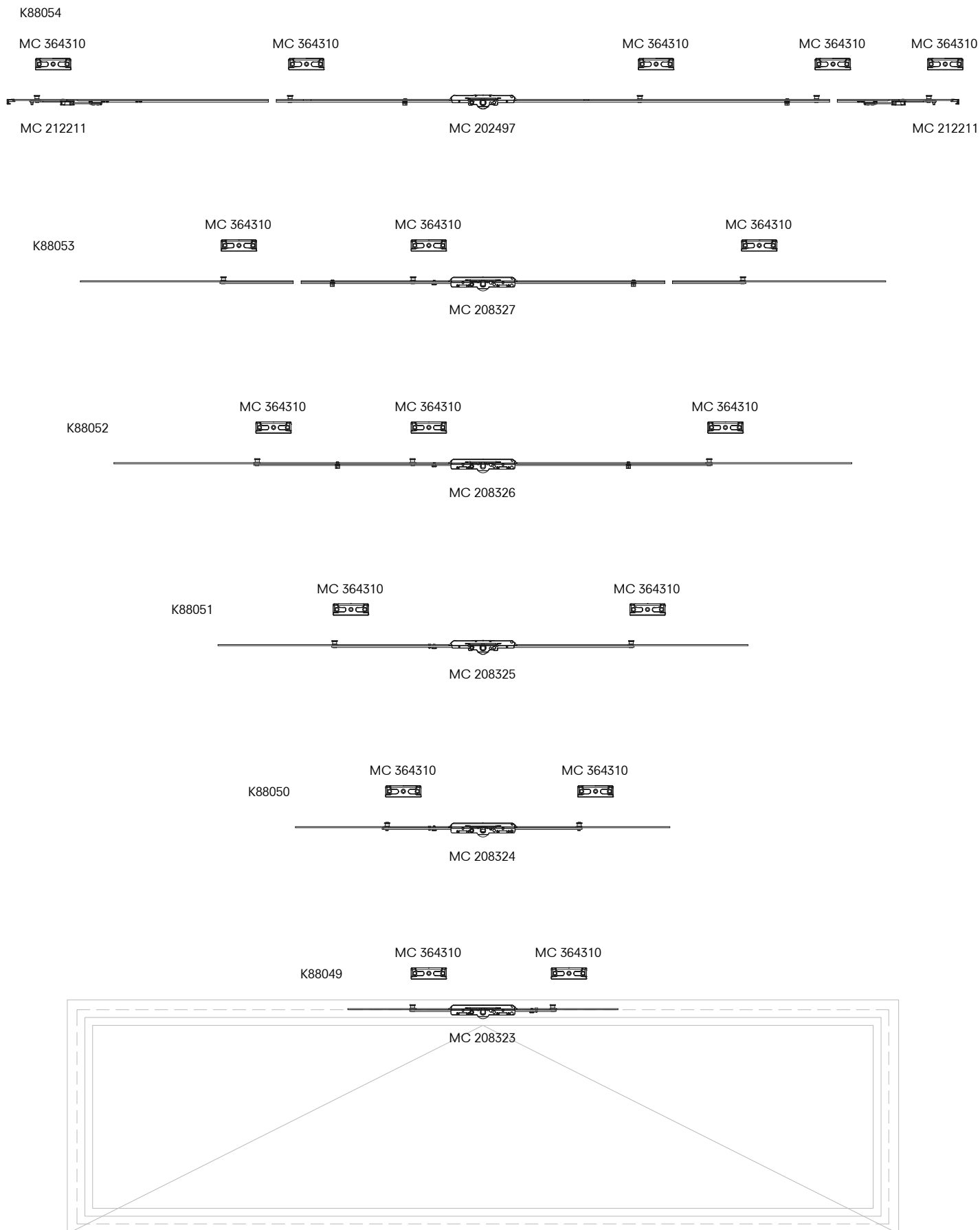
K88054

LBB = 1801 - 2250 mm

K88054

LBB = 1801 - 2250 mm





**Bottom hung windows  
with visible hinge**

Hinges kits

K88040  
n°1 kit per hinge

MC 52321 n°01 piece  
MC 52481 n°01 piece  
MC 52486 n°01 piece  
MC 94491 n°01 piece

**Kippfenster  
mit Aufgesetzter Beschlag**

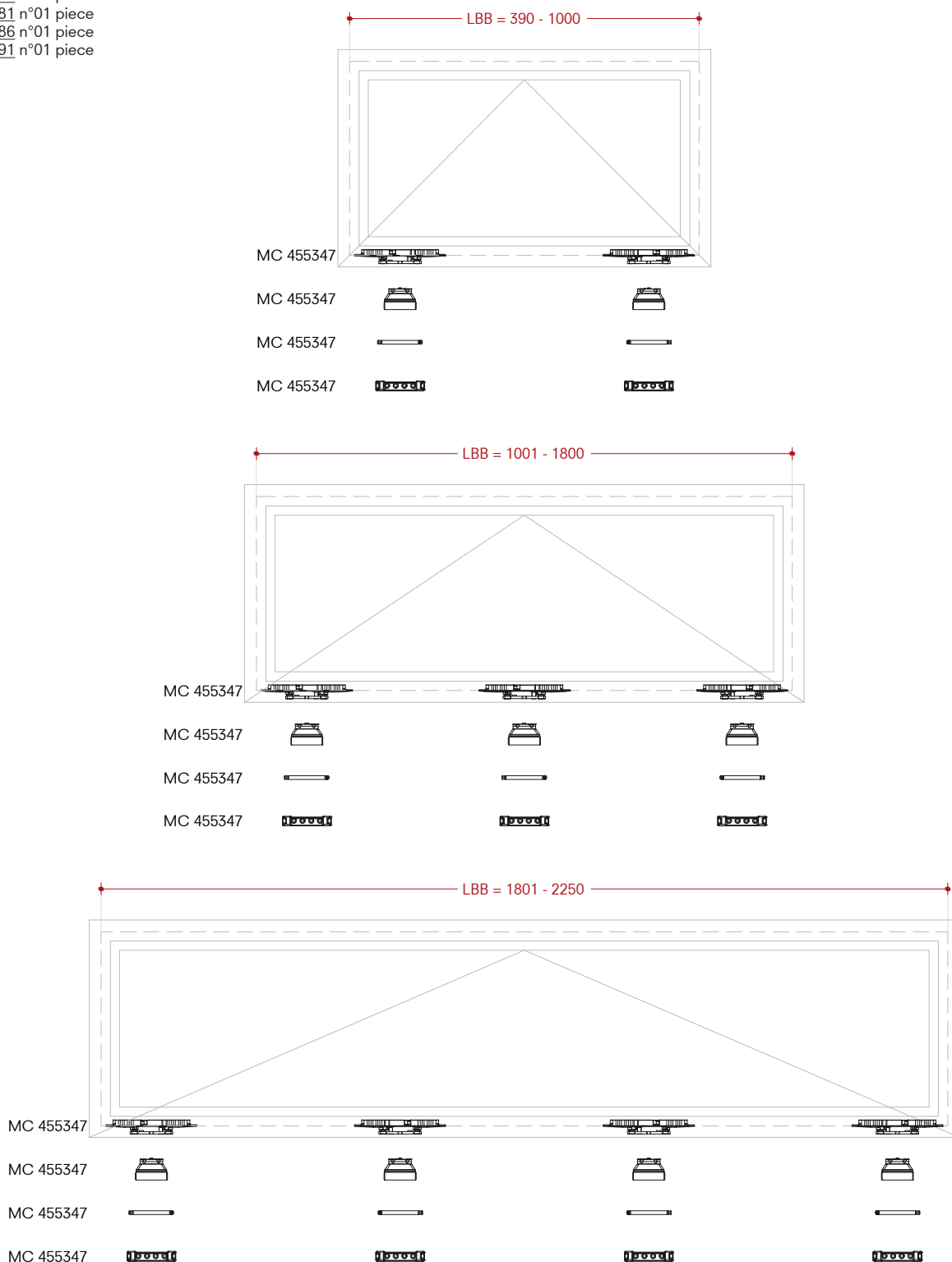
Garnitur Bänder

K88040  
1x Kit pro Band

**Fênêtre à soufflet  
avec paumelle visible**

Kits paumelles

K88040  
n°1 kit par paumelle



**Bottom hung windows  
with visible hinge**

Opening restrictor

E99205-05

With clicks.  
HBB = 400 - 1200 mm

n°02 pieces

[See opening restrictor installation](#)

**Kippfenster  
mit Aufgesetzter Beschlag**

Öffnungsbegrenzer

E99205-05

Mit Klicks.  
HBB = 400 - 1200 mm

2x Stück

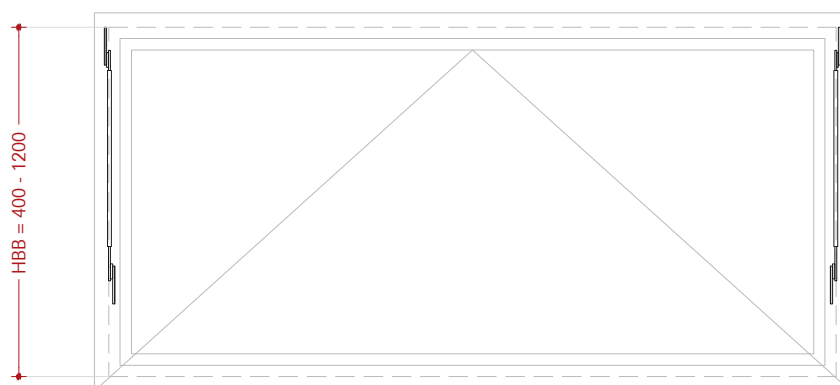
**Fênêtre à soufflet  
avec paumelle visible**

Compas de limitation d'ouverture

E99205-05

Avec des clics.  
HBB = 400 - 1200 mm

n°02 unités



E99206-03

HBB = 400 - 1200 mm

n°02 pieces

[See opening restrictor installation](#)

E99206-03

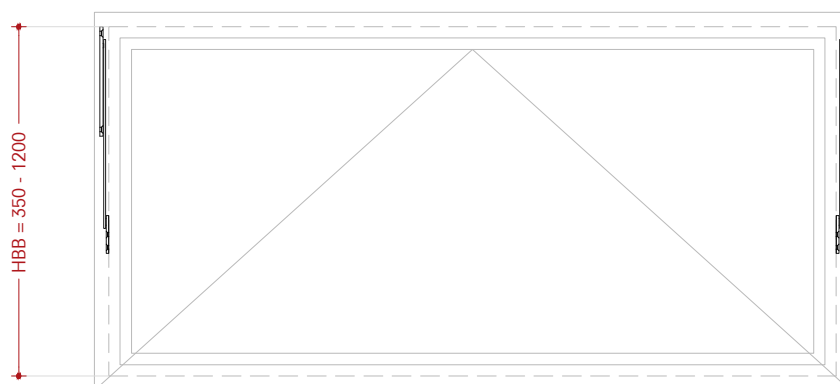
HBB = 400 - 1200 mm

2x Stück

E99206-03

HBB = 400 - 1200 mm

n°02 unités



**Bottom hung windows  
with visible hinge**

Opening restrictor

K88107

HBB = 300 - 500 mm

MC 455347 n°02 pieces

**Kippfenster  
mit Aufgesetzter Beschlag**

Öffnungsbegrenzer

K88107

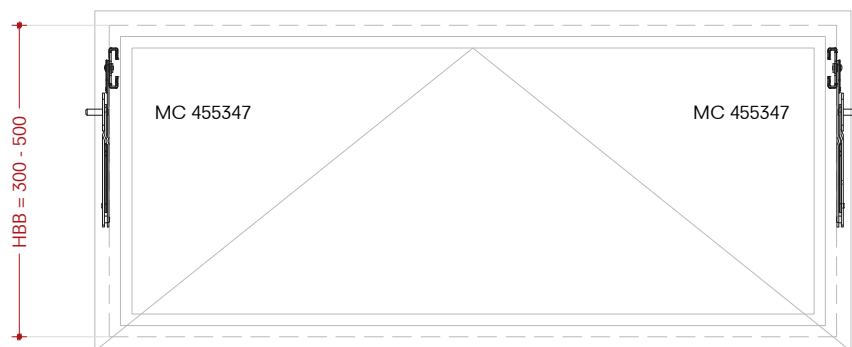
HBB = 300 - 500 mm

K88107

HBB = 300 - 500 mm

**Fênêtre à soufflet  
avec paumelle visible**

Compas de limitation d'ouverture



K88108

HBB = 501 - 1200 mm

MC 455348 n°02 pieces

K88108

HBB = 501 - 1200 mm

K88108

HBB = 501 - 1200 mm



Bottom hung windows  
with visible hinge

Kippfenster  
mit Aufgesetzter Beschlag

Fênêtre à soufflet  
avec paumelle visible

Alarm contact

Alarmkontakt

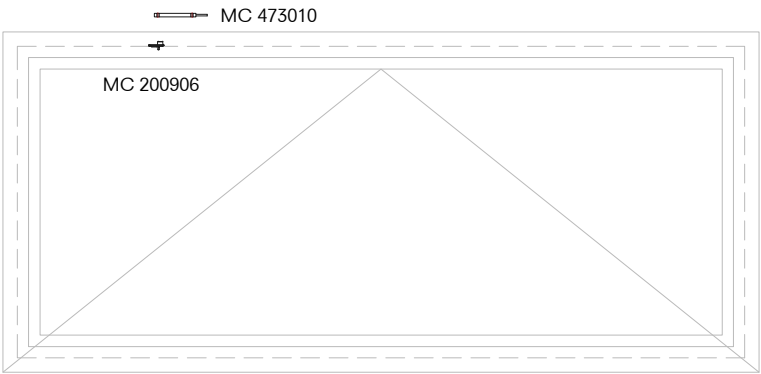
Contact d'alarme

K99062

K99062

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece



**Bottom hung windows  
with visible hinge**

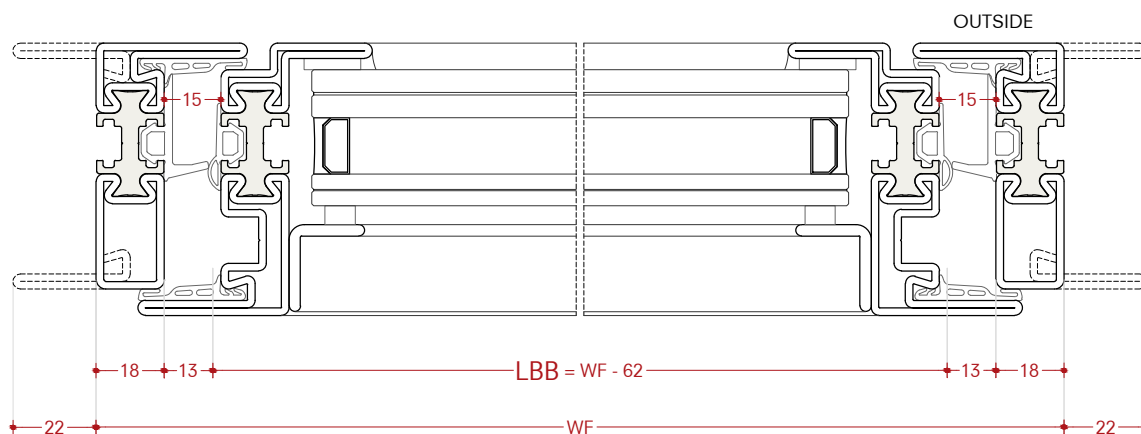
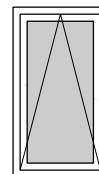
Determination of LBB  
(Groove Hardware Length)

**Kippfenster  
mit Aufgesetzter Beschlag**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre à soufflet  
avec paumelle visible**

Détermination du LBB  
(largeur de rainure de quincaillerie)



**Bottom hung windows  
with visible hinge**

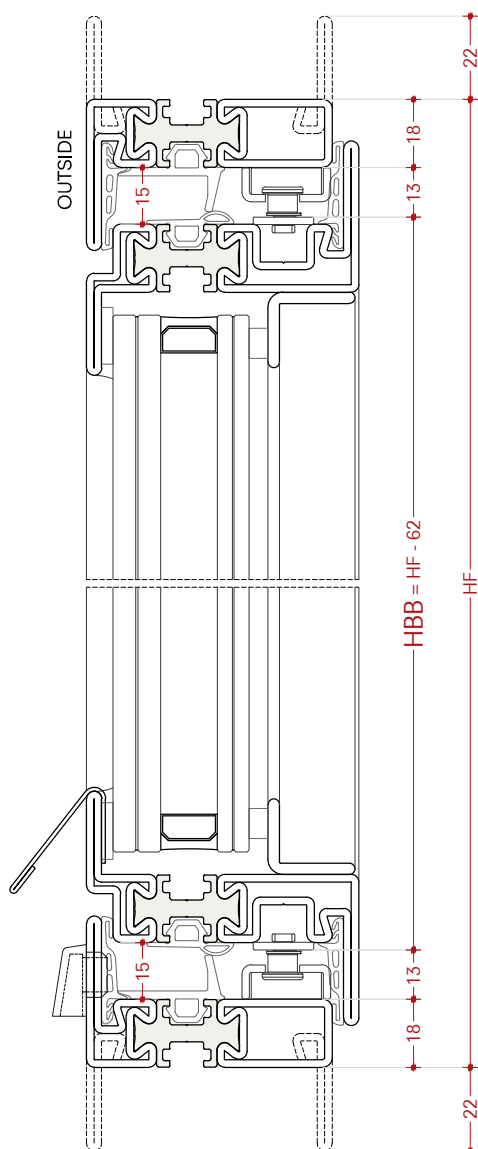
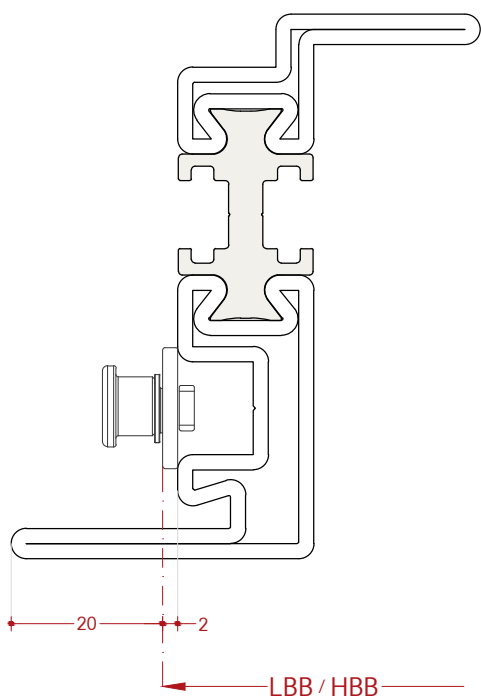
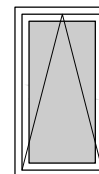
Determination of HBB  
(Groove Hardware Height)

**Kippfenster  
mit Aufgesetzter Beschlag**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre à soufflet  
avec paumelle visible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



**Bottom hung windows  
with visible hinge**

**Kippfenster  
mit Aufgesetzter Beschlag**

**Fênêtre à soufflet  
avec paumelle visible**

Load capacity tables

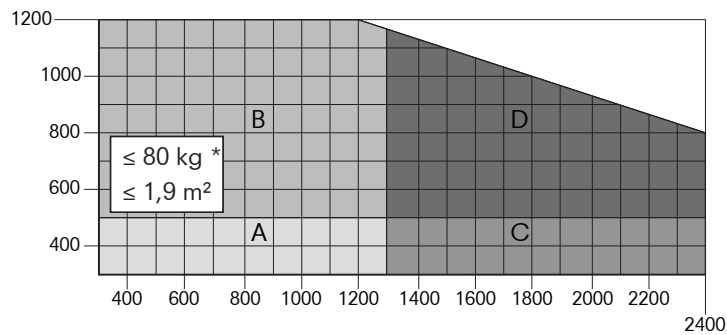
Gewichtstabellen

Capacité maximale

Capacity of bottom hung window  
with visible compression locks

Gewicht Kippfenster mit  
Aufgesetzter Beschlag

Capacité de la fenêtre à soufflet avec  
serrures à compression visible





**Bottom hung windows  
with visible hinge**

**Kippfenster  
mit Aufgesetzter Beschlag**

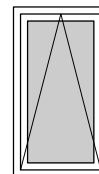
**Fênêtre à soufflet  
avec paumelle visible**

Step #1 - Gear kit choice

Schritt #1 - Garnitur Getriebe

Étape #1 - Choix de kit d'équipement

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88049</b> | 390     | 500     |
| <b>K88050</b> | 501     | 700     |
| <b>K88051</b> | 701     | 1000    |
| <b>K88052</b> | 1001    | 1400    |
| <b>K88053</b> | 1401    | 1800    |
| <b>K88054</b> | 1801    | 2250    |



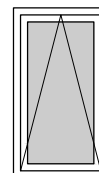
Step #2 - Hinges kit choice

Schritt #2 - Garnitur Bänder

Étape #2 - Choix kit paumelles

Right / Recht / Gauche

|                   | LBB min | LBB max |
|-------------------|---------|---------|
| <b>K88040 x 2</b> | 390     | 1000    |
| <b>K88040 x 3</b> | 1001    | 1800    |
| <b>K88040 x 4</b> | 1801    | 2250    |

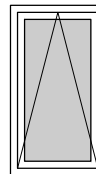


Step #3 - Opening restrictor  
choice

Schritt #3 - Öffnungsbegrenzer

Étape #3 - Choix compas de limitation  
d'ouverture

|                   | HBB min | HBB max |                        |
|-------------------|---------|---------|------------------------|
| <b>E99205-05</b>  | 400     | 1200    | adjustable opening     |
| <b>E99206-05</b>  | 400     | 1200    | releasable             |
| <b>K88107 (*)</b> | 300     | 500     | installation in groove |
| <b>K88108 (*)</b> | 501     | 1200    | installation in groove |



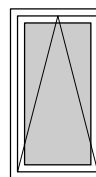
\*Recommended  
\*Empfohlen  
\*Conseillé

Step #4 - Alarm contact choice

Schritt #4 - Alarmkontakt

Étape #4 - Choix contact d'alarme

|               |
|---------------|
| <b>K99062</b> |
|---------------|

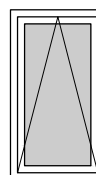


Step #5 - Hinge cover  
n°1 kit per hinge

Schritt #5 - Bandabdeckung  
1x Kit pro Band

Étape #5 - Couvercle de paumelle  
n°1 kit par paumelle

|                   | Surface finishes<br>Oberflächenausführungen<br>Finitions de surface |
|-------------------|---------------------------------------------------------------------|
| <b>K99102</b>     | Silver<br>Silber<br>Argent                                          |
| <b>K99103</b>     | White<br>Weiß<br>Blanc                                              |
| <b>K99104</b>     | Black<br>Schwarz<br>Argent                                          |
| <b>K99105</b>     | Brown<br>Braun<br>Marron                                            |
| <b>K99106 (*)</b> | Titanium<br>Titan<br>Titane                                         |



\*On request  
\*Auf Anfrage  
\*Sur demande



**Bottom hung windows  
with concealed hinge**

**Kippfenster  
mit Verdecktliegende Bänder**

**Fênêtrê à soufflet  
avec paumelle invisible**

Gear kits

Garnitur Getriebe

Kits d'équipement

K88049

LBB = 390 - 500 mm

MC 208323 n°01 piece  
MC 364310 n°02 pieces

K88049

LBB = 390 - 500 mm

K88049

LBB = 390 - 500 mm

K88050

LBB = 501 - 700 mm

MC 208324 n°01 piece  
MC 364310 n°02 pieces

K88050

LBB = 501 - 700 mm

K88050

LBB = 501 - 700 mm

K88051

LBB = 701 - 1000 mm

MC 208325 n°01 piece  
MC 364310 n°02 pieces

K88051

LBB = 701 - 1000 mm

K88051

LBB = 701 - 1000 mm

K88052

LBB = 1001 - 1400 mm

MC 208326 n°01 piece  
MC 364310 n°03 pieces

K88052

LBB = 1001 - 1400 mm

K88052

LBB = 1001 - 1400 mm

K88053

LBB = 1401 - 1800 mm

MC 208327 n°01 piece  
MC 364310 n°03 pieces

K88053

LBB = 1401 - 1800 mm

K88053

LBB = 1401 - 1800 mm

K88054

LBB = 1801 - 2250 mm

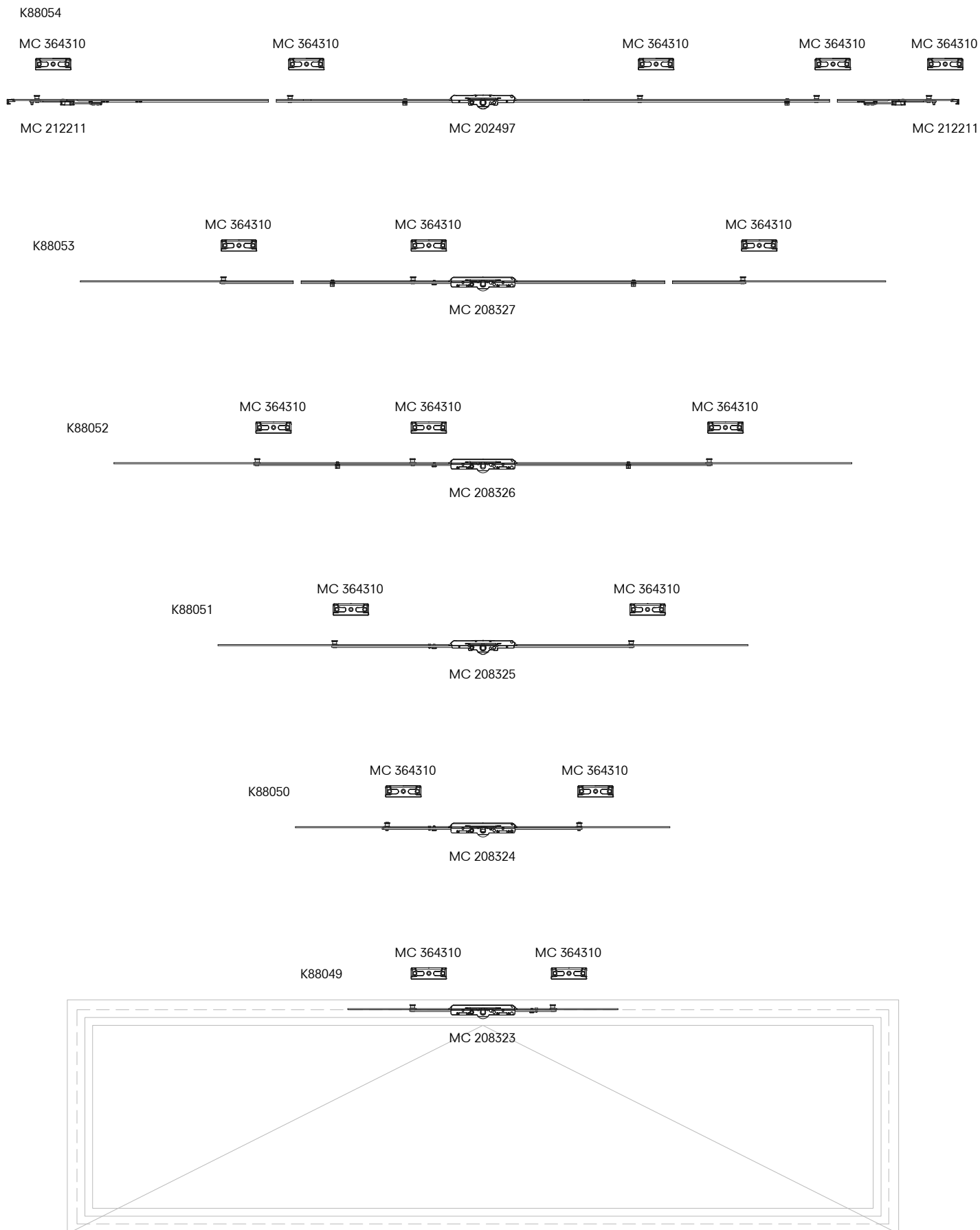
MC 202497 n°01 piece  
MC 212211 n°02 pieces  
MC 364310 n°05 pieces

K88054

LBB = 1801 - 2250 mm

K88054

LBB = 1801 - 2250 mm



**Bottom hung windows  
with concealed hinge**

Gear kits

K88055

LBB = 390 - 1000 mm

MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

**Kippfenster  
mit Verdecktliegende Bänder**

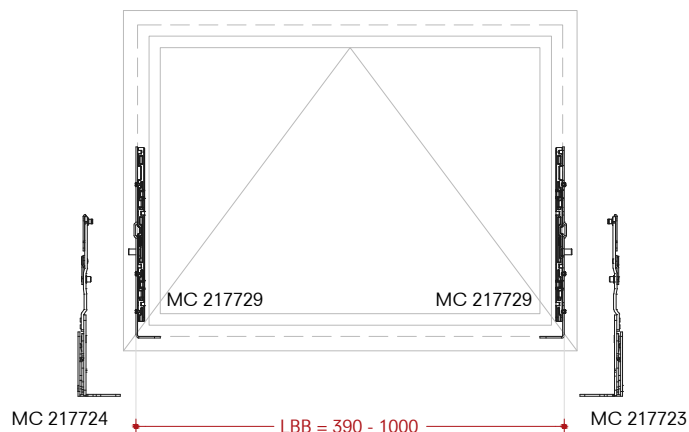
Garnitur Getriebe

K88055

LBB = 390 - 1000 mm

K88055

LBB = 390 - 1000 mm



**Fênêtre à soufflet  
avec paumelle invisible**

Kits d'équipement

K88056

LBB = 1001 - 1400 mm

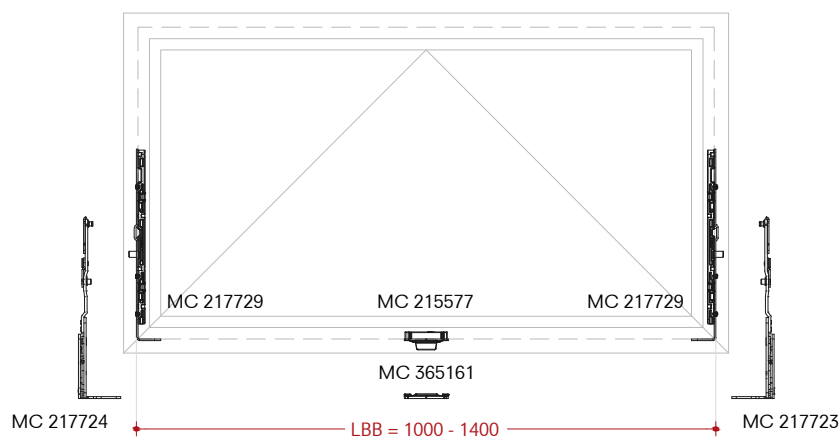
MC 215577 n°01 piece  
MC 365161 n°01 piece  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

K88056

LBB = 1001 - 1400 mm

K88056

LBB = 1001 - 1400 mm



K88057

LBB = 1401 - 1800 mm

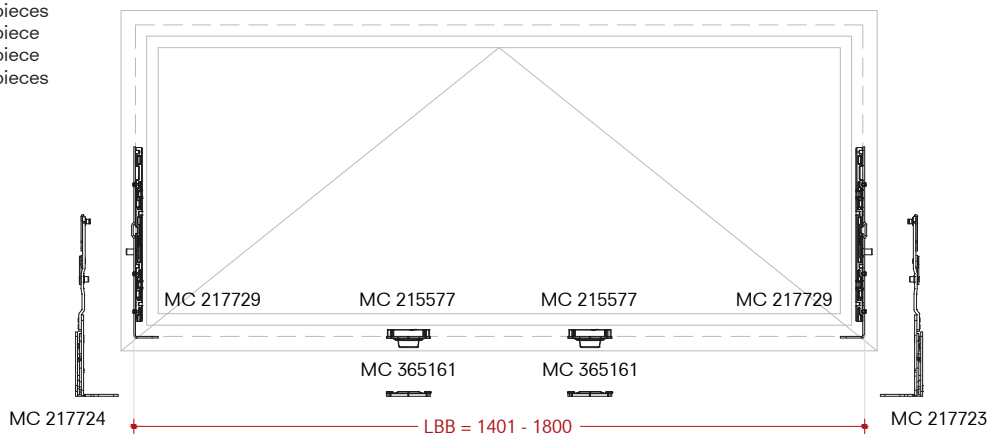
MC 215577 n°02 pieces  
MC 365161 n°02 pieces  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

K88057

LBB = 1401 - 1800 mm

K88057

LBB = 1401 - 1800 mm



K88058

LBB = 1801 - 2250 mm

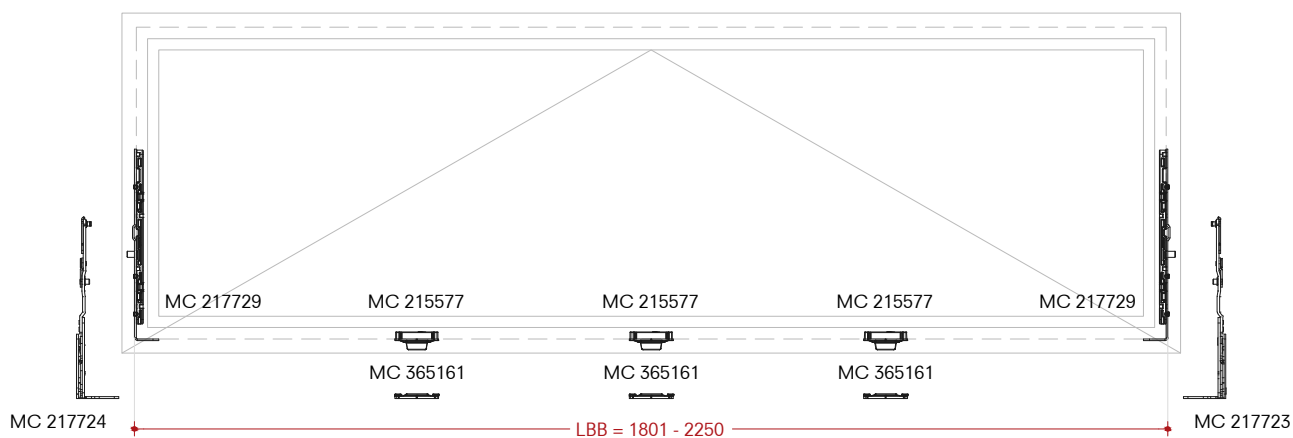
MC 215577 n°03 pieces  
MC 365161 n°03 pieces  
MC 217723 n°01 piece  
MC 217724 n°01 piece  
MC 217729 n°02 pieces

K88058

LBB = 1801 - 2250 mm

K88058

LBB = 1801 - 2250 mm



**Bottom hung windows  
with concealed hinge**

Opening restrictor

E99205-05

With clicks.  
HBB = 400 - 1200 mm

n°02 pieces

[See opening restrictor installation](#)

**Kippfenster  
mit Verdecktliegende Bänder**

Öffnungsbegrenzer

E99205-05

Mit Klicks.  
HBB = 400 - 1200 mm

2x Stück

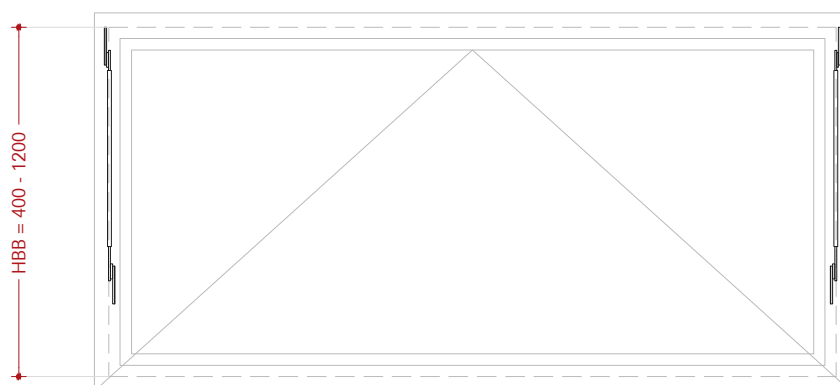
**Fênêtre à soufflet  
avec paumelle invisible**

Compas de limitation d'ouverture

E99205-05

Avec des clics.  
HBB = 400 - 1200 mm

n°02 unités



E99206-03

HBB = 400 - 1200 mm

n°02 pieces

[See opening restrictor installation](#)

E99206-03

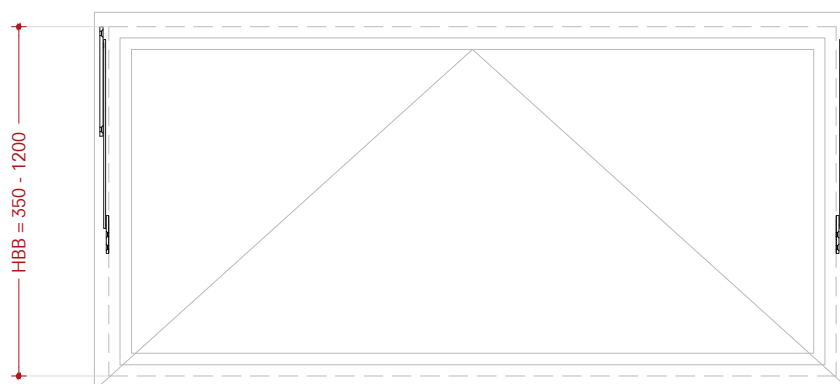
HBB = 400 - 1200 mm

2x Stück

E99206-03

HBB = 400 - 1200 mm

n°02 unités





K88107

HBB = 520 - 620 mm

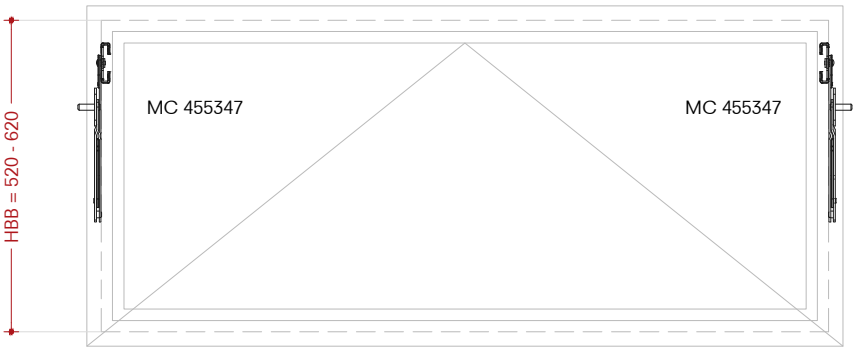
MC 455347 n°02 pieces

K88107

HBB = 520 - 620 mm

K88107

HBB = 520 - 620 mm



K88108

HBB = 621 - 1200 mm

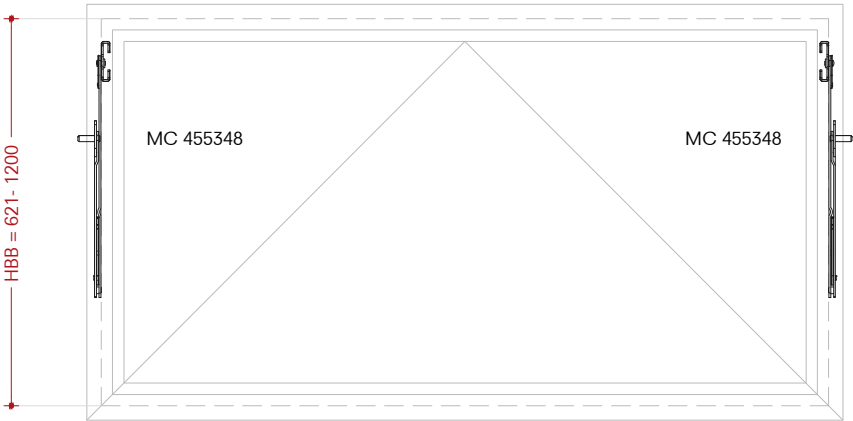
MC 455348 n°02 pieces

K88108

HBB = 621 - 1200 mm

K88108

HBB = 621 - 1200 mm



**Bottom hung windows  
with concealed hinge**

Alarm contact

K99062

MC 200906 n°01 piece  
MC 473010 n°01 piece

**Kippfenster  
mit Verdecktliegende Bänder**

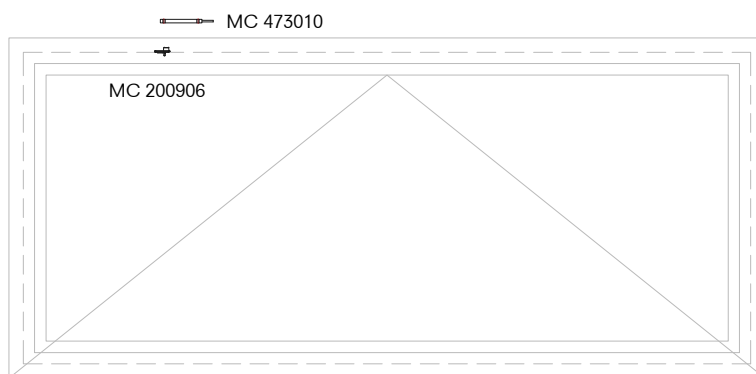
Alarmkontakt

K99062

**Fênêtrê à soufflet  
avec paumelle invisible**

Contact d'alarme

K99062



**Bottom hung windows  
with concealed hinge**

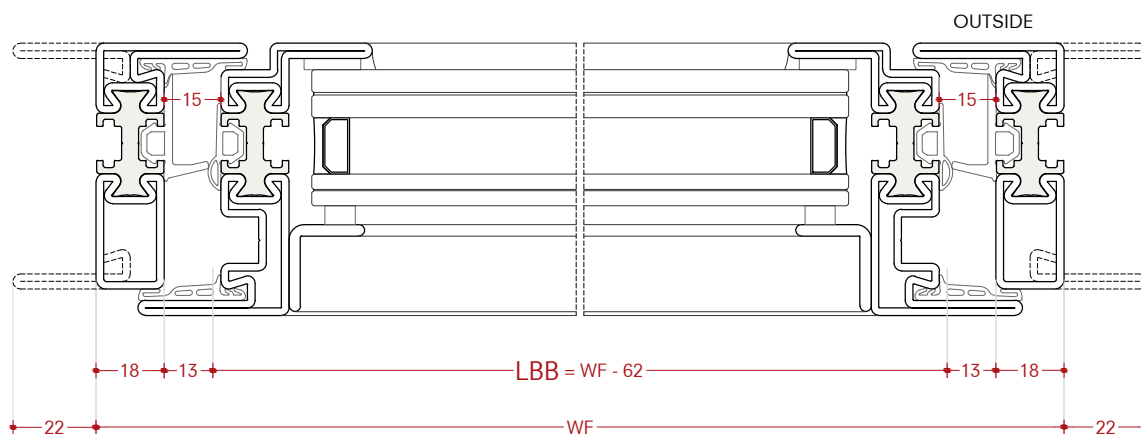
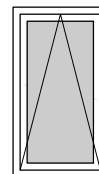
Determination of LBB  
(Groove Hardware Lenght)

**Kippfenster  
mit Verdecktliegende Bänder**

Bestimmung von LBB  
(Beschlagnutbreite)

**Fênêtre à soufflet  
avec paumelle invisible**

Détermination du LBB  
(largeur de rainure de quincaillerie)



**Bottom hung windows  
with concealed hinge**

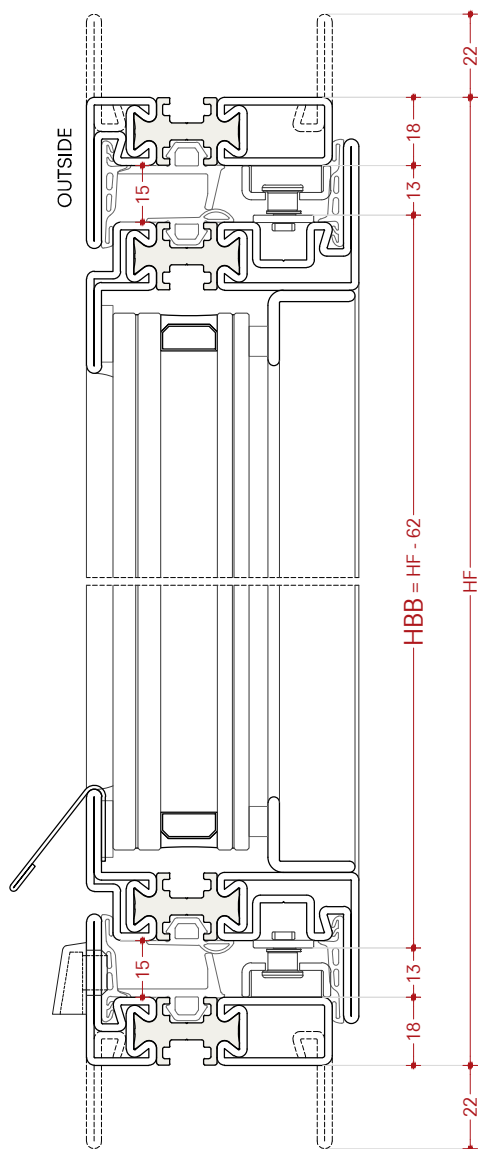
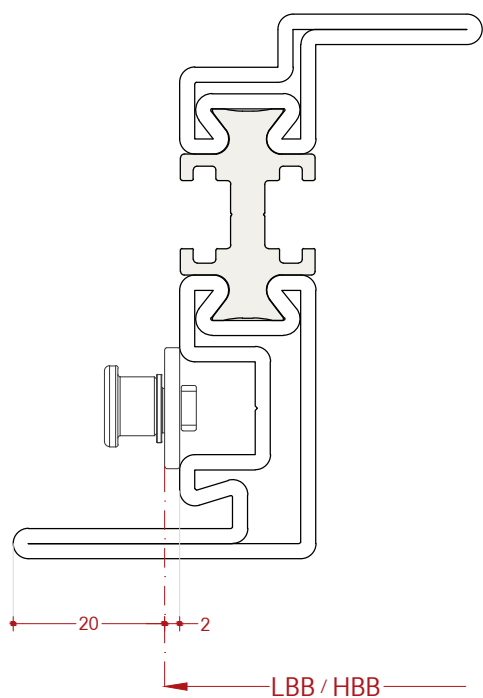
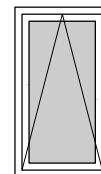
Determination of HBB  
(Groove Hardware Height)

**Kippfenster  
mit Verdecktliegende Bänder**

Bestimmung von HBB  
(Höhe der Beschlagnut)

**Fênêtre à soufflet  
avec paumelle invisible**

Détermination du HBB  
(hauteur de rainure de quincaillerie)



Bottom hung windows  
with concealed hinge

Kippfenster  
mit Verdecktliegende Bänder

Fênêtre à soufflet  
avec paumelle invisible

Load capacity tables

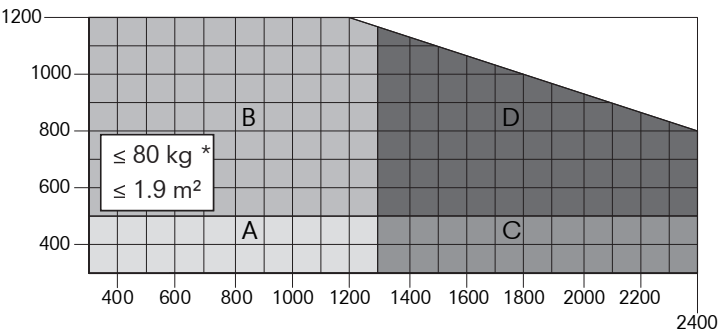
Gewichtstabellen

Capacité maximale

Capacity of bottom hung window  
with concealed compression locks

Gewicht Kippfenster mit  
Anpressverschluss verdeckt

Capacité de la fenêtre à soufflet avec  
serrures à compression cachée



**Bottom hung windows  
with concealed hinge**

**Kippfenster  
mit Verdecktliegende Bänder**

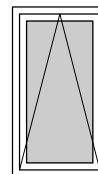
**Fênêtre à soufflet  
avec paumelle invisible**

Step #1 - Gear kit choice

Schritt #1 - Garnitur Getriebe

Étape #1 - Choix de kit d'équipement

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88049</b> | 390     | 500     |
| <b>K88050</b> | 501     | 700     |
| <b>K88051</b> | 701     | 1000    |
| <b>K88052</b> | 1001    | 1400    |
| <b>K88053</b> | 1401    | 1800    |
| <b>K88054</b> | 1801    | 2250    |



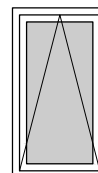
Step #2 - Hinges kit choice

Schritt #2 - Garnitur Bänder

Étape #2 - Choix kit paumelles

Right / Recht / Gauche

|               | LBB min | LBB max |
|---------------|---------|---------|
| <b>K88055</b> | 390     | 1000    |
| <b>K88056</b> | 1001    | 1400    |
| <b>K88057</b> | 1401    | 1800    |
| <b>K88058</b> | 1801    | 2250    |

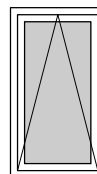


Step #3 - Opening restrictor  
choice

Schritt #3 - Öffnungsbegrenzer

Étape #3 - Choix compas de limitation  
d'ouverture

|                   | HBB min | HBB max |                        |
|-------------------|---------|---------|------------------------|
| <b>E99205-05</b>  | 400     | 1200    | adjustable opening     |
| <b>E99206-05</b>  | 400     | 1200    | releasable             |
| <b>K88107</b> (*) | 520     | 620     | installation in groove |
| <b>K88108</b> (*) | 621     | 1200    | installation in groove |



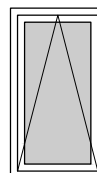
\*Recommended  
\*Empfohlen  
\*Conseillé

Step #4 - Alarm contact choice

Schritt #4 - Alarmkontakt

Étape #4 - Choix contact d'alarme

**K99062**



### Pivot post

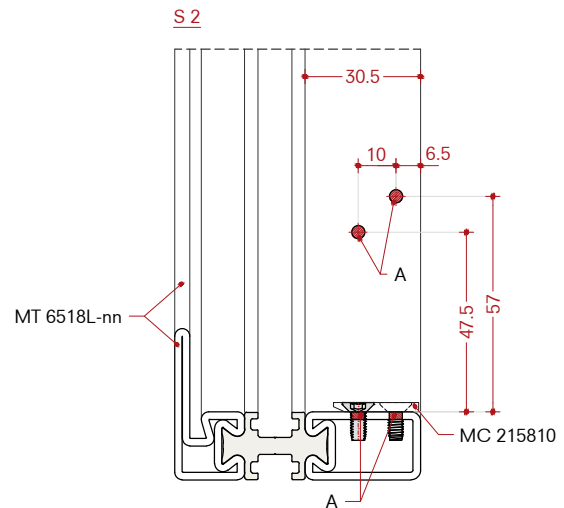
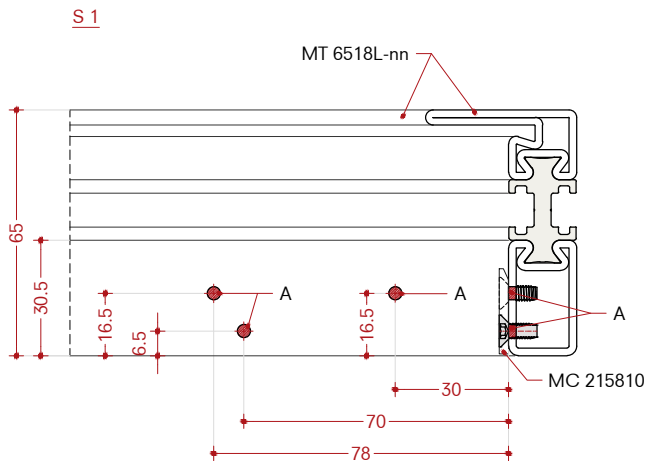
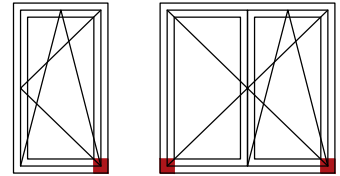
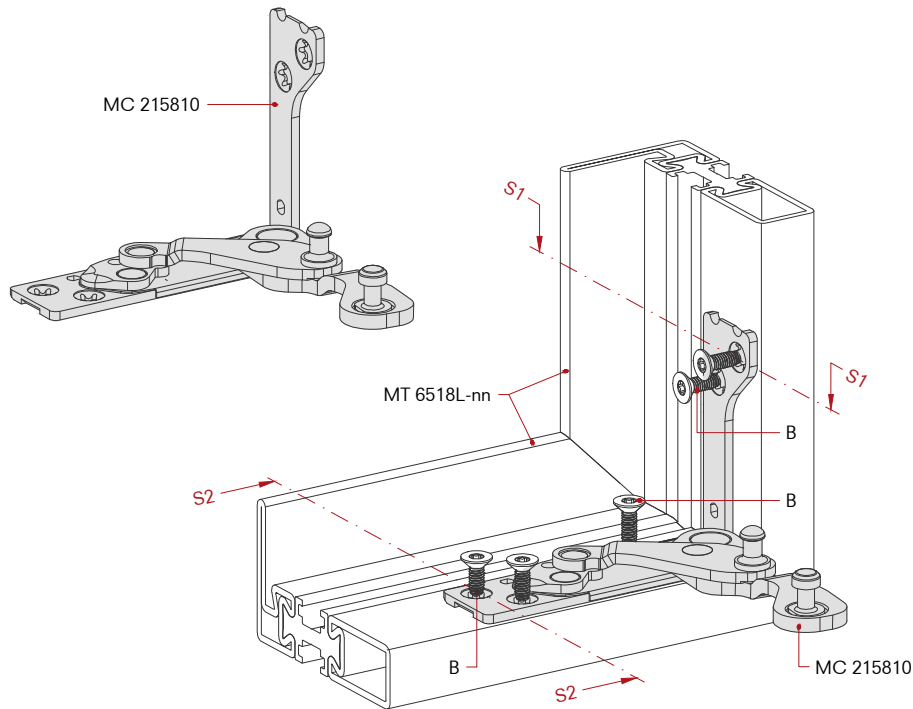
MC 215810 R  
MC 215811 L  
Leaf weight ≤ 150 kg  
Installation on frame

### Ecklager

MC 215810 R  
MC 215811 L  
Flügelgewicht ≤ 150 kg  
Einbau im Rahmen

### Palier d'angle

MC 215810 R  
MC 215811 L  
Poids du vantail ≤ 150 kg  
Montage sur le cadre



M65TB - 0001

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x10

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x10

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x10

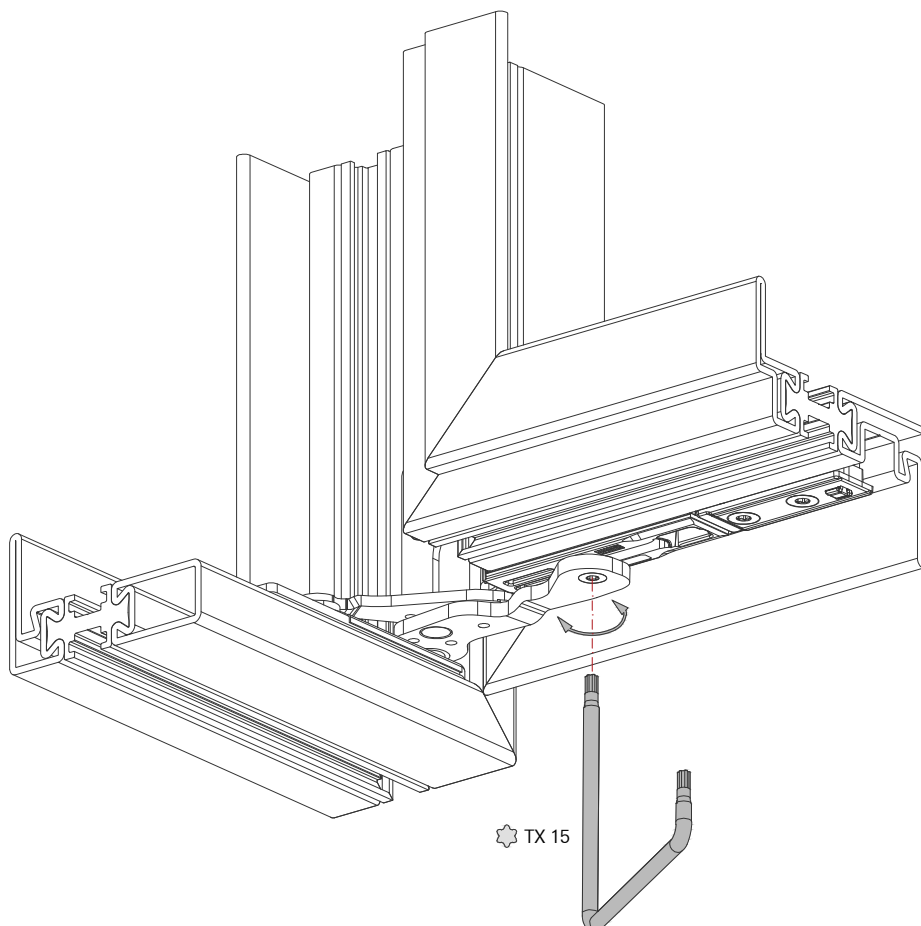
L = Ouverture gauche  
R = Ouverture droite



**Pressure adjustment**

**Anpressdruck Einstellung**

**Réglage de la pression de contact**



★ Adjustment range  $\pm 0.5$  mm with TX 15

L = Left opening  
R = Right opening

★ Einstellbereich  $\pm 0.5$  mm mit TX 15

L = DIN links  
R = DIN rechts

★ Plage de réglage  $\pm 0.5$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite

### Corner support

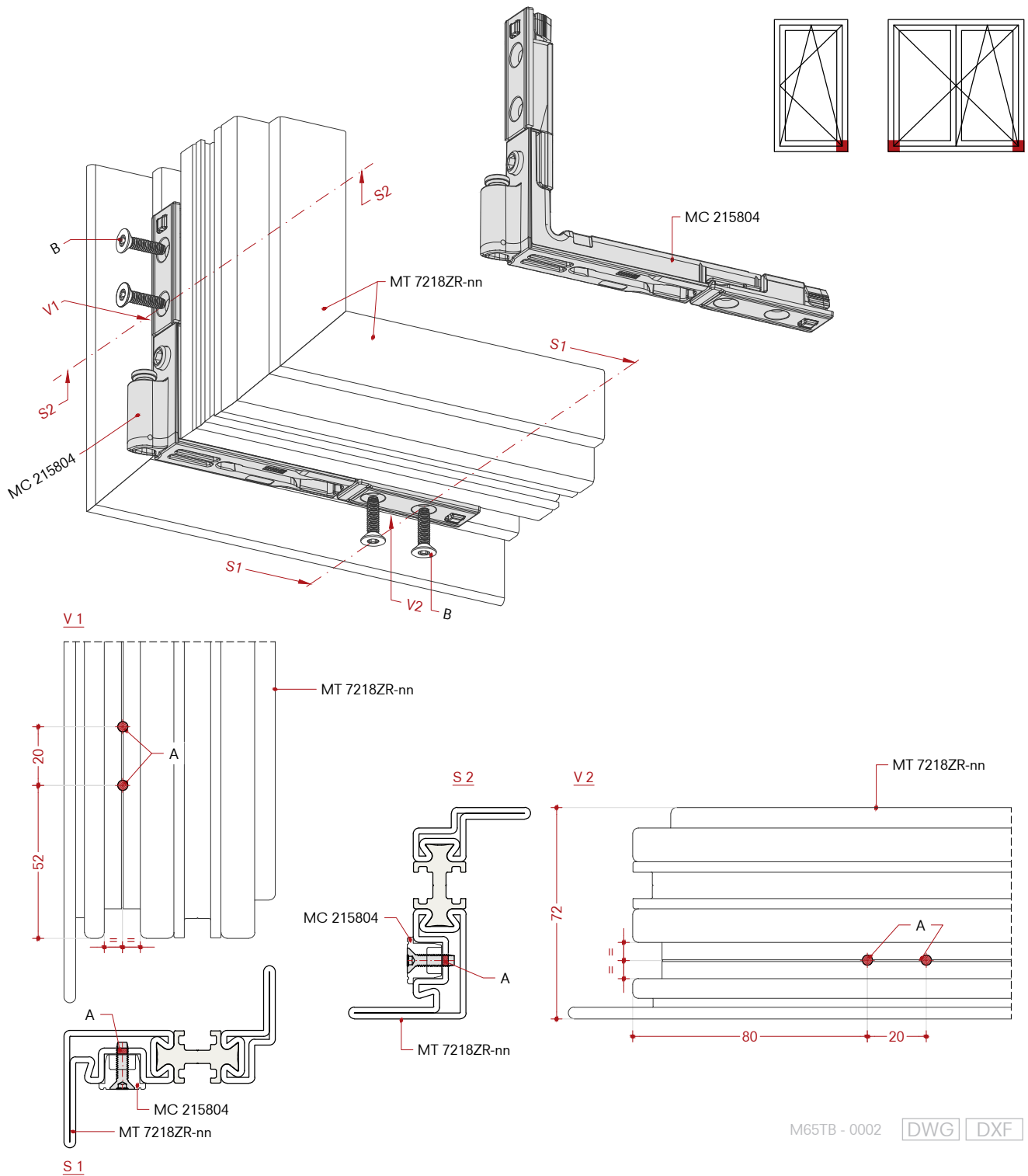
MC 215804 R  
MC 215805 L  
Leaf weight ≤ 150 kg  
Installation on leaf

### Ecklagerband

MC 215804 R  
MC 215805 L  
Flügelgewicht ≤ 150 kg  
Einbau im Flügel

### Fiche d'angle

MC 215804 R  
MC 215805 L  
Poids du vantail ≤ 150 kg  
Montage dans le vantail



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

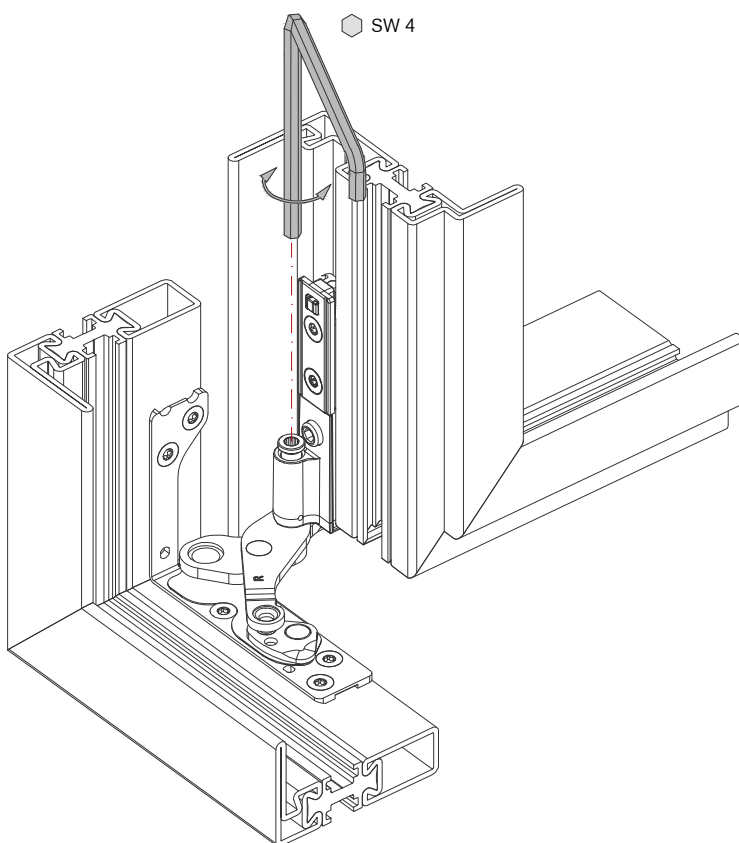
A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

L = Ouverture gauche  
R = Ouverture droite

## Height adjustment

## Höheneinstellung

## Réglage de la hauteur

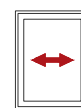
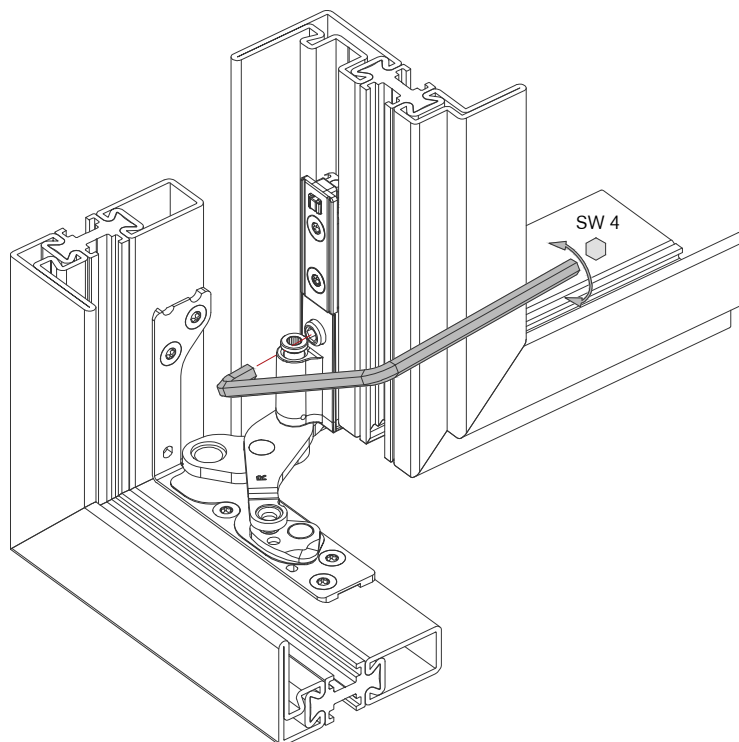


-1/+2

## Side adjustment

## Seiteneinstellung

## Réglage latéral



-1/+2

Adjustment range -1/+2 mm with SW 4

Einstellbereich -1/+2 mm mit SW 4

Plage de réglage -1/+2 mm avec SW 4

L = Left opening  
R = Right opening

L = DIN links  
R = DIN rechts

L = Ouverture gauche  
R = Ouverture droite

### Load transfer MULTI POWER

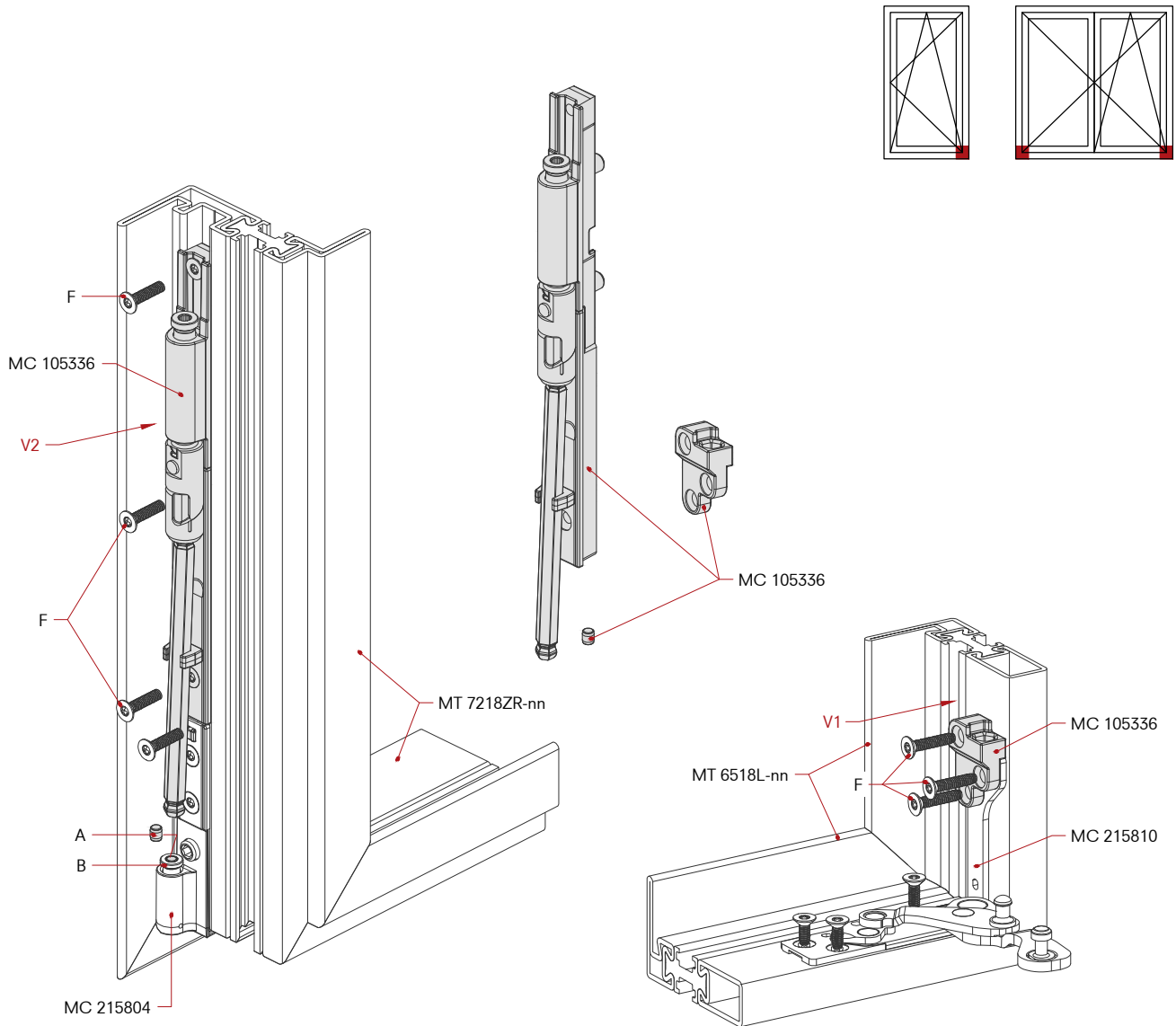
MC 105336 R  
MC 105339 L  
Leaf weight ≤ 180 kg  
Installation frame and leaf

### Lastabtragung MULTI POWER

MC 105336 R  
MC 105339 L  
Flügelgewicht ≤ 180 kg  
Einbau Rahmen und Flügel

### Reprise de charge MULTI POWER

MC 105336 R  
MC 105339 L  
Poids du vantail ≤ 180 kg  
Montage cadre et vantail



M65TB - 0003

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Press the seal into the height adjustment screw of the corner bearing band completely
- B) The height adjusting screw must be in the "neutral position" (delivery condition)
- C) Hole Ø3.3 mm
- D) Hole Ø7 mm
- E) Cut off protruding bolts (MC 105336 / MC 105339 Ø7 mm)
- F) Cut the screw
- G) Countersunk screw M4x16

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Plombe in die Höhenstellschraube des Ecklagerbandes komplett eindrücken
- B) Die Höhenstellschraube muss sich in "Neutralstellung" befinden (Auslieferungszustand)
- C) Bohrdurchmesser Ø3.3 mm
- D) Bohrdurchmesser Ø7 mm
- E) Überstehende Bolzen (MC 105336 / MC 105339 Ø7 mm) kürzen
- F) Schraube kürzen
- G) Senkkopfschraube M4x16

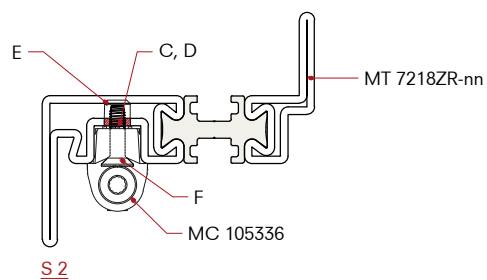
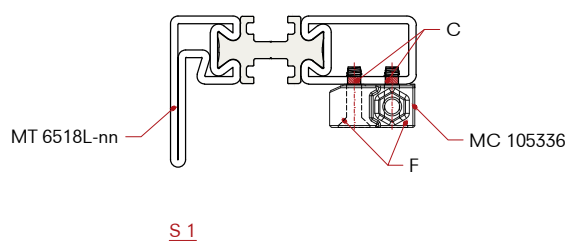
L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Enfoncer complètement le plomb dans la vis de réglage en hauteur de la fiche d'angle
- B) La vis de réglage en hauteur doit se trouver en position "neutre" (position de livraison)
- C) Trou Ø3.3 mm
- D) Trou Ø7 mm
- E) Raccourcir les boulons qui dépassent (MC 105336 / MC 105339 Ø7 mm)
- F) Couper la vis
- G) Vis à tête fraisée M4x16

L = Ouverture gauche  
R = Ouverture droite

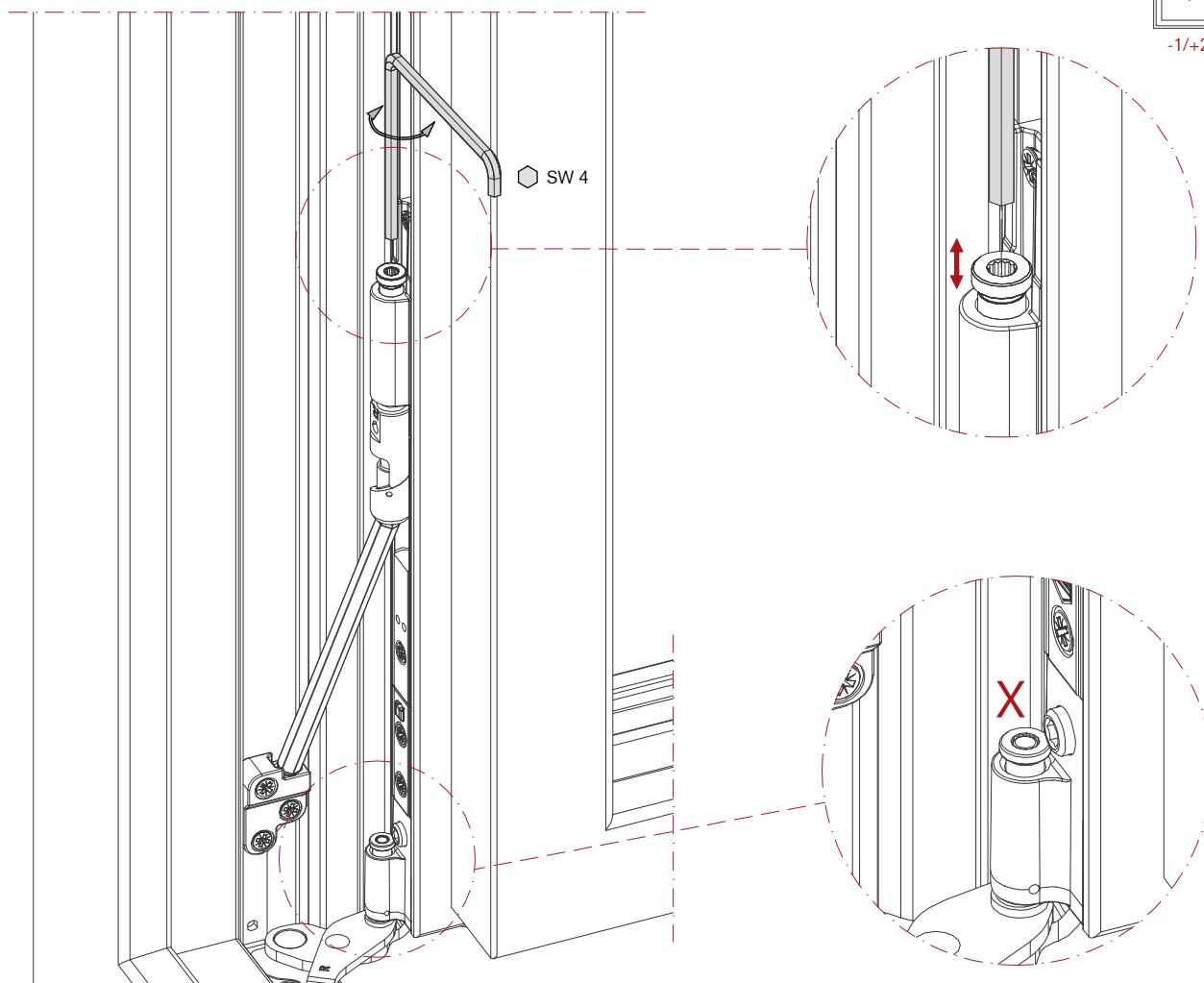
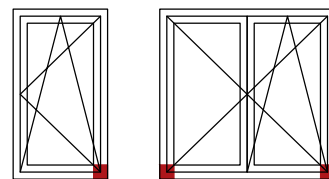
Leaf  
Flügel  
Ouvrant



## Height adjustment

## Höheneinstellung

## Réglage de la hauteur



⬡ Adjustment range -1/+2 mm with SW 4

**X** = No adjustment allowed here

L = Left opening  
R = Right opening

⬡ Einstellbereich -1/+2 mm mit SW 4

**X** = Hier keine Verstellung zulässig

L = DIN links  
R = DIN rechts

⬡ Plage de réglage -1/+2 mm avec SW 4

**X** = Aucun ajustement autorisé ici

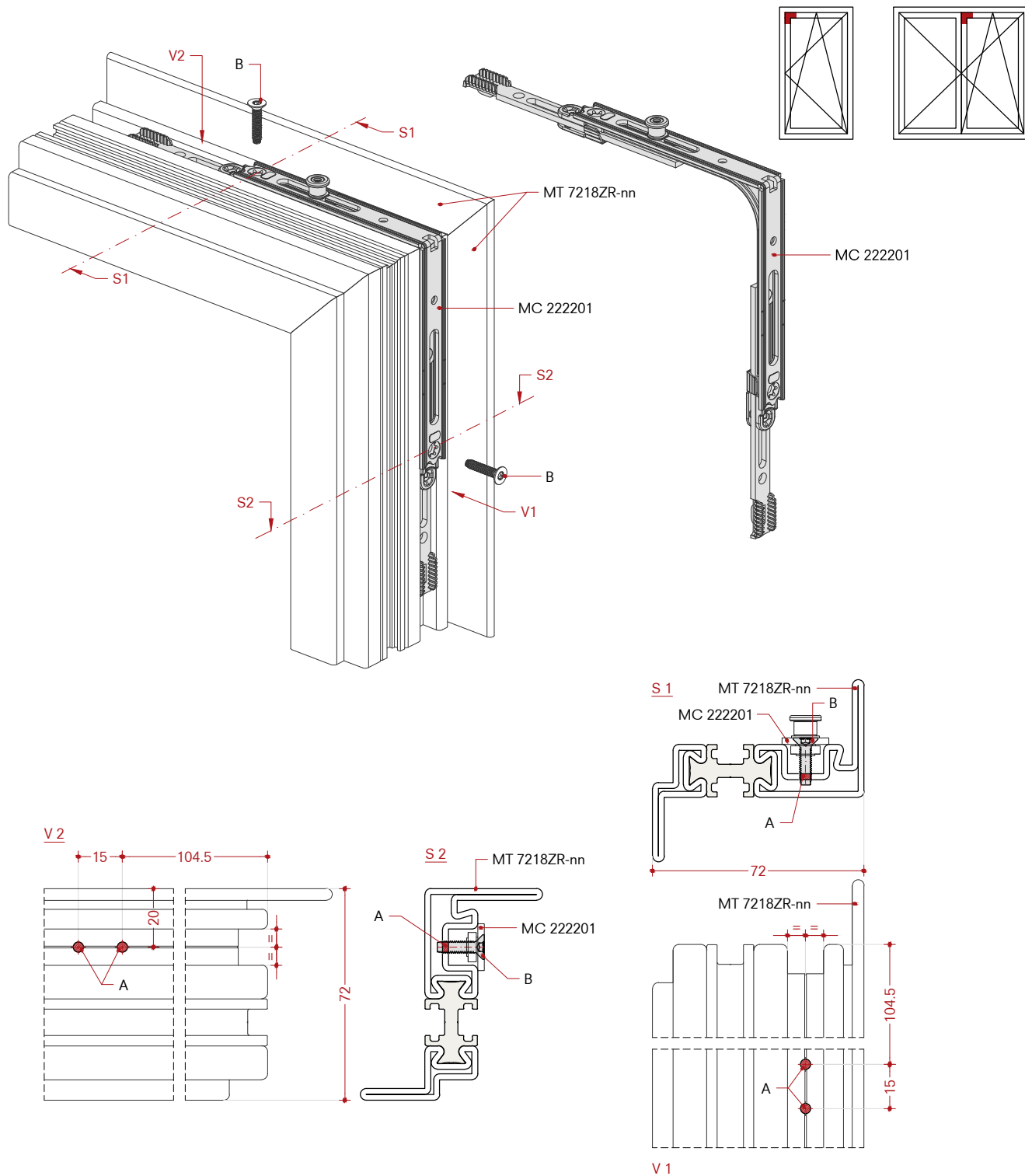
L = Ouverture gauche  
R = Ouverture droite



**Corner element standard  
with 1 locking cam**  
MC 222201

**Eckumlenkung Standard  
mit 1 Verriegelungszapfen**  
MC 222201

**Renvoi d'angle standard  
avec 1 galet de verrouillage**  
MC 222201



M65TB - 0005

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

Montré ouverture droite  
(ouverture gauche inversé en miroir)

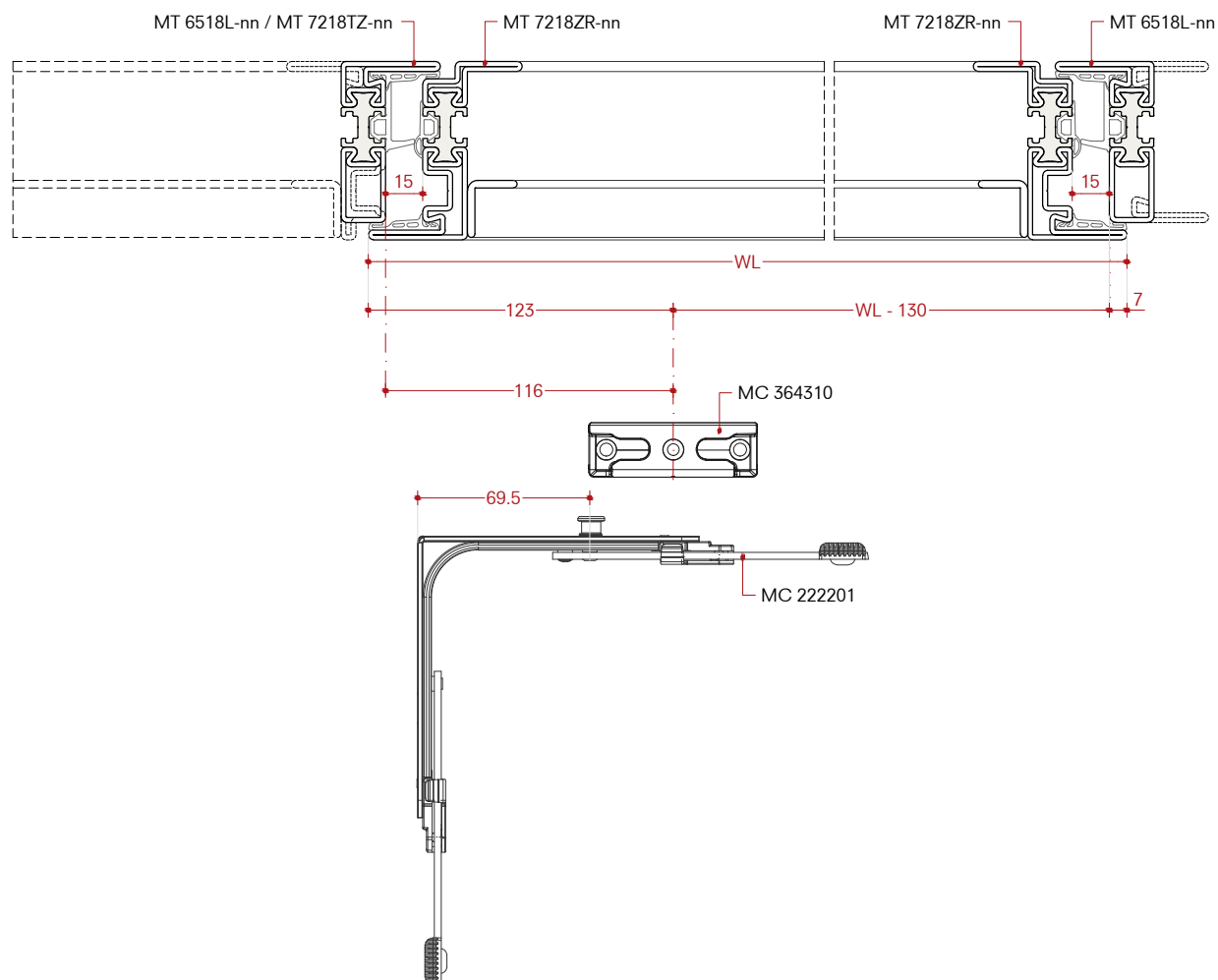
A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16



**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich  
WL = Länge Flügel

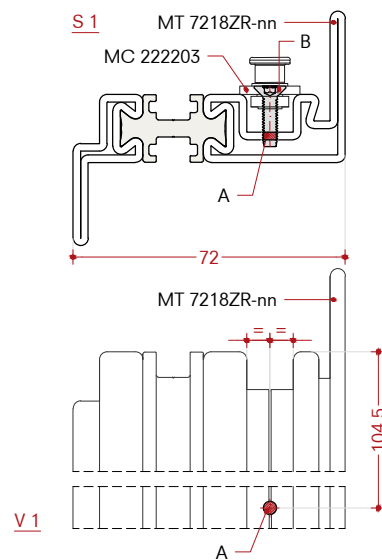
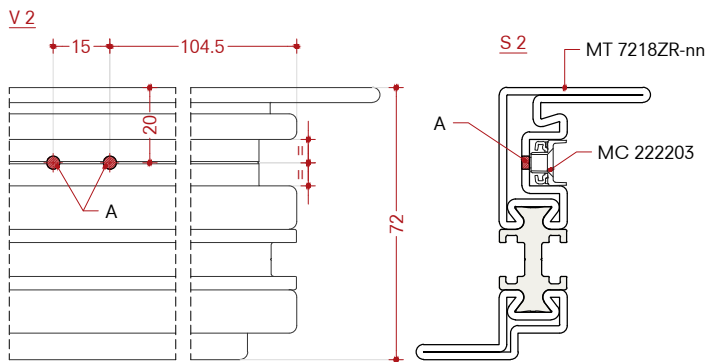
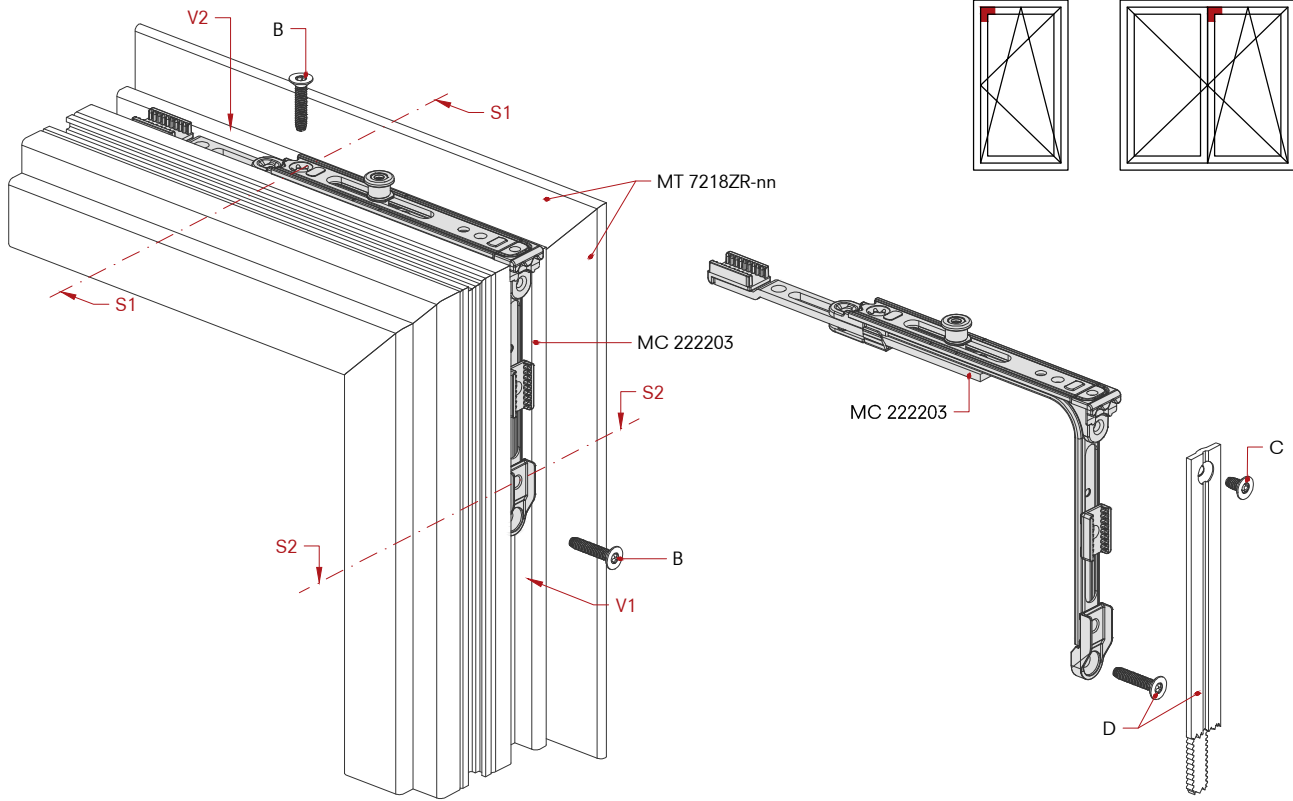
Montré ouverture droite  
(ouverture gauche inversé en miroir)

WL = Largeur ouvrant

**Corner element short  
with 1 locking cams**  
MC 222203

**Eckumlenkung kurz  
mit 1 Verriegelungszapfen**  
MC 222203

**Renvoi d'angle court  
avec 1 galet de verrouillage**  
MC 222203



M65TB - 0007

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- C) Countersunk head screw included (M4x8)
- D) Please note: fasten groove base before support block

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- C) Senkkopfschraube beige (M4x8)
- D) Bitte beachten: Nutgrundverschraubung vor Stützbockverschraubung durchführen

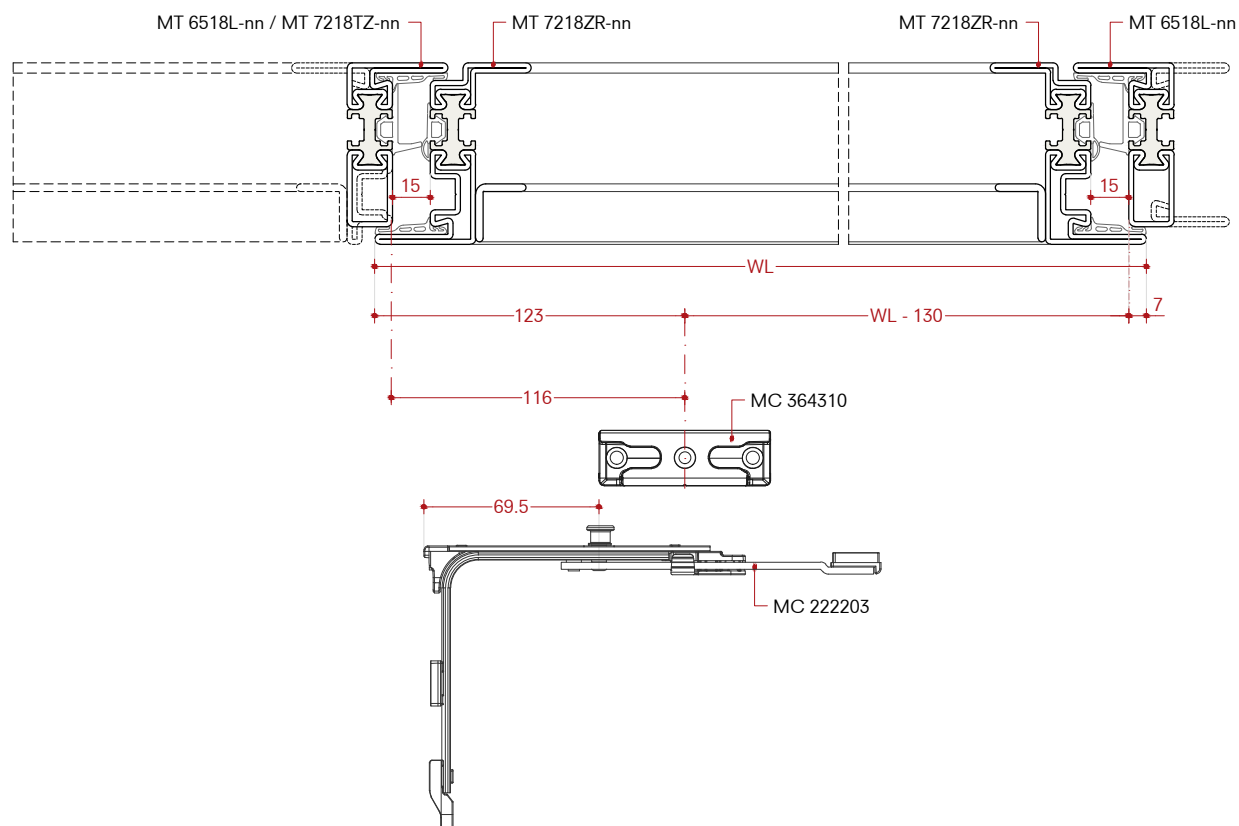
Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- C) Vis à tête fraisée jointe (M4x8)
- D) Attention: effectuer d'abord le vissage de fond de gorge avec de vis-ser la butée de soutien

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich  
WL = Länge Flügel

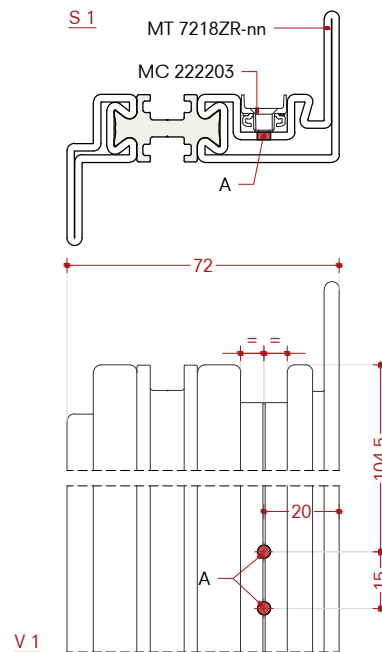
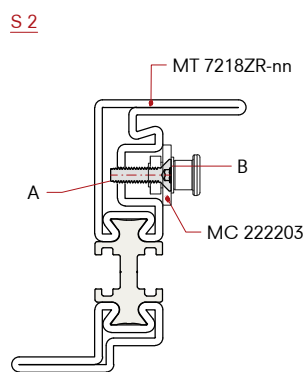
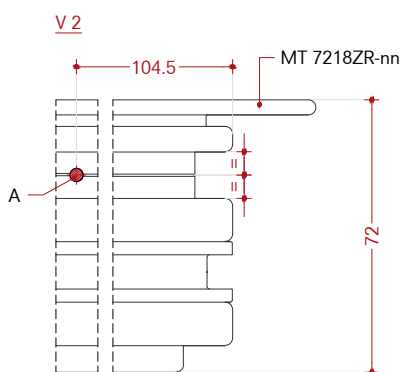
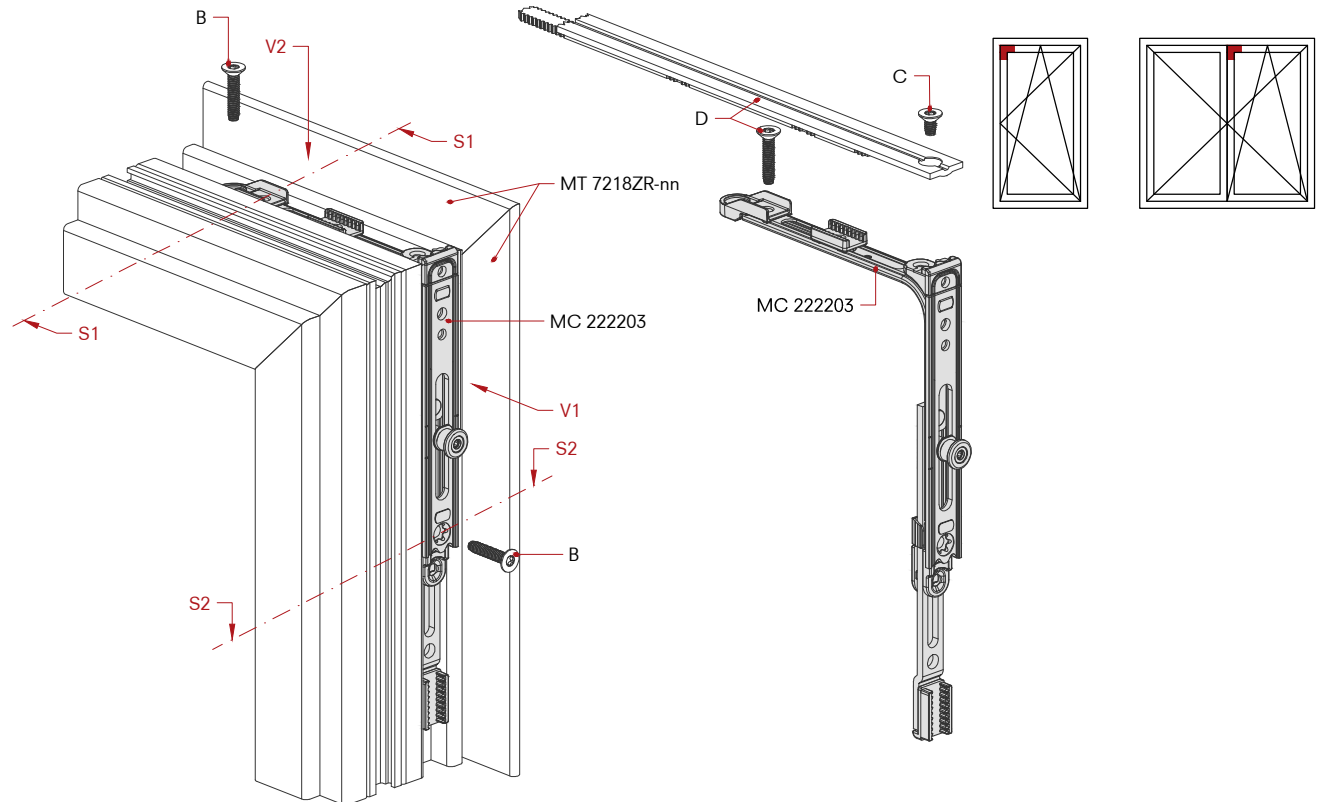
Montré ouverture droite  
(ouverture gauche inversé en miroir)

WL = Largeur ouvrant

**Corner element short  
with 1 locking cams**  
MC 222203

**Eckumlenkung kurz  
mit 1 Verriegelungszapfen**  
MC 222203

**Renvoi d'angle court  
avec 1 galet de verrouillage**  
MC 222203



M65TB - 0008

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- C) Countersunk head screw included (M4x8)
- D) Please note: fasten groove base before support block

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- C) Senkkopfschraube beige (M4x8)
- D) Bitte beachten: Nutgrundverschraubung vor Stützbockverschraubung durchführen

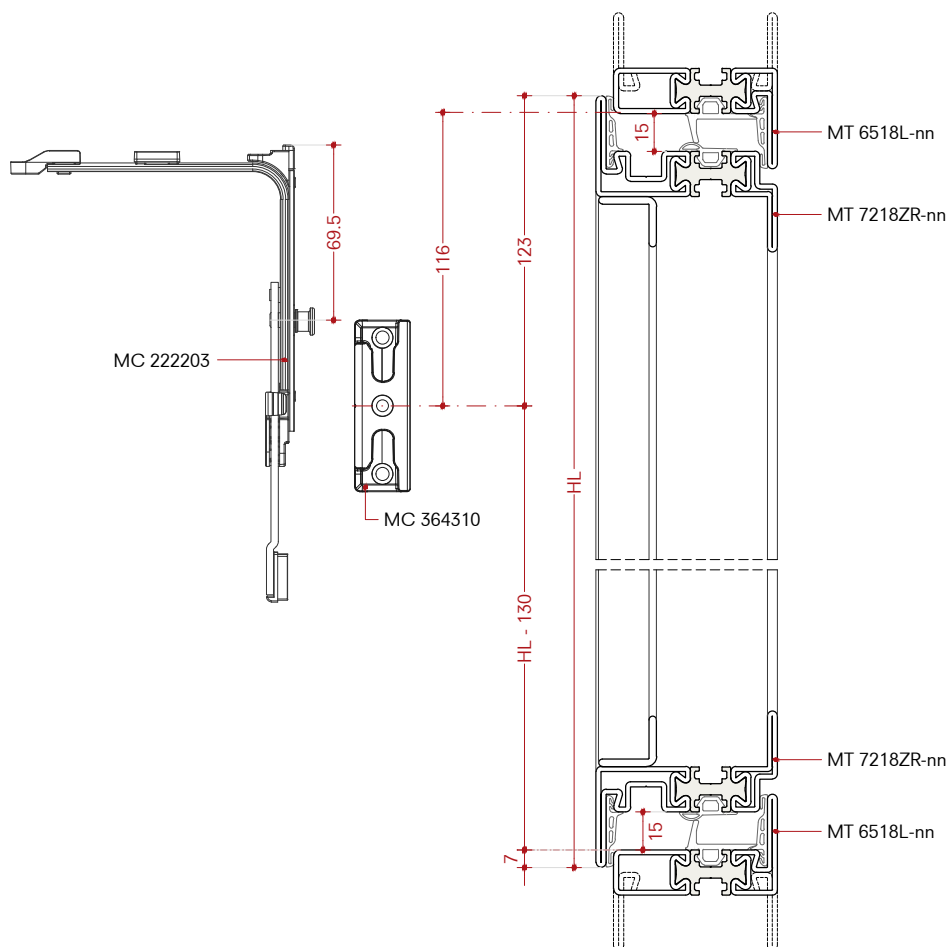
Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- C) Vis à tête fraisée jointe (M4x8)
- D) Attention: effectuer d'abord le vissage de fond de gorge avec de vis-ser la butée de soutien

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich

WL = Länge Flügel

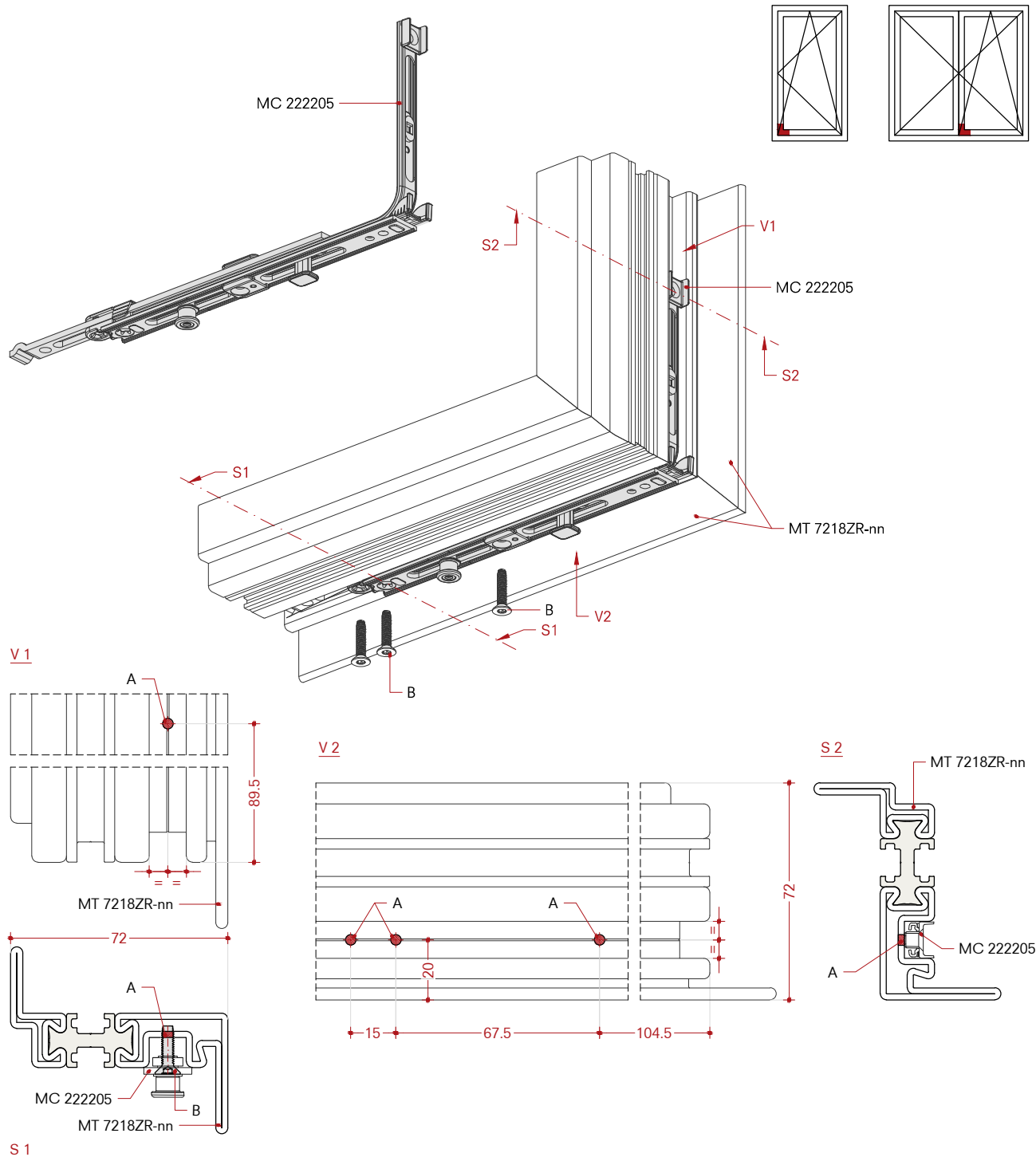
Montré ouverture droite  
(ouverture gauche inversé en miroir)

WL = Largeur ouvrant

**Corner element horizontally  
extendable for fixed drive gear  
with 1 locking cam**  
MC 222205

**Eckumlenkung waagrecht  
verlängerbar für fixes Getriebe  
mit 1 Verriegelungszapfen**  
MC 222205

**Renvoi d'angle horizontal  
rallongeable pour crémone fixe  
avec 1 galet de verrouillage**  
MC 222205



M65TB - 0009

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

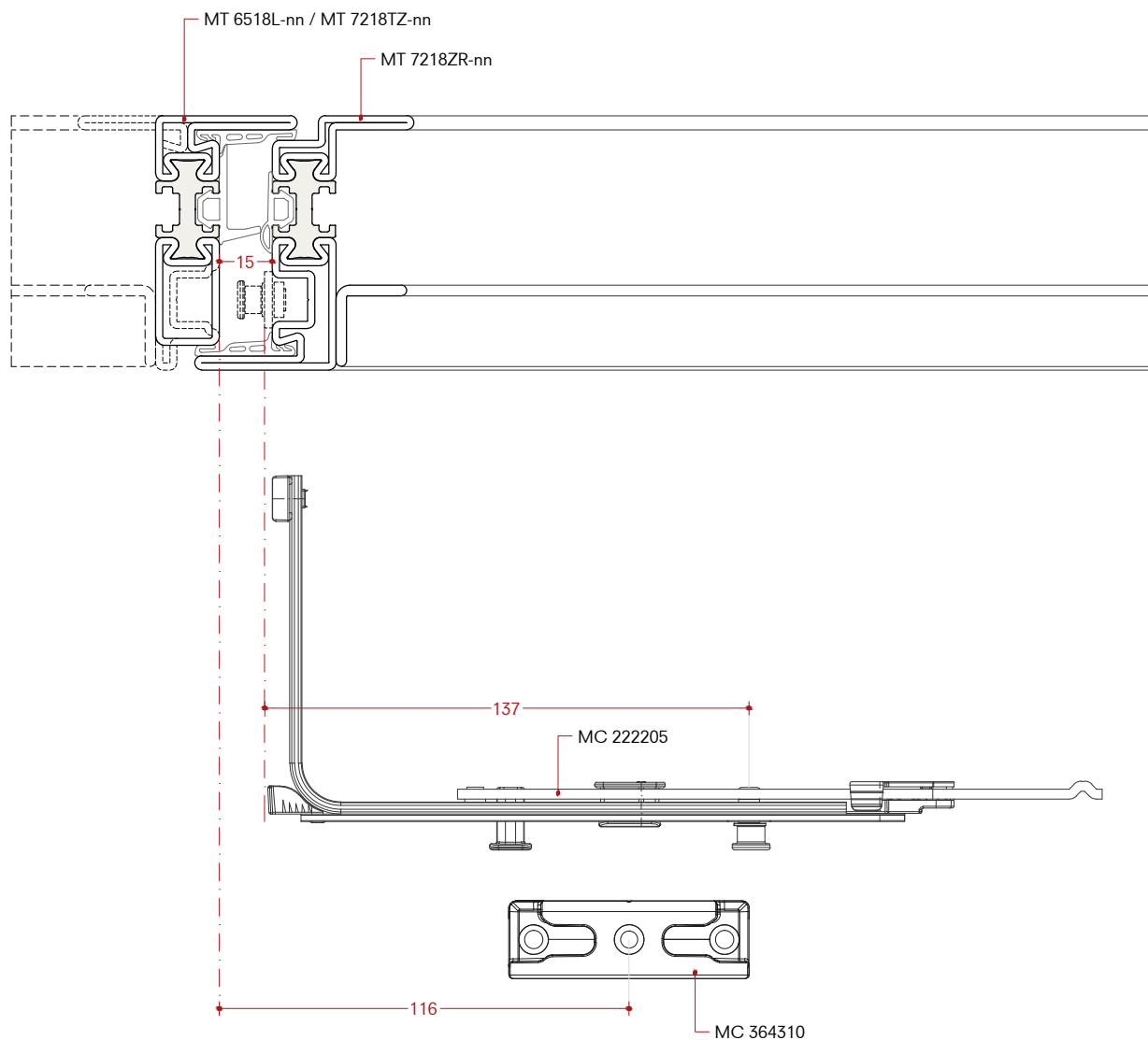
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

Dargestellt DIN rechts - DIN links spiegelbildlich

Montré ouverture droite  
(ouverture gauche inversé en miroir)

### Tilt&Turn drive gear

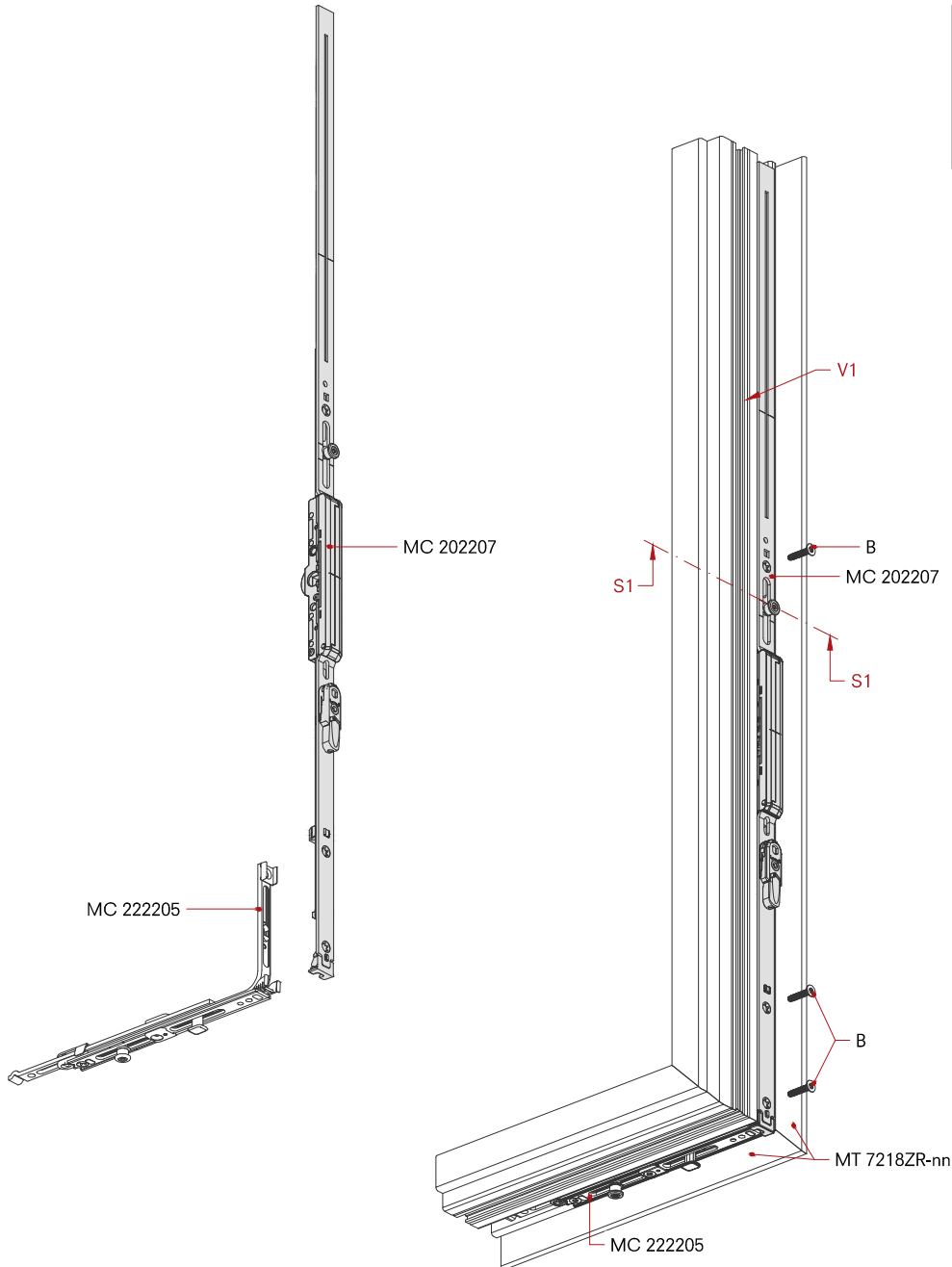
Backset 6.5 mm  
Fixed handle height  
MC 202206 - MC 202207  
MC 202208 - MC 202209  
MC 202216 - MC 202737  
MC 202738 - MC 207305

### DK Getriebe

Dornmass 6.5 mm  
Griffhöhe fix  
MC 202206 - MC 202207  
MC 202208 - MC 202209  
MC 202216 - MC 202737  
MC 202738 - MC 207305

### Crémone OB

Entrée verrouiller 6.5 mm  
Hauteur de poignée fixe  
MC 202206 - MC 202207  
MC 202208 - MC 202209  
MC 202216 - MC 202737  
MC 202738 - MC 207305



M65TB - 0010

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

X = Position screw connection drive gear

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

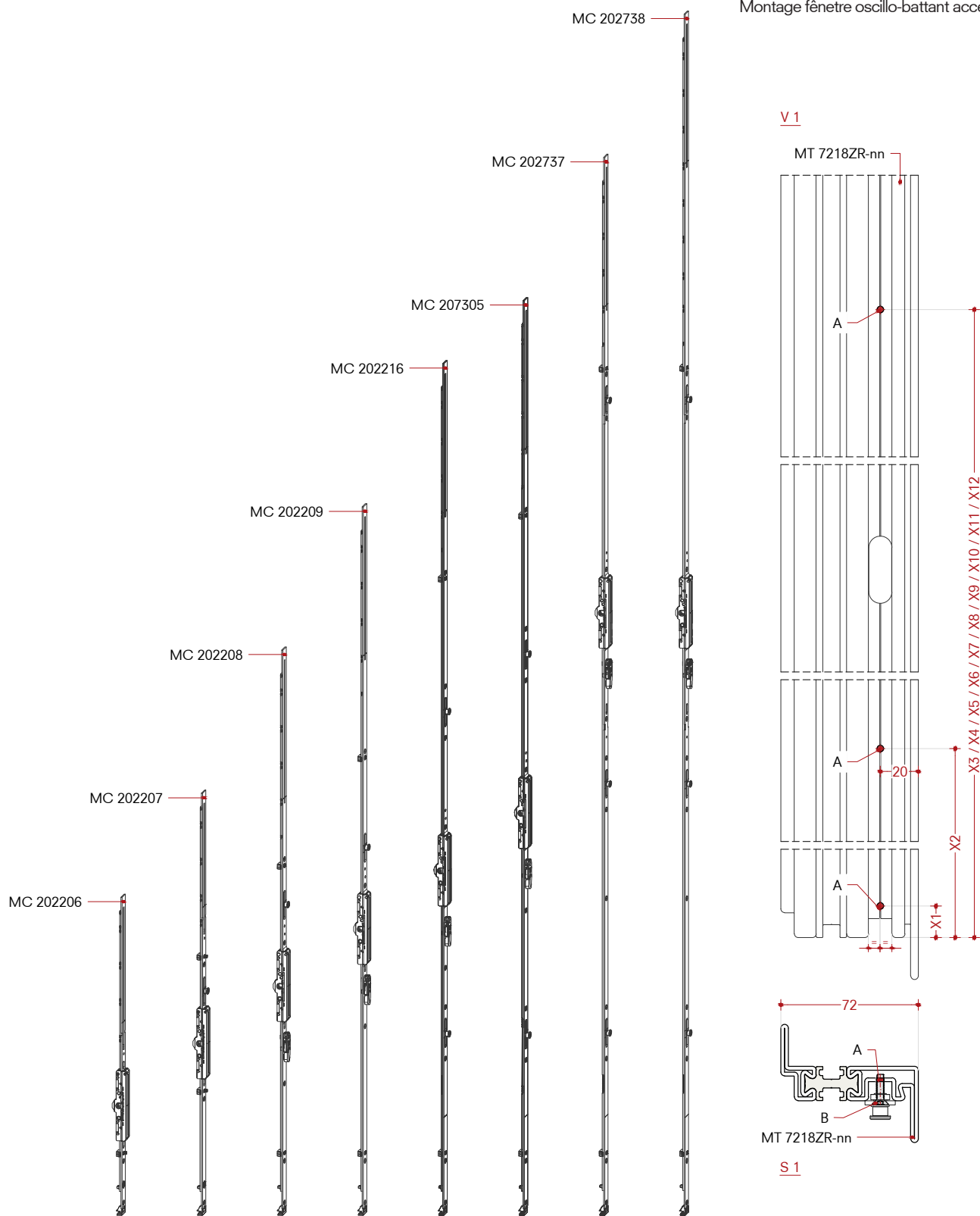
X = Lage Verschraubung Getriebe

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

X = Position du raccord à vis pour crémone





|           | X1   | X2   | X3    | X4  | X5    | X6    | X7  | X8    | X9   | X10  | X11  | X12  |
|-----------|------|------|-------|-----|-------|-------|-----|-------|------|------|------|------|
| MC 202206 | 16.5 | 89.5 | -     | -   | -     | -     | -   | -     | -    | -    | -    | -    |
| MC 202207 | 16.5 | 89.5 | 427   | -   | -     | -     | -   | -     | -    | -    | -    | -    |
| MC 202208 | 16.5 | 89.5 | 226.5 | 472 | 615   | -     | -   | -     | -    | -    | -    | -    |
| MC 202209 | 16.5 | 89.5 | 326.5 | 572 | 683   | 866.5 | -   | -     | -    | -    | -    | -    |
| MC 202216 | 16.5 | 89.5 | 268   | 358 | 426.5 | 672   | 828 | 918   | 1117 | -    | -    | -    |
| MC 207305 | 16.5 | 89.5 | 268   | 358 | 526.5 | 772   | 928 | 1018  | 2227 | -    | -    | -    |
| MC 202737 | 16.5 | 89.5 | 268   | 358 | 548   | 703   | 793 | 861.5 | 1122 | 1386 | 1463 | -    |
| MC 202738 | 16.5 | 89.5 | 268   | 358 | 548   | 703   | 793 | 861.5 | 1122 | 1386 | 1463 | 1727 |

**Handle position  
Tilt&Turn window**

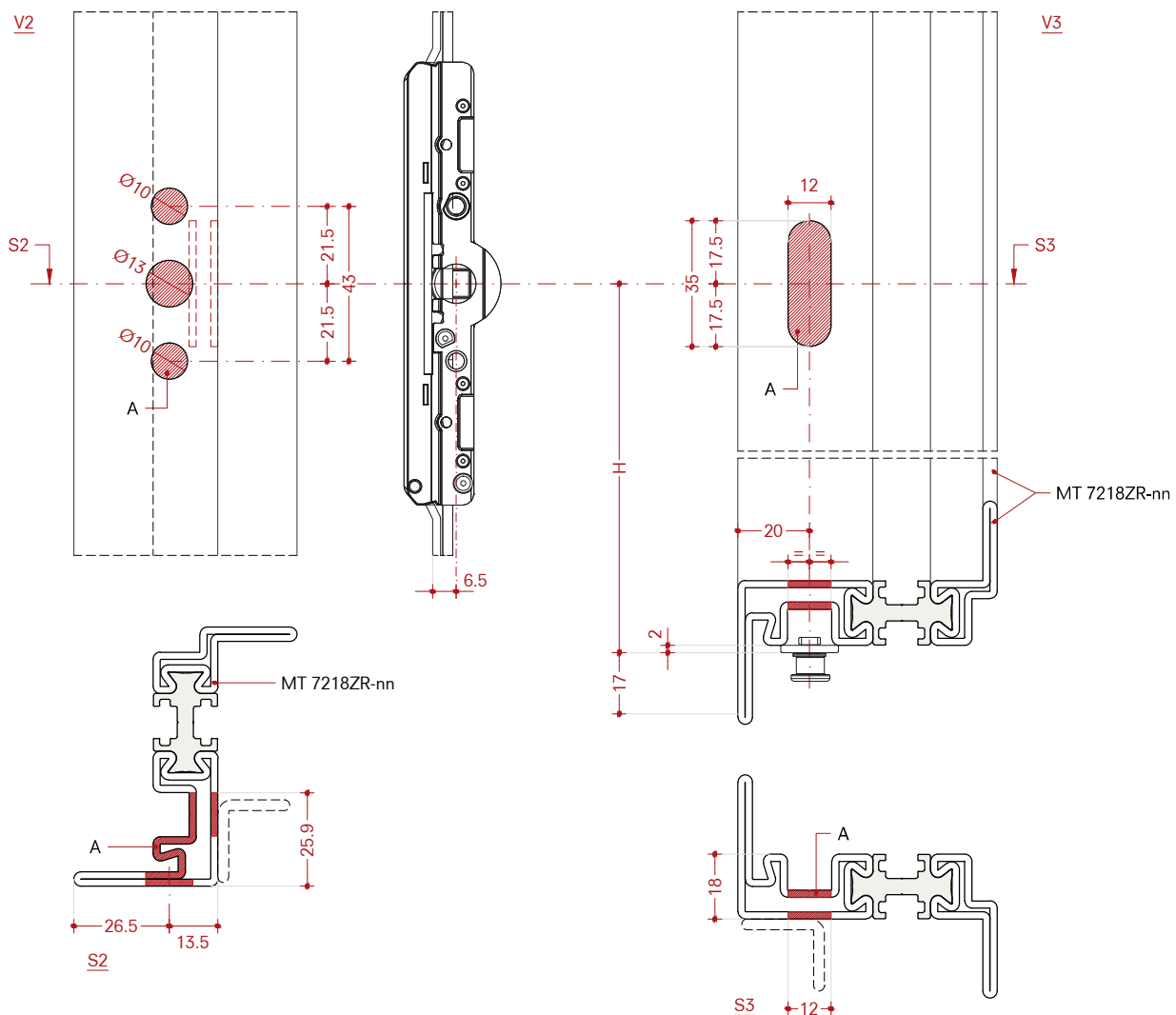
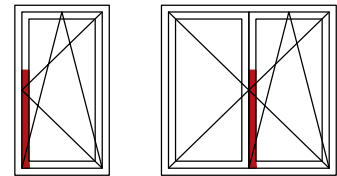
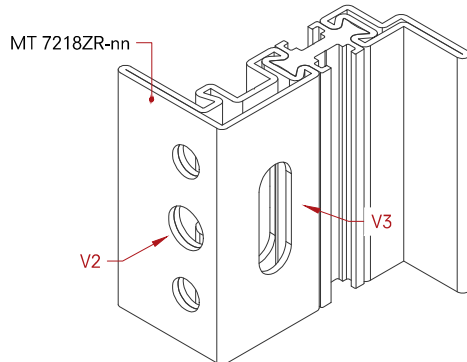
Hardware 6.5 mm backset  
Fixed handle height

**Griffposition  
Dreh-Kippfenster**

Dornmaß Getriebe 6.5 mm  
Griffhöhe fix

**Position de la poignée  
fenêtre inclinable et pivotante**

Entrée verrouiller 6.5 mm  
Hauteur de poignée fixe



M65TB - 0011

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Cut off profile
- H) Fixed handle height  $H \geq 1/3$  leaf height
- L) Length drive gear
- T) Maximum cut drive gear
- Z) Position locking cam

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Profil ausklinken
- H) Griffhöhe fix  $H \geq 1/3$  Flügelhöhe
- L) Länge Getriebe
- T) Maximale Kürzung Getriebe
- Z) Lage Verriegelungszapfen

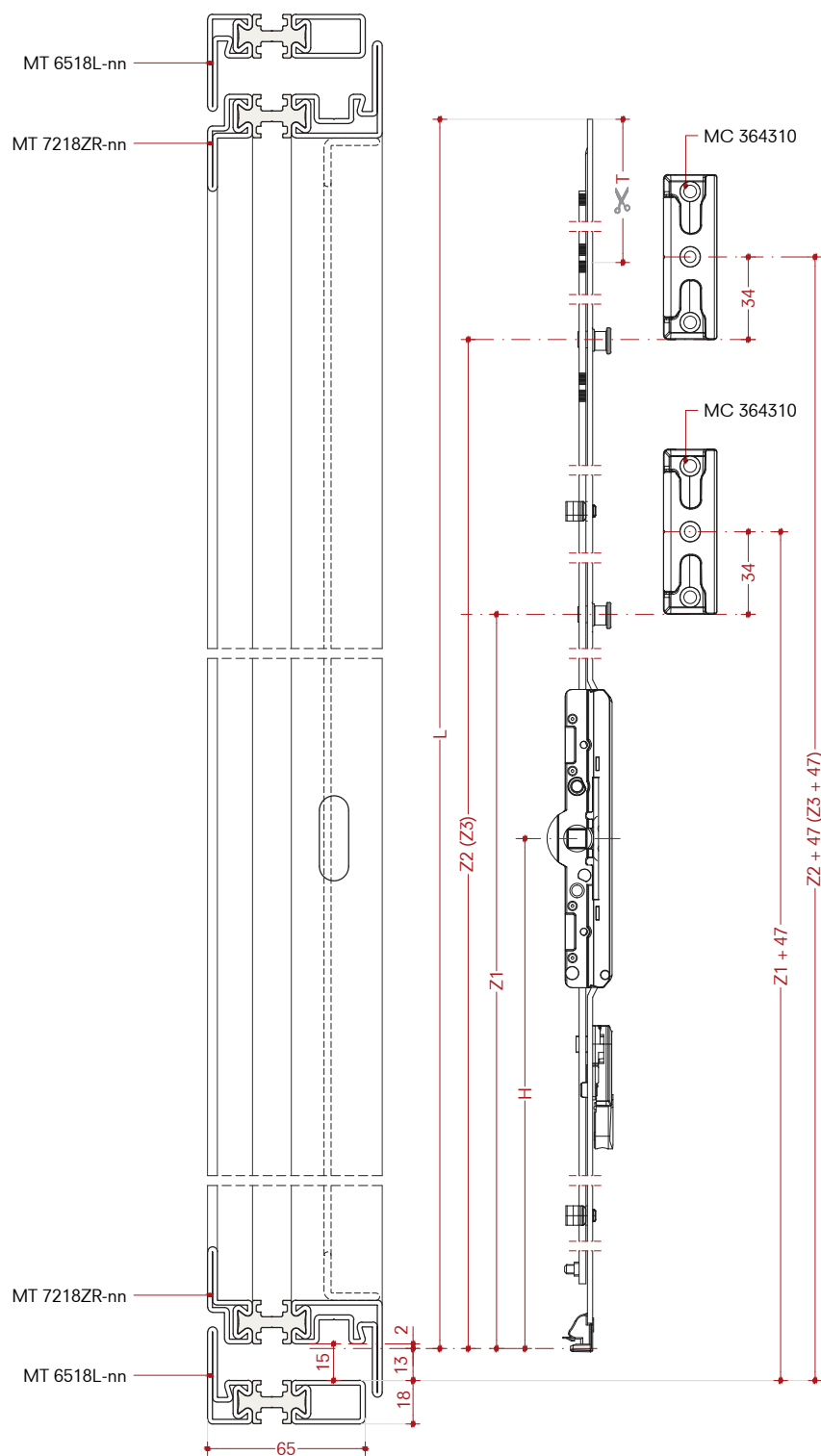
Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Pièce à enlever
- H) Hauteur de poignée fixe  
 $H \geq 1/3$  de la hauteur ouvrant
- L) Longueur du crémonne
- T) Réduction maximale du crémonne
- Z) Position de galet de verrouillage

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



|           | H    | L      | T     | Z1  | Z2  | Z3   |
|-----------|------|--------|-------|-----|-----|------|
| MC 202206 | 190  | 555    | 220   | -   | -   | -    |
| MC 202207 | 300  | 736.5  | 190.5 | 395 | -   | -    |
| MC 202208 | 400  | 986.5  | 260.5 | 540 | -   | -    |
| MC 202209 | 500  | 1236.5 | 260.5 | 640 | -   | -    |
| MC 202216 | 600  | 1486.5 | 260.5 | 315 | 875 | -    |
| MC 207305 | 700  | 1596.5 | 260.5 | 315 | 975 | -    |
| MC 202737 | 1050 | 1846.5 | 260.5 | 315 | 750 | 1420 |
| MC 202738 | 1050 | 2096.5 | 260.5 | 315 | 750 | 1420 |

### Tilt&Turn drive gear

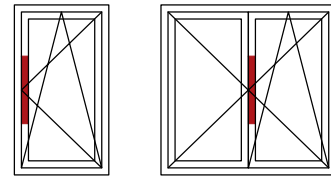
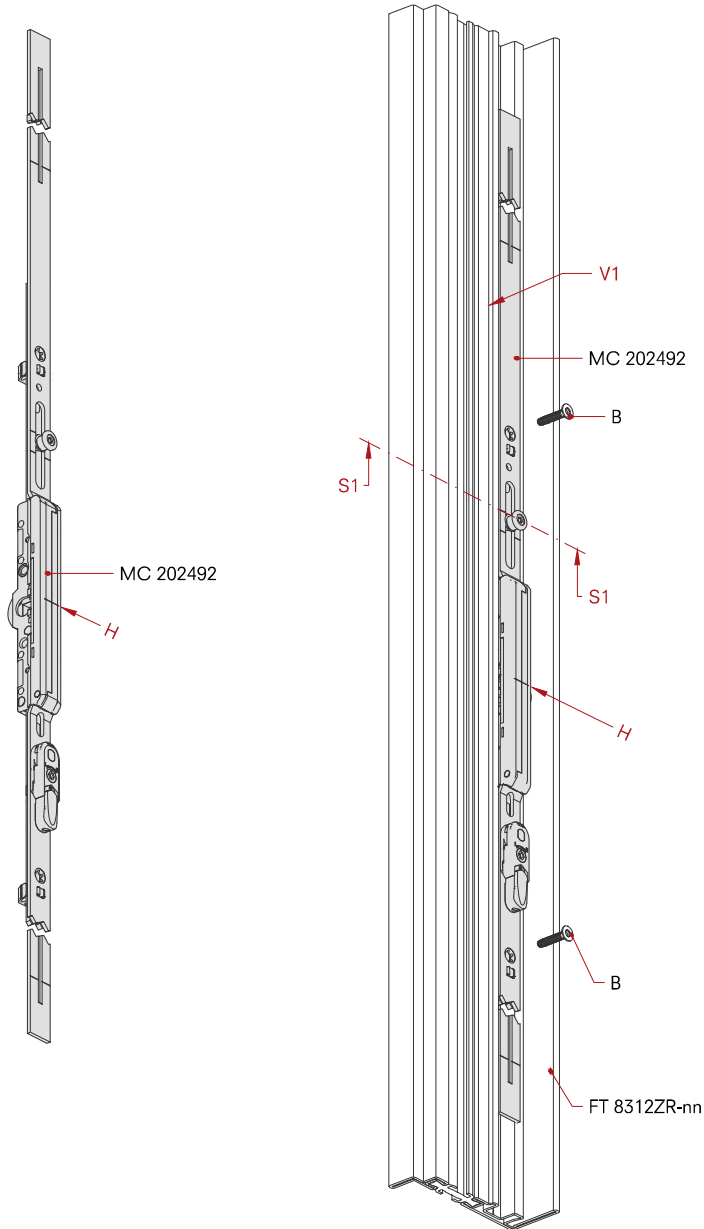
Backset 6.5 mm  
Variable handle height  
MC 202491 - MC 202492  
MC 202494 - MC 202205

### DK Getriebe

Dornmass 6.5 mm  
Griffhöhe variabel  
MC 202491 - MC 202492  
MC 202494 - MC 202205

### Crémone OB

Entrée verrouiller 6.5 mm  
Hauteur de poignée variable  
MC 202491 - MC 202492  
MC 202494 - MC 202205



Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- H) Variable handle height  $H \geq 1/3$  leaf height
- T) Maximum cut drive gear

X = Position screw connection drive gear

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- H) Griffhöhe variabel  $H \geq 1/3$  Flügelhöhe
- T) Maximale Kürzung Getriebe

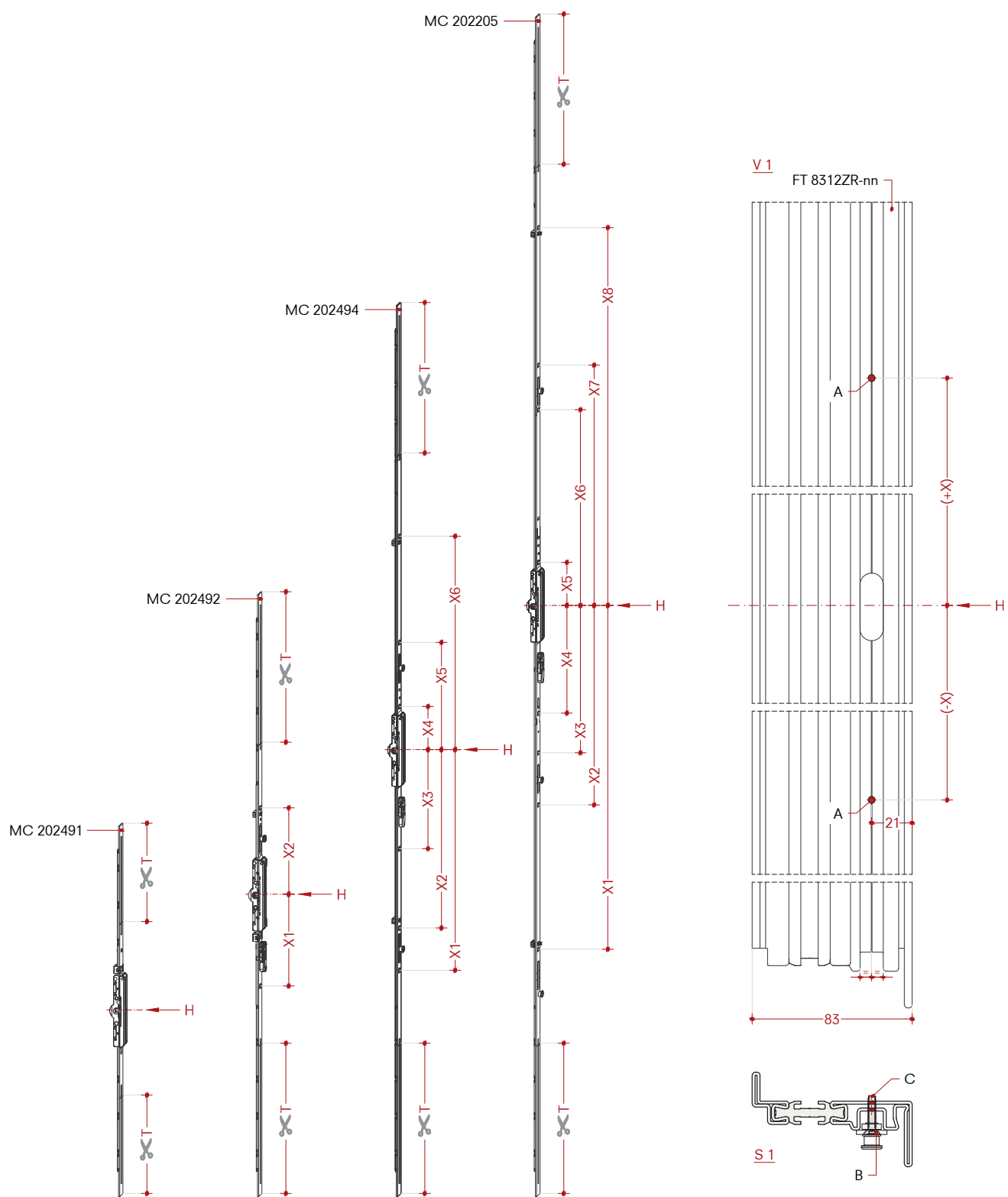
X = Lage Verschraubung Getriebe

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- H) Hauteur de poignée variable  
 $H \geq 1/3$  de la hauteur ouvrant
- T) Réduction maximale du crémonne

X = Position du raccord à vis pour crémonne

M65TB - 0012 DWG DXF



|           | T   | X1     | X2     | X3     | X4     | X5  | X6    | X7  | X8  |
|-----------|-----|--------|--------|--------|--------|-----|-------|-----|-----|
| MC 202491 | 170 | -      | -      | -      | -      | -   | -     | -   | -   |
| MC 202492 | 260 | -158.5 | 149    | -      | -      | -   | -     | -   | -   |
| MC 202494 | 260 | -381.5 | -308.5 | -171.5 | 74     | 185 | 368.5 | -   | -   |
| MC 202205 | 260 | -595   | -345   | -255   | -186.5 | 74  | 338   | 415 | 653 |

**Templates for Tilt&Turn fittings**

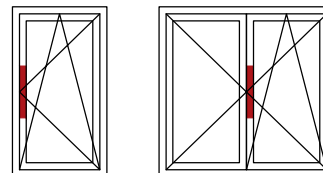
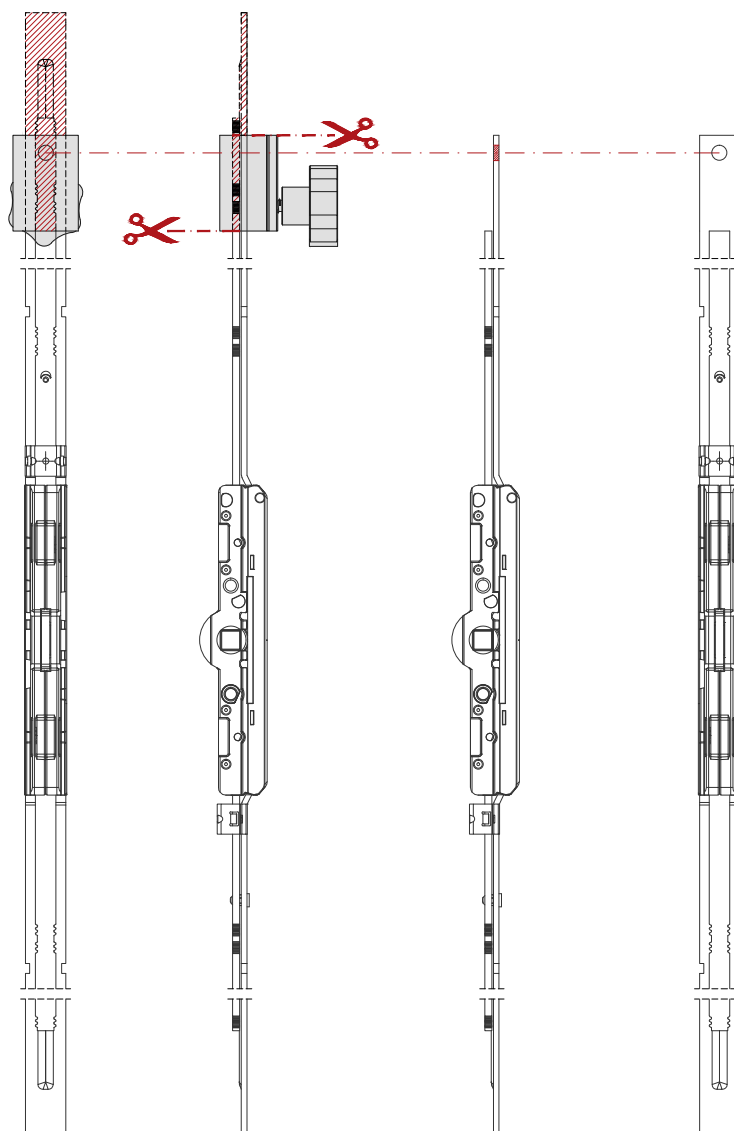
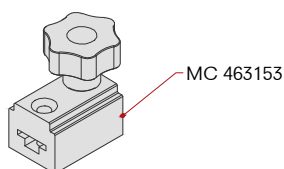
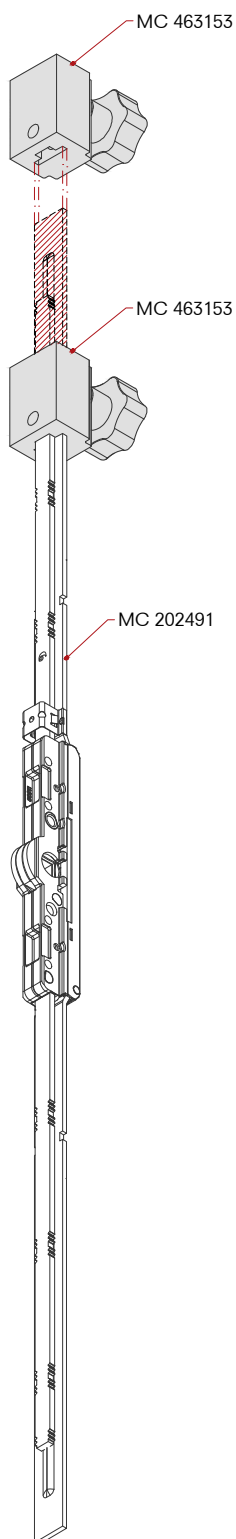
MC 463153

**Beilagen für Dreh-Kippfenster  
Beschläge**

MC 463153

**Gabarit pour ferrures  
de fenêtre oscillo-battant**

MC 463153





**Handle position  
Tilt&Turn window**

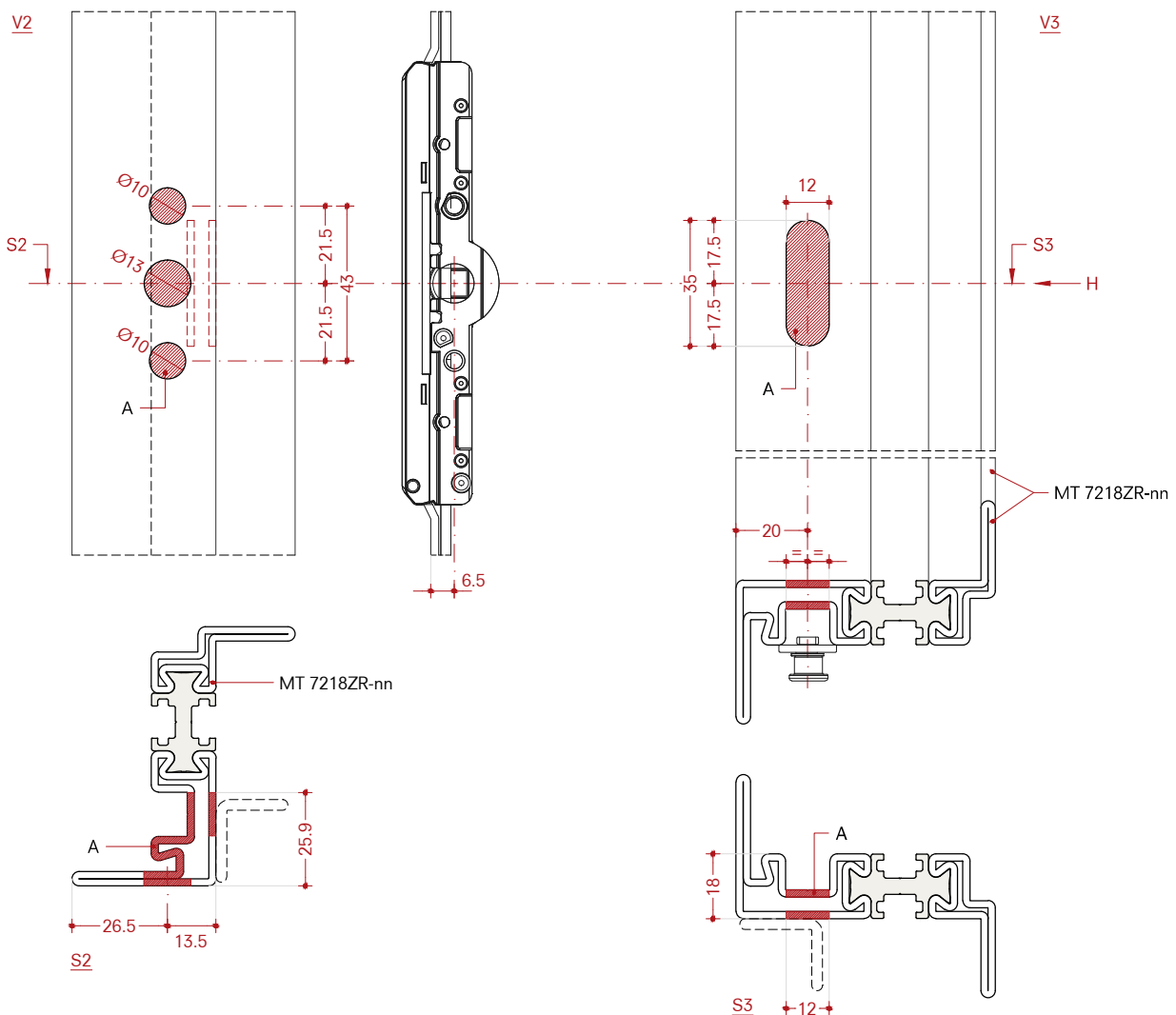
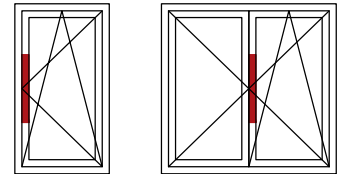
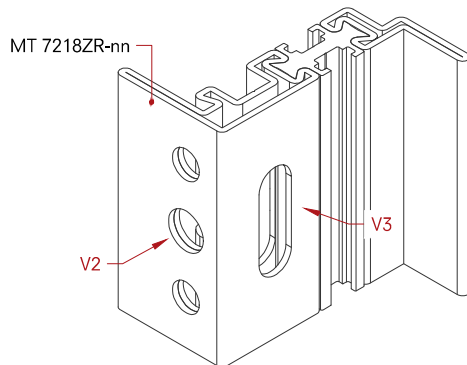
Hardware 6.5 mm backset  
Variable handle height

**Griffposition  
Dreh-Kippfenster**

Dornmaß Getriebe 6.5 mm  
Griffhöhe variabe

**Position de la poignée  
fenêtre inclinable et pivotante**

Entrée verrouiller 6.5 mm  
Hauteur de poignée variable



M65TB - 0013

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Cut off profile  
H) Variable handle height  $H \geq 1/3$  leaf height  
L) Length drive gear  
Z) Position locking cam

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Profil ausklinken  
H) Griffhöhe variabel  $H \geq 1/3$  Flügelhöhe  
L) Länge Getriebe  
Z) Lage Verriegelungszapfen

Montré ouverture droite  
(ouverture gauche inversé en miroir)

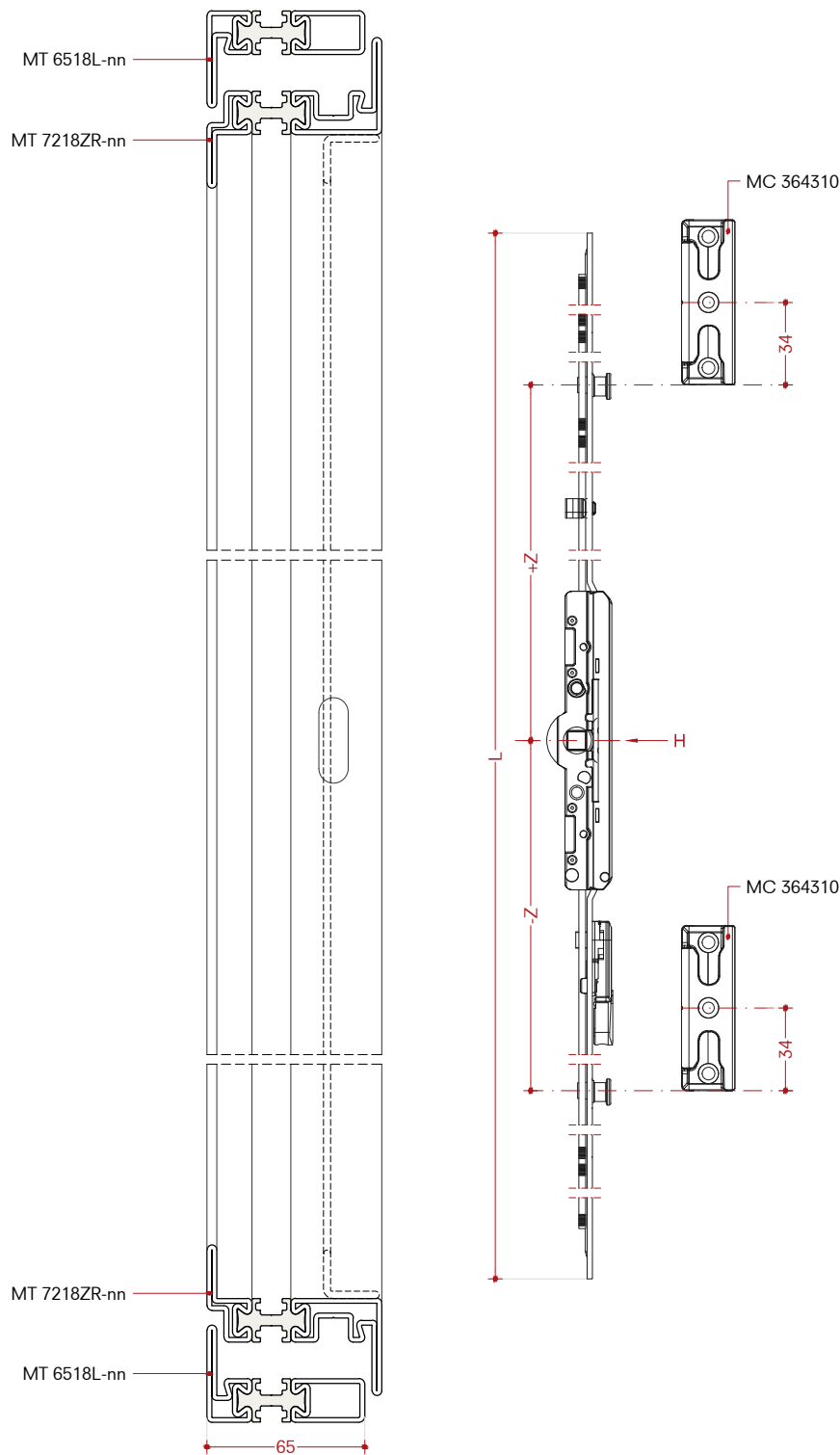
A) Pièce à enlever  
H) Hauteur de poignée variable  
 $H \geq 1/3$  de la hauteur ouvrant  
L) Longueur du crémone  
Z) Position de galet de verrouillage



**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**

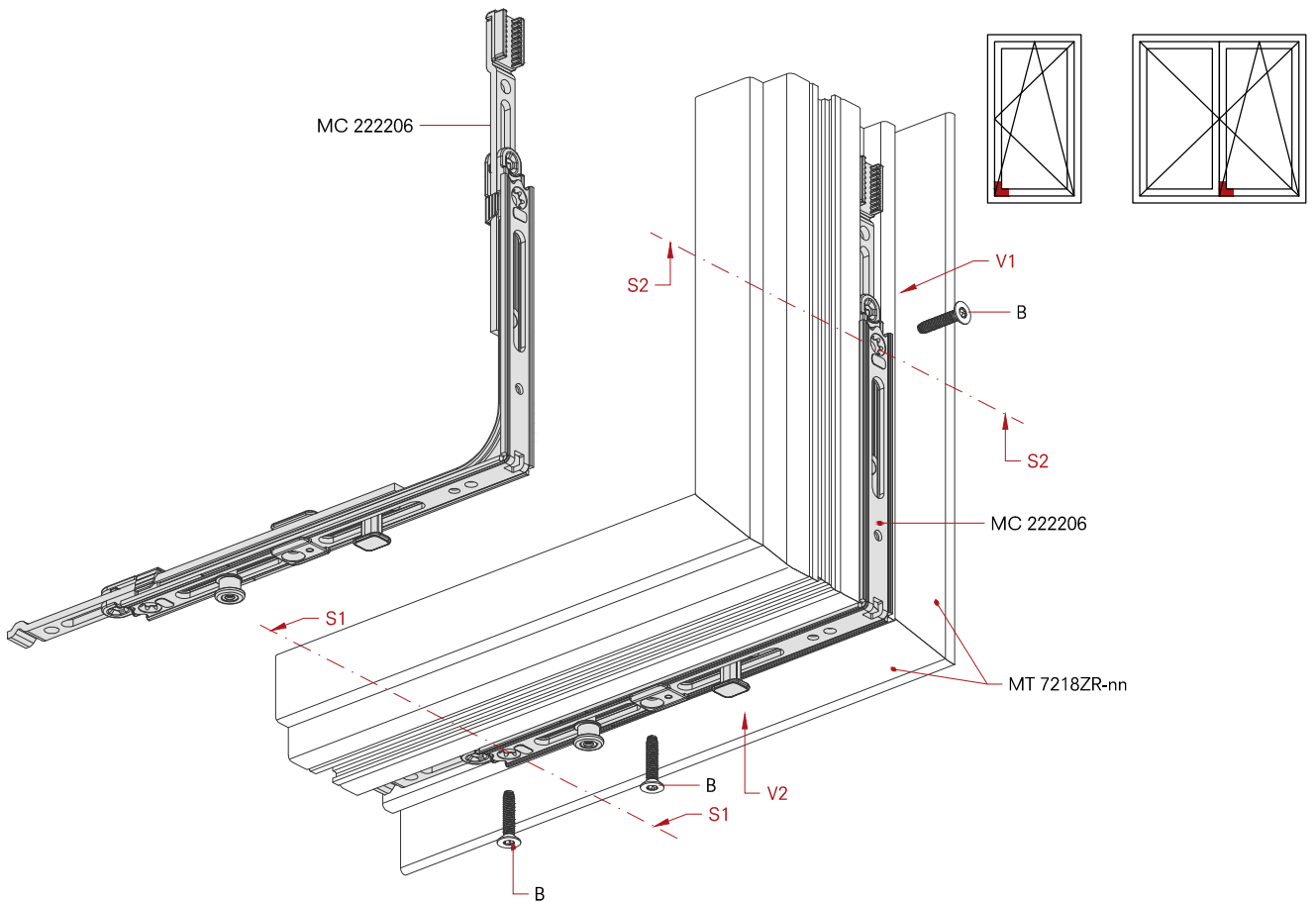


|           | L    | Z1   | Z2   | Z3  |
|-----------|------|------|------|-----|
| MC 202491 | 640  | -    | -    | -   |
| MC 202492 | 1040 | 95   | -    | -   |
| MC 202494 | 1540 | -343 | 140  | -   |
| MC 202205 | 2040 | -640 | -300 | 370 |

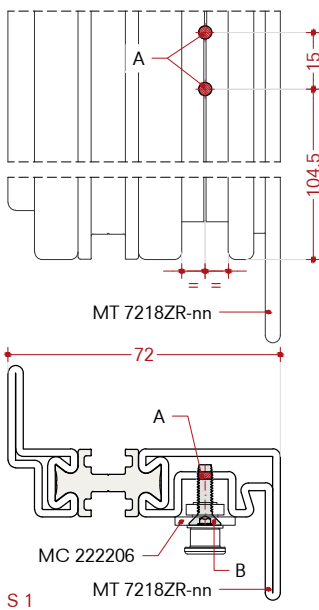
**Corner element horizontally  
extendable for variable drive gear  
with 1 locking cam**  
MC 222206

**Eckumlenkung waagrecht  
verlängerbar für variable Getriebe  
mit 1 Verriegelungszapfen**  
MC 222206

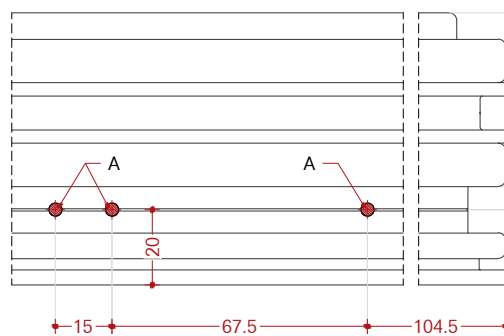
**Renvoi d'angle horizontal  
rallongeable pour crémone variable  
avec 1 galet de verrouillage**  
MC 222206



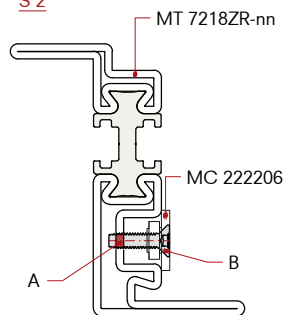
V 1



V 2



S 2



M65TB - 0014

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

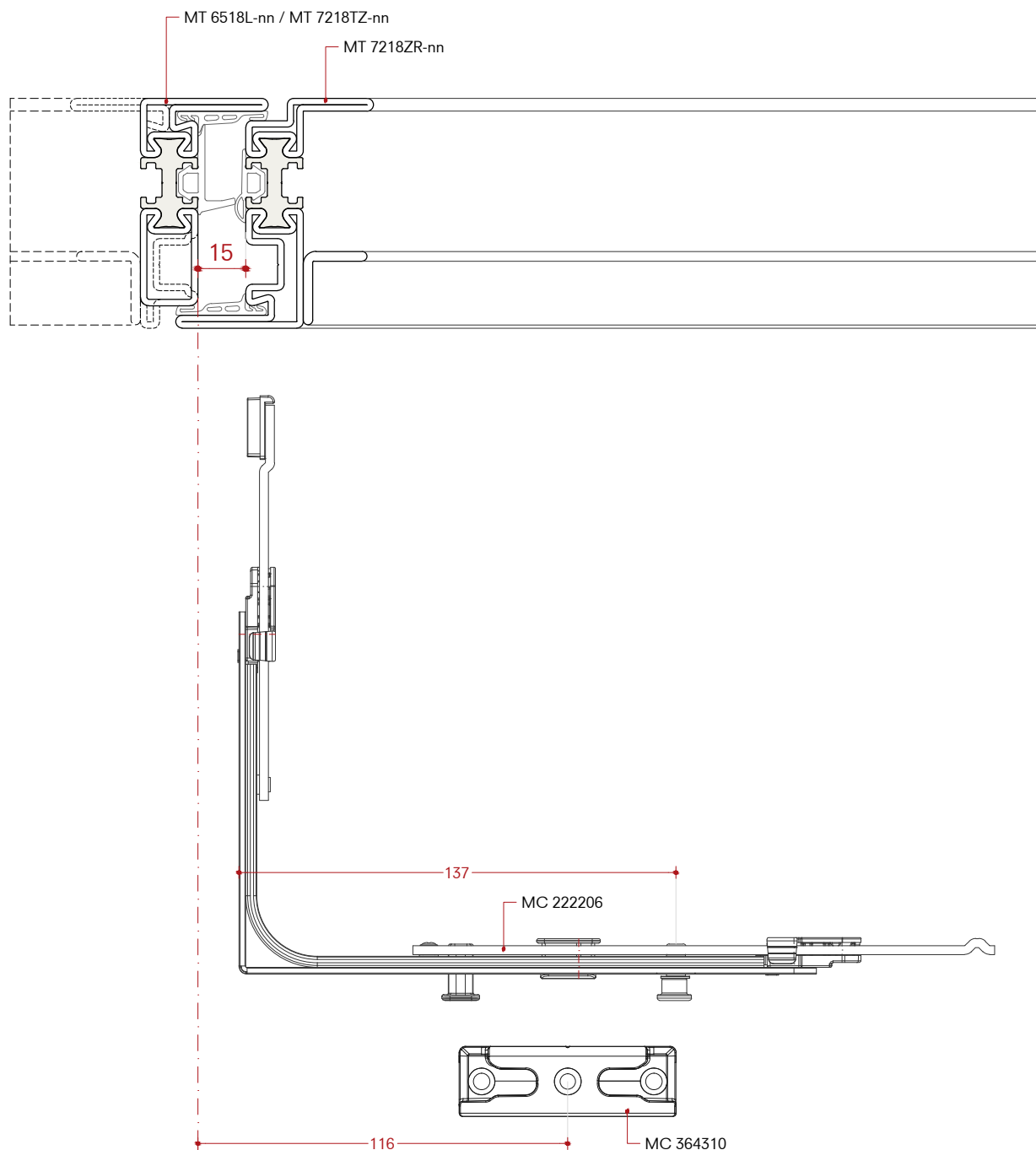
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

Dargestellt DIN rechts - DIN links spiegelbildlich

Montré ouverture droite  
(ouverture gauche inversé en miroir)

**Tilt&Turn scissor stay arm with bearing**

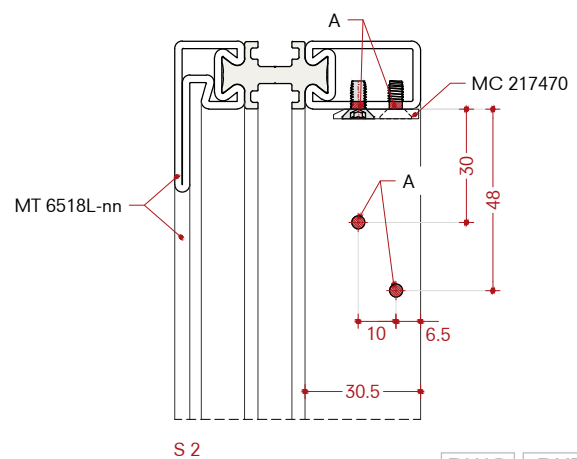
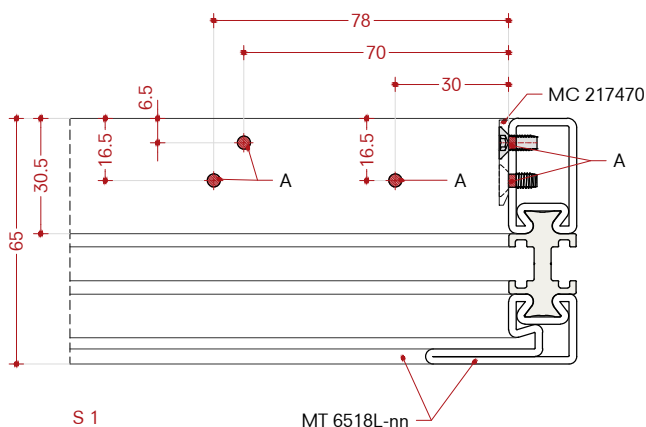
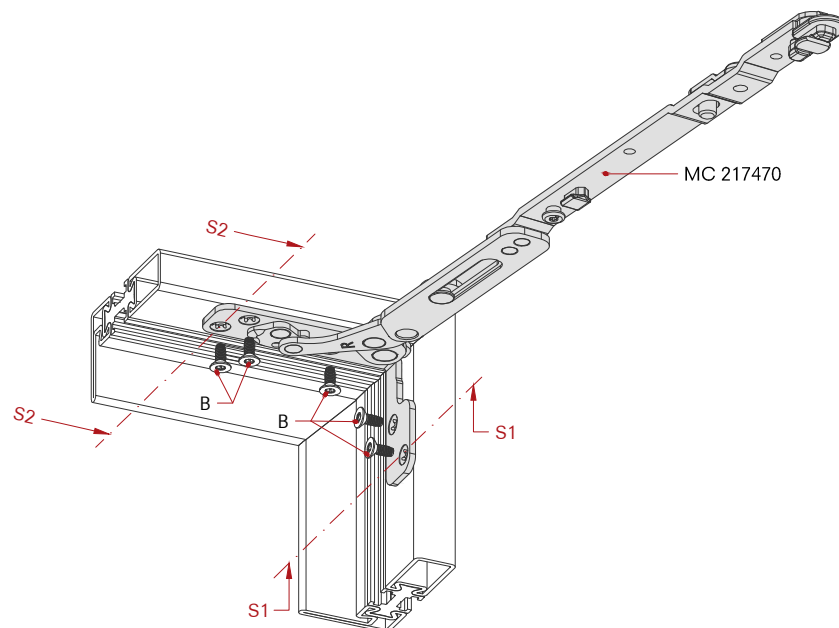
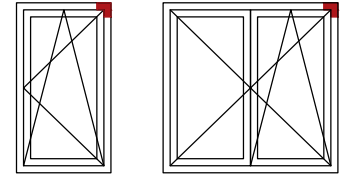
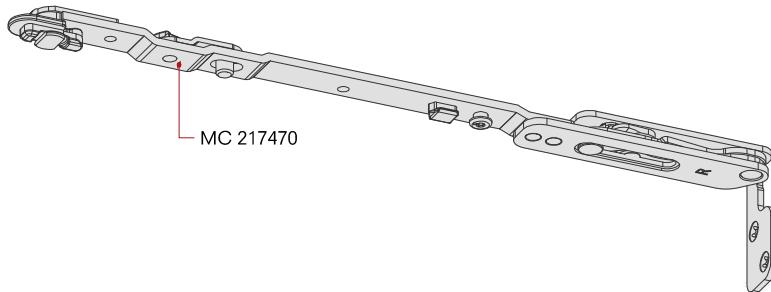
Sash rebate width ≤ 800 mm  
MC 217470 R  
MC 217471 L

**DK Scherenarm mit Lager**

Flügelalzbreite ≤ 800 mm  
MC 217470 R  
MC 217471 L

**Bras de compas OB avec palier**

Largeur fond de feuillure ≤ 800 mm  
MC 217470 R  
MC 217471 L



Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x10
- C) Cut the screw

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x10
- C) Schraube kürzen

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x10
- C) Couper la vis

L = Ouverture gauche  
R = Ouverture droite

## Side adjustment

★ Adjustment range  $\pm 1/-2.5$  mm with TX 15

L = Left opening  
R = Right opening

## Seiteneinstellung

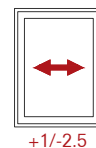
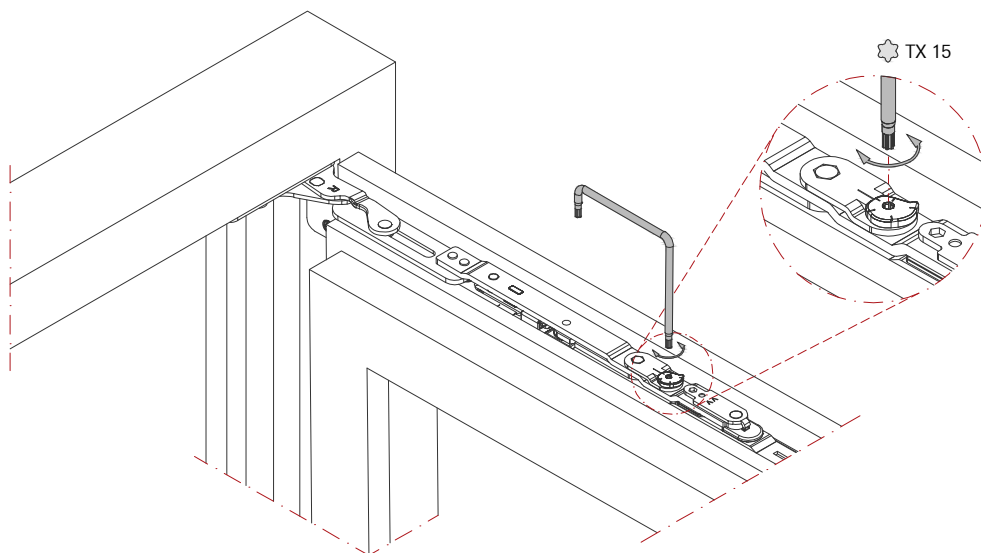
★ Einstellbereich  $\pm 1/-2.5$  mm mit TX 15

L = DIN links  
R = DIN rechts

## Réglage latéral

★ Plage de réglage  $\pm 1/-2.5$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite



## Pressure adjustment

★ Adjustment range  $\pm 0.7$  mm with TX 15

L = Left opening  
R = Right opening

## Anpressdruck Einstellung

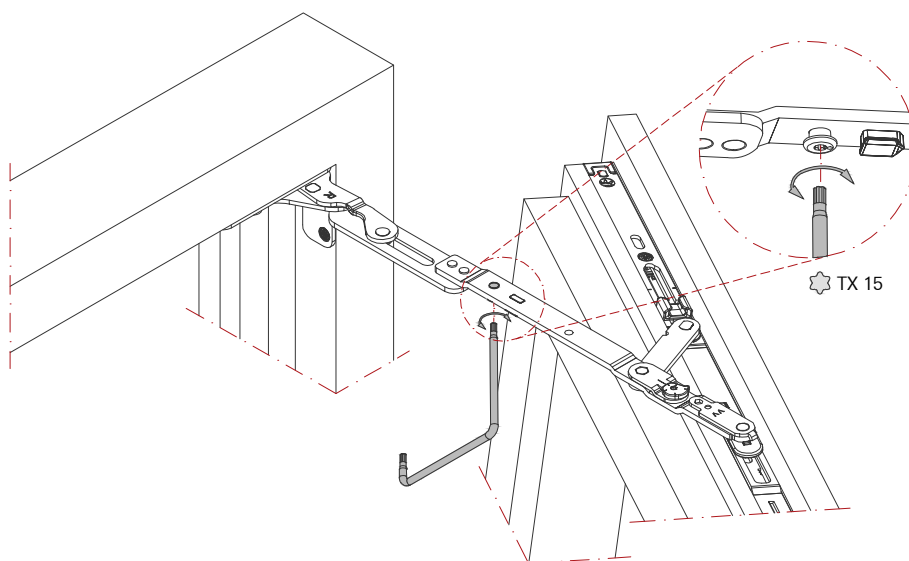
★ Einstellbereich  $\pm 0.7$  mm mit TX 15

L = DIN links  
R = DIN rechts

## Réglage de la pression de contact

★ Plage de réglage  $\pm 0.7$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite



**Tilt&Turn scissor stay arm with bearing**

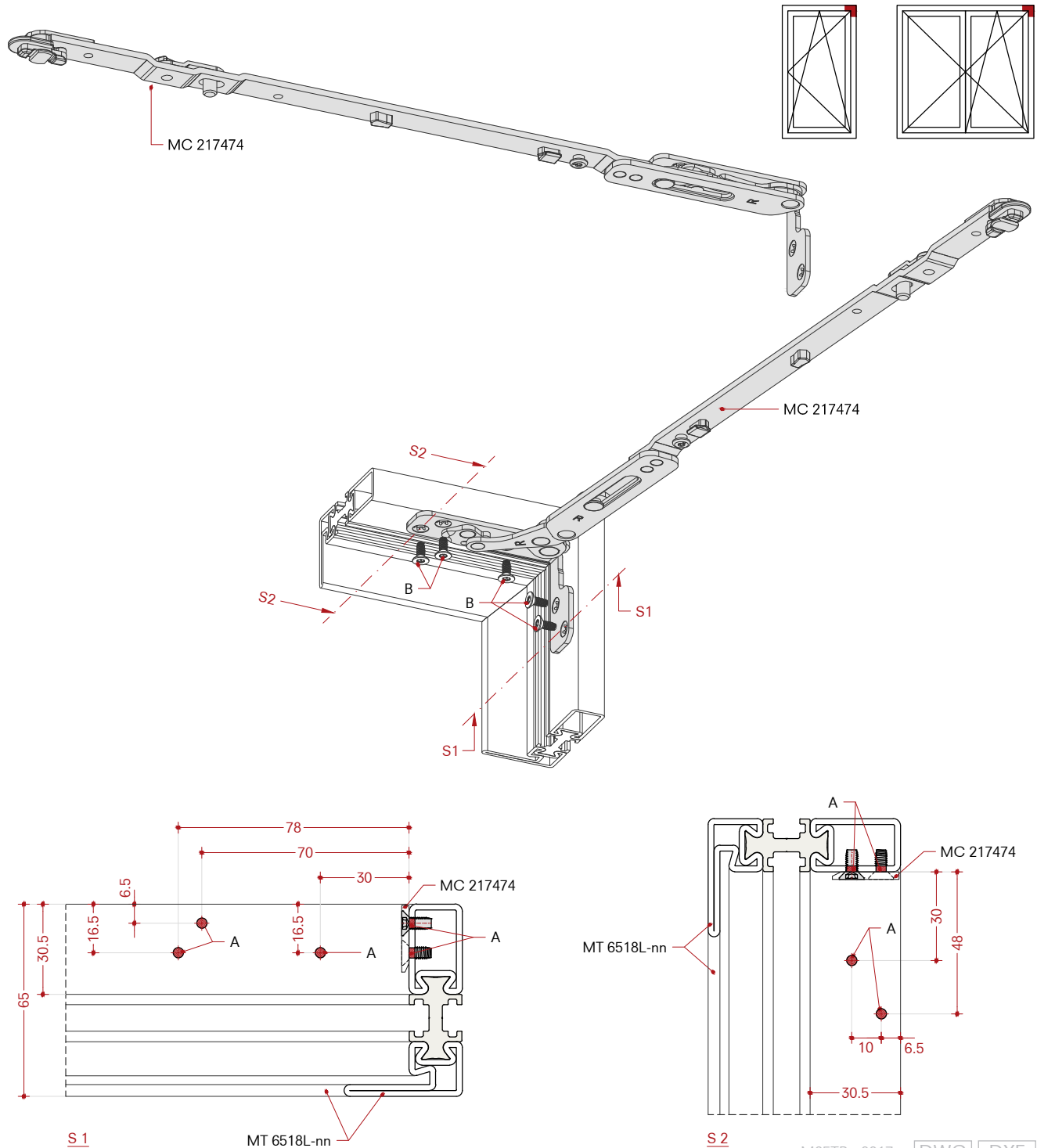
Sash rebate width > 800 mm  
MC 217474 R  
MC 217475 L

**DK Scherenarm mit Lager**

Flügelalzbreite > 800 mm  
MC 217474 R  
MC 217475 L

**Bras de compas OB avec palier**

Largeur fond de feuillure > 800 mm  
MC 217474 R  
MC 217475 L



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x10

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x10

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x10

L = Ouverture gauche  
R = Ouverture droite

## Side adjustment

★ Adjustment range  $\pm 1/-2.5$  mm with TX 15

L = Left opening  
R = Right opening

## Seiteneinstellung

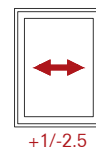
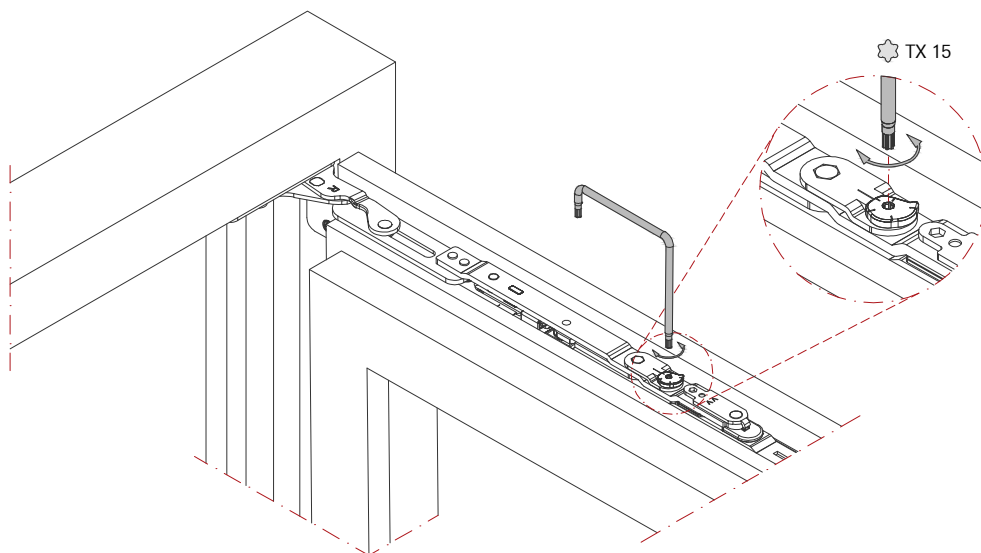
★ Einstellbereich  $\pm 1/-2.5$  mm mit TX 15

L = DIN links  
R = DIN rechts

## Réglage latéral

★ Plage de réglage  $\pm 1/-2.5$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite



## Pressure adjustment

★ Adjustment range  $\pm 0.7$  mm with TX 15

L = Left opening  
R = Right opening

## Anpressdruck Einstellung

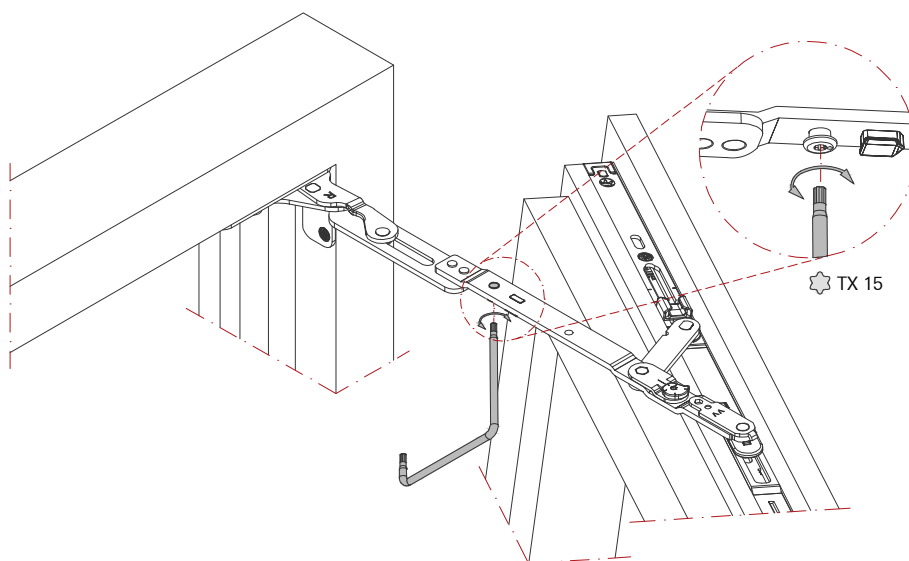
★ Einstellbereich  $\pm 0.7$  mm mit TX 15

L = DIN links  
R = DIN rechts

## Réglage de la pression de contact

★ Plage de réglage  $\pm 0.7$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite



**Turn-only hinge arm with hinge**

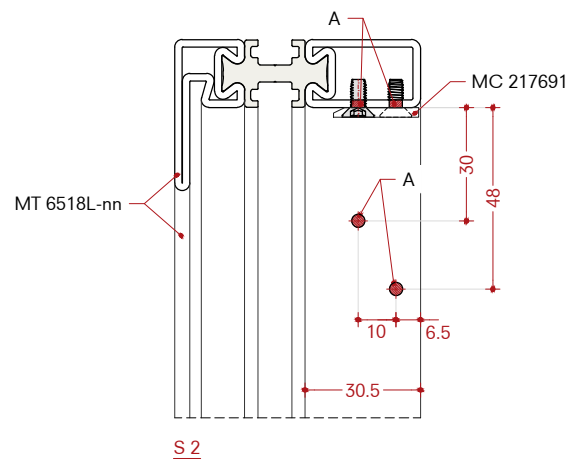
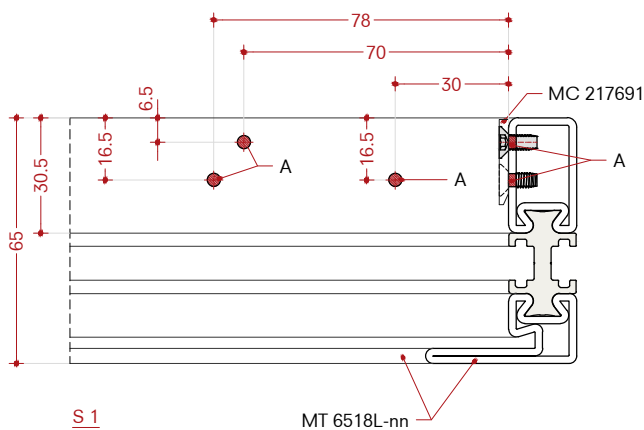
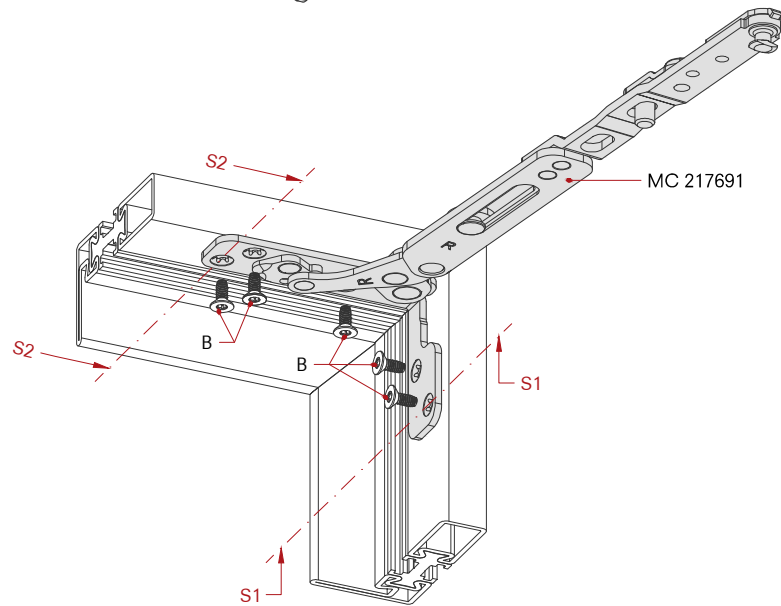
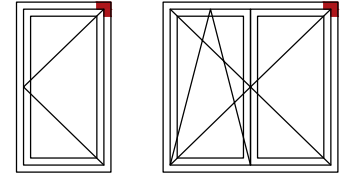
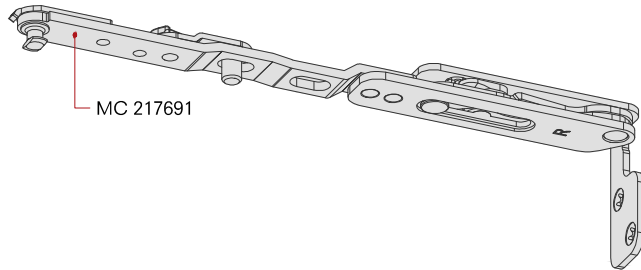
MC 217691 R  
MC 217692 L

**Drehbandarm mit Lager**

MC 217691 R  
MC 217692 L

**Bras de compas OF avec palier**

MC 217691 R  
MC 217692 L



M65TB - 0018 DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x10

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x10

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x10

L = Ouverture gauche  
R = Ouverture droite



## Side adjustment

★ Adjustment range  $\pm 1/-2.5$  mm with TX 15

L = Left opening  
R = Right opening

## Seiteneinstellung

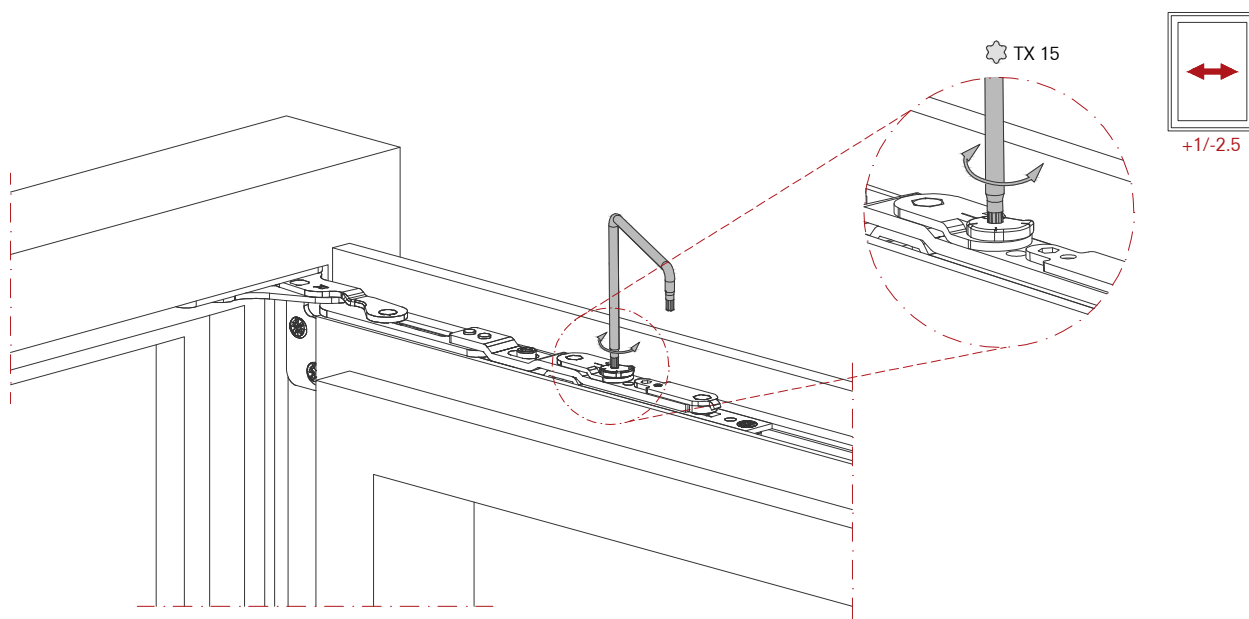
★ Einstellbereich  $\pm 1/-2.5$  mm mit TX 15

L = DIN links  
R = DIN rechts

## Réglage latéral

★ Plage de réglage  $\pm 1/-2.5$  mm avec TX 15

L = Ouverture gauche  
R = Ouverture droite



## Pressure adjustment

⬡ Adjustment range  $\pm 1$  mm with SW 4

L = Left opening  
R = Right opening

## Anpressdruck Einstellung

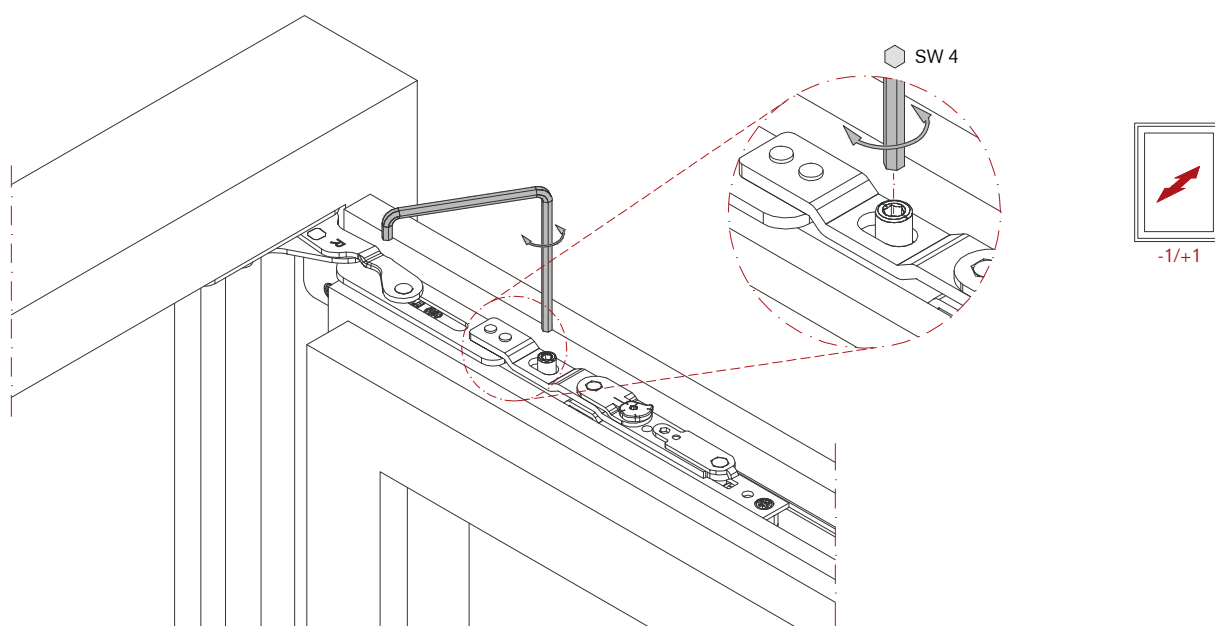
⬡ Einstellbereich  $\pm 1$  mm mit SW 4

L = DIN links  
R = DIN rechts

## Réglage de la pression de contact

⬡ Plage de réglage  $\pm 1$  mm avec SW 4

L = Ouverture gauche  
R = Ouverture droite

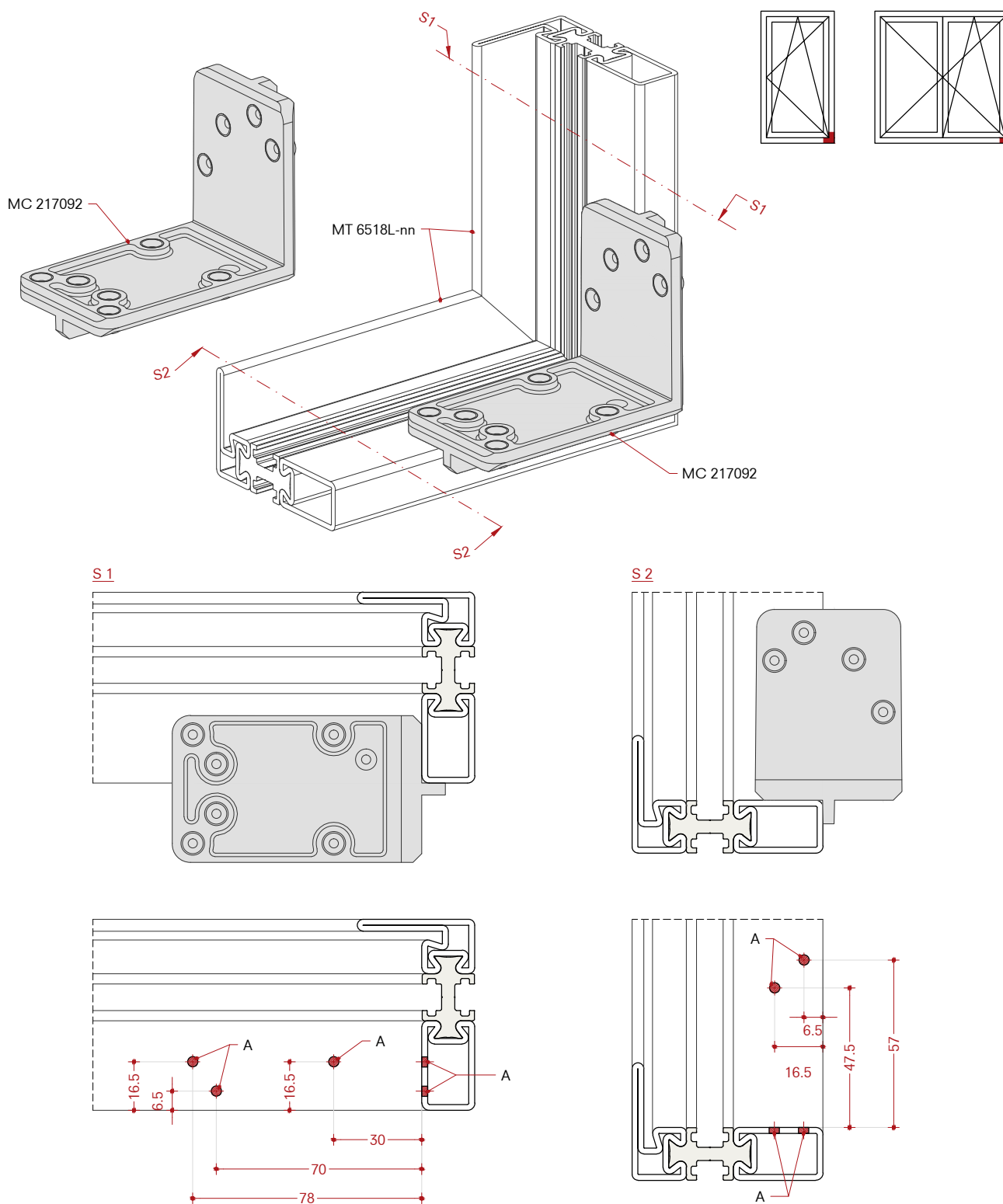


## Templates for Tilt&Turn fittings

MC 217092  
Bottom angle

**Beilagen für Dreh-Kippfenster  
Beschläge**  
MC 217092  
Unterer Winkel

**Gabarit pour ferrures  
de fenêtre oscillo-battant**  
MC 217092  
Angle inférieur



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.5 mm

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.5 mm

Montré ouverture droite  
(ouverture gauche inversé en miroir)

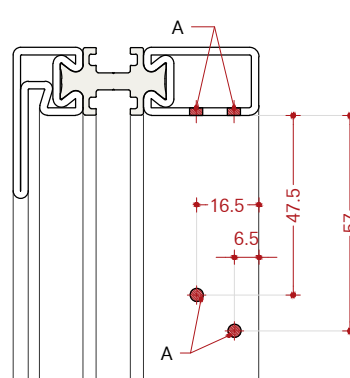
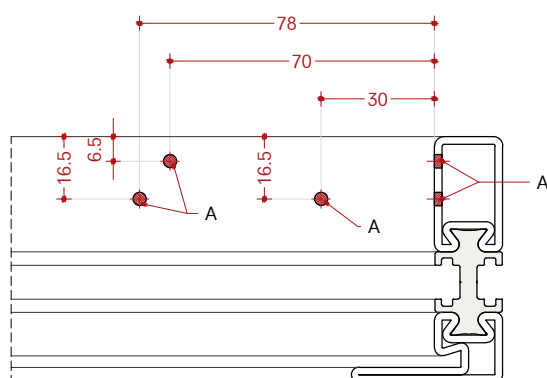
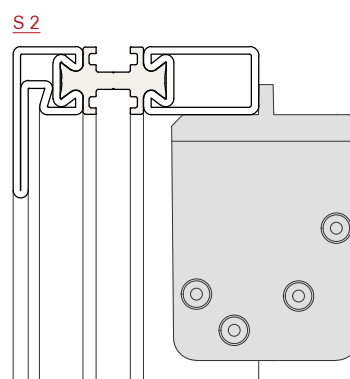
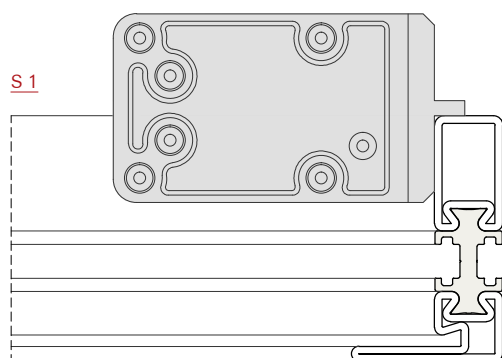
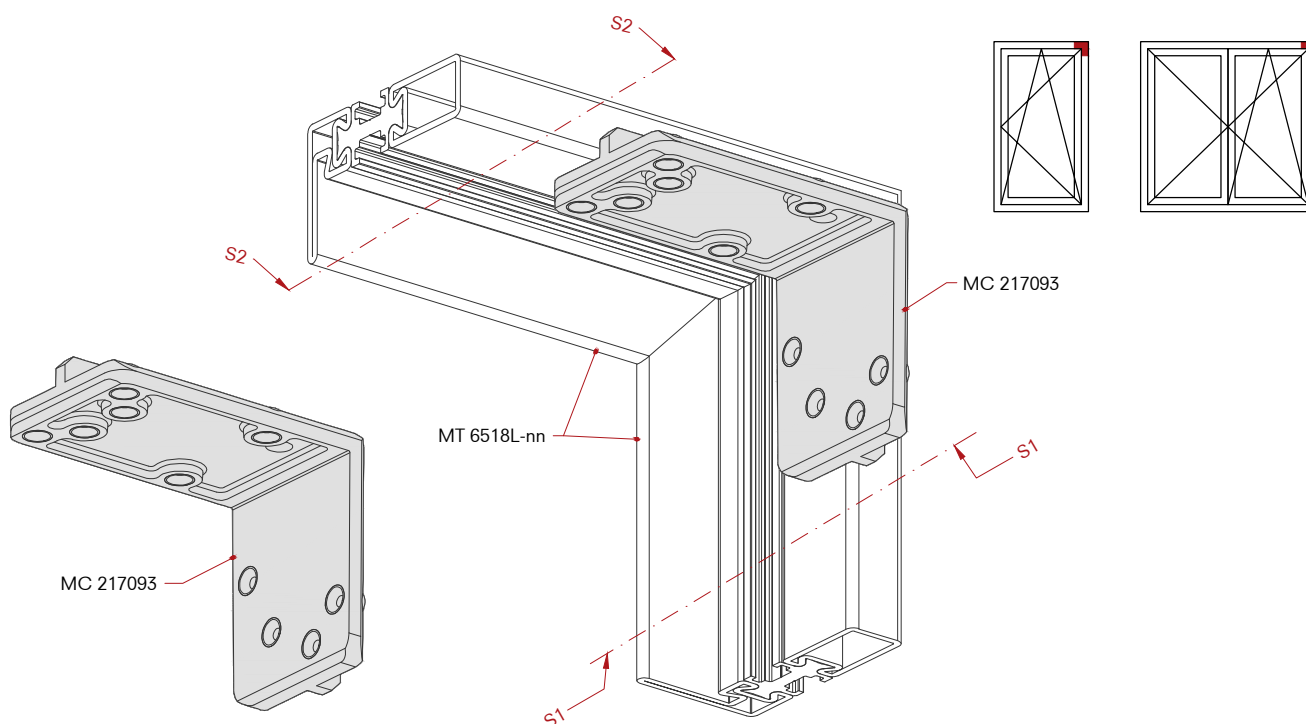
A) Trou Ø3.5 mm

## Templates for Tilt&Turn fittings

MC 217093  
Top angle

**Beilagen für Dreh-Kippfenster  
Beschläge**  
MC 217093  
Spitzenwinkel

**Gabarit pour ferrures  
de fenêtre oscillo-battant**  
MC 217093  
Angle supérieur



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.5 mm

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.5 mm

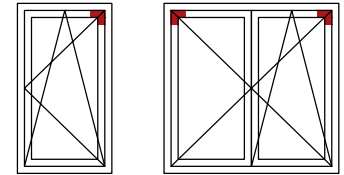
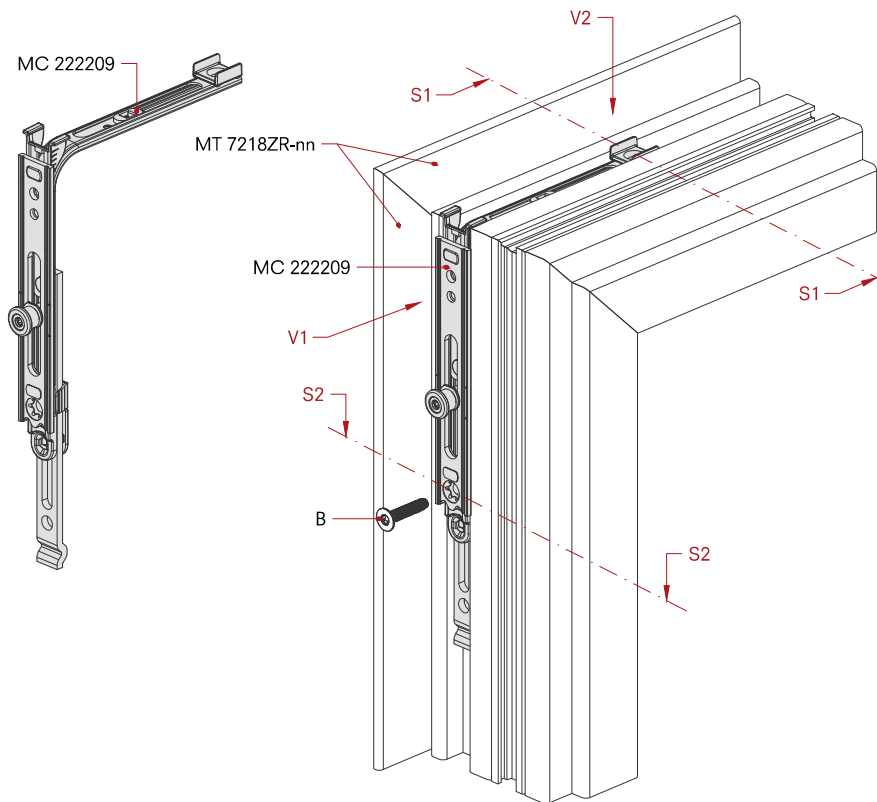
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.5 mm

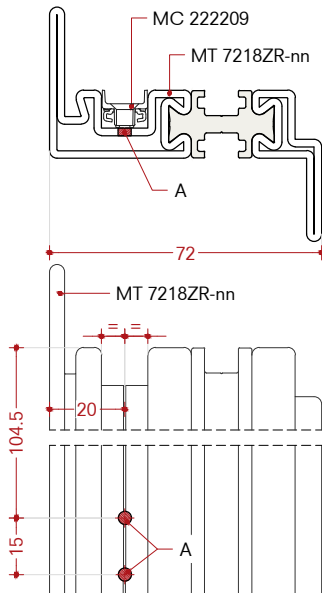
**Corner element vertically  
extendable with 1 locking cam**  
MC 222209

**Eckumlenkung senkrecht  
verlängerbar mit 1  
Verriegelungszapfen**  
MC 222209

**Renvoi d'angle vertical  
rallongeable  
avec 1 galet de verrouillage**  
MC 222209

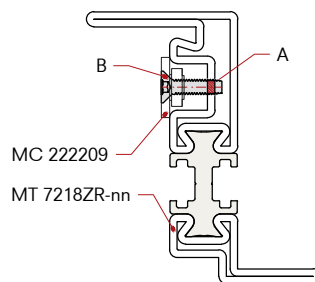


S 1

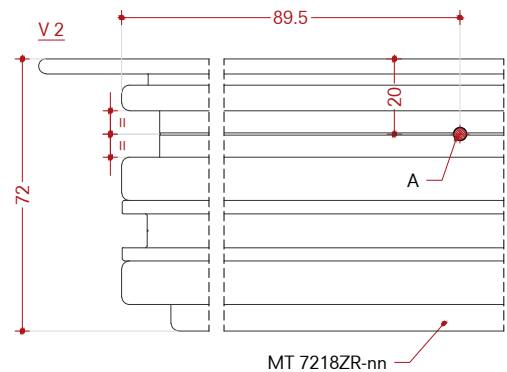


V 1

S 2



V 2



M65TB - 0019

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

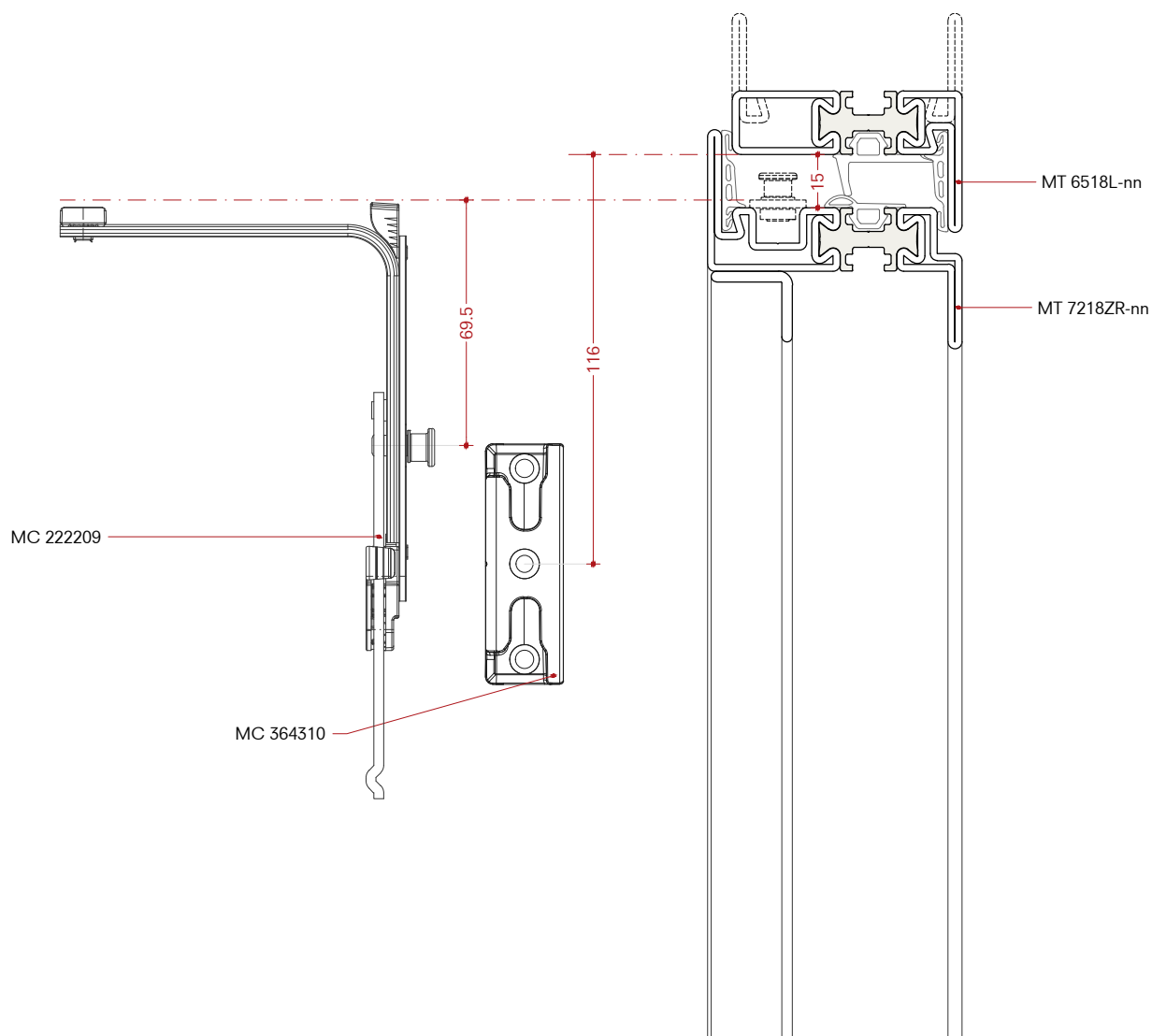
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

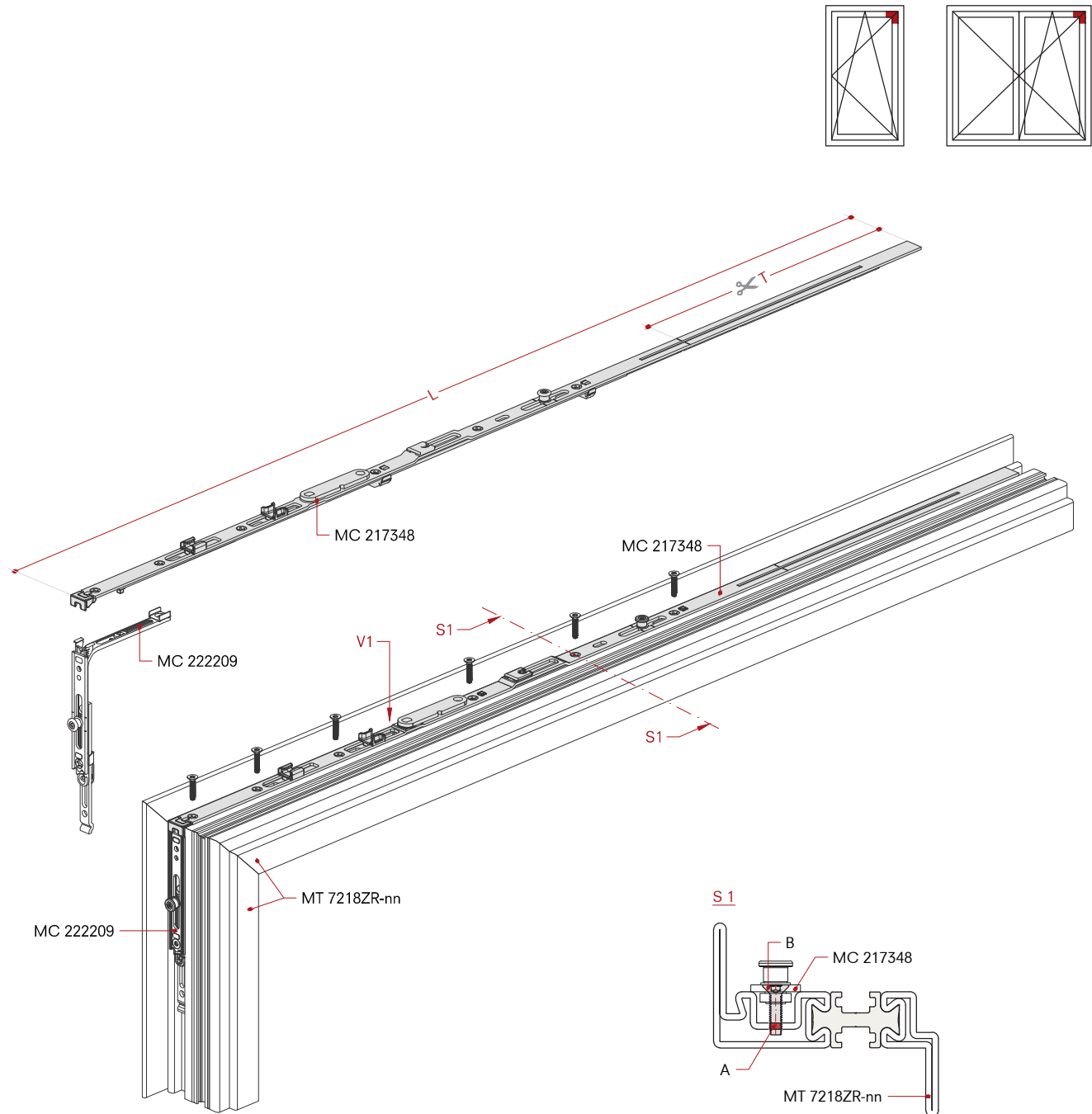
Dargestellt DIN rechts - DIN links spiegelbildlich

Montré ouverture droite  
(ouverture gauche inversé en miroir)

**Tilt&Turn/tilt-first scissor stay**  
MC 217346 - MC 217347  
MC 217348 - MC 217349

**DK/KD Scherenstulpe**  
MC 217346 - MC 217347  
MC 217348 - MC 217349

**Tête de compas OB/OB inversé**  
MC 217346 - MC 217347  
MC 217348 - MC 217349



M65TB - 0020

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

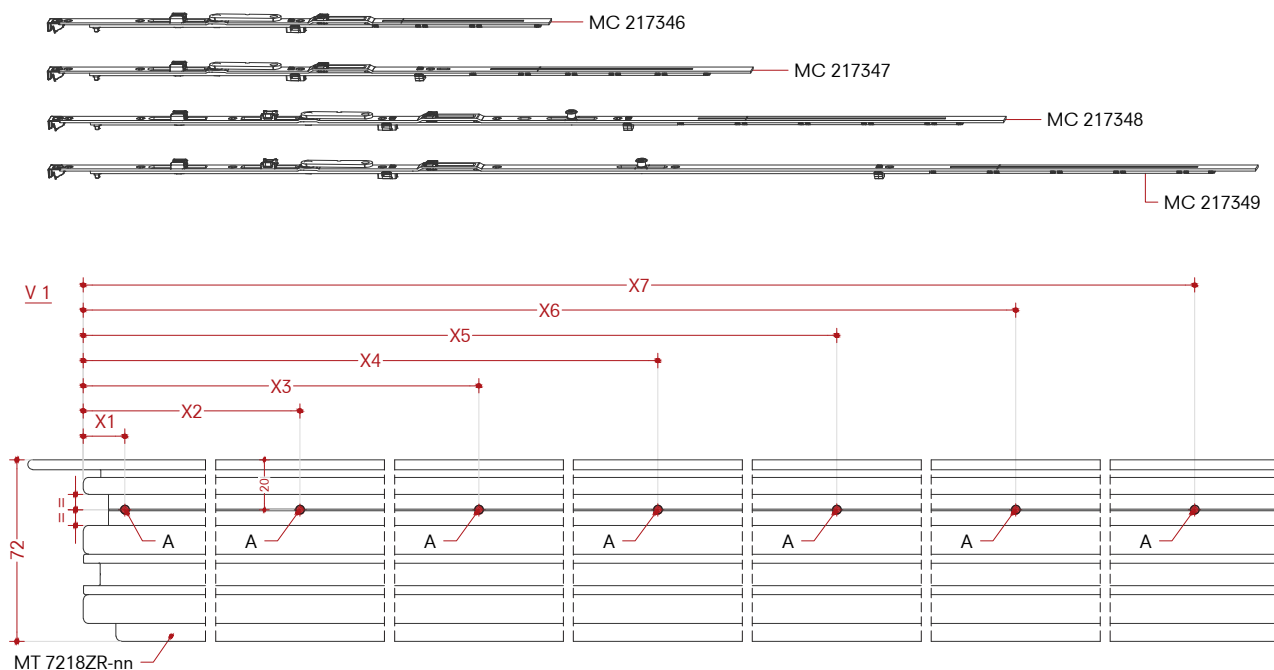
- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- L) Length scissor stay
- T) Maximum cut scissor stay
- X) Position screw connection scissor stay
- Z) Position locking cam

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- L) Länge Scherenstulpe
- T) Maximale Kürzung Scherenstulpe
- X) Lage Verschraubung Scherenstulpe
- Z) Lage Verriegelungszapfen

Montré ouverture droite  
(ouverture gauche inversé en miroir)

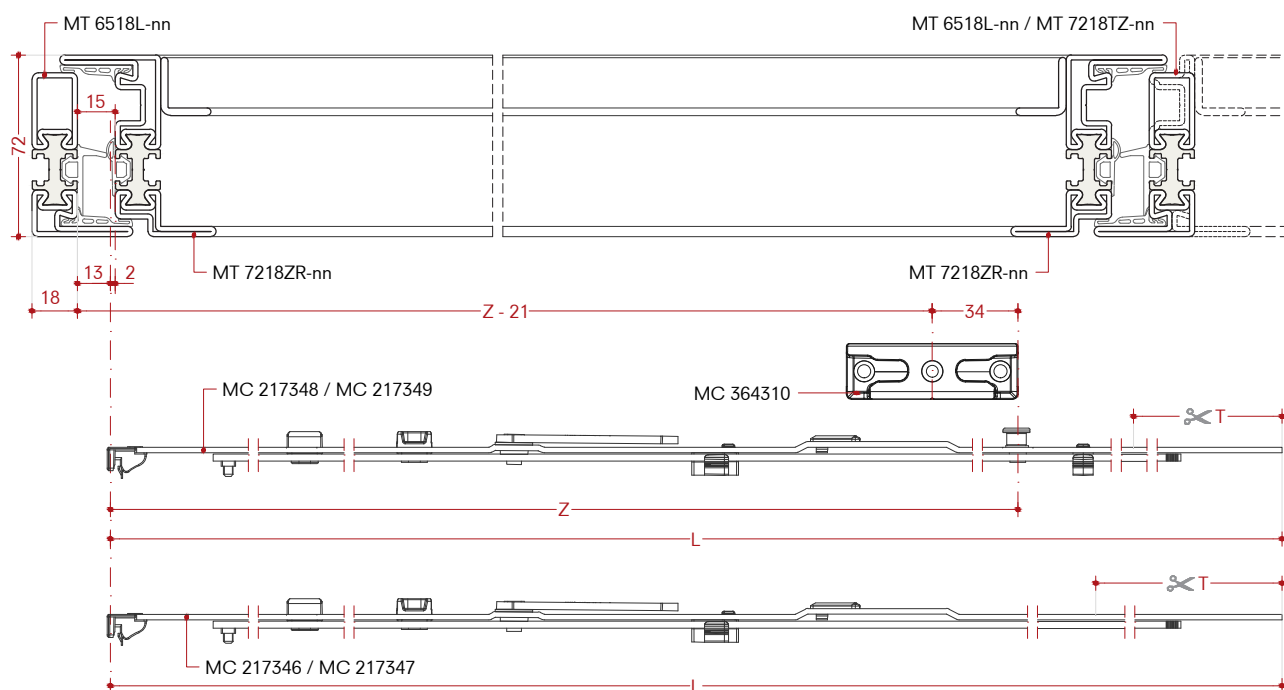
- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- L) Longueur du tête de compas
- T) Réduction maximale du tête de compas
- X) Position du raccord à vis pour tête de compas
- Z) Position de galet de verrouillage



**Positioning striker plate**  
(only for MC 217348 / MC 217349)

**Positionierung Schließteils**  
(nur bei MC 217348 / MC 217349)

**Positionnement de la gâche**  
(que pour MC 217348 / MC 217349)

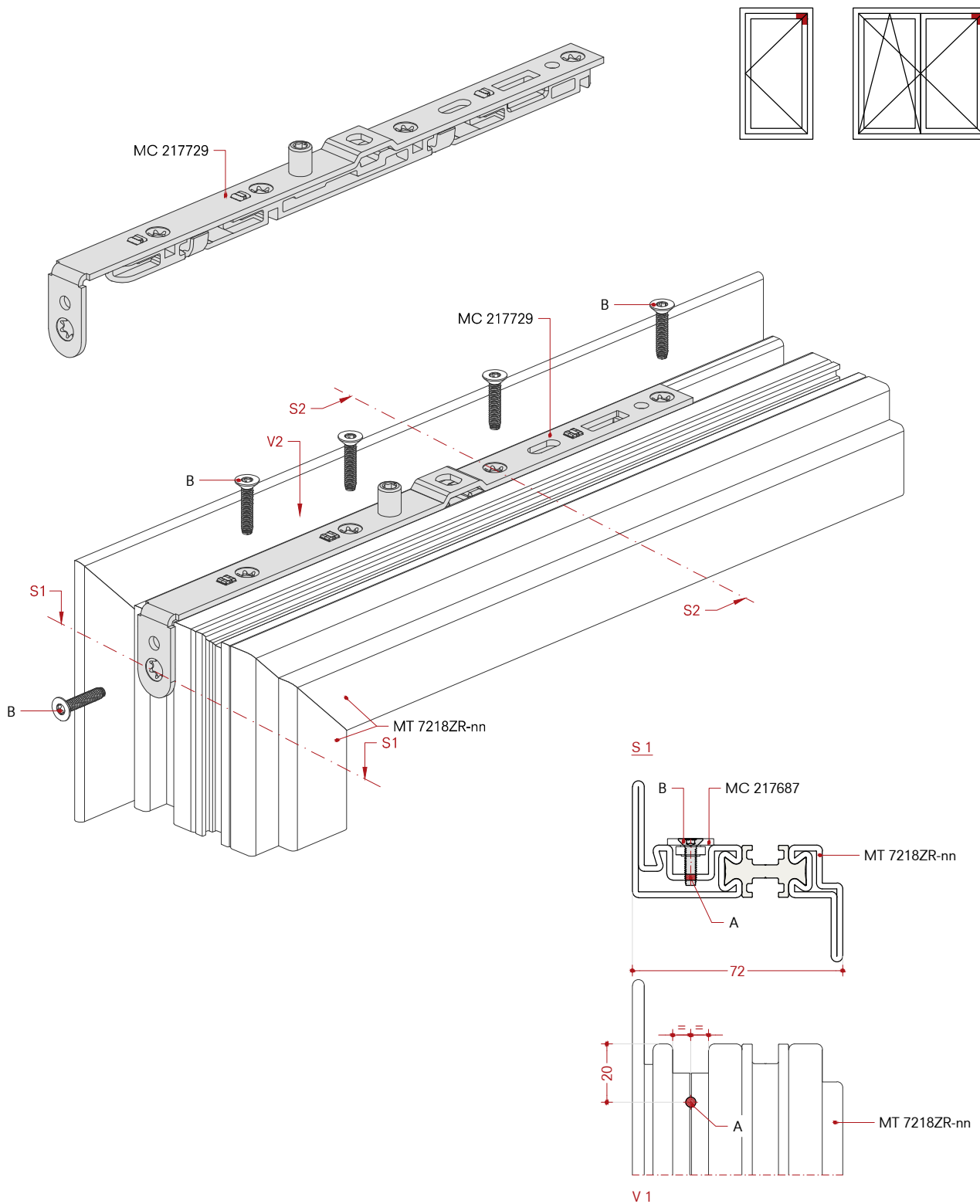


|           | L    | T   | X1   | X2   | X3  | X4  | X5  | X6  | X7  | Z   |
|-----------|------|-----|------|------|-----|-----|-----|-----|-----|-----|
| MC 217346 | 497  | 147 | 16.5 | 89.5 | 247 | -   | -   | -   | -   | -   |
| MC 217347 | 697  | 212 | 16.5 | 89.5 | 247 | 281 | 377 | -   | -   | -   |
| MC 217348 | 947  | 262 | 16.5 | 89.5 | 182 | 281 | 450 | 562 | -   | 528 |
| MC 217349 | 1197 | 262 | 16.5 | 89.5 | 182 | 281 | 450 | 621 | 827 | 587 |

**Turn-only and tilt-only faceplate**  
MC 217729

**Dreh- und Kippbandstulp fix**  
MC 217729

**Tête OF et soufflet fixe**  
MC 217729



M65TB - 0022

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

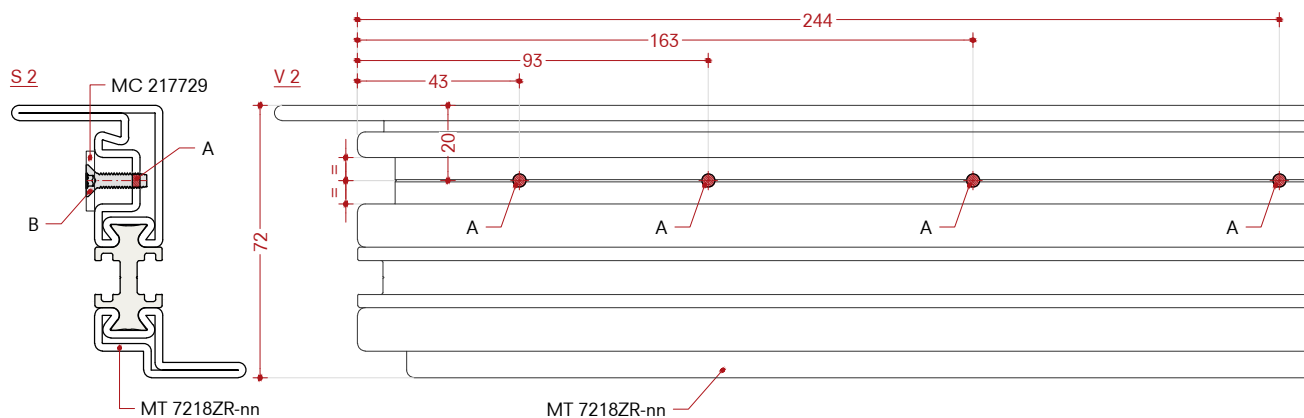
Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

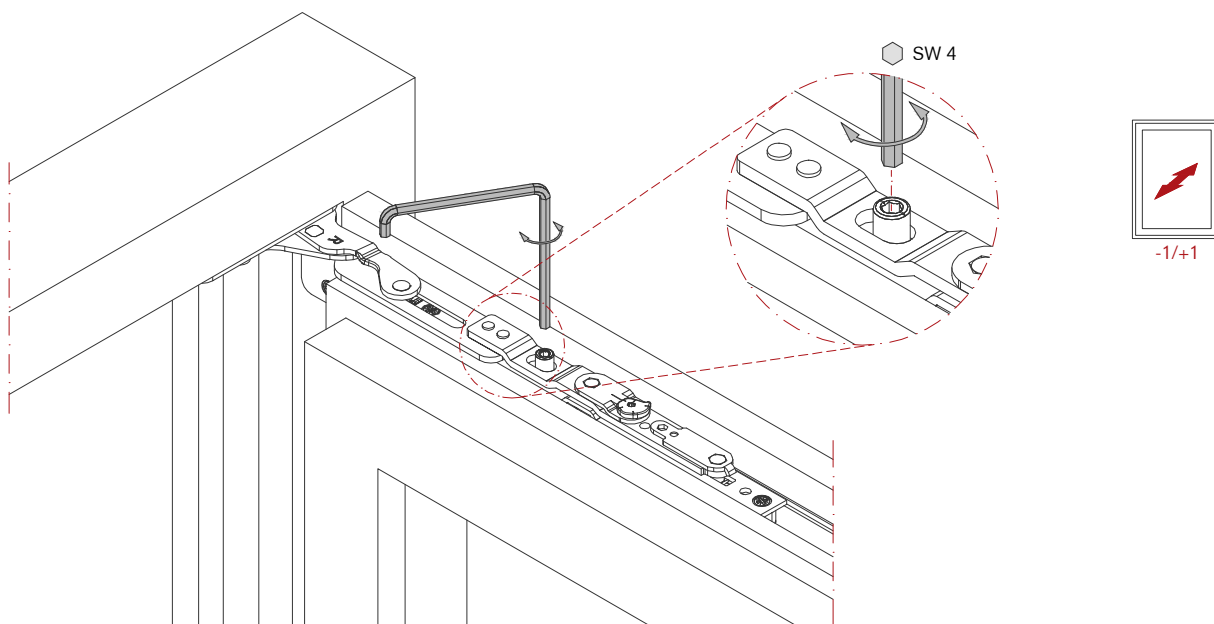




### Pressure adjustment

### Anpressdruck Einstellung

### Réglage de la pression de contact



⬡ Adjustment range +1 mm with SW 4

⬡ Einstellbereich +1 mm mit SW 4

⬡ Plage de réglage +1 mm avec SW 4

**Faceplate extensions extendable**

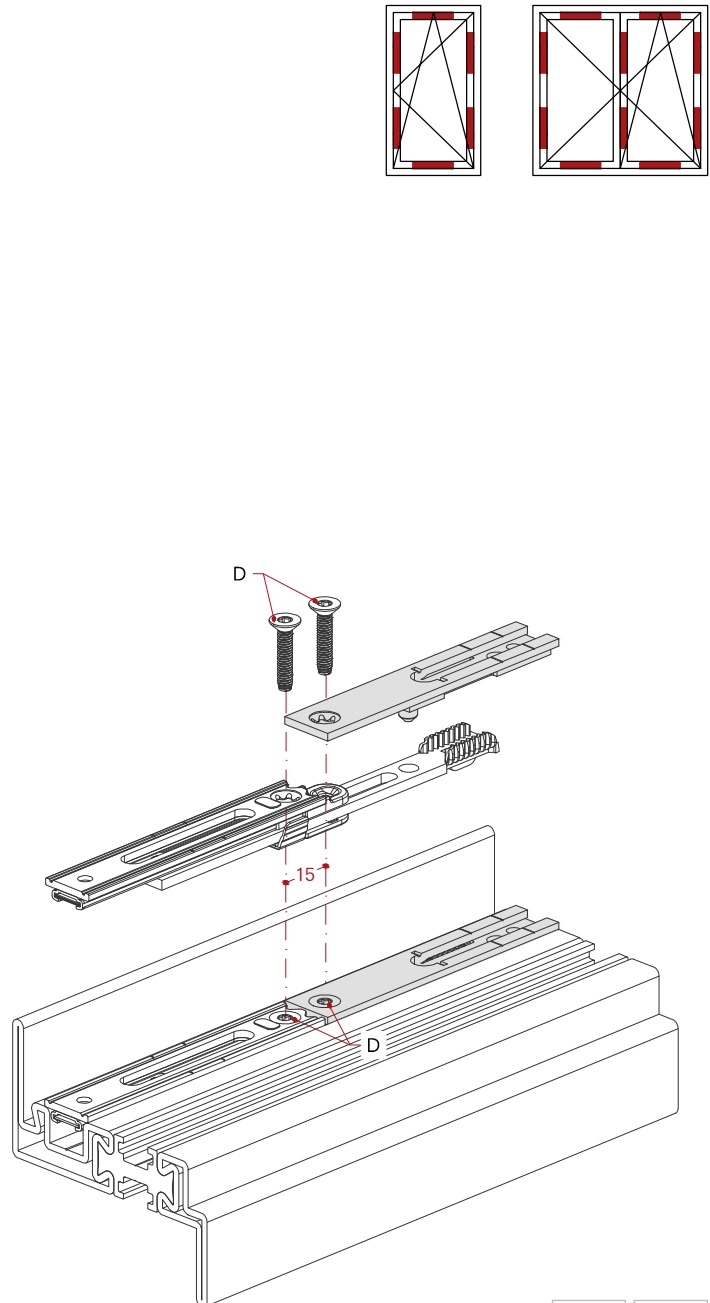
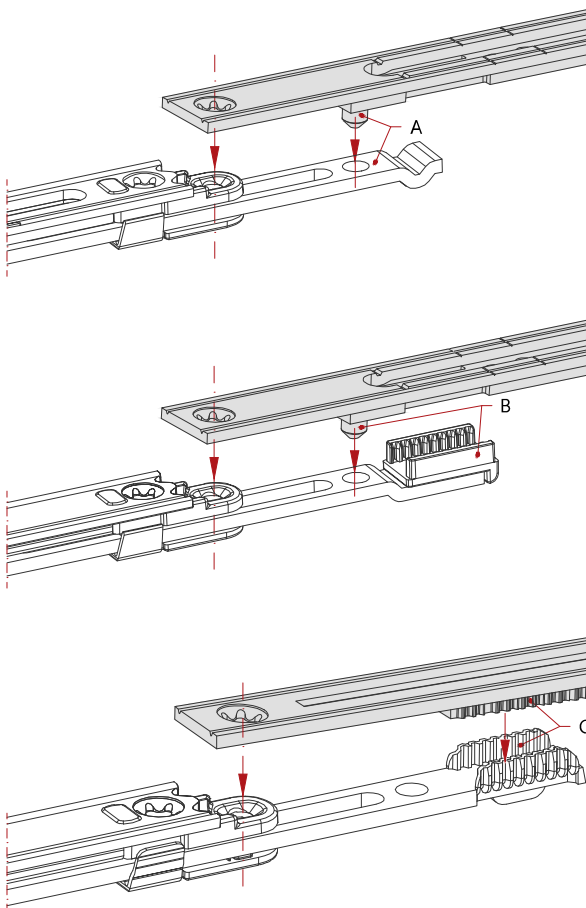
MC 201750  
MC 201753  
MC 201754 (\*)  
MC 201840  
MC 206630

**Stulpverlängerungen verlängerbar**

MC 201750  
MC 201753  
MC 201754 (\*)  
MC 201840  
MC 206630

**Prolongateurs rallongeables**

MC 201750  
MC 201753  
MC 201754 (\*)  
MC 201840  
MC 206630



M65TB - 0023

DWG

DXF

(\*) Faceplate extension MC 201754 can only be used vertically

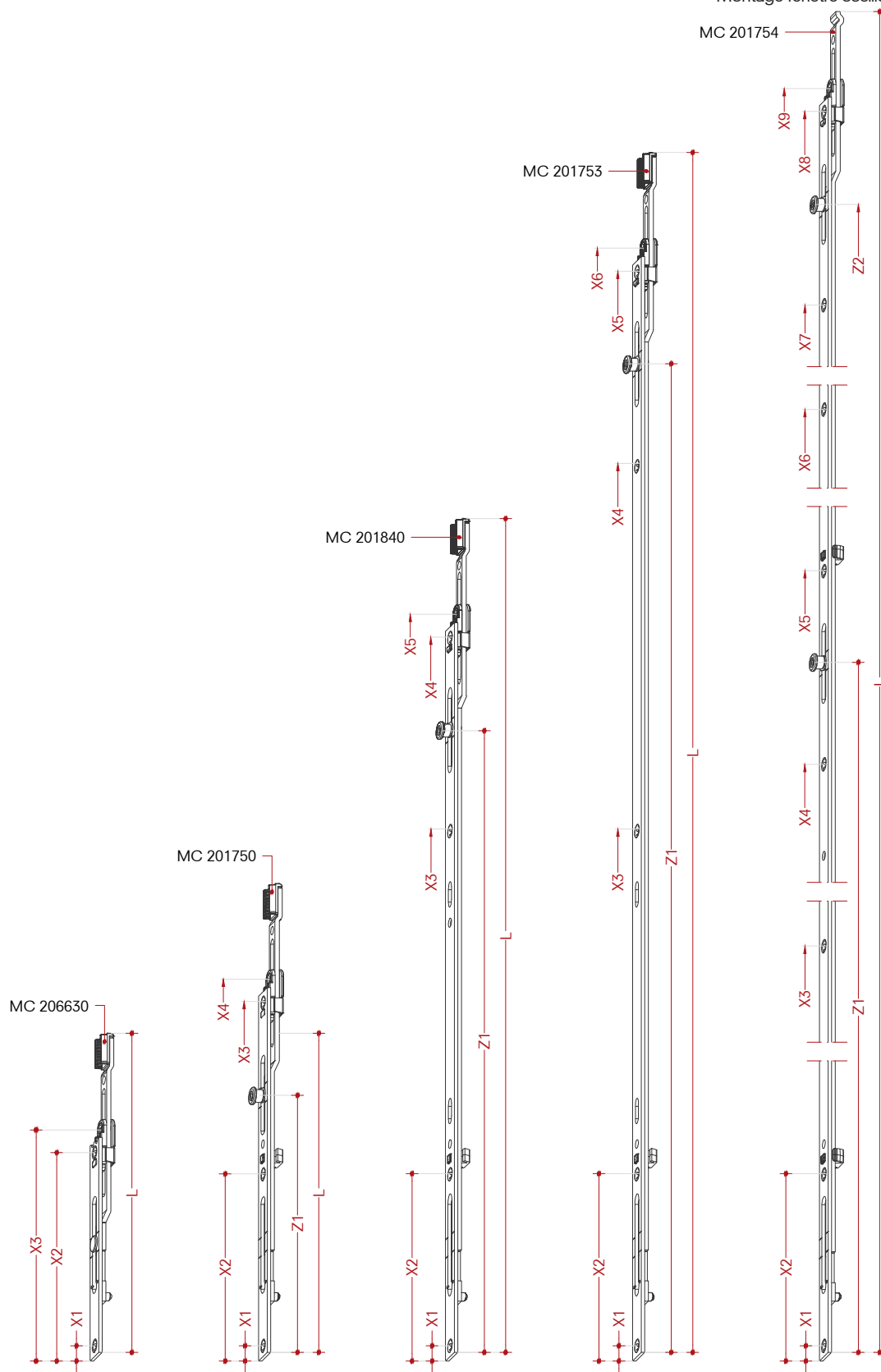
(\*) Stulpverlängerung MC 201754 nur vertikal einsetzbar

(\*) La verrouilleur rallongeable MC 201754 ne peut être utilisée que verticalement

- A) Coupling with hole-pin connection
- B) Coupling with hole-pin connection with serrated carrier
- C) Coupling with serrated carrier connection
- D) Countersunk screw M4x16
- L) Length faceplate extension
- X) Position screw connection faceplate extension
- Z) Position locking cam

- A) Kopplung mit einer Loch-Stift-Verbindung
- B) Kopplung mit einer Loch-Stift-Verbindung mit Zahnkassen
- C) Kopplung mit einer Zahnkassenverbindung
- D) Senkkopfschraube M4x16
- L) Länge Stulpverlängerung
- X) Lage Verschraubung Stulpverlängerung
- Z) Lage Verriegelungszapfen

- A) Assembleur avec liaison par plot et trou
- B) Assembleur avec liaison par plot et trou avec coffre cranté
- C) Assembleur avec liaison par coffre cranté
- D) Vis à tête fraisée M4x16
- L) Longueur du prolongateur
- X) Position du raccord à vis pour prolongateur
- Z) Position de galet de verrouillage



|               | L     | X1 | X2    | X3    | X4    | X5  | X6   | X7   | X8   | X9   | Z1    | Z2   |
|---------------|-------|----|-------|-------|-------|-----|------|------|------|------|-------|------|
| MC 206630     | 138.5 | 7  | 131.5 | 146.5 | -     | -   | -    | -    | -    | -    | -     | -    |
| MC 201750     | 235   | 7  | 117.5 | 228   | 243   | -   | -    | -    | -    | -    | 168.5 | -    |
| MC 201840     | 470   | 7  | 117.5 | 338.5 | 463   | 478 | -    | -    | -    | -    | 403.5 | -    |
| MC 201753     | 705   | 7  | 117.5 | 338.5 | 573.5 | 698 | 713  | -    | -    | -    | 638.5 | -    |
| MC 201754 (*) | 1410  | 7  | 117.5 | 338.5 | 573.5 | 698 | 1044 | 1279 | 1403 | 1408 | 638.5 | 1344 |

**Faceplate extensions fixed**

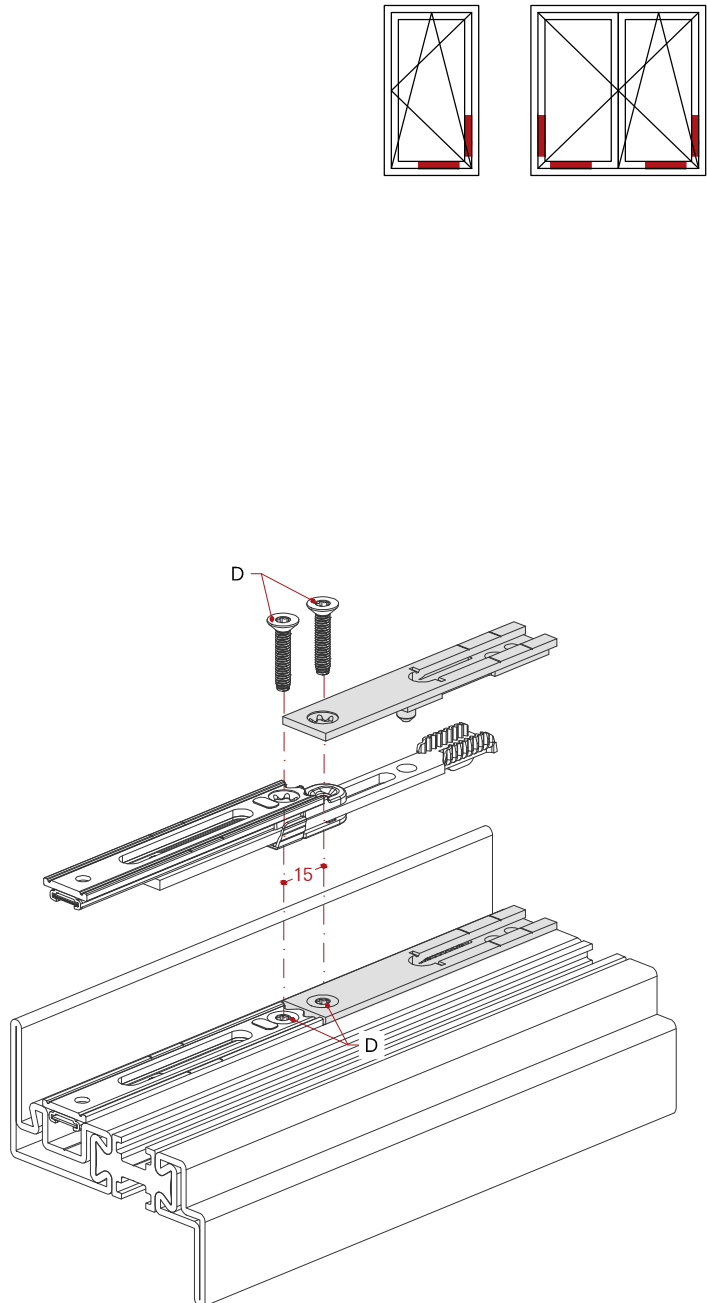
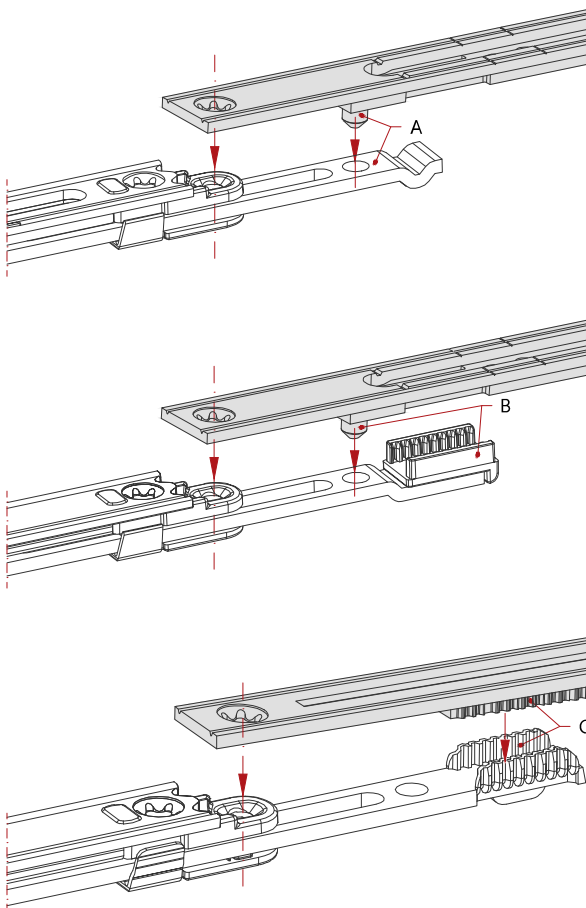
MC 201751  
MC 201752

**Stulpverlängerungen fix**

MC 201751  
MC 201752

**Prolongateur fixe**

MC 201751  
MC 201752

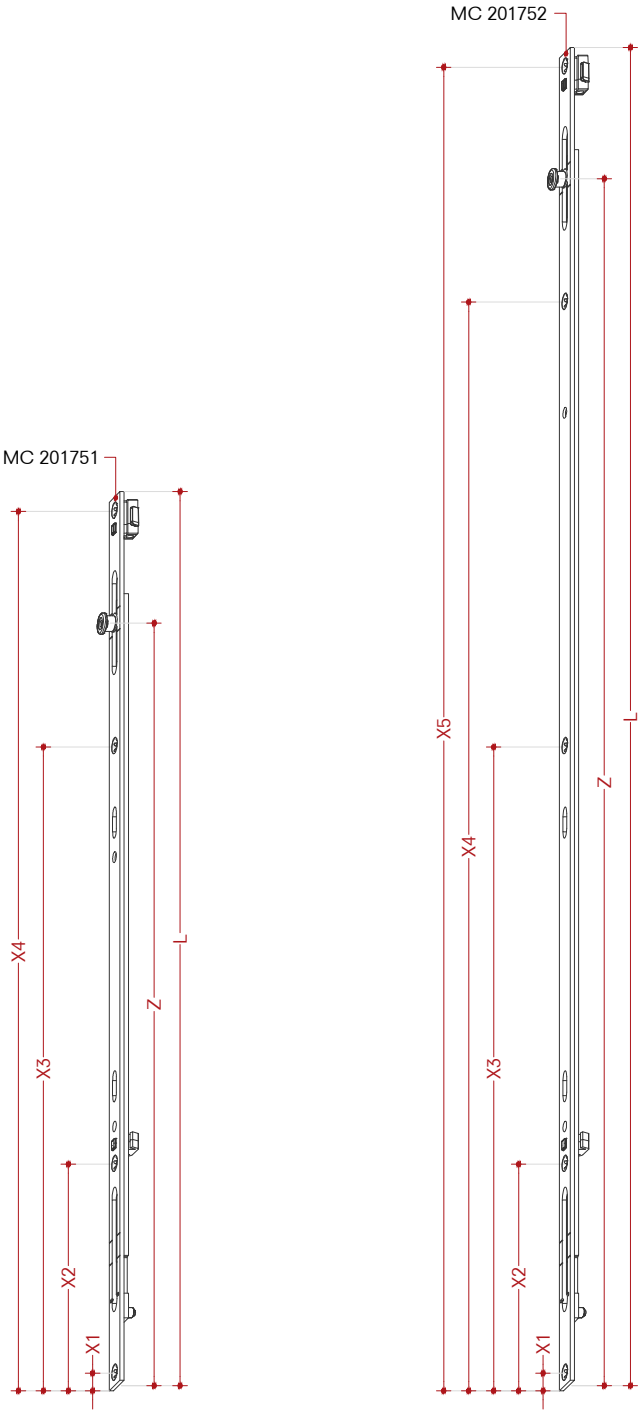


M65TB - 0025 DWG DXF

- A) Coupling with hole-pin connection
- B) Coupling with hole-pin connection with serrated carrier
- C) Coupling with serrated carrier connection
- D) Countersunk screw M4x16
- L) Length faceplate extension
- X) Position screw connection faceplate extension
- Z) Position locking cam

- A) Kopplung mit einer Loch-Stift-Verbindung
- B) Kopplung mit einer Loch-Stift-Verbindung mit Zahnkassen
- C) Kopplung mit einer Zahnkassenverbindung
- D) Senkkopfschraube M4x16
- L) Länge Stulpverlängerung
- X) Lage Verschraubung Stulpverlängerung
- Z) Lage Verriegelungszapfen

- A) Assembleur avec liaison par plot et trou
- B) Assembleur avec liaison par plot et trou avec coffre cranté
- C) Assembleur avec liaison par coffre cranté
- D) Vis à tête fraisée M4x16
- L) Longueur du prolongateur
- X) Position du raccord à vis pour prolongateur
- Z) Position de galet de verrouillage

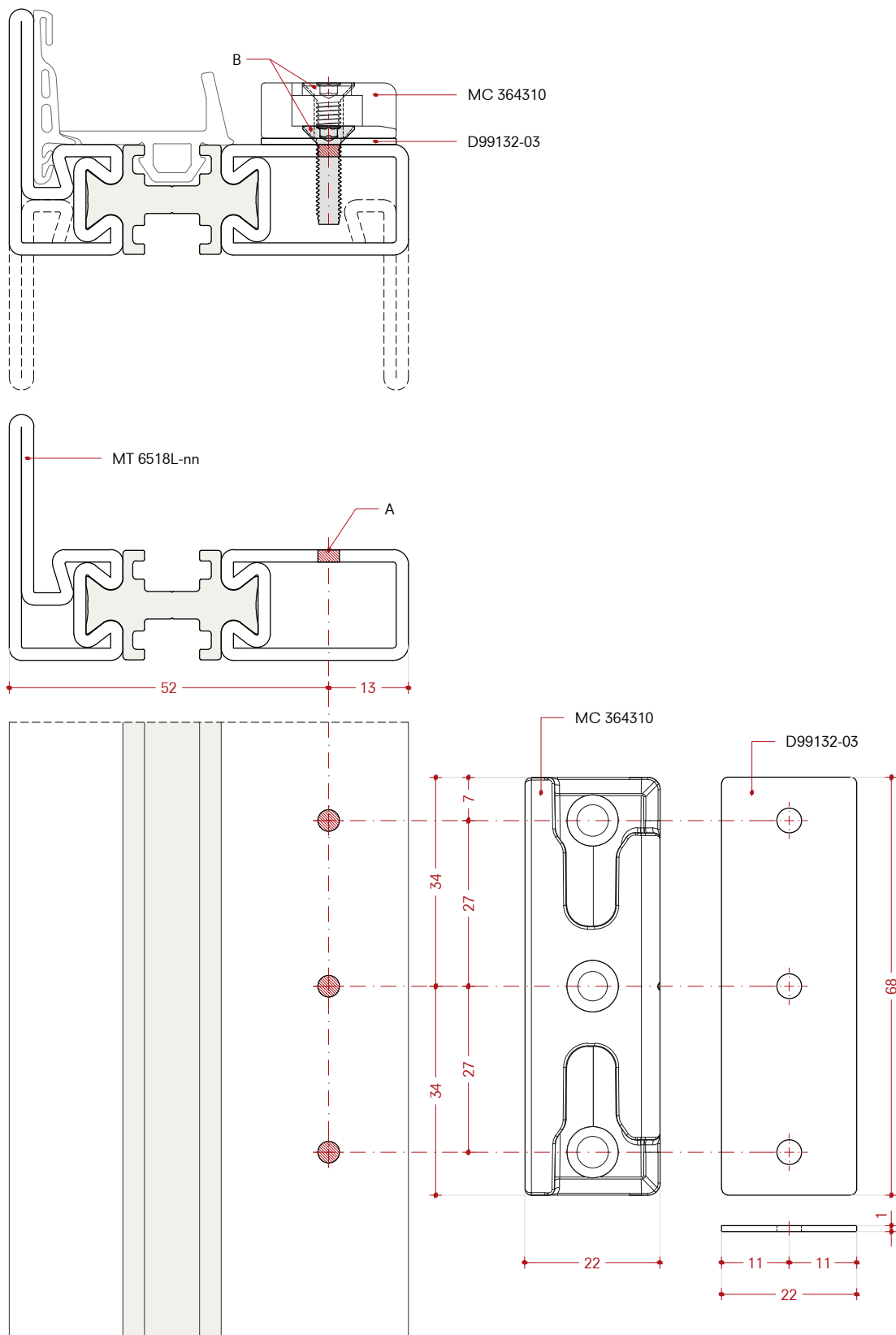


|           | L   | X1 | X2    | X3    | X4    | X5  | Z     |
|-----------|-----|----|-------|-------|-------|-----|-------|
| MC 201751 | 470 | 7  | 117.5 | 338.5 | 463   | -   | 403.5 |
| MC 201752 | 705 | 7  | 117.5 | 338.5 | 573.5 | 698 | 638.5 |

**Striker plate position**  
MC 364310

**Position Schließblech**  
MC 364310

**Position de la gâche**  
MC 364310



M65TB - 0026

DWG

DXF

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16 (3 pieces each)

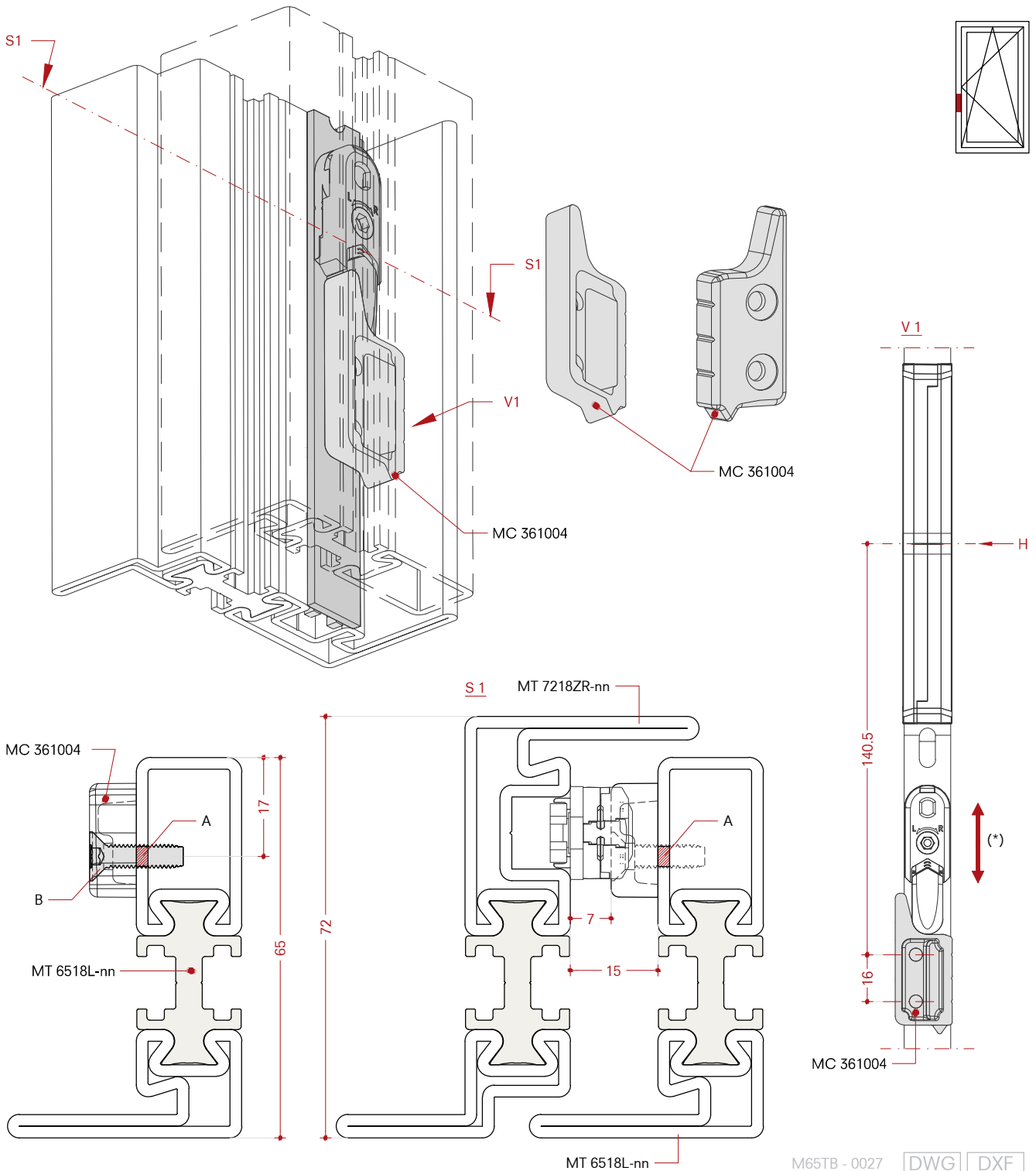
A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16 (jeweils 3 Stück)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16 (3 morceaux chacun)

**Sash lifter**  
MC 361004 R  
MC 361005 L

**Flügelheber**  
MC 361004 R  
MC 361005 L

**Gâche rehausse**  
MC 361004 R  
MC 361005 L



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16  
H) Handle height  
(\*) Adjustable

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16  
H) Griffhöhe  
(\*) Einstellbar

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

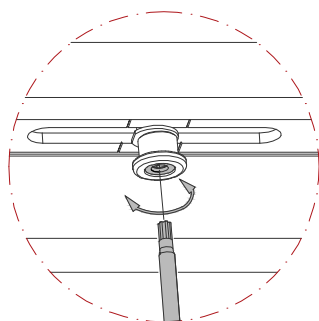
A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16  
H) Hauteur de poignée  
(\*) Ajustable

L = Ouverture gauche  
R = Ouverture droite

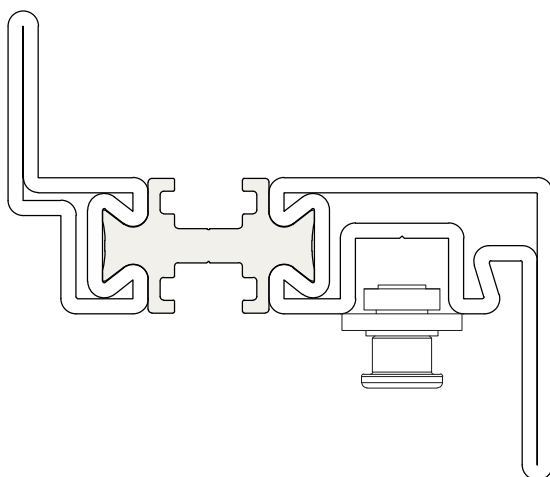
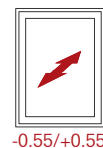
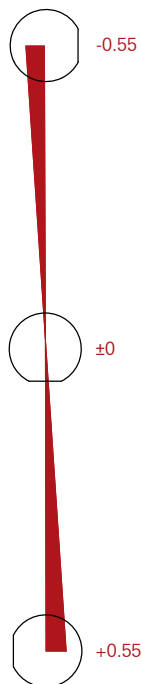
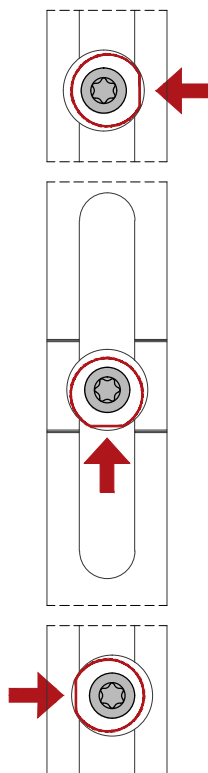
**Pressure adjustment**

**Anpressdruck Einstellung**

**Réglage de la pression de contact**



★ TX 15



★ Adjustment range  $\pm 0.5$  mm with TX 15

★ Einstellbereich  $\pm 0.5$  mm mit TX 15

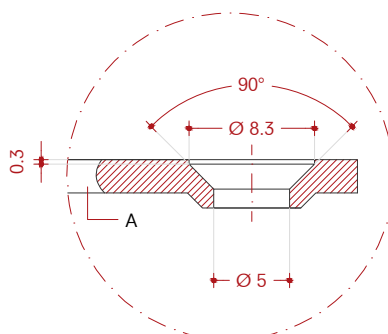
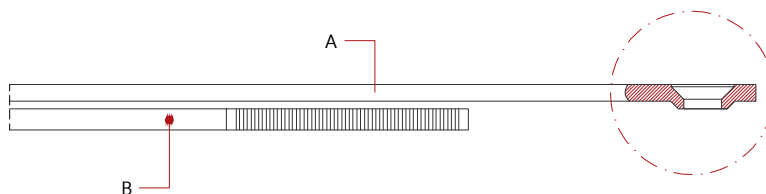
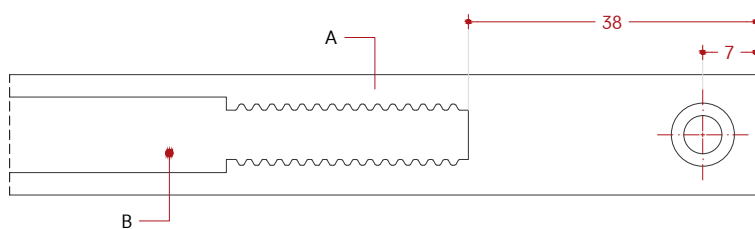
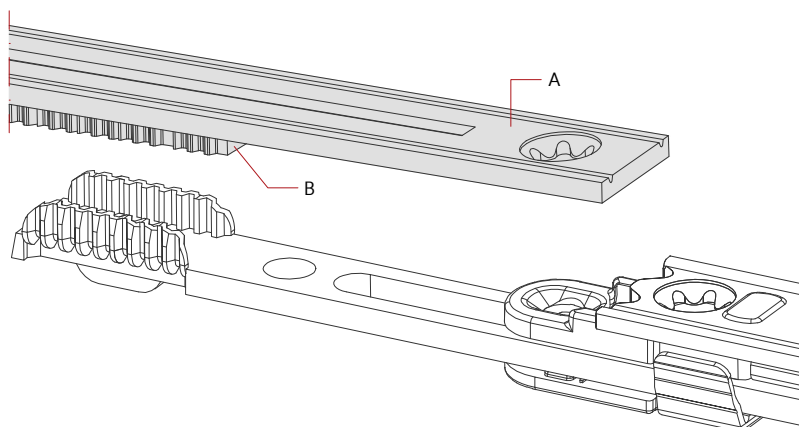
★ Plage de réglage  $\pm 0.5$  mm avec TX 15



**Punch pattern for cut-to-length faceplates**

**Stanzbild bei ablängbaren Stulpen**

**Schéma de découpe pour les têtes coupées à longueur**



**NOTE:**

We recommend re-treating the cropped edges of fittings with a suitable touch-up paint.

- A) Faceplate
- B) Drive track

**HINWEIS:**

Wir empfehlen die Schnittkanten von Beschlagteilen mit geeignetem Ausbesserungslack nachzubehandeln.

- A) Stulp
- B) Riegel

**REMARQUE:**

Nous recommandons que les bords coupés des pièces de quincaillerie soient retouchés avec de la peinture de retouche appropriée.

- A) Tête
- B) Crémaillère

**Templates for Tilt&Turn fittings**

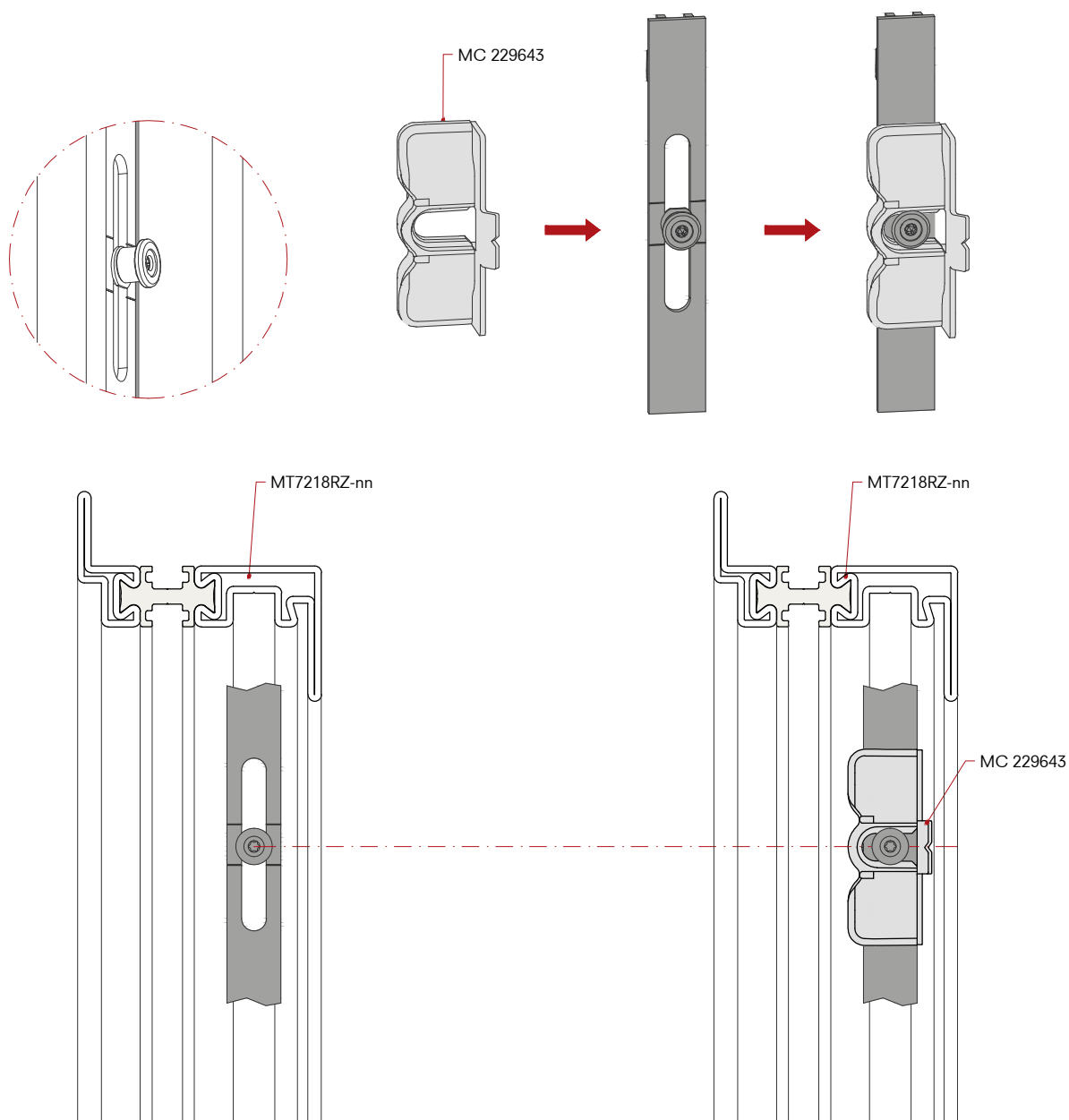
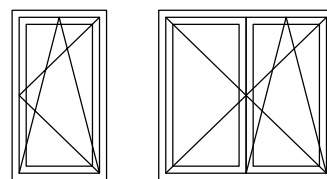
MC 229643

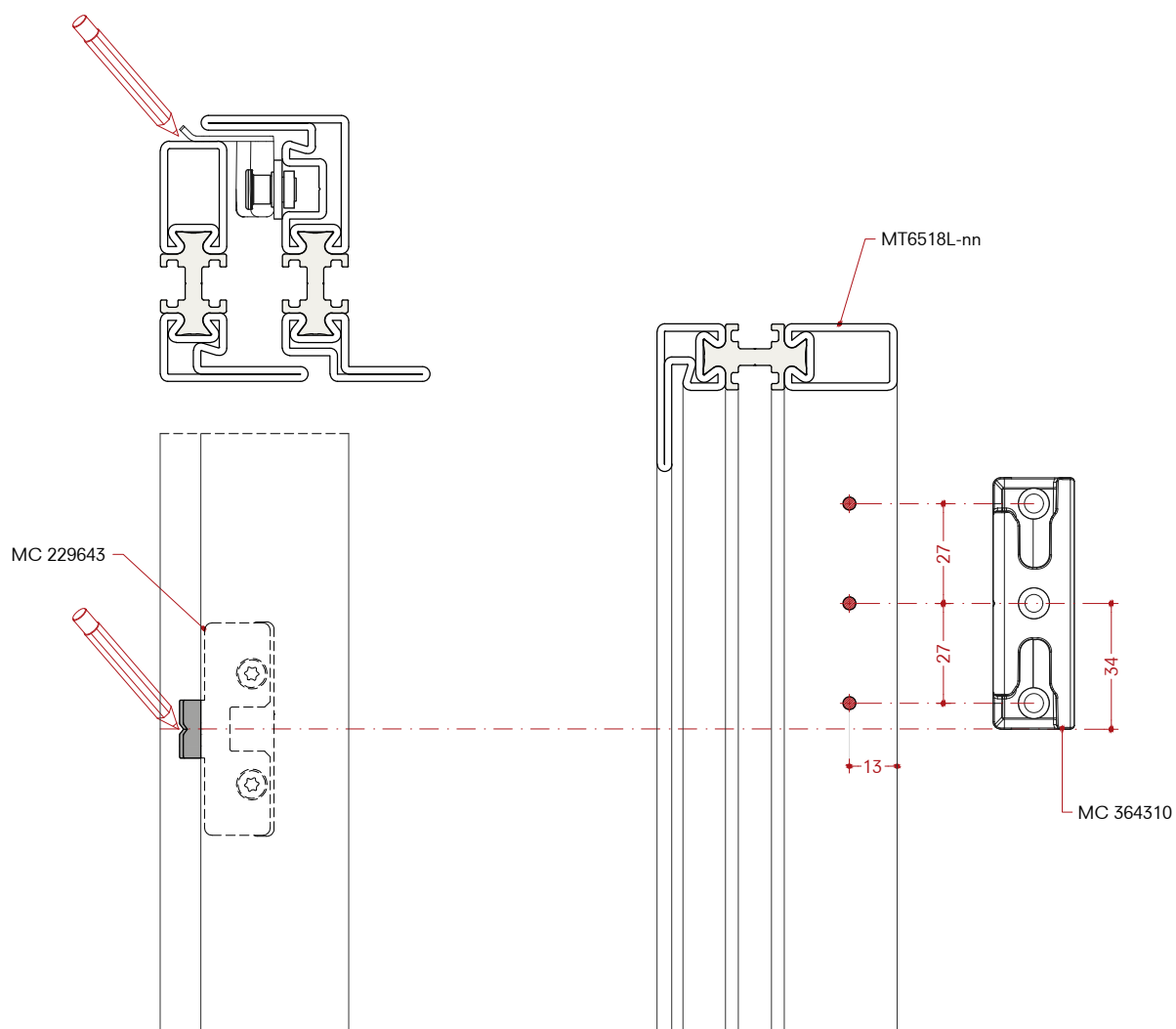
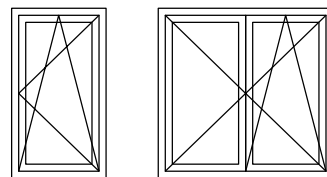
**Beilagen für Dreh-Kippfenster  
Beschläge**

MC 229643

**Gabarit pour ferrures  
de fenêtre oscillo-battant**

MC 229643

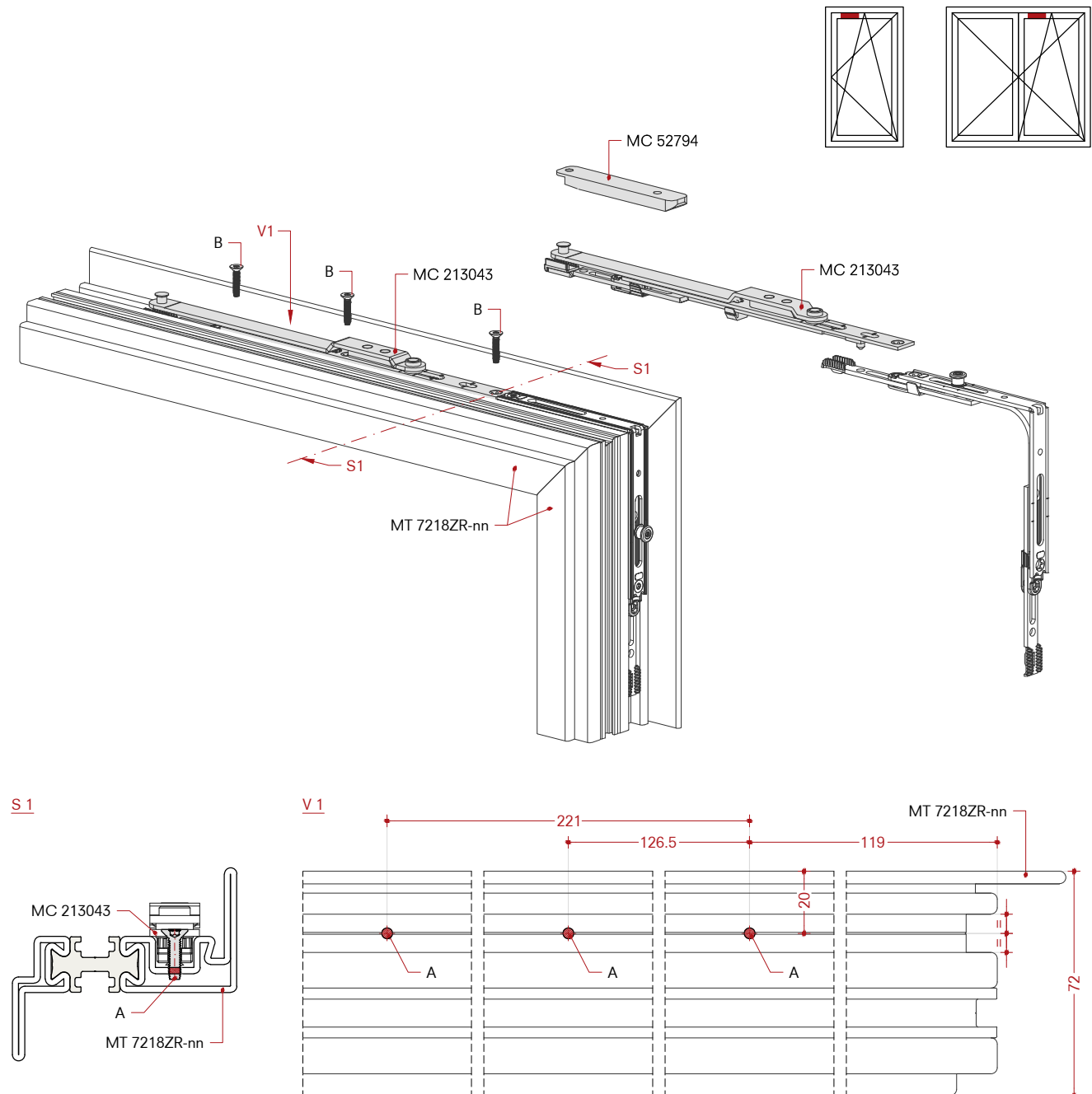




**Stabilizing scissor stay without  
night-vent**  
MC 213043  
**and stabilising scissor stay case**  
MC 52794

**Zweitschere ohne Sparlüftung**  
MC 213043  
**und Zweitscherengehäuse**  
MC 52794

**Compas additionnel sans fonction  
entrebâilleur**  
MC 213043  
**et gâche pour compas additionnel**  
MC 52794



M65TB - 0028

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich

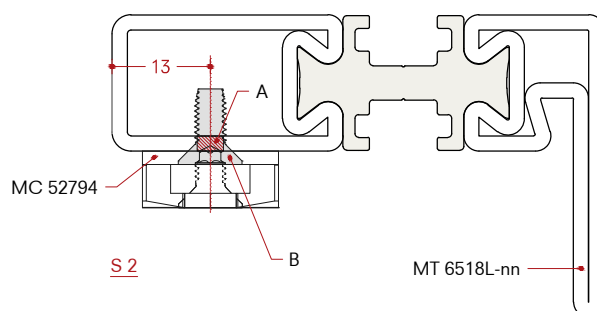
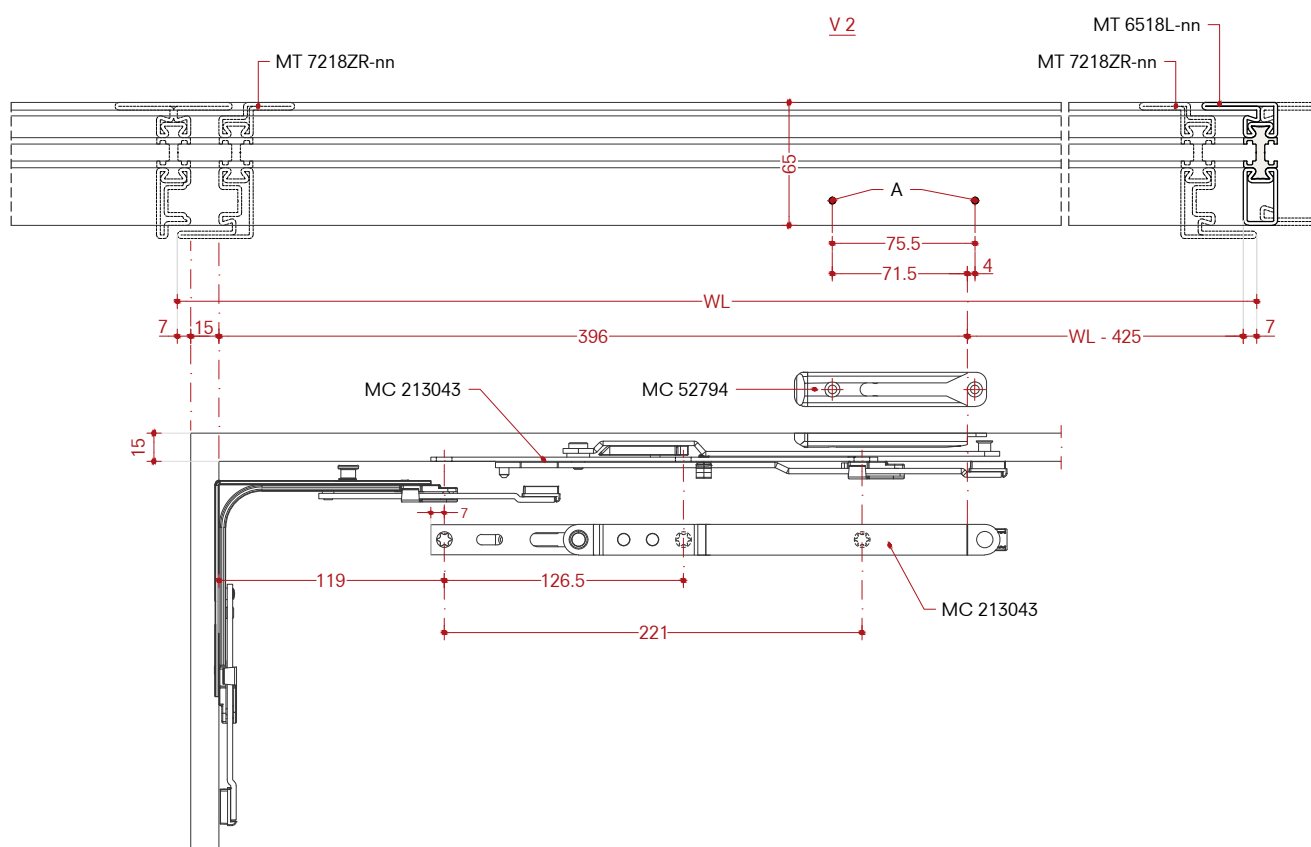
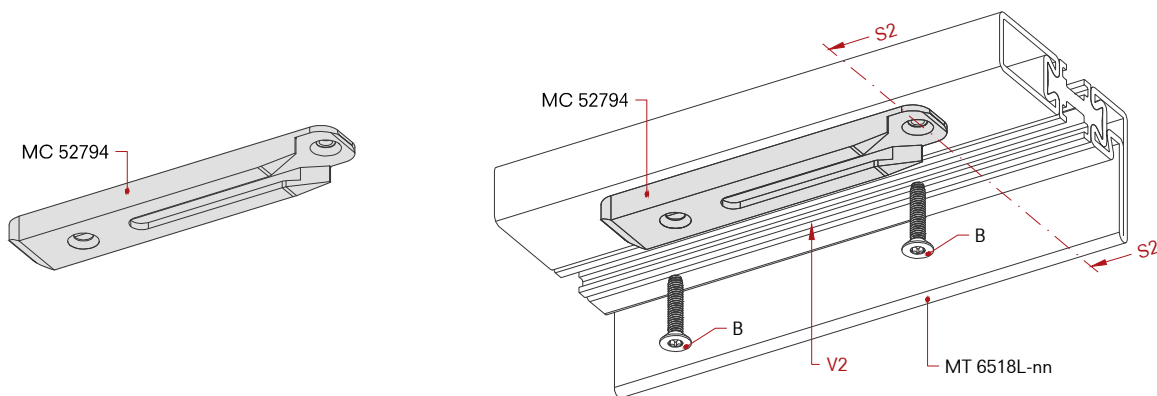
A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

WL = Länge Flügel

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

WL = Largeur ouvrant



**Opening restrictor**

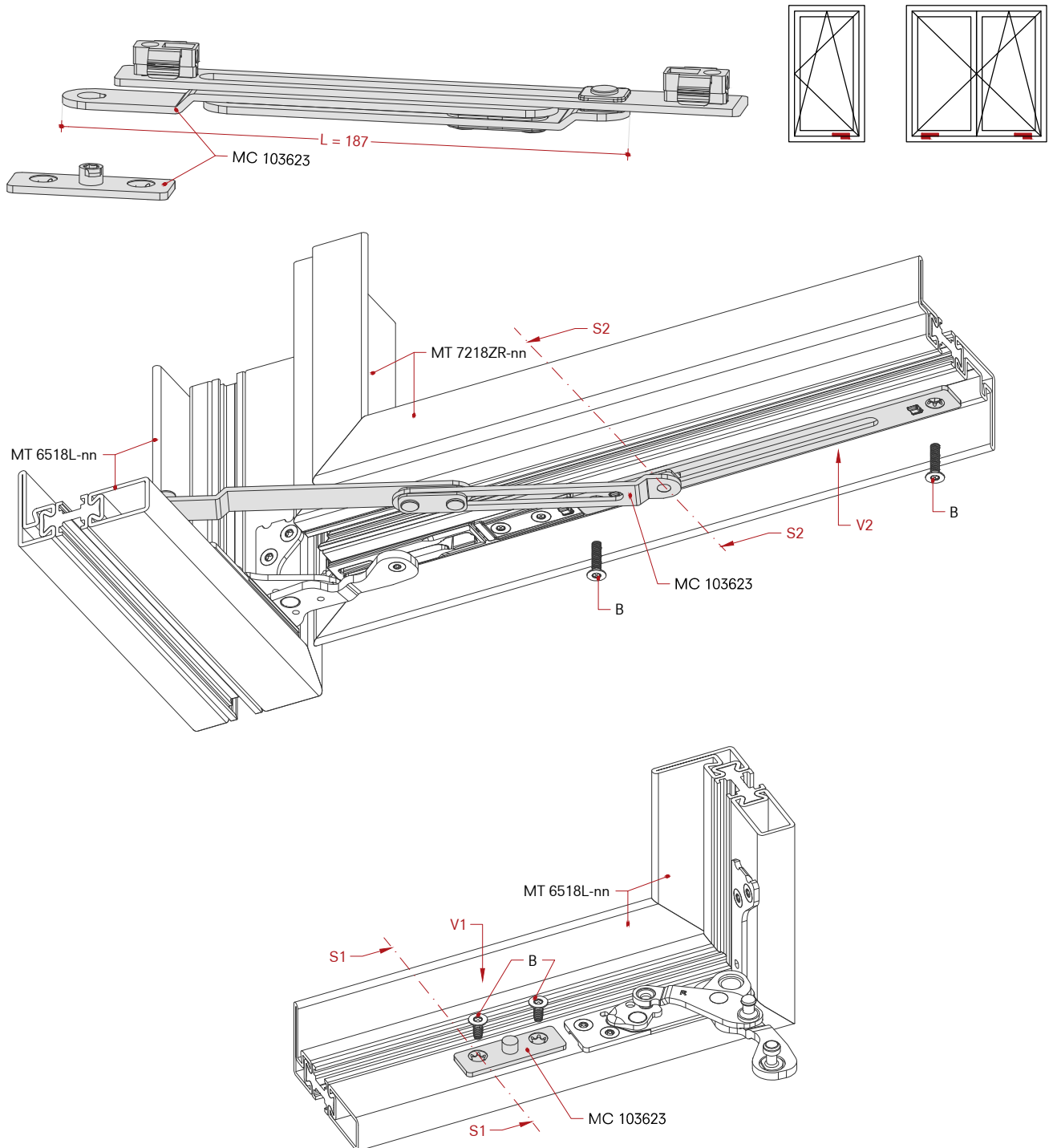
L = 187 mm  
MC 103623

**Drehbegrenzung**

L = 187 mm  
MC 103623

**Compas de limitation d'ouverture**

L = 187 mm  
MC 103623



M65TB - 0029

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- C) Countersunk screw M4x10

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- C) Senkkopfschraube M4x10

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- C) Vis à tête fraisée M4x10

**Please note minimum sash rebate widths:**

For Turn&Tilt and Turn-only window with vertical tilt lock bolt, the sash rebate width is  $\geq 490$  mm

For Turn&Tilt window with horizontal tilt lock bolt,  
the sash rebate width is  $\geq 560$  mm

**Bitte minimale Flügelfalzbreiten beachten:**

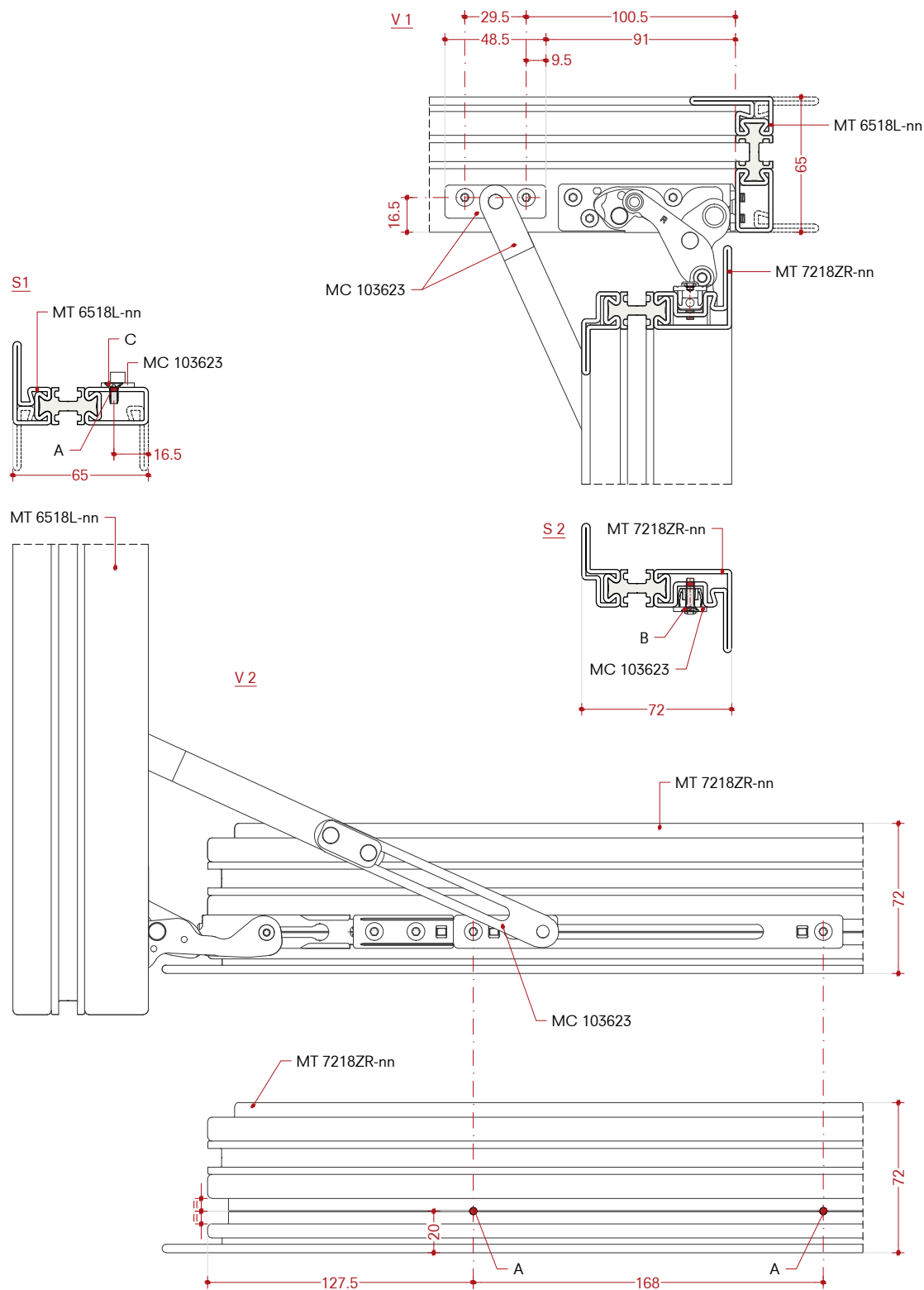
Bei DK- und Dreh-Fenster mit Kippverschluss  
senkrecht beträgt die Flügelfalzbreite  $\geq 490$  mm

Bei DK-Fenster mit Kippverschluss waagrecht beträgt die Flügelfalzbreite  $\geq 560$  mm

**Attention aux largeurs minimales  
des feuillures des ouvrants:**

Pour les fenêtres DK et à guillotine avec une serrure verticale à bascule, Largeur fond de feuillure  $\geq 490$  mm

Pour les fenêtres DK avec serrure horizontale à bascule, Largeur fond de feuillure  $\geq 560$  mm



**Travel restriction 90°**

MC 357081

surface-mounted on corner elements

**Hubbegrenzung 90°**

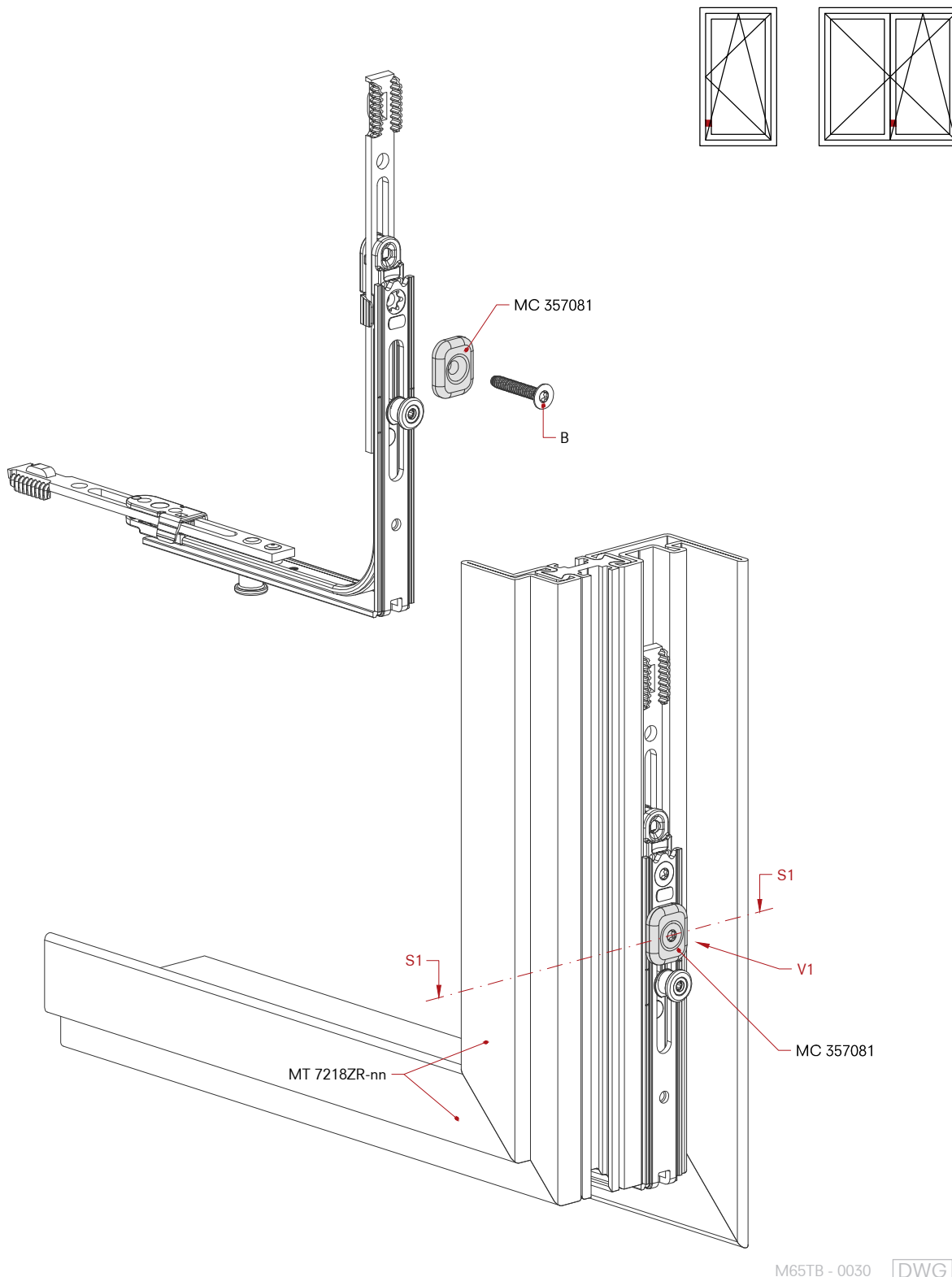
MC 357081

aufschraubbar auf Eckumlenkung

**Limiteur de course 90°**

MC 357081

à visser sur renvois d'angle



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x20

Dargestellt DIN rechts - DIN links spiegelbildlich

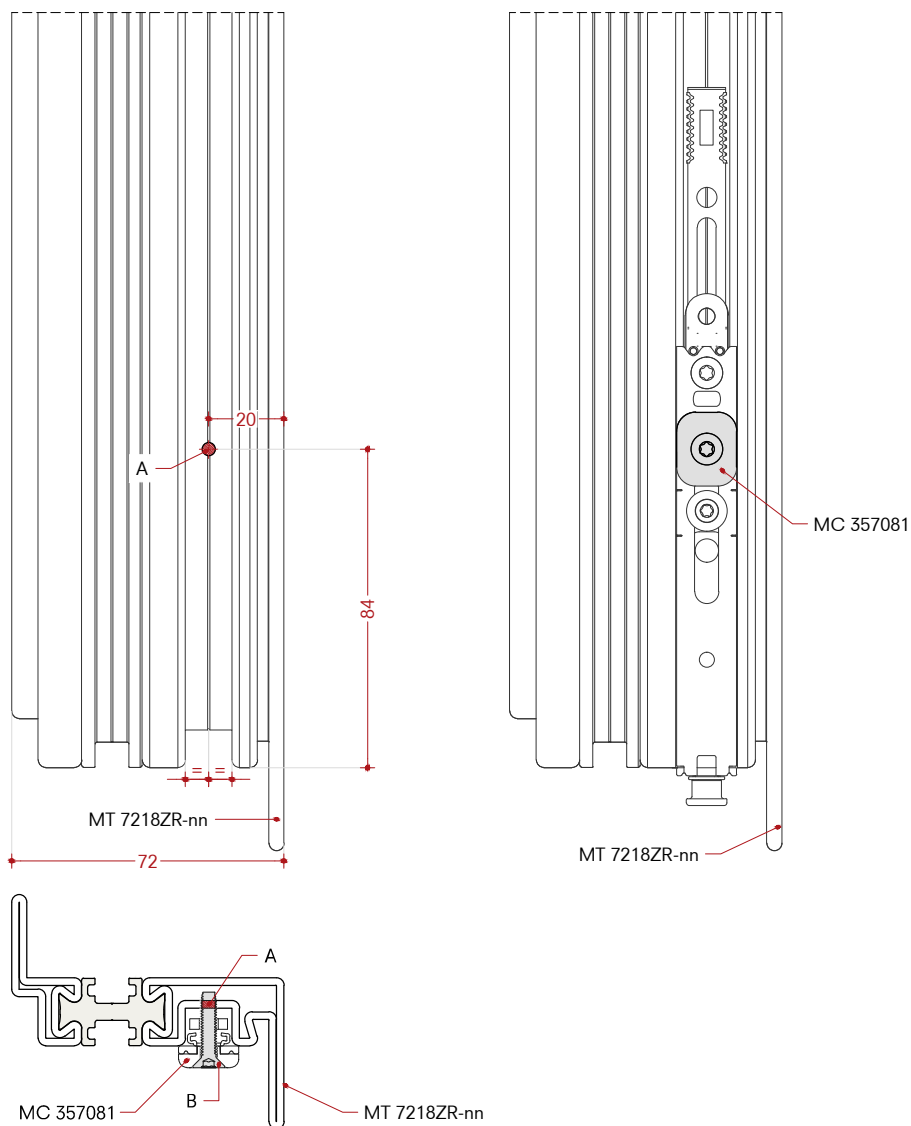
A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x20

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x20



V 1



S 1

**Travel restriction 90°**

MC 357081

surface-mounted on corner elements

**Hubbegrenzung 90°**

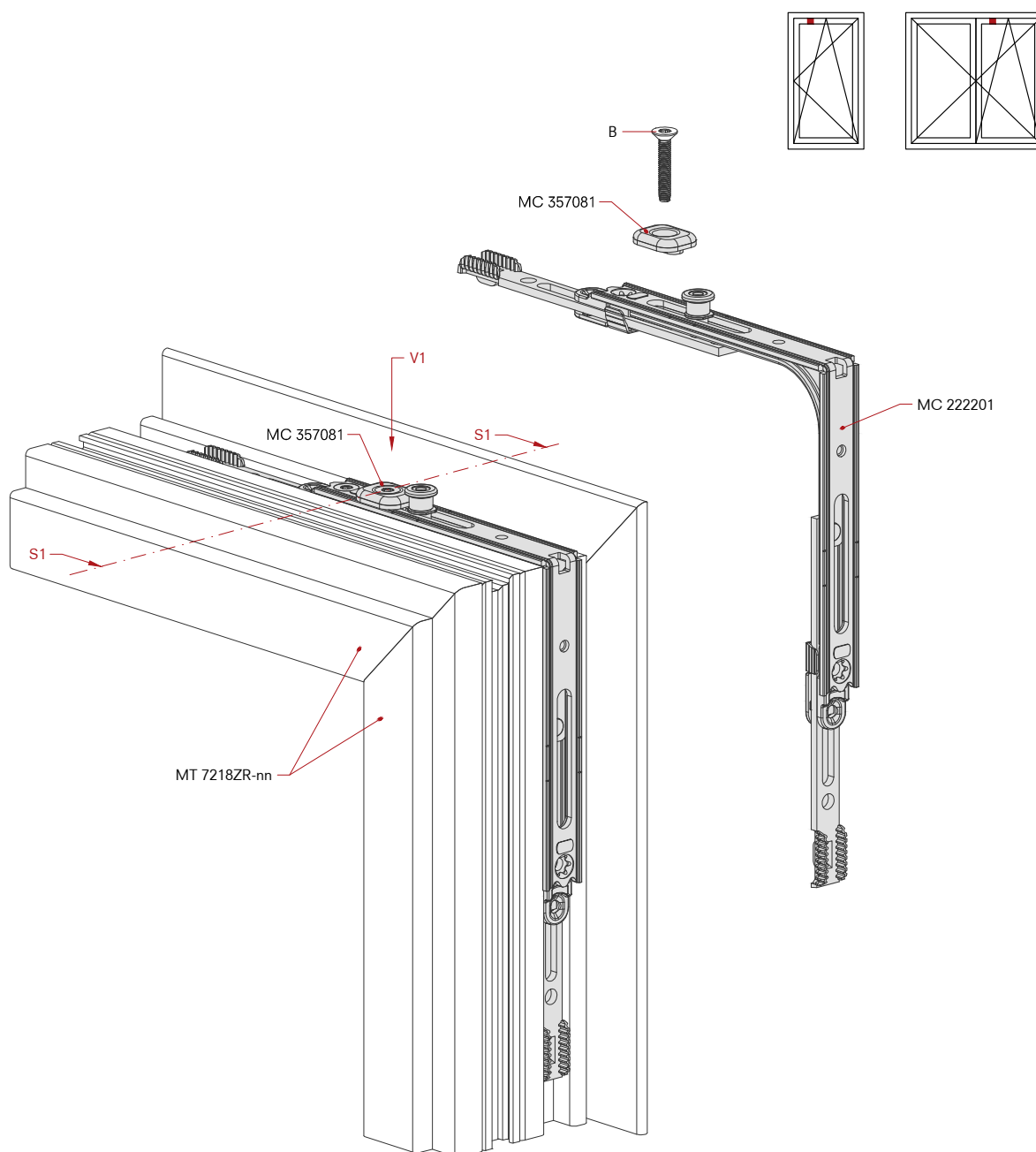
MC 357081

aufschraubbar auf Eckumlenkung

**Limiteur de course 90°**

MC 357081

à visser sur renvois d'angle



M65TB - 0030

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm

B) Countersunk screw M4x20

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm

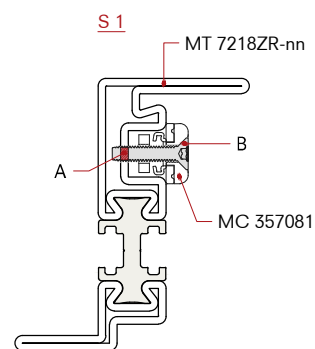
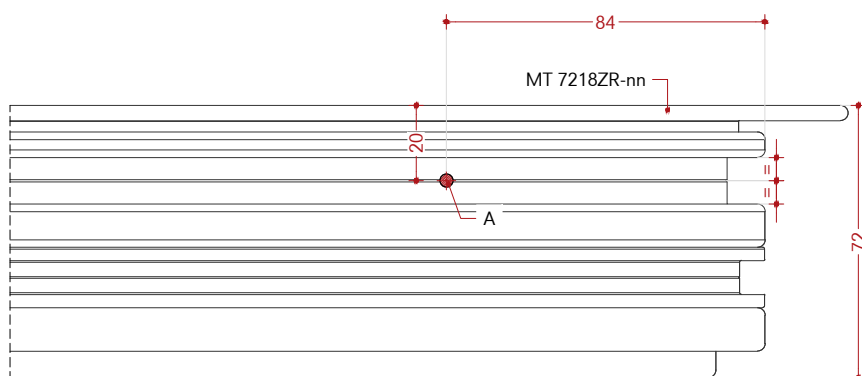
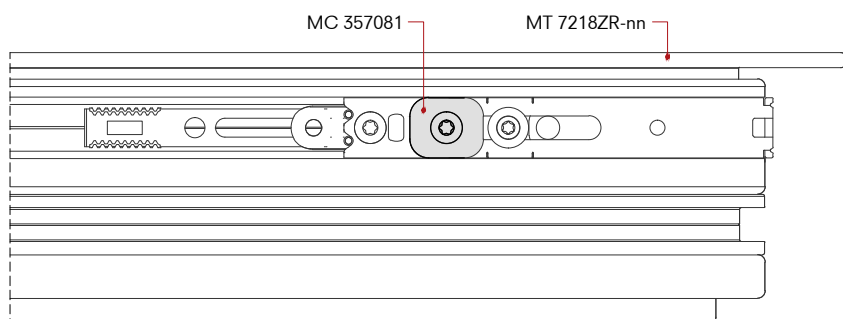
B) Senkkopfschraube M4x20

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm

B) Vis à tête fraisée M4x20

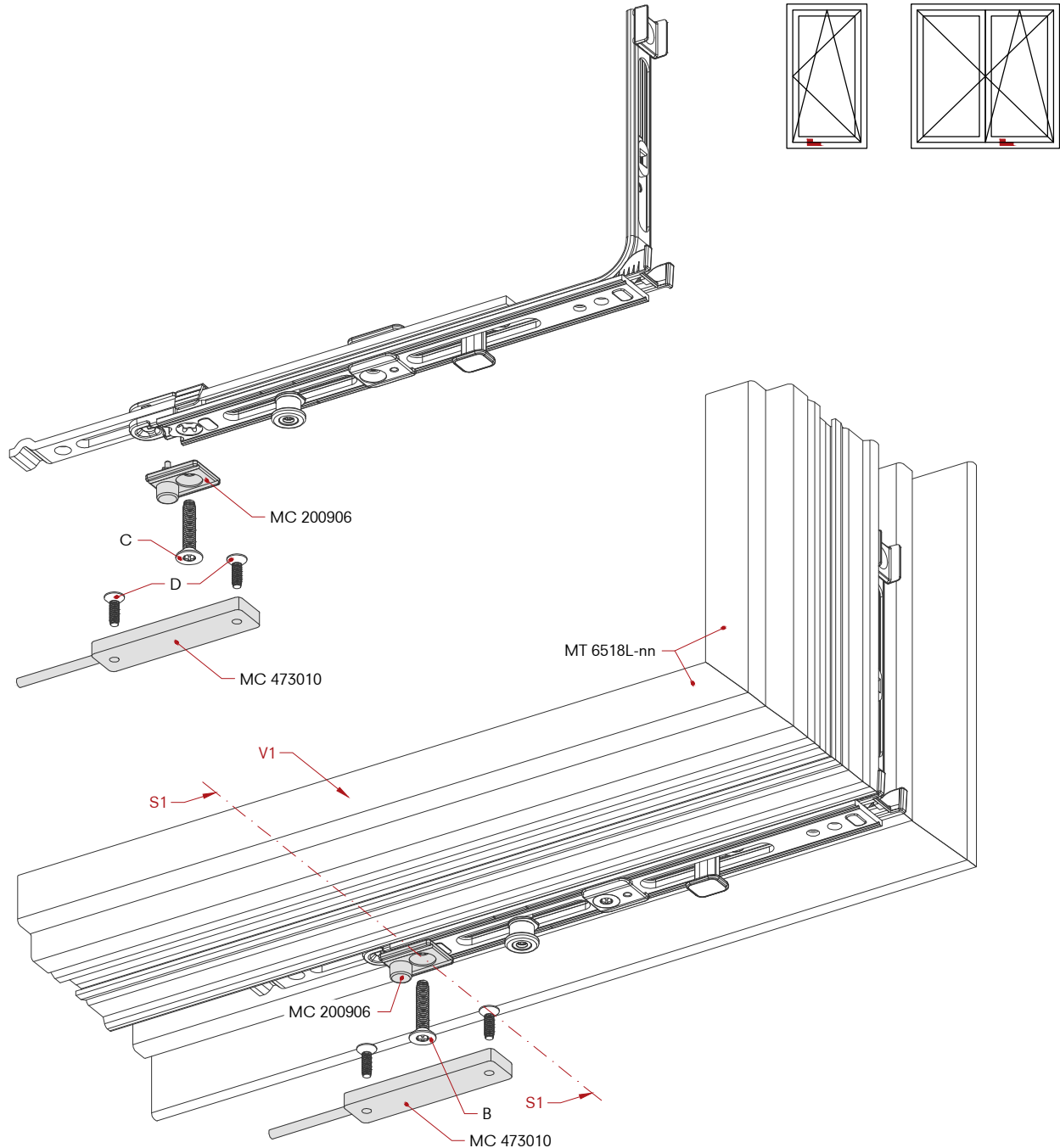
V 1



**Adaptor with contact sensor KVS**  
MC 200906  
Flat magnet contact safety class 2  
MC 473010

**Adapter mit Magnetzapfen KVS**  
MC 200906  
Flacher Magnetkontakt Schutzklasse 2  
MC 473010

**Adaptateur avec contact KVS**  
MC 200906  
Contact magnétique plat classe de  
protection 2  
MC 473010



M65TB - 0031

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

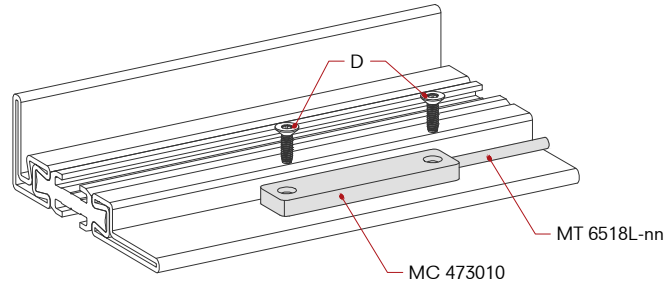
- A) Hole Ø3.3 mm
- B) Hole Ø2.5 mm
- C) Countersunk screw M4x16
- D) Countersunk screw M3x10
- E) Cut the screw

Dargestellt DIN rechts - DIN links spiegelbildlich

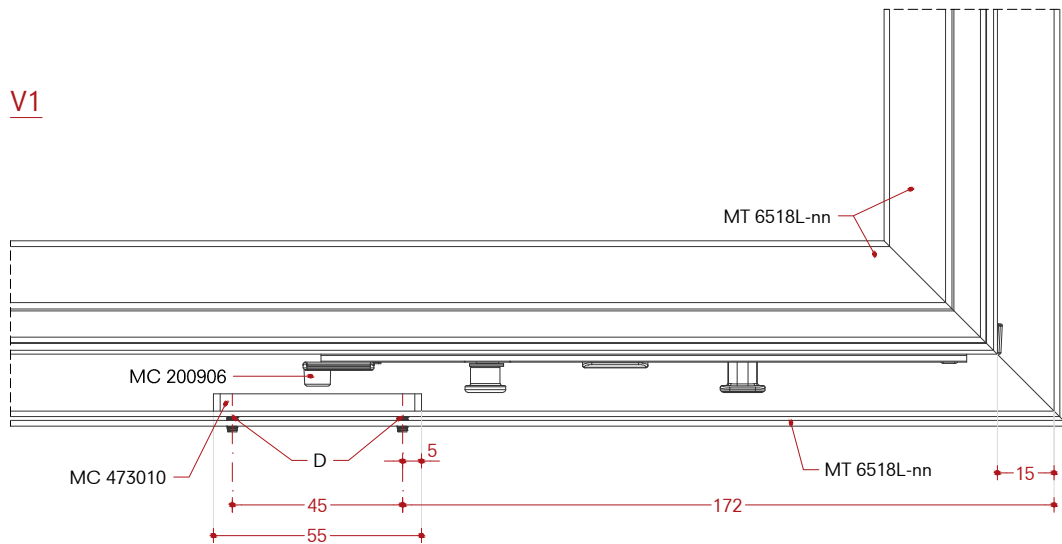
- A) Bohrdurchmesser Ø3.3 mm
- B) Bohrdurchmesser Ø2.5 mm
- C) Senkkopfschraube M4x16
- D) Senkkopfschraube M3x10
- E) Schraube kürzen

Montré ouverture droite  
(ouverture gauche inversé en miroir)

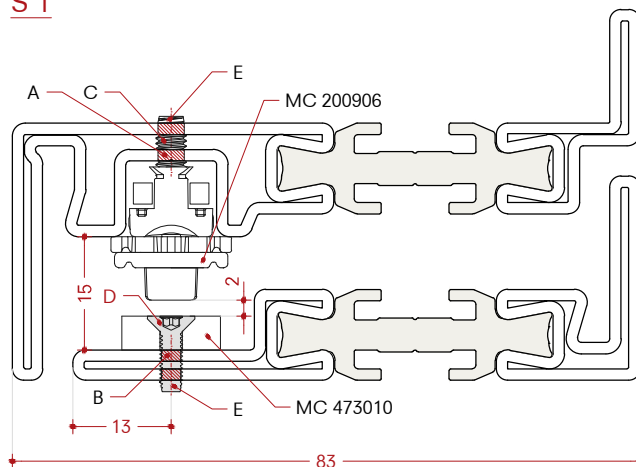
- A) Trou Ø3.3 mm
- B) Trou Ø2.5 mm
- C) Vis à tête fraisée M4x16
- D) Vis à tête fraisée M3x10
- E) Couper la vis



**V1**



**S 1**



**Turn-only drive gear variable**

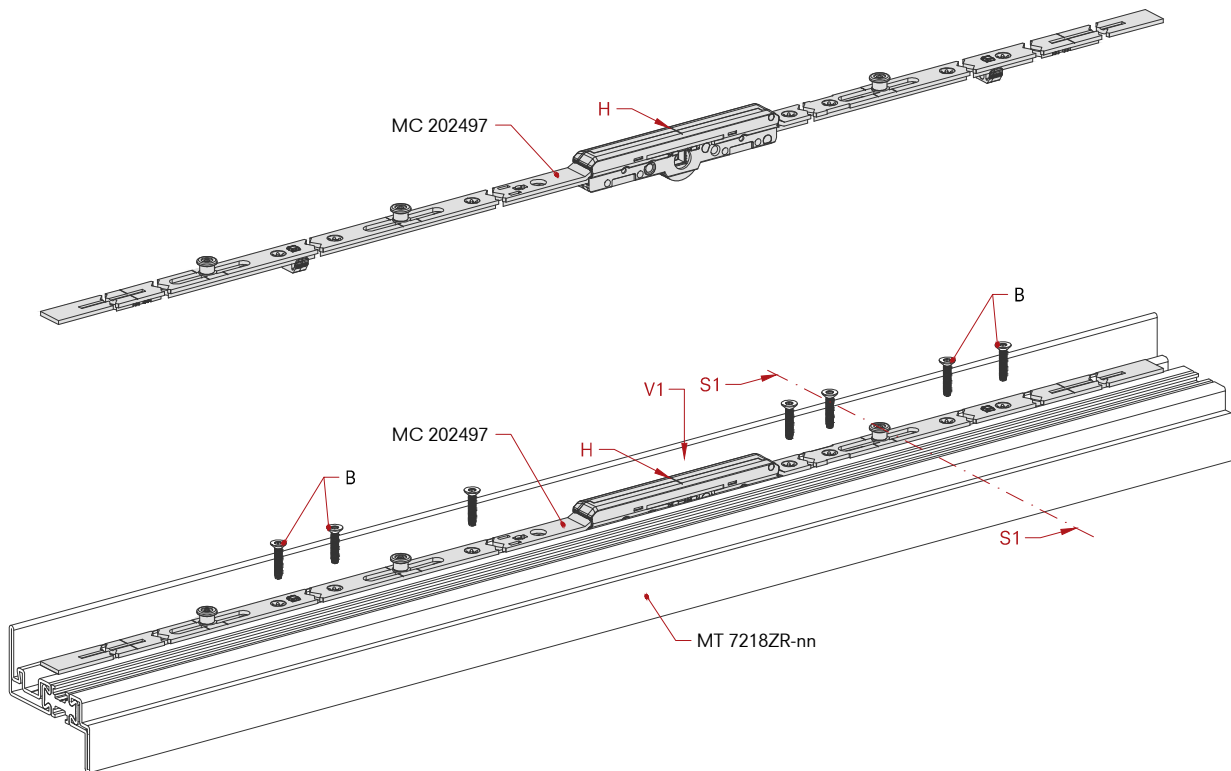
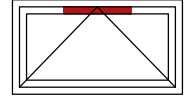
Bottom-hung window  
Backset 6.5 mm  
MC 202497

**Drehgetriebe variabel**

Kippfenster  
Dornmass 6.5 mm  
MC 202497

**Crémone variable**

Fenêtre soufflet  
Entrée verrouiller 6.5 mm  
MC 202497



M65TB - 0032

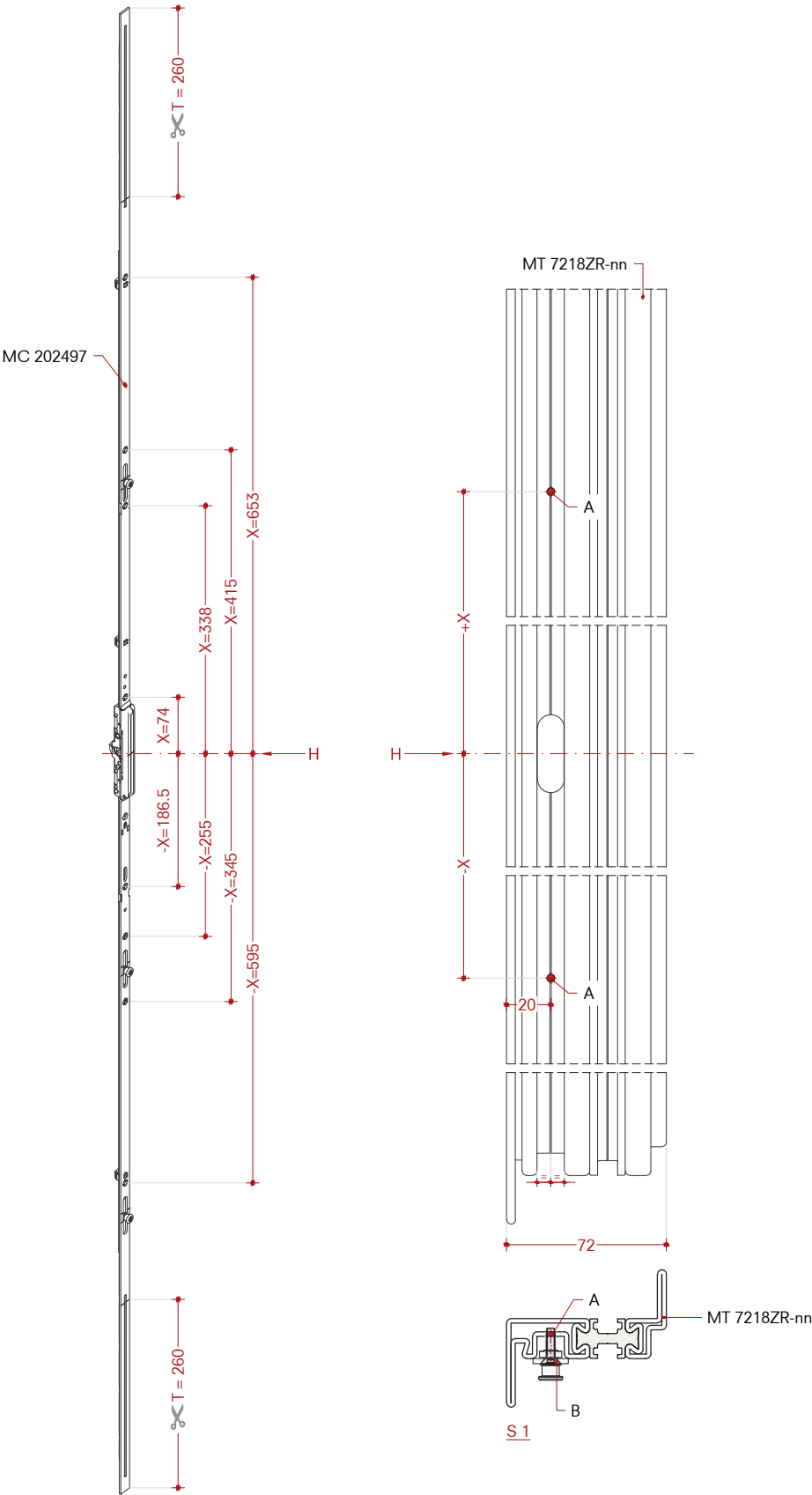
DWG

DXF

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16  
H) Handle centre  
T) Maximum cut drive gear  
X) Position screw connection drive gear

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16  
H) Griffmitte  
T) Maximale Kürzung Getriebe  
X) Lage Verschraubung Getriebe

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16  
H) Centre de poignée  
T) Réduction maximale du crémon  
X) Position du raccord à vis pour crémon



### Handle position

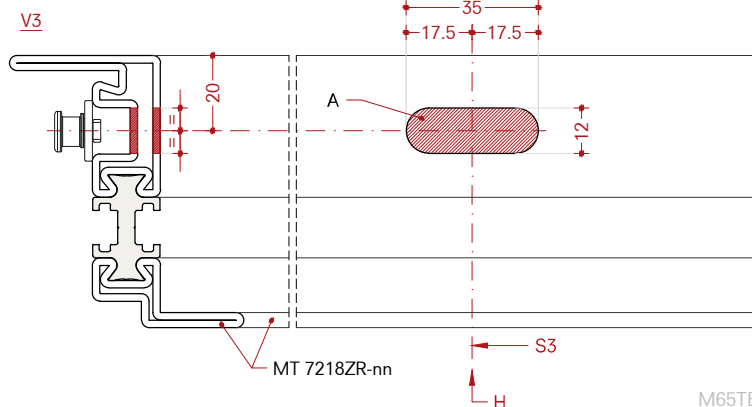
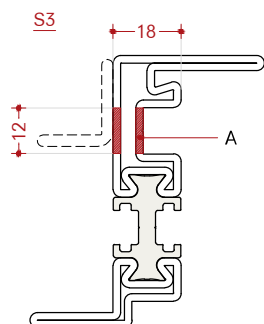
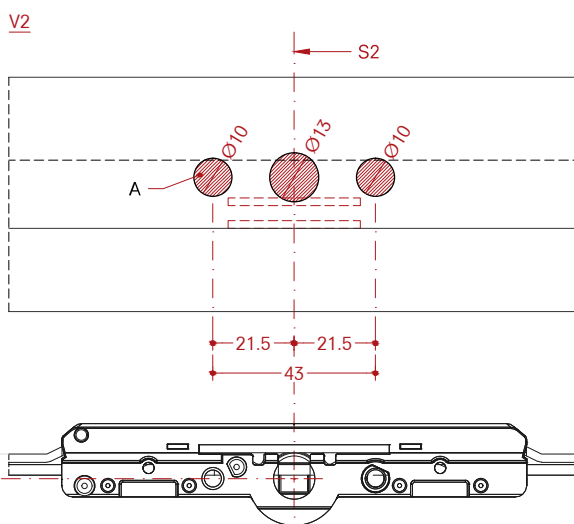
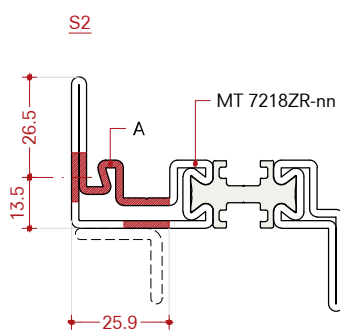
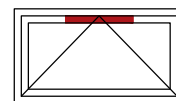
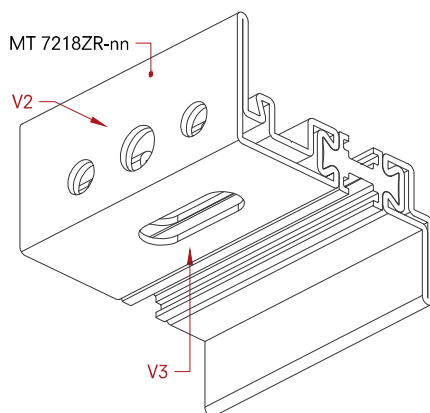
Bottom-hung window  
Hardware 6.5 mm backset  
Drive gear variable

### Griffposition

Kippfenster  
Dornmaß Getriebe 6.5 mm  
Getriebe variabel

### Position de la poignée

Fenêtre soufflet  
Entrée verrouiller 6.5 mm  
Crémone variable



M65TB - 0033

DWG

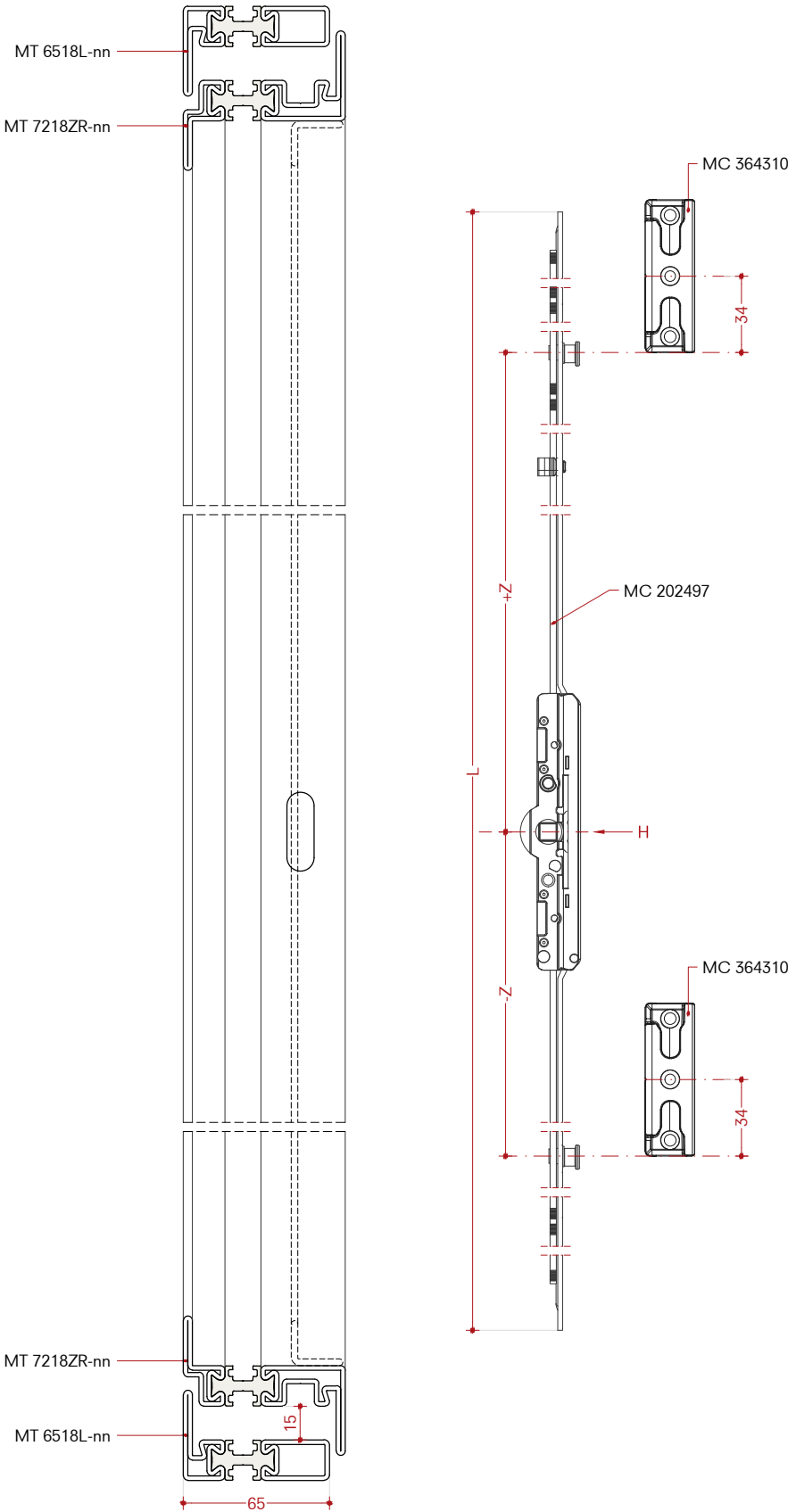
DXF

A) Cut off profile  
H) Handle centre  
L) Length drive gear  
Z) Position locking cam

A) Profil ausklinken  
H) Griffhöhemitte  
L) Länge Getriebe  
Z) Lage Verriegelungszapfen

A) Pièce à enlever  
H) Centre de poignée  
L) Longueur du crémonne  
Z) Position de galet de verrouillage





|           | L    | Z1   | Z2   | Z3  |
|-----------|------|------|------|-----|
| MC 202497 | 2040 | -640 | -300 | 370 |

**Espagnolette - centred handle**

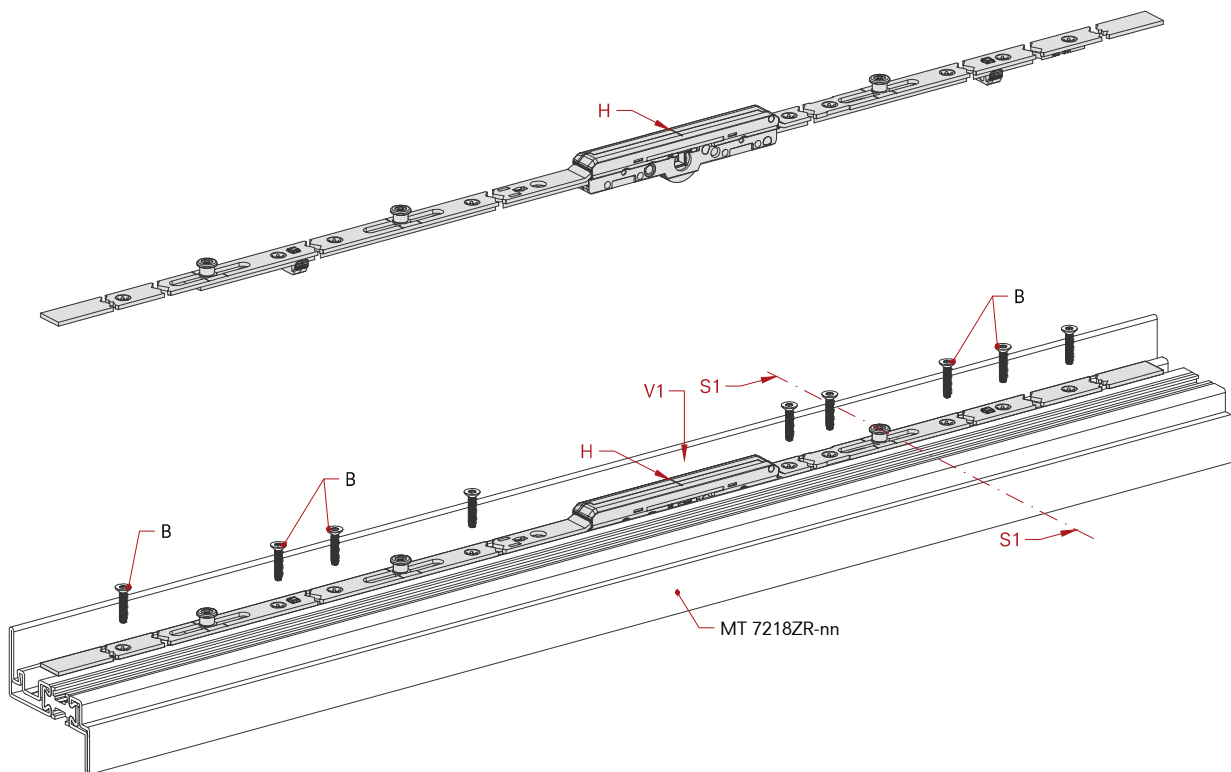
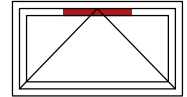
Bottom-hung window  
Backset 6.5 mm  
MC 208323 - MC 208324  
MC 208325 - MC 208326  
MC 208327

**Kantenverschluss mittig**

Kippfenster  
Dornmass 6.5 mm  
MC 208323 - MC 208324  
MC 208325 - MC 208326  
MC 208327

**Crémone-verrou milieu**

Fenêtre soufflet  
Entrée verrouiller 6.5 mm  
MC 208323 - MC 208324  
MC 208325 - MC 208326  
MC 208327



M65TB - 0034

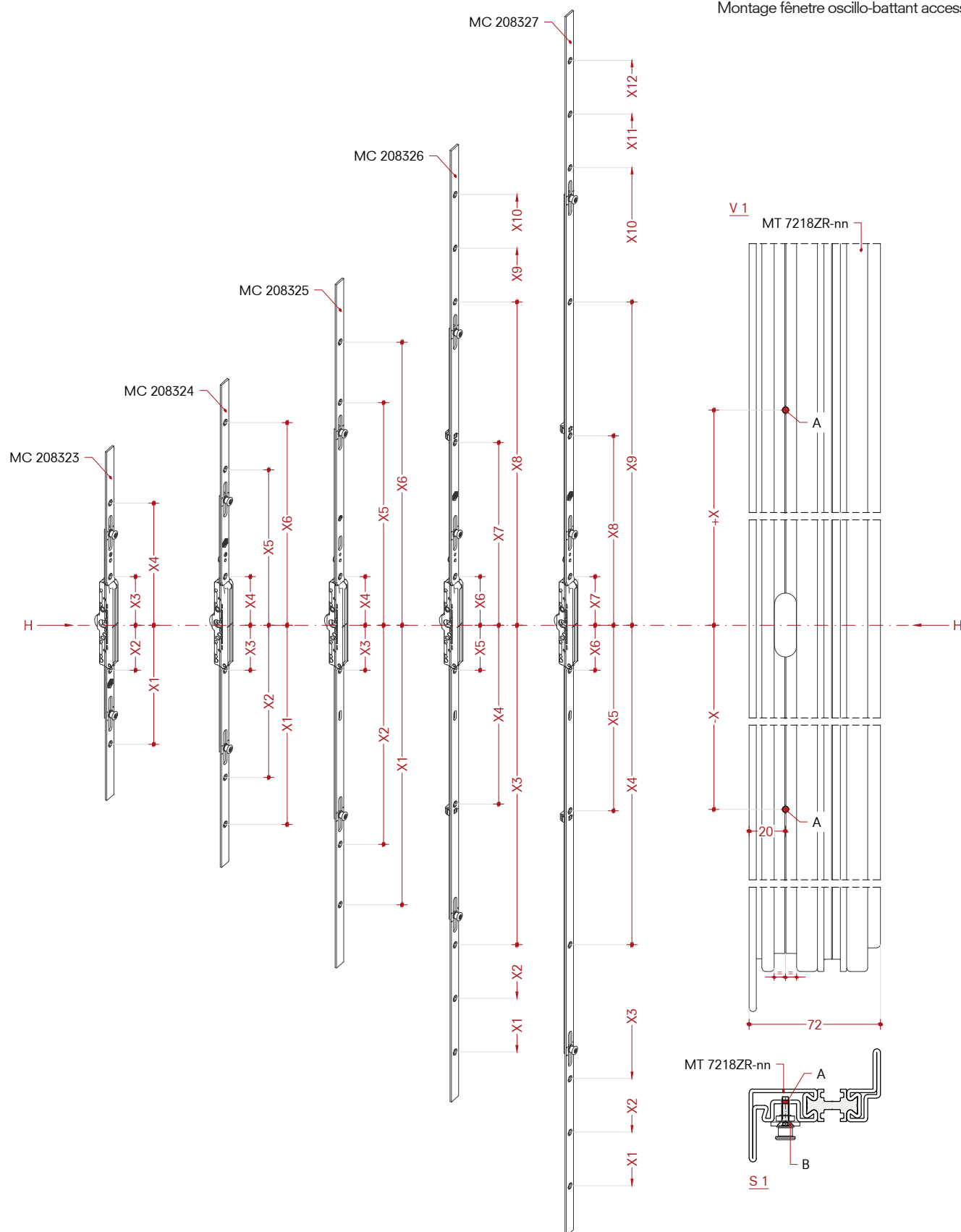
DWG

DXF

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16  
H) Handle centre  
X) Position screw connection drive gear

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16  
H) Griffmitte  
X) Lage Verschraubung Getriebe

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16  
H) Centre de poignée  
X) Position du raccord à vis pour crémone



|           | X1   | X2   | X3   | X4   | X5   | X6  | X7  | X8  | X9  | X10 | X11 | X12 |
|-----------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|
| MC 208323 | -180 | -70  | 70   | 180  | -    | -   | -   | -   | -   | -   | -   | -   |
| MC 208324 | -300 | -230 | -70  | 70   | 230  | 300 | -   | -   | -   | -   | -   | -   |
| MC 208325 | -420 | -330 | -70  | 70   | 330  | 420 | -   | -   | -   | -   | -   | -   |
| MC 208326 | -640 | -560 | -480 | -270 | -70  | 70  | 270 | 480 | 560 | 640 | -   | -   |
| MC 208327 | -840 | -760 | -680 | -480 | -280 | -70 | 70  | 280 | 480 | 680 | 760 | 840 |

### Handle position

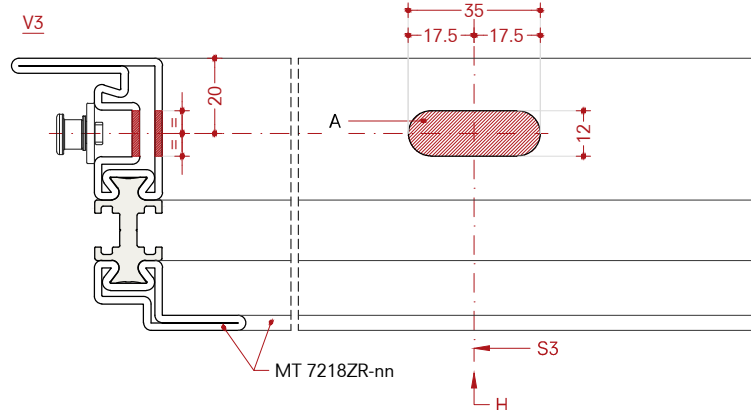
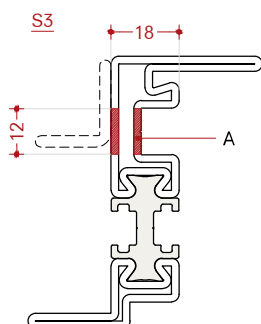
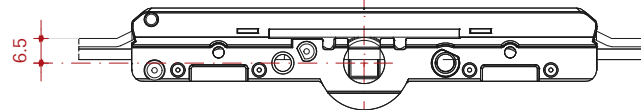
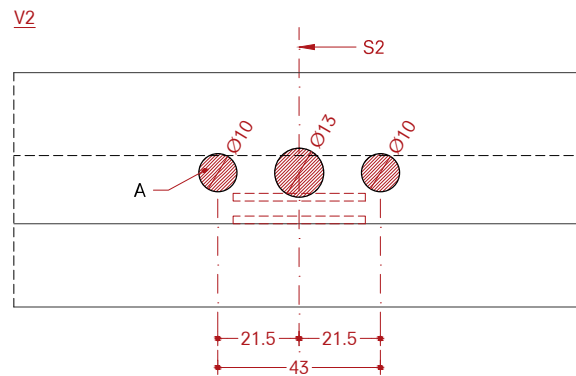
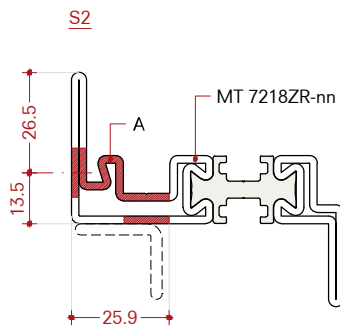
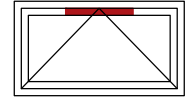
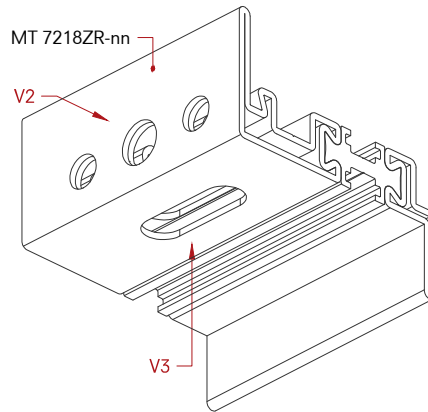
Bottom-hung window  
Hardware 6.5 mm backset  
Drive gear fixed

### Griffposition

Kippfenster  
Dornmaß Getriebe 6.5 mm  
Getriebelänge fix

### Position de la poignée

Fenêtre soufflet  
Entrée verrouiller 6.5 mm  
Crémone fixe



M65TB - 0035

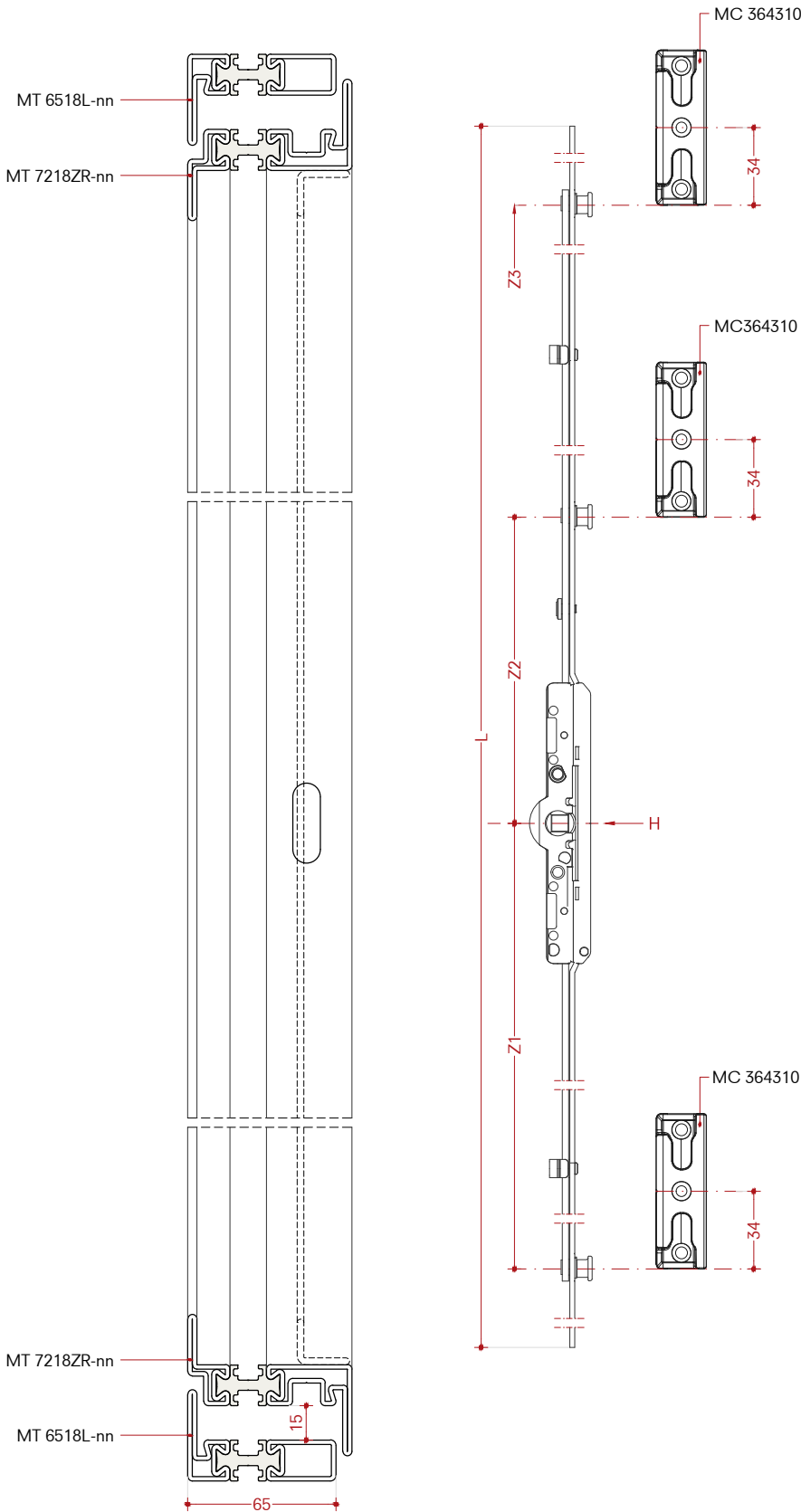
DWG

DXF

A) Cut off profile  
H) Handle centre  
L) Length drive gear  
Z) Position locking cam

A) Profil ausklinken  
H) Griffhöhemitte  
L) Länge Getriebe  
Z) Lage Verriegelungszapfen

A) Pièce à enlever  
H) Centre de poignée  
L) Longueur du crémonne  
Z) Position de galet de verrouillage

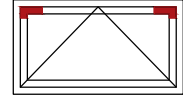
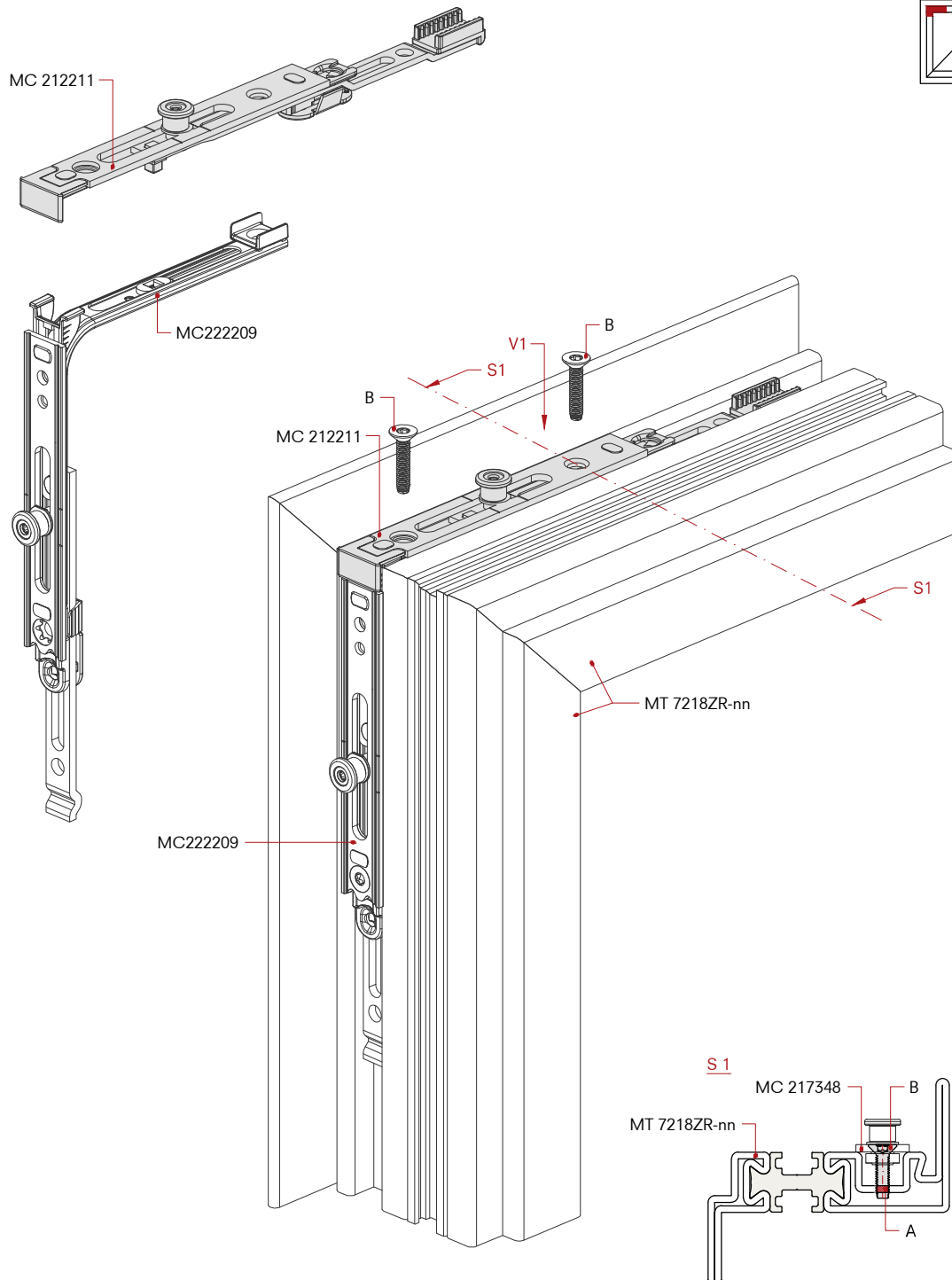


|           | L    | Z1   | Z2  | Z3  |
|-----------|------|------|-----|-----|
| MC 208323 | 520  | -135 | 135 | -   |
| MC 208324 | 720  | -185 | 185 | -   |
| MC 208325 | 1020 | -285 | 285 | -   |
| MC 208326 | 1420 | -435 | 135 | 435 |
| MC 208327 | 1820 | -635 | 135 | 635 |

**End piece top 180°**  
with 1 locking cam  
Bottom-hung window  
MC 212211

**Endverschluss oben 180°**  
mit 1 Verriegelungszapfen  
Kippfenster  
MC 212211

**Embout haut 180°**  
avec 1 galet de verrouillage  
Fenêtre soufflet  
MC 212211



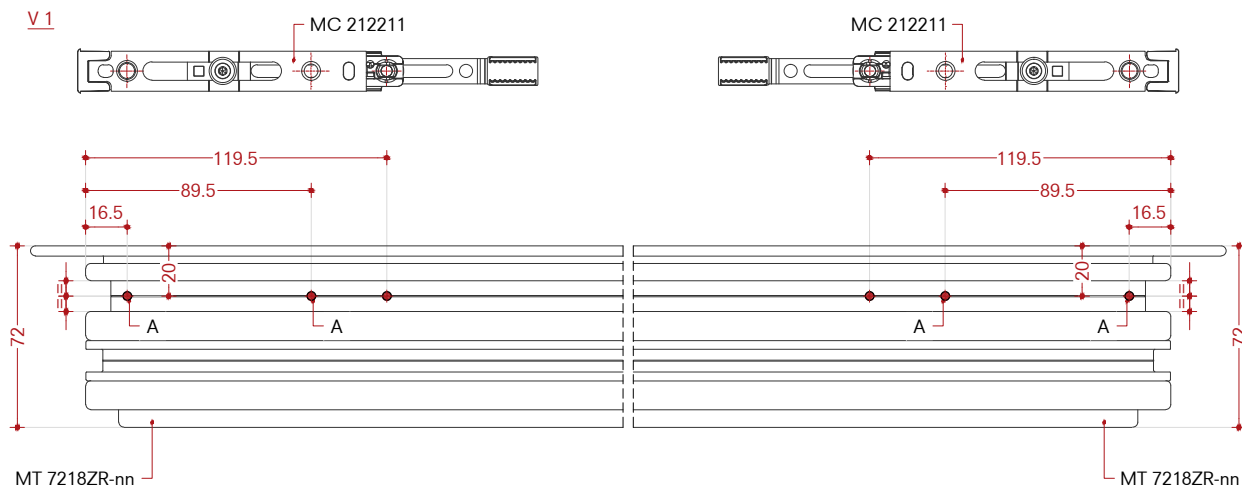
A) Cut off profile  
H) Handle centre  
L) Length drive gear  
Z) Position locking cam

A) Profil ausklinken  
H) Griffhöhemitte  
L) Länge Getriebe  
Z) Lage Verriegelungszapfen

A) Pièce à enlever  
H) Centre de poignée  
L) Longueur du crémonne  
Z) Position de galet de verrouillage

M65TB - 0036

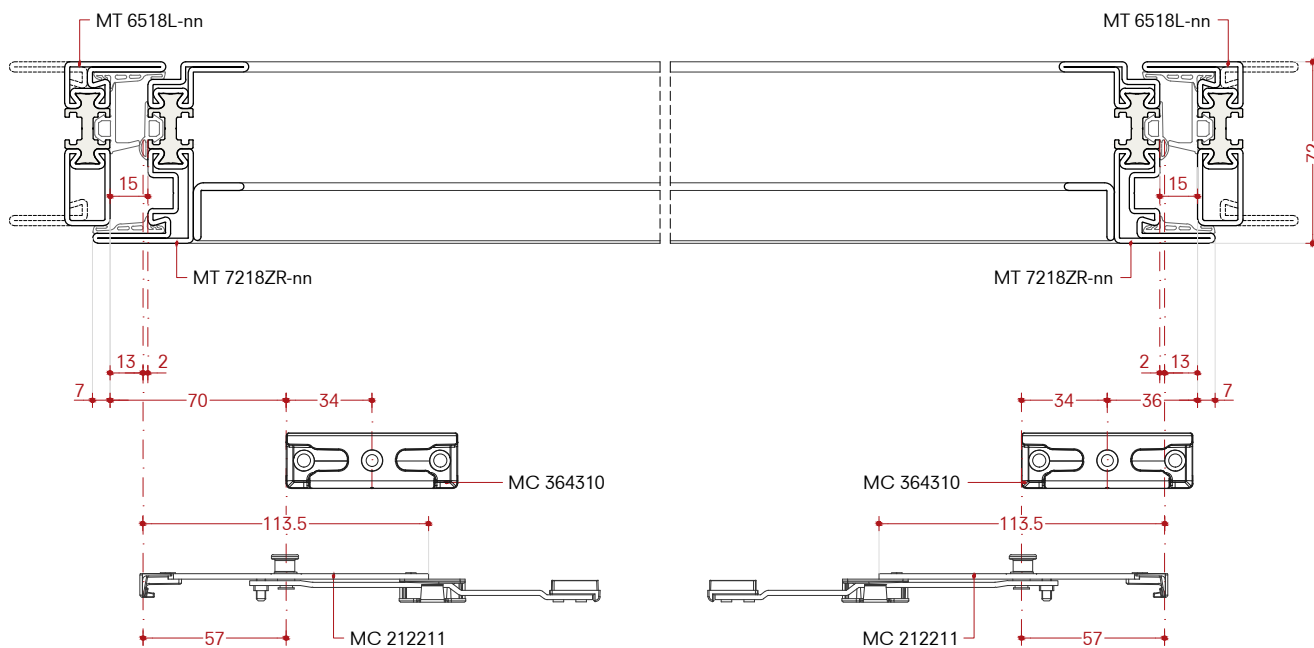
DWG DXF



**Positioning striker plate**  
(only for MC 217348 / MC 217349)

**Positionierung Schließteils**  
(nur bei MC 217348 / MC 217349)

**Positionnement de la gâche**  
(que pour MC 217348 / MC 217349)



**Tilt-only hinge arm with hinge**

MC 217723 R  
MC 217724 L

Leaf weight ≤ 80 kg  
Leaf size ≤ 1.9 m<sup>2</sup>

**Kippbandarm mit Lager**

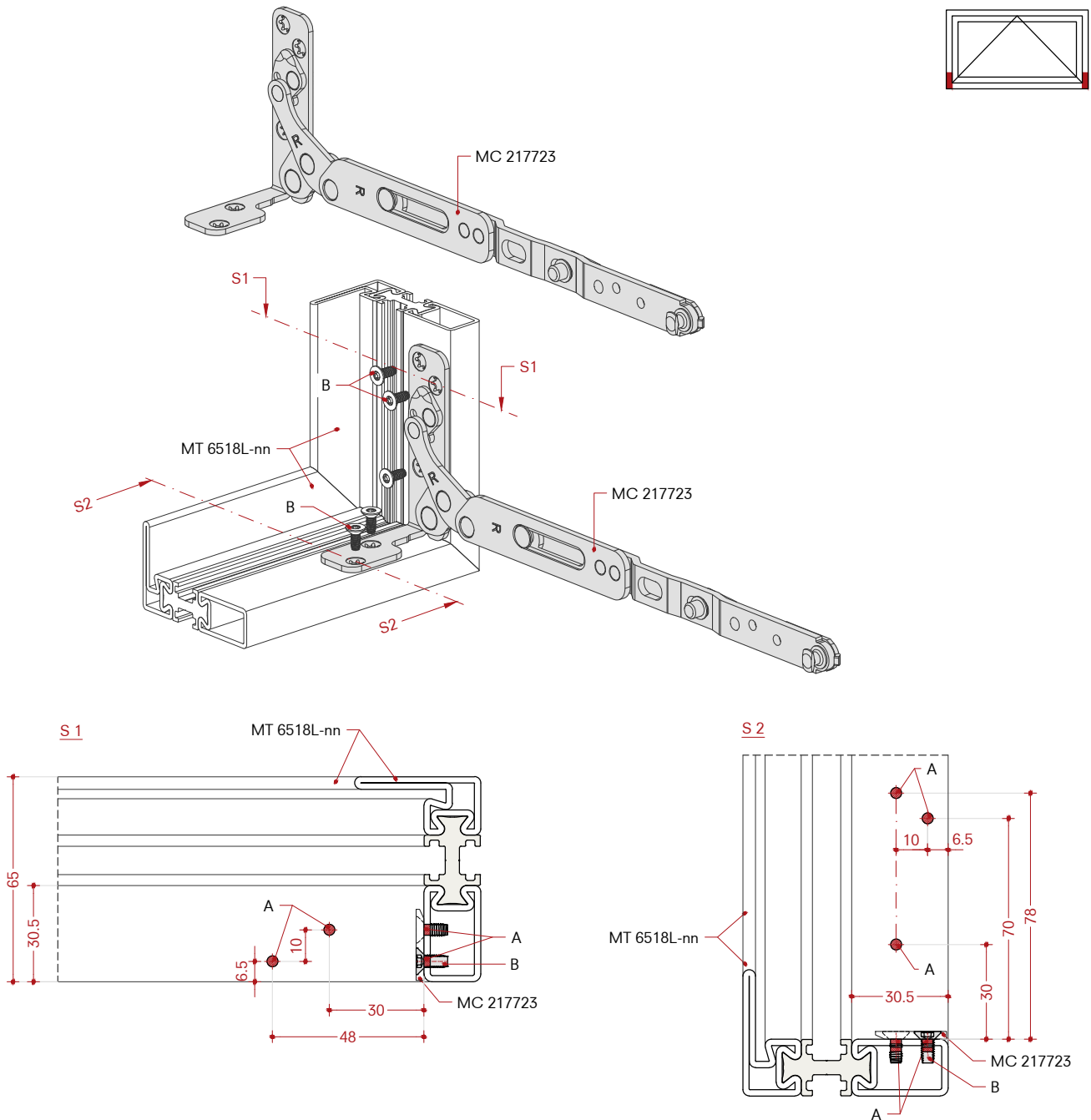
MC 217723 R  
MC 217724 L

Flügelgewicht ≤ 80 kg  
Flügelgröße ≤ 1.9 m<sup>2</sup>

**Bras de soufflet avec palier**

MC 217723 R  
MC 217724 L

Poids du vantail ≤ 80 kg  
Taille du vantail ≤ 1.9 m<sup>2</sup>



M65TB - 0037

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x10

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x10

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x10

L = Ouverture gauche  
R = Ouverture droite



**Please note:**

- Observe guideline "Restrictor and cleaning stays for tilt-only sashes and tilt-only fanlights".
- The maximum sash weight must not be exceeded.
- Fasten according to: TBDK guideline Gütegemeinschaft Schlösser und Beschläge (Locks and Fittings Quality Association - [www.schlossindustrie.de](http://www.schlossindustrie.de)).

**Bitte beachten:**

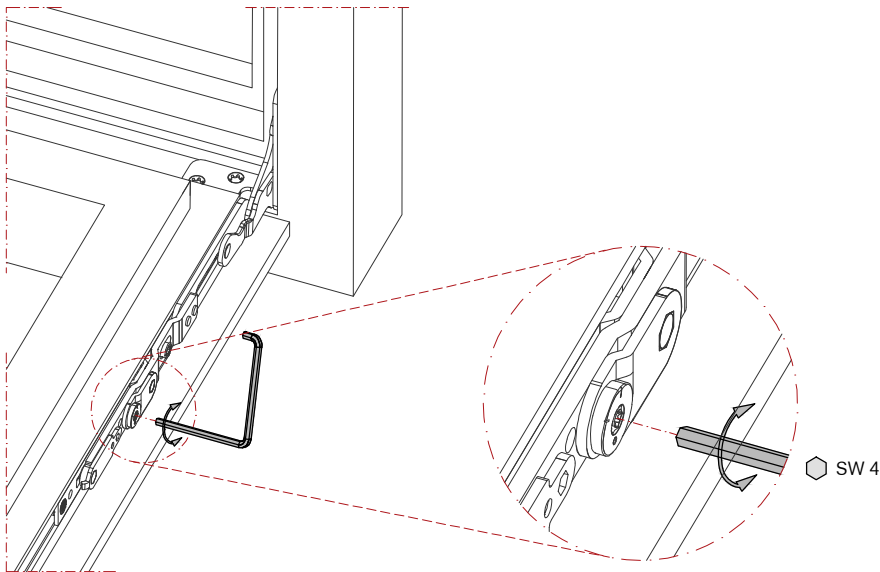
- Einbau von Fang- und Putzschere berücksichtigen.
- Das maximale Flügelgewicht darf nicht überschritten werden.
- Die Verschraubung der Lagerteile muss den Anforderungen der Richtlinie TBDK (Gütegemeinschaft Schlösser und Beschläge - [www.schlossindustrie.de](http://www.schlossindustrie.de)) entsprechen.

**Attention:**

- Tenir compte de la mise en œuvre du compas de reprise et nettoyage.
- Le poids maximal de l'ouvrant ne doit pas être dépassé.
- Le vissage des pièces de rotation doit être conforme aux exigences de la directive TBDK (Groupement Qualité serrures et ferrures - [www.schlossindustrie.de](http://www.schlossindustrie.de)).

**Height adjustment**

⬡ Adjustment range +1/-2.5 mm with SW 4

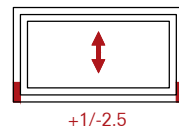


**Höheneinstellung**

⬡ Einstellbereich +1/-2.5 mm mit SW 4

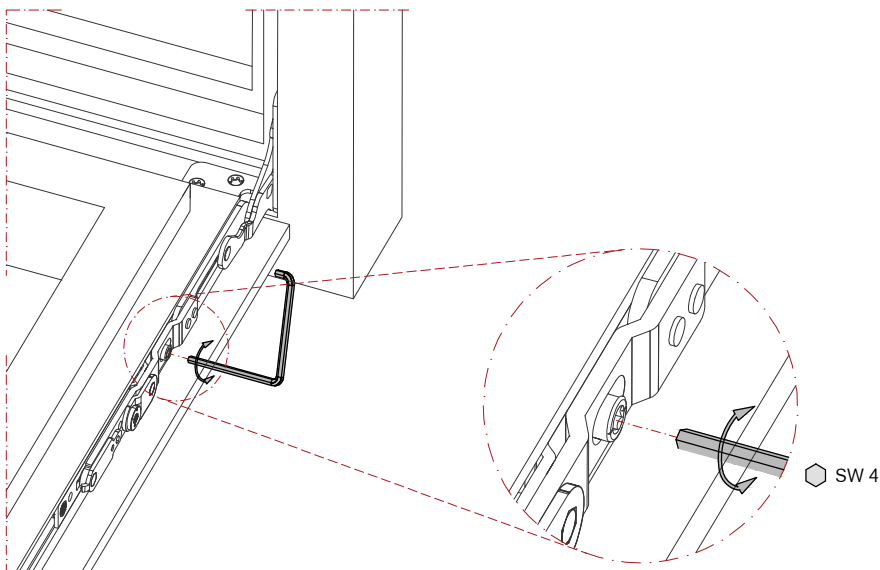
**Réglage de la hauteur**

⬡ Plage de réglage +1/-2.5 mm avec SW 4



**Pressure adjustment**

⬡ Adjustment range +1 mm with SW 4

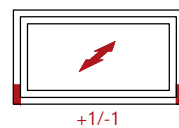


**Anpressdruck Einstellung**

⬡ Einstellbereich +1 mm mit SW 4

**Réglage de la pression de contact**

⬡ Plage de réglage +1 mm avec SW 4





### Bullet catch

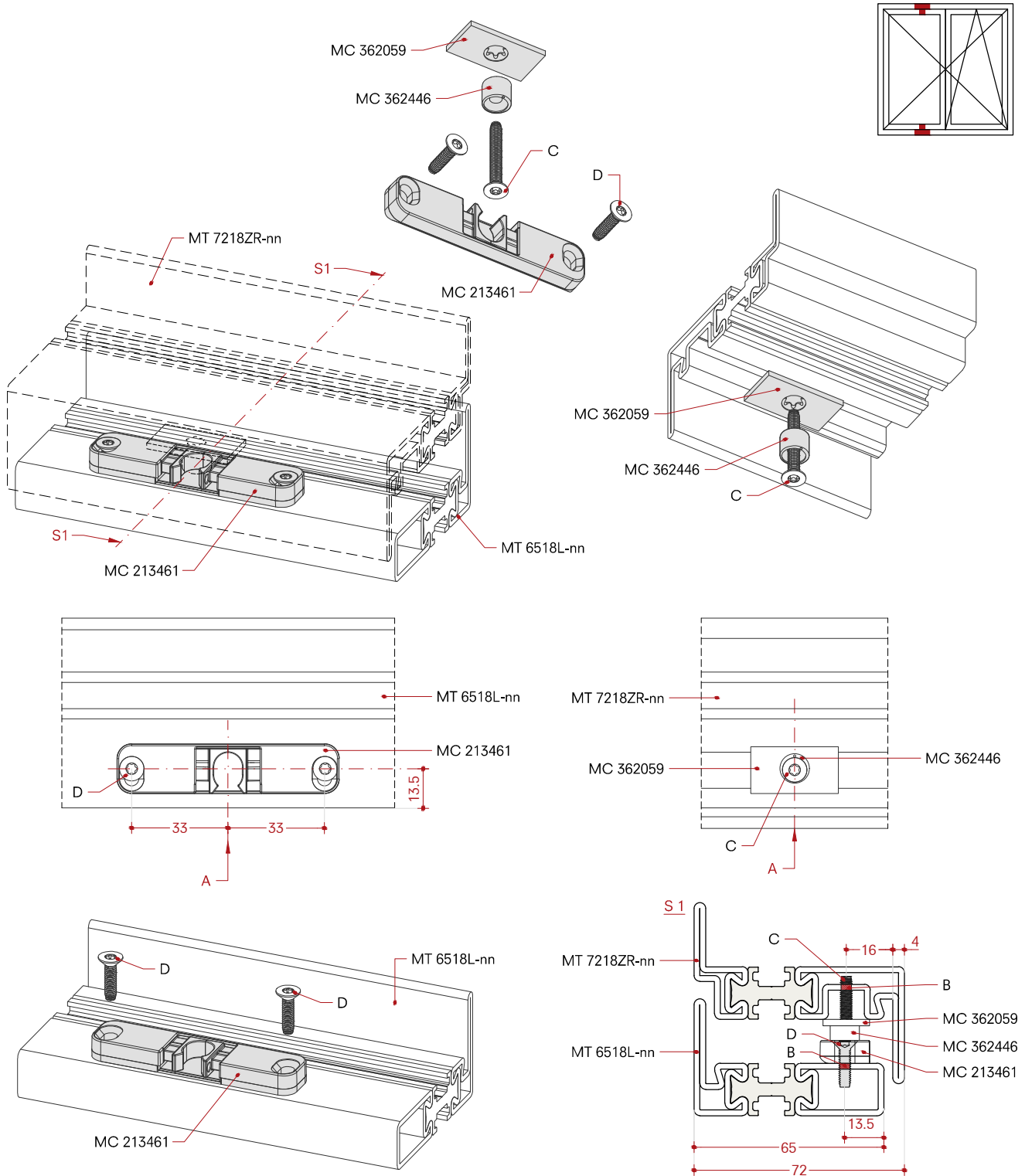
MC 213461  
with Bullet-catch roll MC 362446  
and packer for bullet catch for  
Eurogroove MC 362059

### Schnapper

MC 213461  
mit Schnapperrolle MC 362446  
und Unterlage zur Schnapperrolle für  
Beschlagsnut MC 362059

### Houssette

MC 213461  
avec Plot de houssette MC 362446  
et Cale pour plot de houssette pour  
rainure à ferrage MC 362059



M65TB - 0039

DWG DXF

A) Centre Bullet catch  
B) Hole Ø3.3 mm  
C) Countersunk screw M4x25  
D) Countersunk screw M4x16

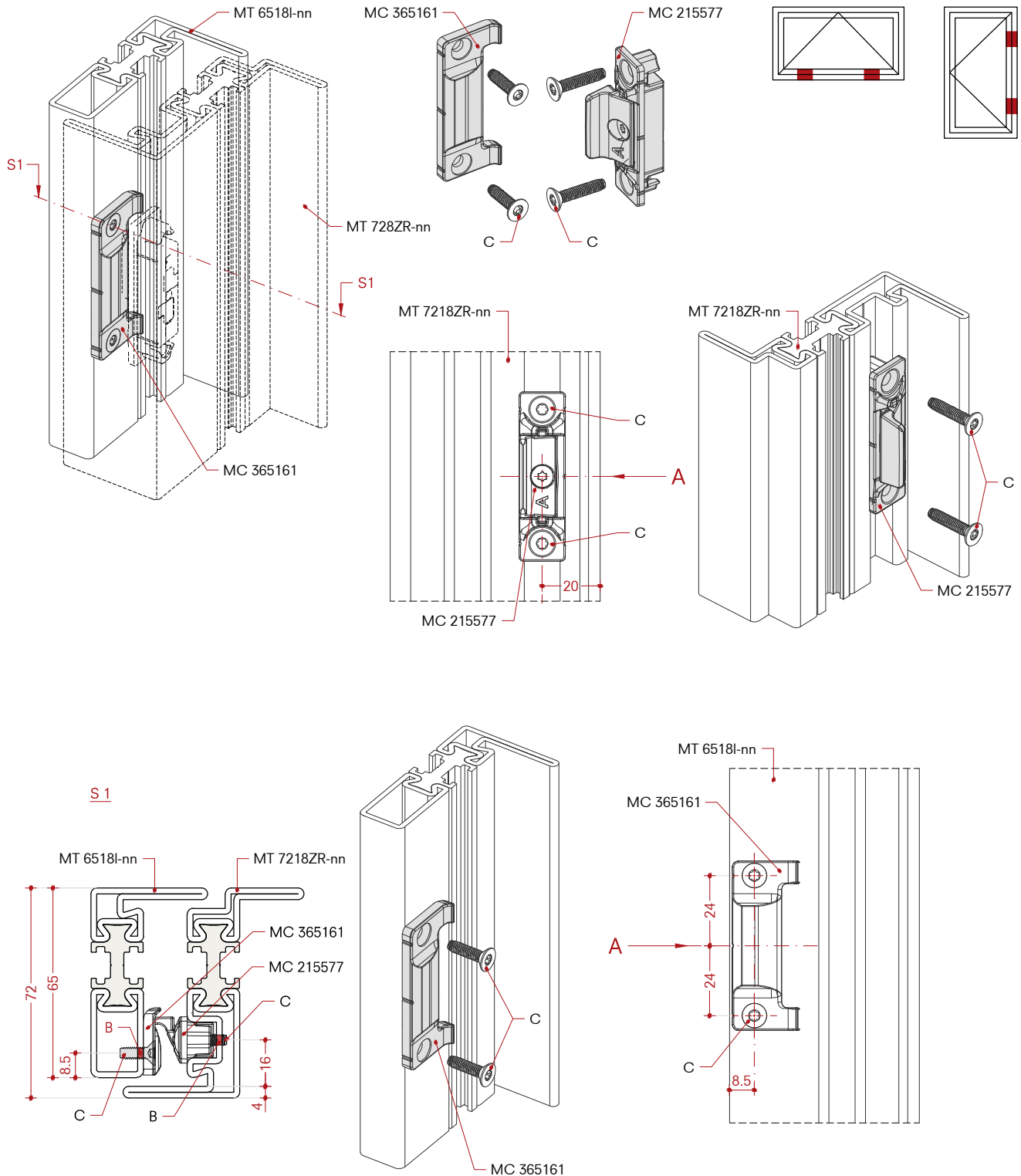
A) Achse Schnapper  
B) Bohrdurchmesser Ø3.3 mm  
C) Senkkopfschraube M4x25  
D) Senkkopfschraube M4x16

A) Houssette central  
B) Trou Ø3.3 mm  
C) Vis à tête fraisée M4x25  
D) Vis à tête fraisée M4x16

**Concealed compression lock**  
**Frame component MC 365161**  
and sash component with lateral  
adjustment MC 215577

**Anpressverschluss verdeckt**  
**Rahmenteil MC 365161**  
und Flügelteil mit Seiteneinstellung  
MC 215577

**Fiche médiane sous recouvrement**  
**Pièce dormant MC 365161**  
et partie ouvrant avec réglage latéral  
MC 215577



M65TB - 0040

DWG DXF

A) Centre compression lock  
B) Hole Ø3.3 mm  
C) Countersunk screw M4x12

A) Achse Anpressverschluss  
B) Bohrdurchmesser Ø3.3 mm  
C) Senkkopfschraube M4x12

A) Fiche médiane central  
B) Trou Ø3.3 mm  
C) Vis à tête fraisée M4x12

**Please note:**

It is necessary to set a spacer block in the area of the compression device (distance piece glazing).

**Bitte beachten:**

Im Bereich des Anpressverschlusses ist eine Verklotzung nötig (Distanzklotz Verglasung).

**Attention:**

Un calage est nécessaire au droit de la fiche médiane (Cale de distance vitrage).

**Pressure adjustment**

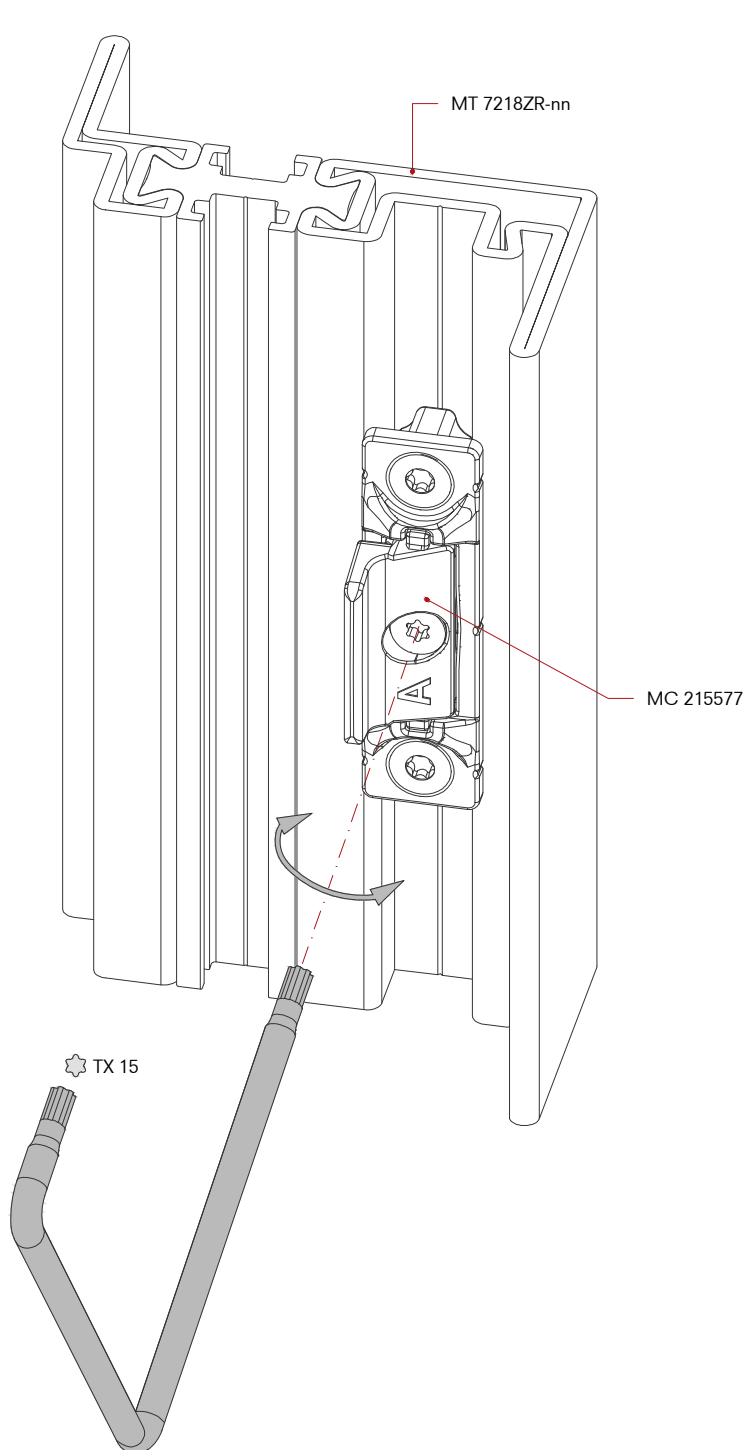
Air gap 10-14 mm adjustable

**Anpressdruck Einstellung**

Falzlufte 10-14 mm einstellbar

**Réglage de la pression de contact**

Jeu en feuillure réglable de 10 à 14 mm



✱ Adjustment range  $\pm 2$  mm with TX 15

✱ Einstellbereich  $\pm 2$  mm mit TX 15

✱ Plage de réglage  $\pm 2$  mm avec TX 15

### French casement drive gear fixed

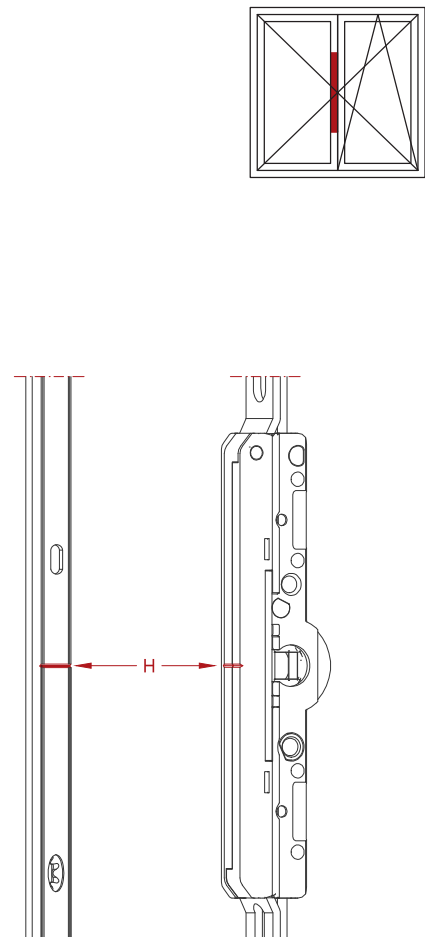
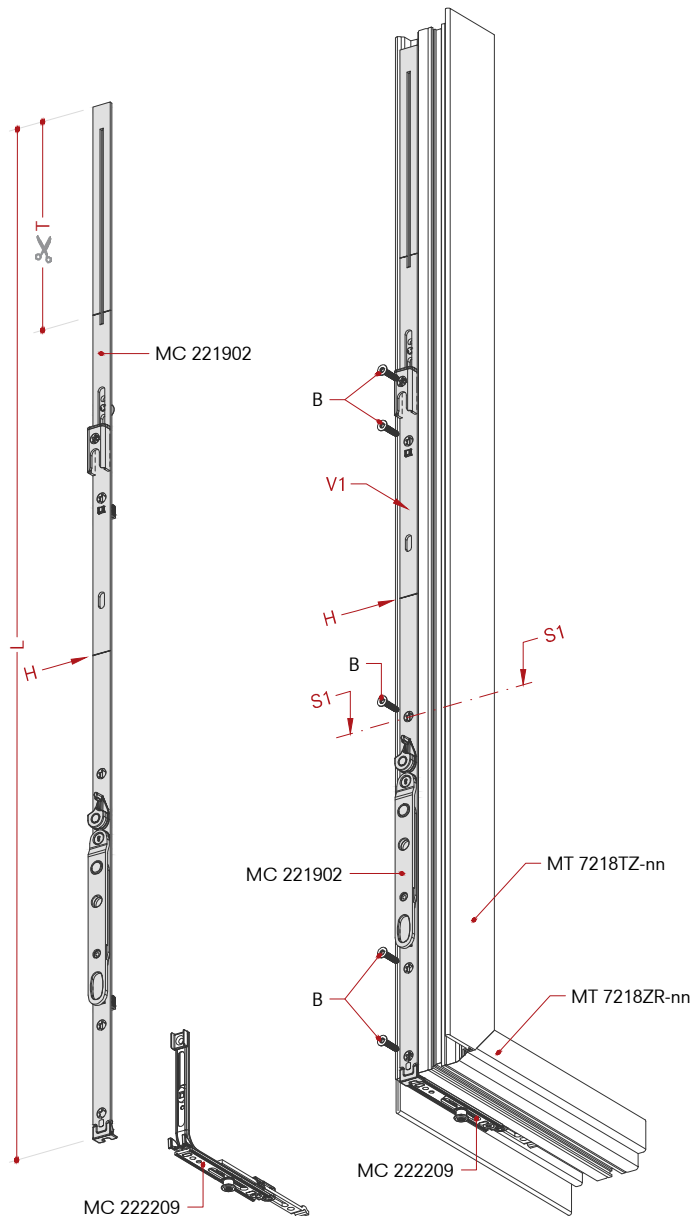
MC 202873 - MC 221901  
MC 221902 - MC 221903  
MC 221906 - MC 207242  
MC 221907 - MC 221908  
MC 221909

### Stulpflügelgetriebe fix

MC 202873 - MC 221901  
MC 221902 - MC 221903  
MC 221906 - MC 207242  
MC 221907 - MC 221908  
MC 221909

### Crémone de semi fixe pour rainure à ferrage fixe

MC 202873 - MC 221901  
MC 221902 - MC 221903  
MC 221906 - MC 207242  
MC 221907 - MC 221908  
MC 221909



M65TB - 0041

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- H) Matching of notches
- L) Length drive gear
- T) Maximum cut drive gear

X = Position screw connection drive gear

Dargestellt DIN rechts - DIN links spiegelbildlich

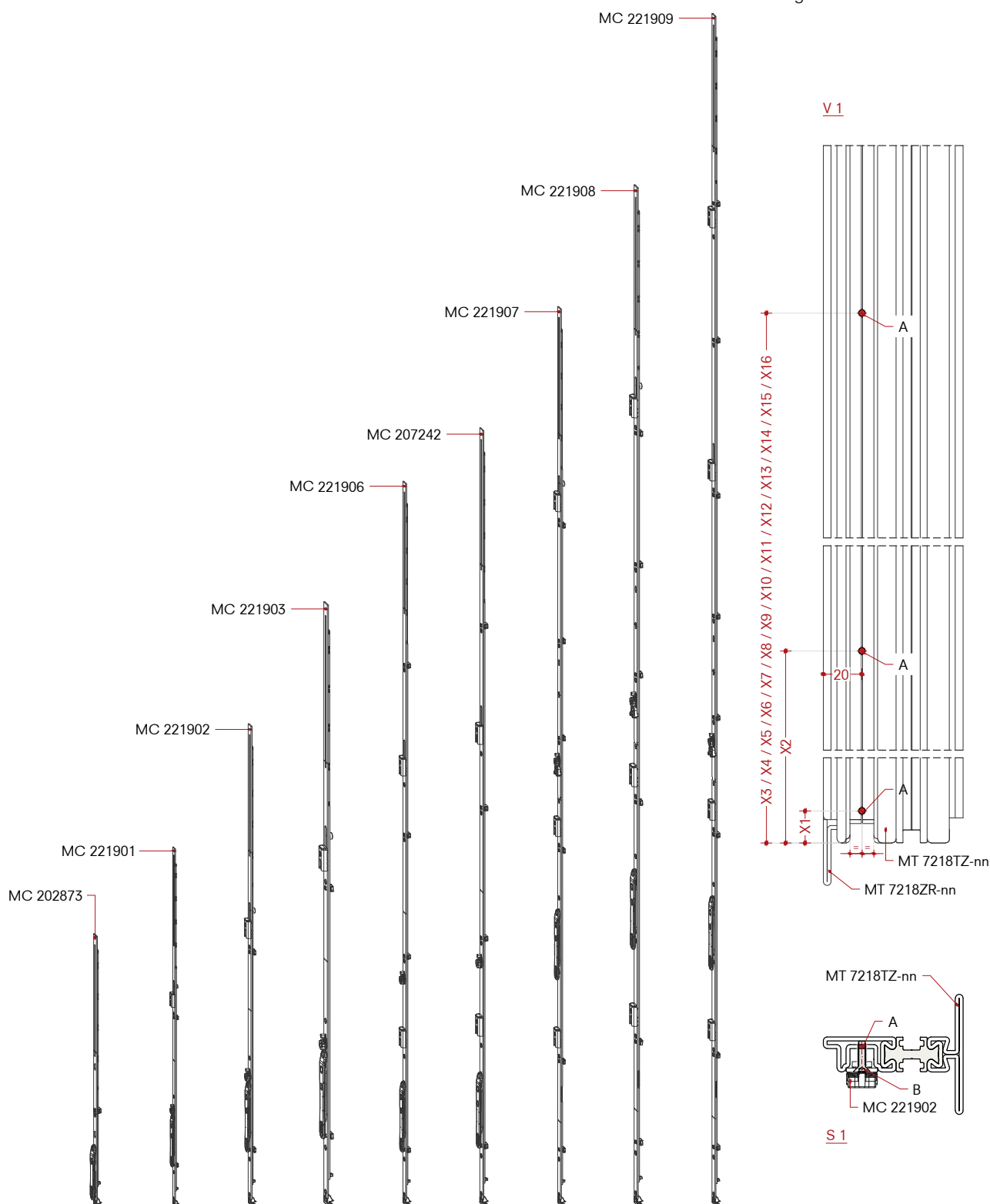
- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- H) Gegenüberstellung der Kerbmarken
- L) Länge Getriebe
- T) Maximale Kürzung Getriebe

X = Lage Verschraubung Getriebe

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- H) Appariement des encoches
- L) Longueur du crémone
- T) Réduction maximale du crémone

X = Position du raccord à vis pour crémone

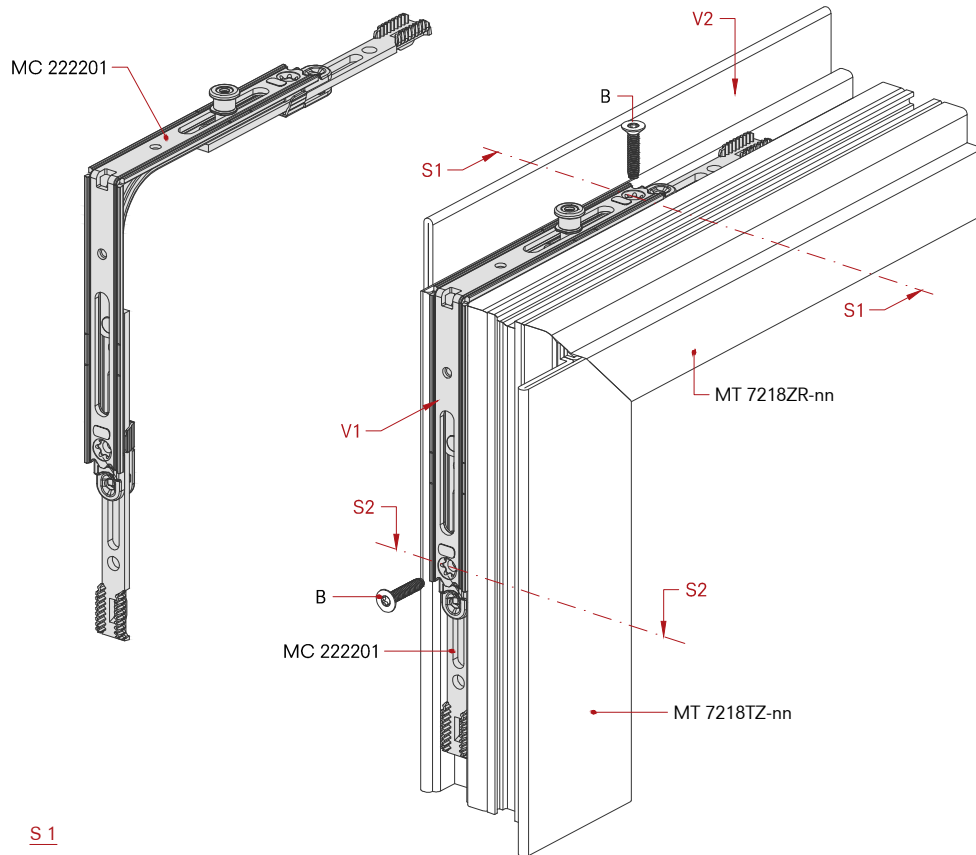


|           | L      | T     | X1   | X2    | X3    | X4    | X5    | X6  | X7    | X8    | X9   | X10 | X11  | X12  | X13  | X14  | X15  | X16  |
|-----------|--------|-------|------|-------|-------|-------|-------|-----|-------|-------|------|-----|------|------|------|------|------|------|
| MC 202873 | 556.5  | 240.5 | 16.5 | 187.5 | -     | -     | -     | -   | -     | -     | -    | -   | -    | -    | -    | -    | -    | -    |
| MC 221901 | 736.5  | 190.5 | 16.5 | 89.5  | 198   | 381.5 | 428   | -   | -     | -     | -    | -   | -    | -    | -    | -    | -    | -    |
| MC 221902 | 986.5  | 260.5 | 16.5 | 89.5  | 298   | 526.5 | 572   | -   | -     | -     | -    | -   | -    | -    | -    | -    | -    | -    |
| MC 221903 | 1236.5 | 260.5 | 16.5 | 89.5  | 301.5 | 398   | 626.5 | 672 | 843   | -     | -    | -   | -    | -    | -    | -    | -    | -    |
| MC 221906 | 1486.5 | 260.5 | 16.5 | 89.5  | 301.5 | 347.5 | 498   | 748 | 861.5 | 909.5 | 1098 | -   | -    | -    | -    | -    | -    | -    |
| MC 207242 | 1596   | 260.5 | 16.5 | 89.5  | 301.5 | 348   | 598   | 798 | 962   | 1008  | 1208 | -   | -    | -    | -    | -    | -    | -    |
| MC 221907 | 1846.5 | 260.5 | 16.5 | 89.5  | 301.5 | 348   | 475   | 628 | 736.5 | 782.5 | 894  | 948 | 1148 | 1407 | 1453 | -    | -    | -    |
| MC 221908 | 2096.5 | 260.5 | 16.5 | 89.5  | 301.5 | 348   | 475   | 628 | 736.5 | 782.5 | 894  | 948 | 1148 | 1407 | 1453 | 1693 | -    | -    |
| MC 221909 | 2450   | 260.5 | 16.5 | 89.5  | 301.5 | 348   | 475   | 628 | 736.5 | 782.5 | 894  | 948 | 1148 | 1407 | 1453 | 1693 | 1907 | 1953 |

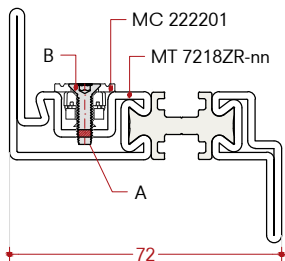
**Corner element for French  
casement drive gear  
with 1 locking cam  
MC 222201**

**Eckumlenkung für  
Stulpflügelgetriebe  
mit 1 Verriegelungszapfen  
MC 222201**

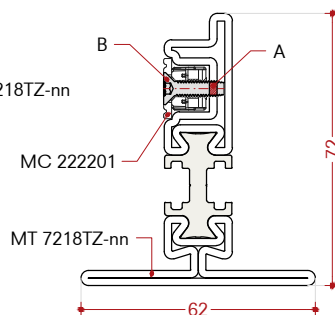
**Renvoi d'angle pour crémonne de  
semi-fixe  
avec 1 galet de verrouillage  
MC 222201**



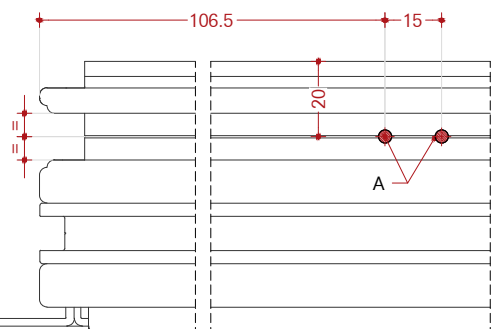
S 1



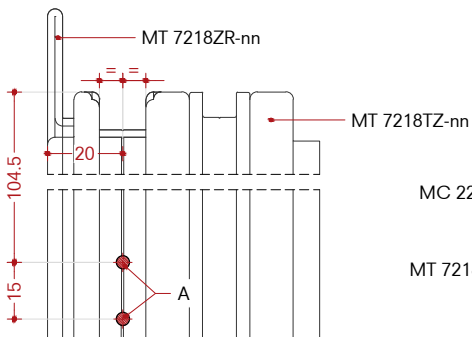
S 2



V 2



V 1



M65TB - 0042

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

Montré ouverture droite  
(ouverture gauche inversé en miroir)

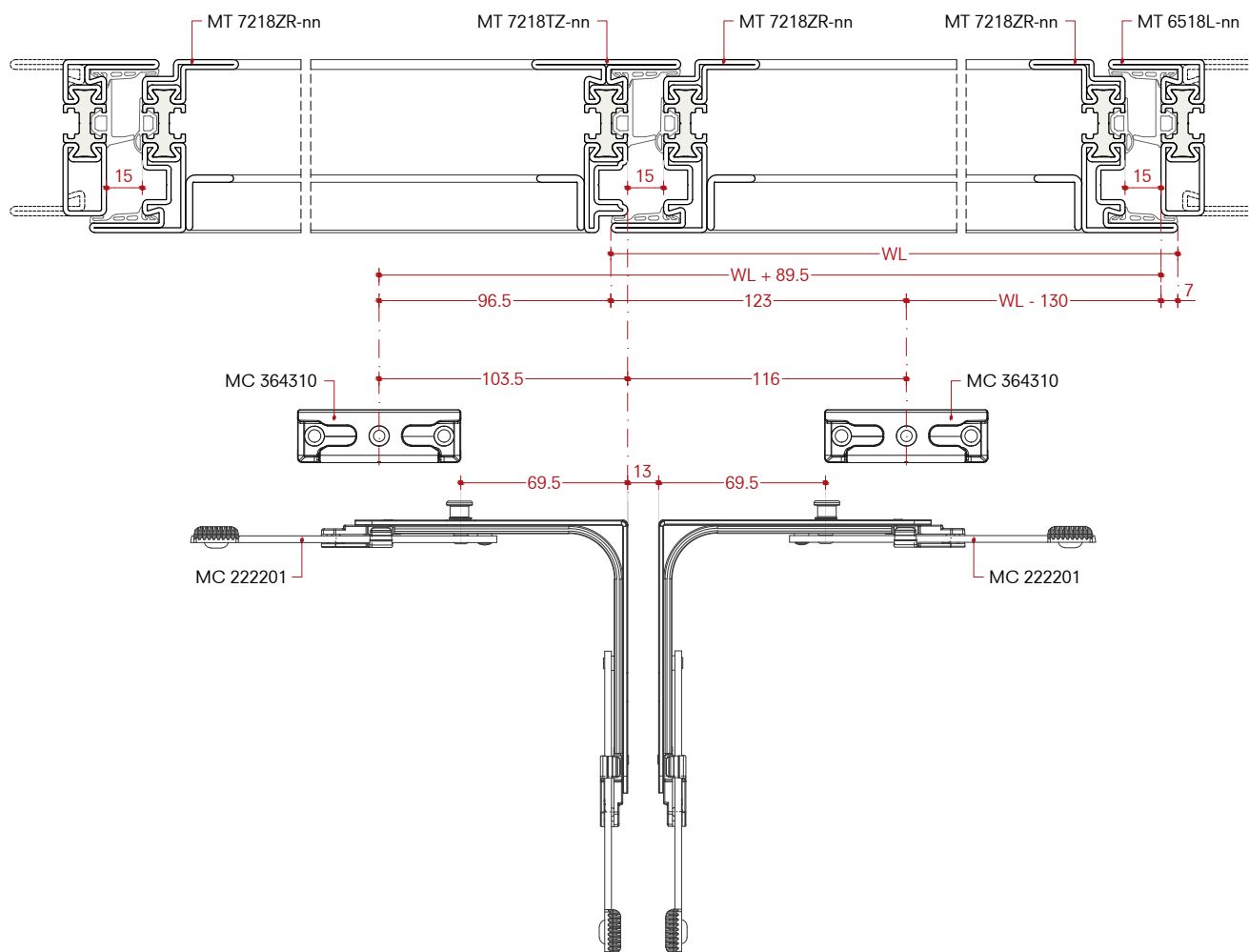
A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16



**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich  
WL = Länge Flügel

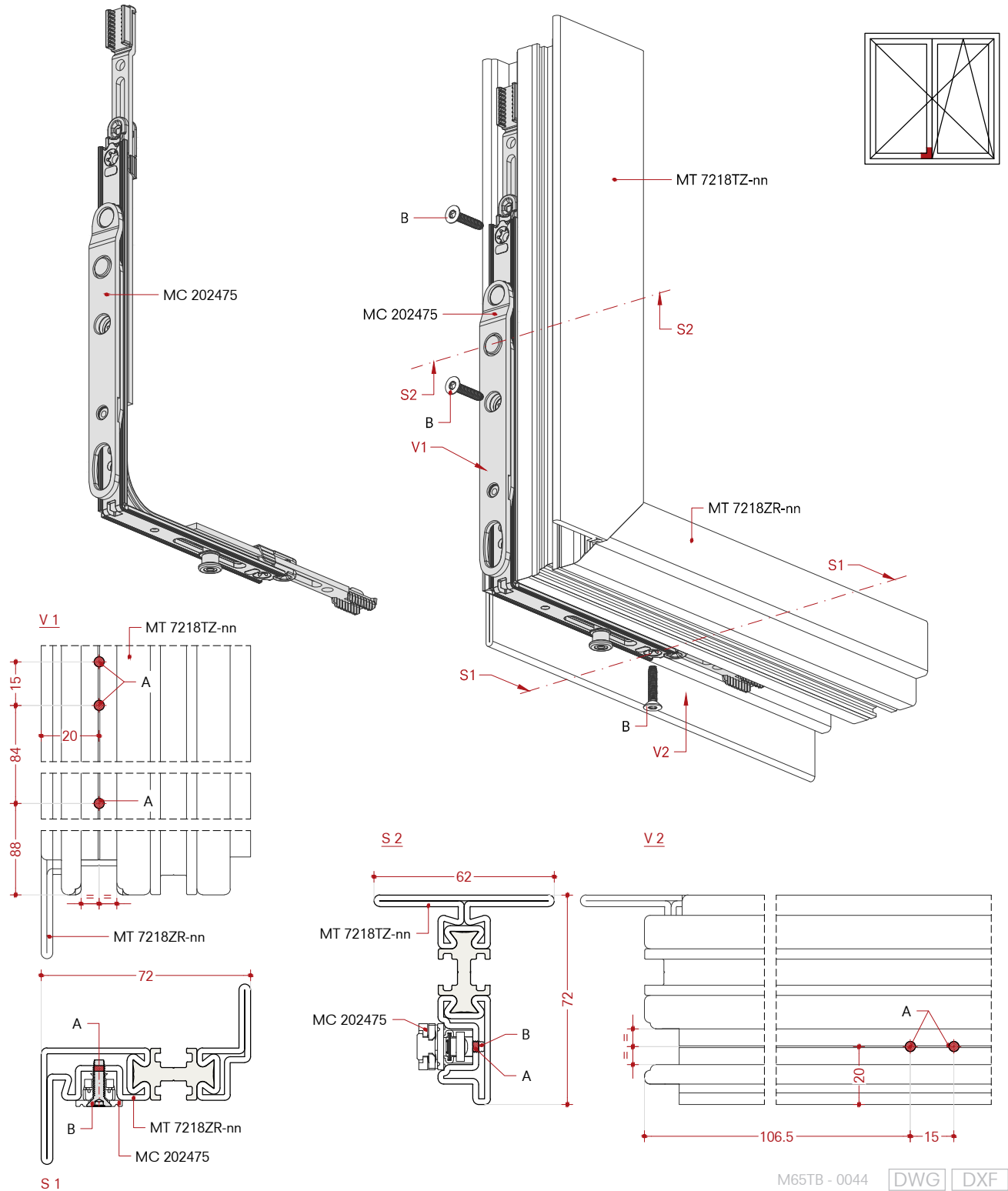
Montré ouverture droite  
(ouverture gauche inversé en miroir)

WL = Largeur ouvrant

**Corner element for French casement drive gear variable with reverse-action lever and 1 locking cam**  
MC 202475

**Eckumlenkung für Stulpflügelgetriebe variabel mit Spreizhebel und 1 Verriegelungszapfen**  
MC 202475

**Renvoi d'angle pour crémone de semi-fixe avec variable avec levier d'action inverse et 1 galet de verrouillage**  
MC 202475



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

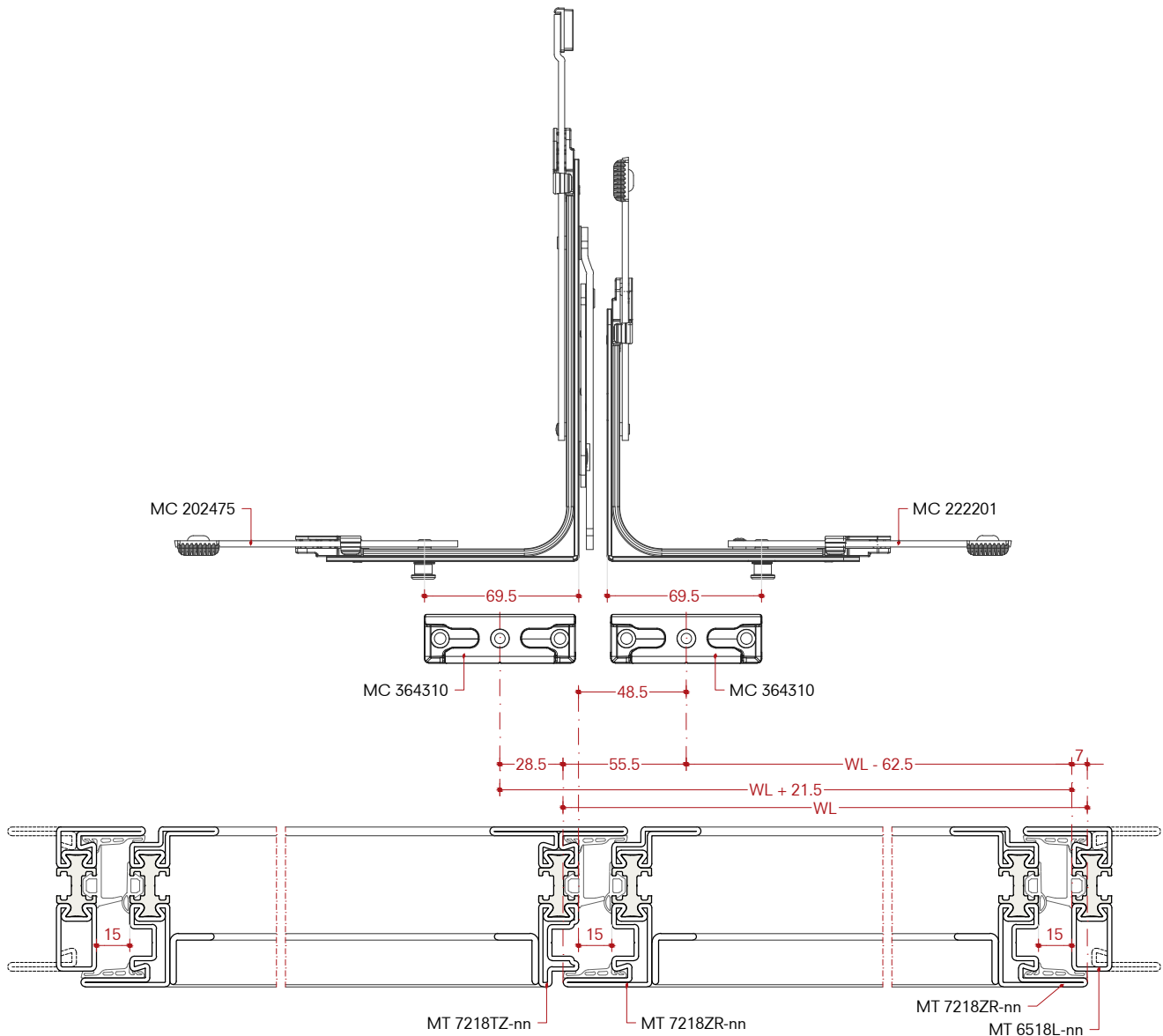
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

**Positioning striker plate**

**Positionierung Schließteils**

**Positionnement de la gâche**



Drawing represents right opening  
(left opening is the mirror image)

WL = Width Leaf

Dargestellt DIN rechts - DIN links spiegelbildlich  
WL = Länge Flügel

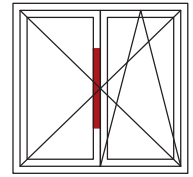
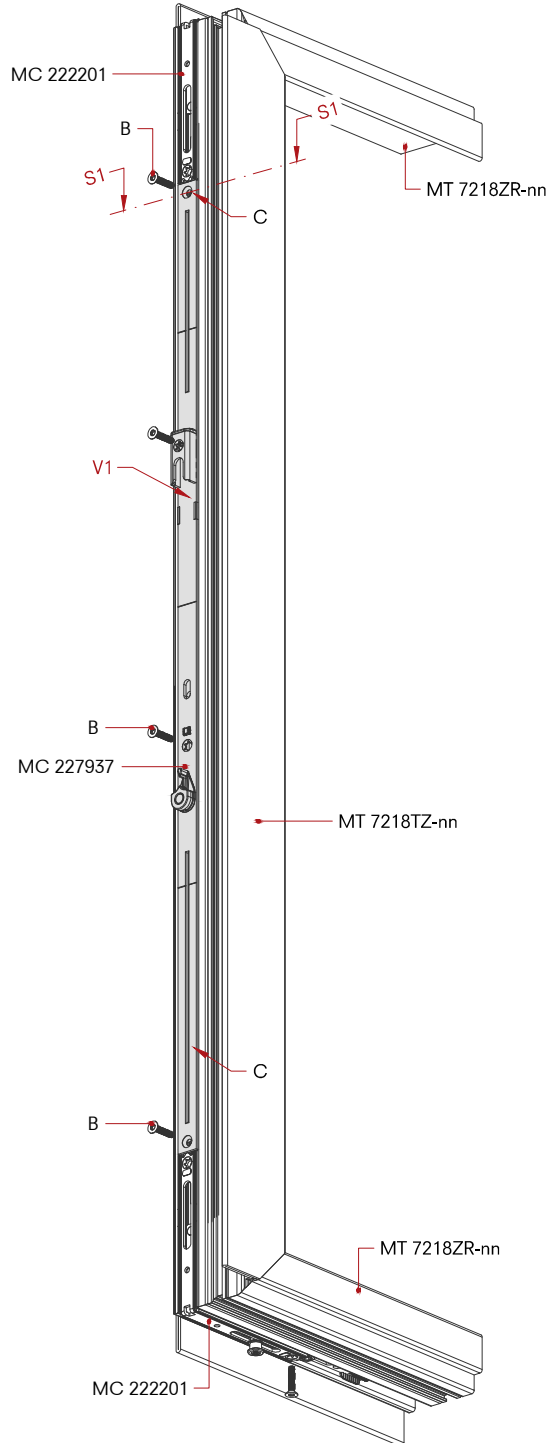
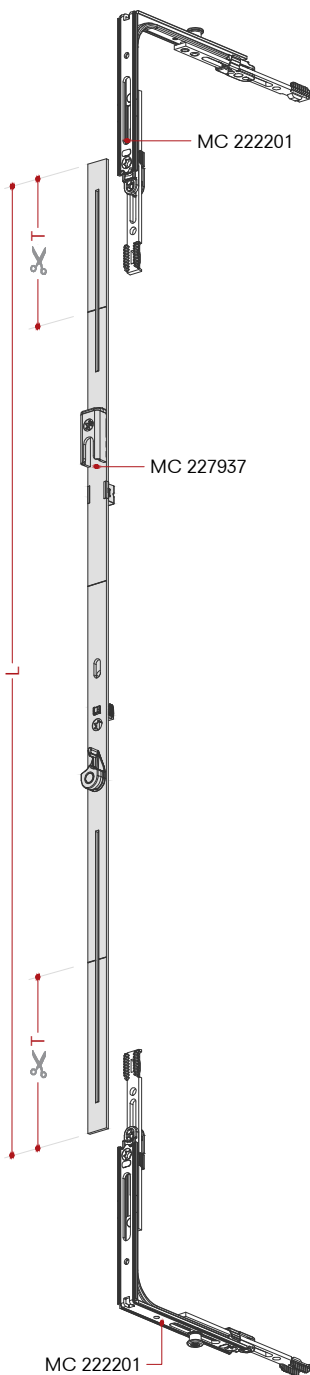
Montré ouverture droite  
(ouverture gauche inversé en miroir)

WL = Largeur ouvrant

**French casement drive gear variable**  
MC 227937  
MC 202471

**Stulpflügelgetriebe variable**  
MC 227937  
MC 202471

**Crémone de semi fixe variable**  
MC 227937  
MC 202471



Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- C) For additional fastening, see note page  
"punch pattern for cut-to-length faceplates"
- L) Length drive gear
- T) Maximum cut drive gear

X = Position screw connection drive gear

Dargestellt DIN rechts - DIN links spiegelbildlich

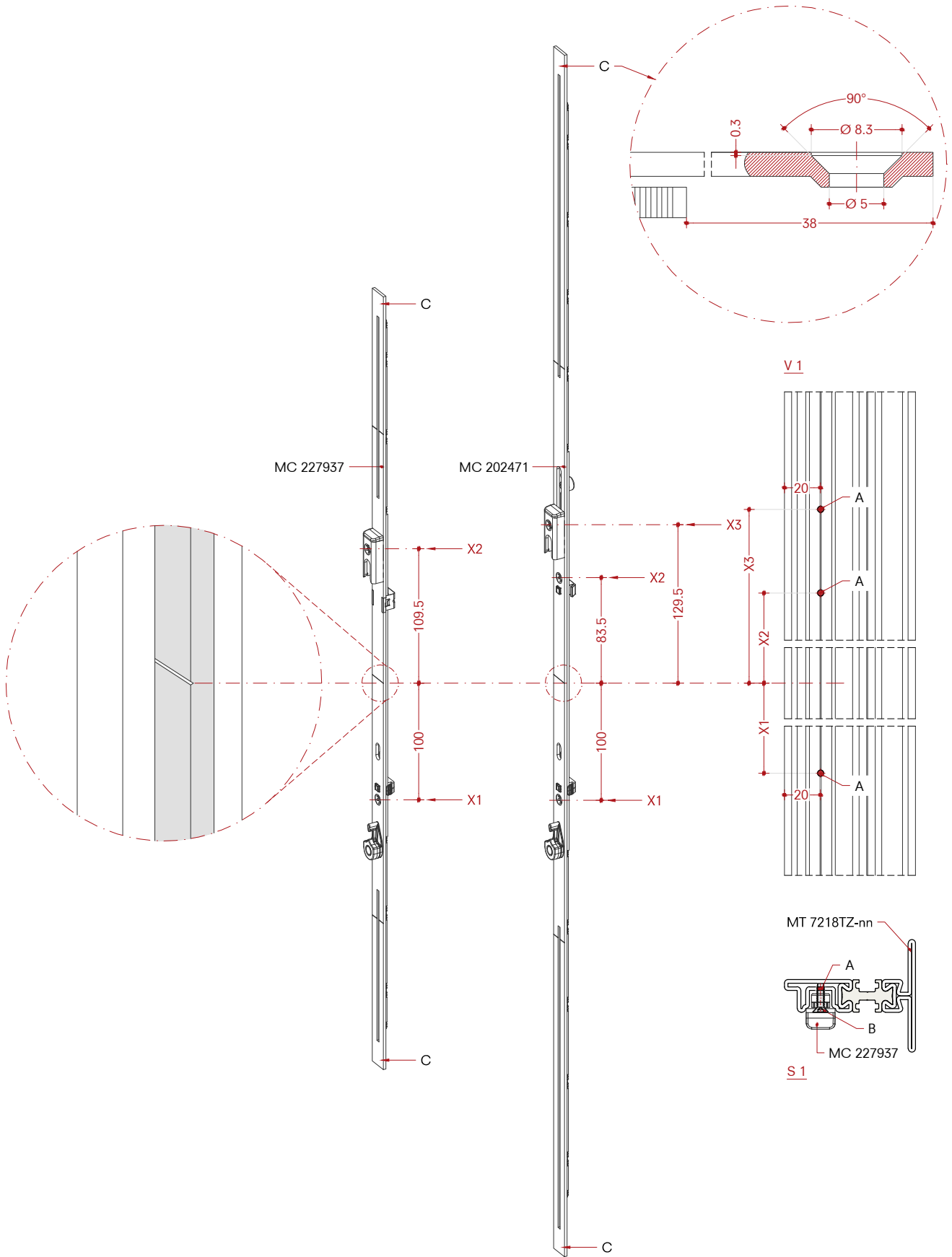
- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- C) Zusätzliche Befestigung siehe Hinweisseite  
"Stanzbild bei ablängbaren Stulpen"
- L) Länge Getriebe
- T) Maximale Kürzung Getriebe

X = Lage Verschraubung Getriebe

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- C) Pour une fixation supplémentaire, voir la note  
page "schéma de découpe pour les têtes  
coupées à longueur"
- L) Longueur du crémon
- T) Réduction maximale du crémon

X = Position du raccord à vis pour crémon



|           | L   | T     | X1   | X2    | X3    |
|-----------|-----|-------|------|-------|-------|
| MC 227937 | 640 | 120.5 | -100 | 109.5 | -     |
| MC 202471 | 995 | 260   | -100 | 83.5  | 129.5 |

**Faceplate extensions for French  
casement drive gear  
for 1 locking cam**

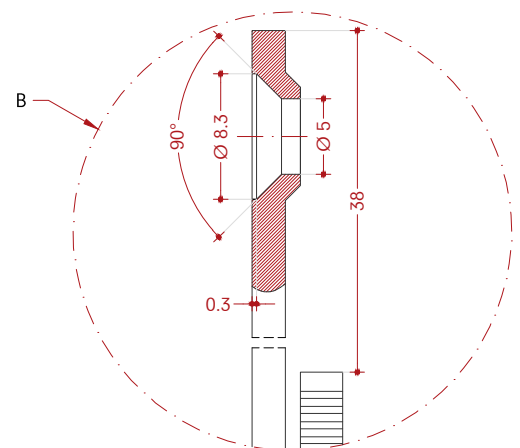
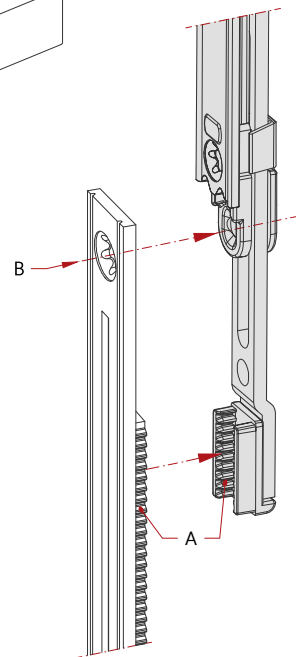
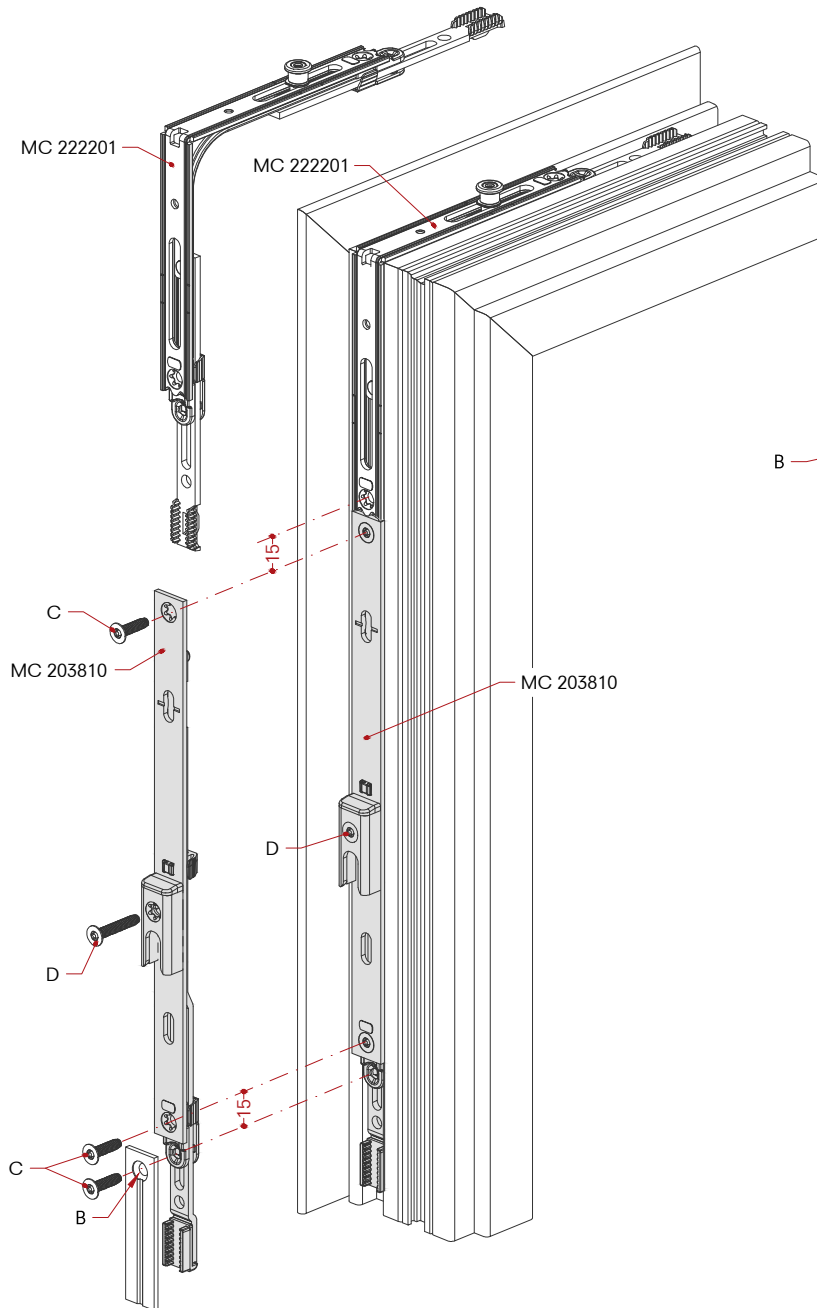
MC 203810  
MC 208333

**Stulpverlängerungen für  
Stulpflügelgetriebe  
für 1 Verriegelungszapfen**

MC 203810  
MC 208333

**Rallonge de têtère pour crémonne  
de semi-fixe  
pour 1 galet de verrouillage**

MC 203810  
MC 208333

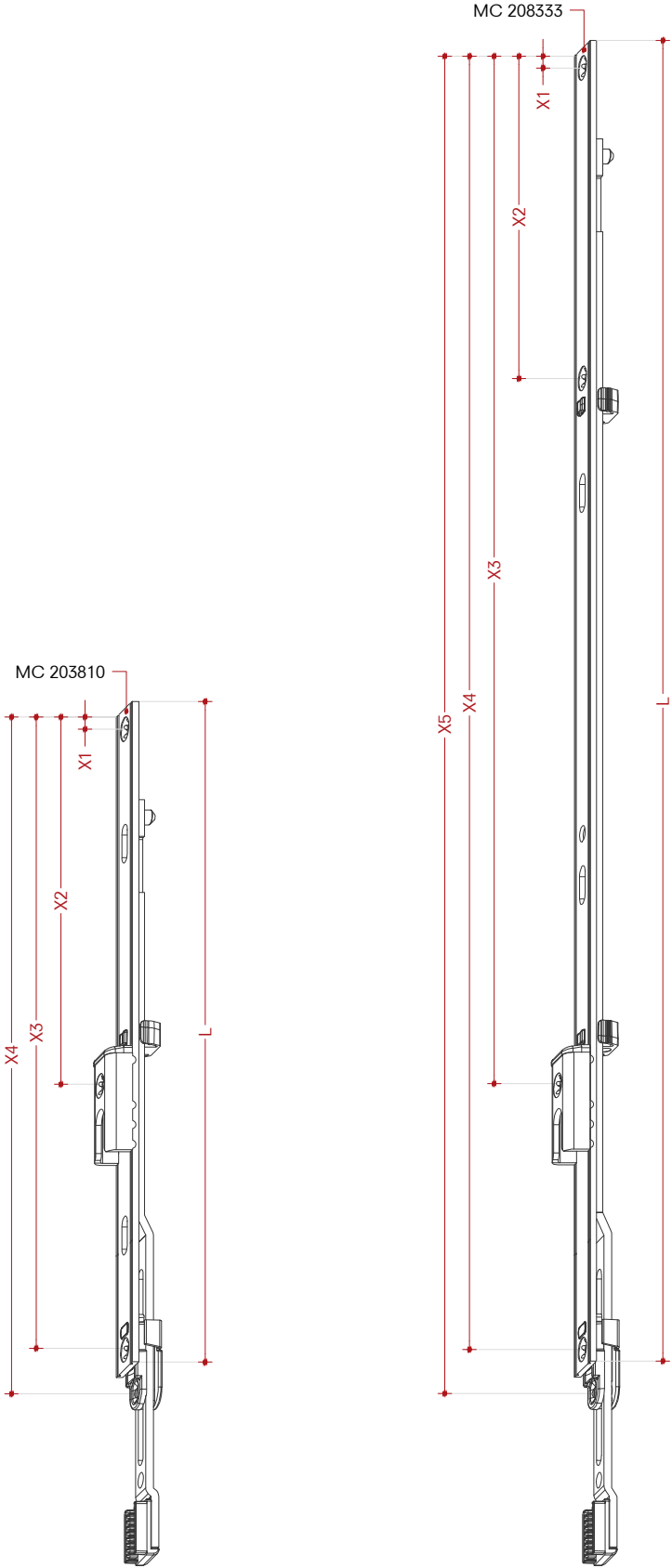


M65TB - 0049 DWG DXF

- A) Coupling with serrated carrier connection  
B) For additional fastening, see note page  
"punch pattern for cut-to-length faceplates"  
C) Countersunk screw M4x16  
D) Countersunk screw M4x25  
L) Length faceplate extension  
X) Position screw connection faceplate extension

- A) Kopplung mit einer Zahnkastenverbindung  
B) Zusätzliche Befestigung siehe Hinweisseite  
"Stanzbild bei ablängbaren Stulpen"  
C) Senkkopfschraube M4x16  
D) Senkkopfschraube M4x25  
L) Länge Stulpverlängerung  
X) Lage Verschraubung Stulpverlängerung

- A) Assembleur avec liaison par coffre cranté  
B) Pour une fixation supplémentaire, voir la note  
page "schéma de découpe pour les têtères  
coupées à longueur"  
C) Vis à tête fraisée M4x16  
D) Vis à tête fraisée M4x25  
L) Longueur du prolongateur  
X) Position du raccord à vis pour prolongateur



|           | L   | X1 | X2    | X3  | X4  | X5  |
|-----------|-----|----|-------|-----|-----|-----|
| MC 203810 | 235 | 7  | 134   | 228 | 243 | -   |
| MC 208333 | 470 | 7  | 117.5 | 370 | 463 | 478 |

**Pivot post with 7 mm supporting pins, 3 mm long**

MC 52485

Leaf weight  $\leq 120$  kg

### Installation on frame

**Ecklager mit 7 mm Tragezapfen  
3 mm kurz**

MC 52485

Flügelgewicht  $\leq 120$  kg

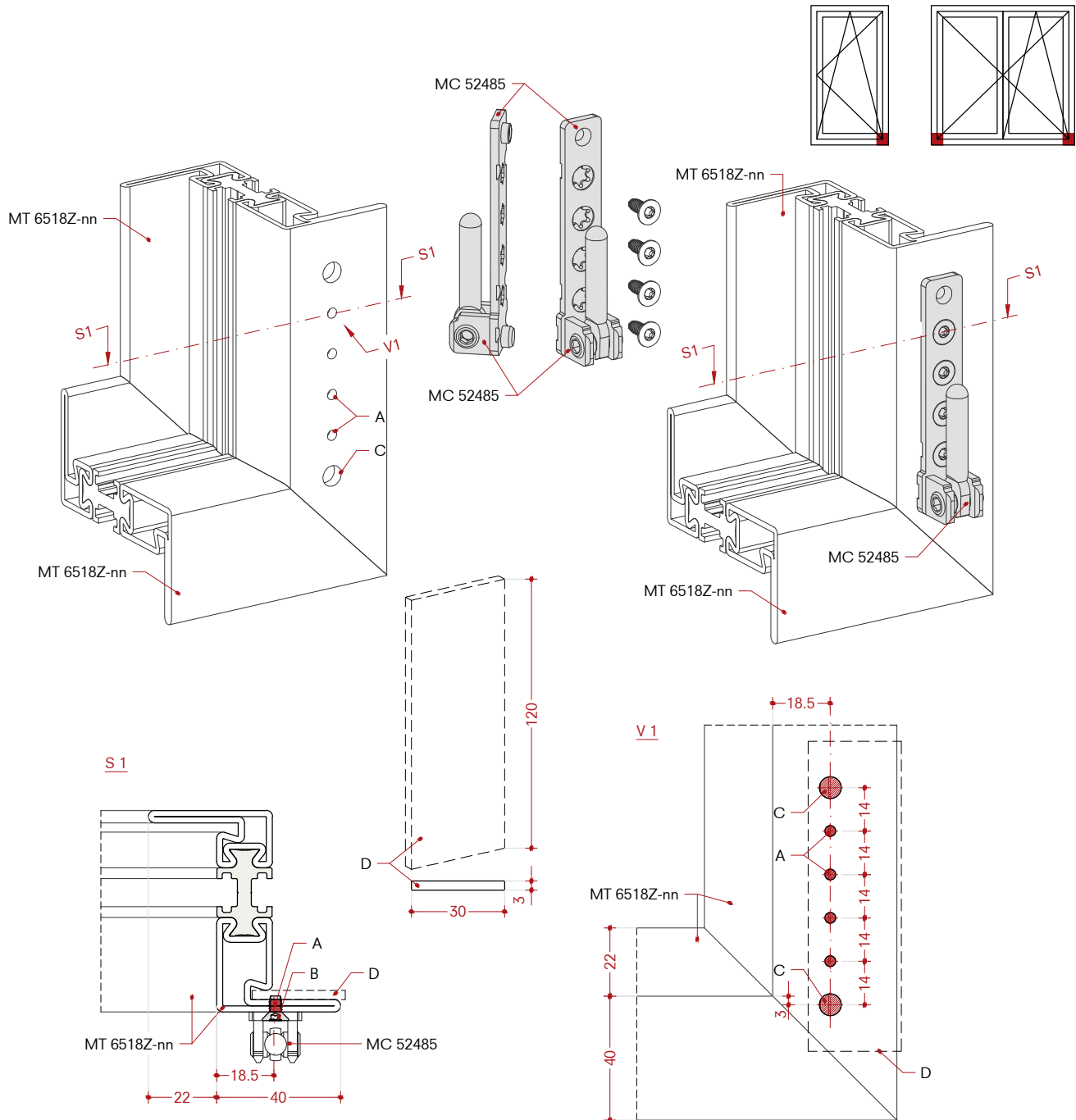
### Einbau im Rahmen

**Palier d'angle avec goujons  
de 7 mm, courts 3 mm**

MC 52485

Poids du vantail  $\leq 120$  kg

## Montage sur le cadre



M65TB - 0050

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.2 mm  
B) Countersunk screw M4x8  
C) Hole Ø7 mm  
D) Use an aluminium base (30x100x3 mm) for drilling

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.2 mm  
B) Senkkopfschraube M4x8  
C) Bohrdurchmesser Ø7 mm  
D) Zum Bohren Aluminiumunterlage  
(30x100x3 mm ) verwenden

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.2 mm  
B) Vis à tête fraisée M4x8  
C) Trou Ø7 mm  
D) Utilisez une base en aluminium (30x100x3 mm) pour les trous

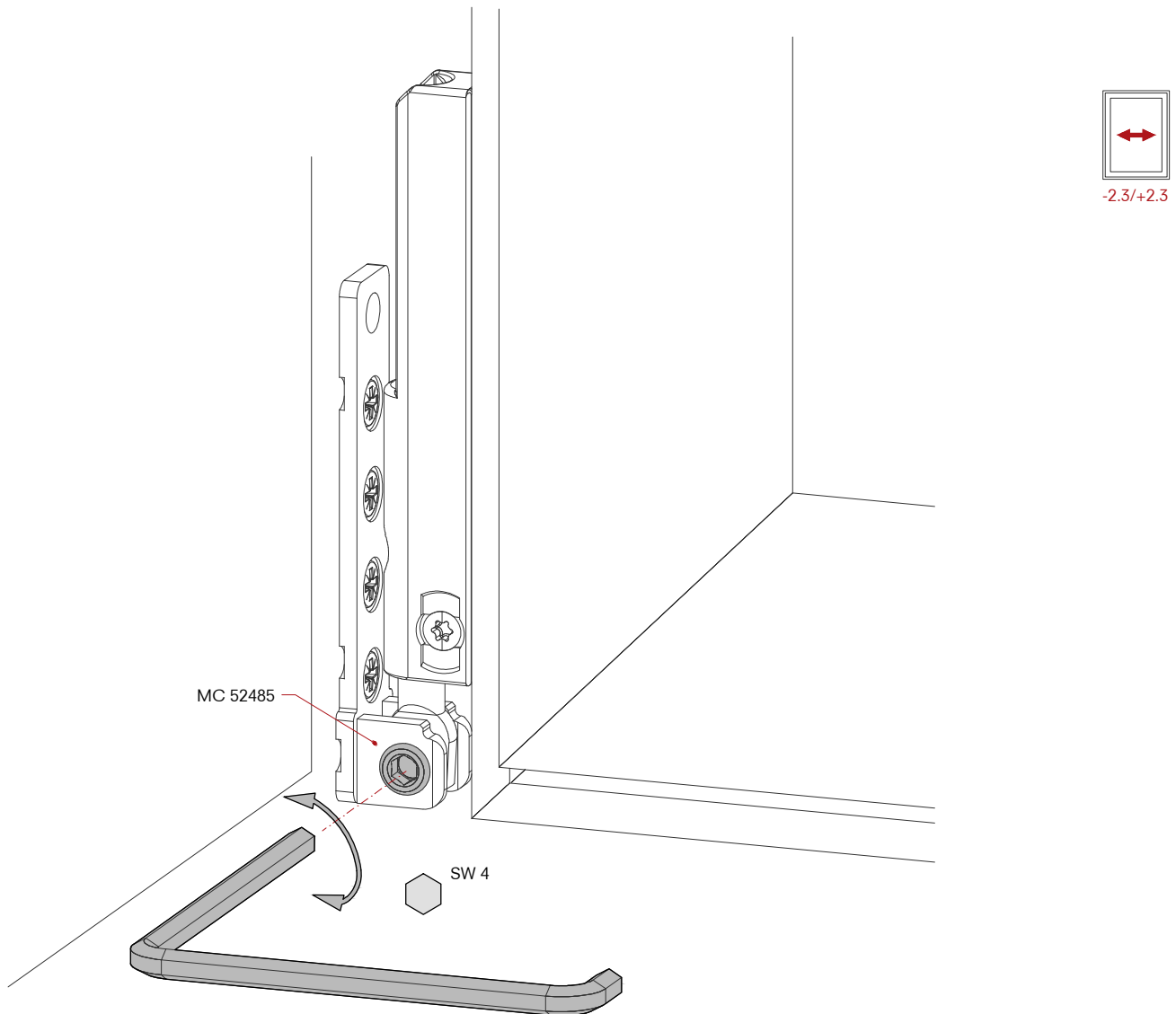
L = Ouverture gauche  
R = Ouverture droite



## Side adjustment

## Seiteneinstellung

## Réglage latéral



### Note:

- Screw the pivot post only after mounting the striker plates, otherwise the jigs for the frame can no longer be attached!
- The maximum sash weight must not be exceeded! Observe the application diagram!

⚙ Adjustment range  $\pm 2.3$  mm with SW 4

### Hinweis:

- Das Ecklager erst nach Montage der Schließteile verschrauben, ansonsten können die Lehren nicht mehr angelegt werden!
- Das maximale Flügelgewicht darf nicht überschritten werden! Anwendungsdiagramm beachten!

⚙ Einstellbereich  $\pm 2.3$  mm mit SW 4

### Remarque:

- Ne visser le palier d'angle qu'après avoir monté les gâches, sinon les gabarits du dormant ne peuvent plus être fixés!
- Le poids maximal de l'ouvrant ne doit pas être!

⚙ Plage de réglage  $\pm 2.3$  mm avec SW 4

### Corner support without rebate-leg screw fixing

MC 54892 R

MC 54893 L

Leaf weight  $\leq 120$  kg

### Installation on leaf

## Falzecklagerband ohne Überschlagverschraubung

MC 54892 R

MC 54893 L

Flügelgewicht  $\leq 120$  kg

### Einbau im Flügel

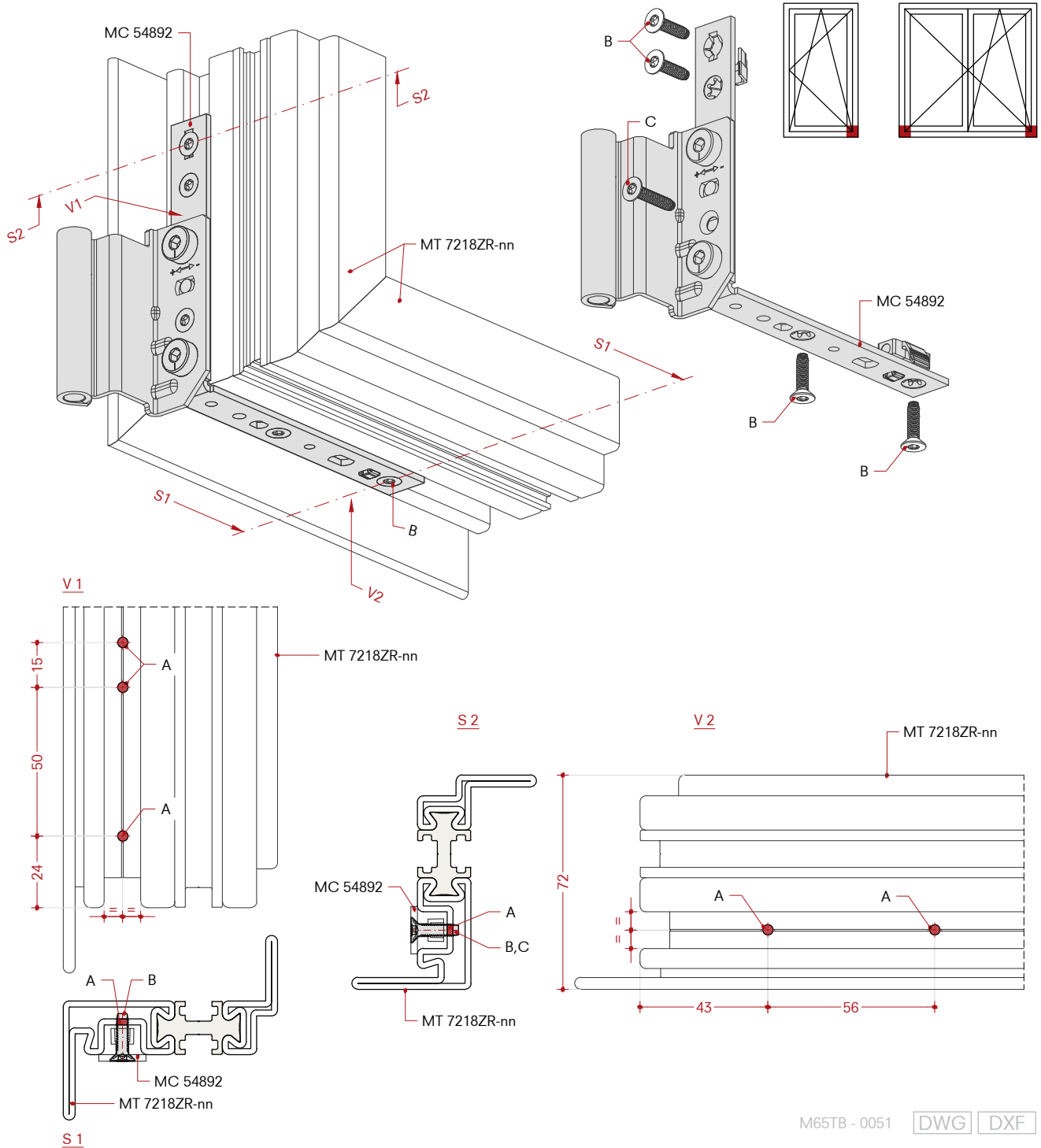
### Fiche d'angle en feuillure

MC 54892 R

MC 54893 L

Poids du vantail  $\leq 120$  kg

### Montage dans le vantail



Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16  
C) Countersunk screw M4x20

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16  
C) Senkkopfschraube M4x20

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

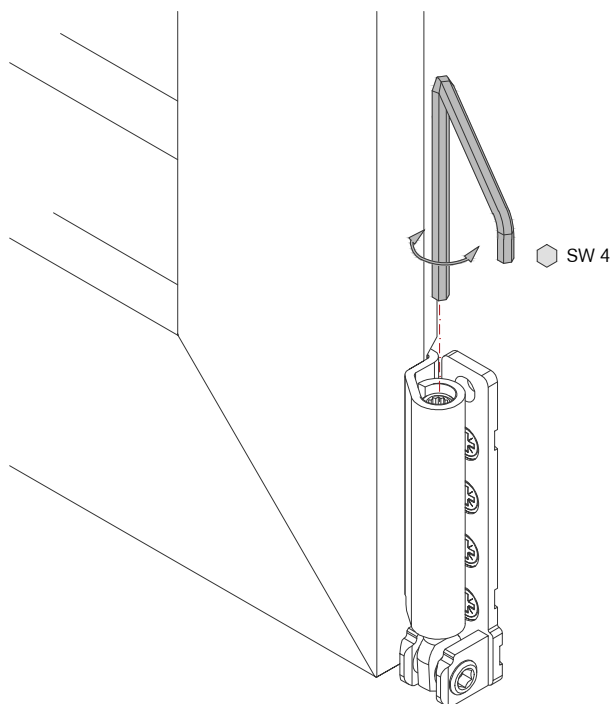
A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16  
C) Vis à tête fraisée M4x20

L = Ouverture gauche  
R = Ouverture droite

## Height adjustment

## Höheneinstellung

## Réglage de la hauteur



⬡ Adjustment range  $\pm 2$  mm with SW 4

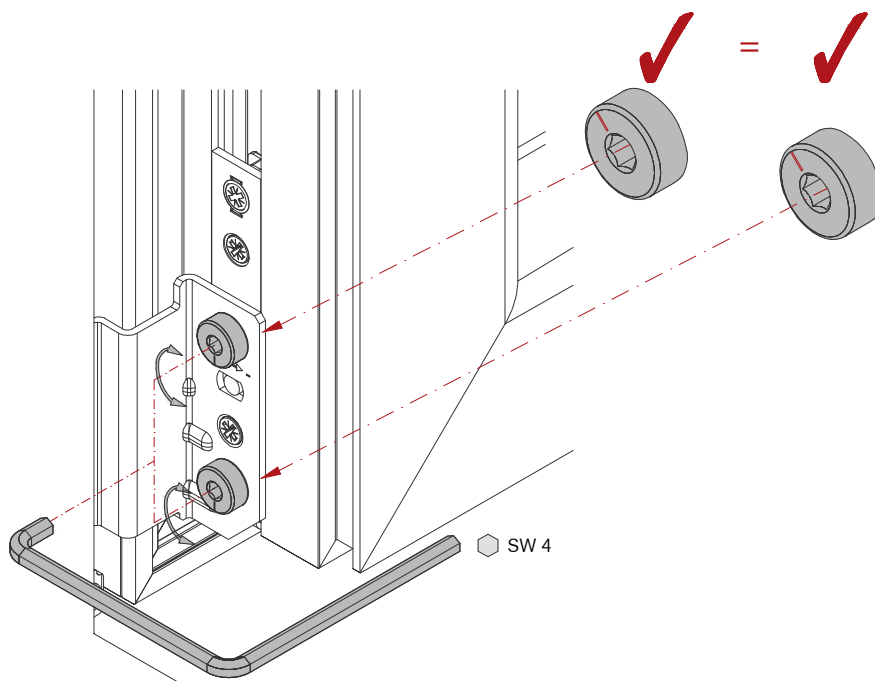
⬡ Einstellbereich  $\pm 2$  mm mit SW 4

⬡ Plage de réglage  $\pm 2$  mm avec SW 4

## Pressure adjustment

## Anpressdruck Einstellung

## Réglage de la pression de contact



⬡ Adjustment range  $\pm 1$  mm with SW 4

⬡ Einstellbereich  $\pm 1$  mm mit SW 4

⬡ Plage de réglage  $\pm 1$  mm avec SW 4

L = Left opening  
R = Right opening

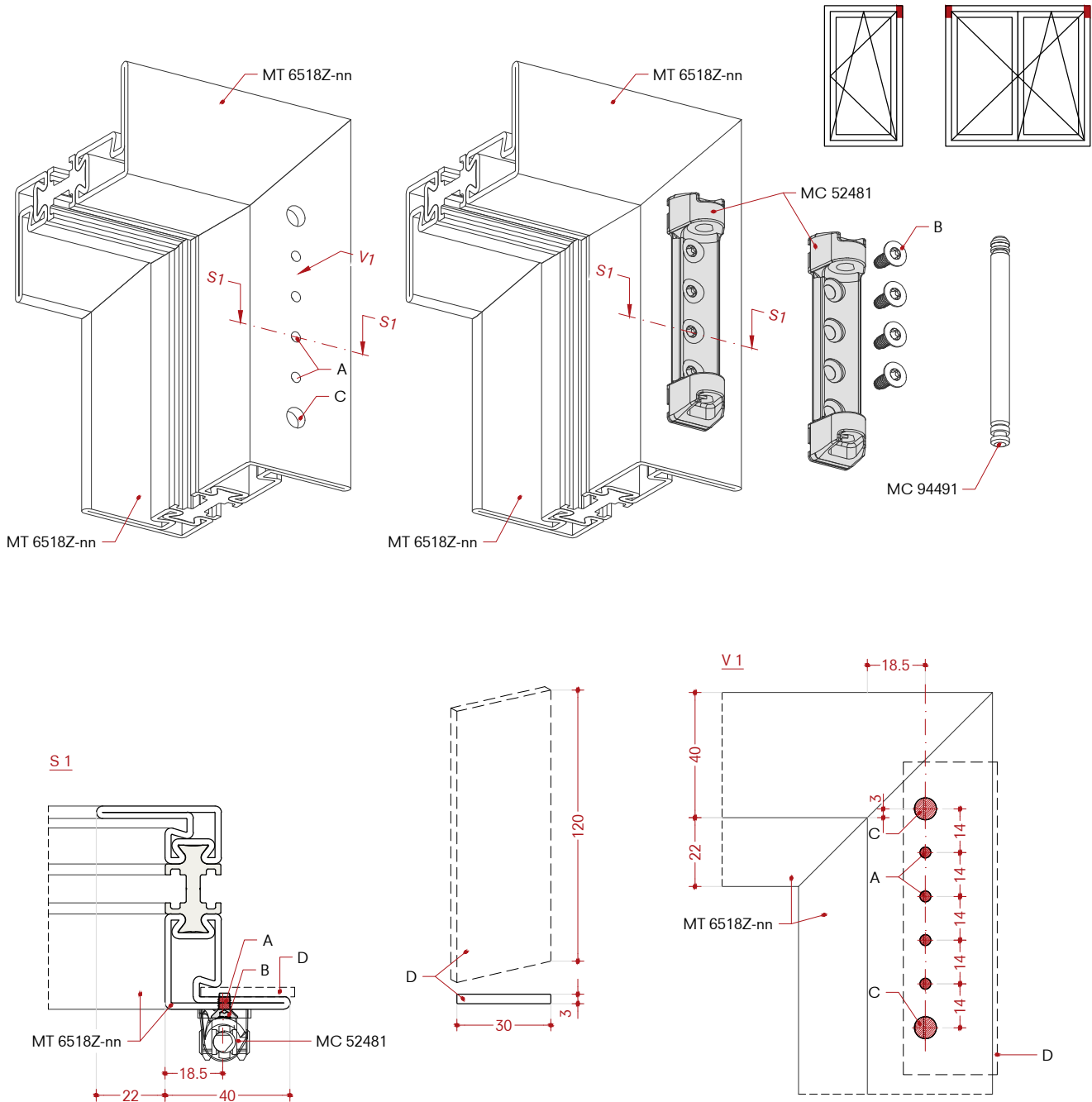
L = DIN links  
R = DIN rechts

L = Ouverture gauche  
R = Ouverture droite

**Scissor stay hinge  
with 7 mm supporting pin  
MC 52481  
and scissor stay hinge pin  
MC 94491  
Installation on frame**

**Scherenlager  
mit 7 mm Tragezapfen  
MC 52481  
und Scherenlagerstift  
MC 94491  
Einbau im Rahmen**

**Palier de compas  
avec goujons de 7 mm  
MC 52481  
et Axe  
MC 94491  
Montage sur le cadre**



M65TB - 0052 DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.2 mm  
B) Countersunk screw M4x8  
C) Hole Ø7 mm  
D) Use an aluminium base (30x100x3 mm) for drilling

L = Left opening  
R = Right opening

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.2 mm  
B) Senkkopfschraube M4x8  
C) Bohrdurchmesser Ø7 mm  
D) Zum Bohren Aluminiumunterlage  
(30x100x3 mm ) verwenden

L = DIN links  
R = DIN rechts

Montré ouverture droite  
(ouverture gauche inversé en miroir)

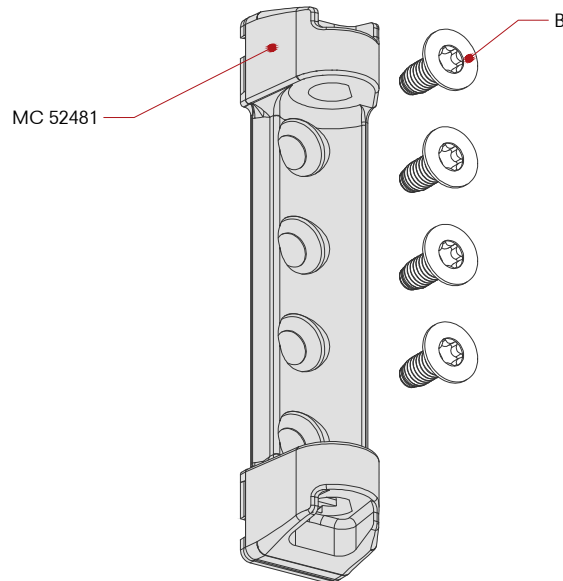
- A) Trou Ø3.2 mm  
B) Vis à tête fraisée M4x8  
C) Trou Ø7 mm  
D) Utilisez une base en aluminium (30x100x3 mm) pour les trous

L = Ouverture gauche  
R = Ouverture droite

### Installation scissor stay hinge

### Einbau Scherenlager

### Pose de le palier de compas



#### Note:

- Screw the scissor stay hinge only after mounting the striker plates, otherwise the jigs for the frame can no longer be attached!
- Insert the scissor stay hinge with the pins in the holes and screw the hinge with four screws (B).

#### Hinweis:

- Das Scherenlager erst nach Montage der Schließteile verschrauben, ansonsten können die Lehren nicht mehr angelegt werden!
- Das Scherenlager mit den Zapfen in die Bohrungen einsetzen und mit vier Schrauben (B) festschrauben.

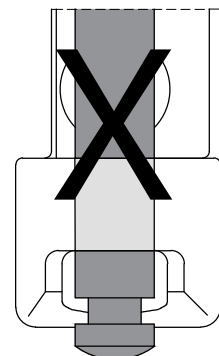
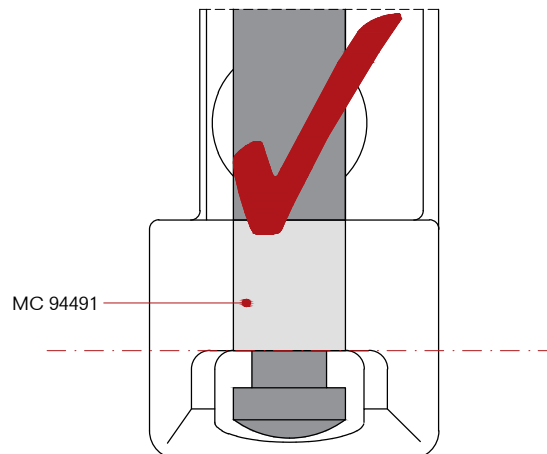
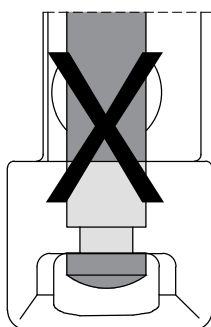
#### Remarque:

- Ne visser le palier de compas qu'après le montage des gâches, sinon les gabarits ne peuvent plus être posés !
- Insérer le palier de compas avec les tourillons dans les trous et le visser avec quatre vis (B).

### Installation scissor stay hinge pin

### Einbau Scherenlagerstift

### Pose de l'axe



#### Note:

- Failure to comply with these instructions may result in the sash falling out of the frame!

#### Hinweis:

- Bei Nichtbeachtung ist ein Herausfallen des Fensterflügels möglich!

#### Remarque:

- En cas d'inobservation une chute d'ouvrant est possible!

**Scissor stay mounted**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

**with scissor stay support**

MC 52486

**Winkelbandschere montiert**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

**mit Bandwinkel**

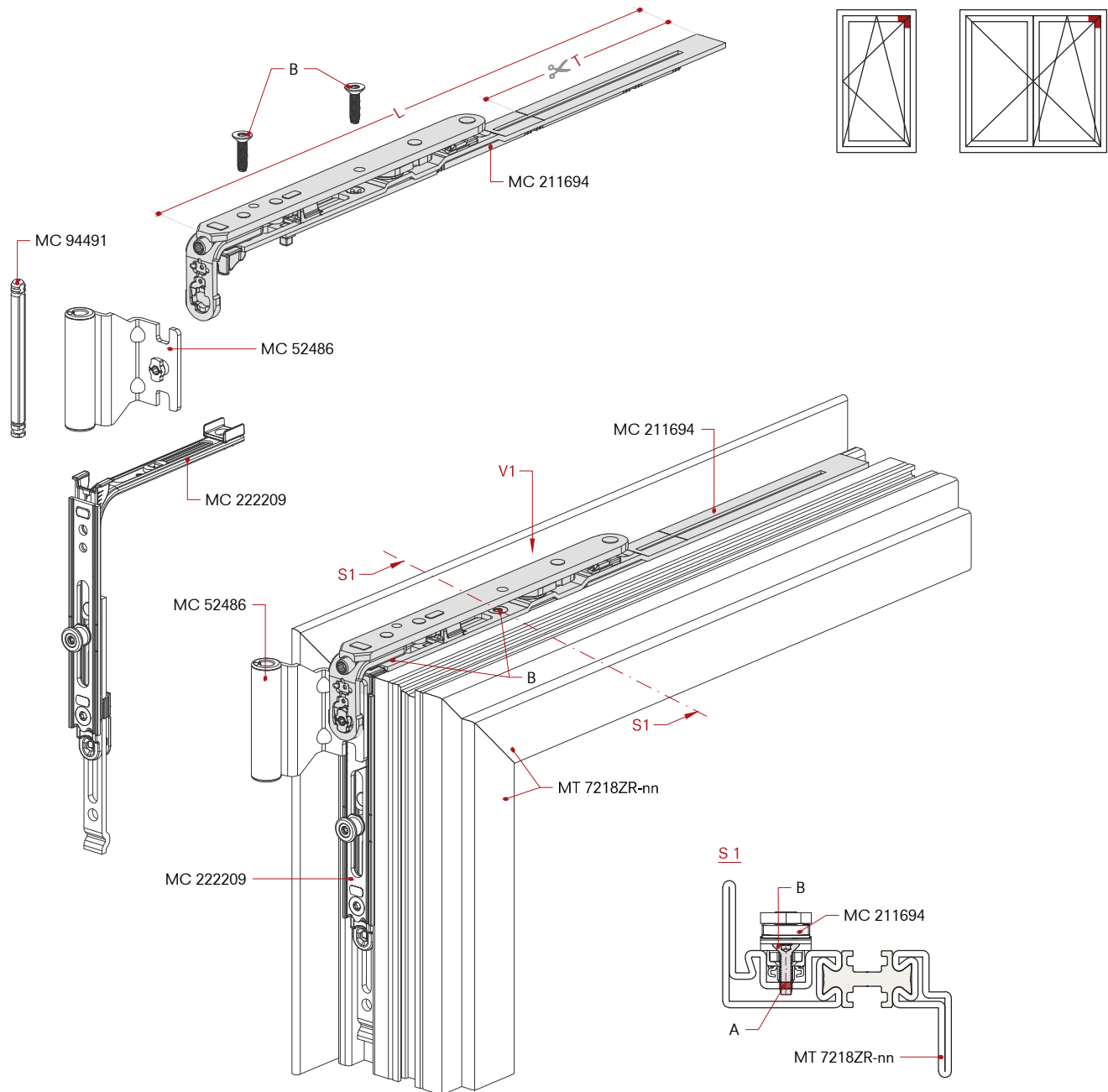
MC 52486

**Compas prémonté**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

**avec fiche de compas**

MC 52486



M65TB - 0053

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

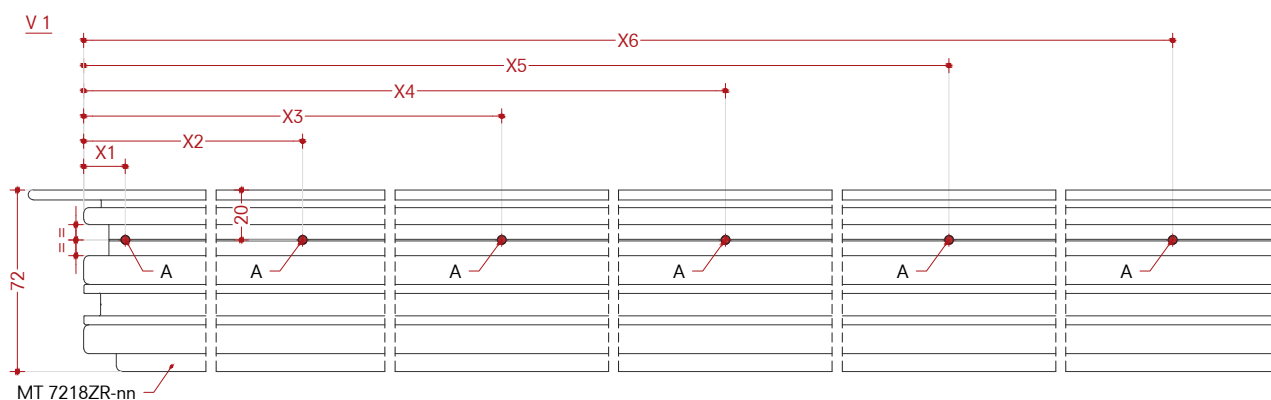
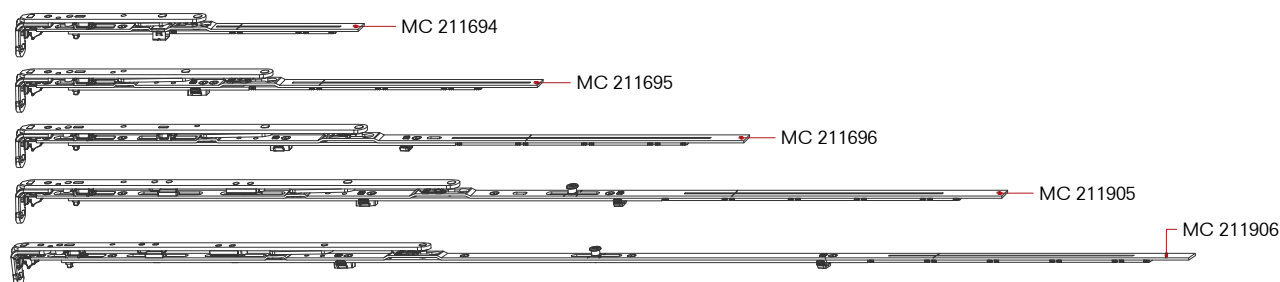
- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- L) Length scissor stay
- T) Maximum cut scissor stay
- X) Position screw connection scissor stay
- Z) Position locking cam

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- L) Länge Scherenstulpe
- T) Maximale Kürzung Scherenstulpe
- X) Lage Verschraubung Scherenstulpe
- Z) Lage Verriegelungszapfen

Montré ouverture droite  
(ouverture gauche inversé en miroir)

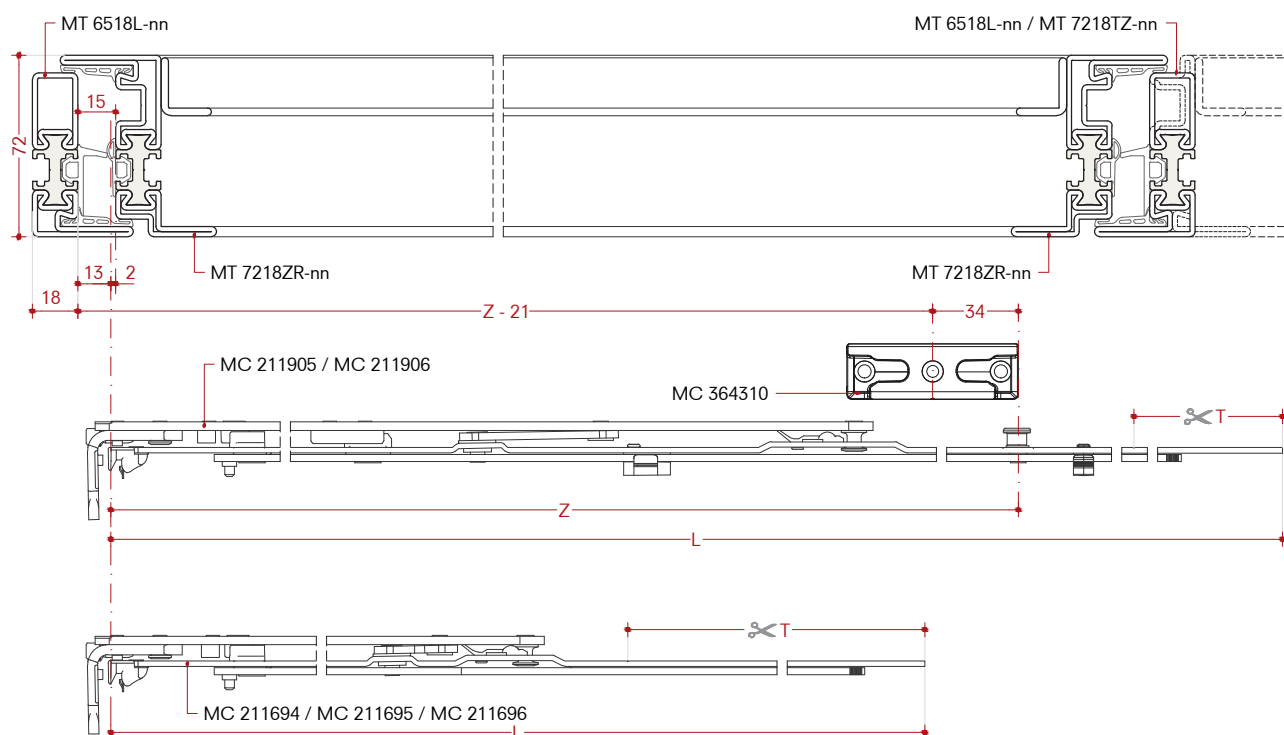
- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- L) Longueur du têtère de compas
- T) Réduction maximale du têtère de compas
- X) Position du raccord à vis pour têtère de compas
- Z) Position de galet de verrouillage



**Positioning striker plate**  
(only for MC 211905 / MC 211906)

**Positionierung Schließteils**  
(nur bei MC 211905 / MC 211906)

**Positionnement de la gâche**  
(que pour MC 211905 / MC 211906)



|           | L      | T   | X1   | X2   | X3  | X4  | X5  | X6  | Z   |
|-----------|--------|-----|------|------|-----|-----|-----|-----|-----|
| MC 211694 | 323    | 118 | 16.5 | 89.5 | -   | -   | -   | -   | -   |
| MC 211695 | 496.5  | 210 | 16.5 | 168  | 178 | -   | -   | -   | -   |
| MC 211696 | 696.5  | 210 | 16.5 | 89.5 | 248 | 375 | -   | -   | -   |
| MC 211905 | 946.5  | 260 | 16.5 | 89.5 | 331 | 450 | 562 | -   | 528 |
| MC 211906 | 1196.5 | 260 | 16.5 | 89.5 | 331 | 450 | 621 | 827 | 587 |

**Installation scissor stay mounted**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

**Einbau Winkelbandschere montiert**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

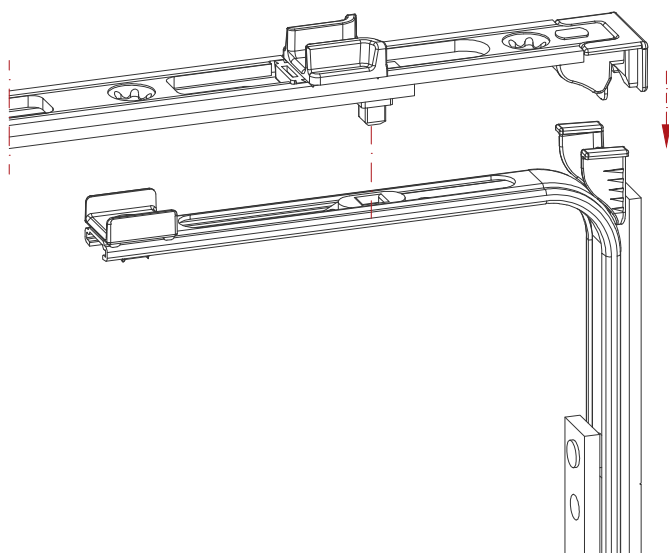
**Pose de le compas prémonté**

MC 211694 - MC 211695  
MC 211696 - MC 211905  
MC 211906

**Engage snap joint**

**Klipsverbindung einhängen**

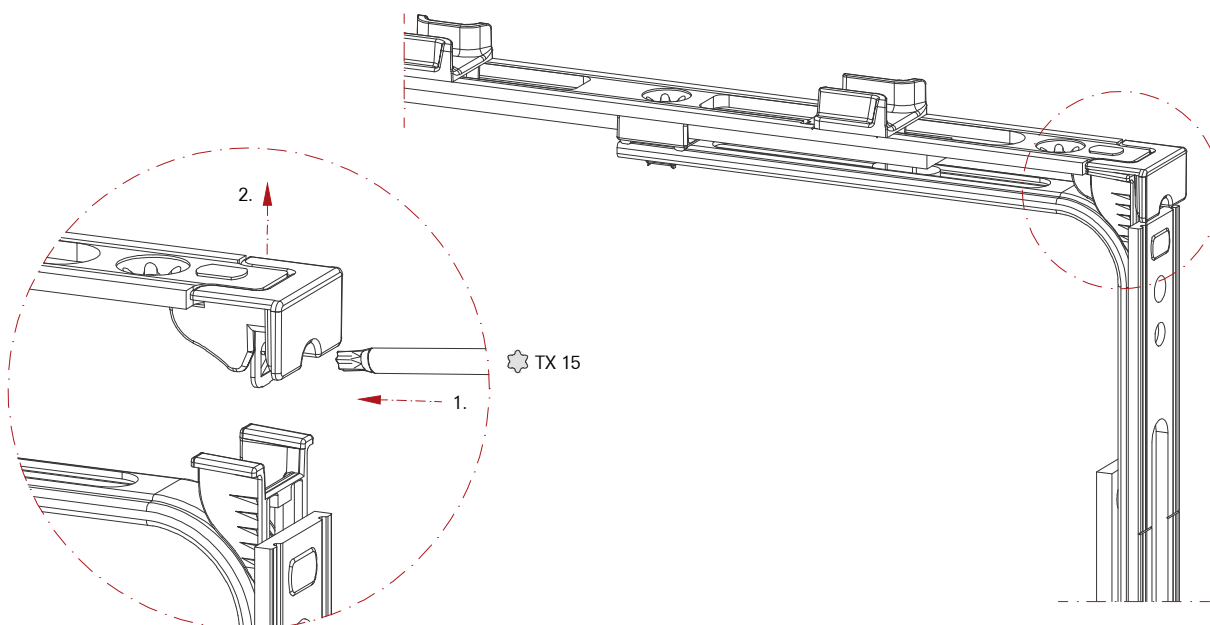
**Accrocher la liaison par clips**



**Disengage snap joint**

**Klipsverbindung aushängen**

**Décrocher la liaison par clips**



M65TB - 0054

DWG

DXF

✱ opening with TX 15

✱ Öffnen mit TX 15

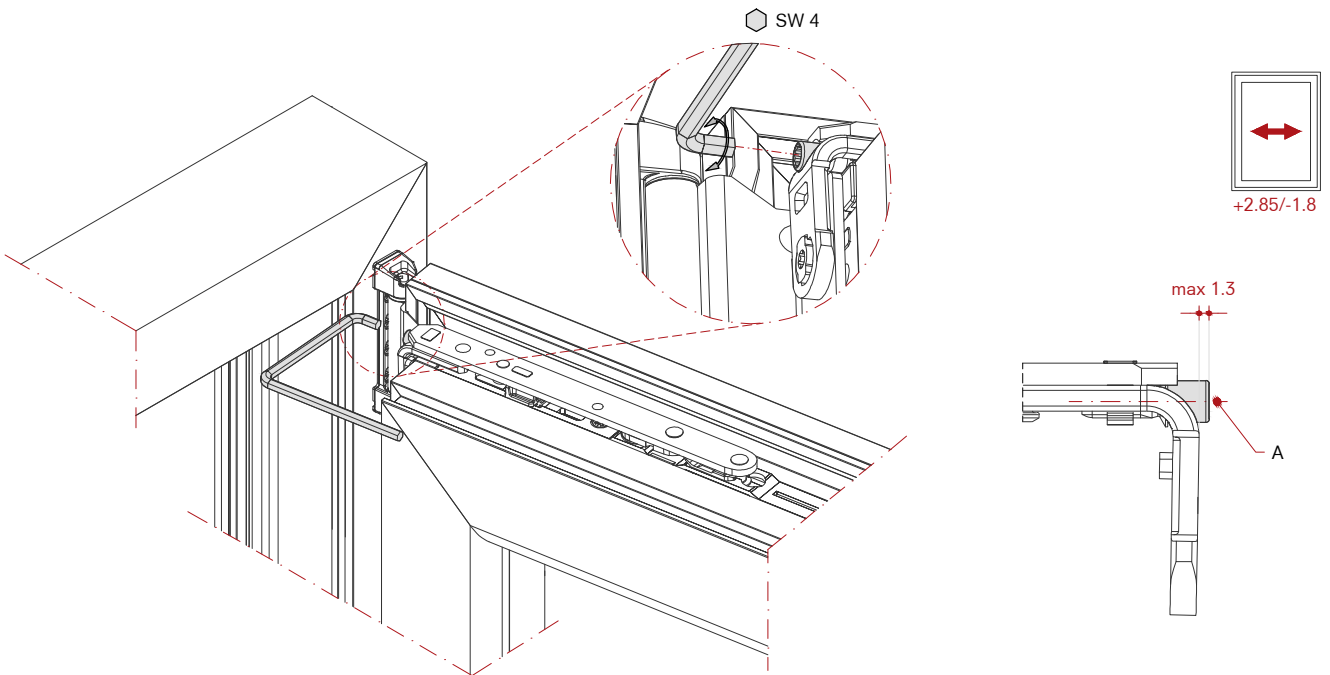
✱ Ouverture avec TX 15



## Lateral adjustment

## Seiteneinstellung

## Réglage latéral



A) When lowering the sash, make sure that the screw is not removed completely. The head of the screw must not protrude more than a maximum of 1 mm!

⬡ Adjustment range +2.85/-1.8 mm with SW 4

A) Beim Absenken des Flügels darauf achten, dass die Schraube nicht komplett herausgeschraubt wird. Der Schraubenkopf darf maximal 1 mm vorstehen!

⬡ Einstellbereich +2.85/-1.8 mm mit SW 4

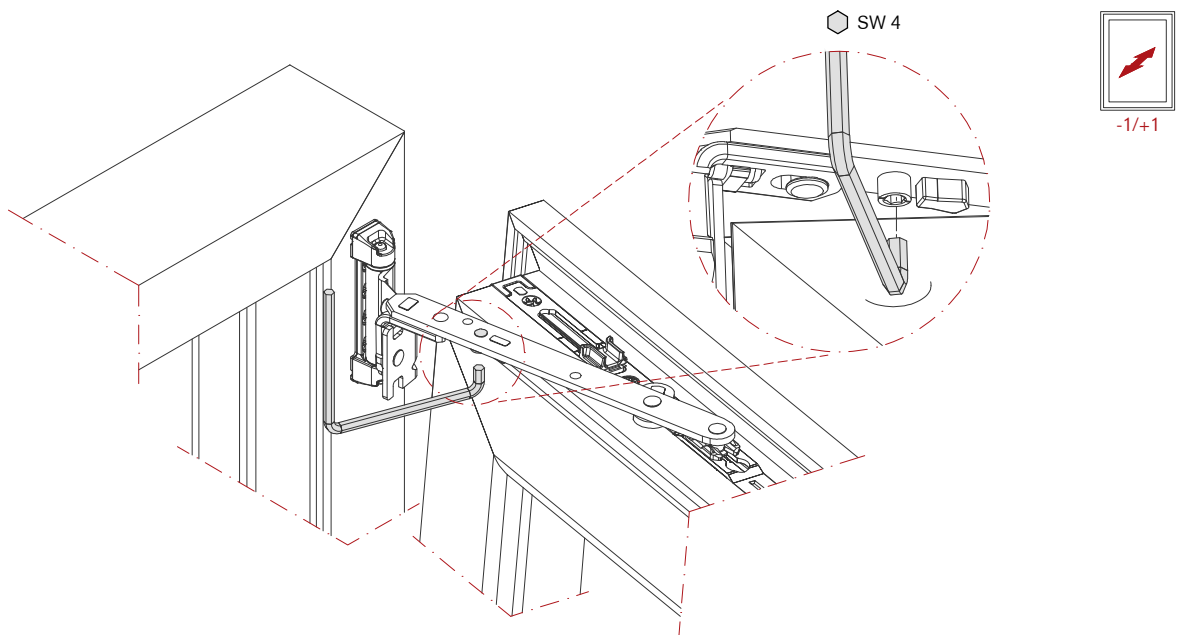
A) A l'abaissement de l'ouvrant faire attention au fait que la vis ne soit pas dévissée complètement. La tête de vis doit dépasser d'1 mm au maximum!

⬡ Plage de réglage +2.85/-1.8 mm avec SW 4

## Pressure adjustment

## Anpressdruck Einstellung

## Réglage de la pression de contact



⬡ Adjustment range  $\pm 1$  mm with SW 4

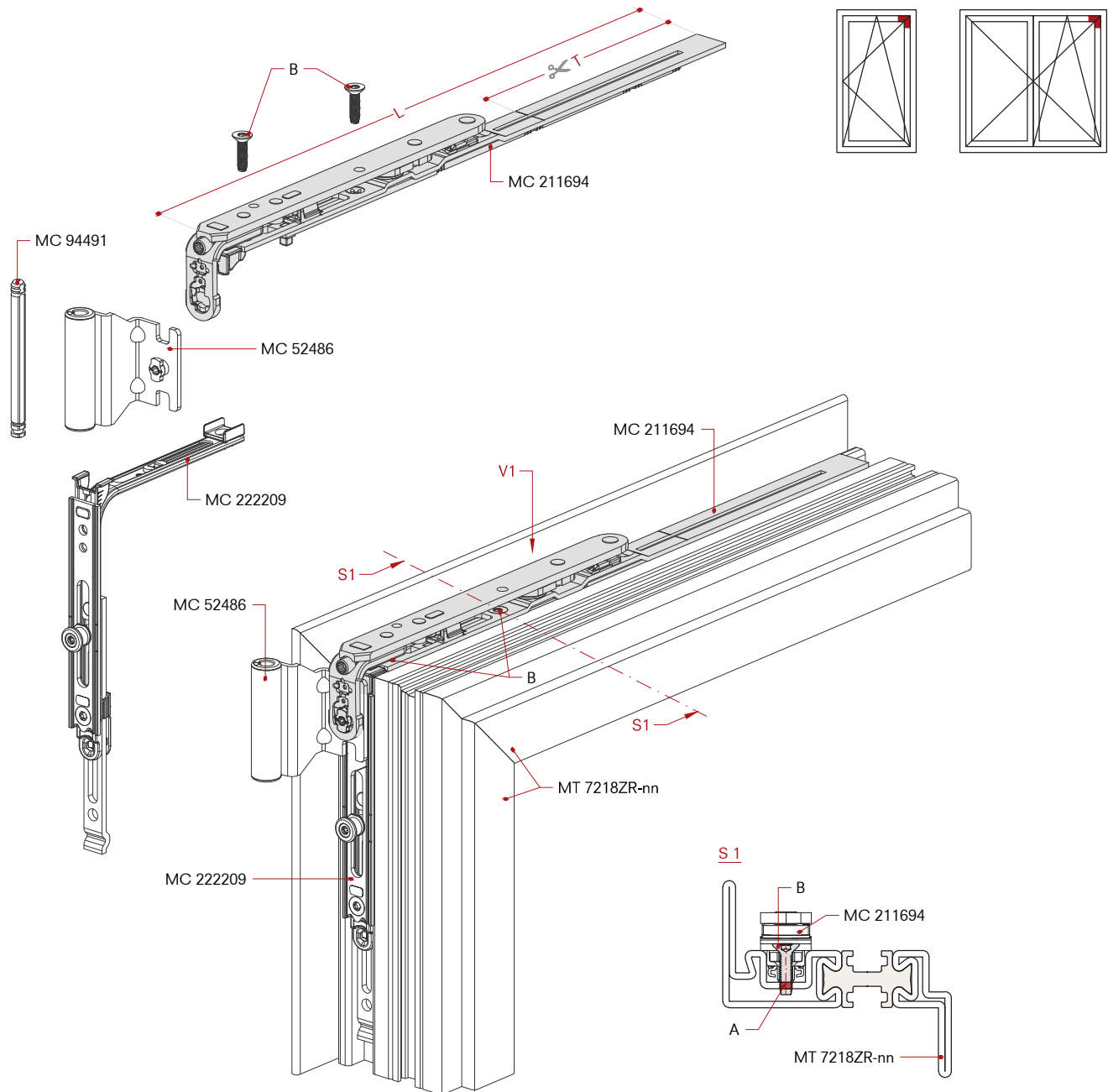
⬡ Einstellbereich  $\pm 1$  mm mit SW 4

⬡ Plage de réglage  $\pm 1$  mm avec SW 4

**Turn-only hinge on top**  
MC 52462  
**with scissor stay support**  
MC 52486

**Drehband oben**  
MC 52462  
**mit Bandwinkel**  
MC 52486

**Compas OF haut**  
MC 52462  
**avec fiche de compas**  
MC 52486



M65TB - 0055

DWG DXF

Drawing represents right opening  
(left opening is the mirror image)

A) Hole Ø3.3 mm  
B) Countersunk screw M4x16

Dargestellt DIN rechts - DIN links spiegelbildlich

A) Bohrdurchmesser Ø3.3 mm  
B) Senkkopfschraube M4x16

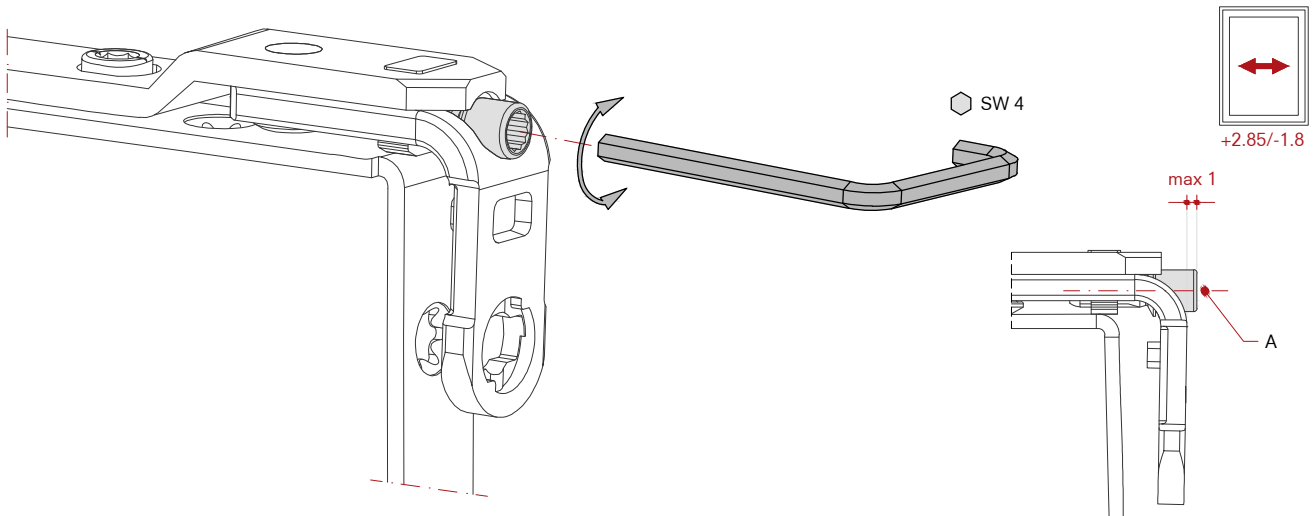
Montré ouverture droite  
(ouverture gauche inversé en miroir)

A) Trou Ø3.3 mm  
B) Vis à tête fraisée M4x16

## Lateral adjustment

## Seiteneinstellung

## Réglage latéral



A) When lowering the sash, make sure that the screw is not removed completely. The head of the screw must not protrude more than a maximum of 1 mm!

⬡ Adjustment range +2.85/-1.8 mm with SW 4

A) Beim Absenken des Flügels darauf achten, dass die Schraube nicht komplett herausgeschraubt wird. Der Schraubenkopf darf maximal 1 mm vorstehen!

⬡ Einstellbereich +2.85/-1.8 mm mit SW 4

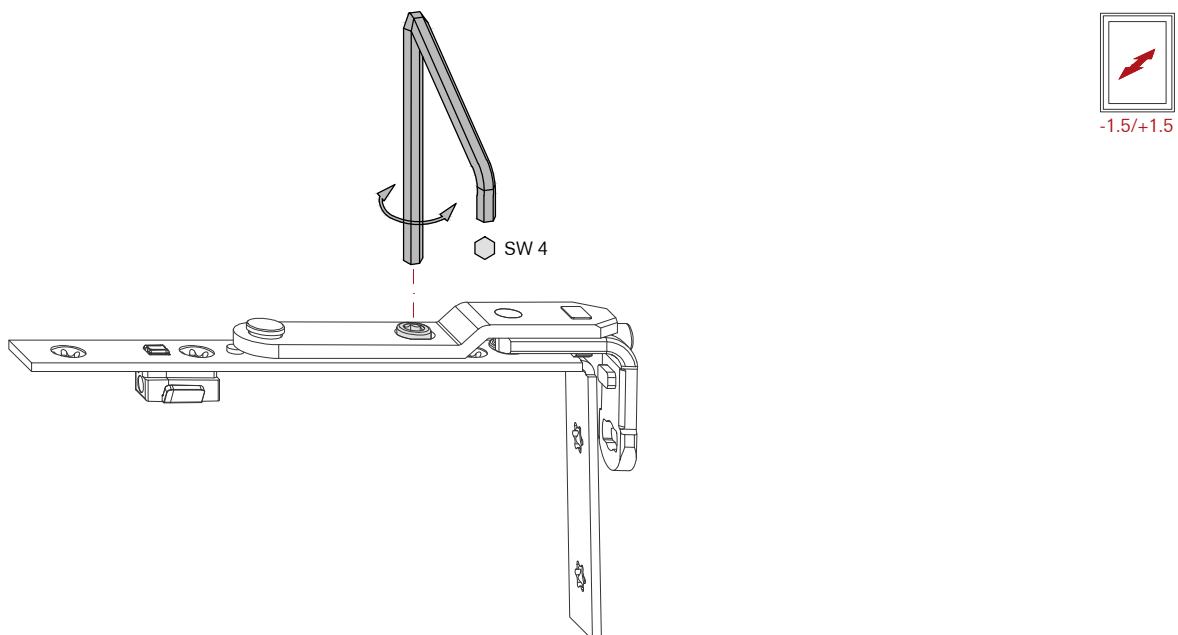
A) A l'abaissement de l'ouvrant faire attention au fait que la vis ne soit pas dévissée complètement. La tête de vis doit dépasser d'1 mm au maximum!

⬡ Plage de réglage +2.85/-1.8 mm avec SW 4

## Pressure adjustment

## Anpressdruck Einstellung

## Réglage de la pression de contact



⬡ Adjustment range  $\pm 1.5$  mm with SW 4

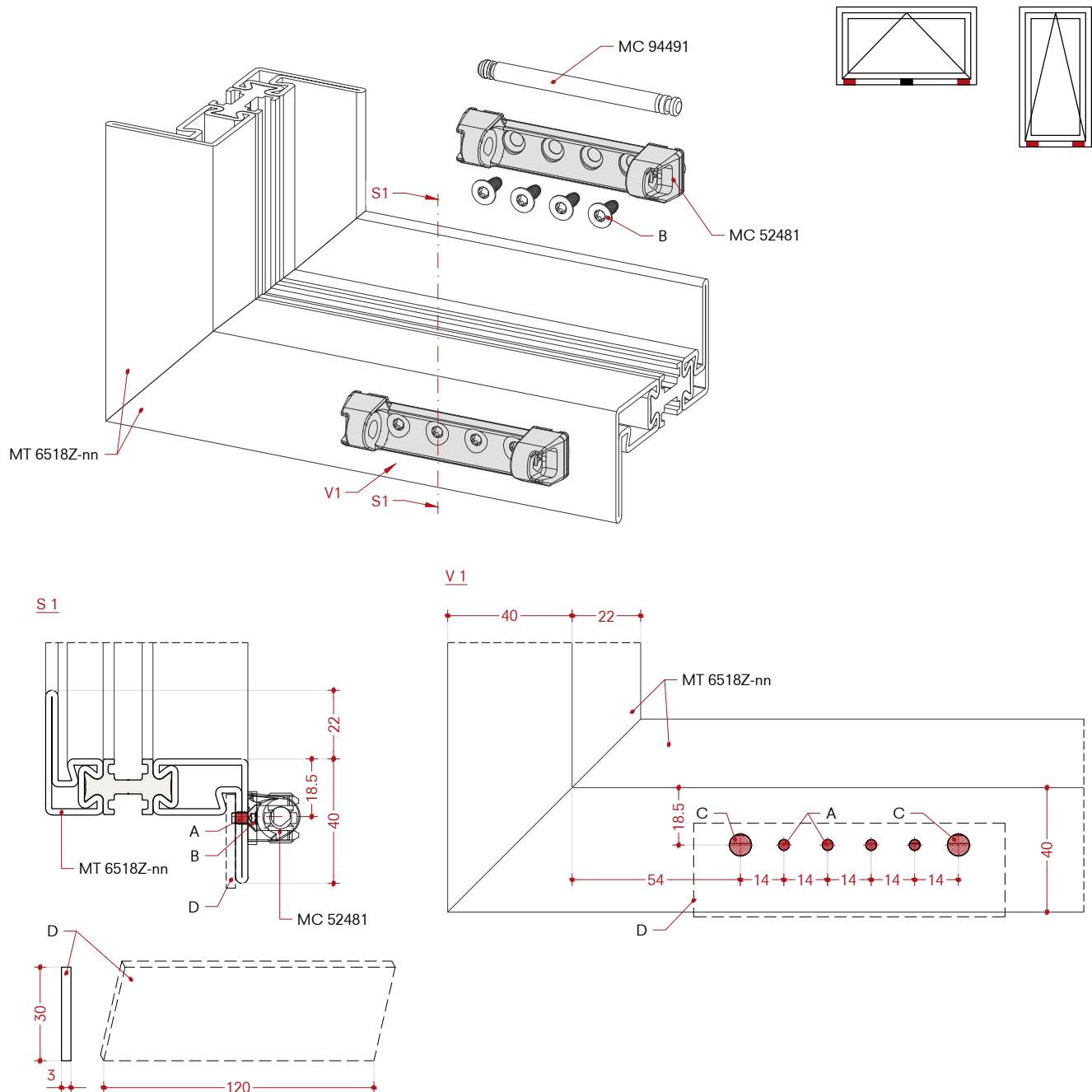
⬡ Einstellbereich  $\pm 1.5$  mm mit SW 4

⬡ Plage de réglage  $\pm 1.5$  mm avec SW 4

**Scissor stay hinge  
with 7 mm supporting pin**  
MC 52481  
**and scissor stay hinge pin**  
MC 94491  
Installation on frame

**Scherenlager  
mit 7 mm Tragezapfen**  
MC 52481  
**und Scherenlagerstift**  
MC 94491  
Einbau im Rahmen

**Palier de compas  
avec goujons de 7 mm**  
MC 52481  
**et Axe**  
MC 94491  
Montage sur le cadre



M65TB - 0056

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.2 mm
- B) Countersunk screw M4x8
- C) Hole Ø7 mm
- D) Use an aluminium base  
(30x100x3 mm) for drilling

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.2 mm
- B) Senkkopfschraube M4x8
- C) Bohrdurchmesser Ø7 mm
- D) Zum Bohren Aluminiumunterlage  
(30x100x3 mm) verwenden

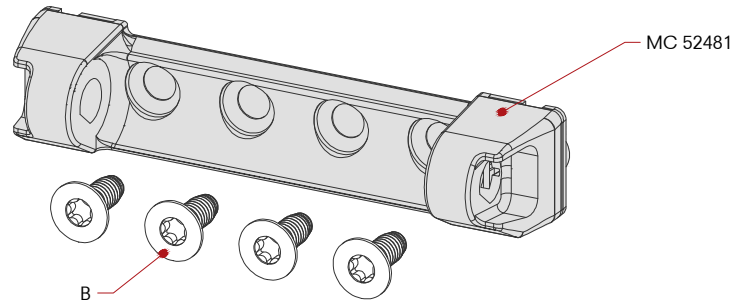
Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.2 mm
- B) Vis à tête fraisée M4x8
- C) Trou Ø7 mm
- D) Utilisez une base en aluminium  
(30x100x3 mm) pour les trous

## Installation scissor stay hinge

## Einbau Scherenlager

## Pose de le palier de compas



### Note:

- Screw the scissor stay hinge only after mounting the striker plates, otherwise the jigs for the frame can no longer be attached!
- Insert the scissor stay hinge with the pins in the holes and screw the hinge with four screws (B).

### Hinweis:

- Das Scherenlager erst nach Montage der Schließteile verschrauben, ansonsten können die Lehren nicht mehr angelegt werden!
- Das Scherenlager mit den Zapfen in die Bohrungen einsetzen und mit vier Schrauben (B) festschrauben.

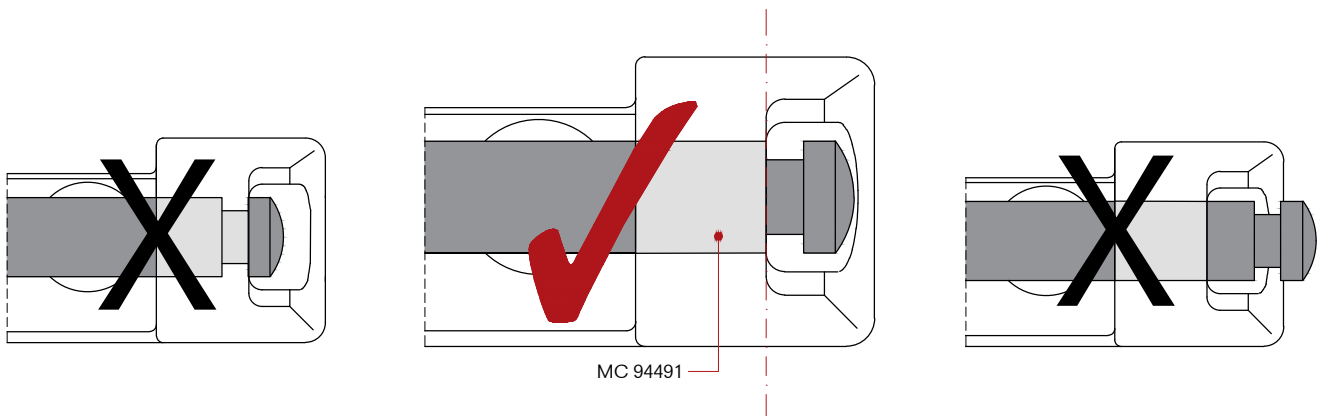
### Remarque:

- Ne visser le palier de compas qu'après le montage des gâches, sinon les gabarits ne peuvent plus être posés !
- Insérer le palier de compas avec les tourillons dans les trous et le visser avec quatre vis (B).

## Installation scissor stay hinge pin

## Einbau Scherenlagerstift

## Pose de l'axe



### Note:

- Failure to comply with these instructions may result in the sash falling out of the frame!

### Hinweis:

- Bei Nichtbeachtung ist ein Herausfallen des Fensterflügels möglich!

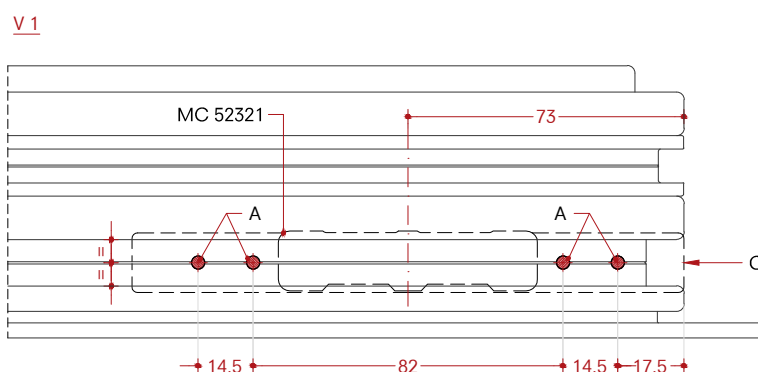
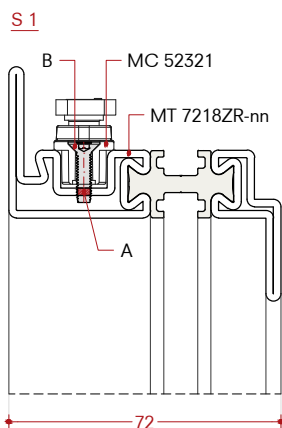
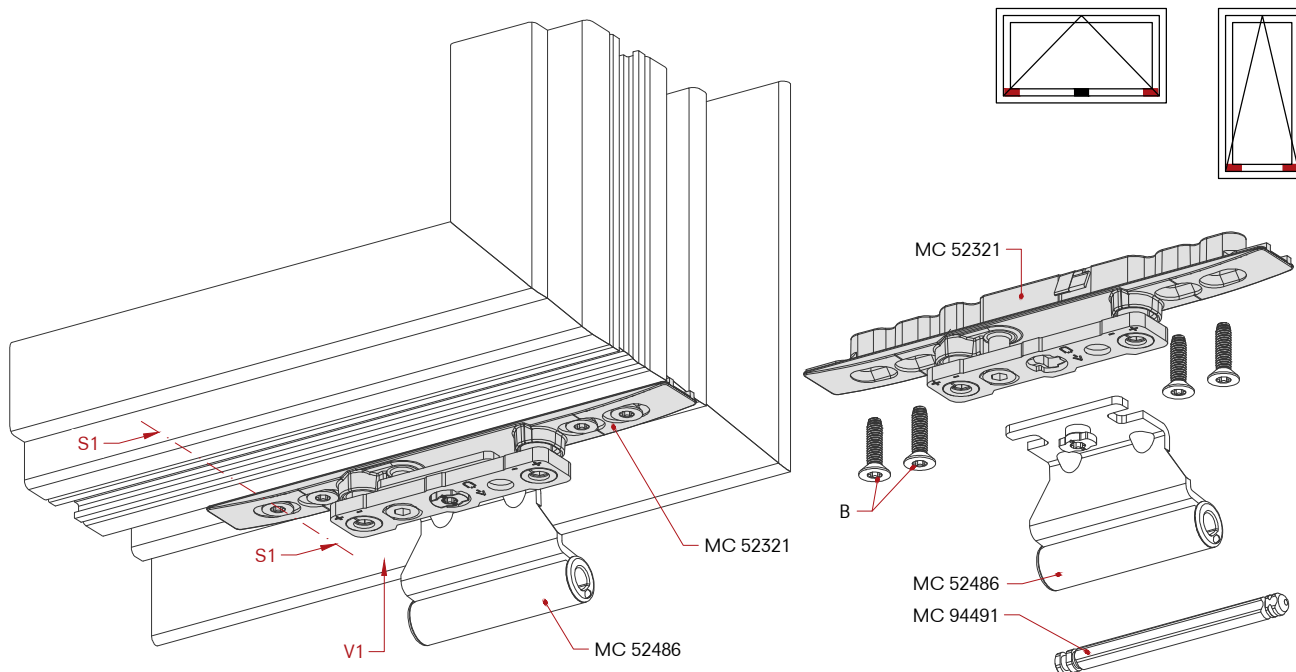
### Remarque:

- En cas d'observation une chute d'ouvrant est possible!

**Tilt-only hinge**  
MC 52321  
**with scissor stay support**  
MC 52486

**Drehband**  
MC 52321  
**mit Bandwinkel**  
MC 52486

**Paumelles à soufflet**  
MC 52321  
**avec fiche de compas**  
MC 52486



M65TB - 0057

DWG

DXF

Drawing represents right opening  
(left opening is the mirror image)

- A) Hole Ø3.3 mm
- B) Countersunk screw M4x16
- C) Fasten flush with rebate edge

Dargestellt DIN rechts - DIN links spiegelbildlich

- A) Bohrdurchmesser Ø3.3 mm
- B) Senkkopfschraube M4x16
- C) Mit Falzkante bündig verschraube

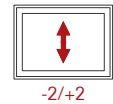
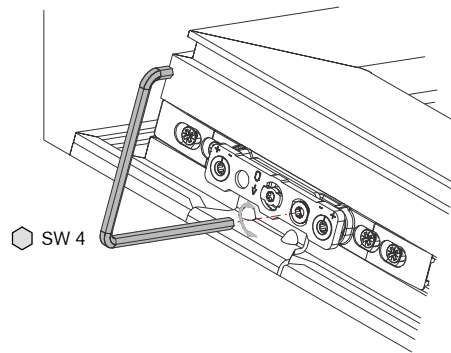
Montré ouverture droite  
(ouverture gauche inversé en miroir)

- A) Trou Ø3.3 mm
- B) Vis à tête fraisée M4x16
- C) Visser à fleur avec chant de la feuillure

## Height adjustment

## Höheneinstellung

## Réglage de la hauteur



Adjustment range  $\pm 2$  mm with SW 4

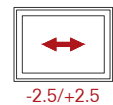
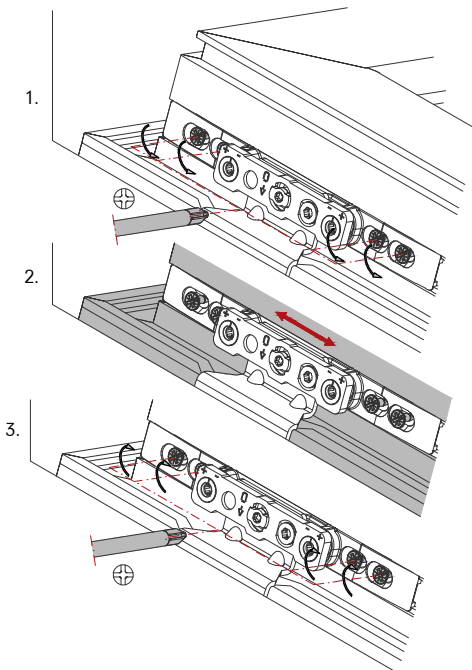
Einstellbereich  $\pm 2$  mm mit SW 4

Plage de réglage  $\pm 2$  mm avec SW 4

## Side adjustment

## Seiteneinstellung

## Réglage latéral



- Lateral adjustment  $\pm 2.5$  mm
- For lateral and/or height adjustment, loosen all 4 screws, position the tilt-only hinge correctly and re-tighten all screws firmly.

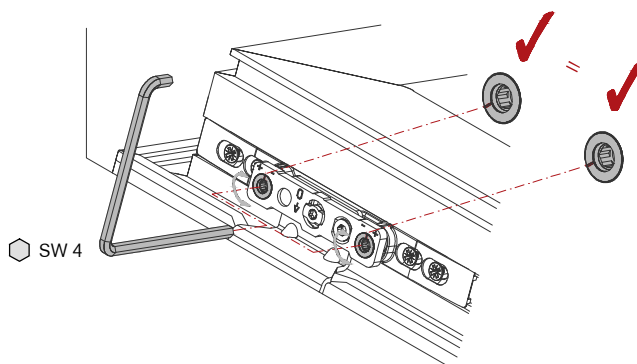
- Seiteneinstellung  $\pm 2.5$  mm
- Für die Seiten- bzw. Höhereinstellung alle 4 Schrauben lösen, Kippflügelband auf Position einstellen und wieder alle Schrauben festziehen.

- Réglage latéral  $\pm 2,5$  mm
- Desserer les 4 vis pour effectuer le réglage latéral ou en hauteur, régler la paumelle à soufflet à la bonne position puis reserrer les vis.

## Pressure adjustment

## Anpressdruck Einstellung

## Réglage de la pression de contact



### Note:

- Adjust both eccentric bolts parallel!

Adjustment range  $\pm 1$  mm with SW 4

### Hinweis:

- Beide Exzenterbolzen immer parallel verstellen!

Einstellbereich  $\pm 1$  mm mit SW 4

### Remarque:

- Toujours régler les deux plots avec excentrique parallèlement!

Plage de réglage  $\pm 1$  mm avec SW 4





**Accessories installation:**

**Handles**

**Montage Zubehör:**

**Griffe**

**Montage accessoires:**

**Poignées**

5.10

## Installation

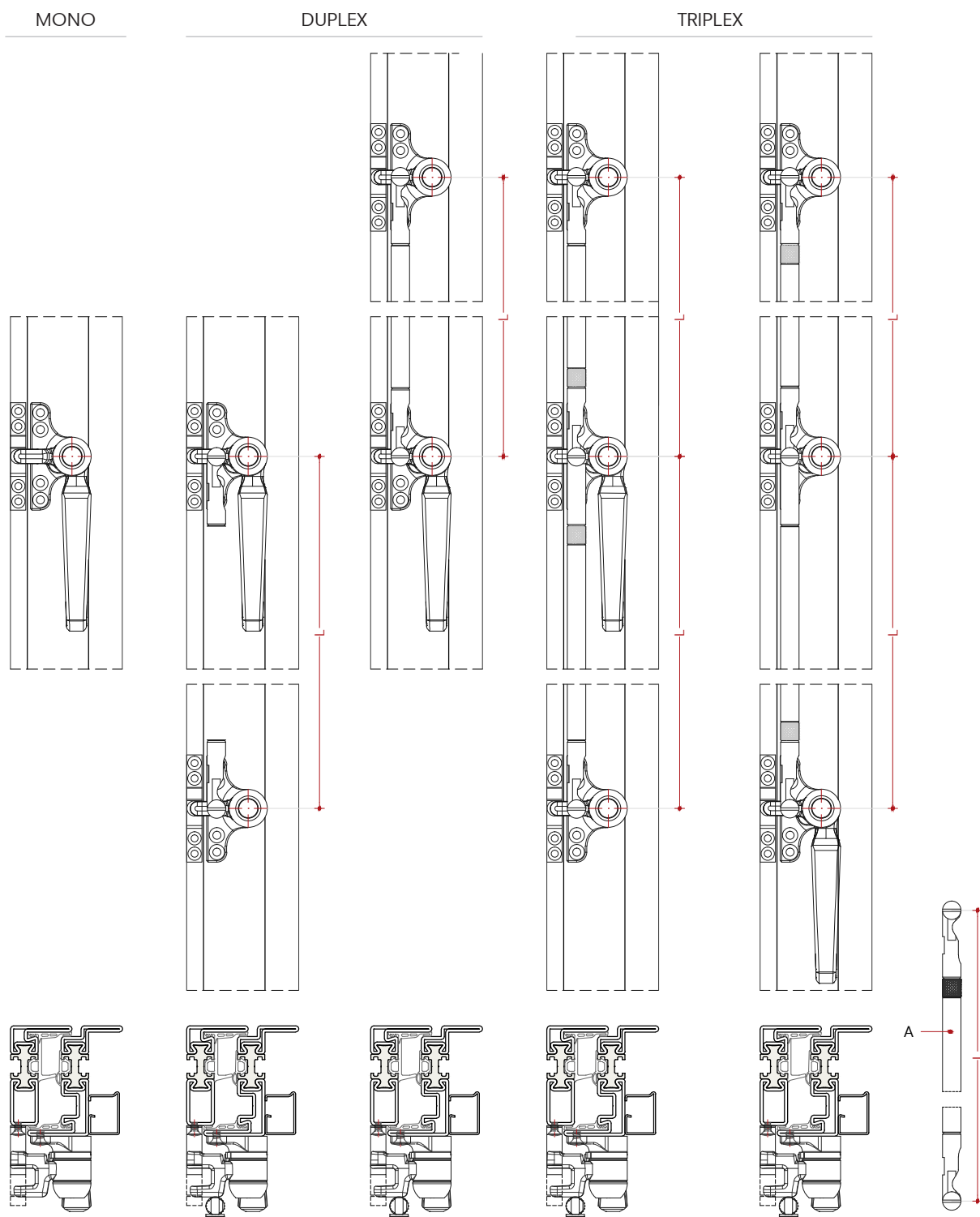
Heritage window handle  
Open in, single leaf window

## Einbau

Heritage Fenstergriff  
Einflüglige Fenster nach innen öffnend

## Schéma de montage

Poignée Heritage pour fenêtre  
Fenêtre un vantail, ouverture intérieure



Scale 1:4

A) Connection rod

| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

Maßstab 1:4

A) Verbindungsstange

| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

Échelle 1:4

A) Barre de liaison

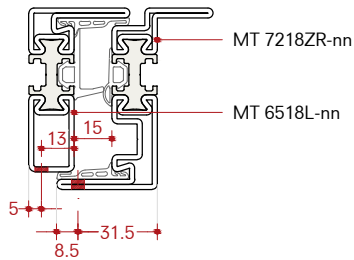
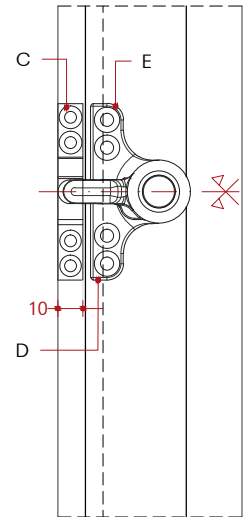
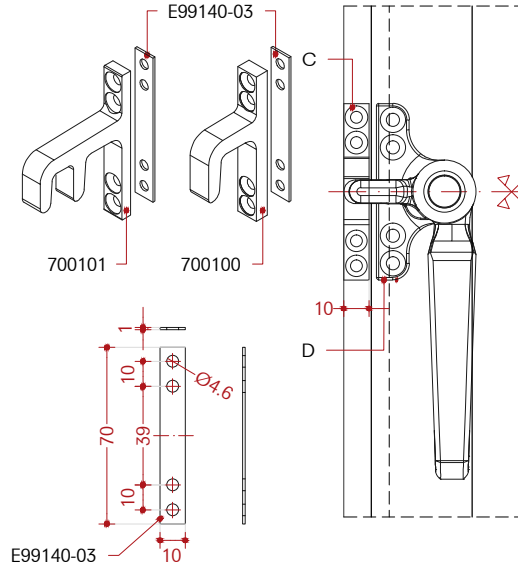
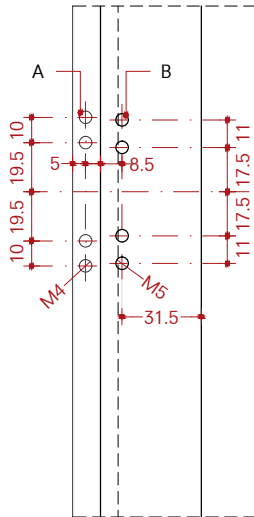
| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

Assembly / Montage / Schéma de montage

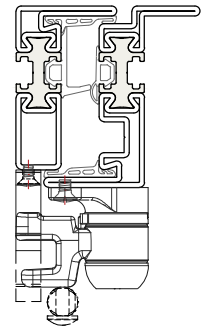
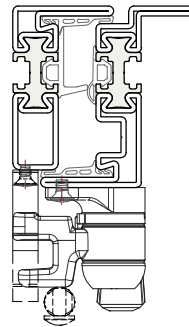
Profiles drilling  
Profilbearbeitung  
Trous sur profilés

Handle and locking hook  
Griff und Verriegelungshaken  
Poignée et crochet de fermeture

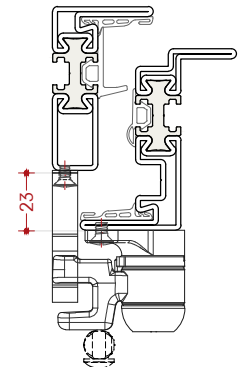
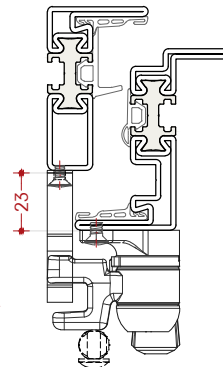
Additional locking nose and hook  
Zusatzverriegelung und Verriegelungshaken  
Nez et crochet de fermeture



Locking  
Verriegelt  
Fermeture



Ventilation  
Belüftung  
Ventilation



- A) M4 holes on frame profile
- B) M5 holes on leaf profile
- C) Fastening of locking hook with M4x8 ISO2010/ISO7047 screws
- D) Fastening of handle and of additional locking nose with M5x8 ISO2010/ISO7047 screws
- E) A 70122X nn connection rod required to connect the handle to additional locking nose

For any additional information please contact our technical office.

- A) Bohrungen M4 am Rahmenprofil
- B) Bohrungen M5 am Flügelprofil
- C) Befestigung von Verriegelungshaken am Rahmen durch Schrauben M4x8 ISO2010/ISO7047
- D) Befestigung der Griffe und Zusatzverriegelungen mit Flügelrahmen durch Schrauben M5x8 ISO2010/ISO7047
- E) Verbindungsstange 70122X nn erforderlich um den Griff mit der Zusatzverriegelung zu verbinden

Für weitere Informationen wenden Sie sich bitte das technische Büro.

- A) Trous M4 sur profilé dormant
- B) Trous M5 sur profilé ouvrant
- C) Fixation du crochet de fermeture sur cadre avec vis M4x8 ISO2010/ISO7047
- D) Fixation des poignées et du nez sur cadre avec vis M5x8 ISO2010/ISO7047
- E) 70122X nn barre de liaison requise pour lier la poignée et le nez

Pour toute information supplémentaire, contacter le bureau technique.

## Installation

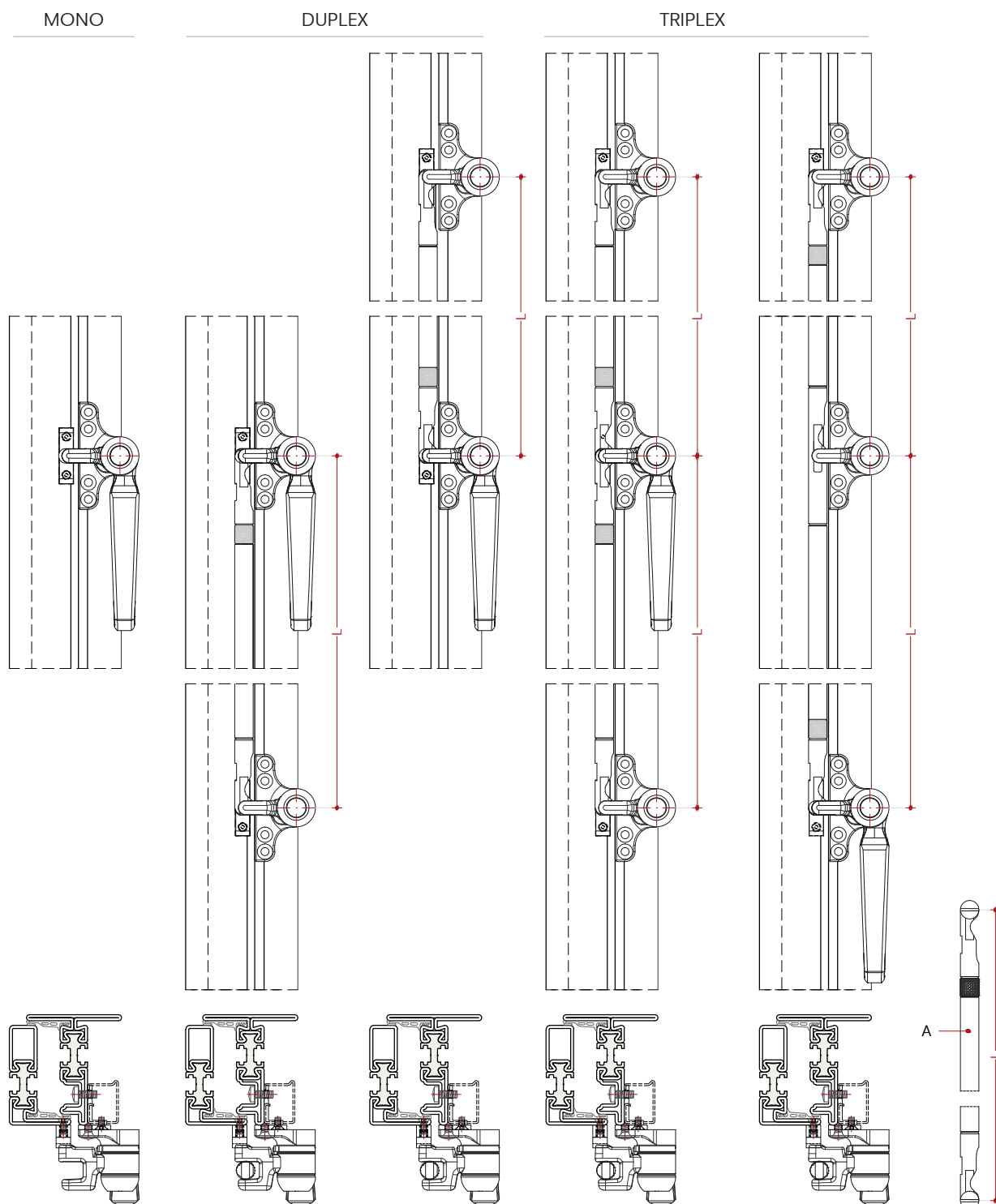
Heritage window handle  
Open out, single leaf window

## Einbau

Heritage Fenstergriff  
Einflüglige Fenster nach außen öffnend

## Schéma de montage

Poignée Heritage pour fenêtre  
Fenêtre un vantail, ouverture extérieure



Scale 1:4

A) Connection rod

| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

Maßstab 1:4

A) Verbindungsstange

| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

Échelle 1:4

A) Barre de liaison

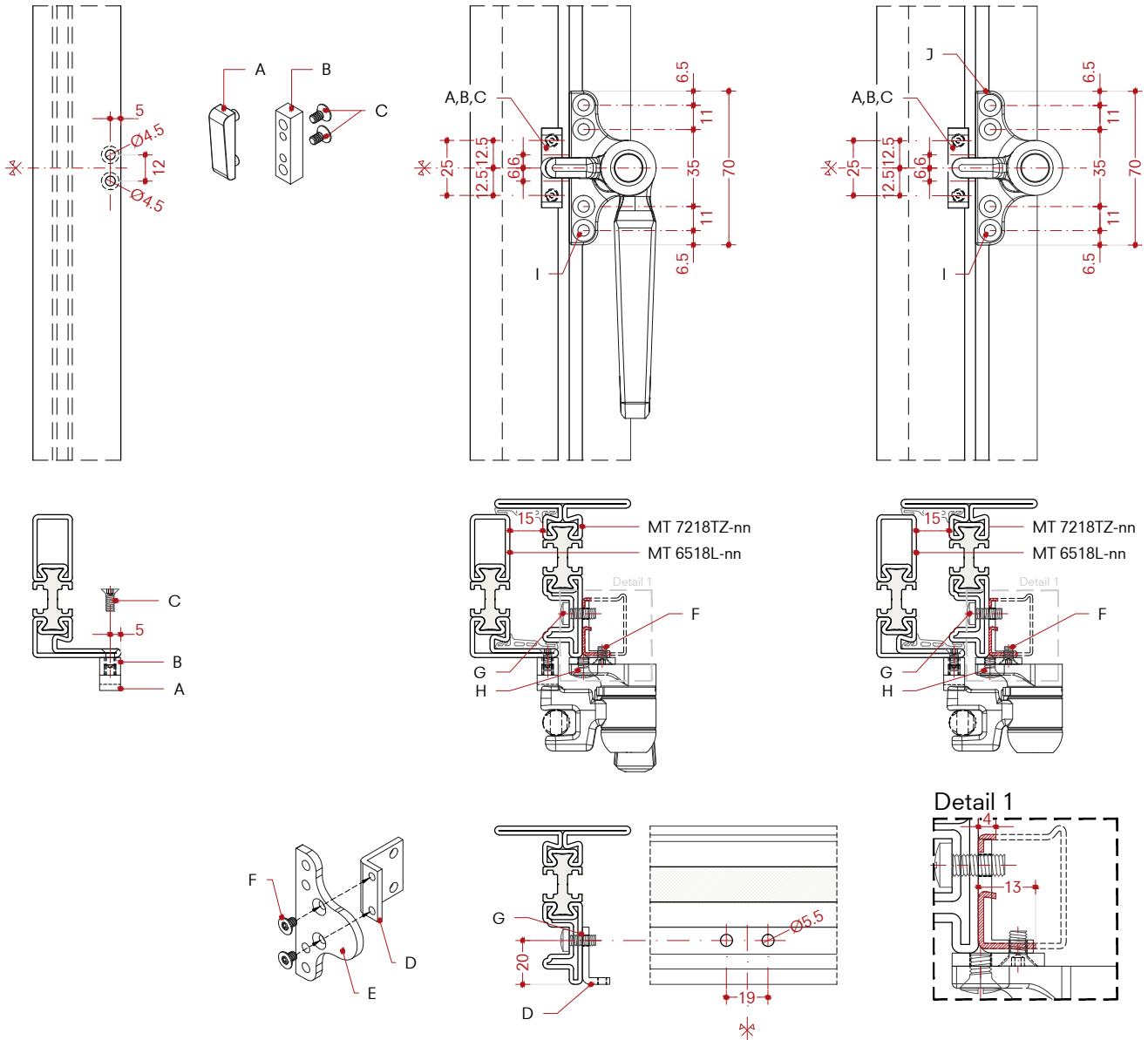
| Code      | L       |
|-----------|---------|
| 701220 nn | 600 mm  |
| 701221 nn | 750 mm  |
| 701222 nn | 900 mm  |
| 701223 nn | 1050 mm |
| 701224 nn | 1200 mm |

## Assembly / Montage / Schéma de montage

Profiles drilling  
Profilbearbeitung  
Trous sur profilés

Handle and locking hook  
Griff und Verriegelungshaken  
Poignée et crochet de fermeture

Additional locking nose and hook  
Zusatzverriegelung und Verriegelungshaken  
Nez et crochet de fermeture



- A) Wedge 700105 NB
- B) Stainless steel shim D99151-03
- C) M4x10 ISO10642 screw
- D) Bracket D99152-03
- E) Base for bracket D99152-03
- F) M4x8 ISO10642 screw
- G) M5x12 ISO7045 screw
- H) M5x8 ISO2010 screw
- I) Fastening of handle and of additional locking nose with M5x8 ISO2010/ISO7047 screws
- J) A 70122X nn connection rod required to connect the handle to additional locking nose

For any additional information please contact  
our technical office.

- A) Verriegelungskeil 700105NB
- B) Unterlage edelstahl D99151-03
- C) Schraube M4x10 ISO 10642
- D) Halterung D99152-03
- E) Unterlage für halterung D99152-03
- F) Schraube M4x8 ISO10642
- G) Schraube M5x12 ISO7045
- H) Schraube M5x8 ISO2010
- I) Befestigung der Griffe und Zusatzverriegelungen mit Flügelrahmen durch Schrauben M5x8 ISO2010/ISO7047
- J) Verbindungsstange 70122X nn erforderlich um den Griff mit der Zusatzverriegelung zu verbinden

Für weitere Informationen wenden Sie sich bitte  
das technische Büro.

- A) Coin de verrouillage 700105NB
- B) Base en acier inoxydable D99151-03
- C) Vis M4x10 ISO10642
- D) Angle D99152-03
- E) Base pour Angle D99152-03
- F) Vis M4x8 ISO10642
- G) Vis M5x12 ISO7045
- H) Vis M5x8 ISO2010
- I) Fixation des poignées et du nez sur cadre avec vis M5x8 ISO2010/ISO7047
- J) 70122X nn barre de liaison requise pour lier la poignée et le nez

Pour toute information supplémentaire,  
contacter le bureau technique.

### Installation

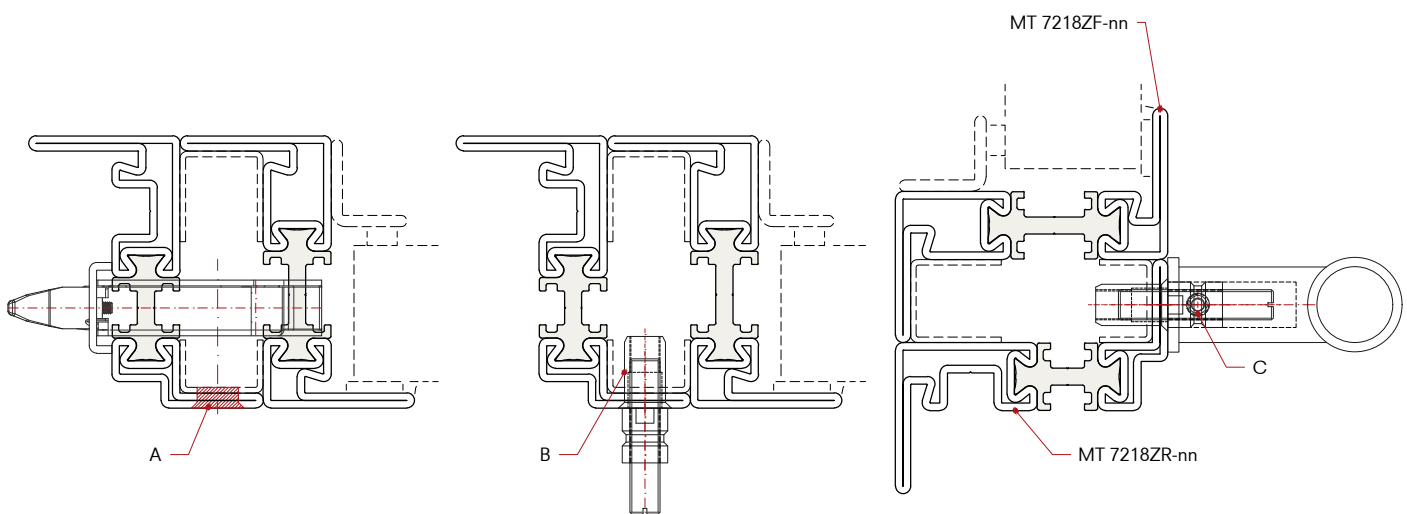
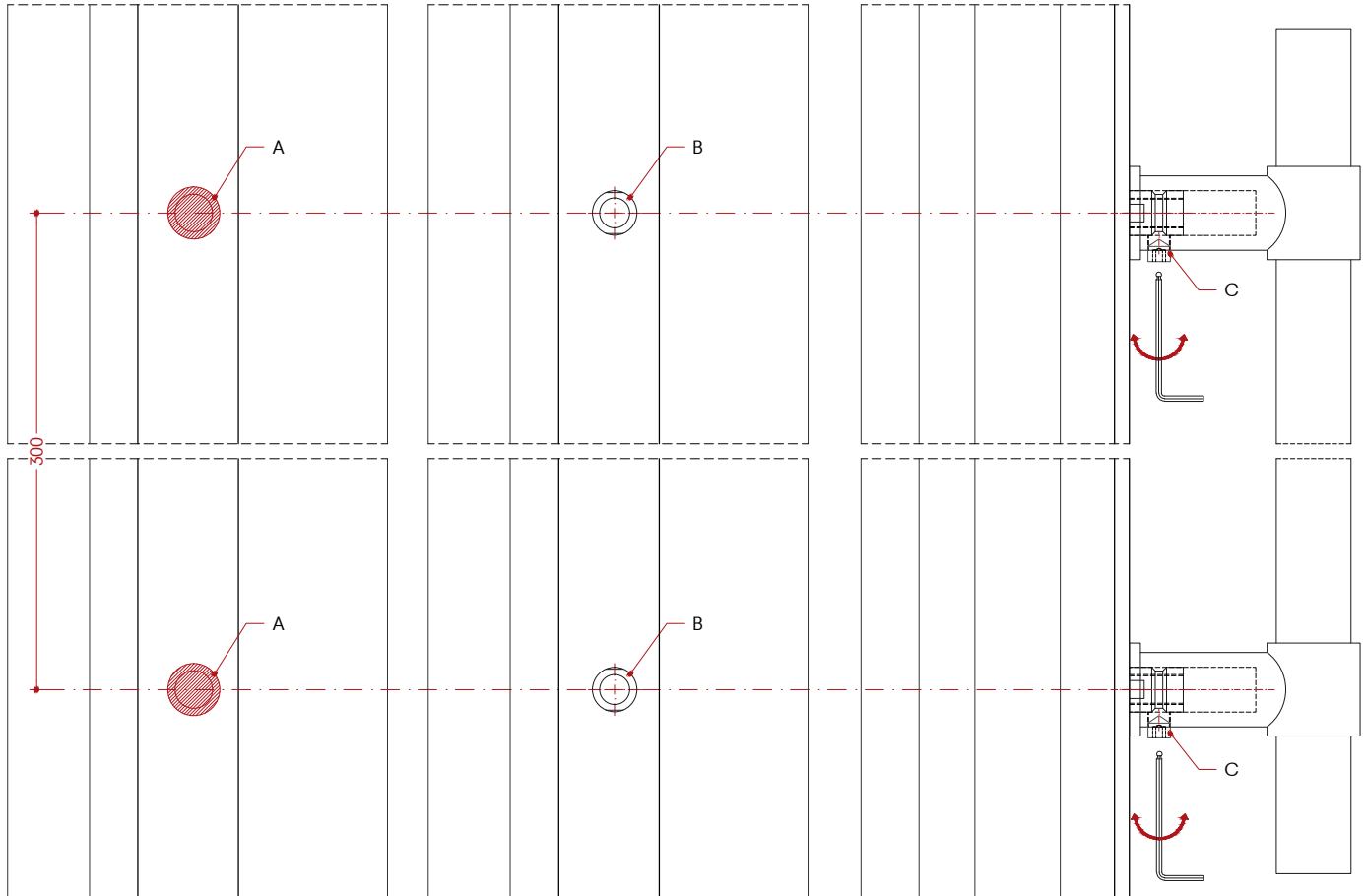
Pull handle 760600 nn L = 400  
Side by side fastening on  
MT 7218ZR-nn + MT 7218ZF-nn

### Einbau

Griffstange 760600 nn L = 400  
Einseitige Befestigung an  
MT 7218ZR-nn + MT 7218ZF-nn

### Schéma de montage

Poignée 760600 nn L = 400  
Fixation passante sur  
MT 7218ZR-nn + MT 7218ZF-nn



A) n°02 Ø10 mm countersunk holes  
B) M8 rivet nut (not provided)  
C) Fastening with M6x6 screws

A) 2X senkbohrungen Ø10 mm  
B) Einnietmutter M8 (nicht im Lieferumfang)  
C) Befestigung mit Madenschraube M6x6

A) n°02 trous fraisés Ø10 mm  
B) Insert fileté M8 (non inclus)  
C) Fixer la poignée avec vis sans tête M6x6

### Installation

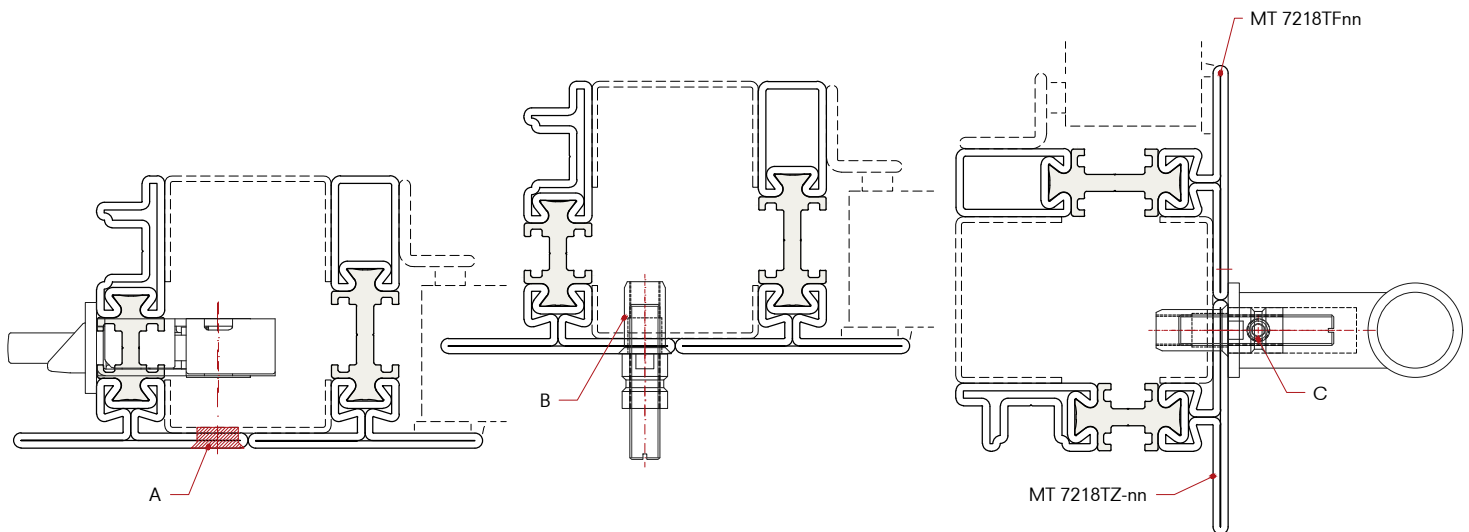
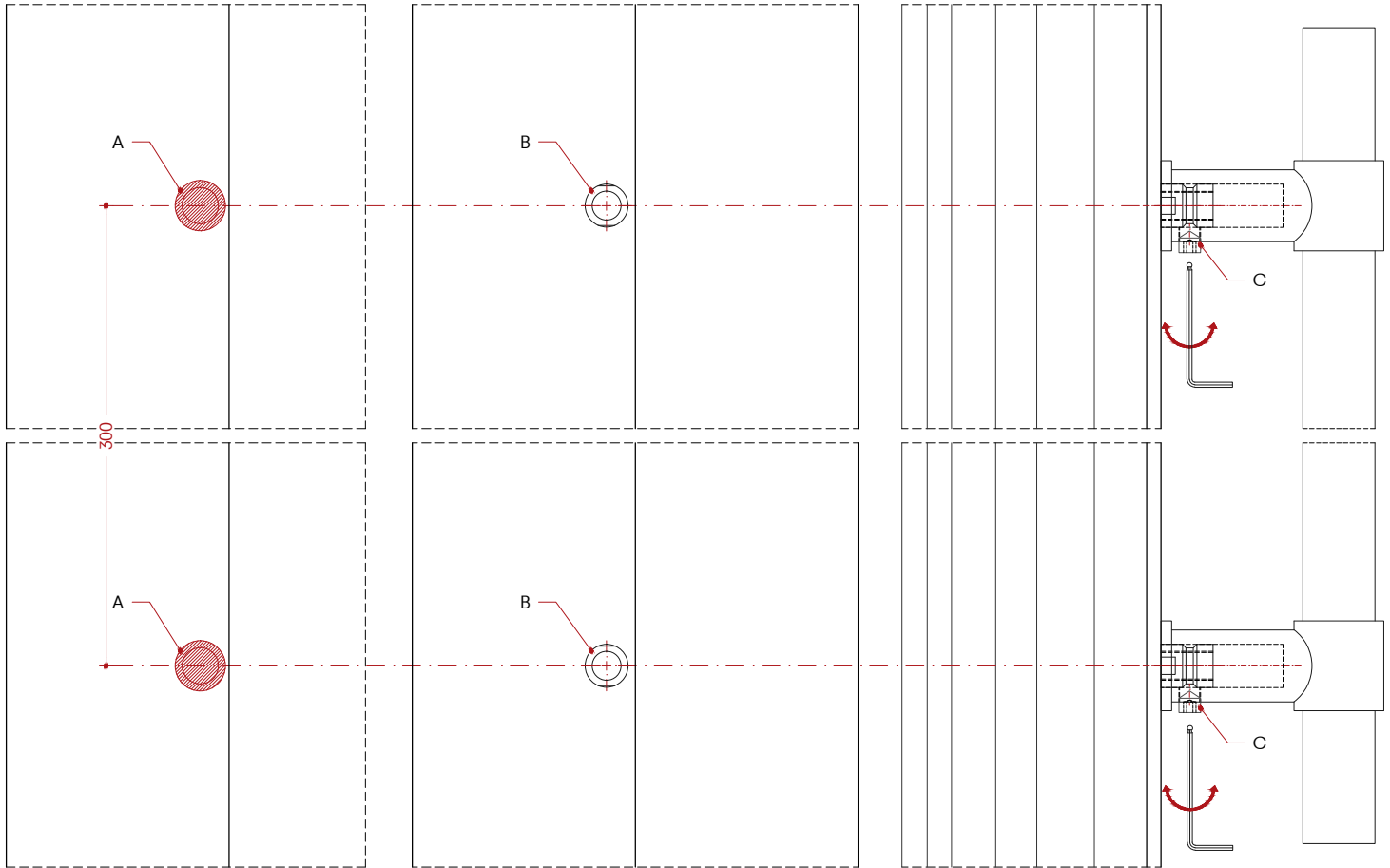
Pull handle 760600 nn L = 400  
Side by side fastening on  
locking box

### Einbau

Griffstange 760600 nn L = 400  
Einseitige Befestigung an  
Schlosskasten

### Schéma de montage

Poignée 760600 nn L = 400  
Fixation passante sur  
boîte pour serrure



A) n°02 Ø10 mm countersunk holes  
B) M8 rivet nut (not provided)  
C) Fastening with M6x6 screws

A) 2X senkbohrungen Ø10 mm  
B) Einnietmutter M8 (nicht im Lieferumfang)  
C) Befestigung mit madenschraube M6x6

A) n°02 trous fraisés Ø10 mm  
B) Insert fileté M8 (non inclus)  
C) Fixer la poignée avec vis sans tête M6x6

### Installation

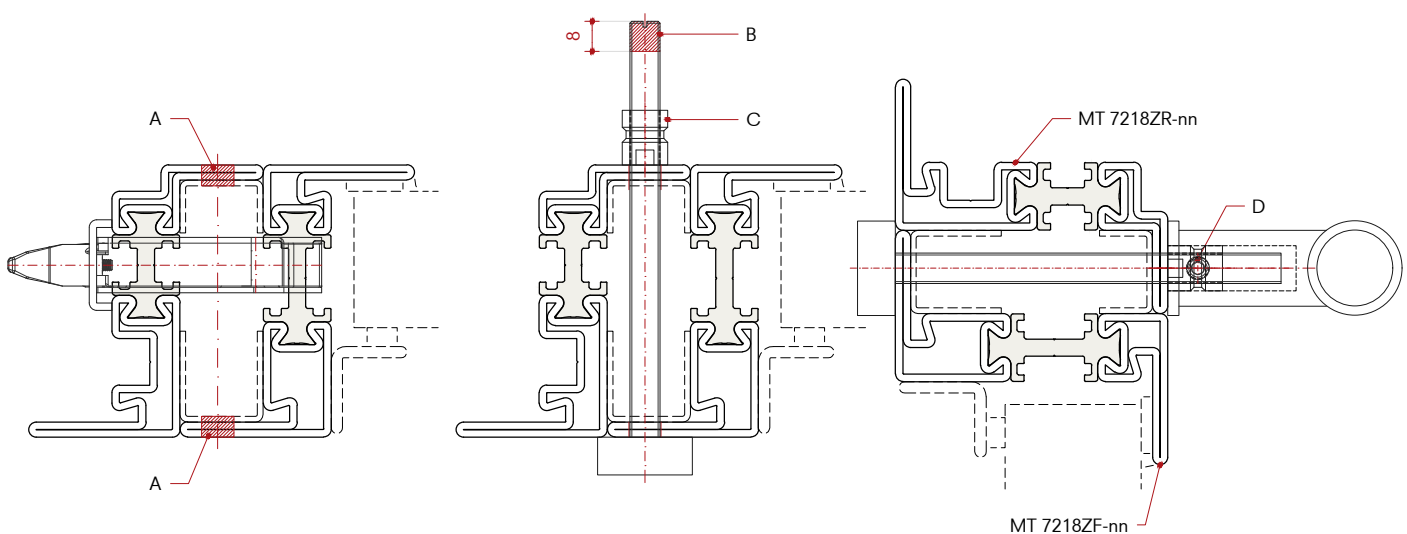
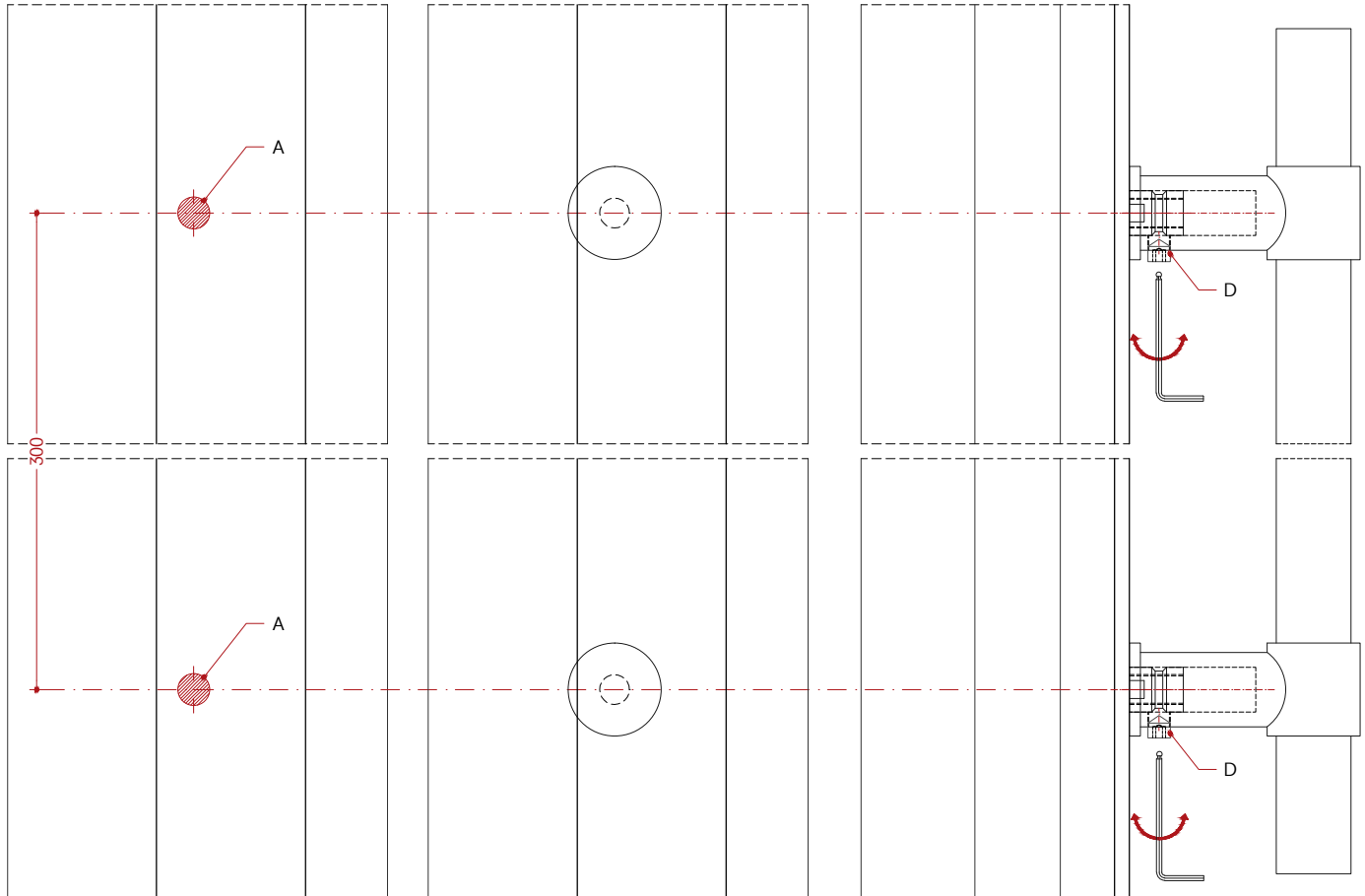
Pull handle 760605 nn L = 400  
Side by side fastening on  
MT 7218ZR-nn + MT 7218ZF-nn

### Einbau

Griffstange 760605 nn L = 400  
Einseitige Befestigung an  
MT 7218ZR-nn + MT 7218ZF-nn

### Schéma de montage

Poignée 760605 nn L = 400  
Fixation passante sur  
MT 7218ZR-nn + MT 7218ZF-nn



- A) n°02 Ø8.5 mm countersunk holes
- B) Cut the screws
- C) M8 rivet nut (not provided)
- D) Fastening with M6x6 screws

- A) 2X senkbohrungen Ø8.5 mm
- B) Schrauben kürzen
- C) Einnietmutter M8 (nicht im Lieferumfang)
- D) Befestigung mit Madenschraube M6x6

- A) n°02 trous fraisés Ø8.5 mm
- B) Couper la vis
- C) Insert fileté M8 (non inclus)
- D) Fixer la poignée avec vis sans tête M6x6



### Installation

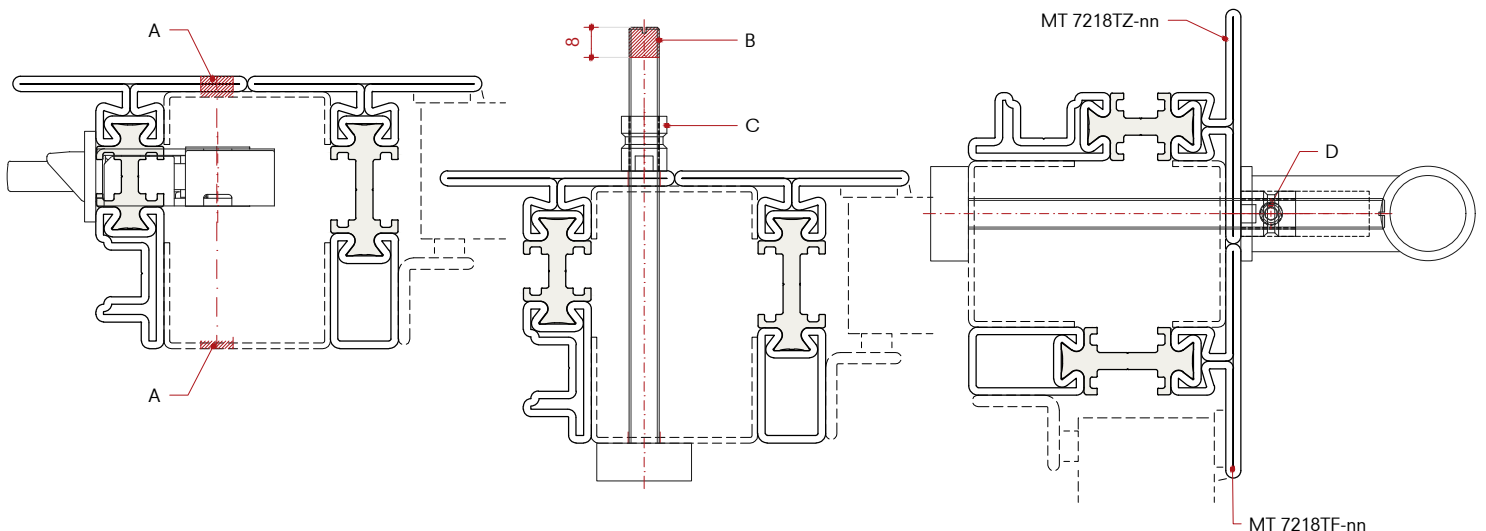
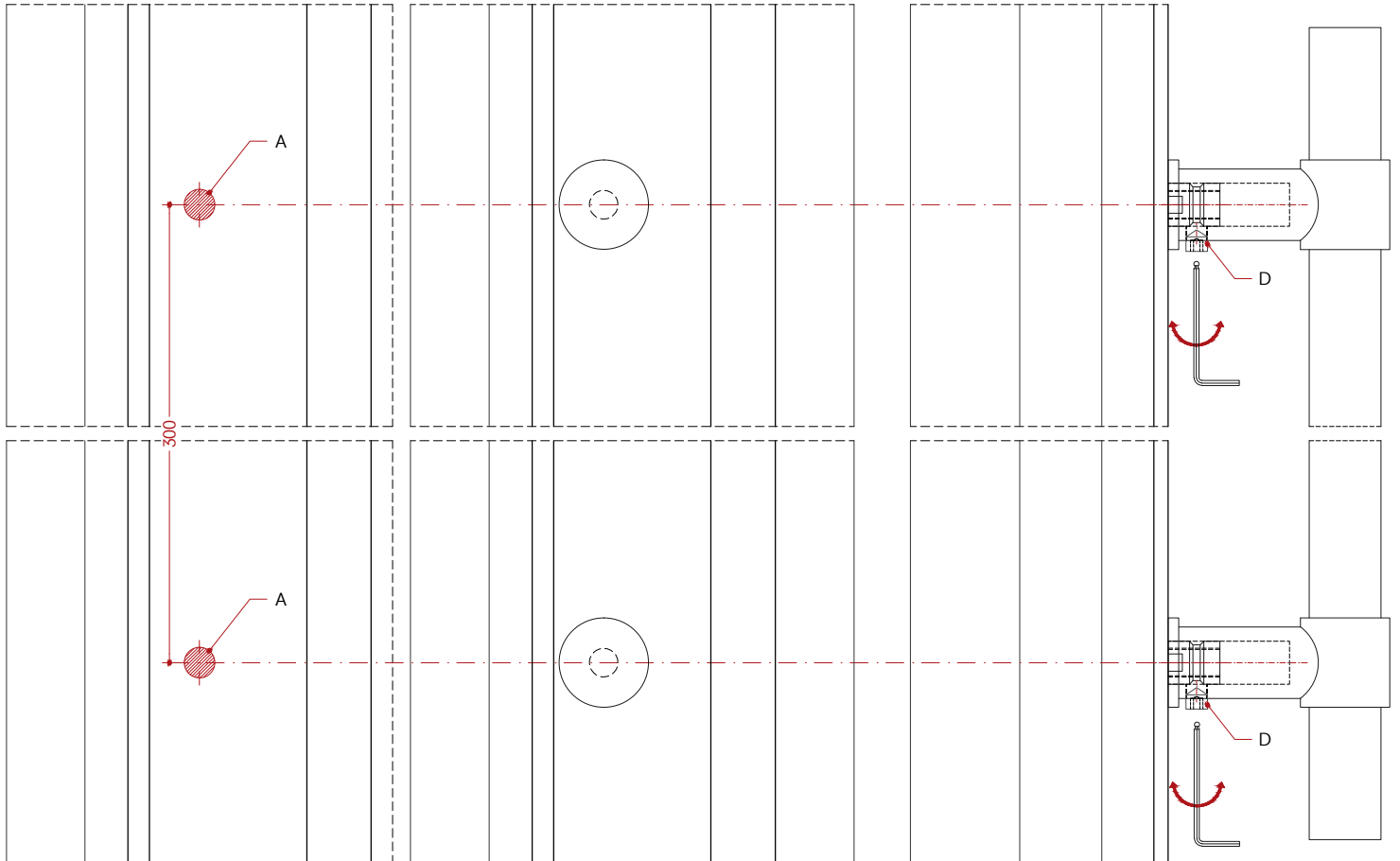
Pull handle 760605 nn L = 400  
Side by side fastening on  
locking box

### Einbau

Griffstange 760605 nn L = 400  
Einseitige Befestigung an  
Schlosskasten

### Schéma de montage

Poignée 760605 nn L = 400  
Fixation passante sur  
boîte pour serrure



- A) n°02 Ø8.5 mm countersunk holes
- B) Cut the screws
- C) M8 rivet nut (not provided)
- D) Fastening with M6x6 screws

- A) 2X senkbohrungen Ø8.5 mm
- B) Schrauben kürzen
- C) Einnietmutter M8 (nicht im Lieferumfang)
- D) Befestigung mit Madenschraube M6x6

- A) n°02 trous fraisés Ø8.5 mm
- B) Couper la vis
- C) Insert fileté M8 (non inclus)
- D) Fixer la poignée avec vis sans tête M6x6

### Installation

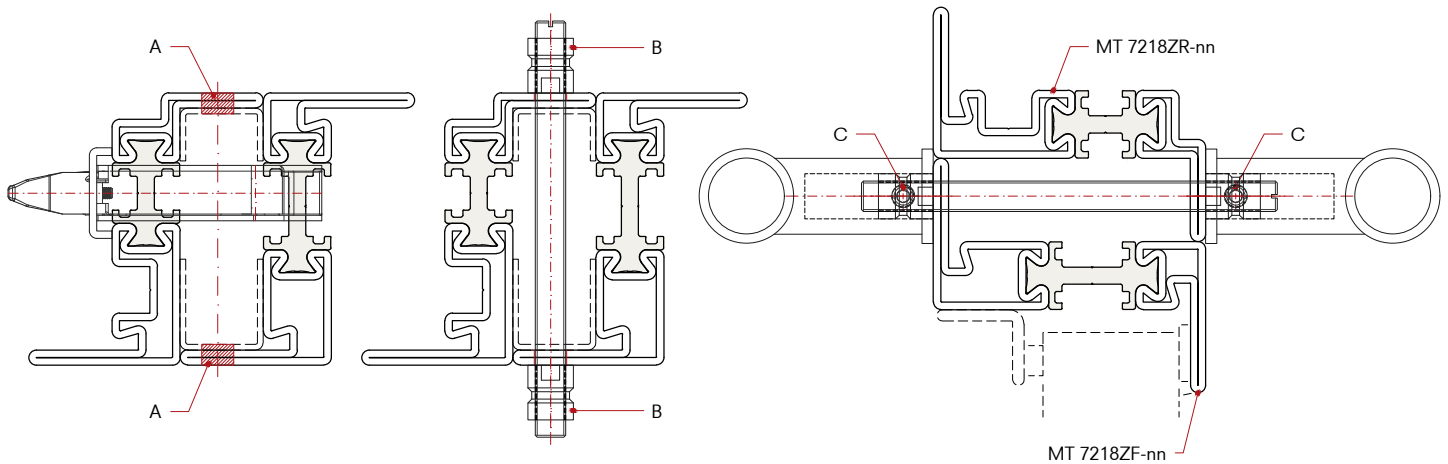
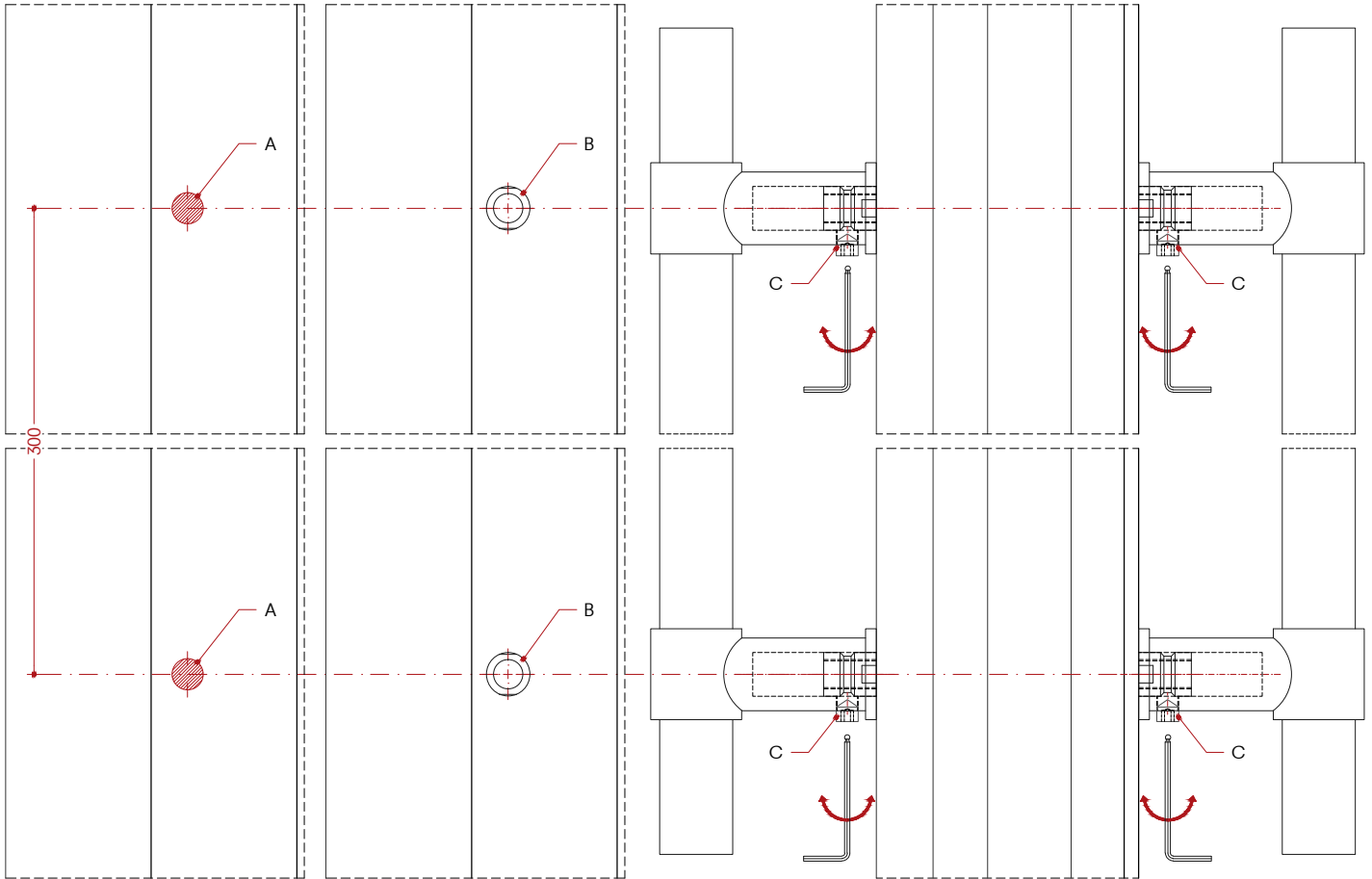
Pull handle 760610 nn L = 400  
Side by side fastening on  
MT 7218ZR-nn + MT 7218ZF-nn  
Pull handle above the lock

### Einbau

Griffstange 760610 nn L = 400  
Einseitige Befestigung an  
MT 7218ZR-nn + MT 7218ZF-nn  
Griffstange oberhalb Schloss

### Schéma de montage

Poignée 760610 nn L = 400  
Fixation passante sur  
MT 7218ZR-nn + MT 7218ZF-nn  
Poignée au-dessus de la serrure



A) n°02 Ø8.5 mm countersunk holes  
B) M8 rivet nut (not provided)  
C) Fastening with M6x6 screws

A) 2X senkbohrungen Ø8.5 mm  
B) Einnietmutter M8 (nicht im Lieferumfang)  
C) Befestigung mit Madenschraube M6x6

A) n°02 trous fraisés Ø8.5 mm  
B) Insert fileté M8 (non inclus)  
C) Fixer la poignée avec vis sans tête M6x6

### Installation

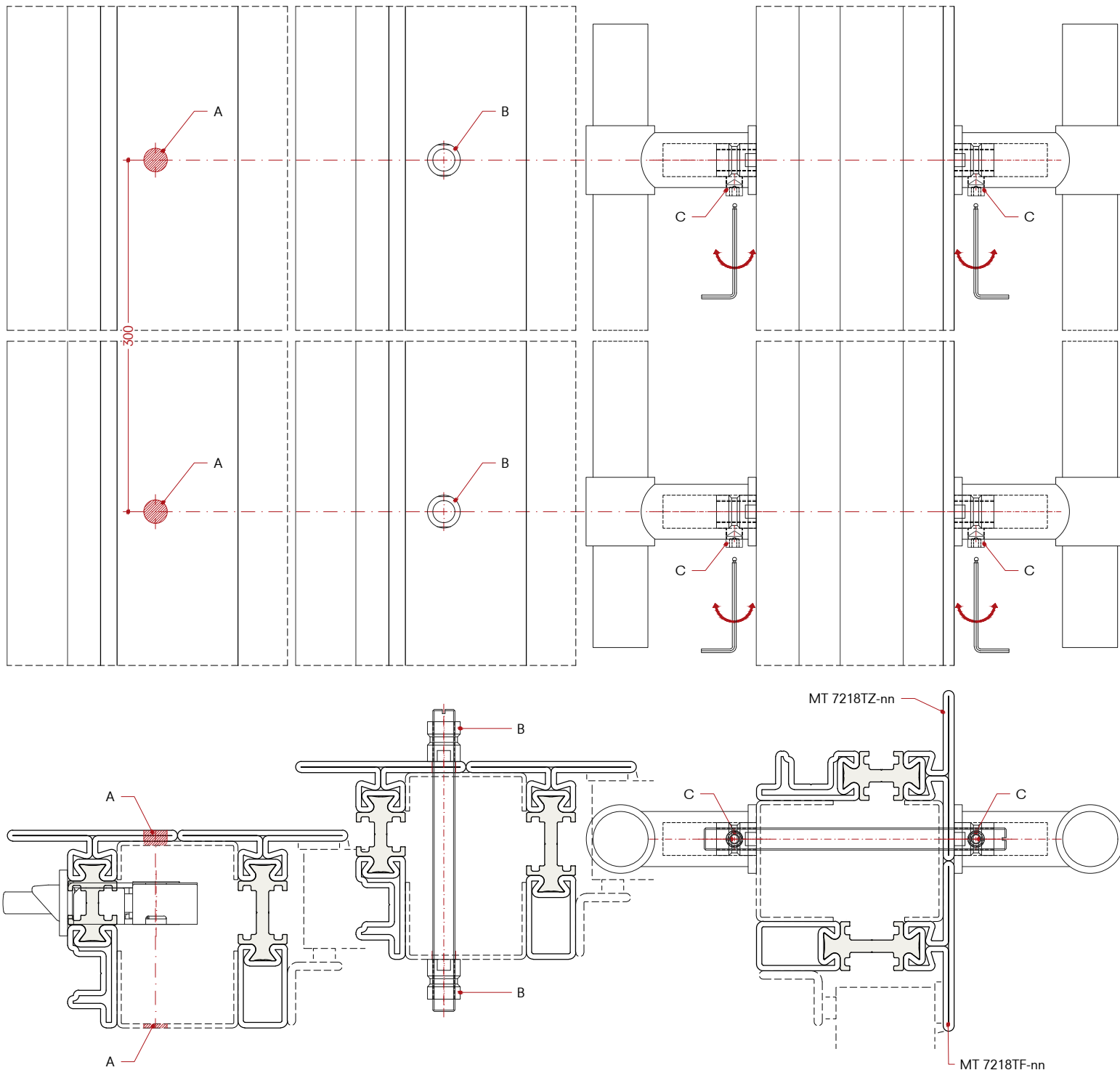
Pull handle 760610 nn L = 400  
Side by side fastening on  
locking box  
Pull handle above the lock

### Einbau

Griffstange 760610 nn L = 400  
Einseitige Befestigung an  
Schlosskasten  
Griffstange oberhalb Schloss

### Schéma de montage

Poignée 760610 nn L = 400  
Fixation passante sur  
boîte pour serrure  
Poignée au-dessus de la serrure



A) n°02 Ø8.5 mm countersunk holes  
B) M8 rivet nut (not provided)  
C) Fastening with M6x6 screws

A) 2X senkbohrungen Ø8.5 mm  
B) Einnietmutter M8 (nicht im Lieferumfang)  
C) Befestigung mit Madenschraube M6x6

A) n°02 trous fraisés Ø8.5 mm  
B) Insert fileté M8 (non inclus)  
C) Fixer la poignée avec vis sans tête M6x6

### Installation

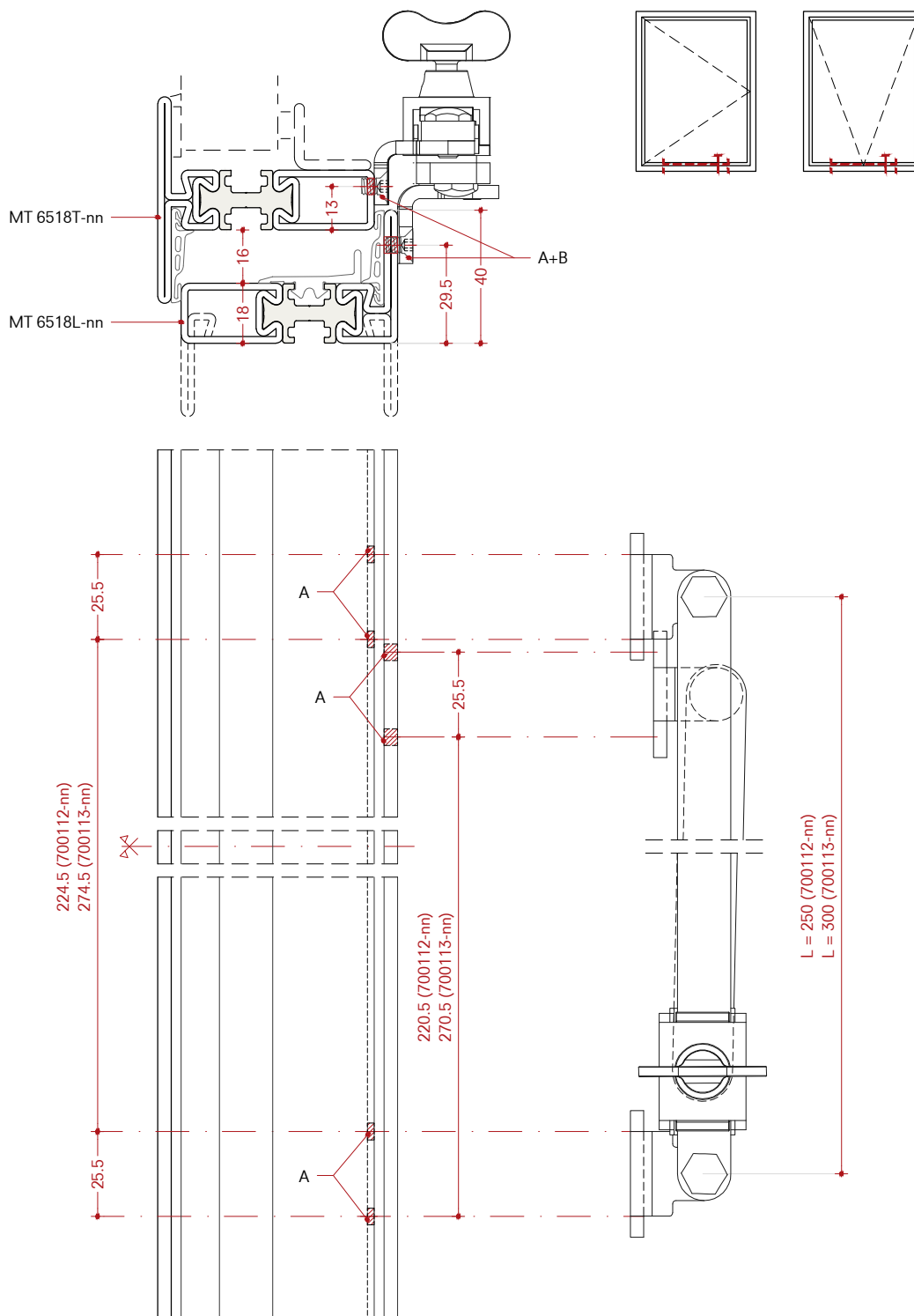
Slide stay 700112 nn (L = 250)  
and 700113 nn (L = 300)  
Open out

### Einbau

Feststellarm gleitend  
700112 nn (L = 250)  
und 700113 nn (L = 300)  
Nach außen öffnend

### Schéma de montage

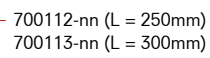
Bras de verrouillage à glissière  
700112 nn (L = 250)  
et 700113 nn (L = 300)  
Ouverture extérieure



A) n°06 M5 holes  
B) n°06 M5x8 ISO10642 screws

A) 6x Bohrungen M5  
B) 6x Schrauben M5x8 ISO10642

A) n°06 trous M5  
B) n°06 vis M5x8 ISO10642



### Installation

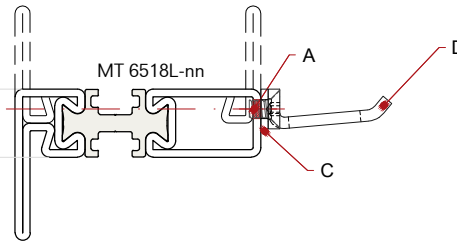
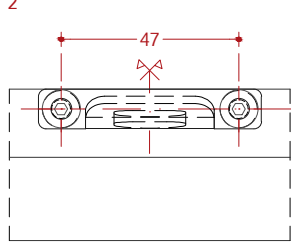
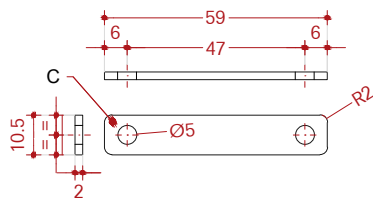
Spring catch 703000 nn  
and spring catch plate 703001 nn

### Einbau

Schnäpper 703000 nn  
und Schnäpperplatte 703001 nn

### Schéma de montage

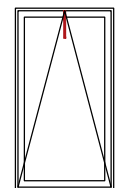
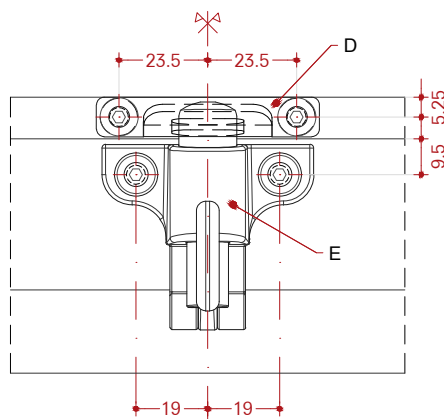
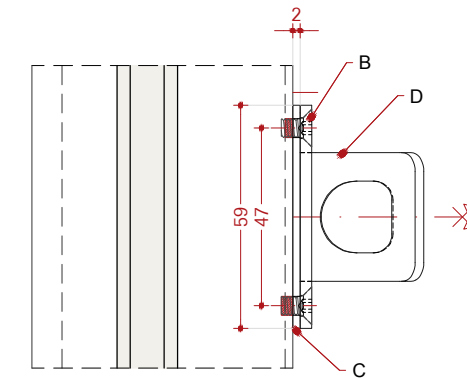
Loqueteau 703000 nn  
et languette 703001 nn



Single spring catch

Verriegelungslasche

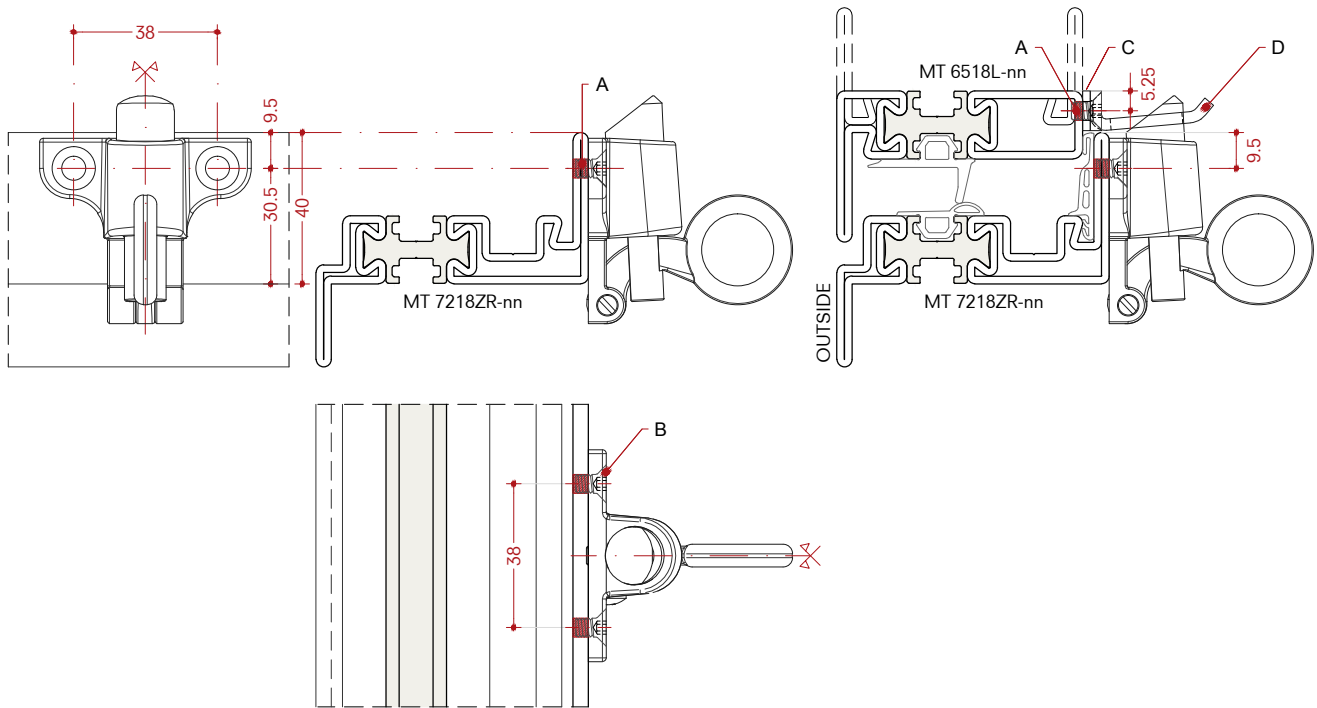
Loqueteau simple



- A) n°02 M5 holes
- B) Fastening with M5x8 ISO10642 screws
- C) Shim stainless steel AISI 304 in-house production
- D) 703001 nn spring catch plate
- E) 703000 nn spring catch

- A) 2x Bohrungen M5
- B) Befestigung Schrauben M5x8 ISO10642
- C) Unterlage edelstahl AISI 304 in Eigenfertigung
- D) Verriegelungslasche 703001 nn
- E) Schnäpper 703000 nn

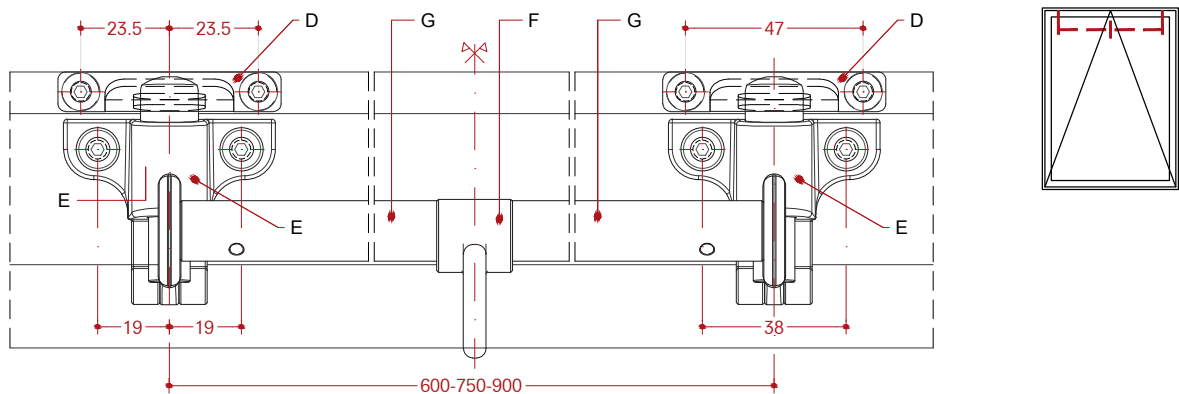
- A) n°02 M5 trous
- B) Fixation avec vis M5x8 ISO10642
- C) Spacer en acier inoxydable AISI 304 dans la production propre
- D) 703001 nn languette pour loqueteau
- E) 703000 nn loqueteau



Double spring catch

Doppelschnäpper

Loqueteau double



- A) n°02 M5 holes
- B) Fastening with M5x8 ISO10642 screws
- C) Shim stainless steel AISI 304 in-house production
- D) 703001 nn spring catch plate
- E) 703000 nn spring catch
- F) 700520 nn connecting tube ring
- G) Connecting tube
  - 700510 nn L = 600
  - 700511 nn L = 750
  - 700512 nn L = 900

- A) 2x Bohrungen M5
- B) Befestigung Schrauben M5x8 ISO10642
- C) Unterlage edelstahl AISI 304 in Eigenfertigung
- D) Verriegelungslasche 703001 nn
- E) 703000 nn Schnäpper
- F) 700520 nn Ring
- G) Verbindungsrohr
  - 700510 nn L = 600
  - 700511 nn L = 750
  - 700512 nn L = 900

- A) n°02 M5 trous
- B) Fixation avec vis M5x8 ISO10642
- C) Spacer en acier inoxydable AISI 304 dans la production propre
- D) 703001 nn languette pour loqueteau
- E) 703000 nn loqueteau
- F) 700520 nn anneau pour tube de jonction
- G) Tube de jonction
  - 700510 nn L = 600
  - 700511 nn L = 750
  - 700512 nn L = 900

### Installation

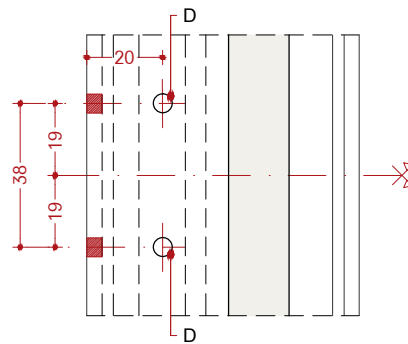
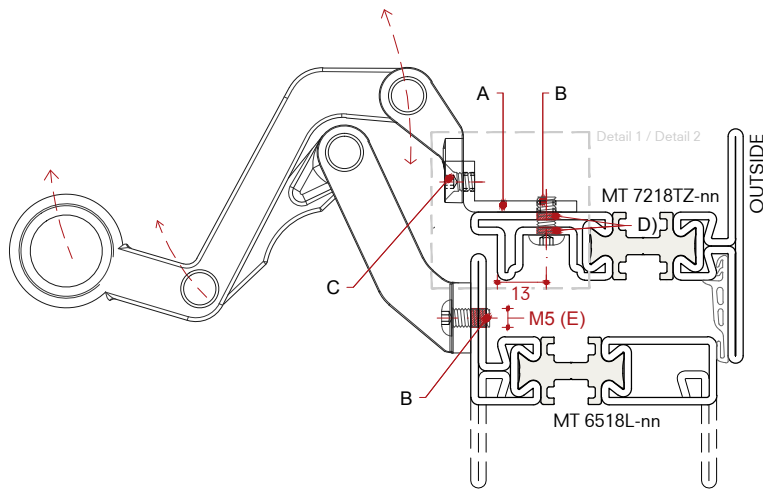
Folding opener  
700500 nn and 700501 nn

### Einbau

Gelenkarm  
700500 nn und 700501 nn

### Schéma de montage

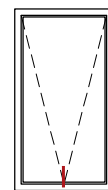
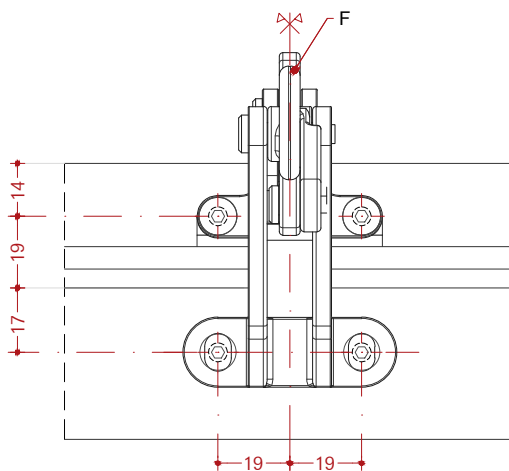
Bras articulé  
700500 nn 700501 nn



Single folding opener

Gelenkarm

bras articulé pliante simple

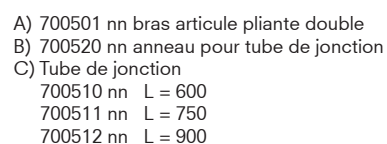


A) D99150-03 bracket folding opener  
B) Fastening with M5x10 ISO7380 screws  
C) Fastening with M5x8 ISO10642 screws  
D) Hole Ø5.5 mm  
E) Tapped hole M5  
F) 700500 nn folding opener

A) D99150-03 Gelenkarm Halterung  
B) Befestigung mit Schrauben M5x10 ISO7380  
C) Befestigung mit Schrauben M5x8 ISO10642  
D) Bohrung Ø5.5 mm  
E) Gewindebohrung M5  
F) 700500 nn gelenkarm

A) D99150-03 fixation, bras articulé  
B) Fixation avec vis M5x10 ISO7380  
C) Fixation avec vis M5x8 ISO10642  
D) Trous Ø5.5 mm  
E) Trous tapé M5  
F) 700500 nn bras articulé pliante simple





### Installation

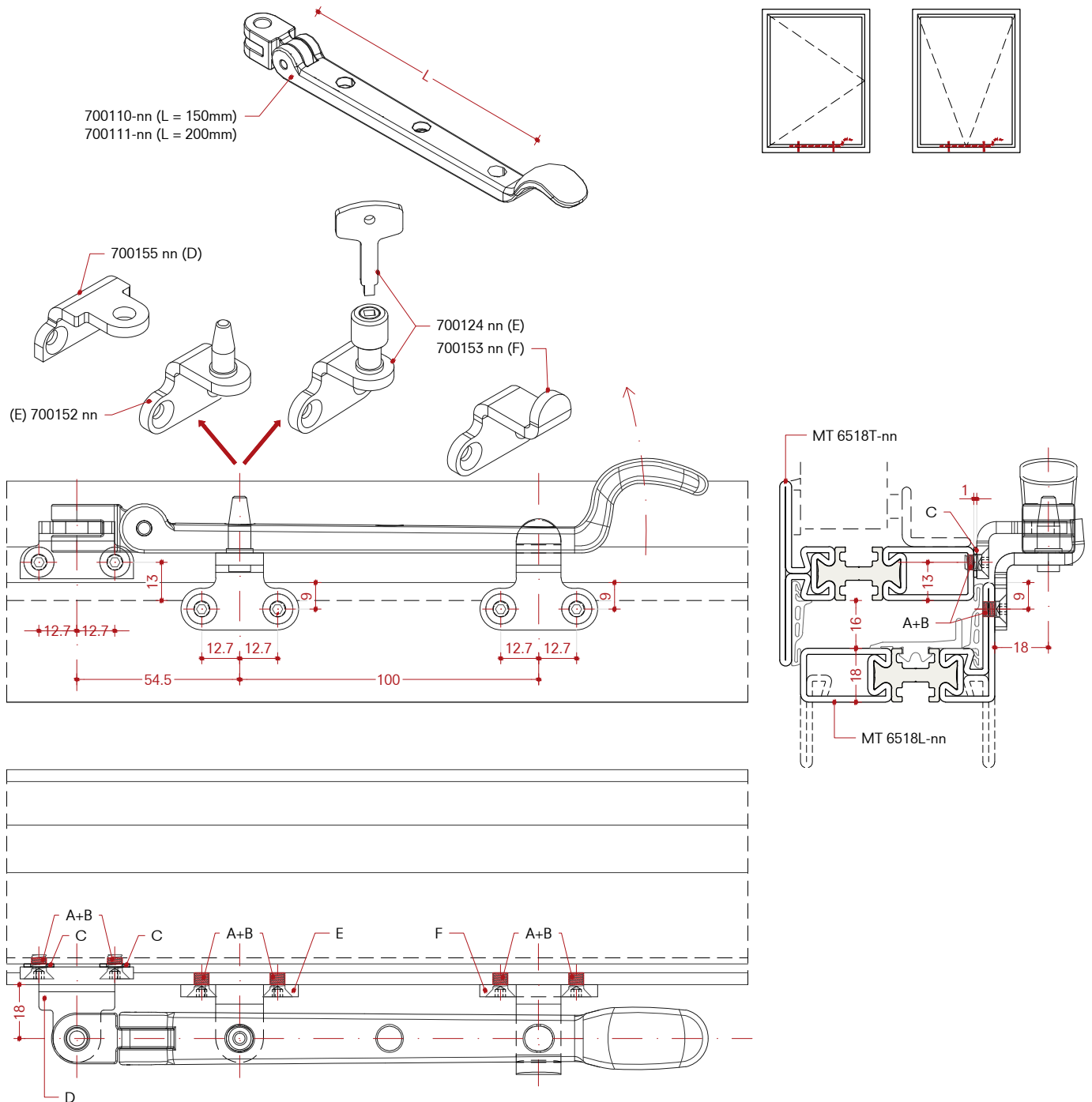
Peg stay - curved design  
700110 nn (L = 150)  
and 700111 nn (L = 200)  
Open out

### Einbau

Feststellarm gebogene ausführung  
700110 nn (L = 150)  
und 700111 nn (L = 200)  
Nach außen öffnend

### Schéma de montage

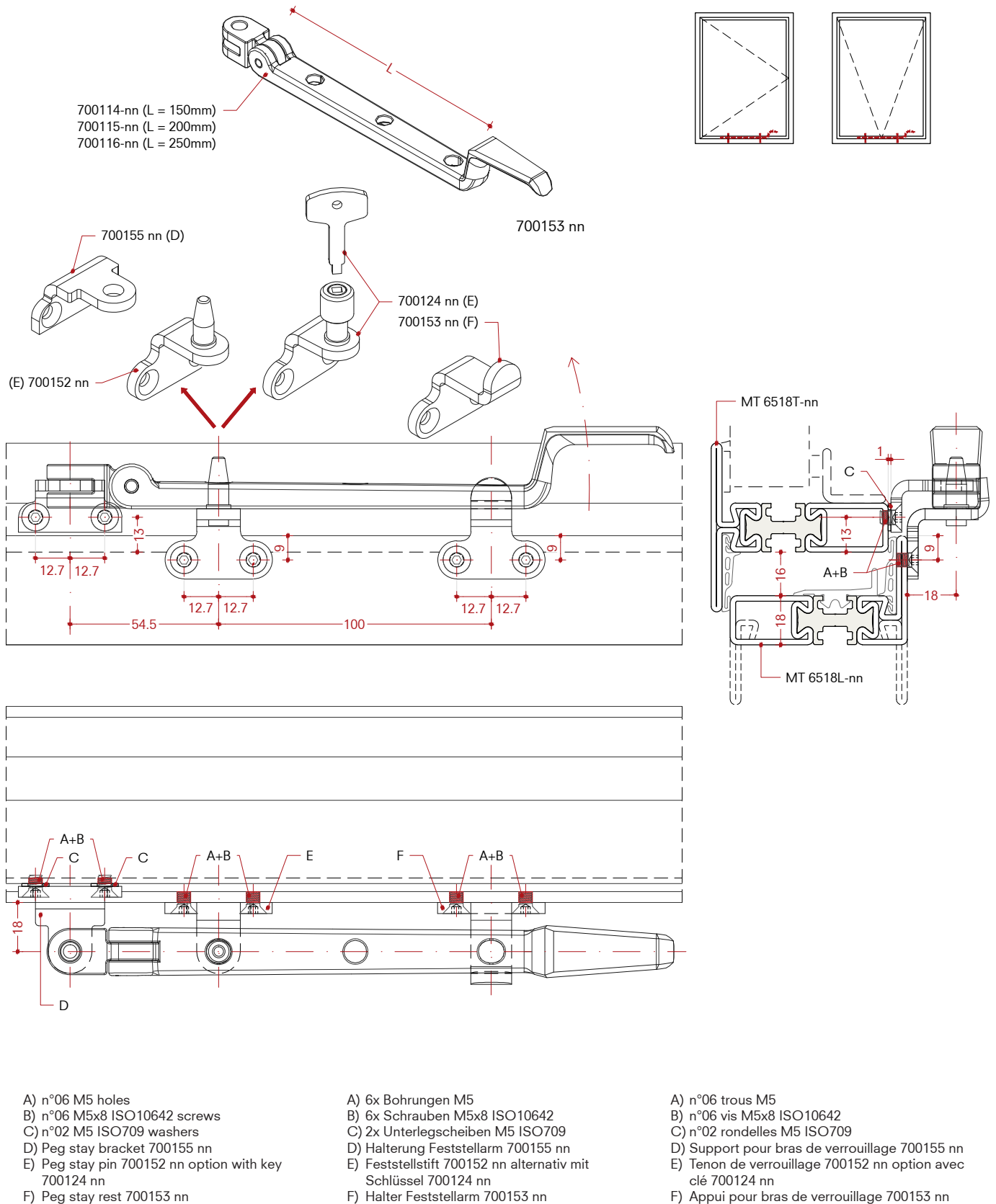
Bras de verrouillage - design courbé  
700110 nn (L = 150)  
et 700111 nn (L = 200)  
Ouverture extérieure



- A) n°06 M5 holes
- B) n°06 M5x8 ISO10642 screws
- C) n°02 M5 ISO709 washers
- D) Peg stay bracket 700155 nn
- E) Peg stay pin 700152 nn option with key 700124 nn
- F) Peg stay rest 700153 nn

- A) 6x Bohrungen M5
- B) 6x Schrauben M5x8 ISO10642
- C) 2x Unterlegscheiben M5 ISO709
- D) Halterung Feststellarm 700155 nn
- E) Feststellstift 700152 nn alternativ mit Schlüssel 700124 nn
- F) Halter Feststellarm 700153 nn

- A) n°06 trous M5
- B) n°06 vis M5x8 ISO10642
- C) n°02 rondelles M5 ISO709
- D) Support pour bras de verrouillage 700155 nn
- E) Tenon de verrouillage 700152 nn option avec clé 700124 nn
- F) Appui pour bras de verrouillage 700153 nn





**Accessories installation:**

**Locks**

**Montage Zubehör:**

**Schlösser**

**Montage accessoires:**

**Serrures**

**5.11**

### Installation

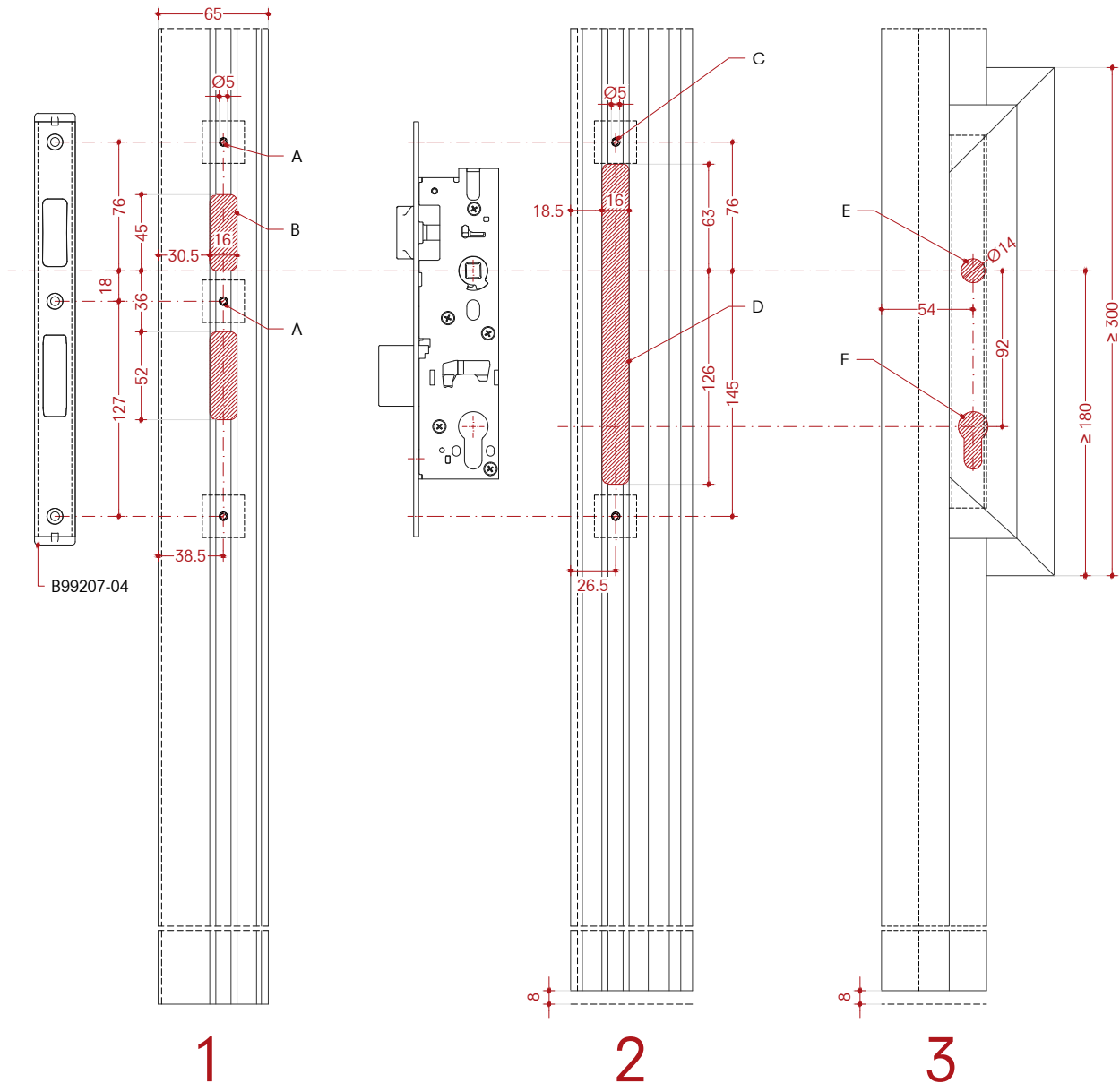
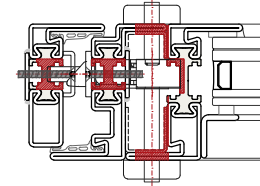
Lock B99016-02  
with locking box MT 7218ZF-nn  
Open in door

### Einbau

Fallen-Riegel-Schloss B99016-02  
mit Schlosskasten MT 7218ZF- nn  
Tür nach innen öffnend

### Schéma de montage

Serrure B99016-02  
avec boîte de verrouillage MT 7218ZF-nn  
Porte ouverture intérieure



Scale 1:4

- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

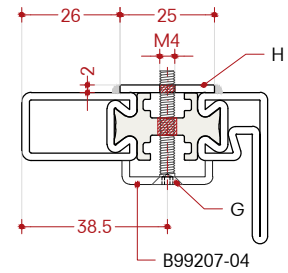
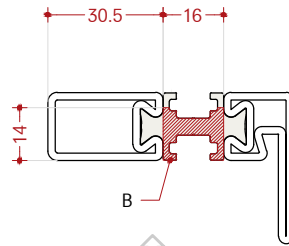
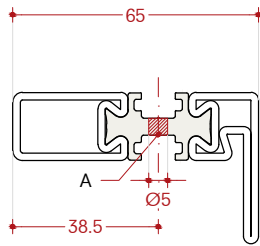
Maßstab 1:4

- A) Bohrungen Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilylinder

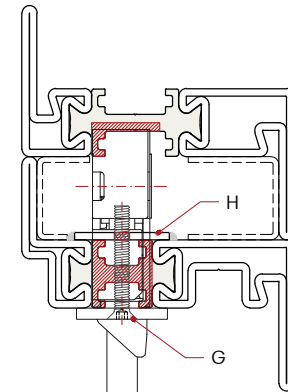
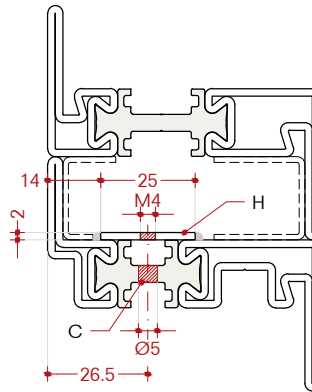
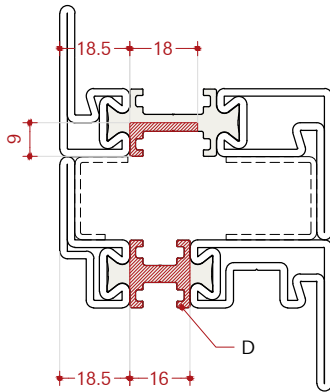
Échelle 1:4

- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés

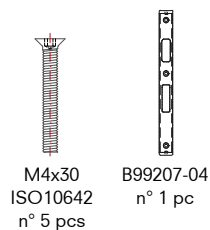
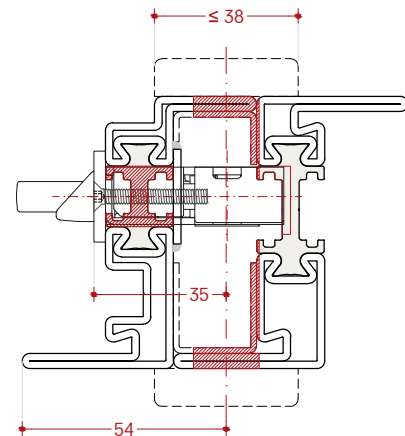
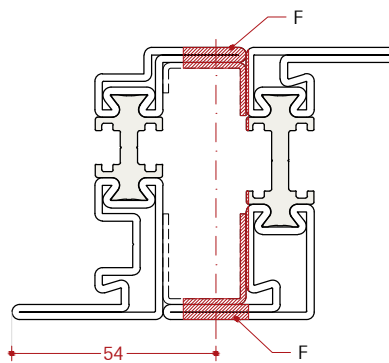
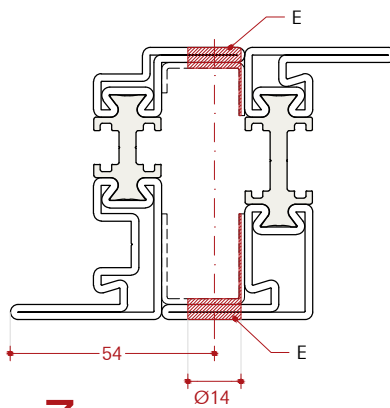
1



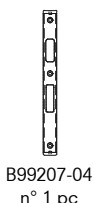
2



3



M4x30  
ISO10642  
n° 5 pcs



B99207-04  
n° 1 pc

- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling
- G) Fastening with M4x30 ISO10642 screws
- H) M4 holes on 25x25x2 mm plate (not provided)

- A) Bohrungen Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Druckerbohrung Ø14 mm
- F) Fräsung Profilzylinder
- G) Befestigung mit M4x30 ISO10642
- H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)

- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés
- G) Montage avec des vis M4x30 ISO10642
- H) Trous M4 sur 25x25x2 mm plat (non inclus)

### Installation

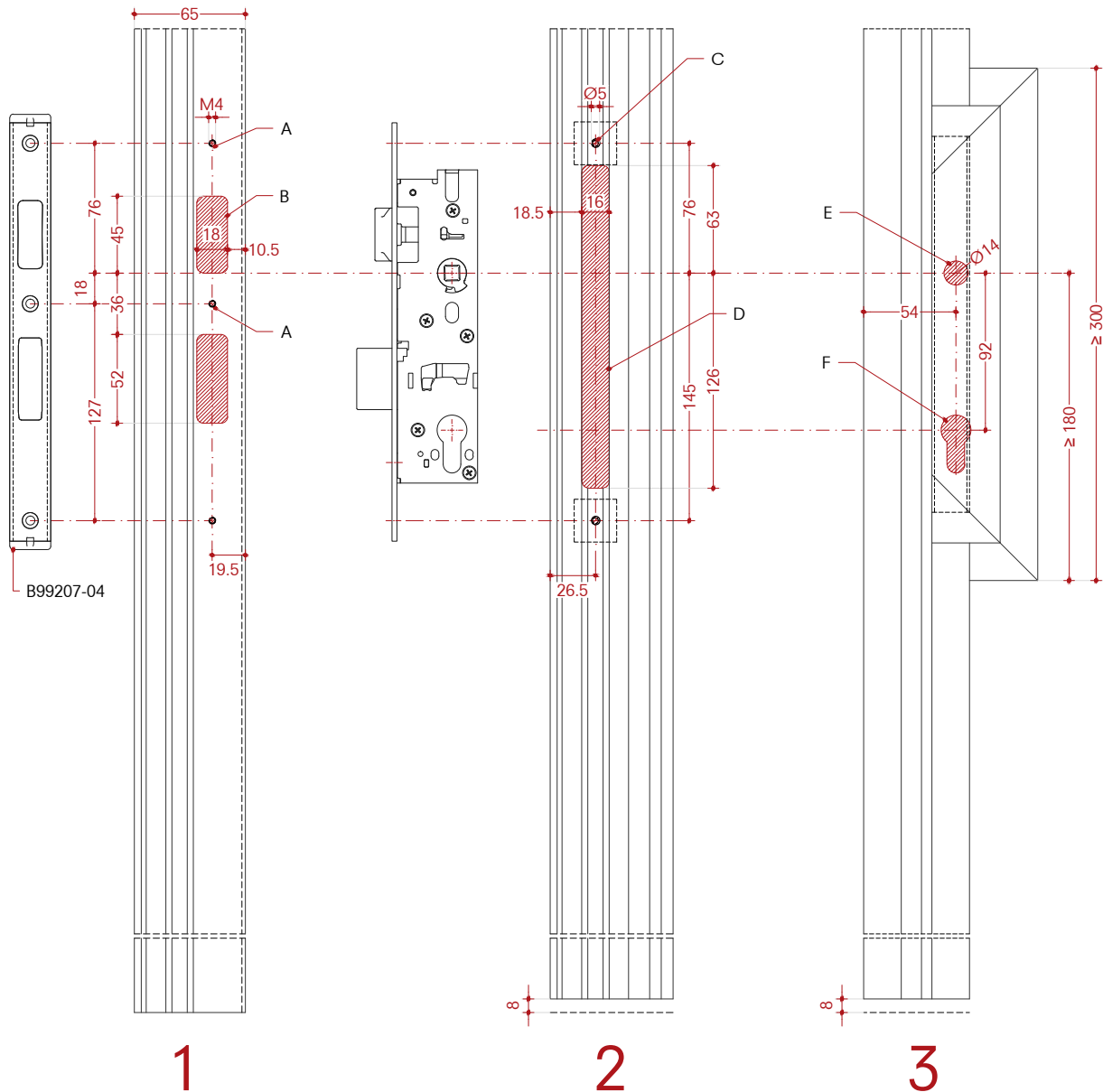
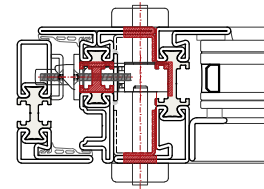
Lock B99016-02  
with locking box MT 7218ZF-nn  
Open out door

### Einbau

Fallen-Riegel-Schloss B99016-02  
mit Schlosskasten MT 7218ZF- nn  
Tür nach außen öffnend

### Schéma de montage

Serrure B99016-02  
avec boîte de verrouillage MT 7218ZF-nn  
Porte ouverture extérieure



Scale 1:4

- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

Maßstab 1:4

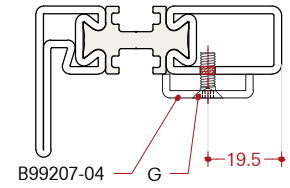
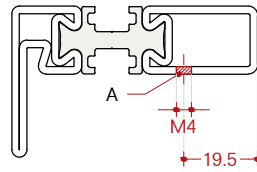
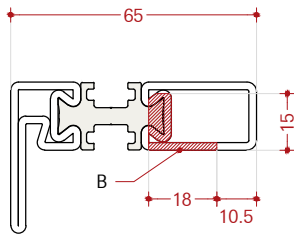
- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilylinder

Échelle 1:4

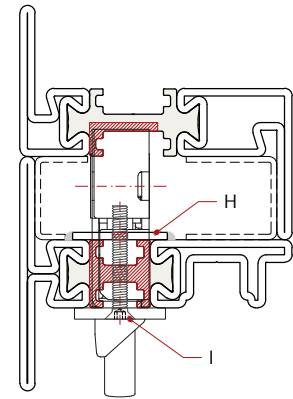
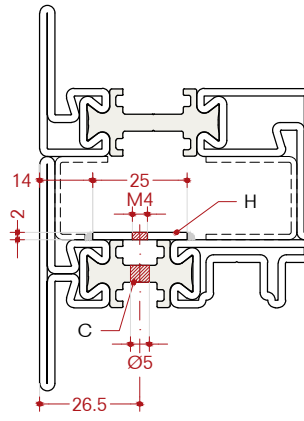
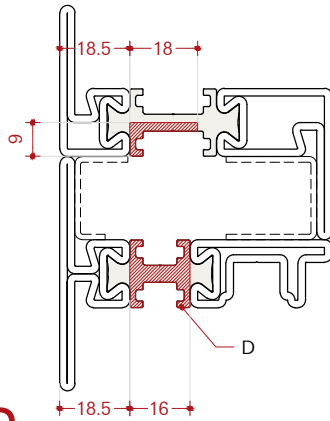
- A) Trou taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés



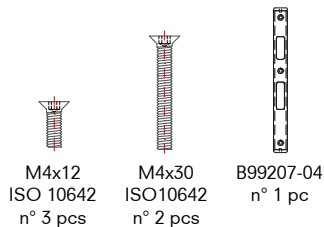
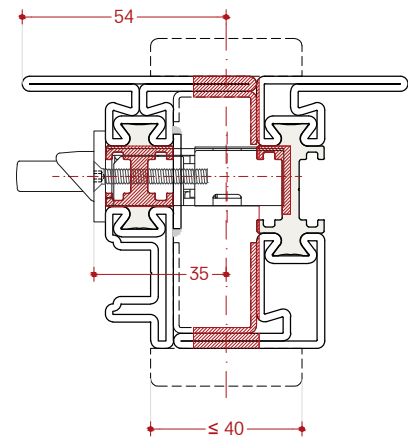
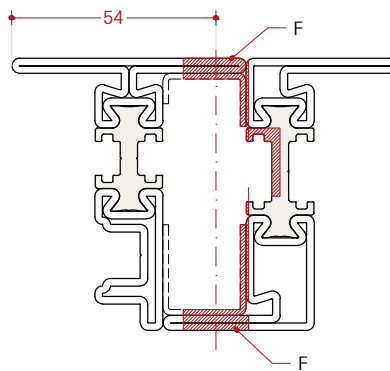
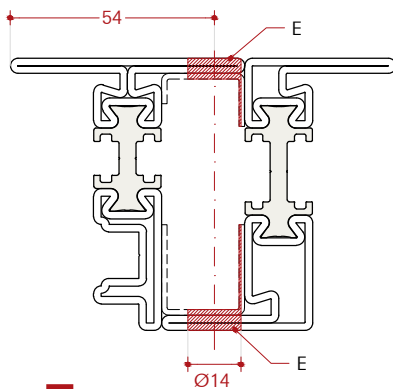
1



2



3



- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling
- G) Fastening with M4x12 ISO10642 screws
- H) M4 holes on 25x25x2 mm plate (not provided)
- I) Fastening with M4x30 ISO10642 screws

- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder
- G) Befestigung mit M4x12 ISO10642
- H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)
- I) Befestigung mit schrauben M4x30 ISO10642

- A) Trous taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés
- G) Montage avec des vis M4x12 ISO10642
- H) Trous M4 sur 25x25x2 mm plat (non inclus)
- I) Montage avec des vis M4x30 ISO10642

### Installation

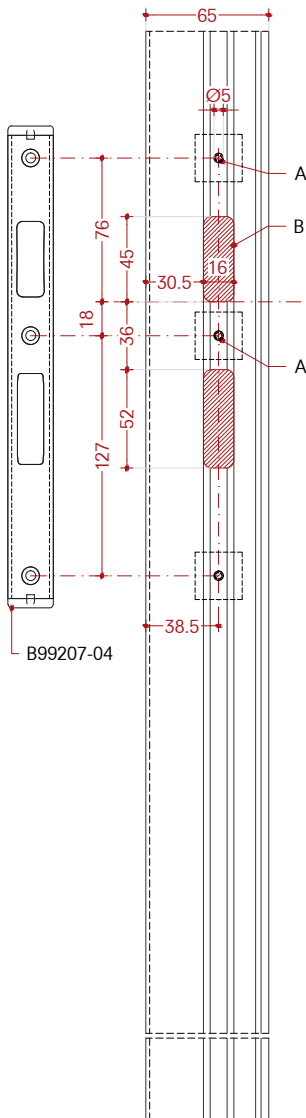
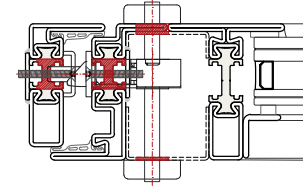
Lock B99016-02  
with locking box MT 7218TF-nn  
and additional brackets  
Open in door

### Einbau

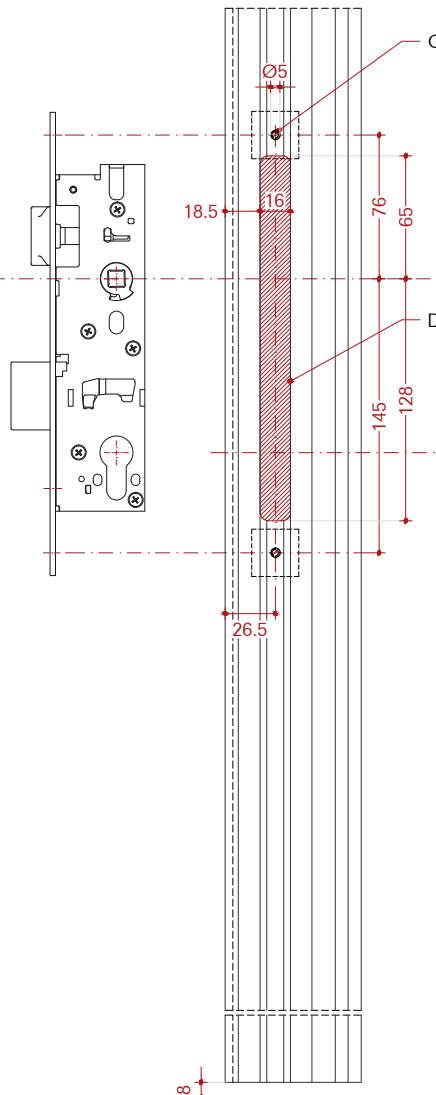
Fallen-Riegel-Schloss B99016-02  
mit Schlosskasten MT 7218TF- nn  
und Zusatzwinkel  
Tür nach innen öffnend

### Schéma de montage

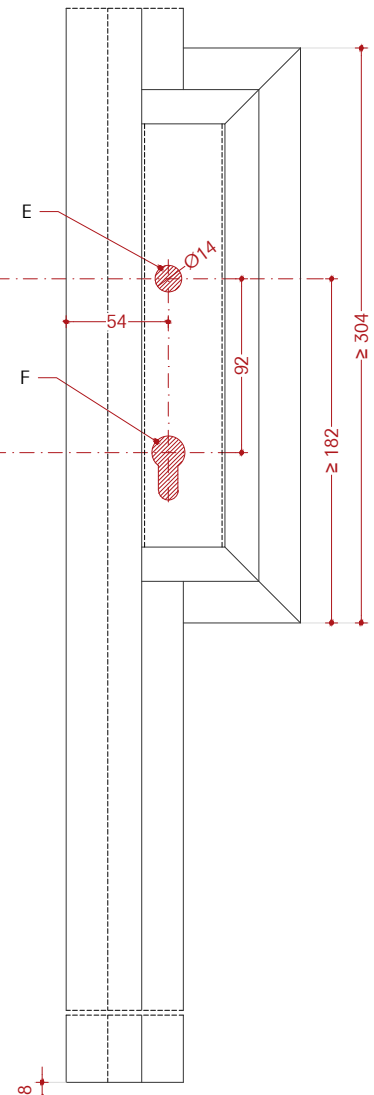
Serrure B99016-02  
avec boîte de verrouillage MT 7218TF-nn  
et corniers supplémentaires  
Porte ouverture intérieure



1



2



3

Scale 1:4

- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

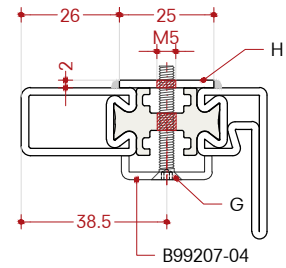
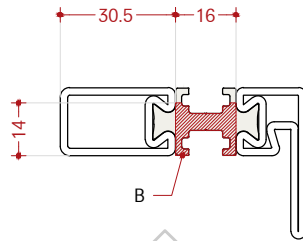
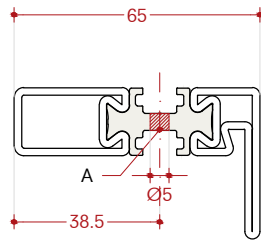
Maßstab 1:4

- A) Bohrungen Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilylinder

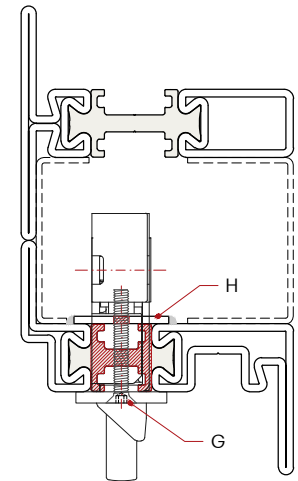
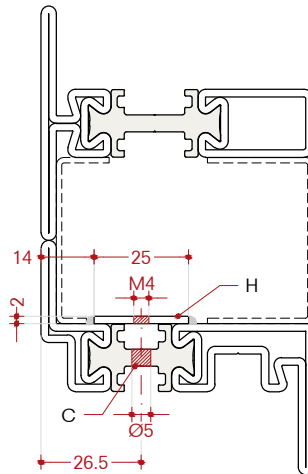
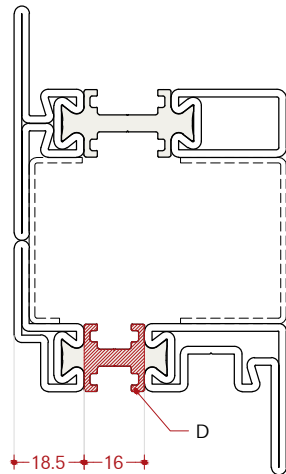
Échelle 1:4

- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés

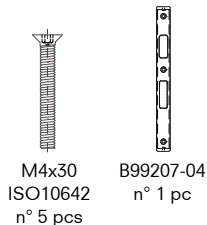
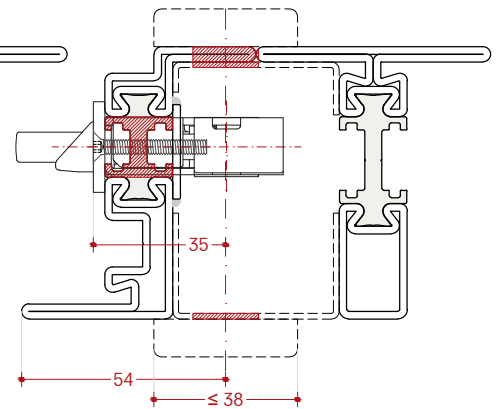
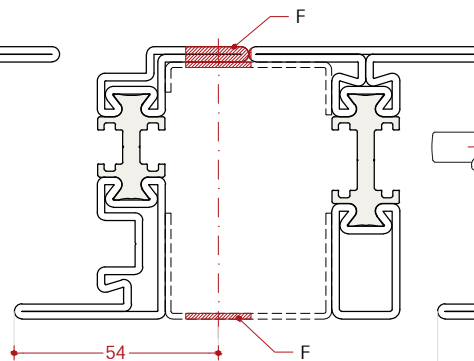
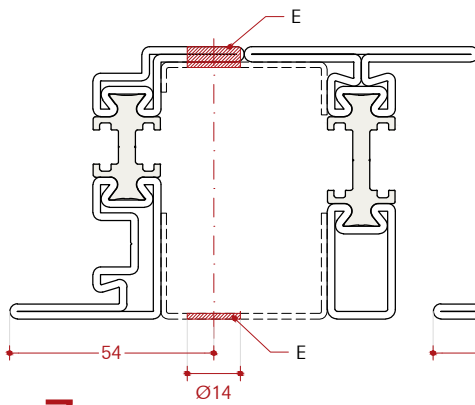
1



2



3



- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling
- G) Fastening with M4x30 ISO10642 screws
- H) M4 holes on 25x25x2 mm plate (not provided)

- A) Bohrung Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder
- G) Befestigung mit schrauben M4x30 ISO10642
- H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)

- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés
- G) Montage avec des vis M4x30 ISO10642
- H) Trous M4 sur 25x25x2 mm plat (non inclus)

### Installation

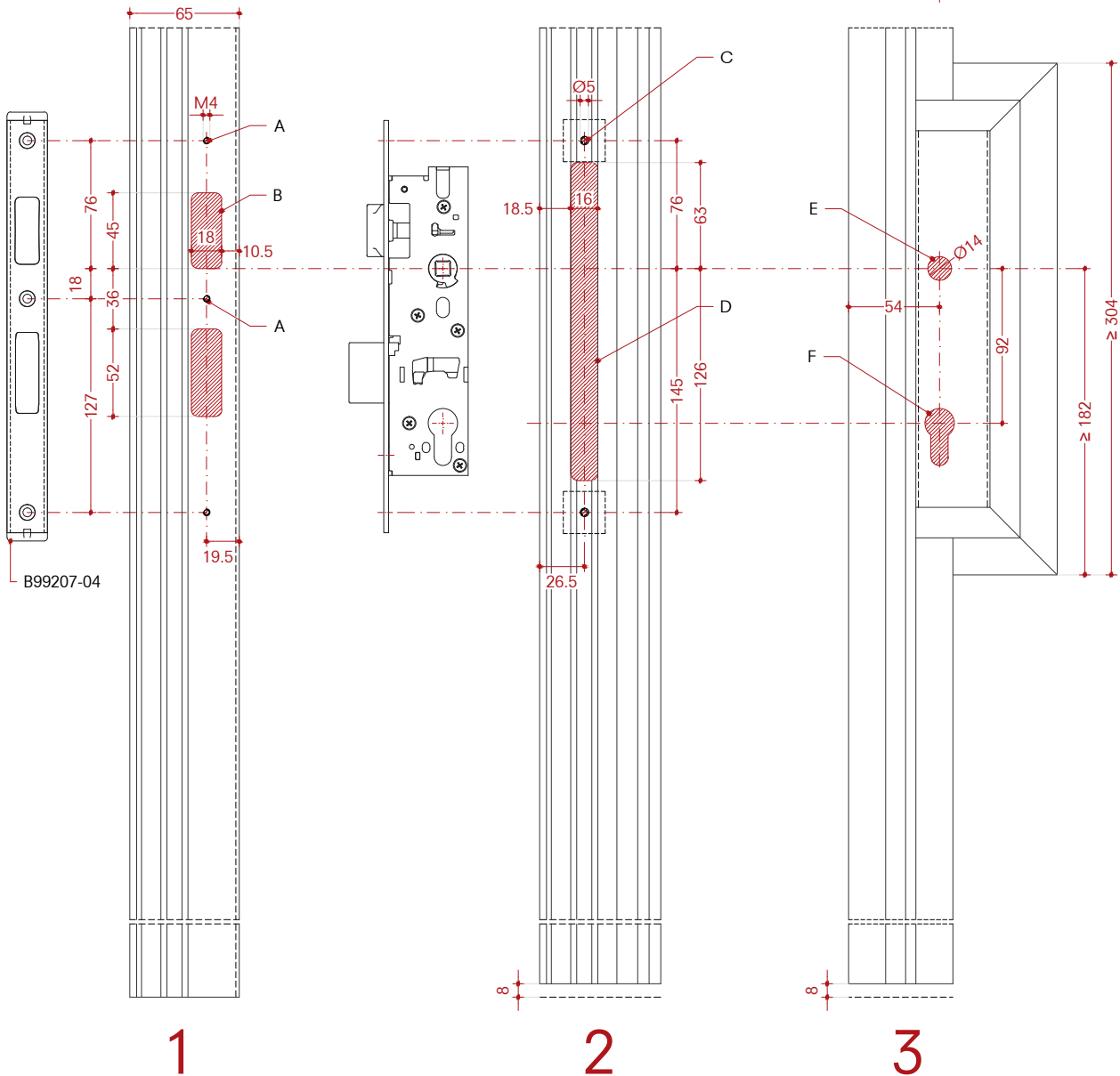
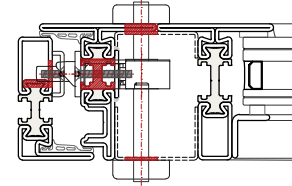
Lock B99016-02  
with locking box MT 7218TF-nn  
and additional brackets  
Open out door

### Einbau

Fallen-Riegel-Schloss B99016-02  
mit Schlosskasten MT 7218TF- nn  
und Zusatzwinkel  
Tür nach außen öffnend

### Schéma de montage

Serrure B99016-02  
avec boîte de verrouillage MT 7218TF-nn  
et corniers supplémentaires  
Porte ouverture extérieure



Scale 1:4

- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

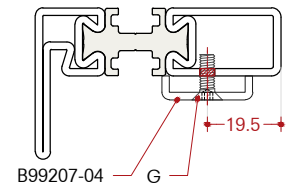
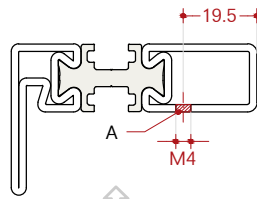
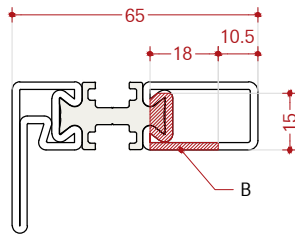
Maßstab 1:4

- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder

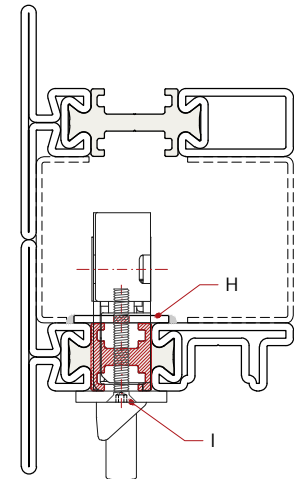
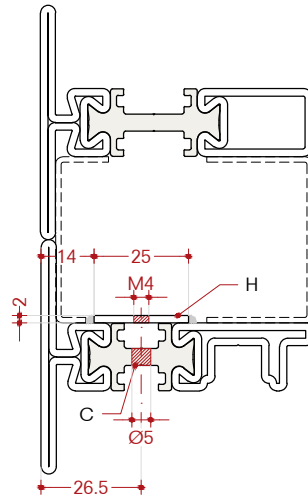
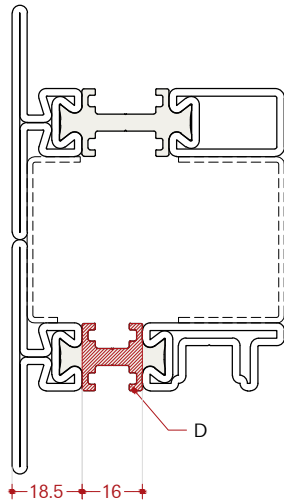
Échelle 1:4

- A) Troux taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Troux Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés

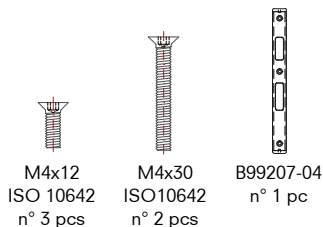
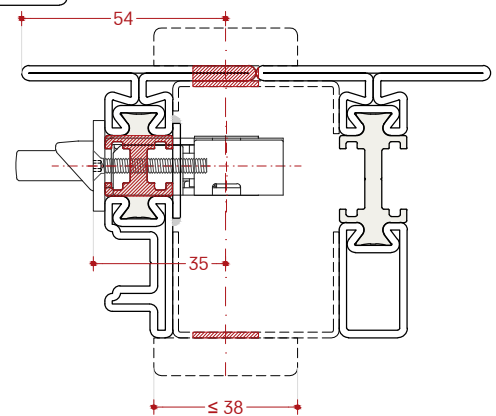
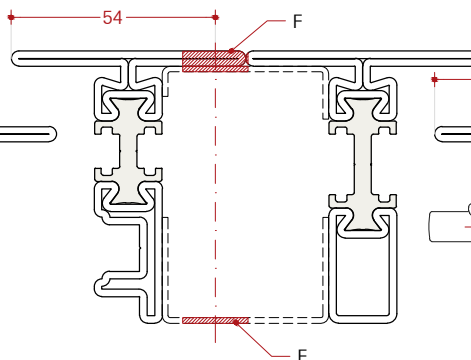
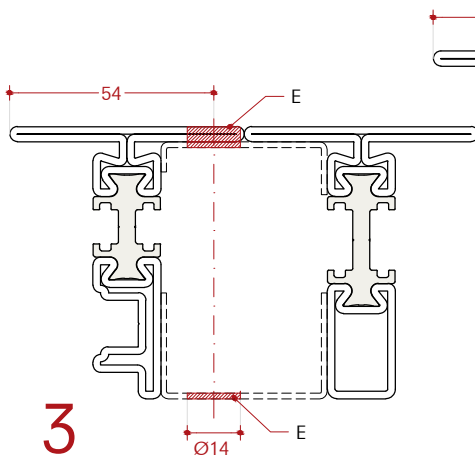
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2



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- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling
- G) Fastening with M4x12 ISO10642 screws
- H) M4 holes on 25x25x2 mm plate (not provided)
- I) Fastening with M4x30 ISO10642 screws

- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder
- G) Befestigung mit M4x12 ISO10642
- H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)
- I) Befestigung mit schrauben M4x30 ISO10642

- A) Trous taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés
- G) Montage avec des vis M4x12 ISO10642
- H) Trous M4 sur 25x25x2 mm plat (non inclus)
- I) Montage avec des vis M4x30 ISO10642

### Installation

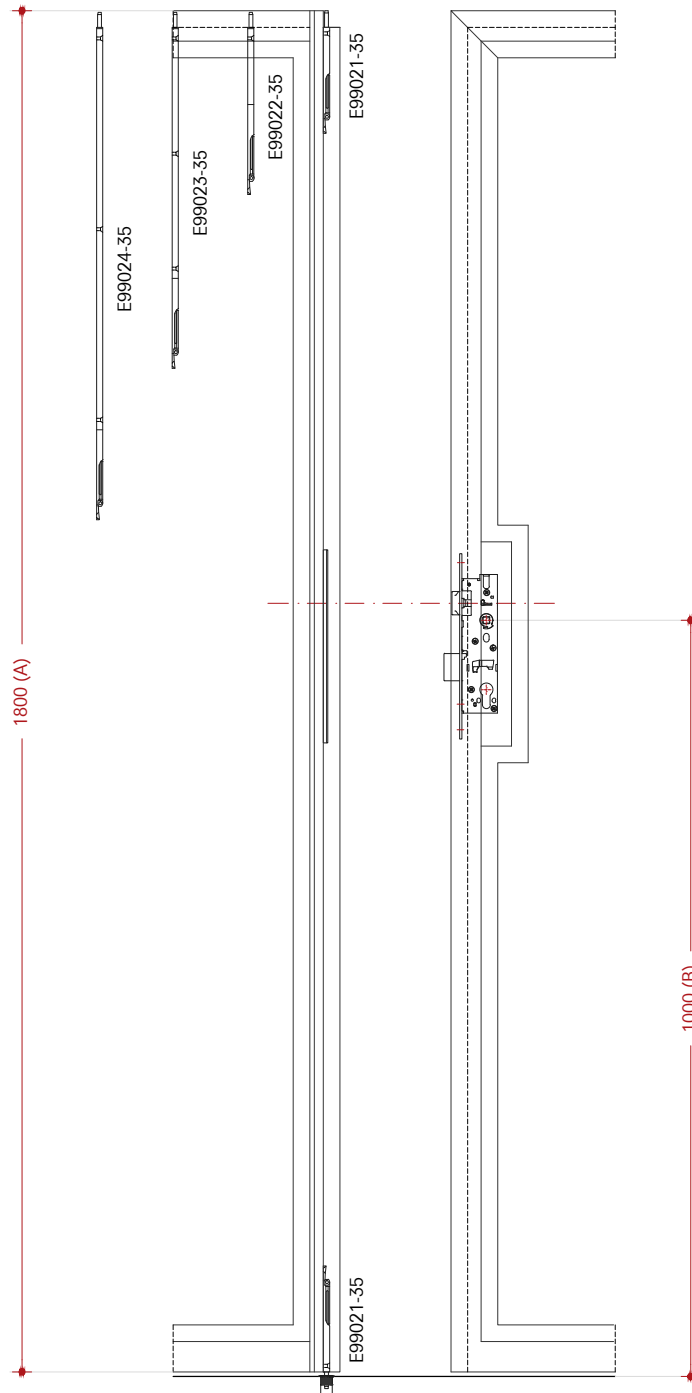
Flush bolt E9902X-35  
Lock B99016-02  
Double leaf door open in  
with locking box

### Einbau

Kantriegel E9902X-35  
Fallen-Riegel-Schloss B99016-02  
Zweiflüglige Anschlagtür nach innen  
öffnend mit Schlosstasche

### Schéma de montage

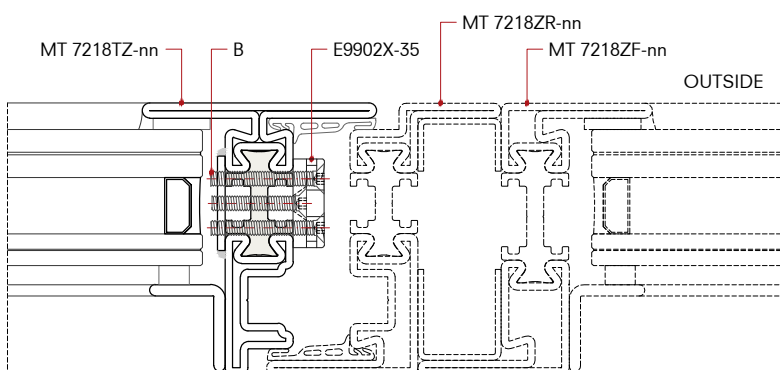
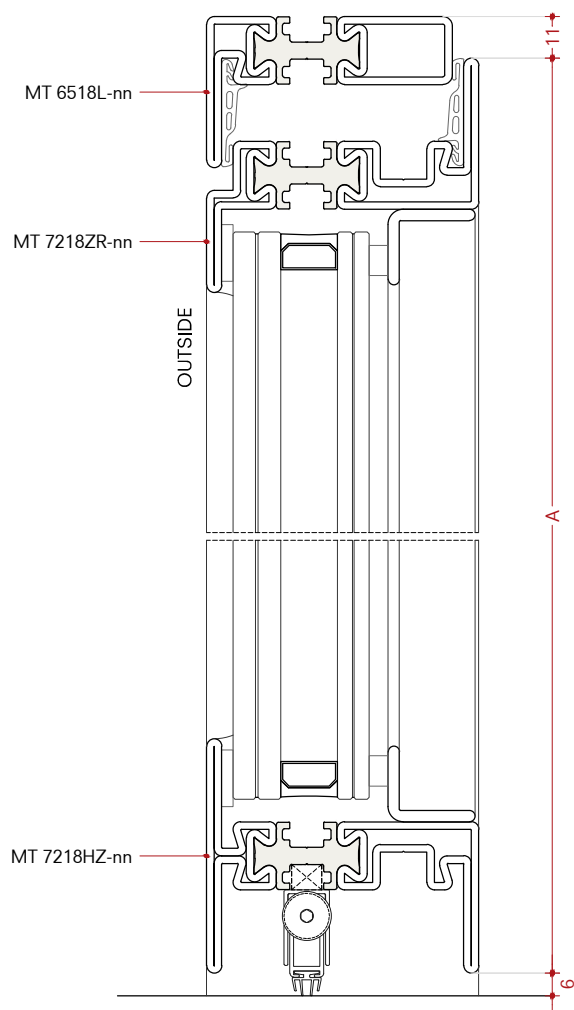
Verrou E9902X-35  
Serrure B99016-02  
Porte à deux vantaux ouvrant vers  
l'intérieur avec boîte pour la serrure



Scale 1:10  
A) Minimum height leaf  
B) Height handle

Maßstab 1:10  
A) Mindesthöhe Flügel  
B) Griffsitz Mittig

Échelle 1:10  
A) Hauteur minimale du vantail  
B) Hauteur de la poignée



A) Height leaf  
B) Fastening with M4x30 mm ISO10642 screws  
and cut the screws

A) Höhe Flügel  
B) Befestigungsschrauben M4x30 mm ISO10642  
und Schraube kürzen

A) Hauteur du vantail  
B) Fixation avec vis M4x30 mm ISO10642 et  
couper les vis

### Installation

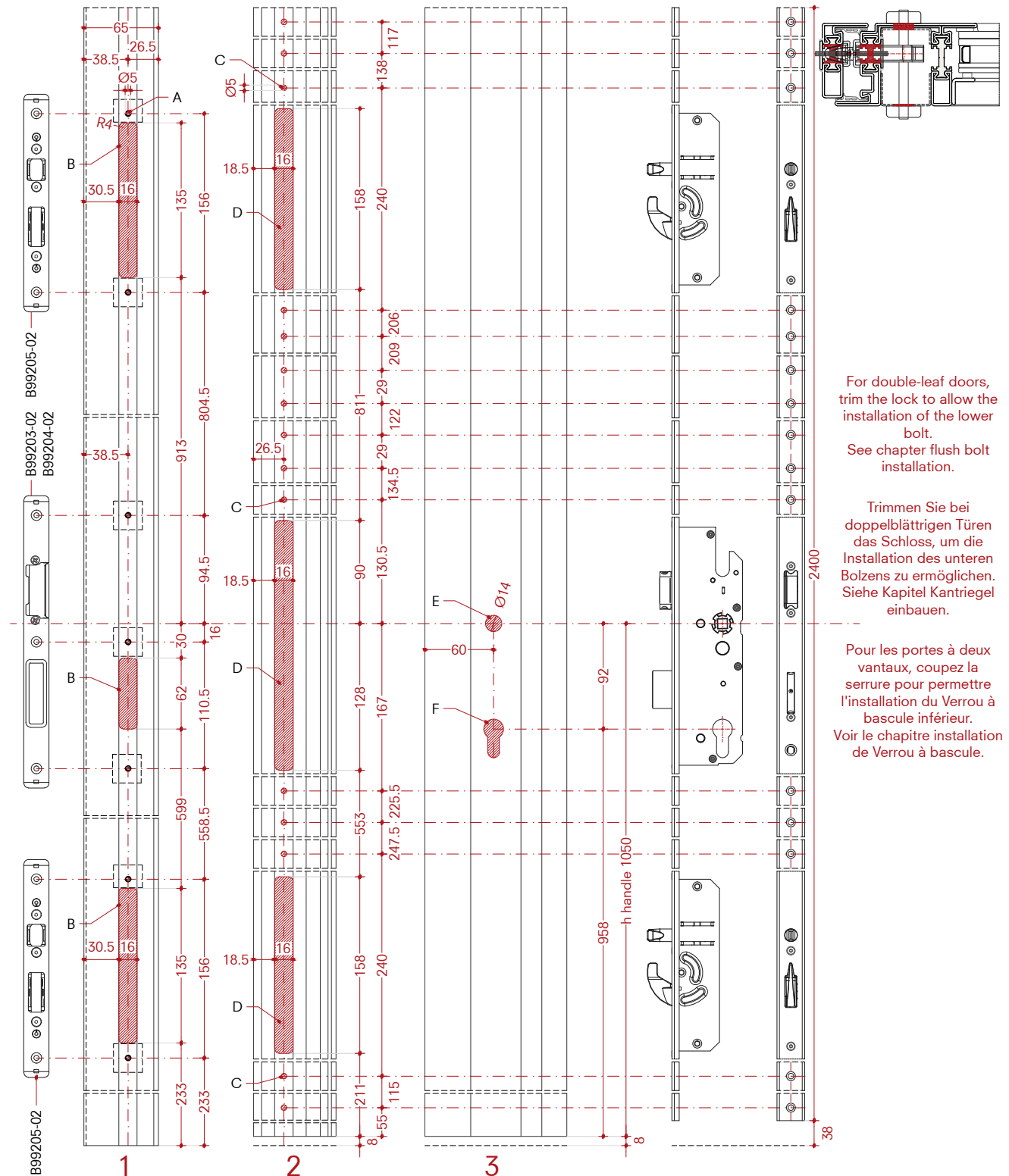
Lock B99172-02 with full height additional profile MT 7218TF-nn  
Open in door

### Einbau

Mehrfachverriegelung B99172-02 mit Schlossverbreiterung in voller Höhe  
MT 7218TF-nn - Tür nach innen öffnend

### Schéma de montage

Serrure B99172-02 avec profilé de doublage pour serrure toute hauteur  
MT 7218TF-nn - Porte ouverture intérieure



For double-leaf doors, trim the lock to allow the installation of the lower bolt.  
See chapter flush bolt installation.

Trimmen Sie bei doppelblättrigen Türen das Schloss, um die Installation des unteren Bolzens zu ermöglichen.  
Siehe Kapitel Kantriegel einbauen.

Pour les portes à deux vantaux, coupez la serrure pour permettre l'installation du Verrou à bascule inférieur.  
Voir le chapitre installation de Verrou à bascule.

Scale 1:5

- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

Maßstab 1:5

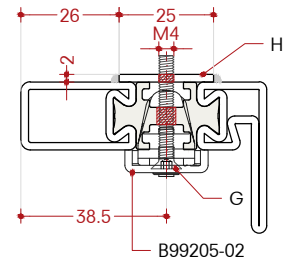
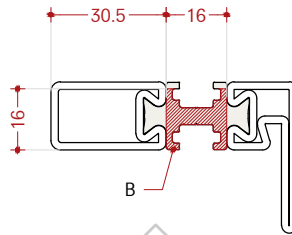
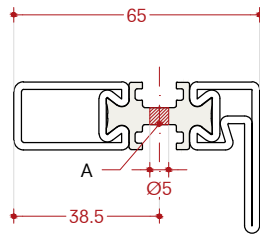
- A) Bohrungen Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilylinder

Échelle 1:5

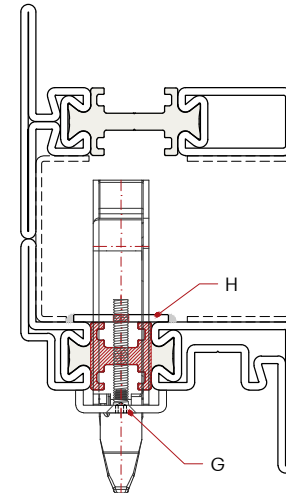
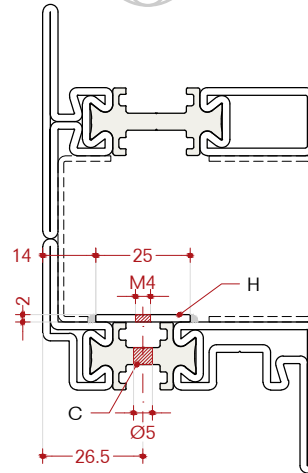
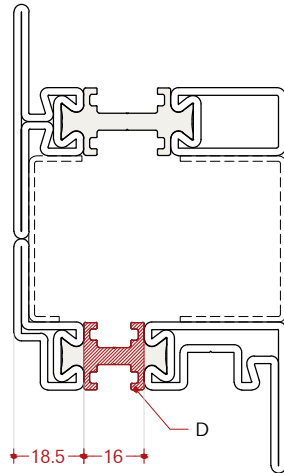
- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés



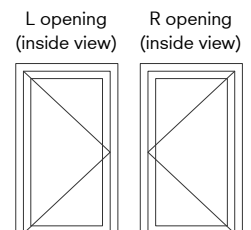
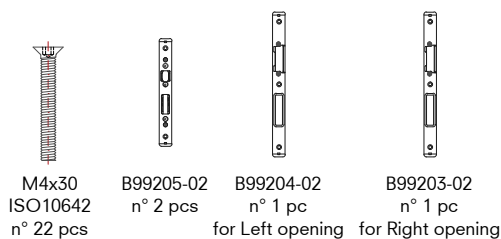
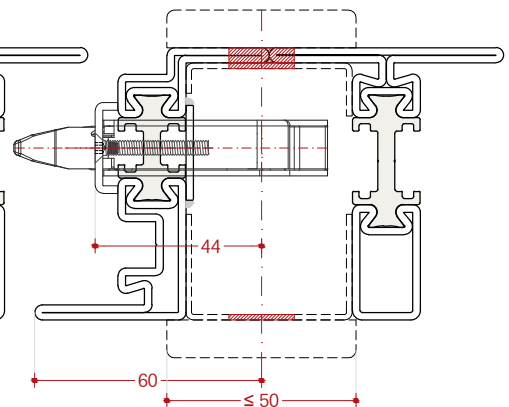
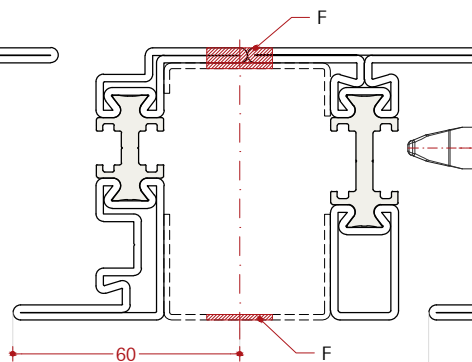
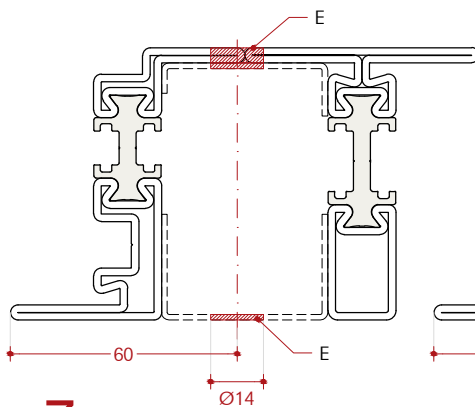
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- A) Holes Ø5 mm in door frame  
B) Cut-out in door frame  
C) Holes Ø5 mm in the door leaf  
D) Milling in the door leaf  
E) Lever handle bore Ø14 mm  
F) Profile cylinder milling  
G) Fastening with M4x30 ISO10642 screws  
H) M4 holes on 25x25x2 mm plate (not provided)

- A) Bohrungen Ø5 mm im Türrahmen  
B) Ausfräsung im Türrahmen  
C) Bohrungen Ø5 mm im Türflügel  
D) Ausfräsung im Türflügel  
E) Drückerbohrung Ø14 mm  
F) Fräsung Profilzylinder  
G) Befestigung mit schrauben M4x30 ISO10642  
H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)

- A) Trous Ø5 mm dans le cadre de la porte  
B) Fraisage dans le cadre de la porte  
C) Trous Ø5 mm dans le vantail de porte  
D) Fraisage dans le vantail de porte  
E) Alésage de la béquille Ø14 mm  
F) Fraisage de cylindres profilés  
G) Montage avec des vis M4x30 ISO10642  
H) Trous M4 sur 25x25x2 mm plat (non inclus)

### Installation

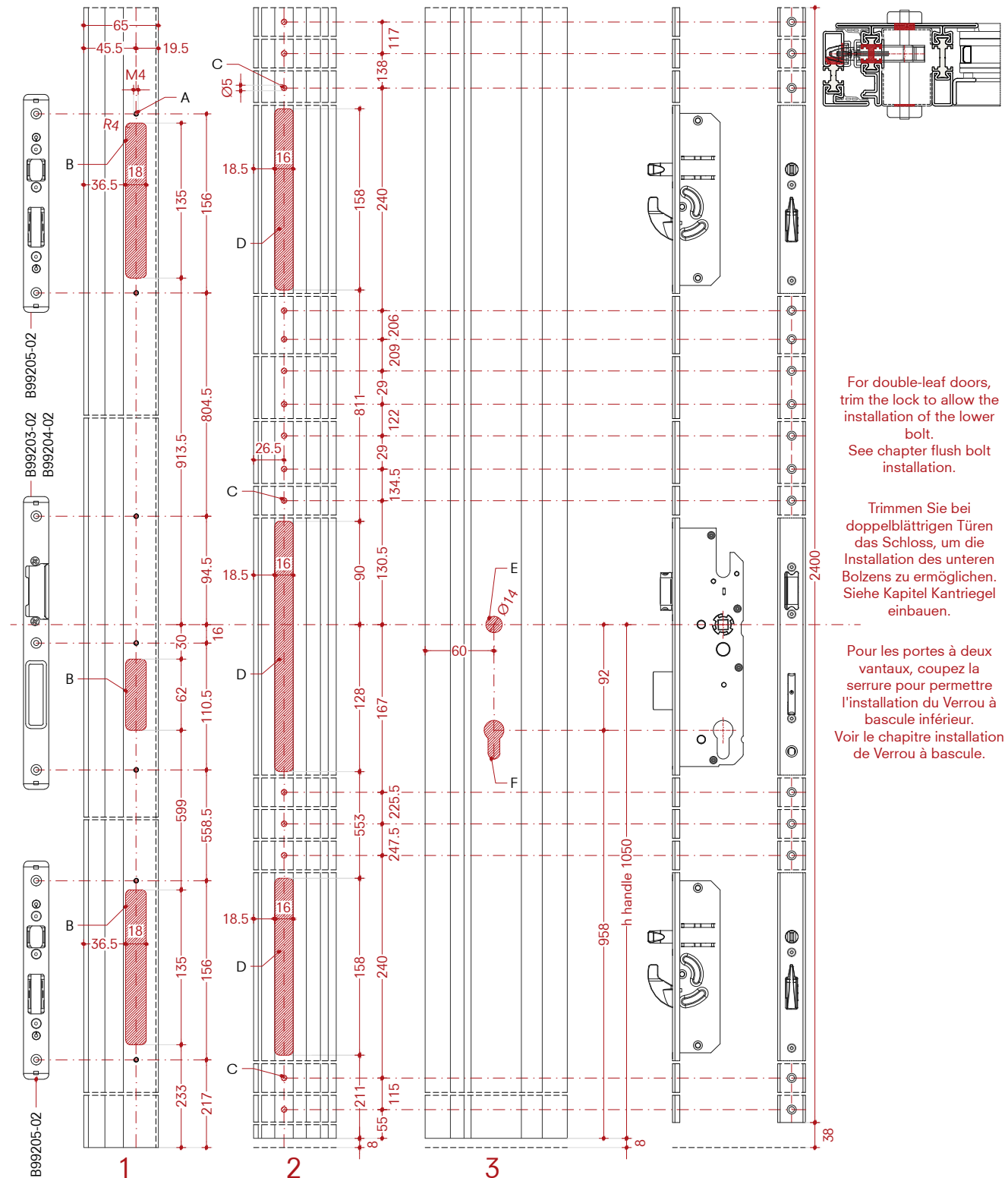
Lock B99172-02 with full height  
additional profile MT 7218TF-nn  
Open out door

### Einbau

Mehrfachverriegelung B99172-02 mit  
Schlossverbreiterung in voller Höhe  
MT 7218TF-nn - Tür nach außen öffnend

### Schéma de montage

Serrure B99172-02 avec profilé de  
doublage pour serrure toute hauteur  
MT 7218TF-nn - Porte ouverture extérieure



For double-leaf doors,  
trim the lock to allow the  
installation of the lower  
bolt.  
See chapter flush bolt  
installation.

Trimmen Sie bei  
doppelblättrigen Türen  
das Schloss, um die  
Installation des unteren  
Bolzens zu ermöglichen.  
Siehe Kapitel Kantriegel  
einbauen.

Pour les portes à deux  
vantaux, coupez la  
serrure pour permettre  
l'installation du Verrou à  
bascule inférieur.  
Voir le chapitre installation  
de Verrou à bascule.

Scale 1:5

- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

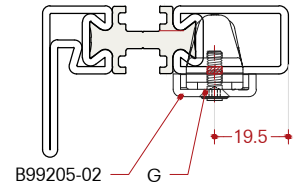
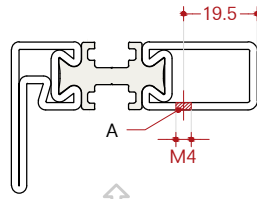
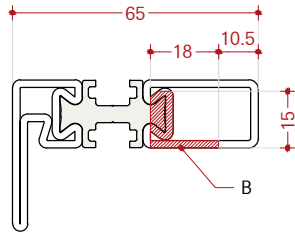
Maßstab 1:5

- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder

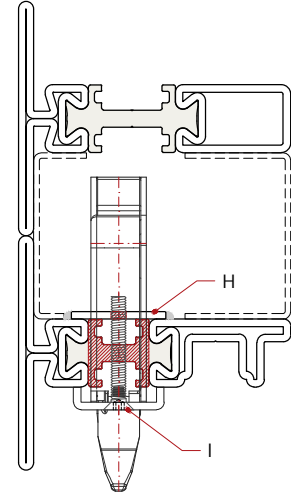
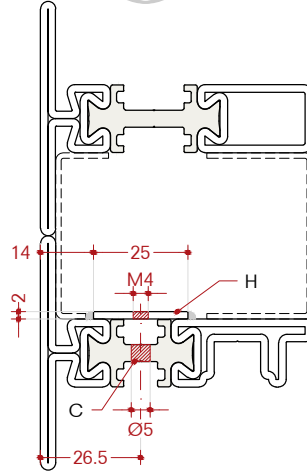
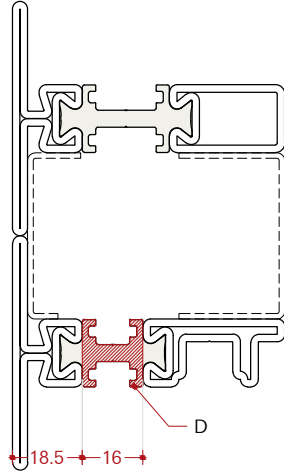
Échelle 1:5

- A) Trous taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés

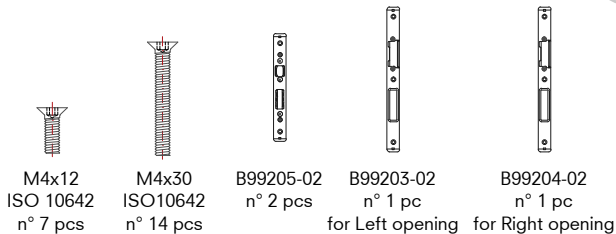
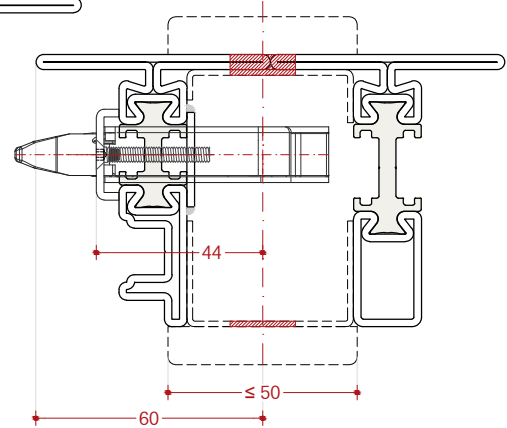
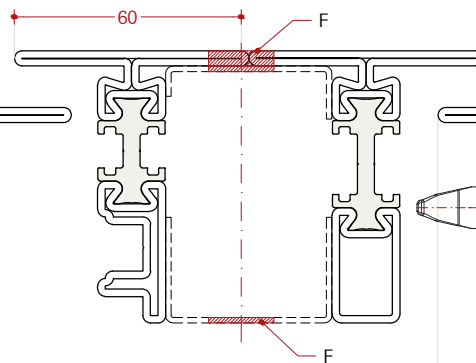
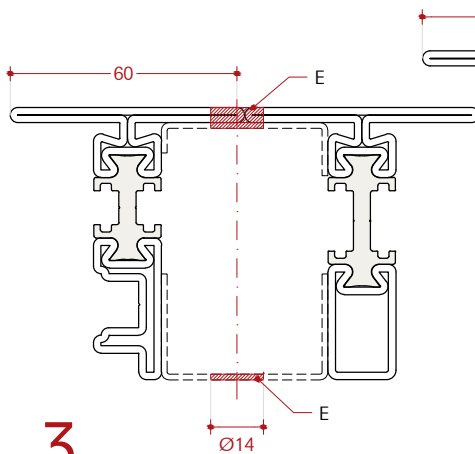
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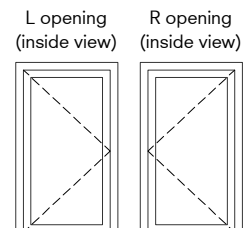
2



3



- A) Tapped hole M4 in door frame  
B) Cut-out in door frame  
C) Holes Ø5 mm in the door leaf  
D) Milling in the door leaf  
E) Lever handle bore Ø14 mm  
F) Profile cylinder milling  
G) Fastening with M4x12 ISO10642 screws  
H) M4 holes on 25x25x2 mm plate (not provided)  
I) Fastening with M4x30 ISO10642 screws
- A) Gewindebohrung M4 im Türrahmen  
B) Ausfräsung im Türrahmen  
C) Bohrungen Ø5 mm im Türflügel  
D) Ausfräsung im Türflügel  
E) Drückerbohrung Ø14 mm  
F) Fräsung Profilzylinder  
G) Befestigung mit M4x12 ISO10642  
H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)  
I) Befestigung mit schrauben M4x30 ISO10642



- A) Trou taraudé M4 dans le cadre de la porte  
B) Fraisage dans le cadre de la porte  
C) Trous Ø5 mm dans le vantail de porte  
D) Fraisage dans le vantail de porte  
E) Alésage de la béquille Ø14 mm  
F) Fraisage de cylindres profilés  
G) Montage avec des vis M4x12 ISO10642  
H) Trous M4 sur 25x25x2 mm plat (non inclus)  
I) Montage avec des vis M4x30 ISO10642

Schéma de montage

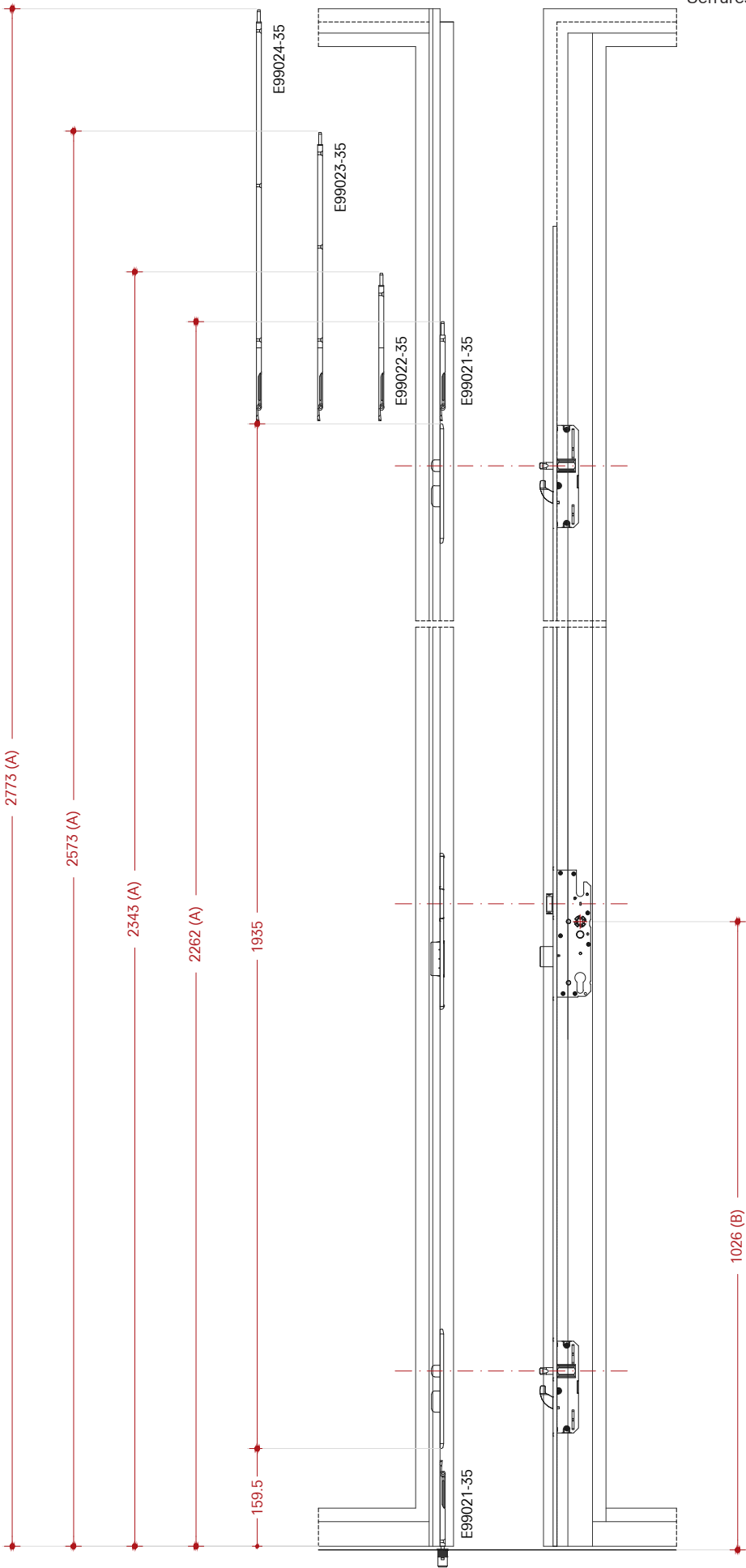
Verrou E9902X-35  
Serrure B99172-02  
Porte à deux vantaux ouvrant vers l'intérieur avec élargissement sur toute la hauteur côté serrure

Einbau

Kantriegel E9902X-35  
Fallen-Riegel-Schloss B99172-02  
Zweiflüglige Anschlagtür nach innen öffnend mit durchgehender Verbreiterung Schlossseite

Installation

Flush bolt E9902X-35  
Lock B99172-02  
Double leaf door open in with widening on complete height on lock side



Scale 1:10

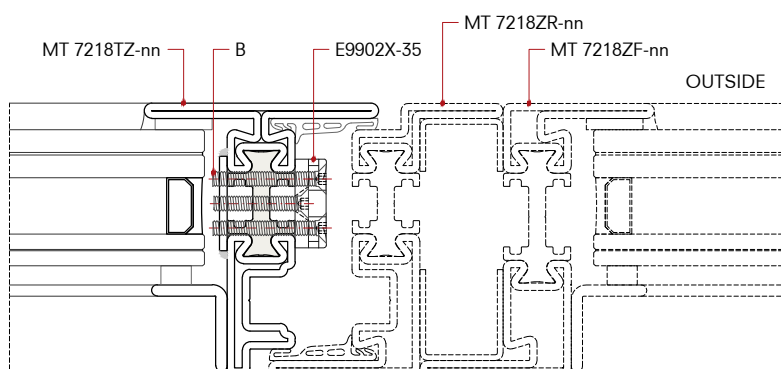
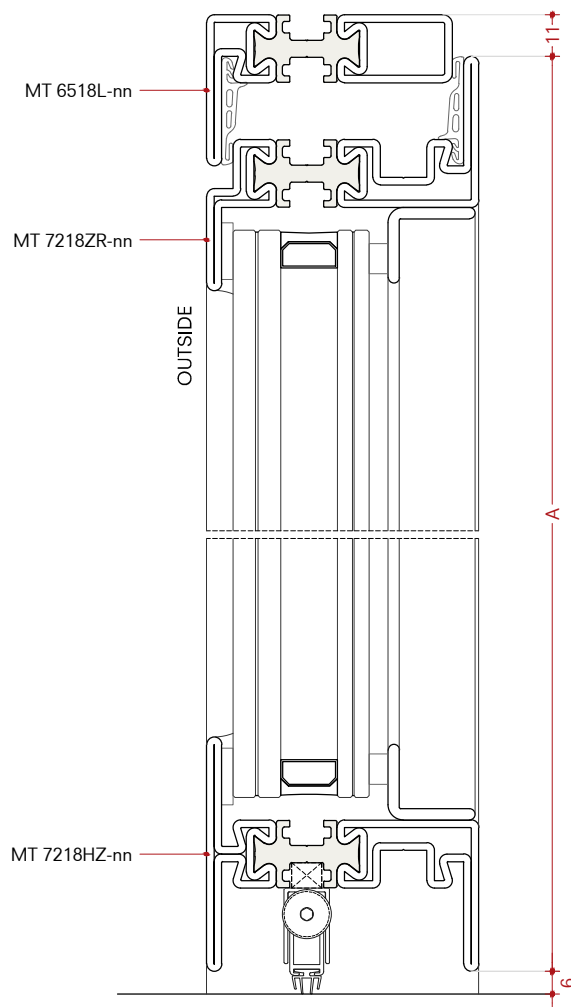
A) Minimum height leaf  
B) Height handle

Maßstab 1:10

A) Mindesthöhe Flügel  
B) Griffsitz Mittig

Échelle 1:10

A) Hauteur minimale du vantail  
B) Hauteur de la poignée



A) Height leaf  
B) Fastening with M4x30 mm ISO10642 screws  
and cut the screws

A) Höhe Flügel  
B) Befestigungsschrauben M4x30 mm ISO10642  
und Schraube kürzen

A) Hauteur du vantail  
B) Fixation avec vis M4x30 mm ISO10642 et  
couper les vis

Schéma de montage

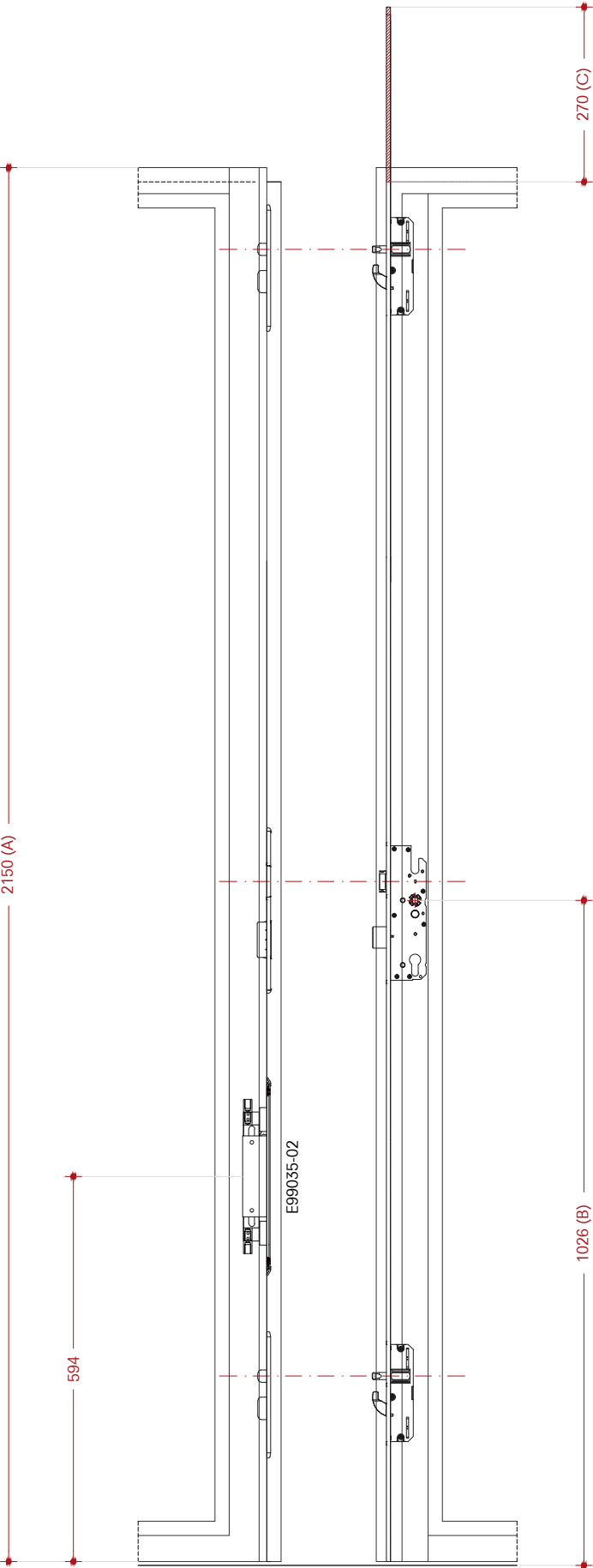
Verrou E99035-02  
Serrure B99172-02  
Porte à deux vantaux ouvrant vers  
l'extérieur avec élargissement sur  
toute la hauteur côté serrure

Einbau

Kantriegel E99035-02  
Fallen-Riegel-Schloss B99172-02  
Zweiflüglige Anschlagtür nach  
außen öffnend mit durchgehender  
Verbreiterung Schlossseite

Installation

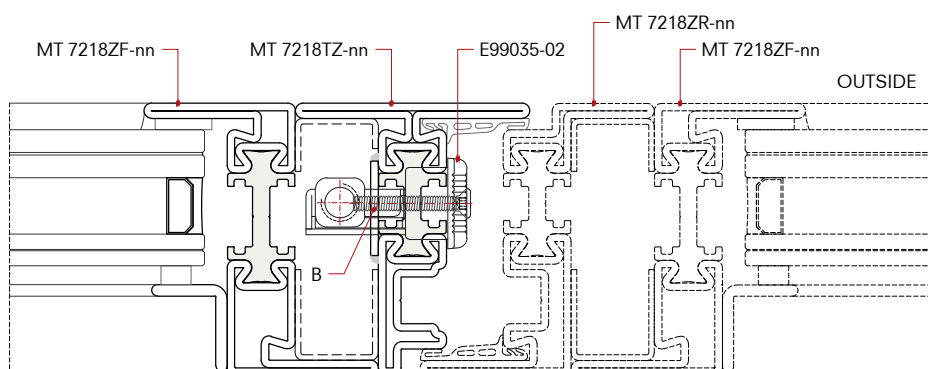
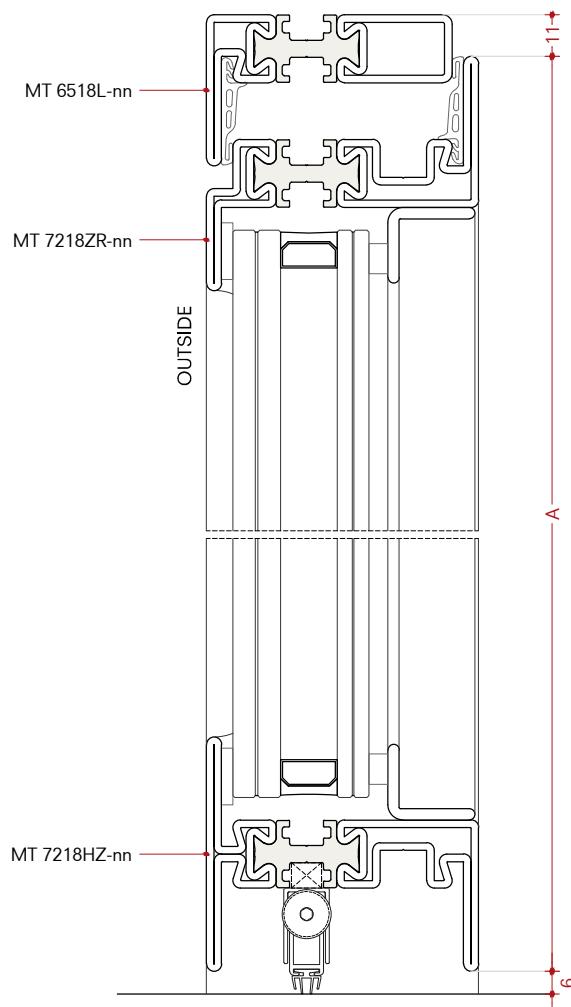
Flush bolt E99035-02  
Lock B99172-02  
Double leaf door open out  
with widening on complete height  
on lock side



Échelle 1:10  
A) Hauteur minimale du vantail  
B) Hauteur de la poignée  
C) Peut être raccourci

Maßstab 1:10  
A) Mindesthöhe Flügel  
B) Griffsitz Mittig  
C) Kann gekürzt werden

Scale 1:10  
A) Minimum height leaf  
B) Height handle  
C) Can be shortened



A) Height leaf  
B) Fastening with M4x30 mm ISO10642 screws  
and cut the screws

A) Höhe Flügel  
B) Befestigungsschrauben M4x30 mm ISO10642  
und Schraube kürzen

A) Hauteur du vantail  
B) Fixation avec vis M4x30 mm ISO10642 et  
couper les vis

## Installation

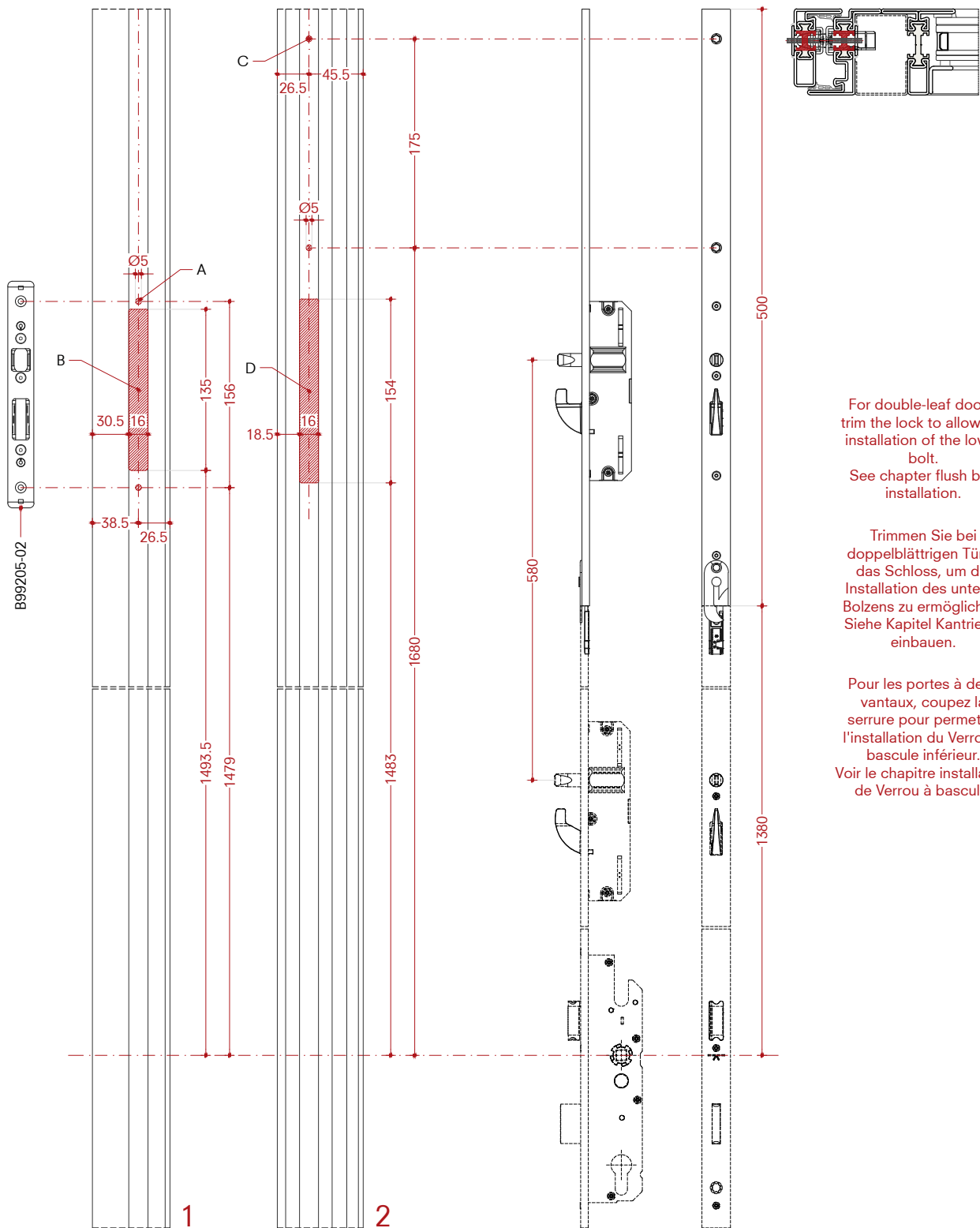
Lock B99169-02 with full height  
additional profile MT 7218TF-nn  
Open in door

## Einbau

Mehrfachverriegelung B99169-02 mit  
Schlossverbreiterung in voller Höhe  
MT 7218TF-nn - Tür nach innen öffnend

## Schéma de montage

Serrure B99169-02 avec profilé de  
doublage pour serrure toute hauteur  
MT 7218TF-nn - Porte ouverture intérieure



For double-leaf doors, trim the lock to allow the installation of the lower bolt.

See chapter flush bolt installation.

Trimmen Sie bei doppelblättrigen Türen das Schloss, um die Installation des unteren Bolzens zu ermöglichen. Siehe Kapitel Kantriegel einbauen.

Pour les portes à deux vantaux, coupez la serrure pour permettre l'installation du Verrou à bascule inférieur.  
Voir le chapitre installation de Verrou à bascule.

Scale 1:5

Scale 1:5

- A) Holes Ø5 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

Maßstab 1:5

Maßstab 1:5

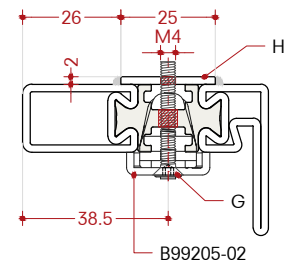
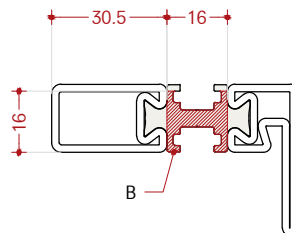
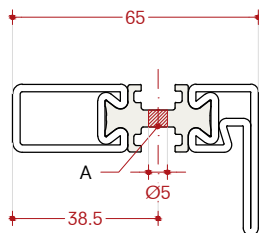
- A) Bohrungen Ø5 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilylinder

Échelle 1:5

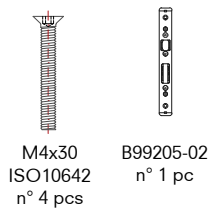
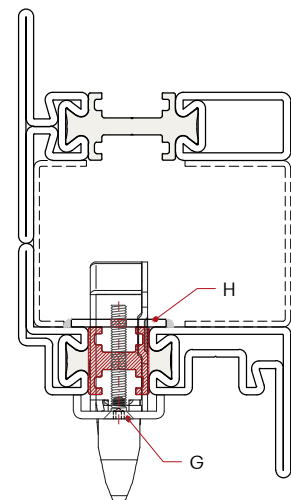
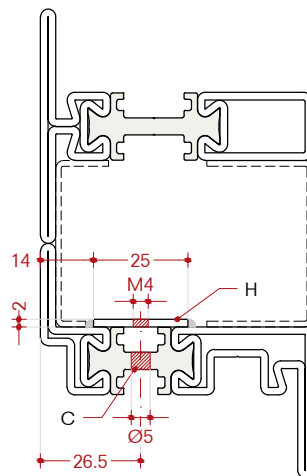
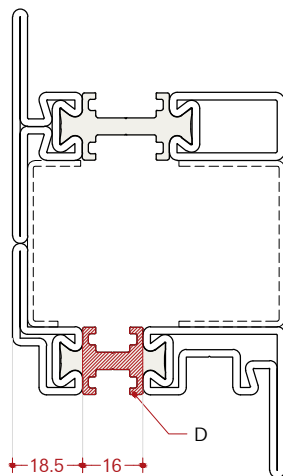
- A) Trous Ø5 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés



1



2



- A) Holes Ø5 mm in door frame  
B) Cut-out in door frame  
C) Holes Ø5 mm in the door leaf  
D) Milling in the door leaf  
E) Lever handle bore Ø14 mm  
F) Profile cylinder milling  
G) Fastening with M4x30 ISO10642 screws  
H) M4 holes on 25x25x2 mm plate (not provided)

- A) Bohrungen Ø5 mm im Türrahmen  
B) Ausfräsung im Türrahmen  
C) Bohrungen Ø5 mm im Türflügel  
D) Ausfräsung im Türflügel  
E) Drückerbohrung Ø14 mm  
F) Fräsung Profilzylinder  
G) Befestigung mit schrauben M4x30 ISO10642  
H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)

- A) Trous Ø5 mm dans le cadre de la porte  
B) Fraisage dans le cadre de la porte  
C) Trous Ø5 mm dans le vantail de porte  
D) Fraisage dans le vantail de porte  
E) Alésage de la béquille Ø14 mm  
F) Fraisage de cylindres profilés  
G) Montage avec des vis M4x30 ISO10642  
H) Trous M4 sur 25x25x2 mm plat (non inclus)

### Installation

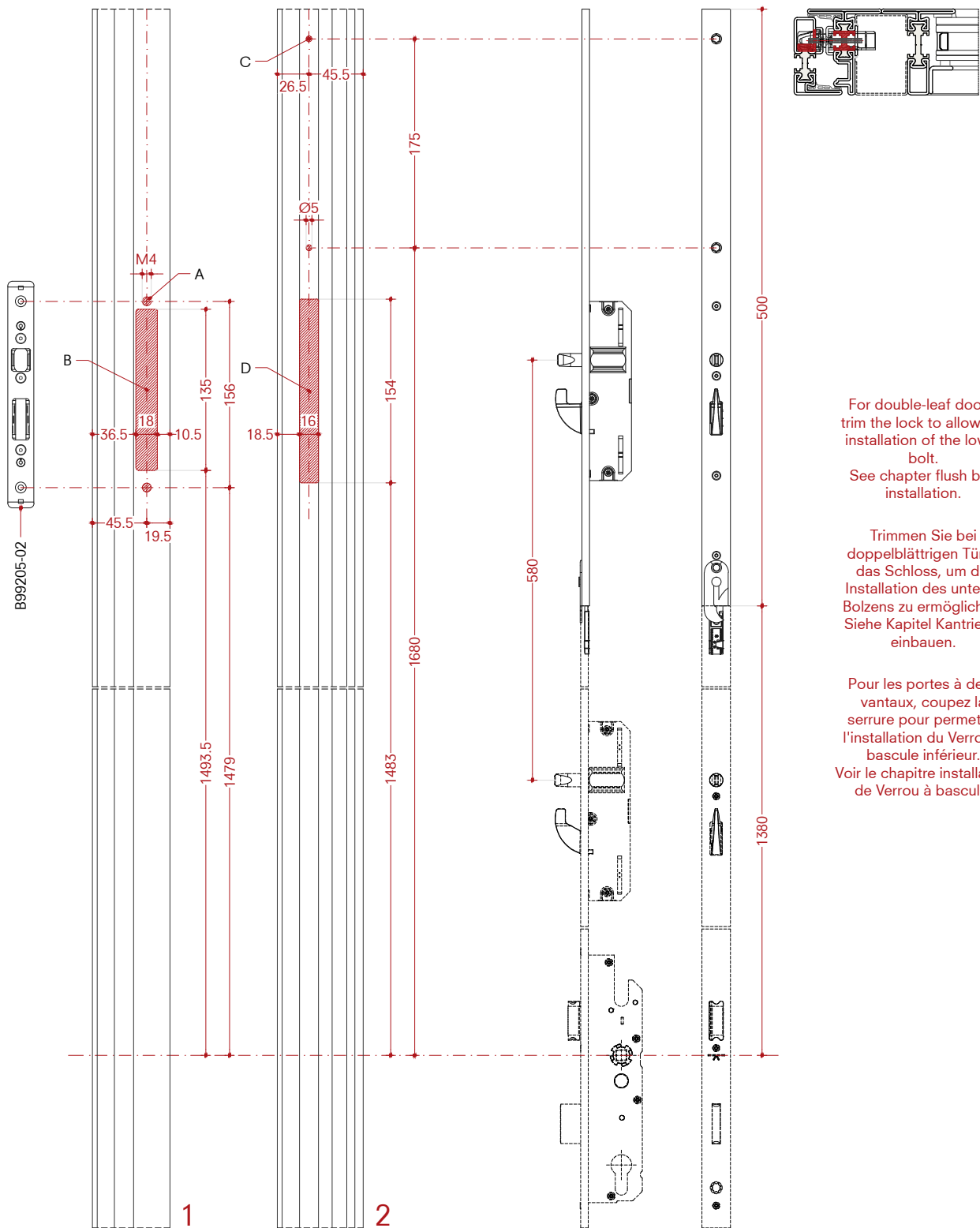
Lock B99169-02 with full height  
additional profile MT 7218TF-nn  
Open out door

### Einbau

Mehrfachverriegelung B99169-02 mit  
Schlossverbreiterung in voller Höhe  
MT 7218TF-nn - Tür nach außen öffnend

### Schéma de montage

Serrure B99169-02 avec profilé de  
doublage pour serrure toute hauteur  
MT 7218TF-nn - Porte ouverture extérieure



For double-leaf doors,  
trim the lock to allow the  
installation of the lower  
bolt.  
See chapter flush bolt  
installation.

Trimmen Sie bei  
doppelblättrigen Türen  
das Schloss, um die  
Installation des unteren  
Bolzens zu ermöglichen.  
Siehe Kapitel Kantriegel  
einbauen.

Pour les portes à deux  
vantaux, coupez la  
serrure pour permettre  
l'installation du Verrou à  
bascule inférieur.  
Voir le chapitre installation  
de Verrou à bascule.

Scale 1:5

- A) Holes M4 mm in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling

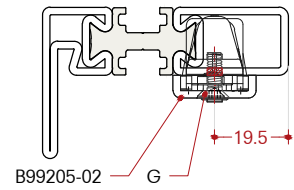
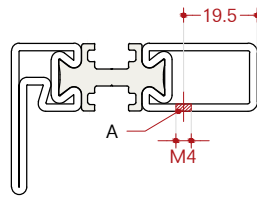
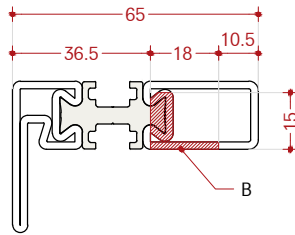
Maßstab 1:5

- A) Bohrungen M4 mm im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder

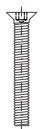
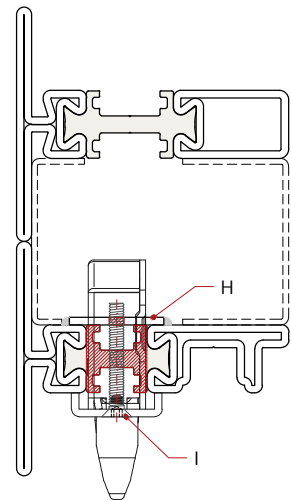
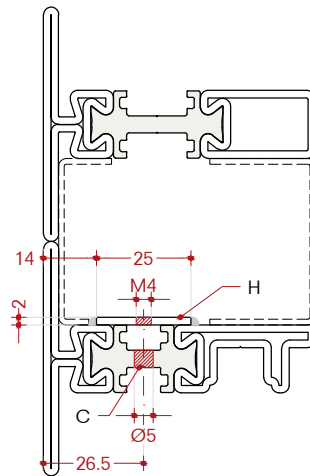
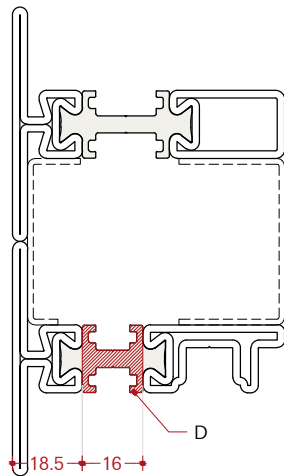
Échelle 1:5

- A) Trous M4 mm dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés

1



2



M4x30  
ISO10642  
n° 4 pcs



B99205-02  
n° 1 pc

- A) Tapped hole M4 in door frame
- B) Cut-out in door frame
- C) Holes Ø5 mm in the door leaf
- D) Milling in the door leaf
- E) Lever handle bore Ø14 mm
- F) Profile cylinder milling
- G) Fastening with M4x12 ISO10642 screws
- H) M4 holes on 25x25x2 mm plate (not provided)
- I) Fastening with M4x30 ISO10642 screws

- A) Gewindebohrung M4 im Türrahmen
- B) Ausfräsung im Türrahmen
- C) Bohrungen Ø5 mm im Türflügel
- D) Ausfräsung im Türflügel
- E) Drückerbohrung Ø14 mm
- F) Fräsung Profilzylinder
- G) Befestigung mit M4x12 ISO10642
- H) M4 Bohrungen auf 25x25x2 mm Platte (Eigenfertigung)
- I) Befestigung mit schrauben M4x30 ISO10642

- A) Trous taraudé M4 dans le cadre de la porte
- B) Fraisage dans le cadre de la porte
- C) Trous Ø5 mm dans le vantail de porte
- D) Fraisage dans le vantail de porte
- E) Alésage de la béquille Ø14 mm
- F) Fraisage de cylindres profilés
- G) Montage avec des vis M4x12 ISO10642
- H) Trous M4 sur 25x25x2 mm plat (non inclus)
- I) Montage avec des vis M4x30 ISO10642

### Installation

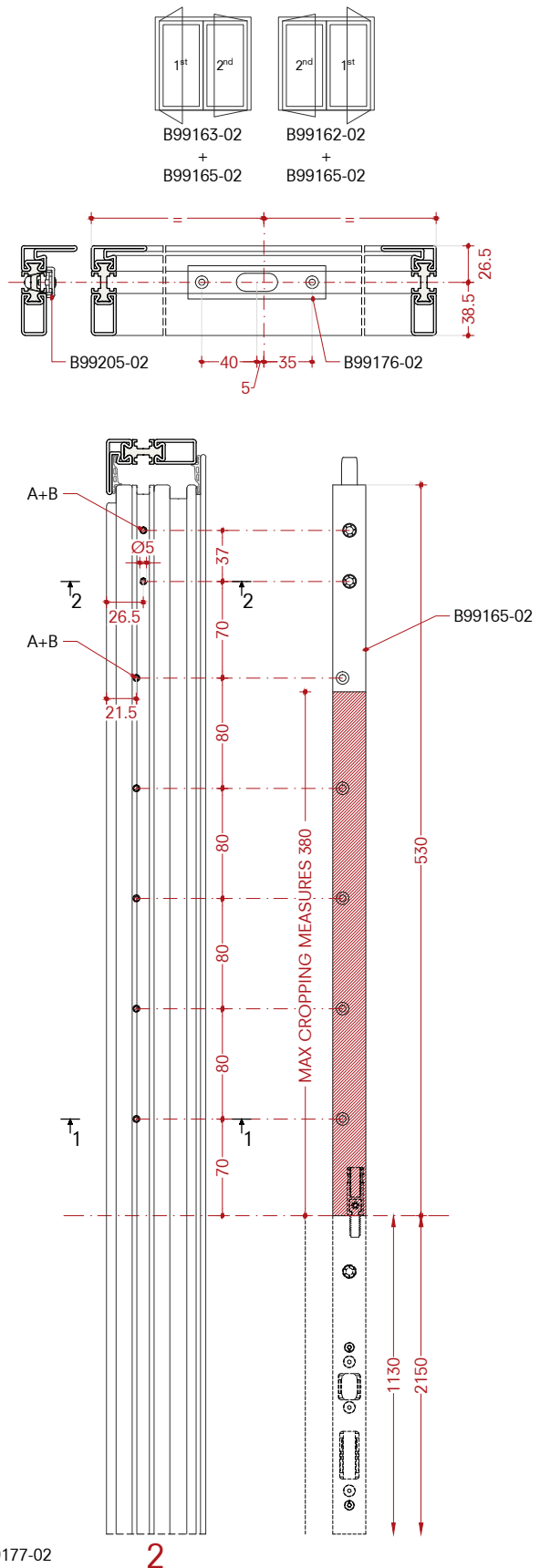
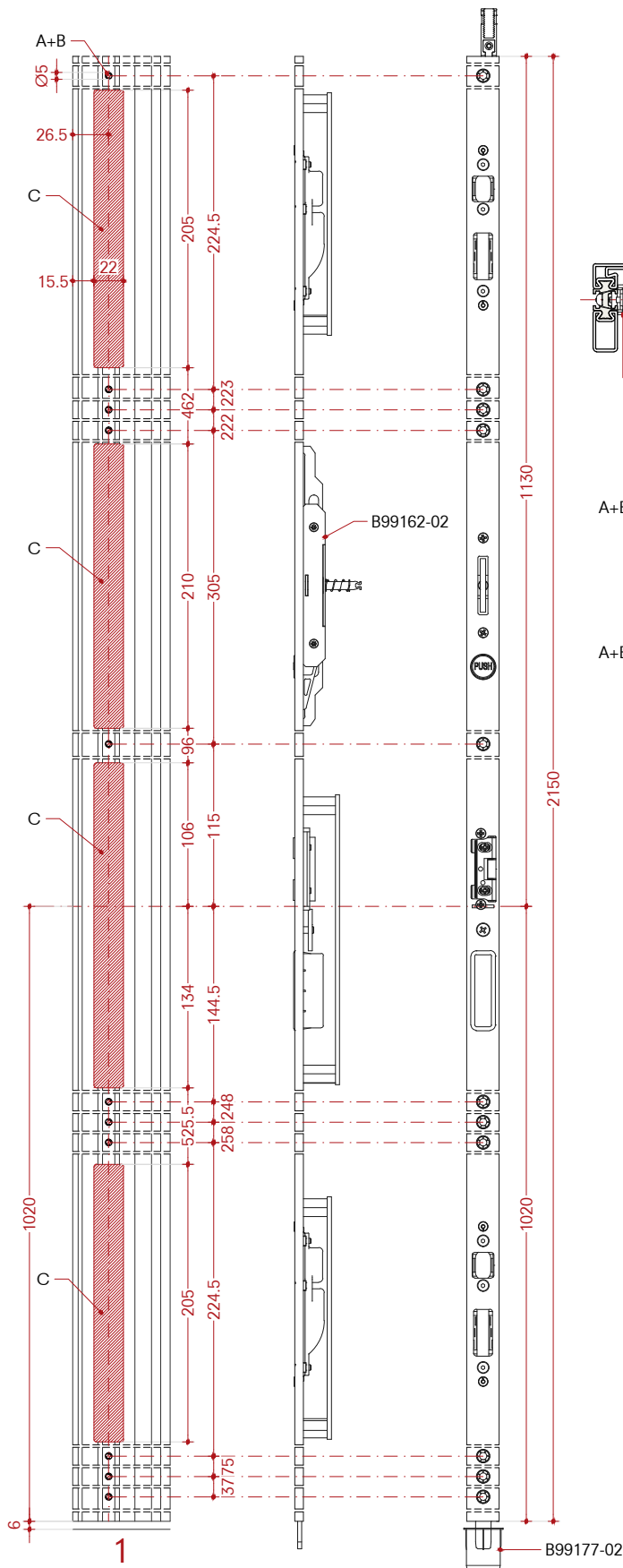
2nd leaf shoot bolt B99165-02  
Open in door

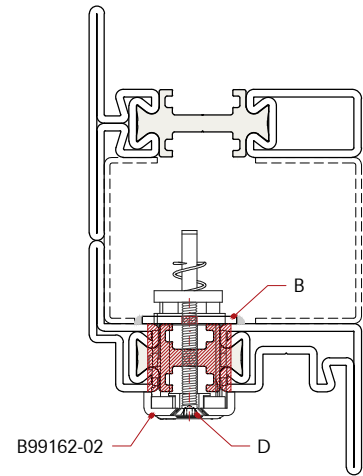
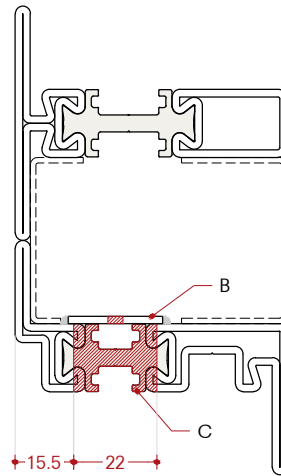
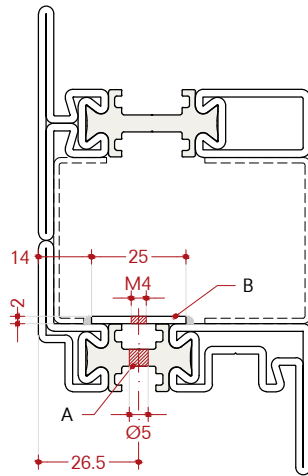
### Einbau

Standflügel Kantriegel B99165-02  
Tür nach innen öffnend

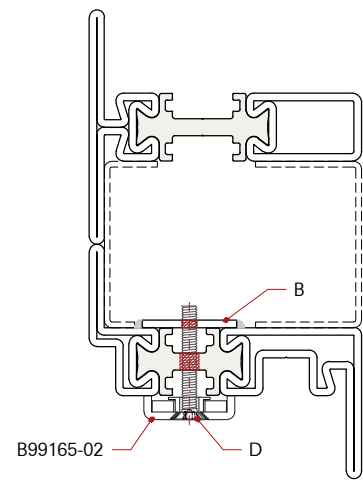
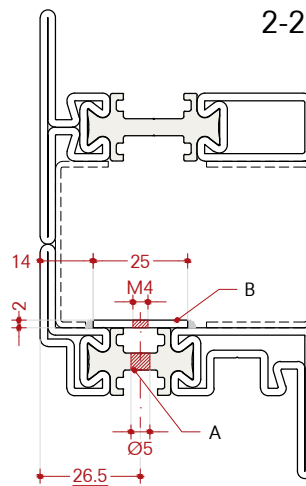
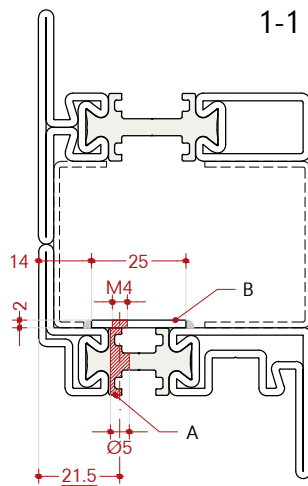
### Schéma de montage

Verrou à bascule 2e ouvrant B99165-02  
Porte ouverture intérieure

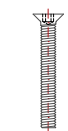




1



2



M4x30  
ISO10642  
n° 18 pcs



B99176-02  
n° 1 pc



B99177-02  
n° 1 pc

A) Holes Ø5 mm in the door leaf  
B) M4 holes on 25x25x2 mm plate (not provided)  
C) Milling in the door leaf  
D) Fastening with M4x30 ISO10642 screws

A) Bohrungen Ø5 mm im Türflügel  
B) M4 Bohrungen auf 25x25x2 mm Platte  
(Eigenfertigung)  
C) Ausfräsung im Türflügel  
D) Befestigung mit schrauben M4x30 ISO10642

A) Trous Ø5 mm dans le vantail de porte  
B) Trous M4 sur 25x25x2 mm plat (non inclus)  
C) Fraisage dans le vantail de porte  
D) Montage avec des vis M4x30 ISO10642

## Installation

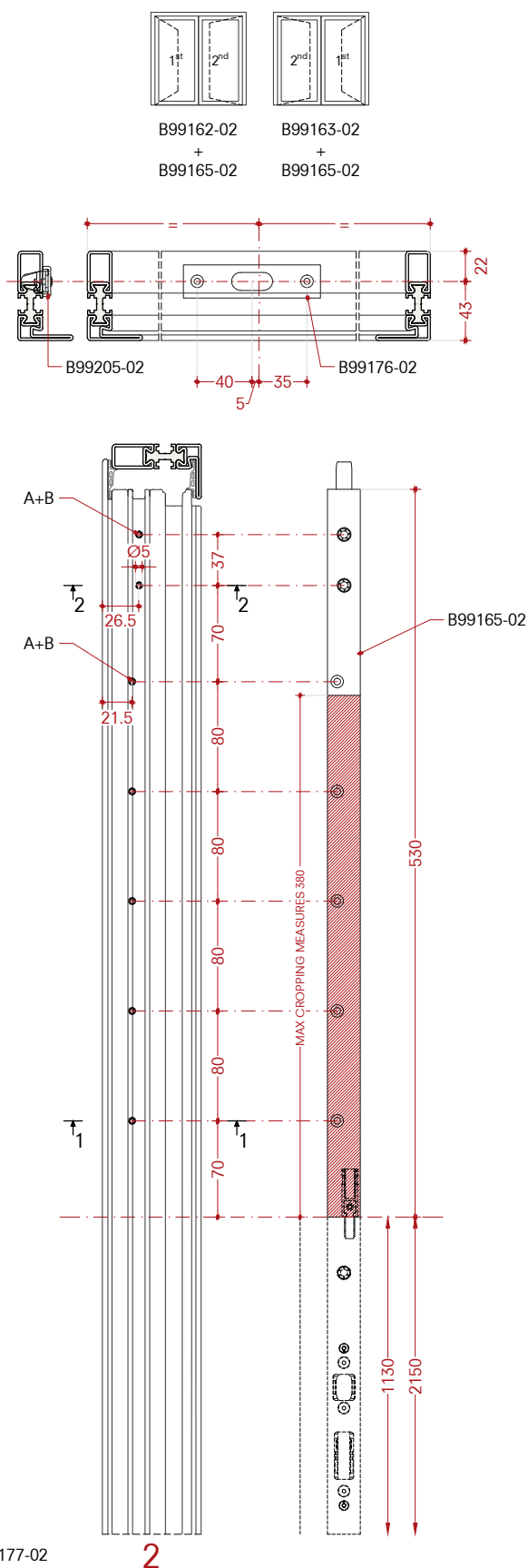
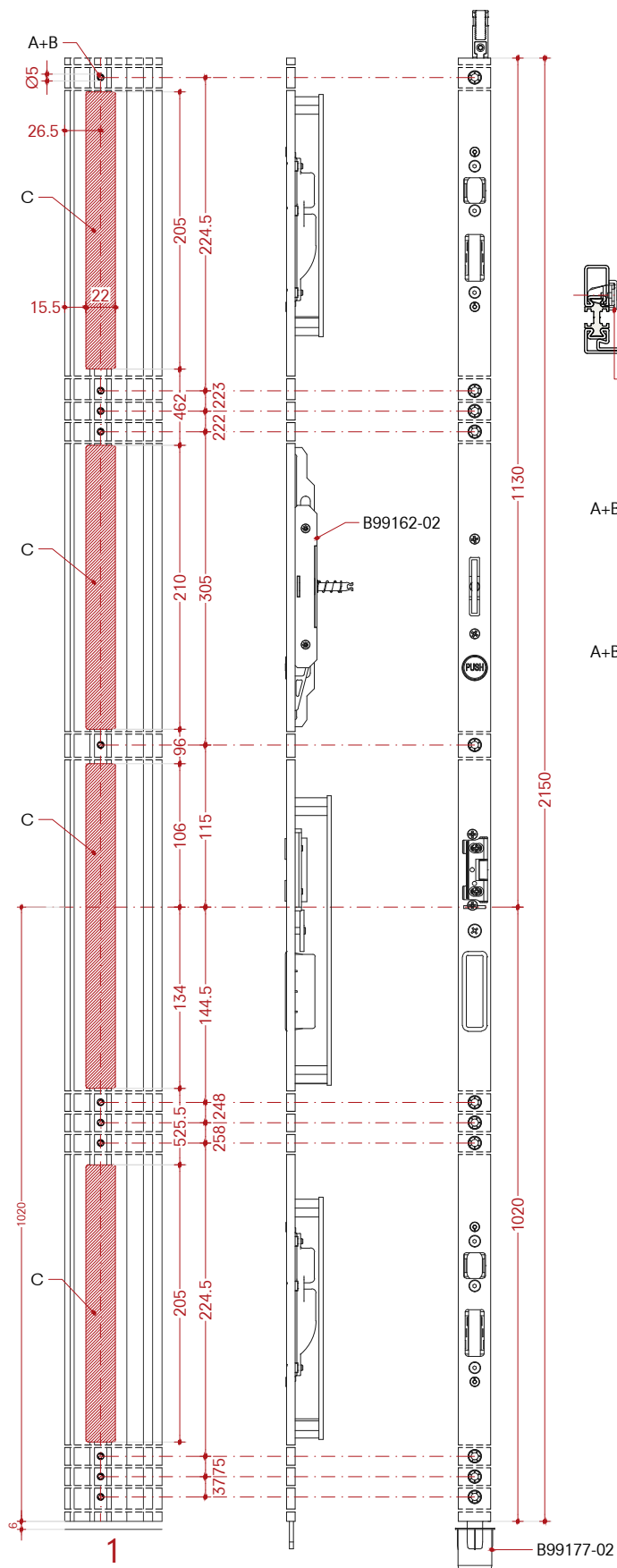
2nd leaf shoot bolt B99165-02  
Open out door

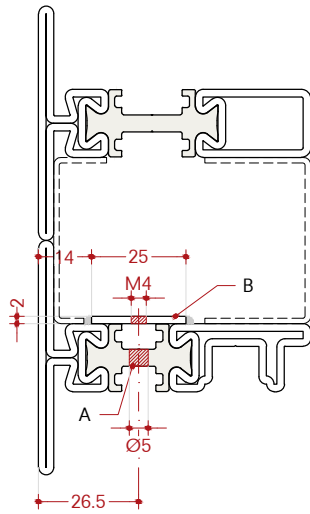
## Einbau

Standflügel Kantriegel B99165-02  
Tür nach außen öffnend

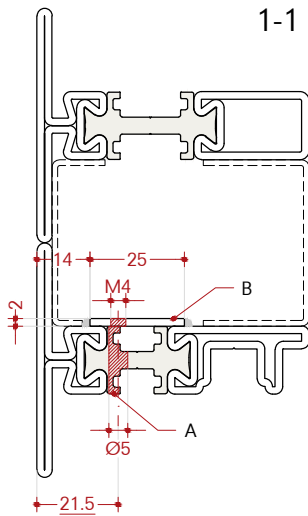
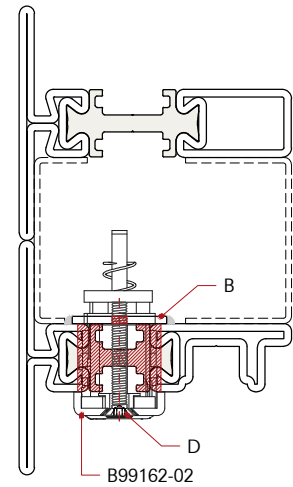
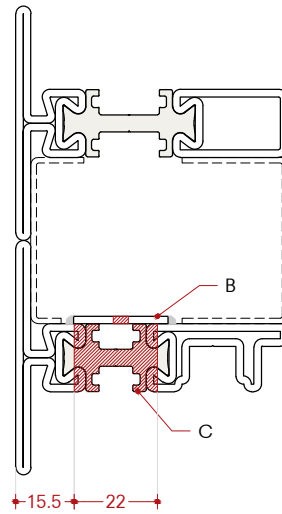
## Schéma de montage

Verrou à bascule 2e ouvrant B99165-02  
Porte ouverture extérieure

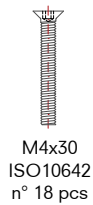
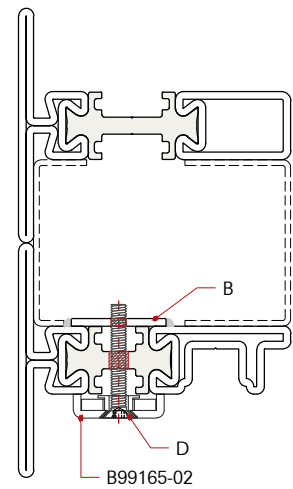
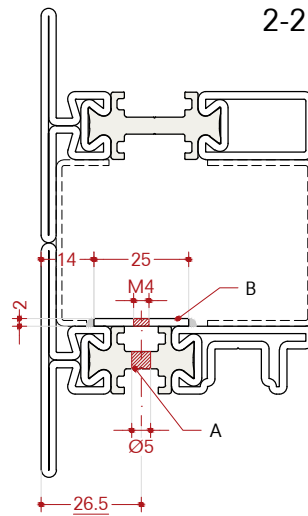




1



2



A) Holes Ø5 mm in the door leaf  
B) M4 holes on 25x25x2 mm plate (not provided)  
C) Milling in the door leaf  
D) Fastening with M4x30 ISO10642 screws

A) Bohrungen Ø5 mm im Türflügel  
B) M4 Bohrungen auf 25x25x2 mm Platte  
(Eigenfertigung)  
C) Ausfräsung im Türflügel  
D) Befestigung mit schrauben M4x30 ISO10642

A) Trous Ø5 mm dans le vantail de porte  
B) Trous M4 sur 25x25x2 mm plat (non inclus)  
C) Fraisage dans le vantail de porte  
D) Montage avec des vis M4x30 ISO10642

## Installation

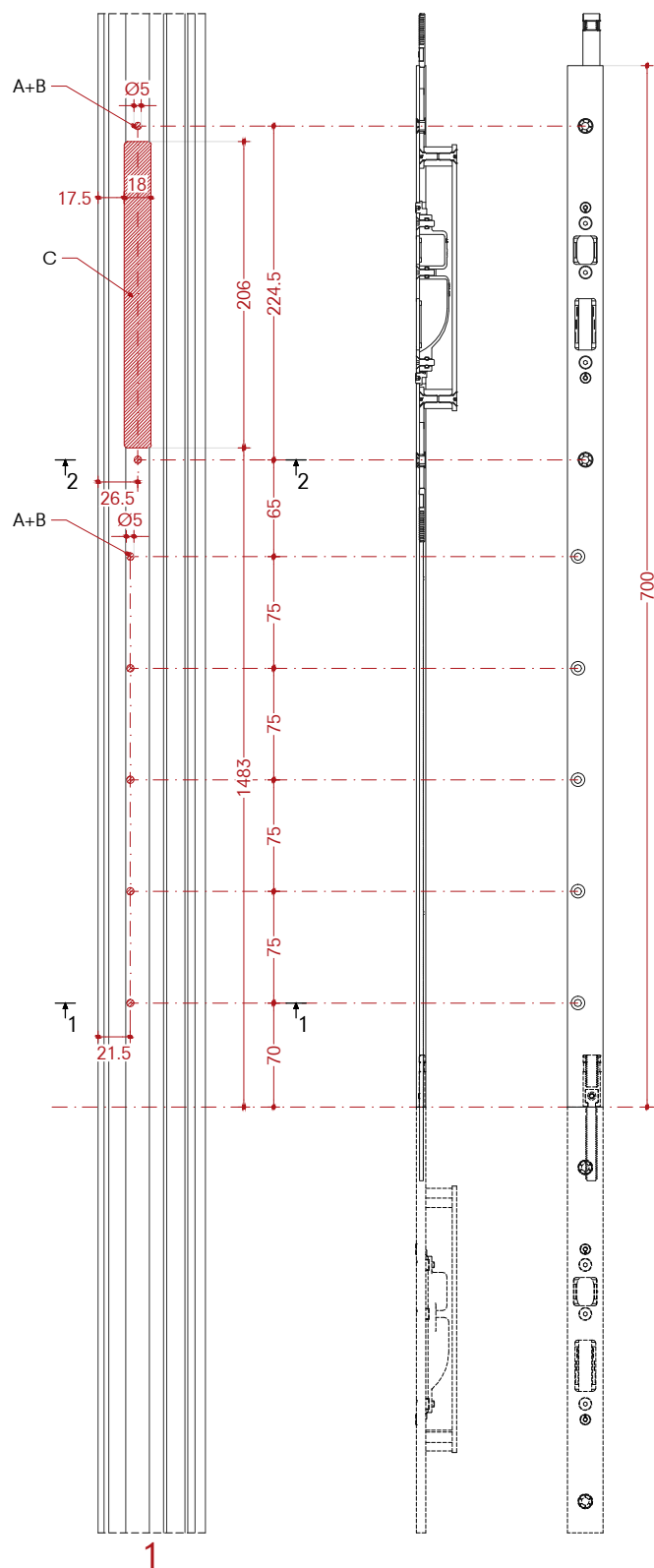
2nd leaf extension B99164-02  
Open in door

## Einbau

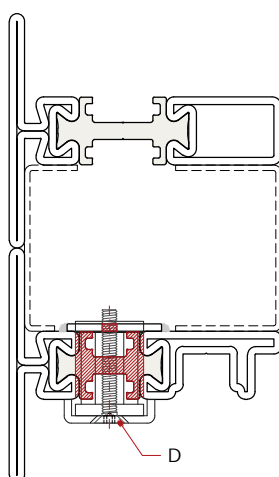
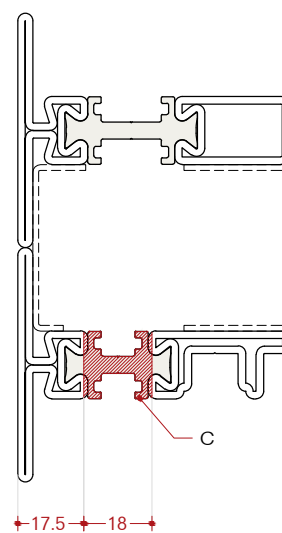
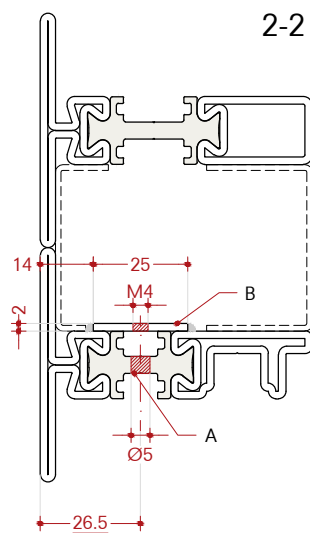
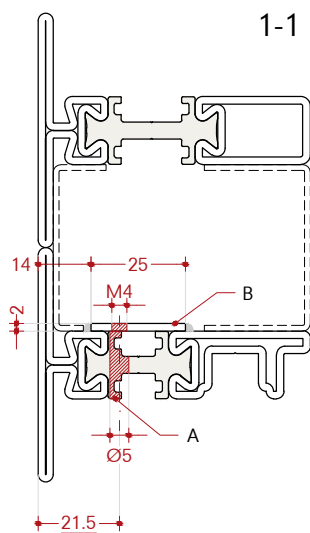
Standflügel Verlängerung B99164-02  
Tür nach innen öffnend

## Schéma de montage

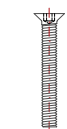
Extension 2e ouvrant B99164-02  
Porte ouverture intérieure







1



M4x30  
ISO10642  
n° 7 pcs

A) Holes Ø5 mm in the door leaf  
B) M4 holes on 25x25x2 mm plate (not provided)  
C) Milling in the door leaf  
D) Fastening with M4x30 ISO10642 screws

A) Bohrungen Ø5 mm im Türflügel  
B) M4 Bohrungen auf 25x25x2 mm Platte  
(Eigenfertigung)  
C) Ausfräsung im Türflügel  
D) Befestigung mit schrauben M4x30 ISO10642

A) Trous Ø5 mm dans le vantail de porte  
B) Trous M4 sur 25x25x2 mm plat (non inclus)  
C) Fraisage dans le vantail de porte  
D) Montage avec des vis M4x30 ISO10642

## Installation

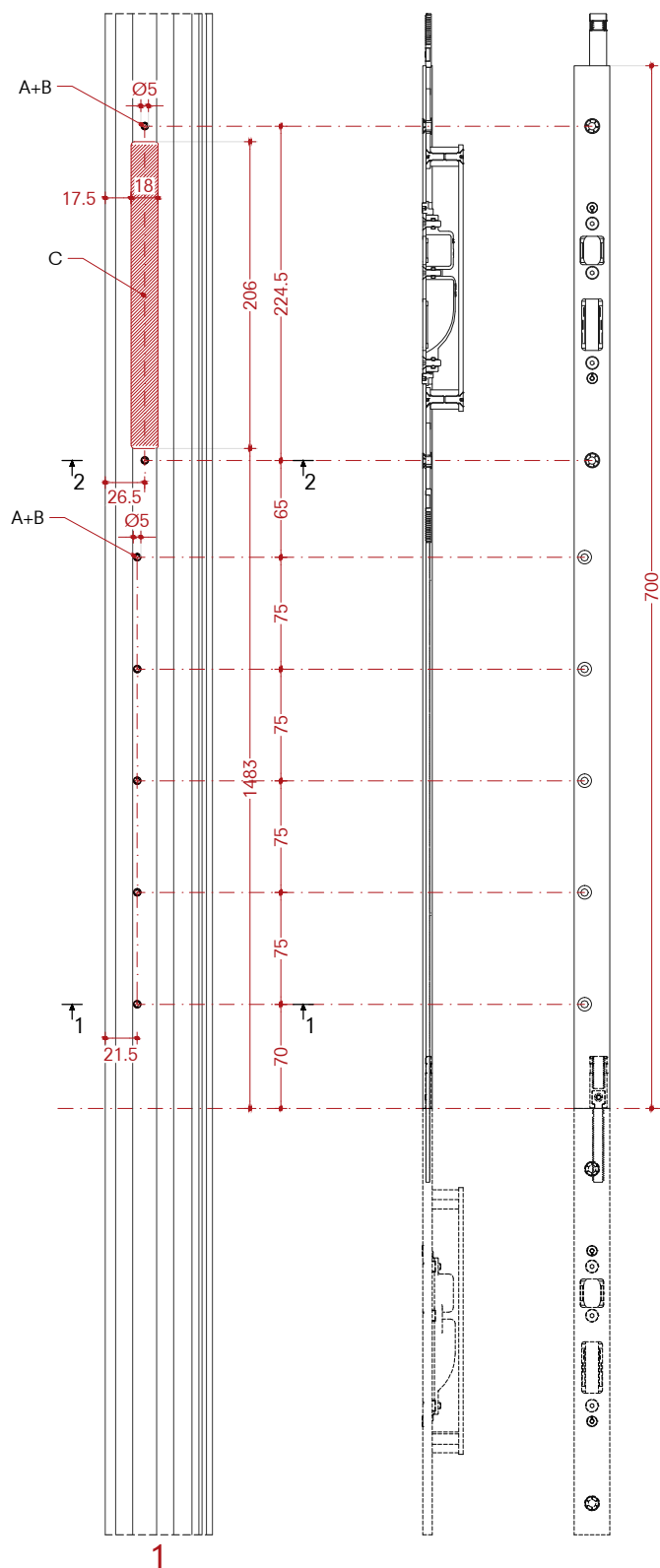
2nd leaf extension B99164-02  
Open out door

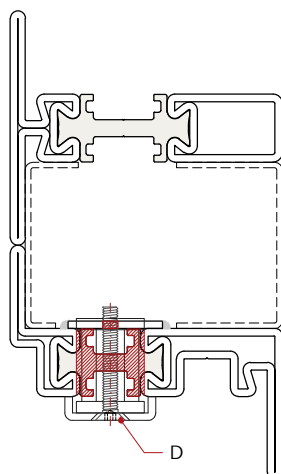
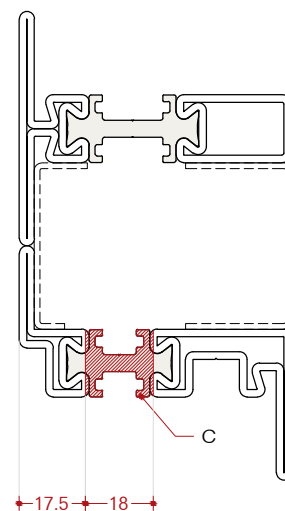
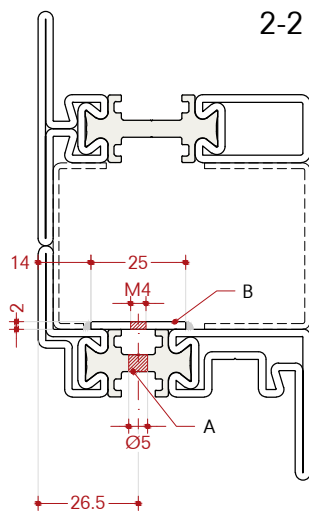
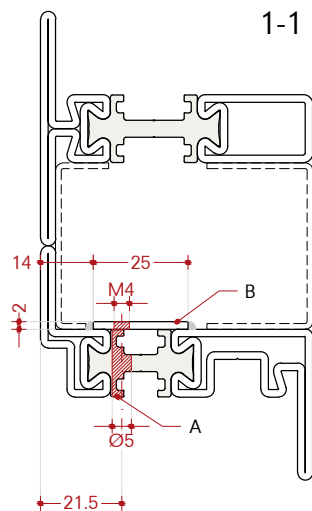
## Einbau

Standflügel Verlängerung B99164-02  
Tür nach außen öffnend

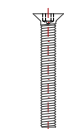
## Schéma de montage

Extension 2e ouvrant B99164-02  
Porte ouverture extérieure





1



M4x30  
ISO10642  
n° 7 pcs

A) Holes Ø5 mm in the door leaf  
B) M4 holes on 25x25x2 mm plate (not provided)  
C) Milling in the door leaf  
D) Fastening with M4x30 ISO10642 screws

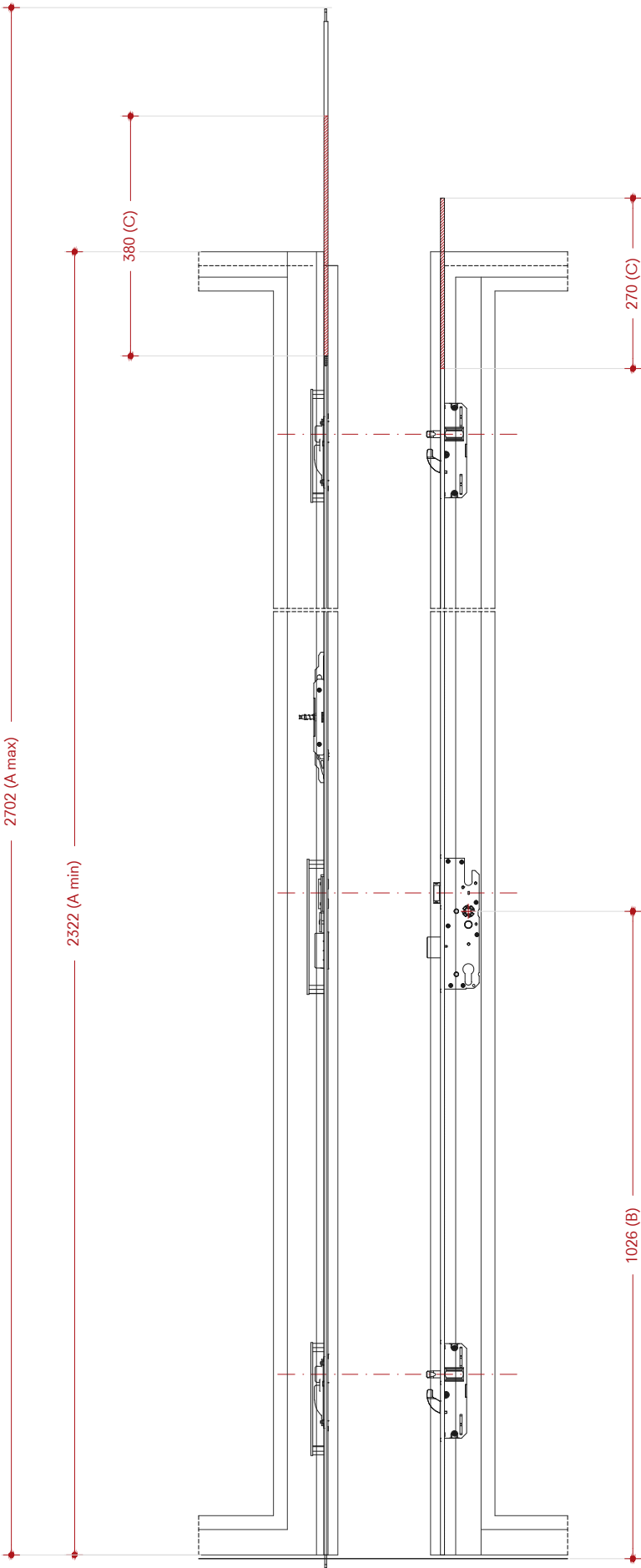
A) Bohrungen Ø5 mm im Türflügel  
B) M4 Bohrungen auf 25x25x2 mm Platte  
(Eigenfertigung)  
C) Ausfräsung im Türflügel  
D) Befestigung mit schrauben M4x30 ISO10642

A) Trous Ø5 mm dans le vantail de porte  
B) Trous M4 sur 25x25x2 mm plat (non inclus)  
C) Fraisage dans le vantail de porte  
D) Montage avec des vis M4x30 ISO10642

**Schéma de montage**  
Extension 2e ouvrant B99164-02  
Porte ouverture intérieure

**Einbau**  
Standflügel Verlängerung B99164-02  
Tür nach innen öffnend

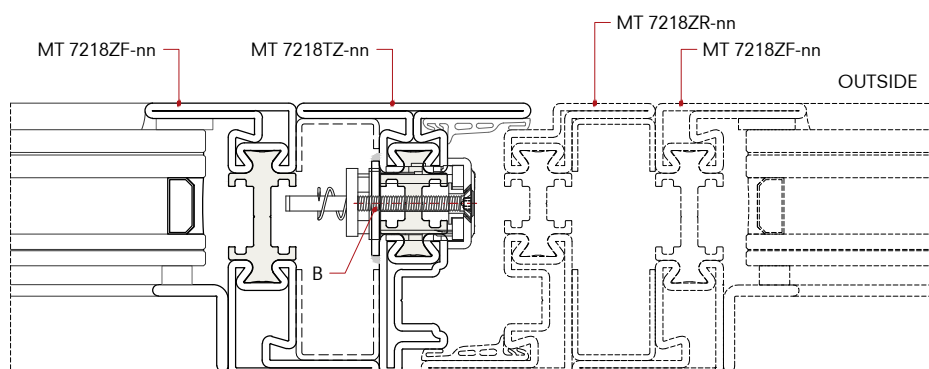
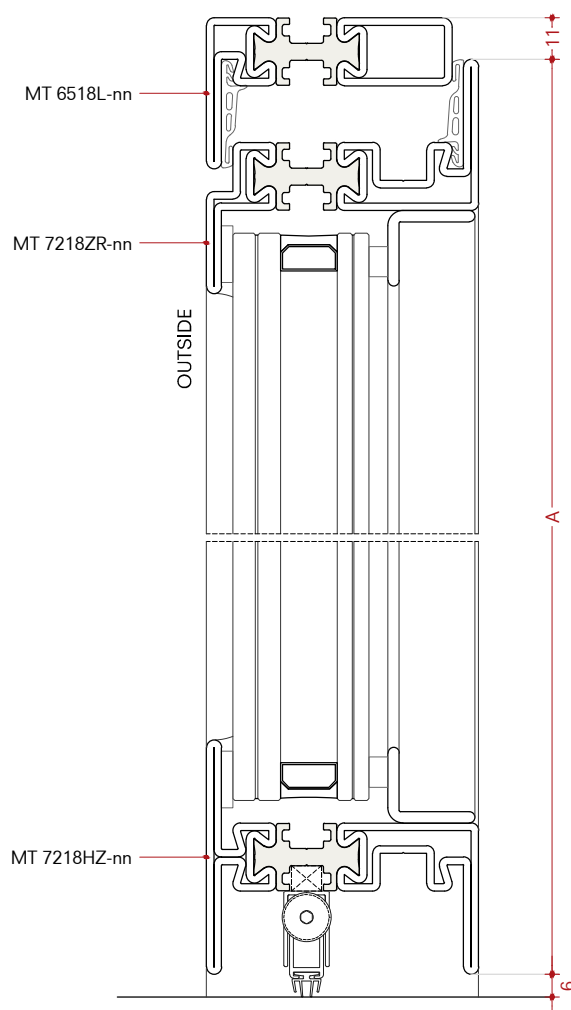
**Installation**  
2nd leaf extension B99164-02  
Open in door



Échelle 1:10  
A) Hauteur du vantail  
B) Hauteur de la poignée  
C) Peut être raccourci

Maßstab 1:10  
A) Höhe Flügel  
B) Griffsitz Mittig  
C) Kann gekürzt werden

Scale 1:10  
A) Height leaf  
B) Height handle  
C) Can be shortened



A) Height leaf  
B) Fastening with M4x30 mm ISO10642 screws  
and cut the screws

A) Höhe Flügel  
B) Befestigungsschrauben M4x30 mm ISO10642  
und Schraube kürzen

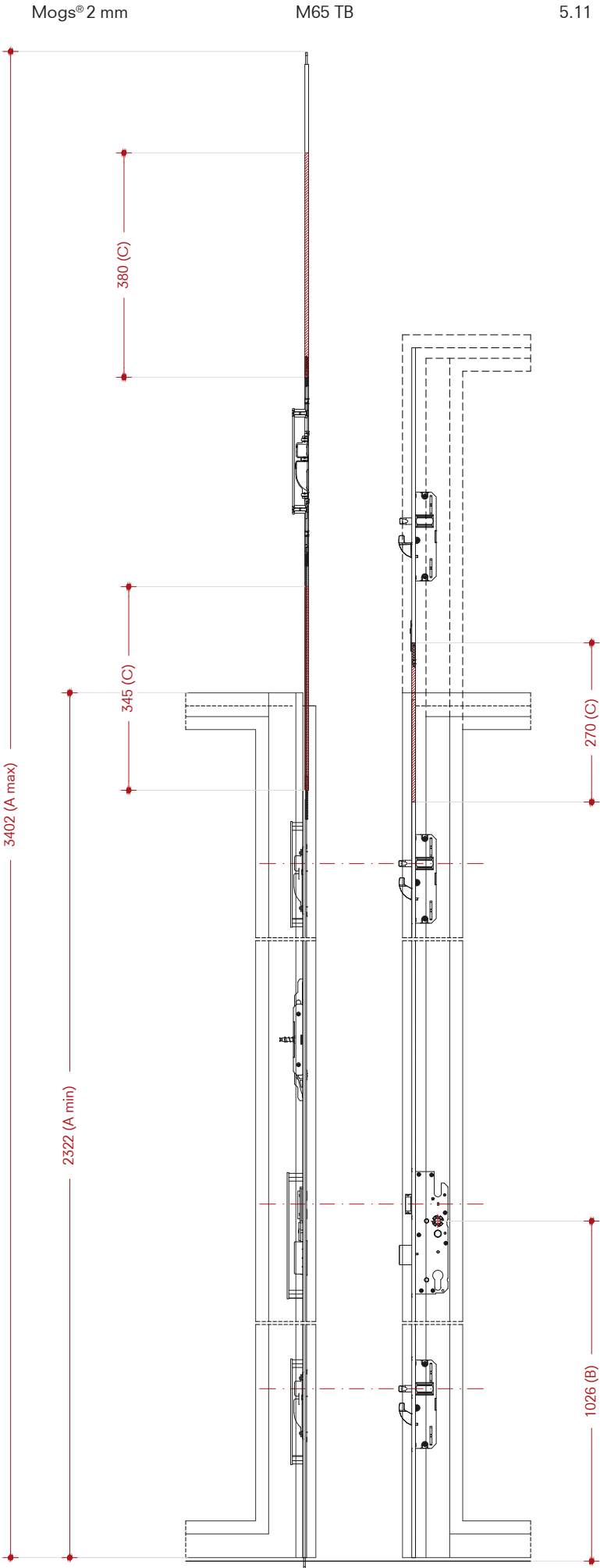
A) Hauteur du vantail  
B) Fixation avec vis M4x30 mm ISO10642 et  
couper les vis

**Schéma de montage**  
Extension 2e ouvrant B99164-02  
Porte ouverture intérieure

**Einbau**  
Standflügel Verlängerung B99164-02  
Tür nach innen öffnend

**Installation**  
2nd leaf extension B99164-02  
Open in door

disclaimer see 7.0.14



rel. 02 - 07/2022

5.11.33

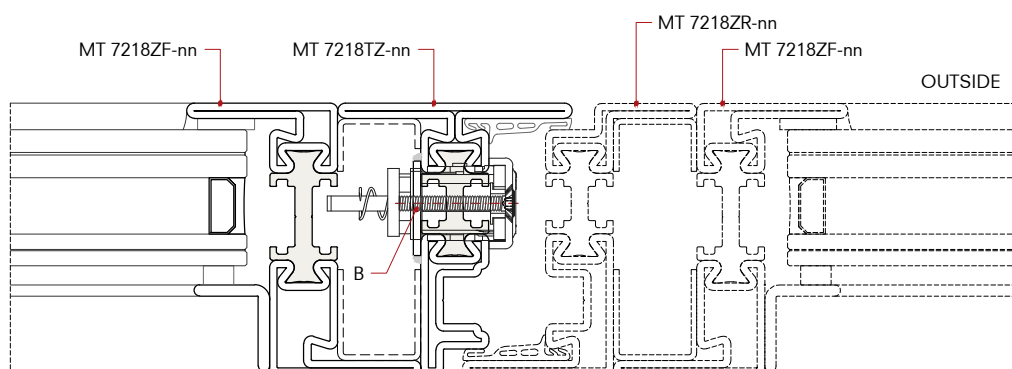
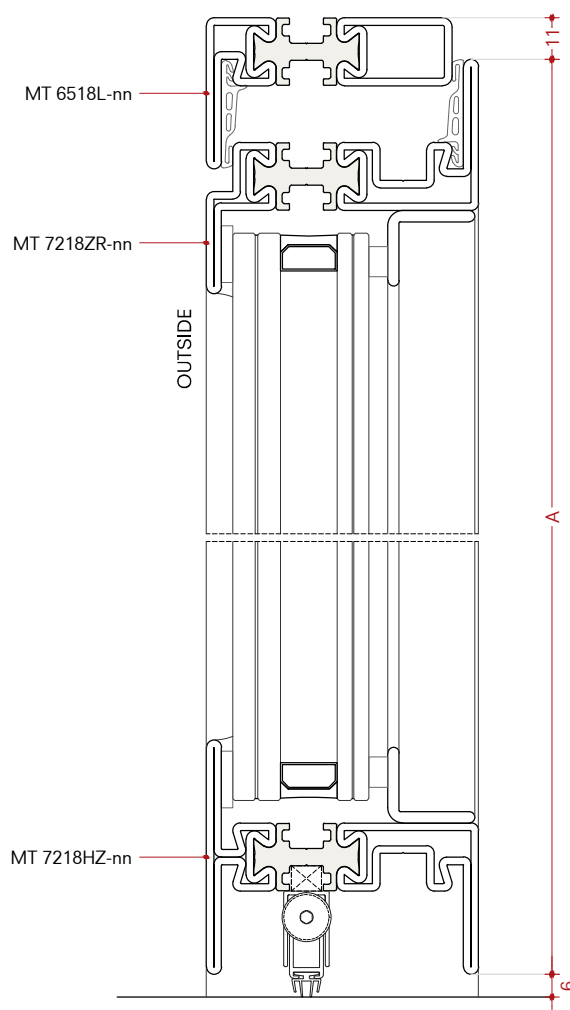
5.11 Locks  
Schlösser  
Serrures

Échelle 1:10  
A) Hauteur du vantail  
B) Hauteur de la poignée  
C) Peut être raccourci

Maßstab 1:10  
A) Höhe Flügel  
B) Griffsitz Mittig  
C) Kann gekürzt werden

Scale 1:10  
A) Height leaf  
B) Height handle  
C) Can be shortened

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A) Height leaf  
B) Fastening with M4x30 mm ISO10642 screws  
and cut the screws

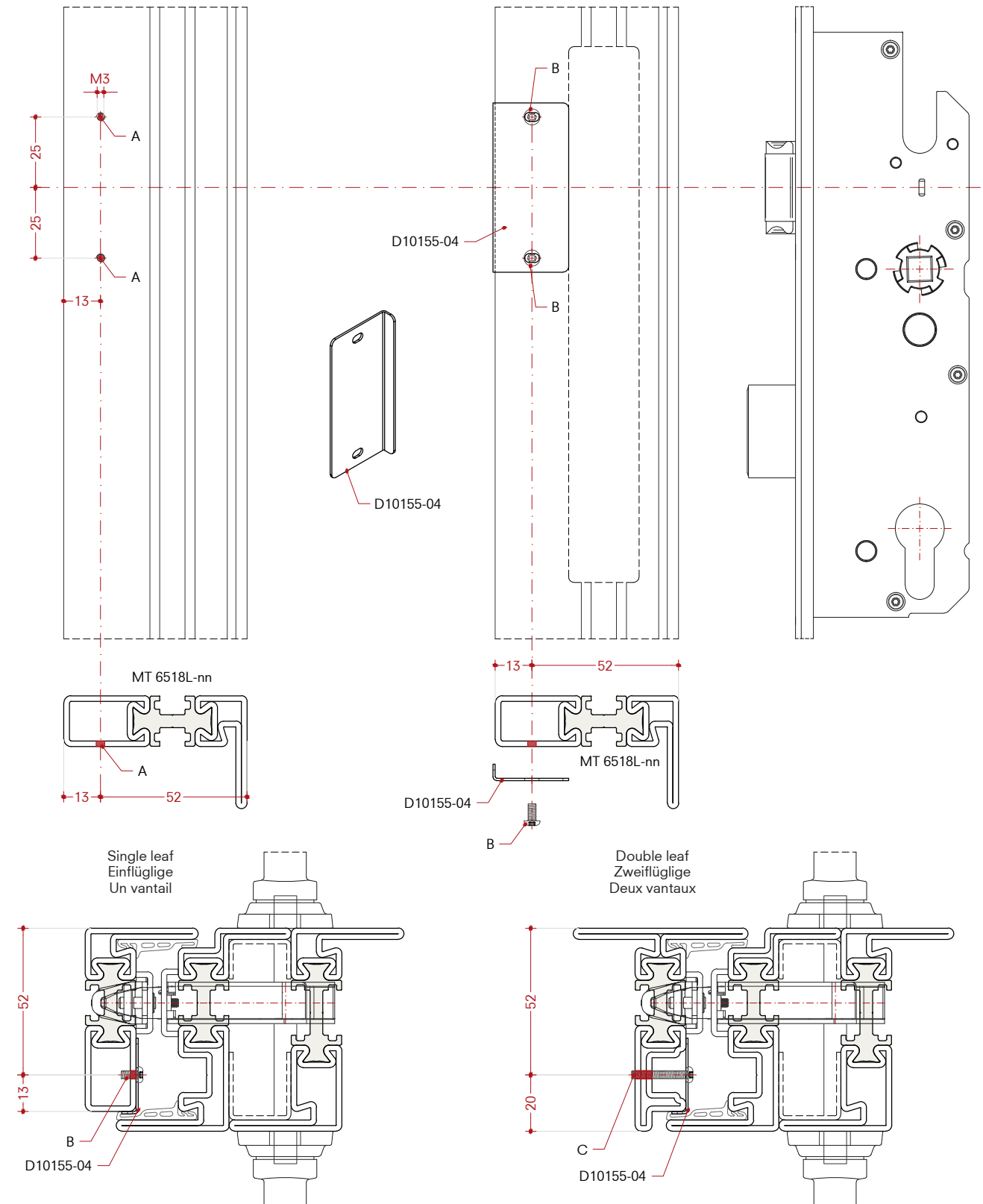
A) Höhe Flügel  
B) Befestigungsschrauben M4x30 mm ISO10642  
und Schraube kürzen

A) Hauteur du vantail  
B) Fixation avec vis M4x30 mm ISO10642 et  
couper les vis

**Installation of rebate  
protection for latchbolt**  
Open in door

**Anschlagschutz für  
Schlossfalle Einbau**  
Tür nach innen öffnend

**Schéma de montage du protection  
joint pour pêne demi-tour**  
Porte ouverture intérieure



- A) Holes M3 mm in door frame  
B) Fastening with M3x6 ISO7380 screws  
C) Fastening with M3x20 ISO7380 screws and cut the screws

- A) Bohrungen M3 mm im Türrahmen  
B) Befestigungsschrauben M3x6 ISO7380  
C) Befestigungsschrauben M3x20 ISO7380 und Schrauben kürzen

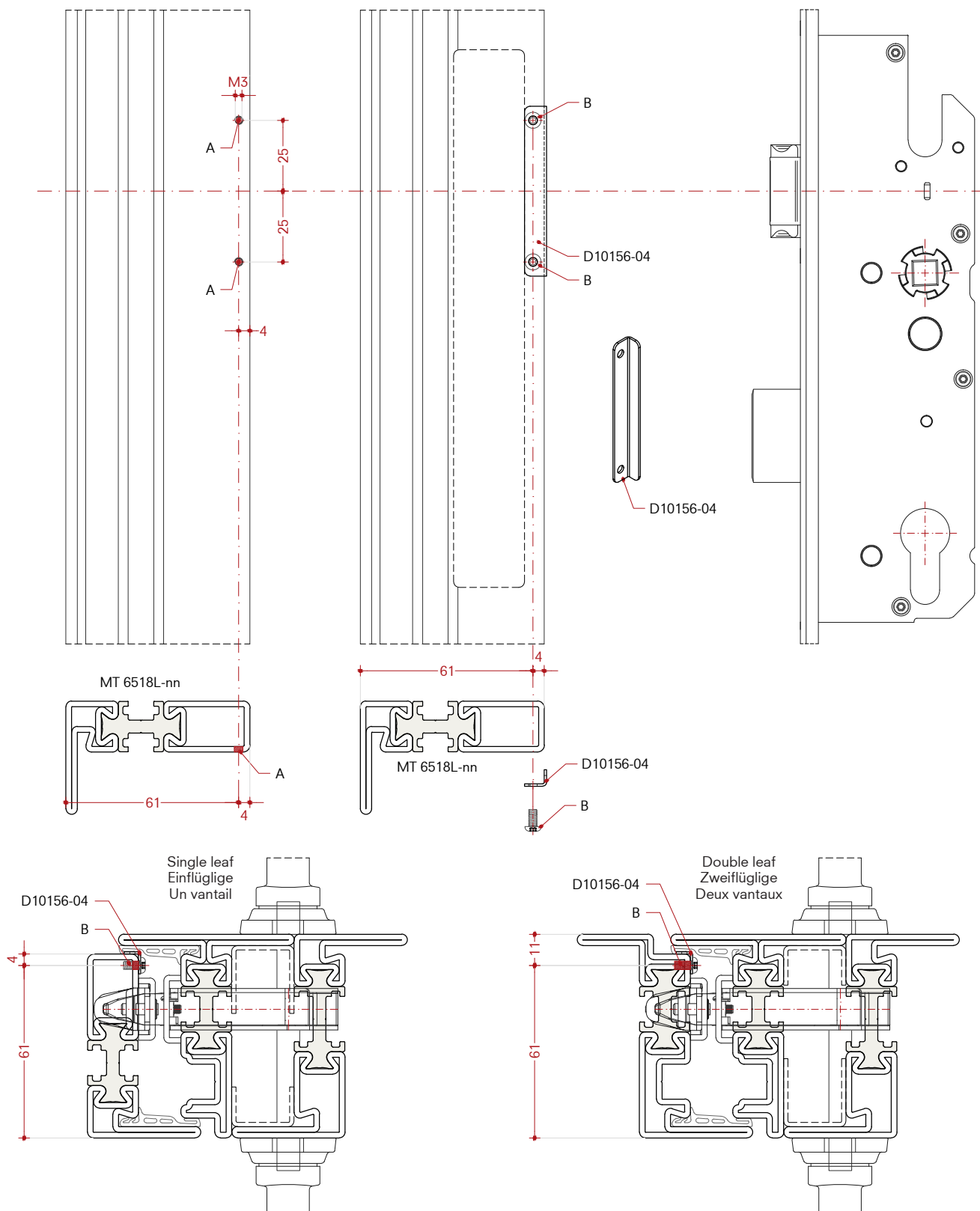
- A) Trous M3 mm dans le cadre de la porte  
B) Fixation avec vis M3x6 ISO7380  
C) Fixation avec vis M3x20 ISO7380 et couper la vis



**Installation of rebate  
protection for latchbolt**  
Open out door

**Anschlagschutz für  
Schlossfalle Einbau**  
Tür nach außen öffnend

**Schéma de montage du protection  
joint pour pêne demi-tour**  
Porte ouverture extérieure



A) Holes M3 mm in door frame  
B) Fastening with M3x6 ISO7380 screws

A) Bohrungen M3 mm im Türrahmen  
B) Befestigungsschrauben M3x6 ISO7380

A) Trous M3 mm dans le cadre de la porte  
B) Fixation avec vis M3x6 ISO7380

## Processing

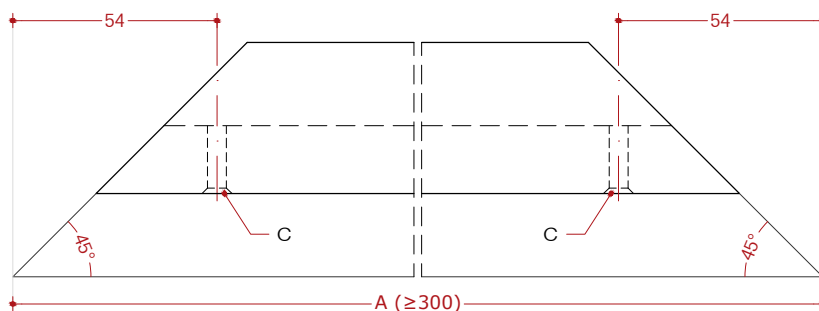
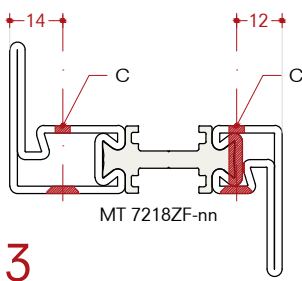
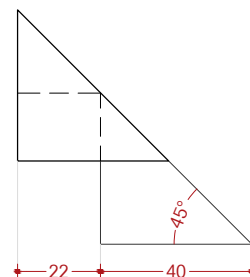
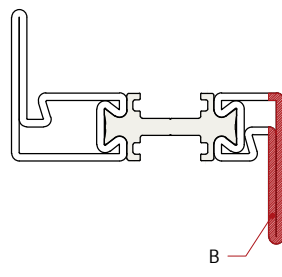
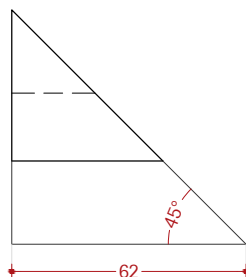
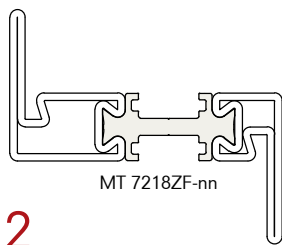
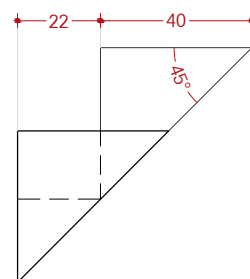
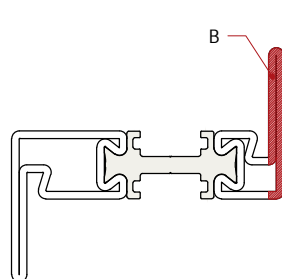
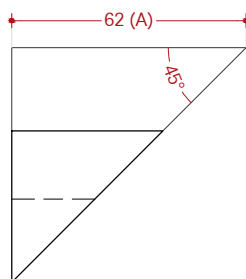
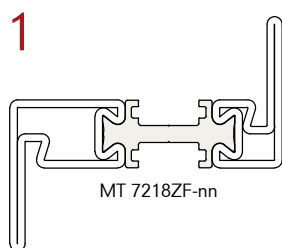
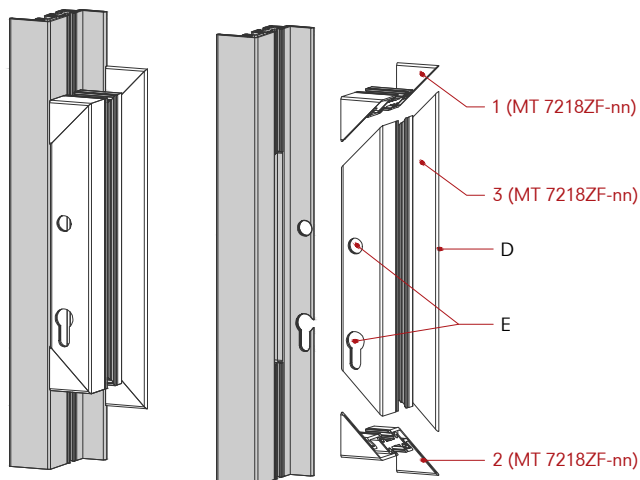
Locking box with MT 7218ZF-nn

## Bearbeitung

Schlosskasten mit MT 7218ZF-nn

## Usinages

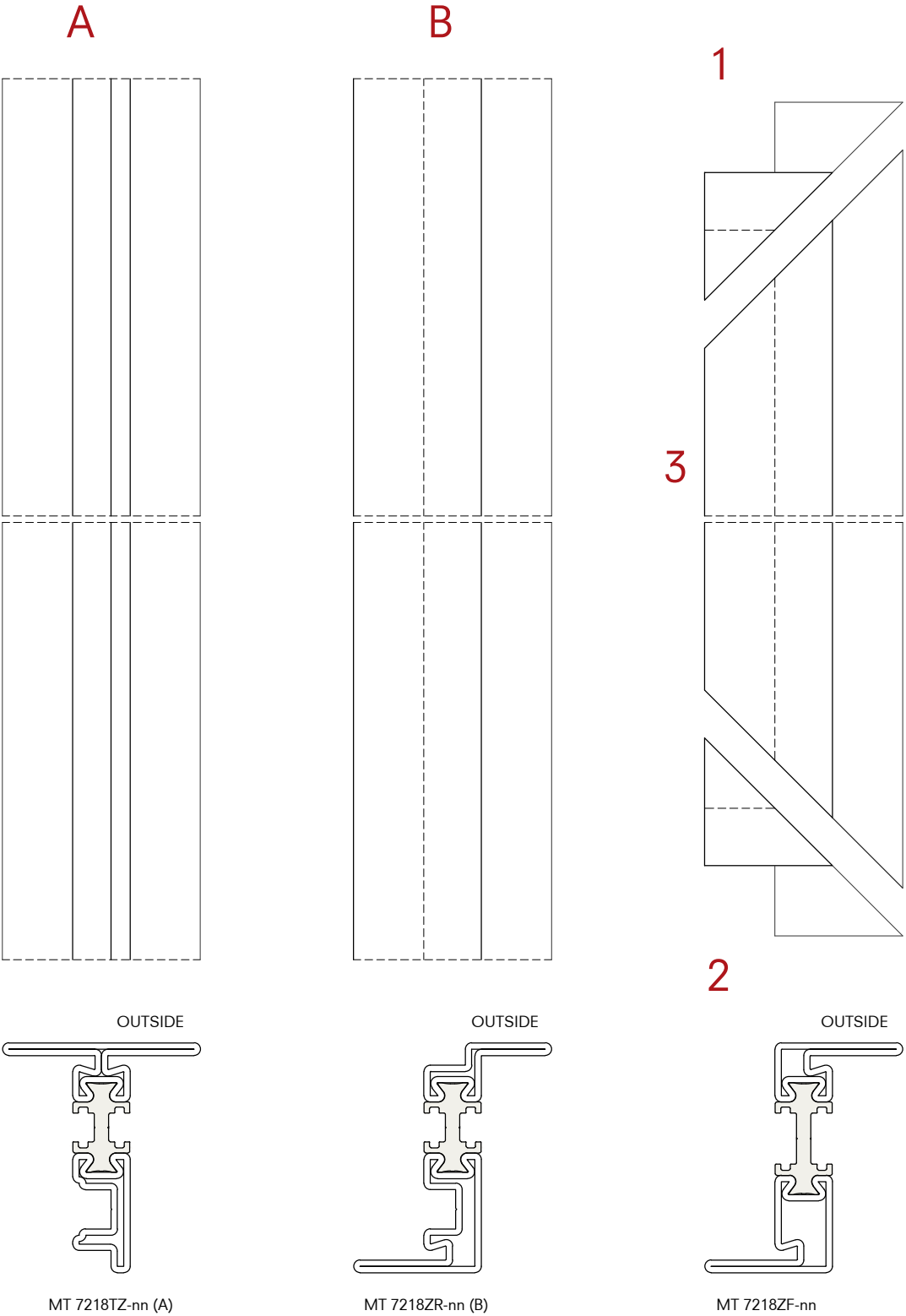
Boîte pour serrure avec MT 7218ZF-nn



A) Cutting length  
B) Cut off profile  
C) n°04 holes Ø5 mm  
D) Height of locking box variable  
E) Holes depending on the lock

A) Zuschnitt  
B) Profil ausklinken  
C) 4x Bohrungen Ø5 mm  
D) Höhe Schlosskasten variabel  
E) Bohrungen in Abhängigkeit vom Schloss

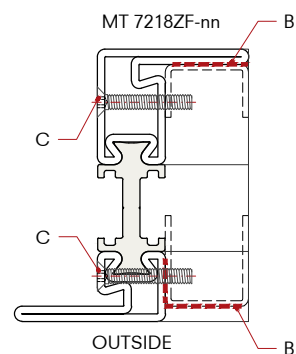
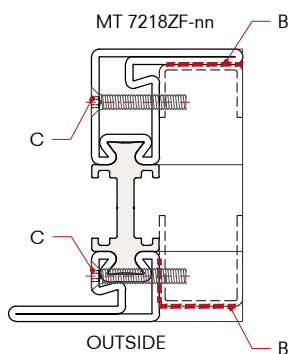
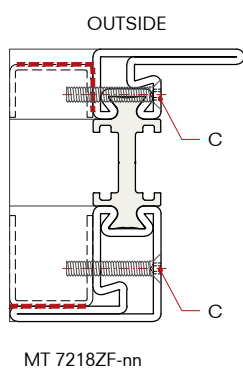
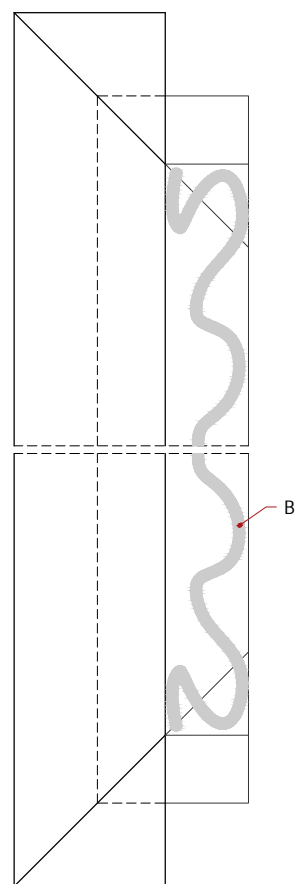
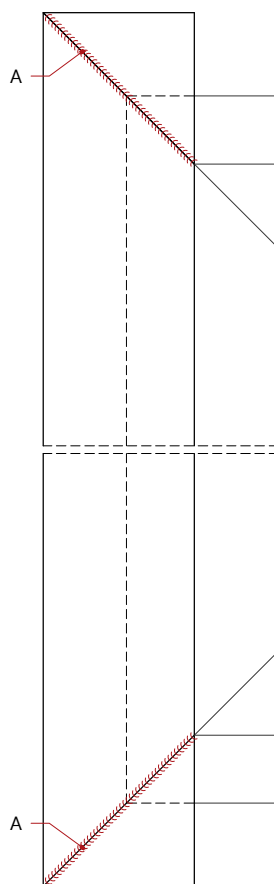
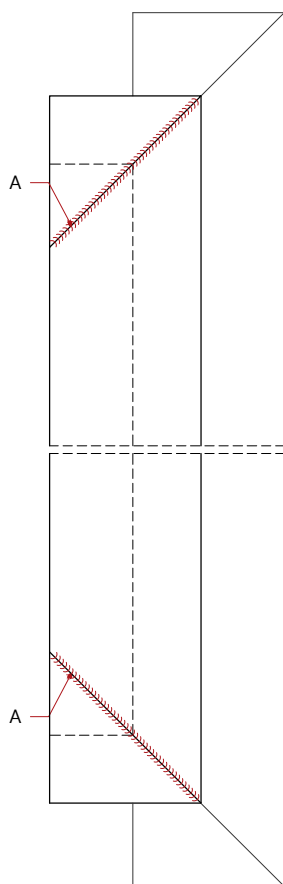
A) Longueur de coupe  
B) Pièce à enlever  
C) n°04 trous Ø5 mm  
D) Hauteur du boîtier serrure variable  
E) Trous en fonction de la serrure



A) Open out  
B) Open in

A) Nach außen öffnend  
B) Nach innen öffnend

A) Ouverture extérieure  
B) Ouverture intérieure

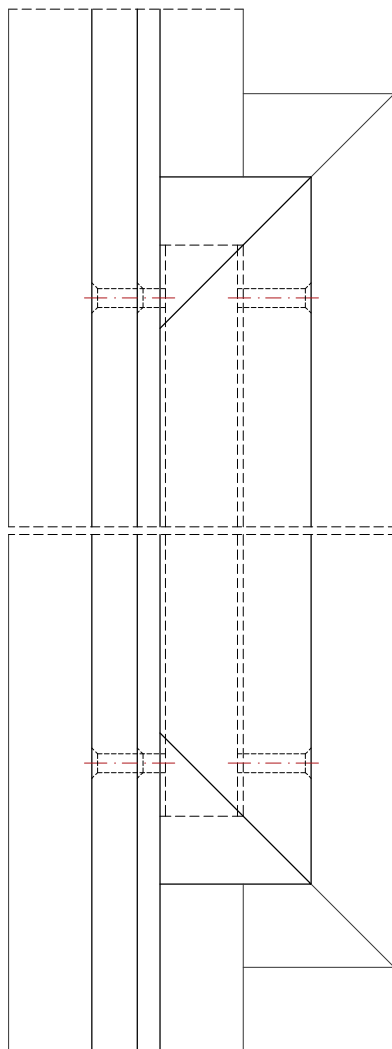


A) Welding  
B) Sealant  
C) Fastening with M4x25 ISO10642 screws

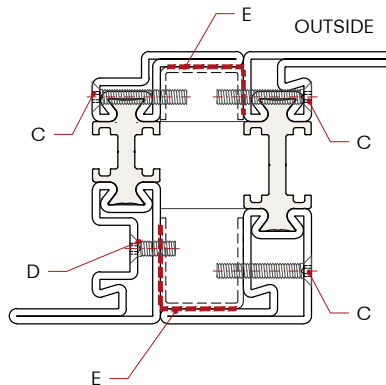
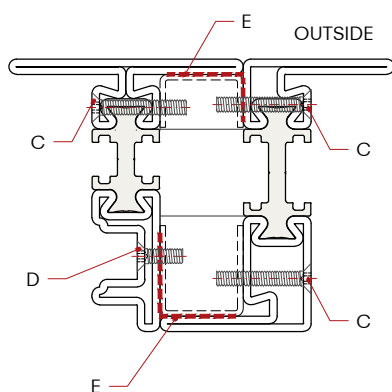
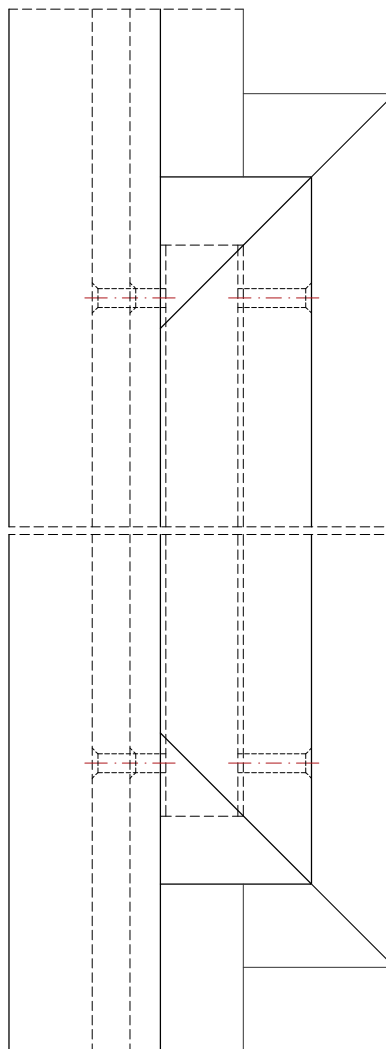
A) Schweißen  
B) Dichtstoff  
C) Befestigungsschrauben M4x25 ISO10642

A) Souder  
B) Silicon  
C) Fixation avec vis M4x25 ISO10642

**A**



**B**



A) Locking box open out  
B) Locking box open in  
C) Fastening with M4x25 ISO10642 screws  
D) Fastening with M4x12 ISO10642 screws  
E) Sealant

A) Schlosskasten nach außen öffnend  
B) Schlosskasten nach innen öffnend  
C) Befestigungsschrauben M4x25 ISO10642  
D) Befestigungsschrauben M4x12 ISO10642  
E) Dichtstoff

A) Boîte serrure ouverture extérieure  
B) Boîte serrure ouverture intérieure  
C) Fixation avec vis M4x25 ISO10642  
D) Fixation avec vis M4x12 ISO10642  
E) Silicon

### Processing

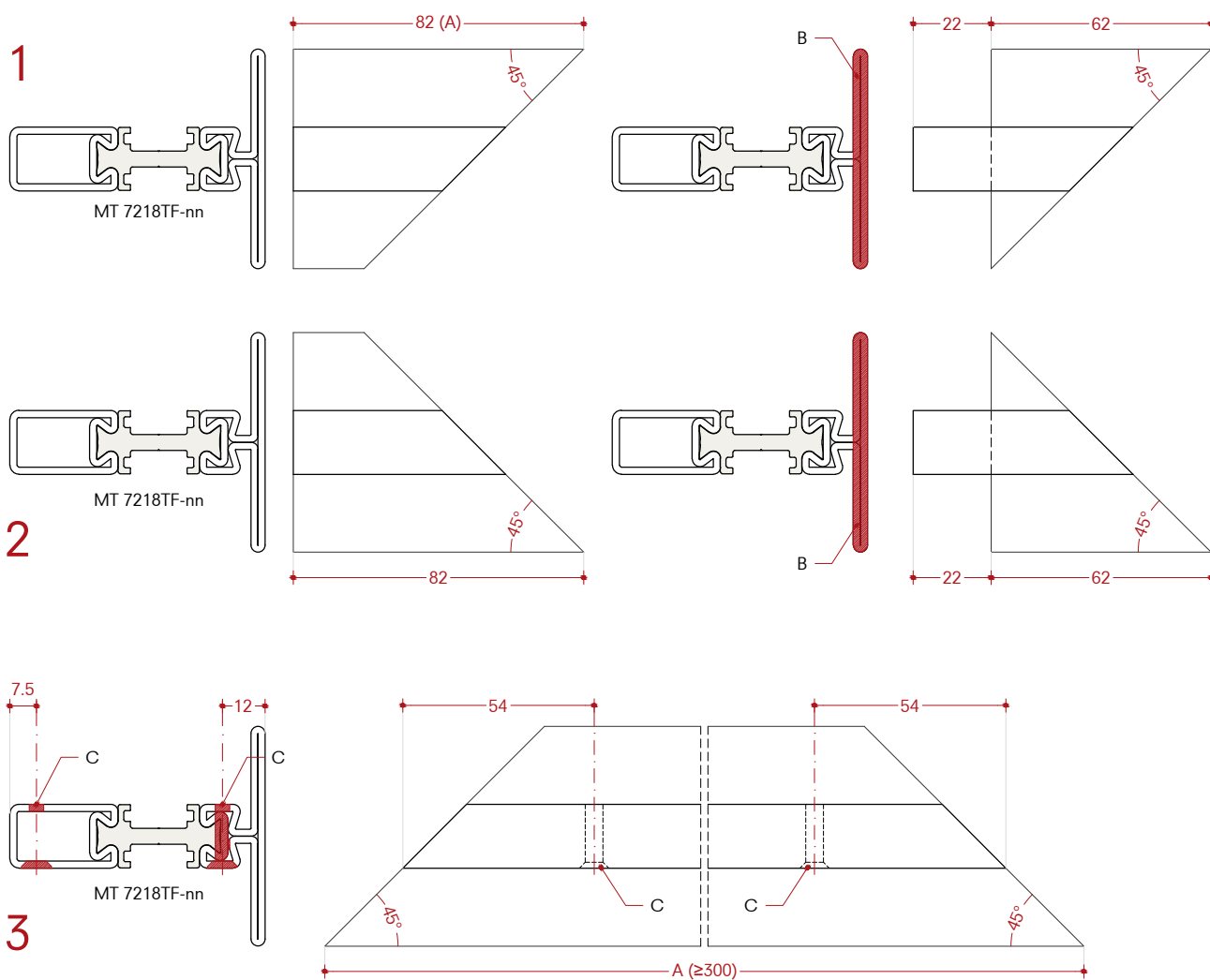
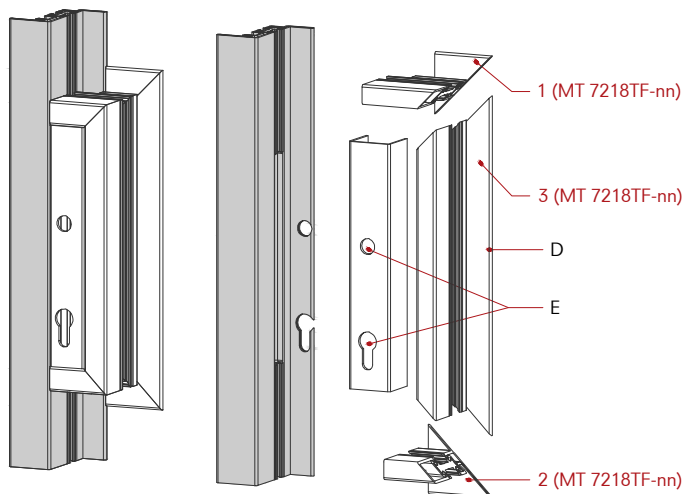
Locking box with MT 7218TF-nn  
And additional brackets

### Bearbeitung

Schlosskasten mit MT 7218TF-nn  
Und zusatzwinkel

### Usinages

Boîte pour serrure avec MT 7218TF-nn  
Et corniers supplémentaires

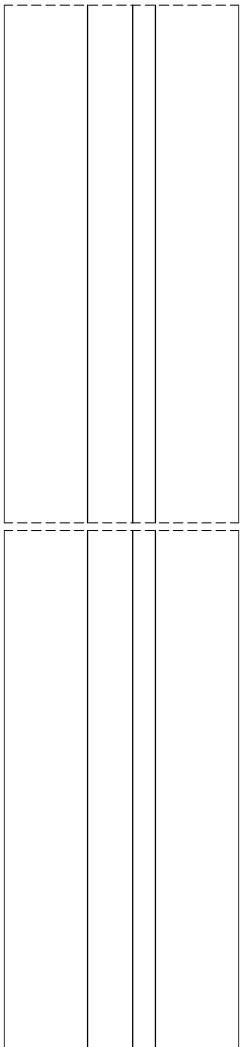


A) Cutting length  
B) Cut off profile  
C) n°02 holes Ø5 mm  
D) Height of locking box variable  
E) Holes depending on the lock

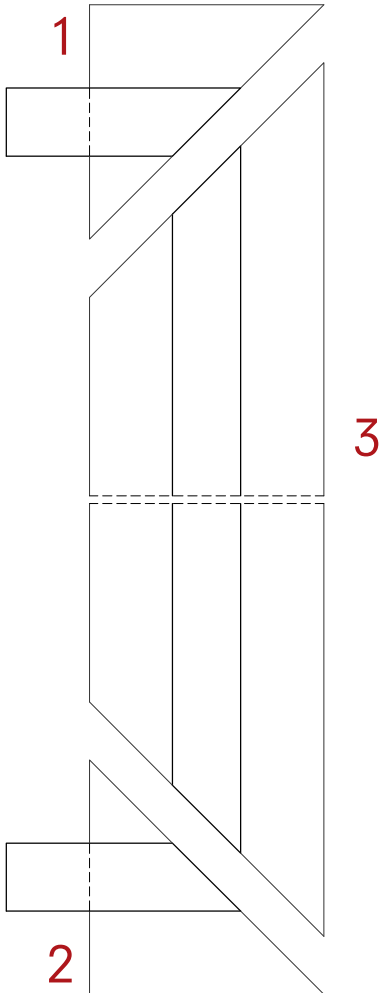
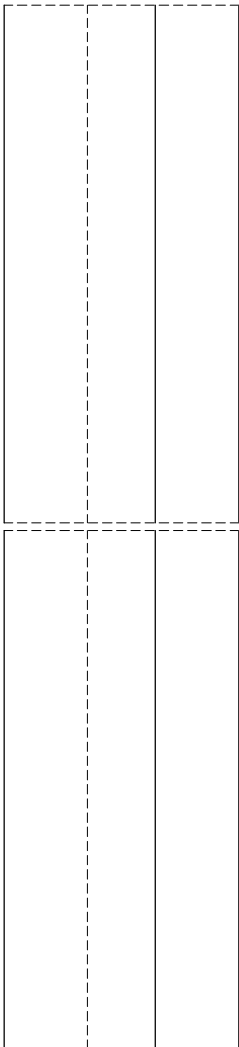
A) Zuschnitt  
B) Profil ausklinken  
C) 2x Bohrungen Ø5 mm  
D) Höhe Schlosskasten variabel  
E) Bohrungen in Abhängigkeit vom Schloss

A) Longueur de coupe  
B) Pièce à enlever  
C) n°02 trous Ø5 mm  
D) Hauteur du boîtier serrure variable  
E) Trous en fonction de la serrure

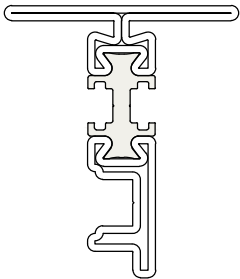
A



B

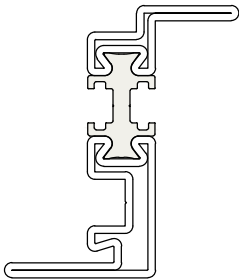


OUTSIDE



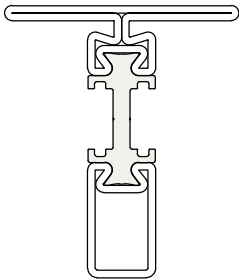
MT 7218TZ-nn (A)

OUTSIDE



MT 7218ZR-nn (B)

OUTSIDE

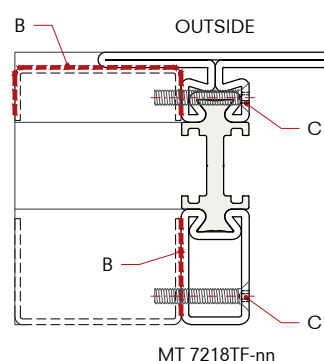
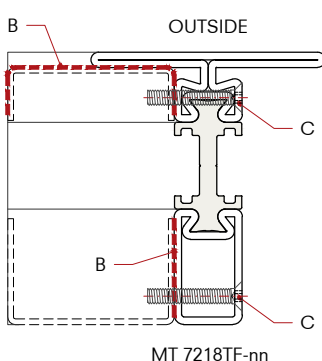
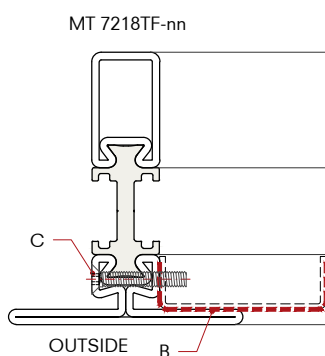
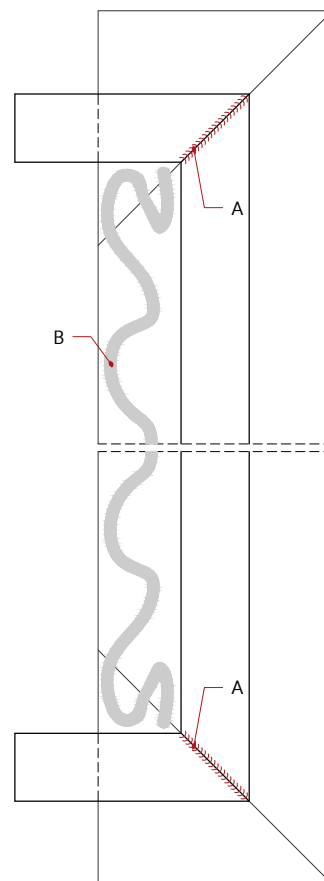
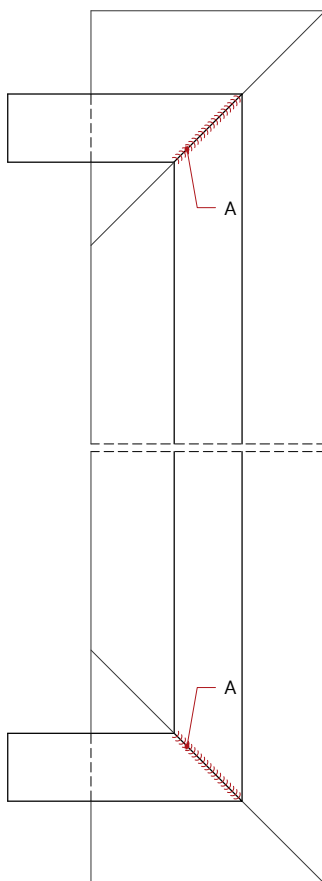
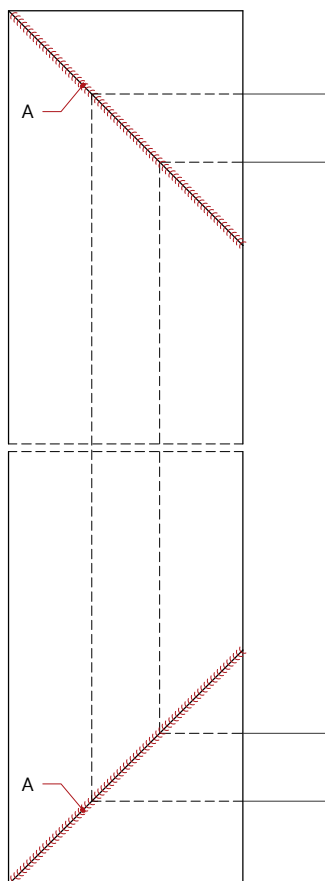


MT 7218TF-nn

A) Open out  
B) Open in

A) Nach außen öffnend  
B) Nach innen öffnend

A) Ouverture extérieure  
B) Ouverture intérieure



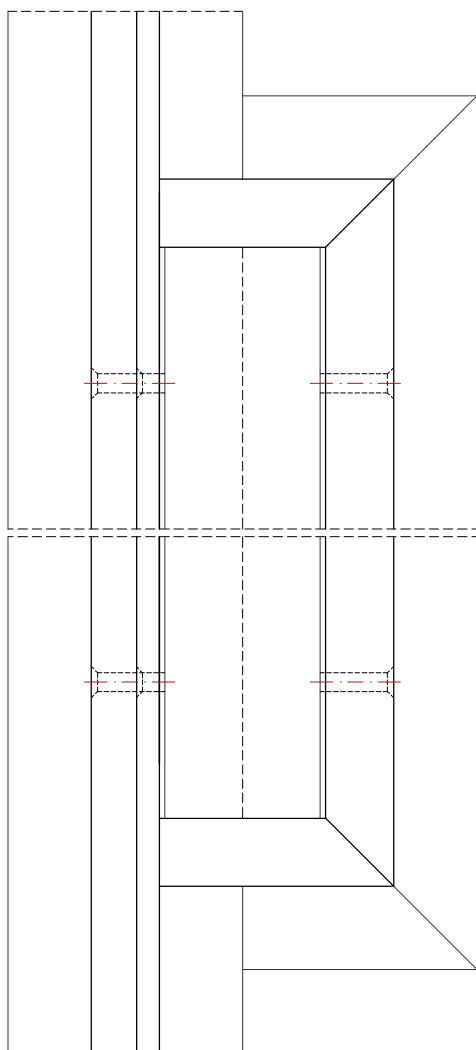
A) Welding  
B) Sealant  
C) Fastening with M4x25 ISO10642 screws

A) Schweißen  
B) Dichtstoff  
C) Befestigungsschrauben M4x25 ISO10642

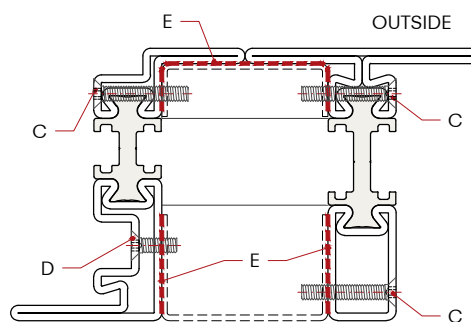
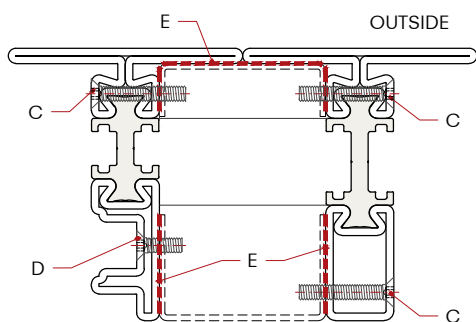
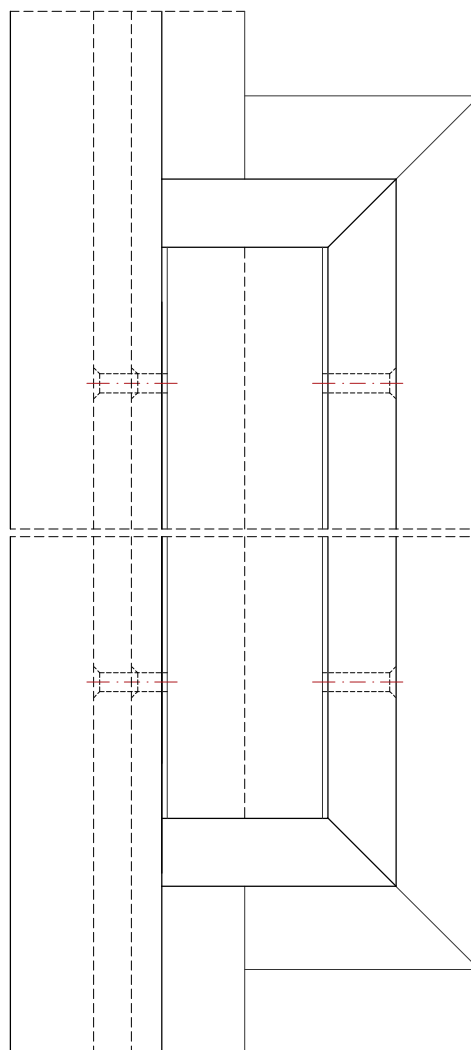
A) Souder  
B) Silicon  
C) Fixation avec vis M4x25 ISO10642



**A**



**B**



A) Locking box open out  
B) Locking box open in  
C) Fastening with M4x25 ISO10642 screws  
D) Fastening with M4x12 ISO10642 screws  
E) Sealant

A) Schlosskasten nach außen öffnend  
B) Schlosskasten nach innen öffnend  
C) Befestigungsschrauben M4x25 ISO10642  
D) Befestigungsschrauben M4x12 ISO10642  
E) Dichtstoff

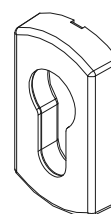
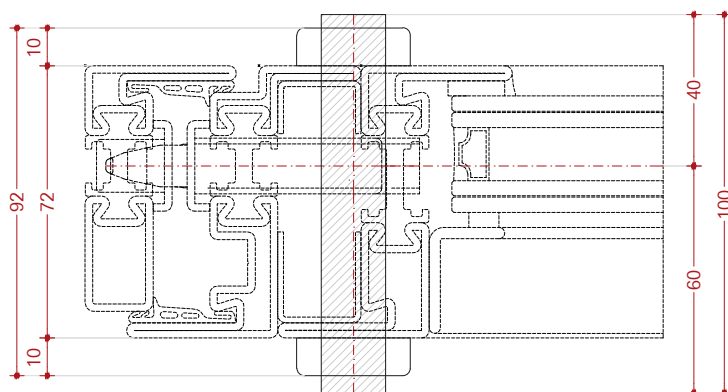
A) Boîte serrure ouverture extérieure  
B) Boîte serrure ouverture intérieure  
C) Fixation avec vis M4x25 ISO10642  
D) Fixation avec vis M4x12 ISO10642  
E) Silicon

**Cylinder combinations**

**Profilzylinder Kombinationen**

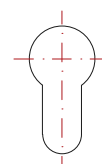
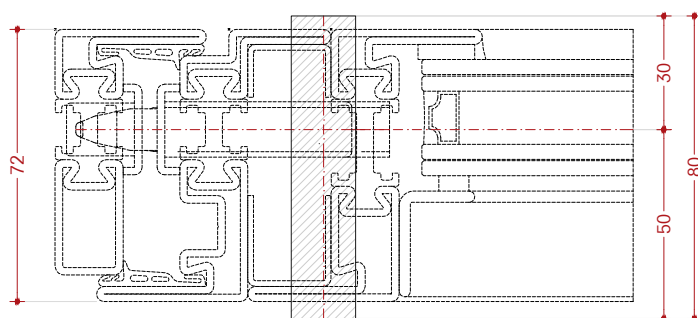
**Combinaison cylindres**

B99172-02 - MT 7218ZR-nn / MT 7218ZF-nn



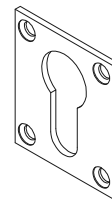
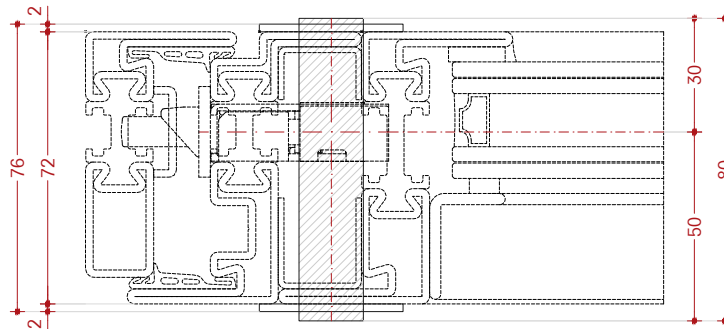
700910 nn

B99172-02 - MT 7218ZR-nn / MT 7218ZF-nn



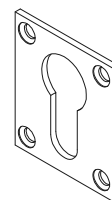
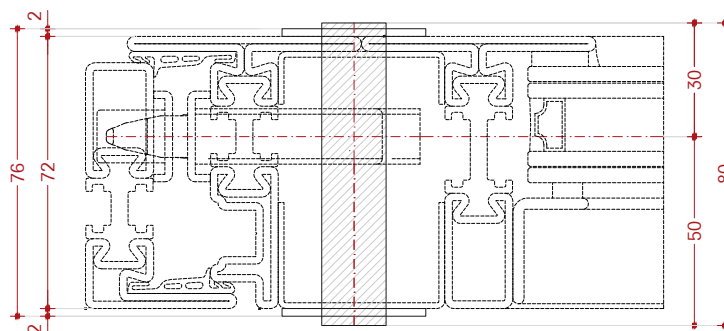
Cylinder without escutcheon  
Profilzylinder ohne Rosette  
Cylindre sans rosace

B99006-02 - MT 7218ZR-nn / MT 7218ZF-nn



750070nn

B99172-02 - MT 7218TZ-nn / MT 7218TF-nn



750070nn



Glazing

Verglasung

Vitrage

5.12

Legend

+ = Fixed  
— = Open in  
- - - = Open out  
Dimensions in: mm  
Scale 1:1 - 1:2

Legende

+ = Fixed  
— = Innen öffnend  
- - - = Außen öffnend  
Einheit in: mm  
Maßstab 1:1 - 1:2

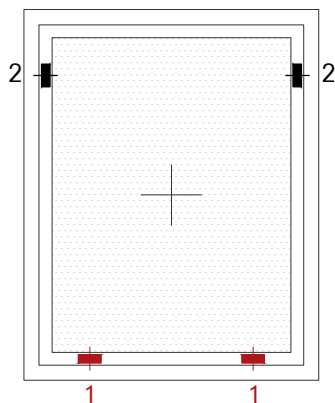
Légende

+ = Fixe  
— = Ouvr. intérieur  
- - - = Ouvr. extérieur  
Dimensions en: mm  
Échelle 1:1 - 1:2

**Installation**  
Glazing

**Einbau**  
Verglasung

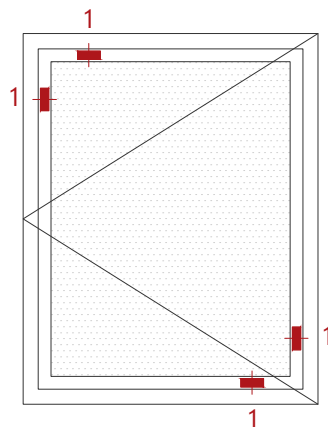
**Schéma de montage**  
Vitrage



Fixed window (Windows and doors)

Festverglasung (Fenster und Türen)

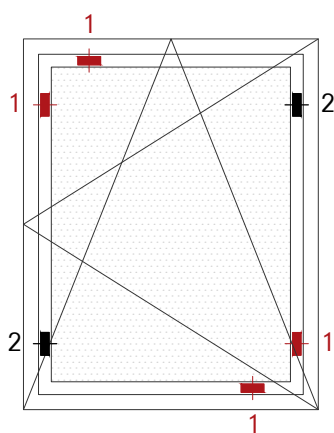
Fenêtre fixe (Menuiserie extérieure)



Single leaf window open in and open out

Einflügliges Fenster nach innen und außen öffnend

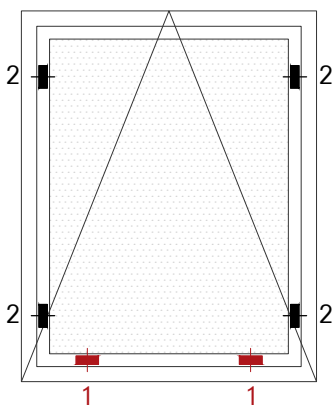
Fenêtre à un vantail ouvrant vers l'intérieur et l'extérieur



Single leaf window

Einflüglige Fenster

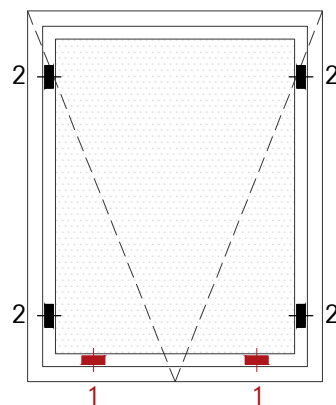
Fenêtre à un vantail



Bottom hung window open in

Kipp-Fenster nach innen öffnend

Fenêtre à soufflet ouvrant vers l'intérieur



Top hung projecting window open out

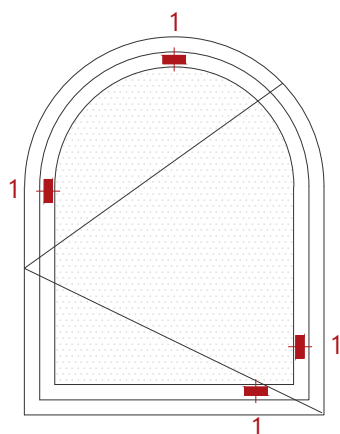
Senkklapp-Fenster nach außen öffnend

Fenêtre à l'italienne ouvrant vers l'extérieur

1) Support shims  
2) Distance shims

1) Stützstärken  
2) Distanzscheiben

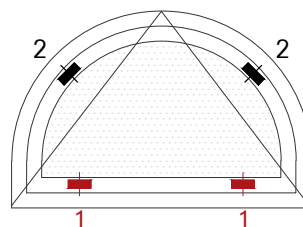
1) Épaisseurs de support  
2) Cales de distance



Single leaf window open in and open out

Einflügliges Fenster nach innen und außen öffnend

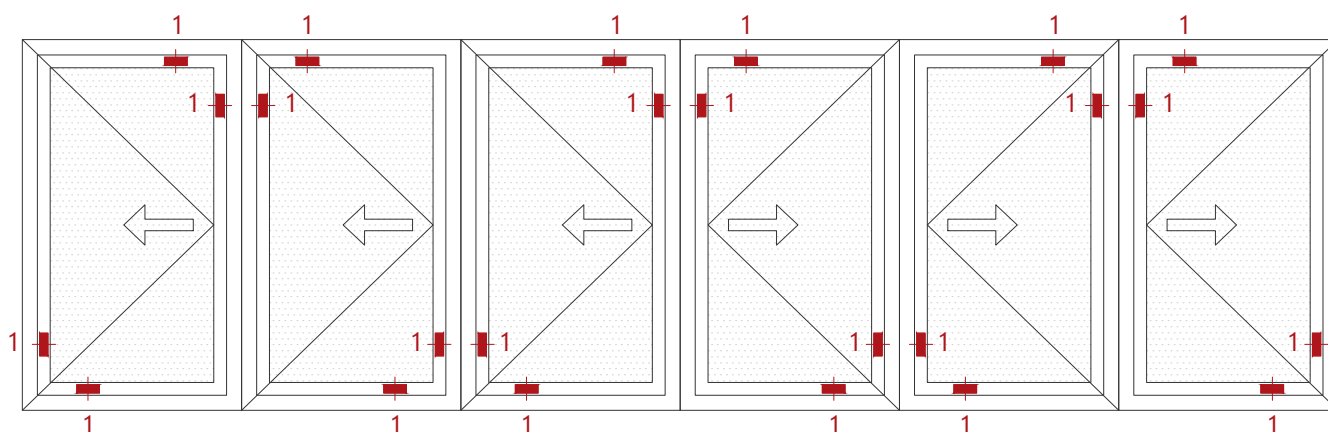
Fenêtre à un vantail ouvrant vers l'intérieur et l'extérieur



Open in bottom hung window

Kipp-Fenster nach innen öffnend

Fenêtre à soufflet ouvrant vers l'intérieur



Bi-folding door system  
6 leaves (3+3 leaves)

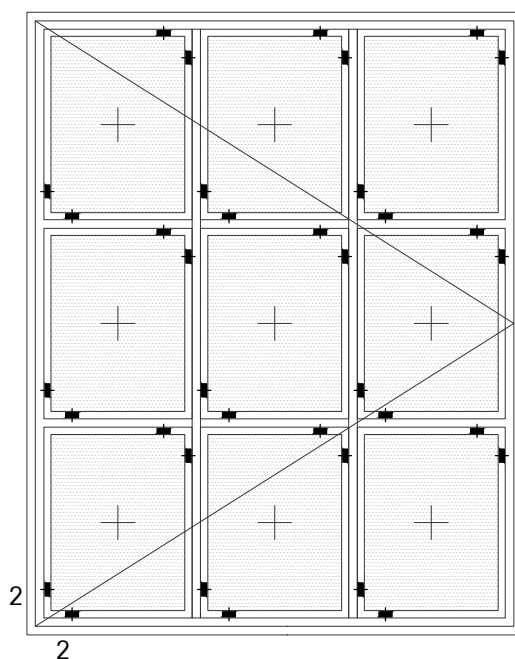
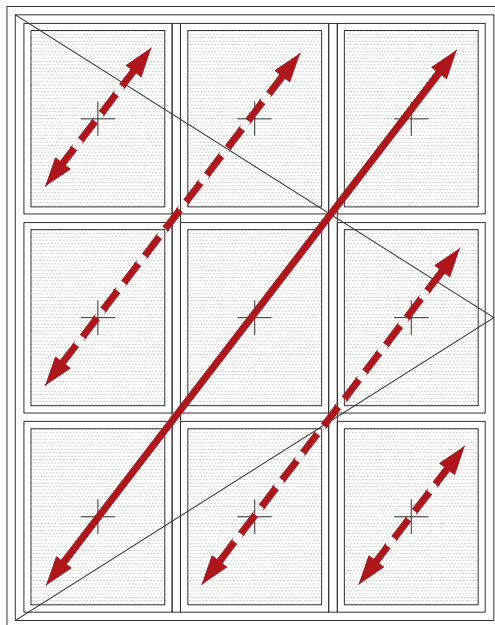
Faltwand  
6 flügelig (3+3 flügelig)

Système de porte accordéon  
6 vantailes (3+3 vantailes)

1) Support shims  
2) Distance shims

1) Stützstärken  
2) Distanzscheiben

1) Épaisseurs de support  
2) Cales de distance



Single leaf window open in and open out

Einflügliges Fenster nach innen und außen öffnend

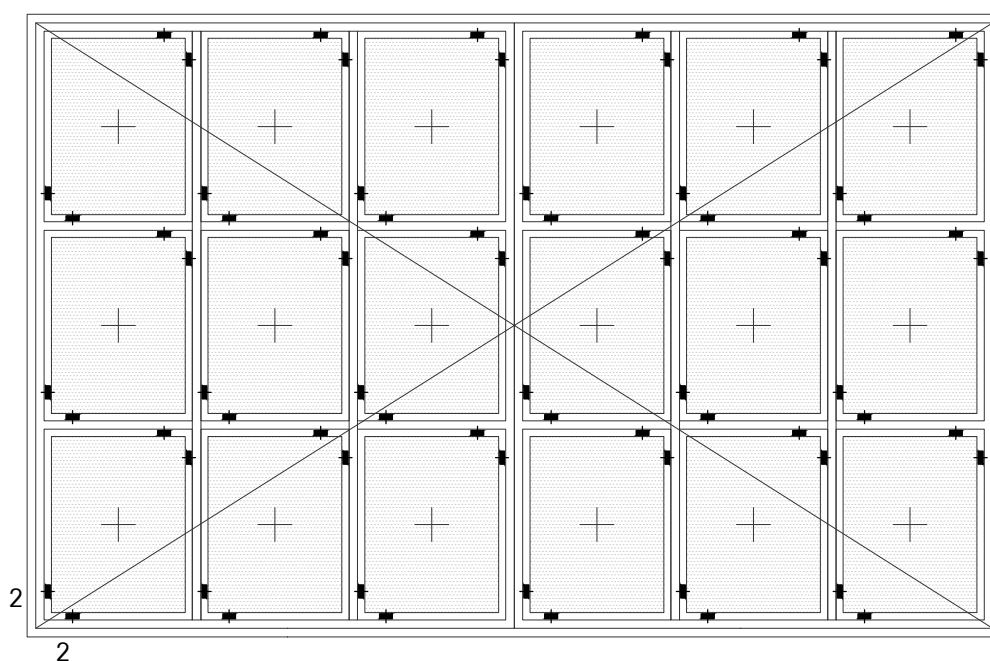
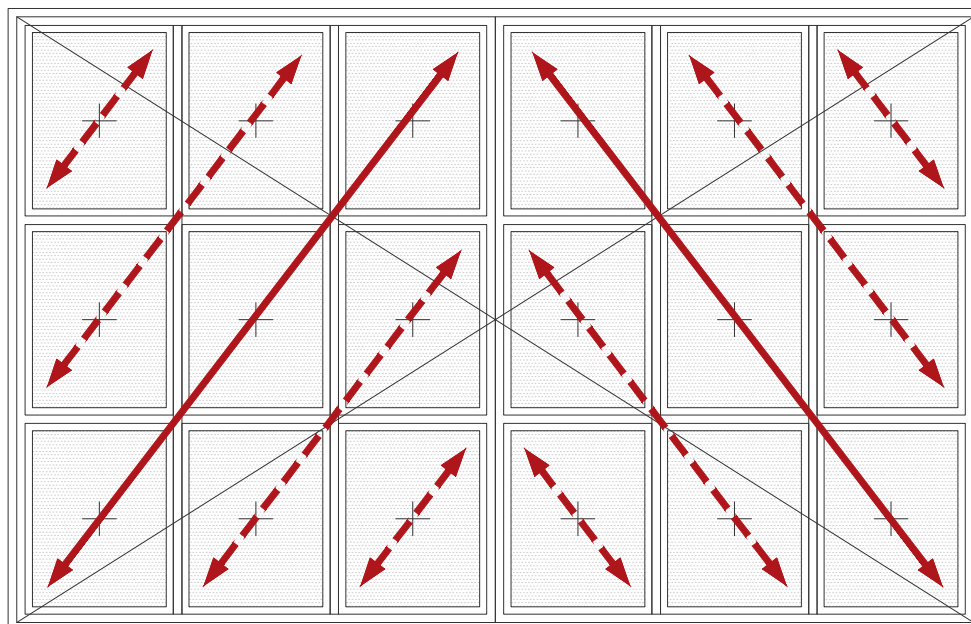
Fenêtre à un vantail ouvrant vers l'intérieur et l'extérieur

2) Distance shims

2) Distanzscheiben

2) Cales de distance





Double leaf window open in and open out

Zweiflügliges Fenster nach innen und außen öffnend

Fenêtre à deux vantaux ouvrant vers l'intérieur et l'extérieur

2) Distance shims

2) Distanzscheiben

2) Cales de distance

**Installation**  
Glazing beads

**Einbau**  
Glashalteleisten

**Schéma de montage**  
Parcloses

45° cutting of angled glazing beads and welding of the corners on the inside.

Winkelglashalteleisten auf 45° zugeschnitten und von innen verschweißt.

Découpe 45° des parcloses à souder.



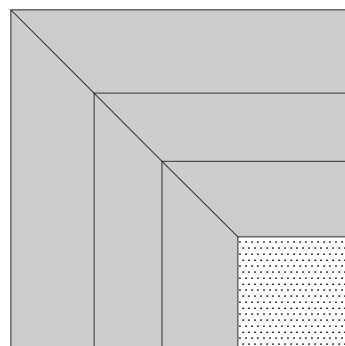
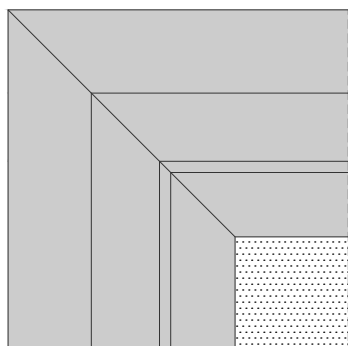
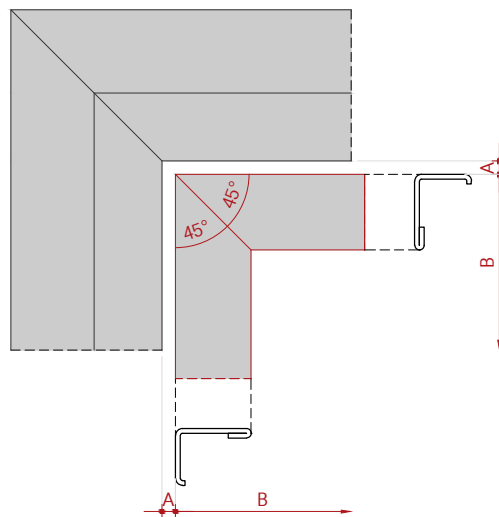
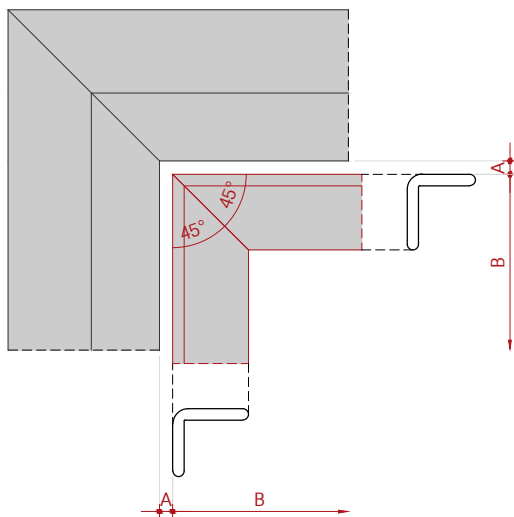
FV 2018L-nn FV 2023L-nn FV 2028L-nn FV 2033L-nn



FV 2015A-nn FV 2018A-06 FV 2023A-06 FV 2028A-06 FV 2033A-06



FV 2003R-06



A) 0.5 mm inlay as gap  
B) Cutting length

A) Einlage von 0.5 mm als Abstand  
B) Zuschnittslänge

A) Garder une distance de 0.5 mm tout autour  
B) Longueur de coupe

90° cutting of glazing beads.

Glashalteleisten auf 90° zuschneiden.

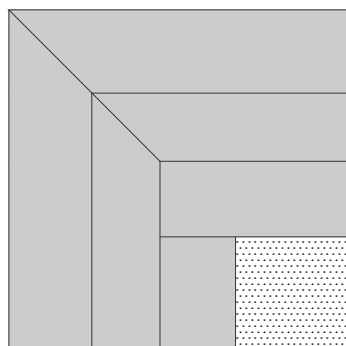
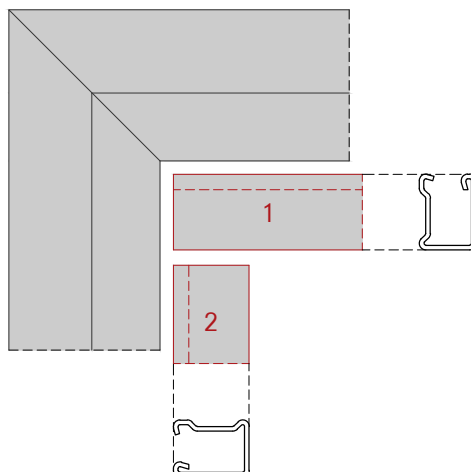
Découpe 90° des parclores.



FV 2015R-02 FV 2018R-02 FV 2023R-02 FV 2028R-02 FV 2033R-02



FV 2015R-06 FV 2020R-06 FV 2025R-06 FV 2030R-06 FV 2035R-06



### Installation

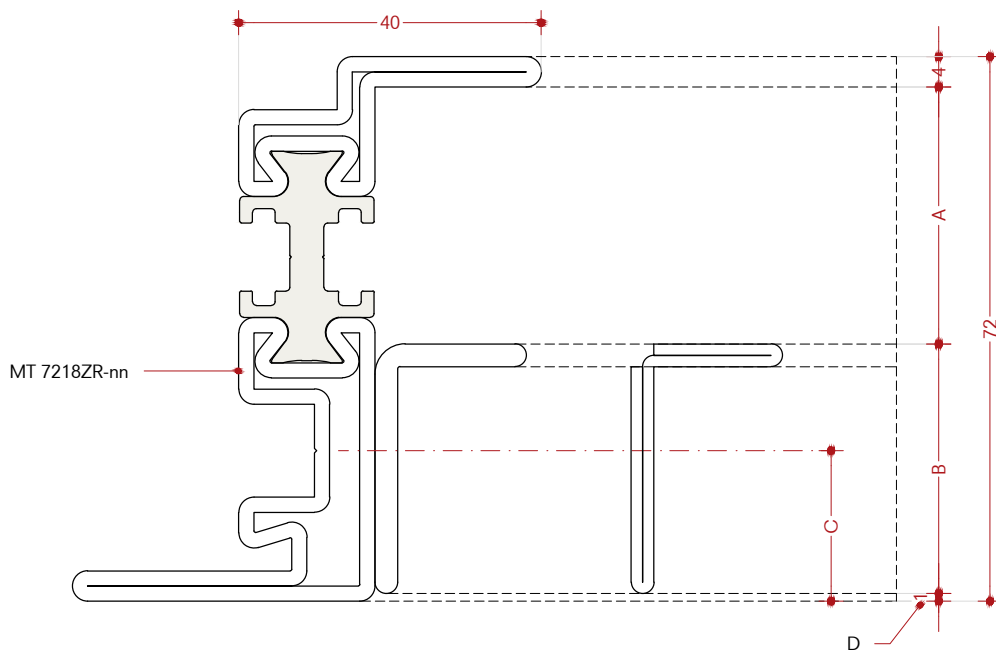
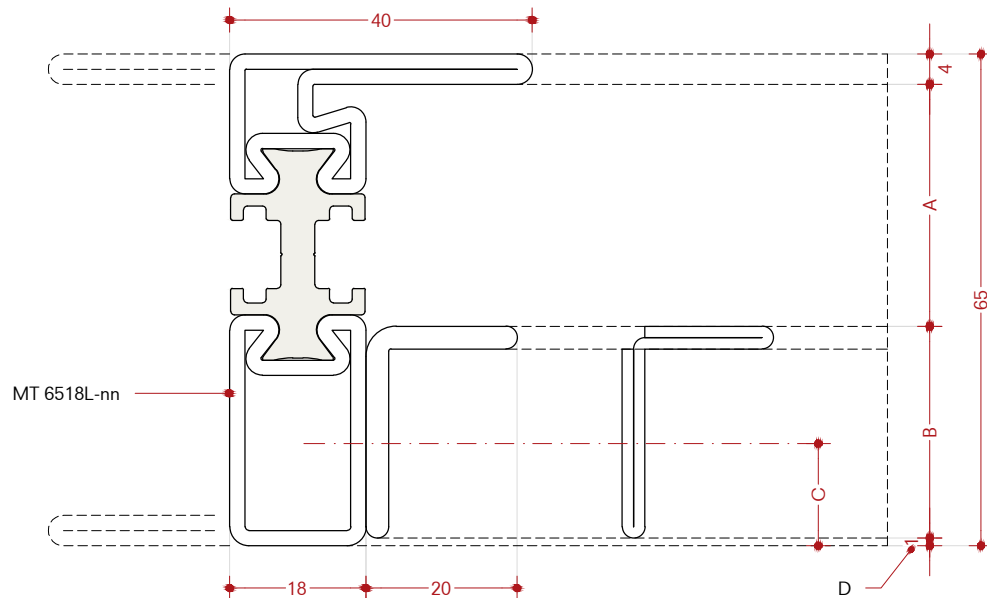
Glazing beads  
Positioning of glazing bead

### Einbau

Glashalteleisten  
Positionierung glashalteleiste

### Schéma de montage

Parcloses  
Positionnement des parcloses



Dimensions see chapter 2.3  
"Glazing table"

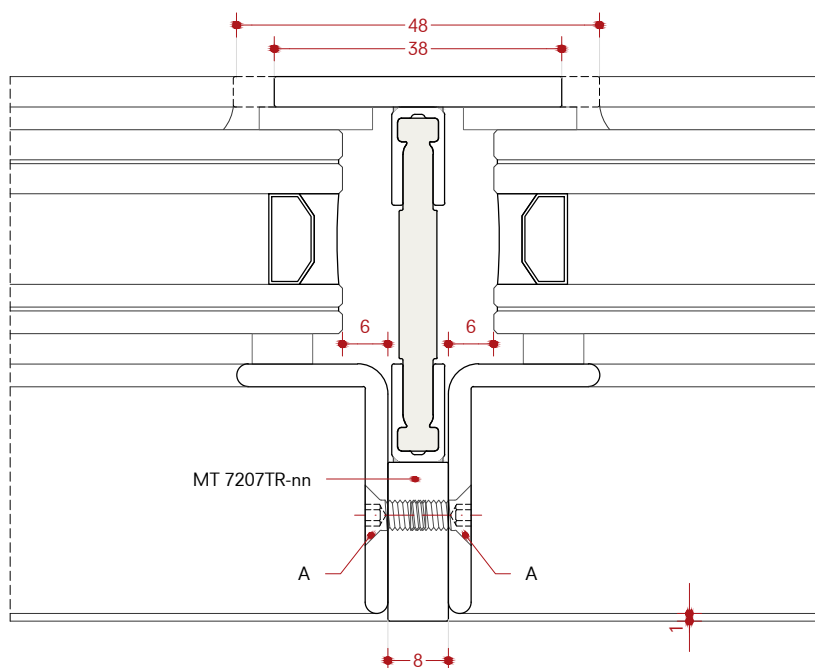
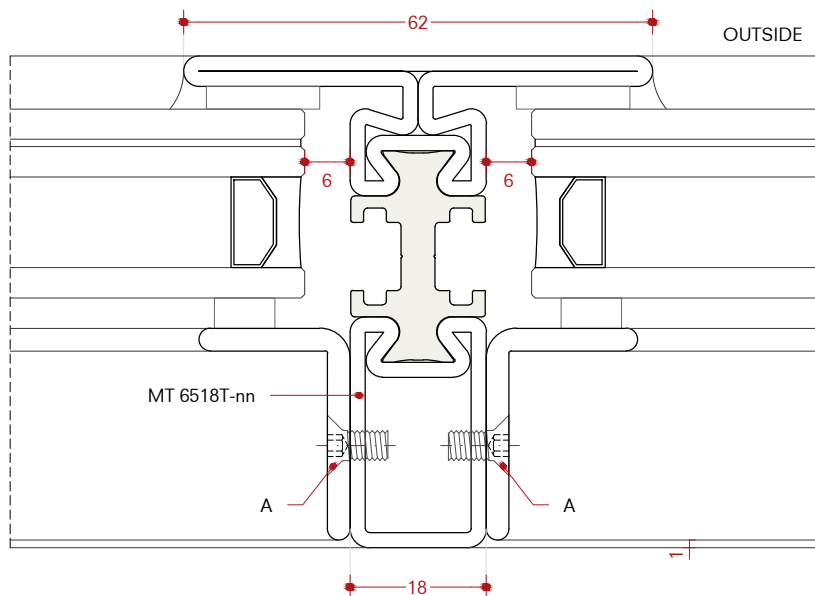
- A) Glazing including internal gasket and external gasket
- B) Depth of glazing bead
- C) Position of the screw connection
- D) Positioning of the glazing bead: recommendation offset 1 mm

Abmessungen siehe Kapitel 2.3  
"Verglasungstabellen"

- A) Verglasung inklusive Innendichtung und Aussendichtung
- B) Bautiefe Glashalteleiste
- C) Lage der Verschraubung
- D) Positionierung der Glashalteleiste: Empfehlung Versatz 1 mm

Dimensions voir chapitre 2.3  
"Tableaux de vitrage"

- A) Vitrage, y compris joint intérieur et joint extérieur
- B) Profondeur de la parclose
- C) Position du raccord à vis
- D) Positionnement de la parclose: décalage de la préconisation 1 mm



A) Screws D99815-03 - D99867-03 - D99866-03

A) Schrauben D99815-03 - D99867-03 - D99866-03

A) Vis D99815-03 - D99867-03 - D99866-03

### Installation

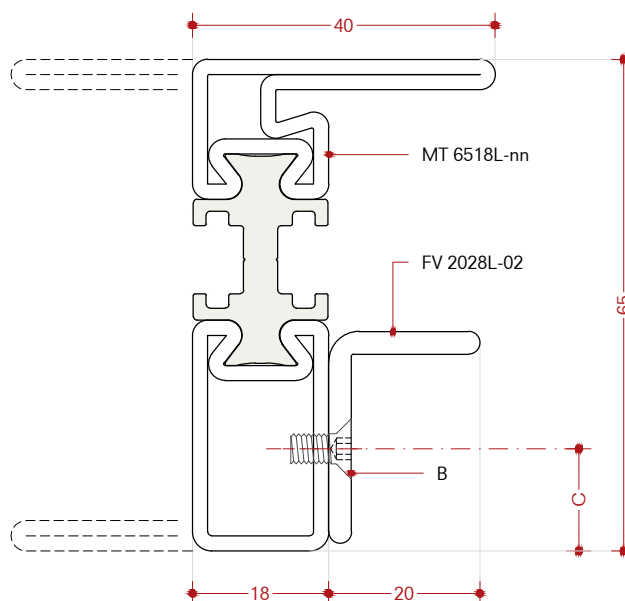
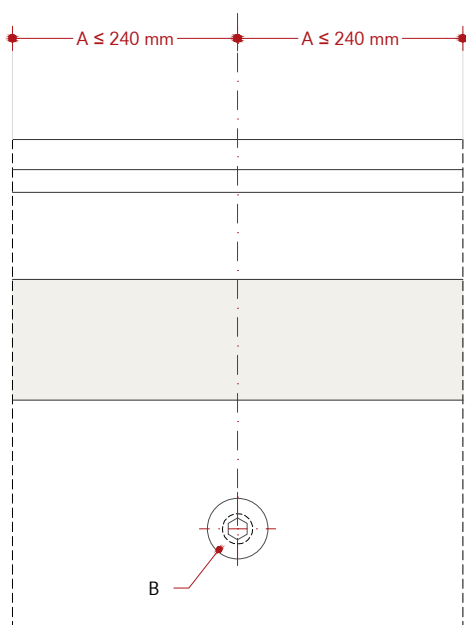
Glazing beads  
Positioning of the fixing screws

### Einbau

Glashalteleisten  
Positionierung der  
Befestigungsschrauben

### Schéma de montage

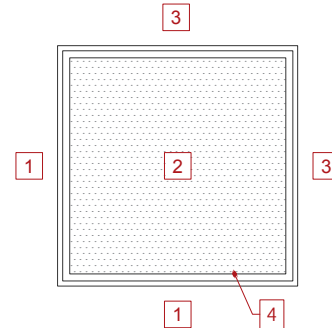
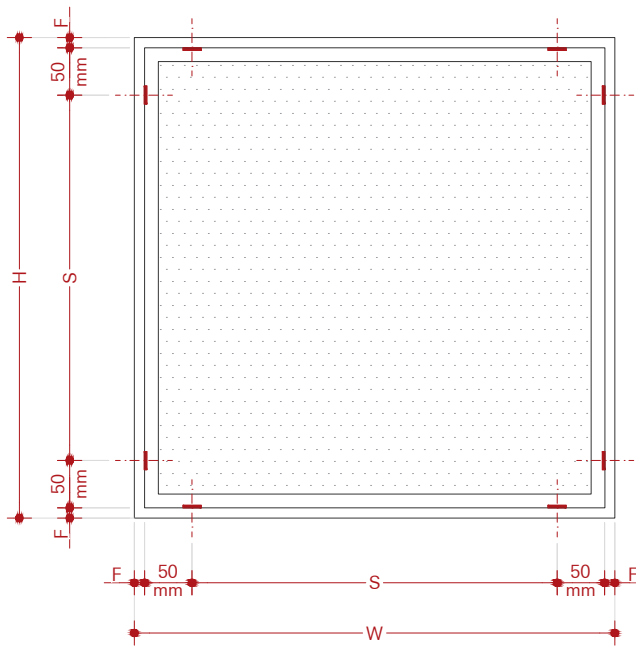
Parcloles  
Positionnement des vis de fixation



A) Maximum fixing distance  
B) Fastening with fixing screw see chapter 2.3  
"Glazing table"  
C) Position of the screw connection see chapter  
2.3 "Glazing table"

A) Maximaler Befestigungsabstand  
B) Befestigung mit Schrauben siehe Kapitel 2.3  
"Verglasungstabellen"  
C) Lage der Verschraubung siehe Kapitel 2.3  
"Verglasungstabellen"

A) Distance maximale de montage  
B) Fixation avec vis voir chapitre 2.3 "Tableaux  
de vitrage"  
C) Position du raccord à vis voir chapitre 2.3  
"Tableaux de vitrage"



### Assembly sequence

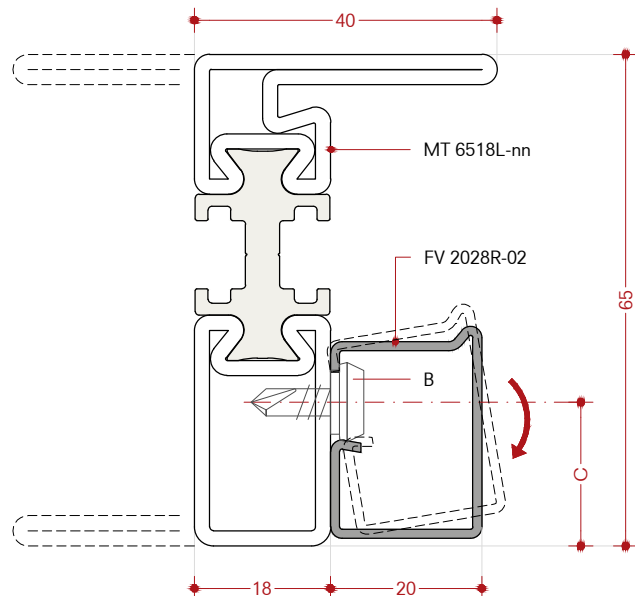
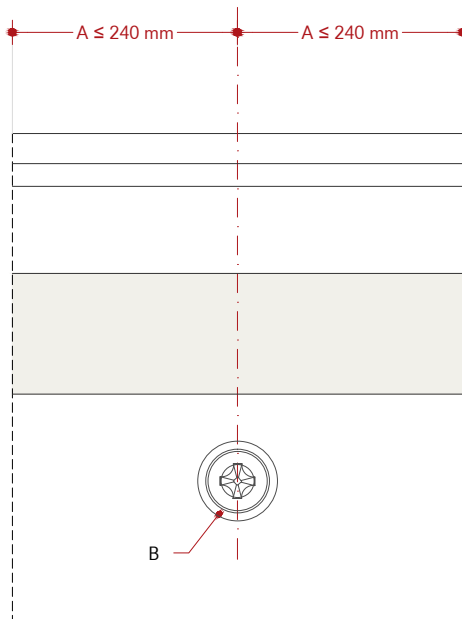
- 1) Prepare the screws on two sides.
- 2) Install the glass.
- 3) Install the screws on the other sides.
- 4) Install the snap-on glazing beads.

### Montagereihenfolge

- 1) Montieren Sie die Klemmköpfe auf 2 Seiten des Rahmens.
- 2) Montieren Sie die Verglasung.
- 3) Restliche Klemmköpfe positionieren/montieren.
- 4) Gashalteleisten einbauen.

### Séquence d'assemblage

- 1) Préparez les vis des deux côtés.
- 2) Installez le verre.
- 3) Installez les vis sur les côtés restants.
- 4) Installez les parcloles à pression.



### NOTE:

We suggest to fix the bushes on the top and on the right side after the installation of the glass.

### HINWEIS:

Wir empfehlen, die Klemmköpfe nach dem Einbau des Glases oben und Rechts zu befestigen.

### REMARQUE:

Nous suggérons de fixer les bagues en haut et à droite après la pose du verre.

- A) Maximum fixing distance  
B) Fastening with fixing screw see chapter 2.3 "Glazing table"  
C) Position of the screw connection see chapter 2.3 "Glazing table"  
F) Internal profile width  
H) Overall height  
S) On-centre distance between the outer clips  
W) Overall width

- A) Maximaler Befestigungsabstand  
B) Befestigung mit Schrauben siehe Kapitel 2.3 "Verglasungstabellen"  
C) Lage der Verschraubung siehe Kapitel 2.3 "Verglasungstabellen"  
F) Profilinnenbreite  
H) Gesamthöhe  
S) Lichter Abstand zwischen den äusseren Klips  
W) Gesamtbreite

- A) Distance maximale de montage  
B) Fixation avec vis voir chapitre 2.3 "Tableaux de vitrage"  
C) Position du raccord à vis voir chapitre 2.3 "Tableaux de vitrage"  
F) Profondeur du profilé  
H) Hauteur totale  
S) Espace de positionnement des clips  
W) Largeur totale

### Installation

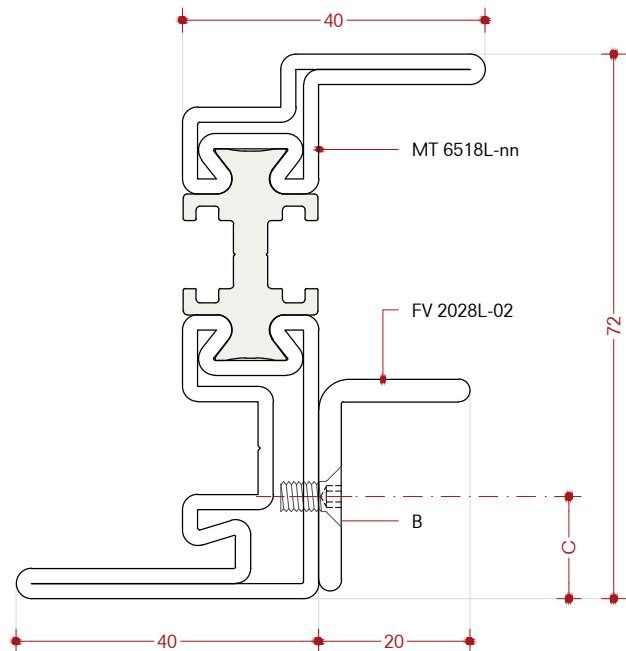
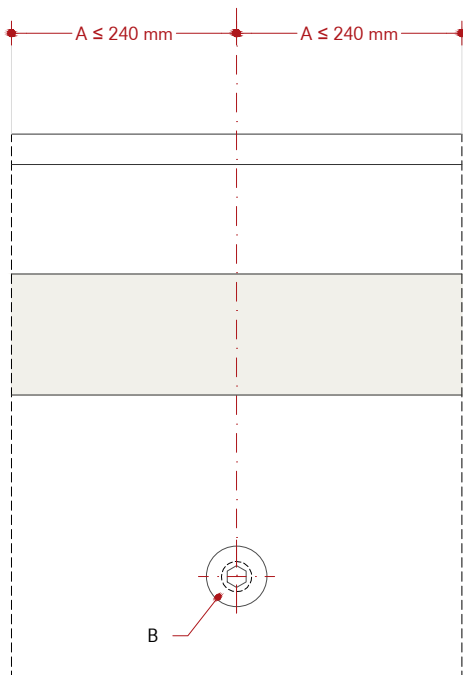
Glazing beads  
Positioning of the fixing screws

### Einbau

Glashalteleisten  
Positionierung der  
Befestigungsschrauben

### Schéma de montage

Parcloles  
Positionnement des vis de fixation

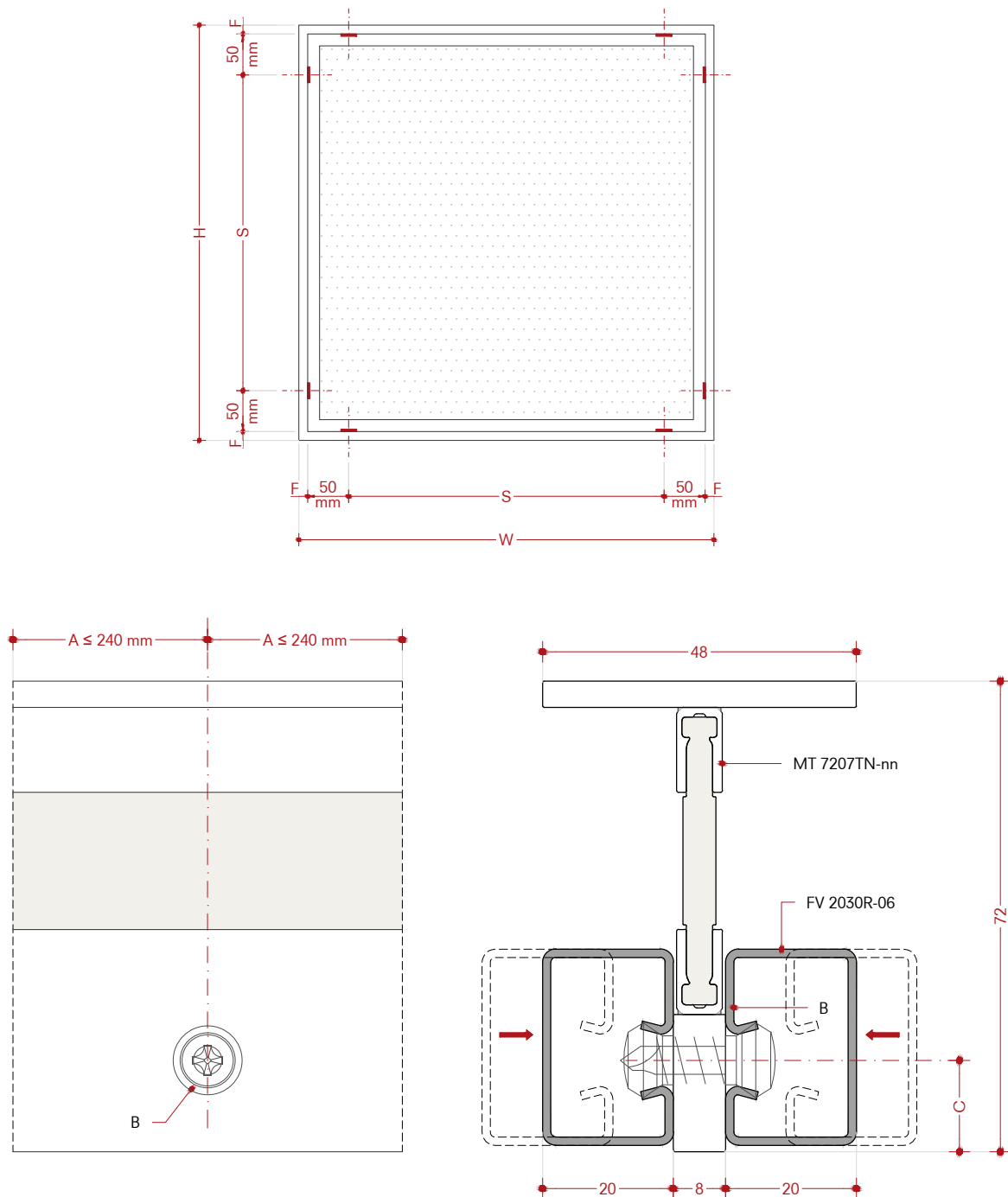


A) Maximum fixing distance  
B) Fastening with fixing screw see chapter 2.3  
"Glazing table"  
C) Position of the screw connection see chapter  
2.3 "Glazing table"

A) Maximaler Befestigungsabstand  
B) Befestigung mit Schrauben siehe Kapitel 2.3  
"Verglasungstabellen"  
C) Lage der Verschraubung siehe Kapitel 2.3  
"Verglasungstabellen"

A) Distance maximale de montage  
B) Fixation avec vis voir chapitre 2.3 "Tableaux  
de vitrage"  
C) Position du raccord à vis voir chapitre 2.3  
"Tableaux de vitrage"





**NOTE:**

Offset 10 mm fixing position.

We suggest to fix the bushes on the top and on the right side after the installation of the glass.

- A) Maximum fixing distance
- B) Fastening with fixing screw see chapter 2.3 "Glazing table"
- C) Position of the screw connection see chapter 2.3 "Glazing table"
- F) Internal profile width
- H) Overall height
- S) On-centre distance between the outer clips
- W) Overall width

**HINWEIS:**

Versatz 10 mm Befestigungsposition.

Wir empfehlen, die Klemmknöpfe nach dem Einbau des Glases oben und Rechts zu befestigen.

- A) Maximaler Befestigungsabstand
- B) Befestigung mit Schrauben siehe Kapitel 2.3 "Verglasungstabellen"
- C) Lage der Verschraubung siehe Kapitel 2.3 "Verglasungstabellen"
- F) Profilinnenbreite
- H) Gesamthöhe
- S) Lichter Abstand zwischen den äusseren Klips
- W) Gesamtbreite

**REMARQUE:**

Position des fixation décalés de 10 mm

Nous suggérons de fixer les bagues en haut et à droite après la pose du verre.

- A) Distance maximale de montage
- B) Fixation avec vis voir chapitre 2.3 "Tableaux de vitrage"
- C) Position du raccord à vis voir chapitre 2.3 "Tableaux de vitrage"
- F) Profondeur du profilé
- H) Hauteur totale
- S) Espace de positionnement des clips
- W) Largeur totale

### Installation

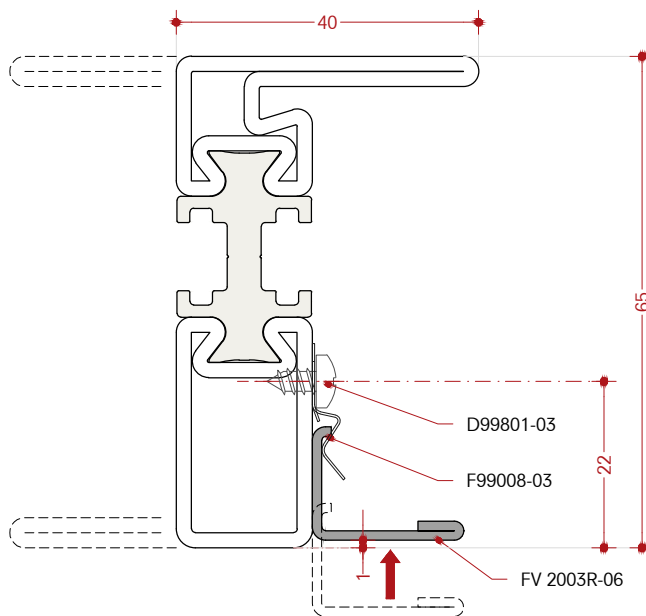
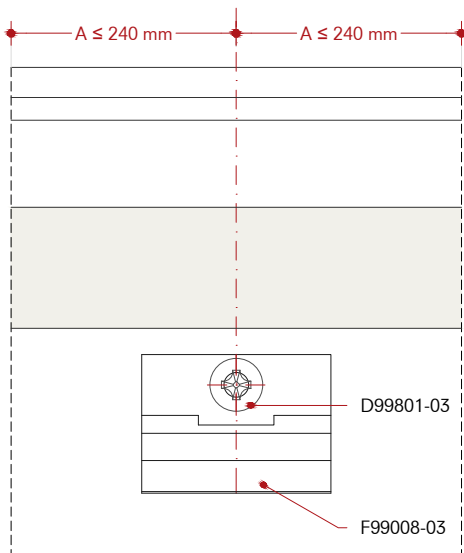
Glazing beads  
Fastening of clips F99008-03  
with screws D99801-03

### Einbau

Glashalteleisten  
Befestigung von Klips F99008-03  
mit Schrauben D99801-03

### Schéma de montage

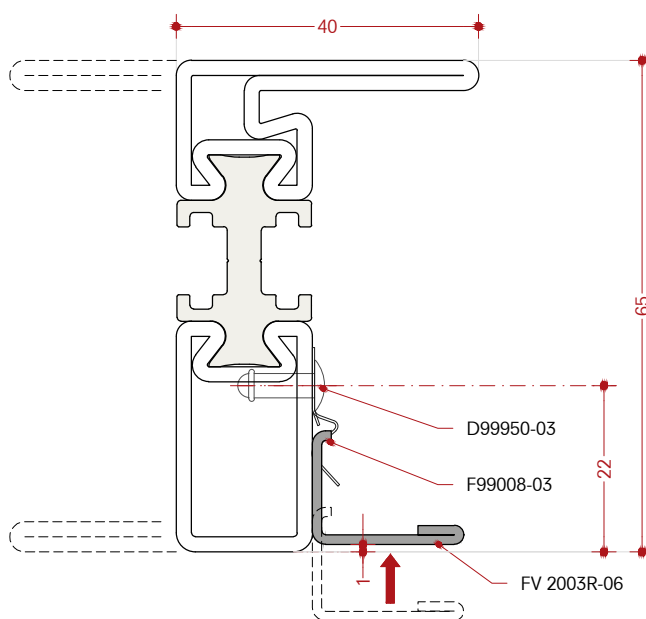
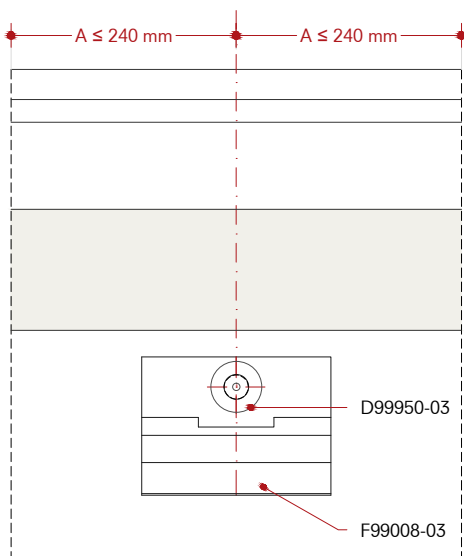
Parcloles  
Fixation des clips F99008-03  
avec des vis D99801-03



Fastening of clips F99008-03  
With rivet D99950-03

Befestigung von Klips F99008-03  
mit Niet D99950-03

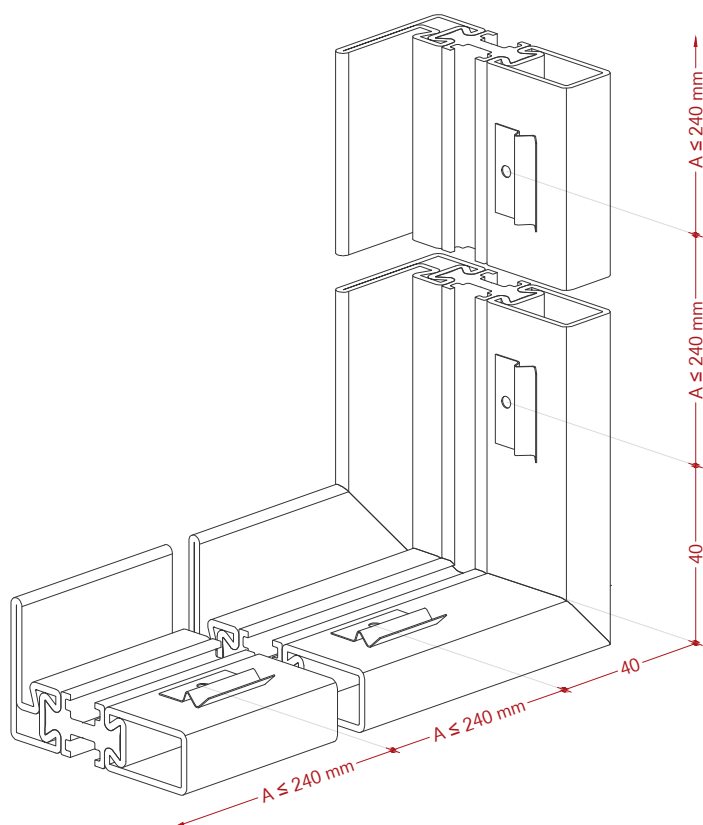
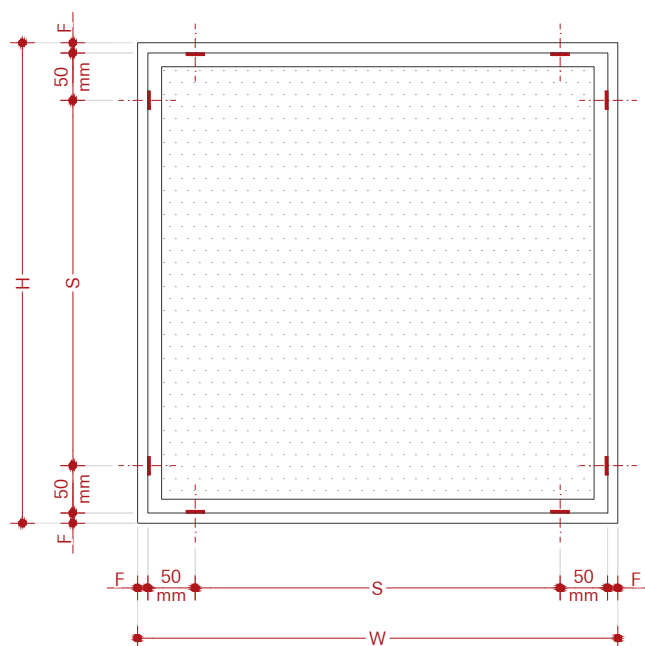
Fixation des clips F99008-03  
avec des rivet D99950-03



A) Maximum fixing distance

A) Maximaler Befestigungsabstand

A) Distance maximale de montage



A) Maximum fixing distance  
F) Internal profile width  
H) Overall height  
S) On-centre distance between the outer clips  
W) Overall width

A) Maximaler Befestigungsabstand  
F) Profillinienbreite  
H) Gesamthöhe  
S) Lichter Abstand zwischen den äusseren Klips  
W) Gesamtbreite

A) Distance maximale de montage  
F) Profondeur du profilé  
H) Hauteur totale  
S) Espace de positionnement des clips  
W) Largeur totale

### Installation

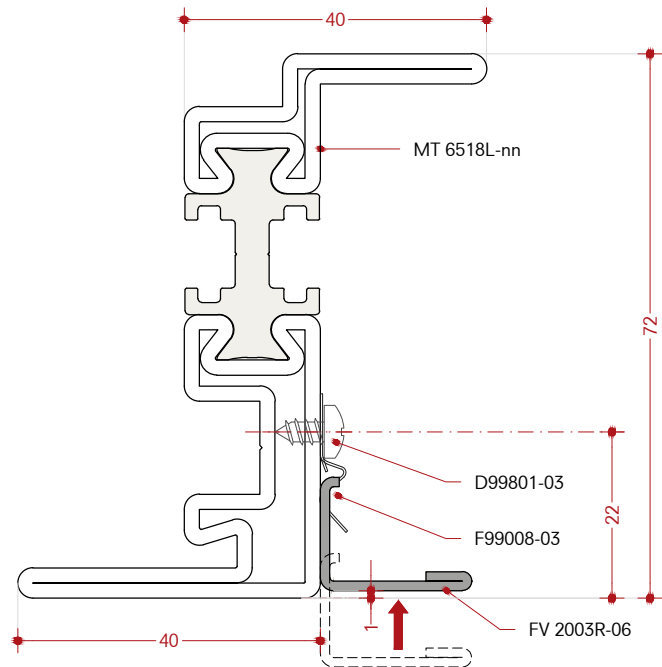
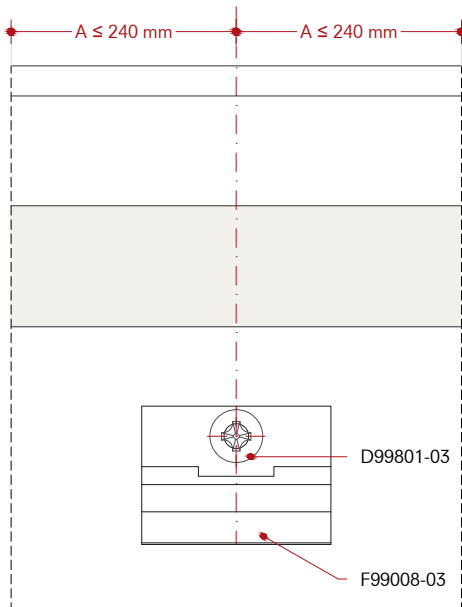
Glazing beads  
Fastening of clips F99008-03  
with screws D99801-03

### Einbau

Glashalteleisten  
Befestigung von Klips F99008-03  
mit Schrauben D99801-03

### Schéma de montage

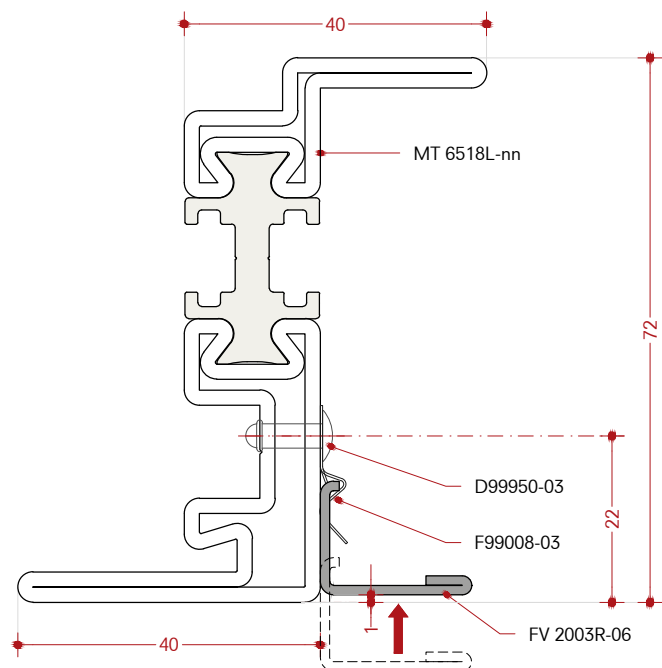
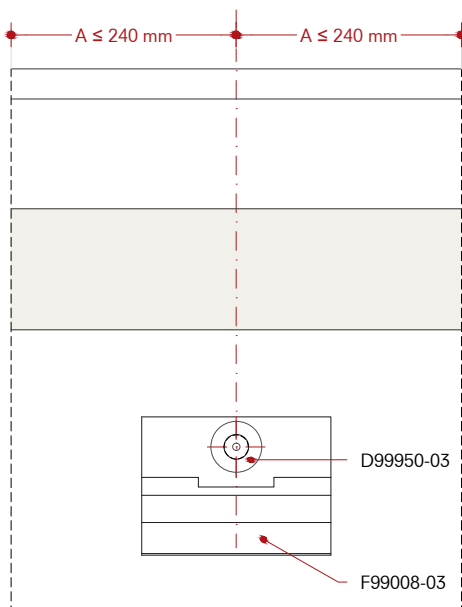
Parcloses  
Fixation des clips F99008-03  
avec des vis D99801-03



Fastening of clips F99008-03  
With rivet D99950-03

Befestigung von Klips F99008-03  
mit niet D99950-03

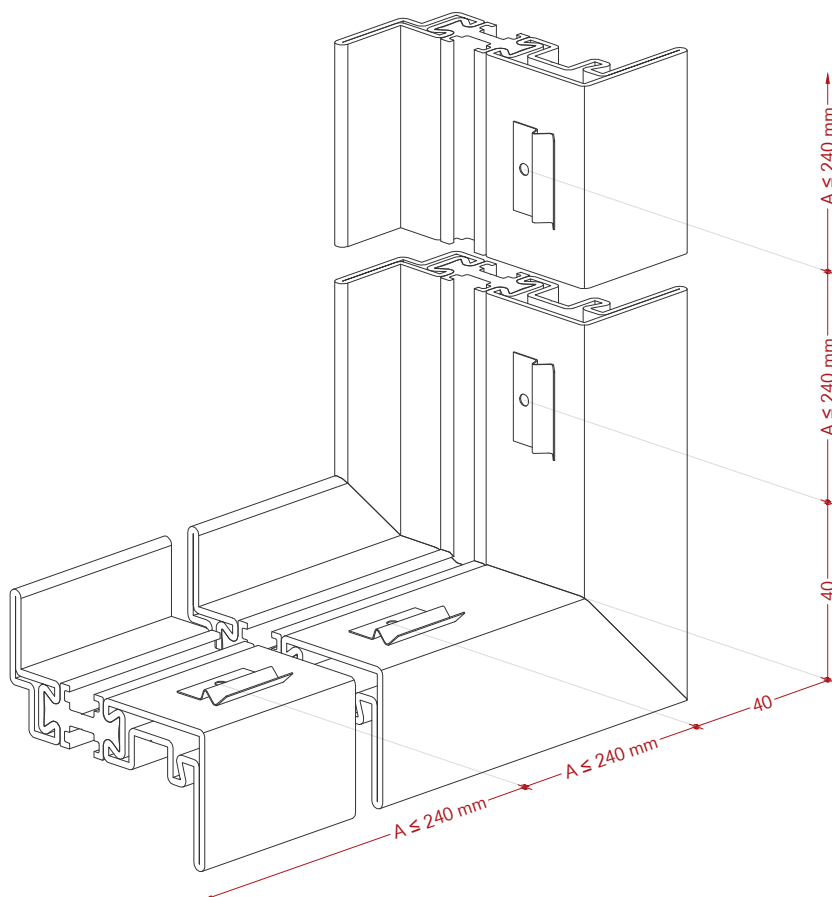
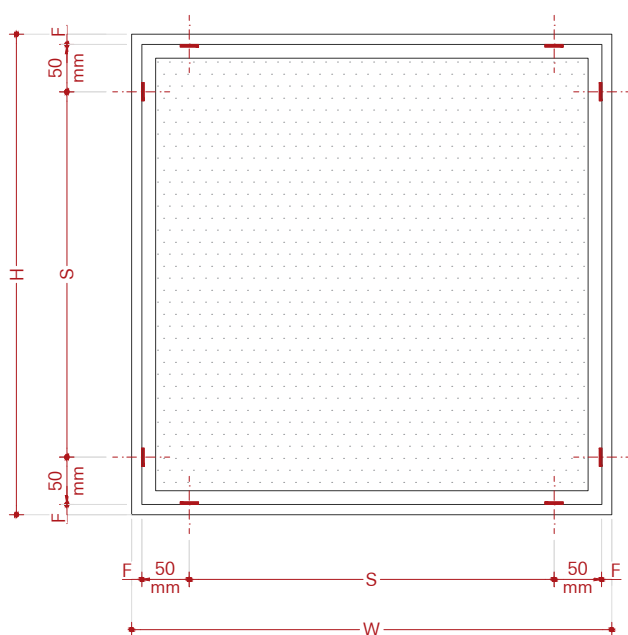
Fixation des clips F99008-03  
avec des rivet D99950-03



A) Maximum fixing distance

A) Maximaler Befestigungsabstand

A) Distance maximale de montage



A) Maximum fixing distance  
F) Internal profile width  
H) Overall height  
S) On-centre distance between the outer clips  
W) Overall width

A) Maximaler Befestigungsabstand  
F) Profillinienbreite  
H) Gesamthöhe  
S) Lichter Abstand zwischen den äusseren Klips  
W) Gesamtbreite

A) Distance maximale de montage  
F) Profondeur du profilé  
H) Hauteur totale  
S) Espace de positionnement des clips  
W) Largeur totale

### Installation

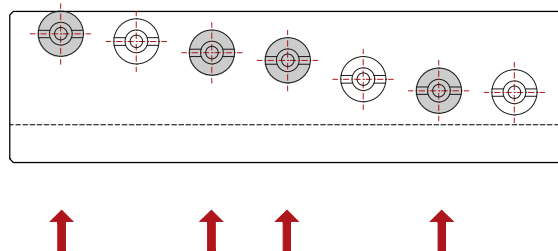
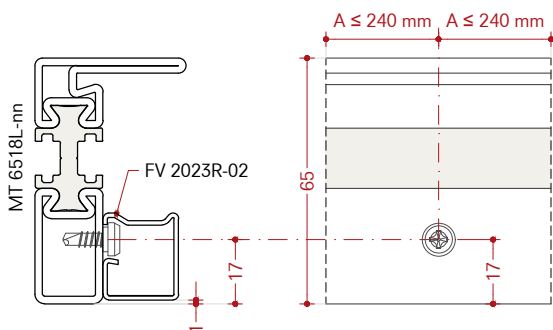
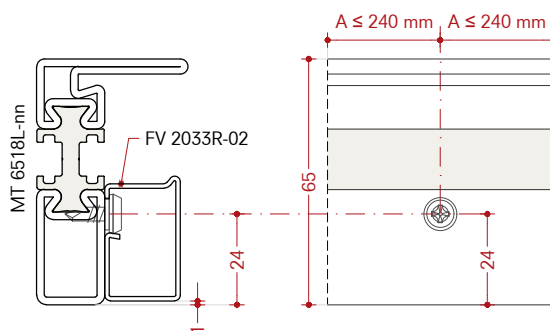
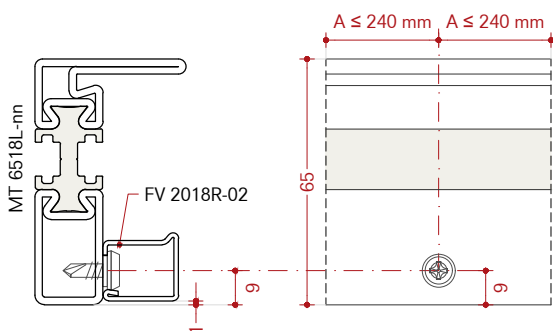
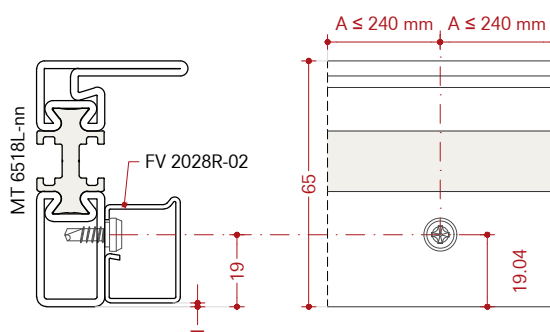
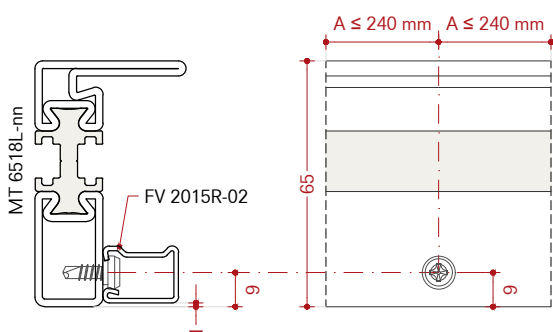
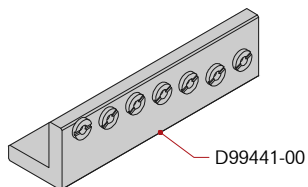
Template D99441-00  
for FV 20XXR-02 glazing beads

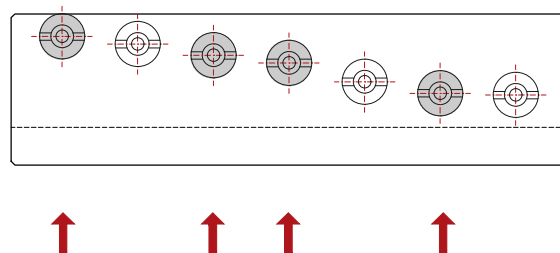
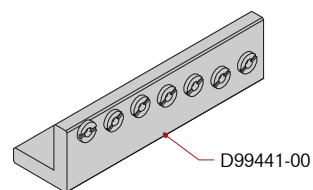
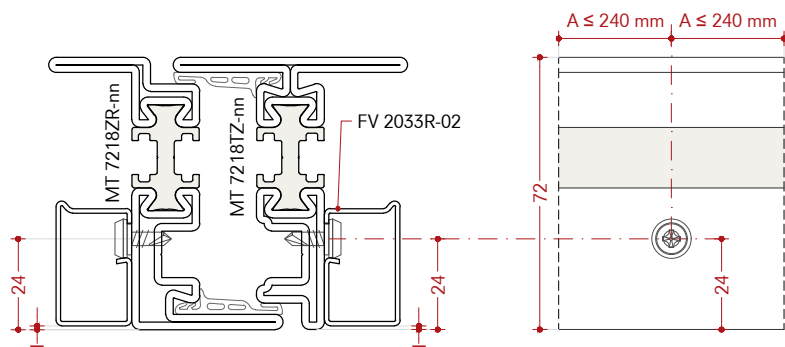
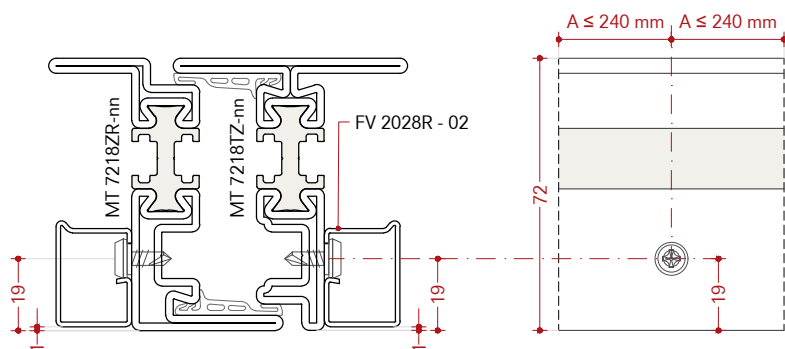
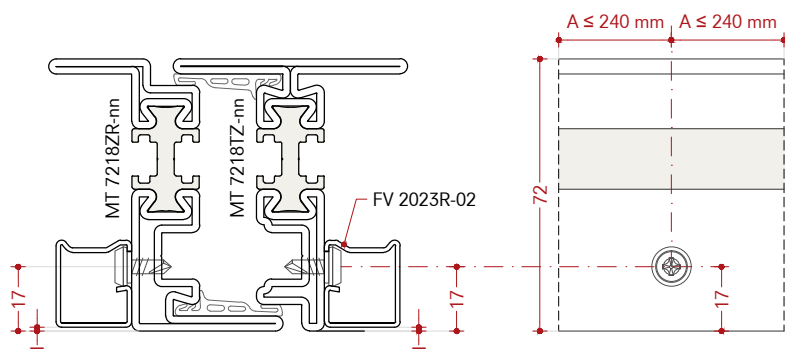
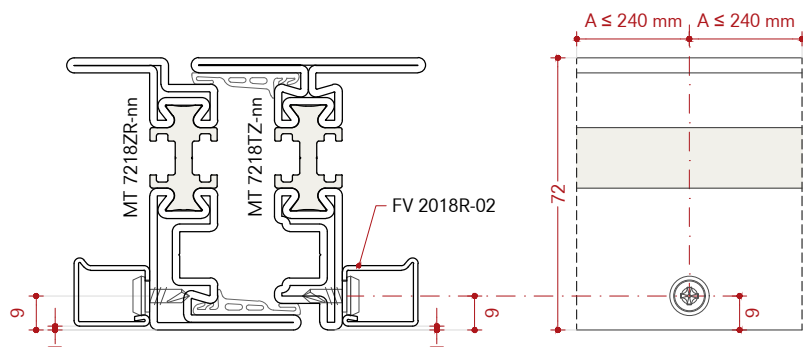
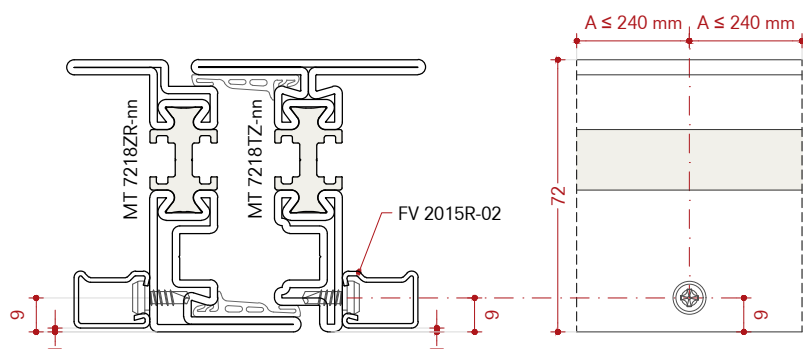
### Einbau

Schweißschablone D99441-00  
für FV 20XXR-02 Glashalteleisten

### Schéma de montage

Gabarit D99441-00  
pour parclores FV 20XXR-02





### Installation

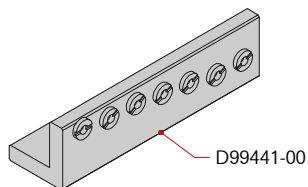
Template D99441-00  
for FV 2003R-06 glazing beads

### Einbau

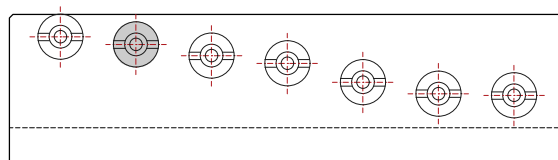
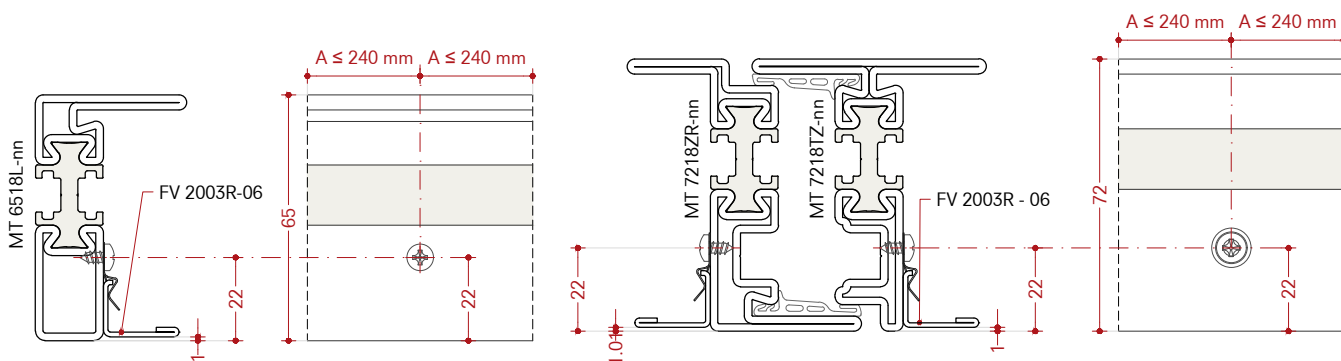
Schweißschablone D99441-00  
für FV 2003R-06 Glashalteleisten

### Schéma de montage

Gabarit D99441-00  
pour parclores FV 2003R-06



D99441-00





### Installation

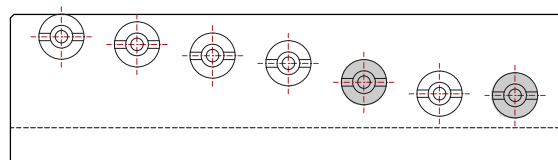
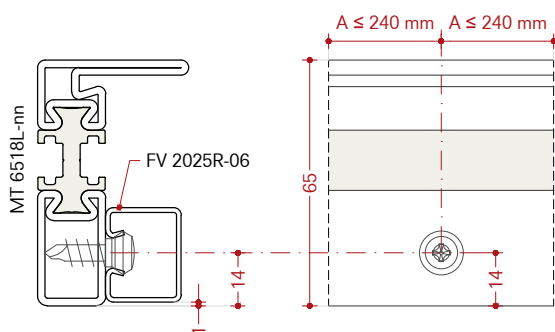
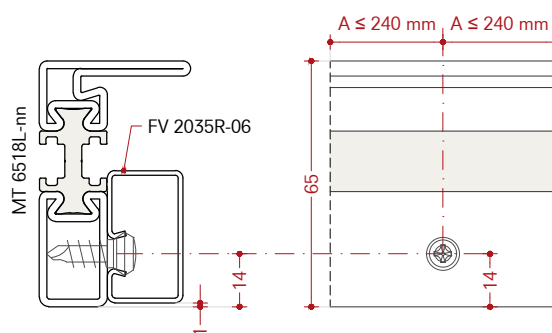
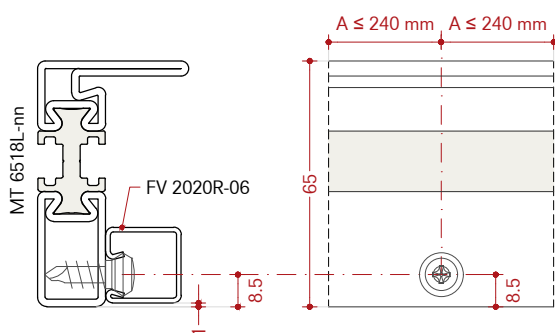
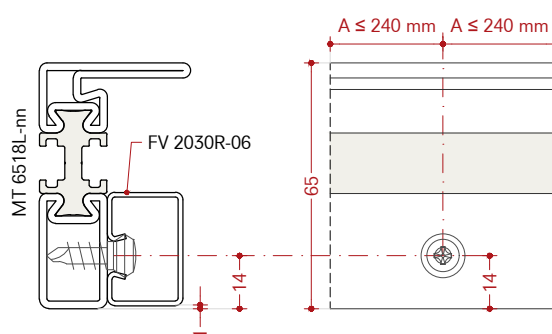
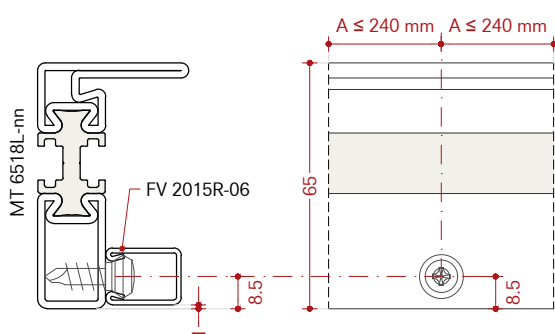
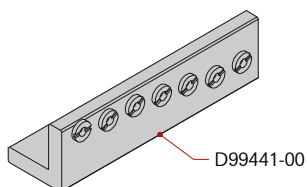
Template D99441-00  
for FV 20XXR-06 glazing beads

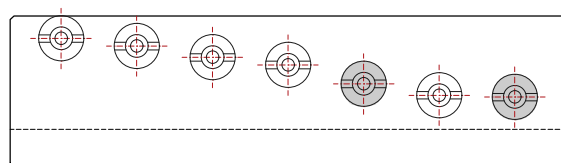
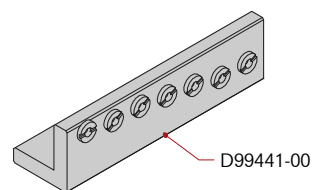
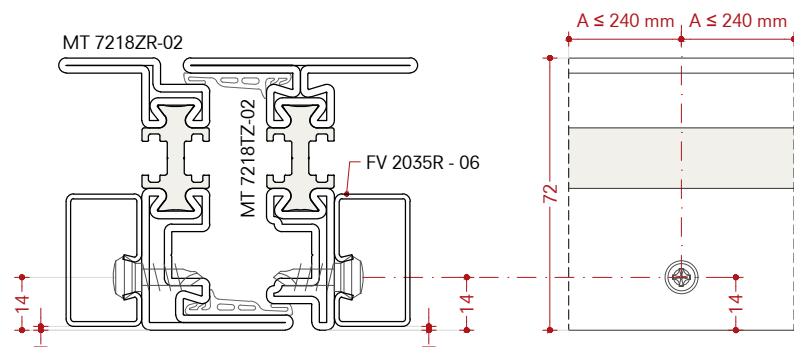
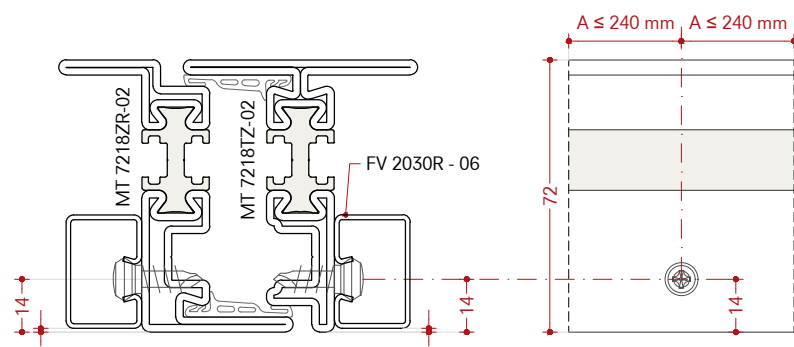
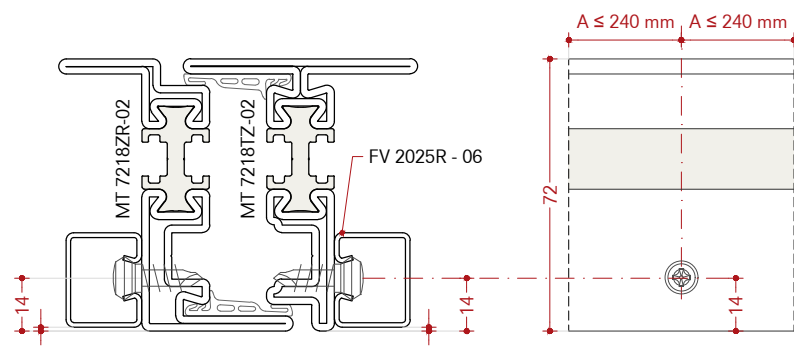
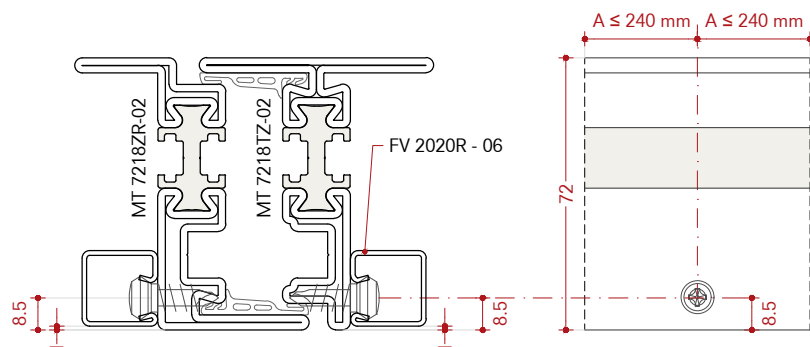
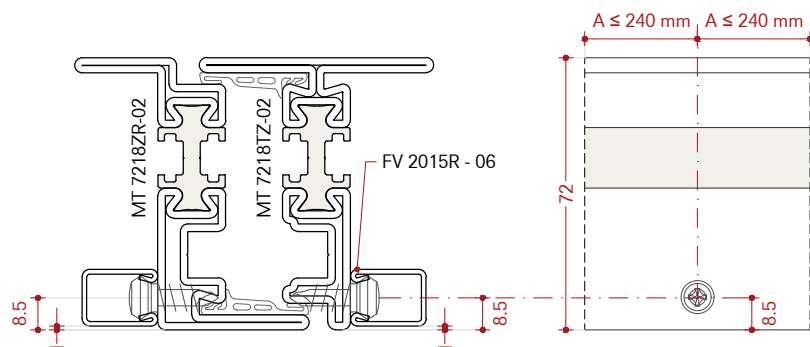
### Einbau

Schweißschablone D99441-00  
für FV 20XXR-06 Glashalteleisten

### Schéma de montage

Gabarit D99441-00  
pour parclores FV 20XXR-06





General technical  
instructions

Allgemeine Technische  
Hinweise

Technique générale  
Instructions

6.0

Ventilation glazing rebate  
Bending radius  
Coating

Glasfalzbelüftung  
Biegeradien  
Beschichtung

Ventilation du vitrage  
Rayons de cintrage  
Peinture

6.1  
6.2  
6.3



**Ventilation glazing  
rebate**

**Glasfalzbelüftung**

**Ventilation du vitrage**

**6.1**



### Ventilation glazing rebate

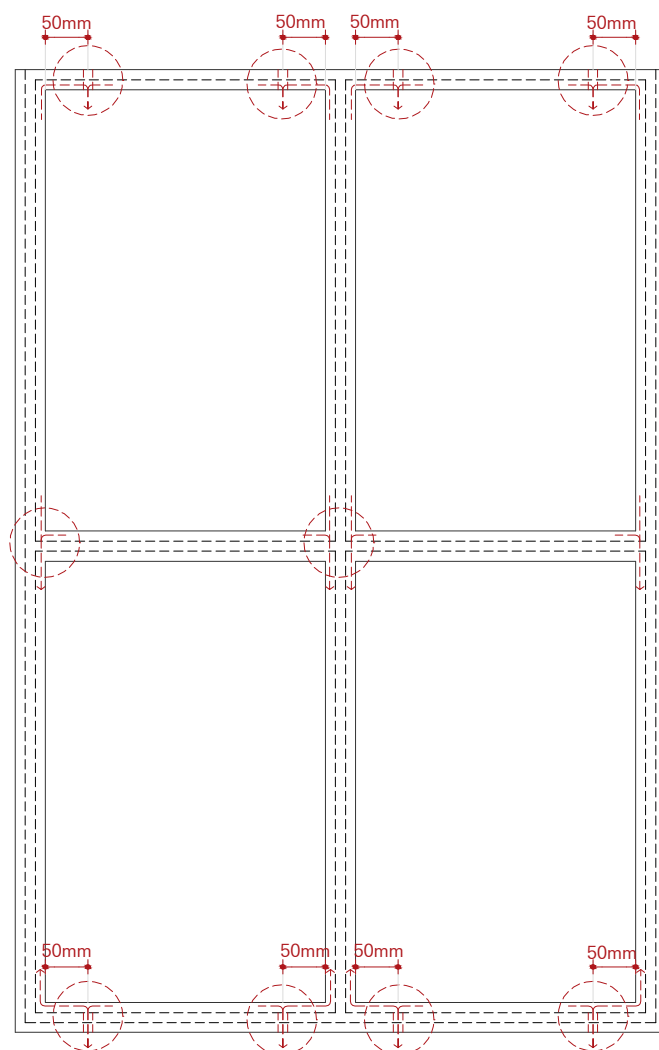
If there is a high chance of moisture forming in the glazing rebate, appropriate ventilation must be provided.  
In such cases, drainage holes and outlets must be provided to enhance air circulation and to keep moisture away from the insulated glazing.

### Glasfalzbelüftung

Falls die Wahrscheinlichkeit von Feuchtigkeit im Glasfalz hoch ist, muss eine angemessene Belüftung vorgesehen werden.  
In solchen Fällen müssen umlaufende Drainagebohrungen und Entwässerungen vorgesehen werden, um die Luftzirkulation zu erleichtern und die Feuchtigkeit von der Isolierverglasung fern zu halten.

### Ventilation du vitrage

S'il y a la possibilité élevée de formation d'humidité dans la fenêtre, un système d'aération approprié doit être fourni.  
Dans telles circonstances, il sera nécessaire prévoir des trous de drainage et de ventilation appropriés pour améliorer la circulation de l'air et garder l'humidité loin du vitrage.







**Bending radius**

**Biegeradien**

**Rayons de cintrage**

**6.2**

**Bending radius**

**Biegeradien**

**Rayons de cintrage**

| Fixed frames<br>Festverglasung<br>Cadres fixes |                                            |                                                  |
|------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| Profile<br>Profil<br>Profilé                   | Description<br>Beschreibung<br>Description | Minimum radius<br>Mindestradius<br>Rayon minimum |
| MT 6518L-nn                                    | L profile<br>L Profil<br>L profilé         | 450 mm                                           |
| MT 6518T-nn                                    | T profile<br>T Profil<br>T profilé         | 500 mm                                           |
| MT 6518Z-nn                                    | Z profile<br>Z Profil<br>Z profilé         | 450 mm                                           |
| MT 6518H-nn                                    | H profile<br>H Profil<br>H profilé         | 500 mm                                           |
| MT 7218LF-nn                                   | L profile<br>L Profil<br>L profilé         | 450 mm                                           |
| MT 8418SU-nn                                   | I profile<br>I Profil<br>I profilé         | 450 mm                                           |

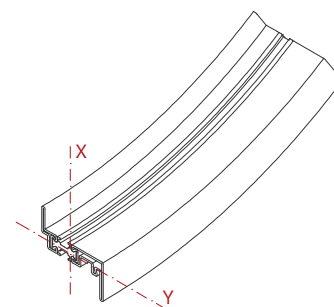
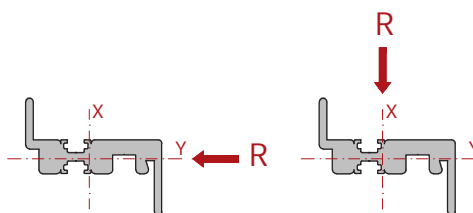
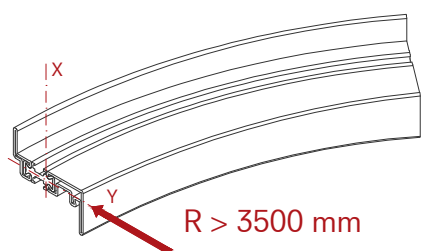
| Window + Door<br>Fenster + Türen<br>Fenêtre + Porte |                                            |                                                  |
|-----------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| Profile<br>Profil<br>Profilé                        | Description<br>Beschreibung<br>Description | Minimum radius<br>Mindestradius<br>Rayon minimum |
| MT 7218TF-nn                                        | T profile<br>T Profil<br>T profilé         | 500 mm                                           |
| MT 7218ZF-nn                                        | Z profile<br>Z Profil<br>Z profilé         | 450 mm                                           |
| MT 7218HF-nn                                        | H profile<br>H Profil<br>H profilé         | 500 mm                                           |
| MT 7218TZ-nn                                        | T profile<br>T Profil<br>T profilé         | 450 mm                                           |
| MT 7218ZR-nn                                        | Z profile<br>Z Profil<br>Z profilé         | 450 mm                                           |
| MT 7218HZ-nn                                        | H profile<br>H Profil<br>H profilé         | 500 mm                                           |
| MT 7218LR-nn                                        | L profile<br>L Profil<br>L profilé         | 450 mm                                           |

| Fixed frames<br>Festverglasung<br>Cadres fixes |                                             |                                                  |
|------------------------------------------------|---------------------------------------------|--------------------------------------------------|
| Glazing bead<br>Glashalteleiste<br>Parclose    | Description<br>Beschreibung<br>Description  | Minimum radius<br>Mindestradius<br>Rayon minimum |
| FV 2015R-02                                    | Glazing bead<br>Glashalteleiste<br>Parclose | 500 mm                                           |
| FV 2018R-02                                    | "                                           | 500 mm                                           |
| FV 2023R-02                                    | "                                           | 500 mm                                           |
| FV 2028R-02                                    | "                                           | 500 mm                                           |
| FV 2033R-02                                    | "                                           | 500 mm                                           |
| FV 2003R-06                                    | "                                           | 500 mm                                           |
| FV 2015R-06                                    | "                                           | 500 mm                                           |
| FV 2020R-06                                    | "                                           | 500 mm                                           |
| FV 2025R-06                                    | "                                           | 500 mm                                           |
| FV 2030R-06                                    | "                                           | 500 mm                                           |
| FV 2035R-06                                    | "                                           | 500 mm                                           |
| FV 2015A-nn                                    | "                                           | 500 mm                                           |
| FV 2018A-nn                                    | "                                           | 500 mm                                           |
| FV 2023A-nn                                    | "                                           | 500 mm                                           |
| FV 2028A-nn                                    | "                                           | 500 mm                                           |
| FV 2033A-nn                                    | "                                           | 500 mm                                           |
| FV 2018L-02                                    | "                                           | 500 mm                                           |
| FV 2023L-02                                    | "                                           | 500 mm                                           |
| FV 2028L-02                                    | "                                           | 500 mm                                           |
| FV 2033L-02                                    | "                                           | 500 mm                                           |

The bending along the x axis is allowed  
only for minimum radius of 3500 mm

Das Biegen entlang der x-Achse ist nur für einen  
Mindestradius von 3500 mm zulässig

La flexion le long de l'axe x n'est autorisée  
que pour un rayon minimum de 3500 mm





**Coating**

**Beschichtung**

**Peinture**

**6.3**

**Coating**

**Beschichtung**

**Peinture liquide**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Painting procedure (ISO 12944) - based on Sherwin Williams liquid paints<br>Beschichtungsverfahren (ISO 12944) - basierend auf Sherwin Williams Flüssiglacken<br>Procédure de peinture (ISO 12944) - à base de peintures liquides Sherwin Williams                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Surface cleaning / Oberflächenreinigung / Nettoyage de surface</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Sand blast frames until metal gets almost white with grit Sa 2.5 for cycle C3-H/C4-M or sand blast frames until metal gets totally white with grit Sa 3 for cycle C5M-H.</li> <li>Clean up any debris of sand blasting with compressed air in order to obtain a perfectly cleaned surface.</li> <li>Apply the first primer layer within 2 hours from sand blasting or, in any case, before the oxidation process starts.</li> </ul>                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Sandstrahlen der Rahmen, bis das Metall mit Körnung Sa 2.5 für Zyklus C3-H/C4-M fast weiß wird, oder Sandstrahlrahmen, bis das Metall mit Körnung Sa 3 für Zyklus C5M-H vollständig weiß wird.</li> <li>Reinigen Sie alle Reste von den Rahmen durch Sandstrahlen mit Druckluft, um eine perfekte saubere Oberfläche zu erzielen.</li> <li>Tragen Sie die erste Grundierungsschicht innerhalb von 2 Stunden nach dem Sandstrahlen oder in jedem Fall vor Beginn des Oxidationsprozesses auf.</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Sabler les cadres jusqu'à ce que le métal devienne presque blanc avec le grain Sa 2.5 pour le cycle C3-H/C4-M, ou jusqu'à ce que le métal devienne totalement blanc avec le grain Sa 3 pour le cycle C5M-H.</li> <li>Nettoyez tous les débris des cadres avec un jet d'air comprimé afin d'obtenir une surface parfaitement propre.</li> <li>Appliquez la première couche d'apprêt dans les 2 heures qui suivent le sablage ou, dans tous les cas, avant le début du processus d'oxydation.</li> </ul>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Liquid painting options / Optionen für Flüssiglackierungen / Options de peinture liquide</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| C3-H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Apply first layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 70 µm</li> <li>Apply a second layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 70 µm</li> <li>Apply a third layer of poly-acrylic enamel Inverplast/B pastel: 60 µm Colours and shades as per customer choice (*).</li> <li>Total coating thickness: 200 µm</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>Tragen Sie die erste Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 70 µm auf</li> <li>Tragen Sie eine zweite Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 70 µm auf</li> <li>Tragen Sie eine dritte Schicht Poly-acryl-Email Inverplast/B-Pastell auf: 60 µm Farben und Schattierungen nach Wahl des Kunden (*).</li> <li>Gesamtschichtdicke: 200 µm</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>Appliquer la première couche du primaire époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 70 µm</li> <li>Appliquer une seconde couche de primaire époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 70 µm</li> <li>Appliquez une troisième couche de pastel Inverplast/B d'email poly-acrylique: 60 µm. Couleurs et nuances selon le choix du client (*).</li> <li>Épaisseur totale du revêtement: 200 µm</li> </ul>                                                                                                                         |
| C4-M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Apply first layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 90 µm</li> <li>Apply a second layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 90 µm</li> <li>Apply a third layer of poly-acrylic enamel Inverplast/B pastel: 60 µm Colours and shades as per customer choice (*).</li> <li>Total coating thickness: 240 µm</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>Tragen Sie die erste Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 90 µm auf</li> <li>Tragen Sie eine zweite Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 90 µm auf</li> <li>Tragen Sie eine dritte Schicht Poly-acryl-Email Inverplast/B-Pastell auf: 60 µm Farben und Schattierungen nach Wahl des Kunden (*).</li> <li>Gesamtschichtdicke: 240 µm</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>Appliquer la première couche du primaire époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 90 µm</li> <li>Appliquer une seconde couche de primaire époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 90 µm</li> <li>Appliquez une troisième couche de pastel Inverplast/B d'email poly-acrylique: 60 µm. Couleurs et nuances selon le choix du client (*).</li> <li>Épaisseur totale du revêtement: 240 µm</li> </ul>                                                                                                                         |
| C5M-H                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>Apply first layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 80 µm</li> <li>Apply a second layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 90 µm</li> <li>Apply a third layer of the epoxy primer with zinc phosphate Macropoxy C400V3, grey or white 90 µm</li> <li>Apply final layer of poly-acrylic enamel Inverplast/B pastel: 60 µm Colours and shades as per customer choice (*).</li> <li>Total coating thickness: 320 µm</li> </ul> | <ul style="list-style-type: none"> <li>Tragen Sie die erste Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 80 µm auf</li> <li>Tragen Sie eine zweite Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 90 µm auf</li> <li>Tragen Sie eine dritte Schicht der Epoxidgrundierung mit Zinkphosphat Macropoxy C400V3, grau oder weiß 90 µm auf</li> <li>Tragen Sie die letzte Schicht Poly-acryl-Email Inverplast/B-Pastell auf: 60 µm Farben und Schattierungen nach Wahl des Kunden (*).</li> <li>Gesamtschichtdicke: 320 µm</li> </ul> | <ul style="list-style-type: none"> <li>Appliquer la première couche de l'apprêt époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 80 µm</li> <li>Appliquer une seconde couche de primaire époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 90 µm.</li> <li>Appliquez une troisième couche de l'apprêt époxy avec du phosphate de zinc Macropoxy C400V3, gris ou blanc 90 µm</li> <li>Appliquer la dernière couche de vernis poly-acrylique Inverplast/B pastel: 60 µm. Couleurs et nuances selon le choix du client (*).</li> <li>Épaisseur totale du revêtement: 320 µm</li> </ul> |
| <b>Drying-curing process / Trocknen-Aushärten / Procédé de séchage-durcissement</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Dry frames for at least 5 hours at a room temperature of 15°C (60°F) between the different applications of epoxy primers.</li> <li>Wait for at least 8 hours at a room temperature of 15°C (60°F) before applying the final enamel paint on the last epoxy primer application.</li> <li>Max. humidity level: 85%</li> </ul>                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Trocknen Sie die Rahmen zwischen den verschiedenen Aufträgen von Epoxy-Primern mindestens 5 Stunden lang bei einer Raumtemperatur von 15°C (60°F).</li> <li>Warten Sie mindestens 8 Stunden bei einer Raumtemperatur von 15°C (60°F), bevor Sie die endgültige Emailfarbe auf die letzte Epoxidgrundierung auftragen.</li> <li>Max. Luftfeuchtigkeit: 85%</li> </ul>                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>Sécher les cadres pendant au moins 5 heures à une température ambiante de 15°C (60°F) entre les différentes applications d'apprêt époxy.</li> <li>Attendez au moins 8 heures à une température ambiante de 15°C (60°F) avant d'appliquer la dernière peinture émail sur la dernière application d'apprêt époxy.</li> <li>Max. taux d'humidité: 85%</li> </ul>                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| (*) For colour selection and/or special touch up finishes, please contact directly Sherwin Williams.<br>(*) Für Farbauswahl und/oder spezielle Ausbesserungen wenden Sie sich bitte direkt an Sherwin Williams.<br>(*) Pour en savoir plus sur les couleurs et/ou les finitions spéciales, veuillez contacter directement Sherwin Williams.                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Powder Coating

M65 TB profiles can be wet painted and powder coated. In case of powder coating the profile temperature must not exceed 180°C (18 min.). Once out of the oven the frame must be accurately removed and laid in a horizontal position until complete coating. Depending on the aesthetic requirements, for window leaves we recommend to cover the visible areas of the isolator with a heat resistant tape before powder coating.

Polyester powder is mainly used.

The object temperature of max. 180°C to be measured on the frame in the furnace must not exceed a duration of 18 minutes when powder coating frames of composite profiles. Compliance with this condition is to be documented regularly by records.

Contact must be established in such a way to prevent any deformation of the profiles and frames. Additional support may be required for flexible profiles. All the holes and millings must be foreseen before the painting operations.

## Beschichtung

M65 TB Profile können nasslackiert und pulverbeschichtet werden. Im Falle von Pulverbeschichtung darf die Objekttemperatur 180°C (18 min.) nicht überschreiten.

In Abhängigkeit von den ästhetischen Anforderungen, empfehlen wir den Sichtbereich des Isolators in Fensteröffnungen, mit einem hitzebeständigen Band vor der Pulverbeschichtung abzudecken. Es werden überwiegend Polyesterpulver wie.

Bei Pulverlackbeschichtung von Rahmen aus Verbundprofilen von OTTOSTUMM | Mogs darf die im Ofen am Rahmen zu messende Objekttemperatur von max. 180°C die Dauer von 18 Minuten nicht überschreiten. Die Einhaltung dieser Bedingung ist durch Aufzeichnungen regelmäßig zu dokumentieren. Die Kontaktierung muss so erfolgen, dass keine Deformation der Profile und Rahmen auftreten können. Alle Löcher müssen vor den Lackiervorgängen vorgesehen werden.

## Peinture

Les profilés M65 TB peuvent être peints avec les peintures liquides et en poudre. Dans le cas de thermolaquage avec poudre, la température ne doit pas dépasser 180°C (18 min.). Selon les exigences esthétiques, nous recommandons de couvrir la zone d'isolant visible des profilés avec un ruban résistant à la chaleur avant le laquage à poudre. On utilise principalement de la poudre de polyester. En ce qui concerne le revêtement par poudre des cadres en profilés composites OTTOSTUMM | Mogs, la cuisson ne doit en aucun cas dépasser la température de 180°C, à mesurer dans le four sur le cadre, pendant 18 minutes. Le respect de cette condition doit être régulièrement documenté par des enregistrements. La mise en contact doit s'effectuer de manière à ce que les profilés et les cadres ne se déforment pas. Tous les trous et les procédés doivent être prévus avant les travaux de peinture.

## Process sequence

### Preparation

- Grind welding points, blast them if necessary (remove waviness).
- Degreasing and cleaning of all component surfaces.
- Roughening (in general sweeping) of all component surfaces / alternative: chemical surface treatment.

### Painting cycle

- Degreasing
- Flushing
- Zinc phosphating
- Flushing
- 1x polyester powder paint, nominal coat thickness of 60-90 µm

The safety regulations and procedural instructions of the manufacturers must be observed.

## Verfahrensablauf

### Vorbereitung

- Schweißstellen schleifen, gegebenenfalls strahlen (Welligkeit beseitigen).
- Entfetten und Reinigen aller Bauteiloberflächen.
- Aufrauen (i.a. Sweepen) aller Bauteiloberflächen / Alternativ: chemische Oberflächenbehandlung.

### Malzyklus

- Entfetten
- Spülung
- Zinkphosphatieren
- Spülung
- 1x Polyesterpulverlack, Sollsichtdicke 60 - 90 µm

Die Sicherheitsvorschriften und Verfahrensanweisungen der Hersteller sind zu beachten.

## Méthode à appliquer

### Préparation

- Meuler les points de soudage, sabler le cas échéant (éliminer tout gondolement).
- Dégraisser et nettoyer toutes les surfaces des éléments.
- Dépolir (en général par soufflage) toutes les surfaces/alternative: traitement de surface chimique.

### Cycle de peinture

- Dégraissage
- Rinçage
- Phosphatation au zinc
- Rinçage
- 1x couche de finition en poudre de polyester, épaisseur de couche nominale de 60 à 90 µm

Les consignes d'application et de sécurité du fabricant doivent être respectées.

**VFF leaflet St. 01: 2015-10**

Correlation of corrosivity categories, protection period and corrosion protection classes.

**VFF Merkblatt St. 01: 2015-10**

Zusammenhang von Korrosivitätskategorien, Schutzdauer, Zugänglichkeit und Korrosionsschutzklassen.

**Fiche technique du VFF acier 01: 2015-10**

Rapport entre les catégories de corrosivité, la durée de protection, l'accessibilité et les classes de protection contre la corrosion.

| Corrosivity category<br>Korrosivitäts - kategorie<br>Catégorie de corrosivité | Protection period<br>Schutzdauer<br>Durée de protection | <sup>(1)</sup><br>Corrosion protection class<br>Korrosionsschutzklasse<br>Catégorie de protection anticorrosion |                      | Environment example outdoors<br>Beispiel der Umgebung Außen<br>Exemple d'environnement extérieur                                                                                                                                                                                                                                                   | Environment example indoors<br>Beispiel der Umgebung Innen<br>Exemple d'environnement intérieur                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>C1</b><br>Insignificant<br>Unbedeutend<br>Léger                            | Low<br>Niedrig<br>Faible                                | I                                                                                                               | I                    |                                                                                                                                                                                                                                                                                                                                                    | Heated building with neutral atmosphere.<br>Geheizte Gebäude mit neutraler Atmosphäre.<br>Bâtiment chauffé avec atmosphère neutre.                                                                                                                                                                                                                                                               |
|                                                                               | Médium<br>Mitte<br>Moyen                                | I                                                                                                               | I                    |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | I                                                                                                               | I                    |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>C2</b><br>Low<br>Gering<br>Faible                                          | Low<br>Niedrig<br>Faible                                | I                                                                                                               | II                   | Rural areas with a low level of pollution.<br>Ländliche Gebiete mit niedriger Verunreinigung.<br>Régions rurales avec contamination faible.                                                                                                                                                                                                        | Buildings where condensation may occasionally occur, e.g. gymnasiums.<br>Gebäude wo gelegentlich Kondensation entstehen kann z.B. Sporthallen.<br>Bâtiments avec formation occasionnelle de condensation p.ex.: des gymnases.                                                                                                                                                                    |
|                                                                               | Medium<br>Mitte<br>Médium                               | I                                                                                                               | II                   |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | I                                                                                                               | III                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>C3</b><br>Moderate<br>Mässig<br>Modéré                                     | Low<br>Niedrig<br>Faible                                | II                                                                                                              | III                  | Urban and industrial atmosphere, moderate sulphur dioxide pollution, coastal area with low salt content.<br>Stadt- und Industriatmosphäre, mässige Verunreinigung durch Schwefeldioxid, Küstenbereich mit geringer Salzbelastung.<br>Atmosphère urbaine/industrielle, contamination modérée par dioxyde de soufre, zone côtière à faible salinité. | Production rooms with high humidity and some air pollution, e.g. laundries, dairies, canteen kitchens, winter gardens.<br>Produktionsräume mit hoher Feuchte und etwas Luftverunreinigung, z.B. Wäschereien, Molkereien, Großküchen, Wintergärten.<br>Salles de production avec humidité élevée et pollution faible, p.ex.: blanchisseries, beurseries, cuisines industrielles, jardins d'hiver. |
|                                                                               | Medium<br>Mitte<br>Médium                               | II                                                                                                              | III                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | II                                                                                                              | III                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>C4</b><br>High<br>Stark<br>Fort                                            | Low<br>Niedrig<br>Faible                                | III                                                                                                             | III                  | Industrial areas, tunnels, traffic junctions, moderate salt load.<br>Industrielle Bereiche, Tunnel, Verkehrsknotenpunkte, mässige Salzbelastung.<br>Régions industrielles, tunnels, carrefours de circulation, salinité modérée.                                                                                                                   | Chemical plants, swimming pools, slaughterhouses.<br>Chemieanlagen, Schwimmbäder, Schlachthäuser.<br>Usines chimiques, piscines, abattoirs.                                                                                                                                                                                                                                                      |
|                                                                               | Medium<br>Mitte<br>Médium                               | III                                                                                                             | III                  |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | III                                                                                                             | > III <sup>(2)</sup> |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>C5-I</b><br>Very high<br>sehr hoch<br>Très fort                            | Low<br>Niedrig<br>Faible                                | III                                                                                                             | > III <sup>(2)</sup> | Industrial sectors with high moisture and aggressive atmosphere.<br>Industrielle Bereiche mit hoher Feuchte und aggressiver Atmosphäre.<br>Régions industrielles à forte humidité et atmosphère agressive.                                                                                                                                         | Buildings or areas with almost constant condensation and heavy pollution.<br>Gebäude oder Bereiche mit nahezu ständiger Kondensation und starker Verunreinigung.<br>Bâtiments ou régions avec condensation presque constante et forte contamination.                                                                                                                                             |
|                                                                               | Medium<br>Mitte<br>Médium                               | III                                                                                                             | > III <sup>(2)</sup> |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | > III <sup>(2)</sup>                                                                                            | > III <sup>(2)</sup> |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>C5-M</b><br>Very high<br>sehr hoch<br>Très fort                            | Low<br>Niedrig<br>Faible                                | III                                                                                                             | > III <sup>(2)</sup> | Coastal and offshore areas with high salt concentration.<br>Küsten- und Offshorebereiche mit hoher Salzbelastung.<br>Régions littorales et offshore, salinité élevée.                                                                                                                                                                              | Buildings or areas with almost constant condensation and heavy pollution.<br>Gebäude oder Bereiche mit nahezu ständiger Kondensation und starker Verunreinigung.<br>Bâtiments ou régions avec condensation presque constante et forte contamination.                                                                                                                                             |
|                                                                               | Medium<br>Mitte<br>Médium                               | III                                                                                                             | > III <sup>(2)</sup> |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                                                               | High<br>Hoch<br>Fort                                    | > III <sup>(2)</sup>                                                                                            | > III <sup>(2)</sup> |                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                  |

- (1) The indication of the corrosion protection class serves only the assignment of the previous building authority requirements to the new European classification system consisting of corrosivity category and protection period.
- (2) The corrosion protection classes are not applicable in the event of very high corrosion loads and long protection periods as well as special loads. In the case of these loads and conditions, the necessary measures must be determined on a case-by-case basis.

Source: DIN 55634 table 1.

- (1) Die Angabe der Korrosionsschutzklasse dient lediglich der Zuordnung bisheriger bauaufsichtlicher Anforderungen an das neue europäische Klassifizierungssystem aus Korrosivitätskategorie und Schutzdauer.
- (2) Bei sehr starker Korrosionsbelastung und hoher Schutzdauer und bei Sonderbelastungen sind die Korrosionsschutzklassen nicht anwendbar. Bei diesen Belastungen und Bedingungen sind die erforderlichen Massnahmen jeweils im Einzelfall festzulegen.

Quelle: DIN 55634 Tabelle 1.

- (1) L'indication de la classe de protection contre la corrosion sert simplement à la catégorisation des exigences actuelles en construction par rapport au nouveau système de classification européen qui s'appuie sur des classes de corrosivité et des durées de protection.
- (2) En cas de forte exposition à la corrosion et de grande durée de protection ainsi que dans certains cas exceptionnels, les classes de protection contre la corrosion ne sont pas applicables. Dans ces conditions de sollicitation, les mesures à respecter doivent être définies au cas par cas.

Source: DIN 55634, tableau 1.



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## 7.1 Foreword

The profile systems from OTTOSTUMM I Mogs are designed for use in door, window and façade construction. The high dimensional accuracy and straightness of the profiles makes them easy to be processed. These documents are intended for specialist companies that are familiar with the relevant standards, directives and regulations.

Notes on construction suggestions and application examples:

- The illustrations shown are non-binding suggestions.
- The examples cannot cover every possible application.
- All relevant regulations are to be observed.
- The processing guidelines for the OTTOSTUMM I Mogs product ranges also apply.
- The static dimensioning of the profiles, anchors, dowels, screws and glazing must be determined independently by the executing company in accordance with the applicable standards, directives and regulations.
- In individual cases they must be checked for their usefulness and, if necessary, modified in consultation with the responsible architect, structural engineer and/or building physicist.
- The professional execution is the responsibility of the executing company.
- OTTOSTUMM I Mogs assumes no liability for this.

For all items contained in this documentation, as well as for all activities related to them (order, transport, etc.), our General Conditions and Terms, which can be downloaded at [www.ottostumm-mogs.com](http://www.ottostumm-mogs.com), apply.

## 7.1 Vorwort

Die Profilsysteme von OTTOSTUMM I Mogs sind für den Einsatz im Tür-, Tor-, Fenster- und Fassadenbau ausgelegt. Die hohe Massgenauigkeit und Geradheit der Profile ermöglichen eine einfache Verarbeitung. Diese Unterlagen wenden sich an Fachfirmen, die mit den einschlägigen Normen, Richtlinien und Vorschriften vertraut sind.

Hinweise zu Konstruktionsvorschlägen und Anwendungsbeispielen:

- Die gezeigten Darstellungen sind unverbindliche Vorschläge.
- Die Beispiele können nicht jeden möglichen Anwendungsfall abdecken.
- Alle einschlägigen Vorschriften sind zu berücksichtigen.
- Zusätzlich gelten die Verarbeitungsrichtlinien der OTTOSTUMM I Mogs Programme.
- Die statische Dimensionierung der Profile, Verankerungen, Dübel, Schrauben und Verglasungen müssen eigenverantwortlich durch die ausführende Firma gemäß gültigen Normen, Richtlinien und Vorschriften festgelegt werden.
- Im Einzelfall müssen sie auf ihre Brauchbarkeit hin überprüft und gegebenenfalls - nach Absprache mit dem zuständigen Architekten, Statiker und/oder Bauphysiker abgeändert werden.
- Die fachgerechte Ausführung liegt im Verantwortungsbereich der ausführenden Firma.
- OTTOSTUMM I Mogs kann hierfür keine Gewähr übernehmen.

Für alle in dieser Dokumentation enthaltenen Artikel sowie für alle damit zusammenhängenden Dienstleistungen (Bestellung, Transport usw.) gelten unsere Allgemeinen Geschäftsbedingungen, die unter [www.ottostumm-mogs.com](http://www.ottostumm-mogs.com) heruntergeladen werden können.

## 7.1 Avant-propos

La gamme de profilés OTTOSTUMM I Mogs est conçue pour une utilisation dans les portes, portails, fenêtres et façades. La grande qualité de précision dimensionnelle et de rectitude des profilés facilite la mise en œuvre. Les présents documents s'adressent aux entreprises spécialisées qui sont familiarisées avec les normes, directives et dispositions applicables.

Consignes relatives aux propositions de construction et exemples d'application:

- Les représentations constituent des propositions non contraignantes.
- Les exemples ne peuvent couvrir toutes les applications possibles.
- Il convient de respecter tous les dispositions s'y rapportant.
- En outre, les directives de mise en œuvre du programme OTTOSTUMM I Mogs s'appliquent.
- Le dimensionnement statique des profilés, les ancrages, les chevilles, les vis et les vitrages doivent être fixés de manière autonome par l'entreprise exécutante conformément aux normes, directives et règlements en vigueur.
- Dans certains cas, il convient de contrôler leur mise en œuvre et, si nécessaire, de les modifier, après concertation avec les architectes, ingénieurs B.T.P. et/ou techniciens du bâtiment.
- L'entreprise exécutante est responsable de la réalisation dans les règles de l'art.
- OTTOSTUMM I Mogs ne prendra en charge aucune garantie à cet égard.

Pour d'autres avertissements, reportez-vous à ce qui est spécifié dans la clause d'exclusion de la responsabilité. Pour tous les articles contenus dans cette documentation, ainsi que pour toutes les activités qui y sont liées (commande, transport, etc.), s'appliquent nos Conditions Générales de Vente, téléchargeables sur [www.ottostumm-mogs.com](http://www.ottostumm-mogs.com)

## 7.2 Materials

OTTOSTUMM | Mogs profiles are produced in the following material variants:

- A) Aluminum (-00) Aluminum alloy EN AW 6060 according to EN 573-3, state T 66 according to EN 755-2 for complementary profiles.
- B) Galvanized steel (-02) Steel profiles 2 mm thick, grade 1.0242, S250GD+ZM130-BO according to EN 10346 and 10143, galvanized with a continuous hot process. Thermal break consisting of a glass fiber reinforced polyamide insulation.
- C) Stainless steel (-05) Stainless steel profiles 2 mm thick, quality AISI 316L according to EN 10088-1 T2, finish 2B according to EN 10088-2. Thermal break consisting of a glass fiber reinforced polyamide insulation.
- D) Cor-Ten steel (-07) Cor-Ten steel profiles thickness 2 mm, quality 1.8946 - S355J2WP according to EN 10025 T1/T5. Thermal break consisting of a glass fiber reinforced polyamide insulation.
- E) Bright steel (-12) Cold rolled steel profiles 2 mm thick, quality/grade 1.0038, S235JR according to EN 10025 and EN 10027. Thermal break consisting of an insulation in polyamide reinforced with glass fiber.

The standard designation is:  
S250GD+ZM 130-B-O according to EN 10346 and EN 10143

Material no. 1.0244 according to table 2 EN 10346

Density: 7.85 kg/dm<sup>3</sup>  
0.2% yield strength: 280 N/mm<sup>2</sup>  
Tensile strength: 360 N/mm<sup>2</sup>  
Elongation at break: 18%  
E module: 210000 N/mm<sup>2</sup>

The coating consists of zinc with 1-2 wt.% magnesium (abbreviation: ZM).  
The total weight of coating is 130 g/m<sup>2</sup>. This corresponds to a coat thickness of approx. 10 µm per side (abbreviation: ZM 130).  
The profiles are supplied with surface type B (= improved surface) with surface treatment O (= oiled). Surface type B is achieved by cold re-rolling.

**Galvanized steel - 02**  
Profiles made from 2 mm steel, material quality 1.0242, S250GD + ZM130-BO in accordance with EN 10346 and 10143, continuously hot-dip galvanized. Joined by a glass fiber reinforced polyamide insulator.

**Stainless steel - 05**  
Profiles made of 2 mm stainless steel, material quality 316L according to EN 10088-1 T2, surface 2B according to EN 10088-2. Joined by a glass fiber reinforced polyamide insulator.

**Cor-Ten steel - 07**  
Profile made of 2 mm Cor-Ten steel, Material quality 1.8946 - S355J2WP according EN 10025 T1/T5. Joined by a glass fiber reinforced polyamide insulator.

**Bright steel - 12**  
Profile made of 2 mm steel, material quality 1.0038, S235JR cold rolled steel, according EN 10025 and EN 10027. Joined by a glass fiber reinforced polyamide insulator.

## 7.2 Werkstoffe

OTTOSTUMM | Mogs Profile werden in folgenden Werkstoff-Varianten hergestellt:

- A) Aluminium (-00) Aluminiumlegierung EN AW 6060 gemäß EN 573-3, Zustand T 66 gemäß EN 755-2 für komplementäre Profile.
- B) Verzinkter Stahl (-02) 2 mm dicke Stahlprofile, Güte 1,0242, S250GD+ZM130-BO gemäß EN 10346 und 10143, verzinkt mit einem kontinuierlichen Heißverfahren. Wärmebruch bestehend aus einer glasfaserverstärkten Polyamidisolierung.
- C) Edelstahl (-05) Edelstahlprofile 2 mm dick, Qualität AISI 316L gemäß EN 10088-1 T2, Ausführung 2B gemäß EN 10088-2. Wärmebruch bestehend aus einer glasfaserverstärkten Polyamidisolierung.
- D) Cor-Ten-Stahl (-07) Cor-Ten-Stahlprofile Dicke 2 mm, Qualität 1.8946 - S355J2WP gemäß EN 10025 T1/T5. Wärmebruch bestehend aus einer glasfaserverstärkten Polyamidisolierung.
- E) Stahl Blank (-12) Kaltgewalzte Stahlprofile mit einer Dicke von 2 mm, Qualität/Qualität 1,0038, S235JR gemäß EN 10025 und EN 10027. Thermischer Bruch, bestehend aus einer Isolierung aus mit Glasfaser verstärktem Polyamid.

Die Normbezeichnung lautet: S250GD+ZM 130-B-O nach EN 10346 und EN 10143

Werkstoff Nr. 1.0244

nach Tabelle 2 EN 10346

Dichte: 7.85 kg/dm<sup>3</sup>  
0.2% Dehngrenze: 280 N/mm<sup>2</sup>  
Zugfestigkeit: 360 N/mm<sup>2</sup>  
Bruchdehnung: 18%  
E-Modul: 210000 N/mm<sup>2</sup>

Der Überzug besteht aus Zink mit 1-2 Gew.-% Magnesium (Kurzzeichen ZM).  
Das Auflegegewicht (= Gewicht des Überzugs) beträgt gesamt 130 g/m<sup>2</sup>. Das entspricht einer Schichtdicke von ca. 10 µm pro Seite (Kurzzeichen ZM 130).  
Die Profile werden in der Oberflächenart B (= verbesserte Oberfläche) mit der Oberflächenbehandlung O (= geölt) geliefert.  
Die Oberflächenart B wird durch Kaltnachwalzen erzielt.

**Stahl bandverzinkt - 02**  
Profile aus 2 mm Stahl, Werkstoff 1.0242, S250GD + ZM 130-BO nach DIN EN 10346 und 10143, kontinuierlich schmelztauchveredelt. Schalenverbund durch einen glasfaserverstärkten Polyamid Isolator.

**Edelstahl - 05**  
Profile aus 2 mm Edelstahl, Werkstoff 1.4401 nach DIN EN 10088-1 T2, Oberfläche 2B nach DIN EN 10088-2 Schalenverbund durch einen glasfaserverstärkten Polyamid Isolator.

**Stahl Cor-Ten - 07**  
Profile aus 2 mm Cor-Ten Stahl, Werkstoff 1.8946 - S355J2WP nach DIN EN 10025 T1/T5. Schalenverbund durch einen glasfaserverstärkten Polyamid Isolator.

**Stahl Blank - 12**  
Profile aus 2 mm Stahl, Werkstoff 1.0038, S235JR kaltgewalzt, nach DIN EN 10025 und DIN EN 10027. Schalenverbund durch einen glasfaserverstärkten Polyamid Isolator.

## 7.2 Matériaux

Les profilés OTTOSTUMM | Mogs sont fabriqués dans les variantes de matériau suivantes:

- A) Aluminium (-00) Alliage d'aluminium EN AW 6060 selon EN 573-3, état T 66 selon EN 755-2 pour les profils complémentaires.
- B) Acier galvanisé (-02) Profilés en acier de 2 mm d'épaisseur, nuance 1.0242, S250GD+ZM130-BO selon EN 10346 et 10143, galvanisés avec un processus à chaud continu. Rupture thermique constituée d'un isolant polyamide renforcé de fibre de verre.
- C) Acier inoxydable (-05) Profilés en acier inoxydable de 2 mm d'épaisseur, qualité AISI 316L selon EN 10088-1 T2, finition 2B selon EN 10088-2. Rupture thermique constituée d'un isolant polyamide renforcé de fibre de verre.
- D) Acier Cor-Ten (-07) Profilés en acier Cor-Ten épaisseur 2 mm, qualité 1.8946 - S355J2WP selon EN 10025 T1/T5. Rupture thermique constituée d'un isolant polyamide renforcé de fibre de verre.
- E) Acier décapé (-12) Profilés en acier laminé à froid épaisseur 2 mm, qualité/grade 1.0038, S235JR selon EN 10025 et EN 10027. Rupture thermique constituée d'une isolation en polyamide renforcée de fibre de verre.

La désignation normalisée est la suivante:

S250GD+ZM 130-B-O selon les normes EN 10346 et EN 10143

Code matériau 1.0244

d'après le tableau 2 EN 10346

Densité: 7.85 kg/dm<sup>3</sup>  
Limite d'élasticité à 0.2%: 280 N/mm<sup>2</sup>  
Résistance à la traction: 360 N/mm<sup>2</sup>  
Allongement à la rupture: 18%  
Module d'élasticité: 210000 N/mm<sup>2</sup>

Le revêtement se compose de zinc avec 1-2% en poids de magnésium (abréviation ZM). La force d'appui (c'est-à-dire le poids du revêtement) s'élève en tout à 130 g/m<sup>2</sup>. Ceci correspond à une épaisseur de revêtement d'environ 10 µm par côté (abréviation ZM 130).

Les profilés sont fournis avec le type de surface B (pour surface améliorée) et le traitement de surface O (pour lubrifié). Le type de surface B est obtenu par relaminage à froid.

**Acier galvanisé - 02**  
Profilés en acier de 2 mm, qualité de matériau 1.0242, S250GD + ZM130-BO selon EN 10346 et 10143, galvanisés à chaud en continu. Joints par un isolant en polyamide renforcé de fibres de verre.

**Acier inoxydable - 05**  
Profilés en acier inoxydable de 2 mm, qualité de matériau 316L selon la norme EN 10088-1 T2, surface 2B selon la norme EN 10088-2. Joints par un isolant en polyamide renforcé de fibres de verre.

**Acier Cor-Ten - 07**  
Profil en acier Cor-Ten de 2 mm, qualité de matériau 1.8946 - S355J2WP selon EN 10025 T1/T5. Joints par un isolant en polyamide renforcé de fibres de verre.

**Acier décapé - 12**  
Profil en acier de 2 mm, qualité de matériau 1.0038, S235JR laminé à froid, selon les normes EN 10025 et EN 10027. Joints par un isolant en polyamide renforcé de fibres de verre.

### 7.3 European standards

EN 1993-1-1: Design of steel structures - Part 1-1: General rules and rules for buildings  
EN 1993-1 -1/NA: National Annex - Nationally determined parameters -: Design of steel structures - Part 1-1: General rules and rules for buildings  
EN 1993-1-2: Design of steel structures - Part 1-2: General rules - Structural fire design  
EN 1993-1 -2/NA: National Annex - Nationally determined parameters -: Design of steel structures - Part 1-2: General rules - Structural fire design  
EN 1993-1-3: Design of steel structures - Part 1-3: General rules - Supplementary rules for cold-formed members and sheeting  
EN 1993-1 -3/NA: National Annex - Nationally determined parameters -: Design of steel structures - Part 1-3: General rules - Supplementary rules for cold-formed members and sheeting  
EN 1993-1-4: Design of steel structures - Part 1-4: General rules - Supplementary rules for stainless steels  
EN 1993-1 -4/NA: National Annex - Nationally determined parameters -: Design of steel structures - Part 1-4: General rules - Supplementary rules for stainless steels  
EN 1993-1-5: Design of steel structures - Part 1-5: Plated structural elements  
EN 1993-1 -5/NA: National Annex - Nationally determined parameters -: Design of steel structures - Part 1-5: Plated structural elements  
EN ISO 1461: Hot dip galvanized coatings on fabricated iron and steel articles  
EN 10143: Continuously hot-dip coated steel sheet and strip - Tolerances on dimensions and shape  
EN 10346: Continuously hot-dip coated steel flat products for cold forming - Technical delivery conditions  
EN 12944: Corrosion protection of steel structures by protective paint systems  
EN 12944-1: General introduction  
EN 12944-2: Classification of environments  
EN 12944-3: Design considerations  
EN 12944-4: Types of surface and surface preparation  
EN 12944-5: Protective paint systems  
EN 12944-6: Laboratory performance test methods  
EN 12944-7: Execution and supervision of paint work  
EN 12944-8: Development of specifications for new work and maintenance

### 7.3 Europäische Normen

EN 1993-1-1: Bemessung und Konstruktion von Stahlbauten - Teil 1-1: Allgemeine Bemessungsregeln und Regeln für den Hochbau  
EN 1993-1 -1/NA: Nationaler Anhang - National festgelegte Parameter -: Bemessung und Konstruktion von Stahlbauten - Teil 1-1: Allgemeine Bemessungsregeln und Regeln für den Hochbau  
EN 1993-1-2: Bemessung und Konstruktion von Stahlbauten - Teil 1-2: Allgemeine Regeln - Tragwerksbemessung für den Brandfall  
EN 1993-1 -2/NA: Nationaler Anhang - National festgelegte Parameter -: Bemessung und Konstruktion von Stahlbauten - Teil 1-2: Allgemeine Regeln - Tragwerksbemessung für den Brandfall  
EN 1993-1-3: Bemessung und Konstruktion von Stahlbauten - Teil 1-3: Allgemeine Regeln - Ergänzende Regeln für kaltgeformte Bauteile und Bleche  
EN 1993-1 -3/NA: Nationaler Anhang - National festgelegte Parameter -: Bemessung und Konstruktion von Stahlbauten - Teil 1-3: Allgemeine Regeln - Ergänzende Regeln für kaltgeformte dünnwandige Bauteile und Bleche  
EN 1993-1-4: Bemessung und Konstruktion von Stahlbauten - Teil 1-4: Allgemeine Bemessungsregeln - Ergänzende Regeln zur Anwendung von nichtrostenden Stählen  
EN 1993-1 -4/NA: Nationaler Anhang - National festgelegte Parameter -: Bemessung und Konstruktion von Stahlbauten - Teil 1-4: Allgemeine Bemessungsregeln - Ergänzende Regeln zur Anwendung von nichtrostenden Stählen  
EN 1993-1-5: Bemessung und Konstruktion von Stahlbauten - Teil 1-5: Plattenförmige Bauteile  
EN 1993-1 -5/NA: Nationaler Anhang - National festgelegte Parameter -: Bemessung und Konstruktion von Stahlbauten - Teil 1-5: Plattenförmige Bauteile  
EN ISO 1461: Durch Feuerverzinken auf Stahl aufgetragene Zinküberzüge (Stückverzinkung)  
EN 10143: Kontinuierlich schmelztauchveredeltes Blech und Band aus Stahl - Grenzabmasse und Formtoleranzen  
EN 10346: Kontinuierlich schmelztauchveredeltes Band und Blech aus Baustählen - Technische Lieferbedingungen  
EN 12944: Korrosionsschutz von Stahlbauten durch Beschichtungssysteme  
EN 12944-1: Allgemeines, Begriffe, Korrosionsbelastung  
EN 12944-2: Einteilung der Umgebungsbedingungen  
EN 12944-3: Grundregeln zur Gestaltung  
EN 12944-4: Arten von Oberflächen und Oberflächenvorbereitung  
EN 12944-5: Beschichtungssysteme  
EN 12944-6: Laborprüfungen zur Bewertung von Beschichtungssystemen  
EN 12944-7: Ausführung und Überwachung der Beschichtungsarbeiten  
EN 12944-8: Erarbeitung von Spezifikationen für Erstschutz und Instandsetzung

### 7.3 Normes européennes

EN 1993-1-1: Calcul des structures en acier - Partie 1-1: règles générales et règles pour les bâtiments  
EN 1993-1 -1/NA: Annexe nationale - Paramètres déterminés au plan national: Calcul des structures en acier - Partie 1-1: règles générales et règles pour les bâtiments  
EN 1993-1-2: Calcul des structures en acier - Partie 1-2: règles générales - Calcul du comportement au feu  
EN 1993-1 -2/NA: Annexe nationale - Paramètres déterminés au plan national: Calcul des structures en acier - Partie 1-2: règles générales - Calcul du comportement au feu  
EN 1993-1-3: Calcul des structures en acier - Partie 1-3: règles générales - Règles supplémentaires pour les profilés et plaques formés à froid  
EN 1993-1 -3/NA: Annexe nationale - Paramètres déterminés au plan national: Calcul des structures en acier - Partie 1-3: règles générales - Règles supplémentaires pour les profilés à paroi mince et plaques formés à froid  
EN 1993-1-4: Calcul des structures en acier - Partie 1-4: règles générales - Règles supplémentaires pour les aciers inoxydables  
EN 1993-1 -4/NA: Annexe nationale - Paramètres déterminés au plan national: Calcul des structures en acier - Partie 1-4: règles générales - Règles supplémentaires pour les aciers inoxydables  
EN 1993-1-5: Calcul des structures en acier - Partie 1-5: plaques planes  
EN 1993-1 -5/NA: Annexe nationale - Paramètres déterminés au niveau national: Calcul des structures en acier - Partie 1-5: plaques planes  
EN ISO 1461: Revêtements par galvanisation à chaud sur produits finis en fonte et en acier (galvanisation au trempé)  
EN 10143: Tôles et bandes en acier revêtues en continu par immersion à chaud - Tolérances dimensionnelles et de forme  
EN 10346: Produits plats en acier revêtus en continu par immersion à chaud - Conditions techniques de livraison  
EN 12944: Anticorrosion des structures en acier par systèmes de peinture  
EN 12944-1: Généralités, terminologie, exposition à la corrosion  
EN 12944-2: Classification des environnements  
EN 12944-3: Conception et dispositions constructives  
EN 12944-4: Types de surface et de préparation de surface  
EN 12944-5: Systèmes de peinture  
EN 12944-6: Essais de performance en laboratoire  
EN 12944-7: Exécution et surveillance des travaux de peinture  
EN 12944-8: Développement de spécifications pour les travaux neufs et l'entretien

## 7.4 Order

Delivery lengths of profiles and packaging units of accessories and fittings are included in the program list. In the case of insulate profiles, the outside unfolding specified for profiles contains the entire visible unfolding. The specified weights per metre apply to the corresponding material and the weights of the composite webs are included in the insulated profiles.

## 7.5 Transport and storage

OTTOSTUMM | Mogs profiles are treated and pack extremely carefully at the factory to rule out any corrosion and mechanical damage at the distribution warehouses and during transport to the processor.

The risk is transferred to the purchaser when the goods are handed over to a freight forwarder or carrier, at the latest, however, when they leave the warehouse or the supplying plant.

Unloading operations can be carried out with an overhead crane or forklift truck.

Only forklift trucks with wide forks set at a large distance may be used for unloading and transport.

For the timely notification of transport damage and other material defects, the corresponding information in our terms of sale shall apply.

OTTOSTUMM | Mogs profiles must be stored separately according to the material in order to exclude a risk of corrosion due to extraneous rust particles on stainless steel and aluminium. Dry storage in suitable rooms must be ensured to avoid corrosion. Short-term strong temperature fluctuations in the storage room should be avoided in view of possible condensation water formation in the profile stack.

The profiles must rest on wood or plastic, materials which must not contain any aggressive substances that could trigger chemical reactions at the contact surfaces with the profiles.

Scratches, indentations or other deformation or damage to the surface must be avoided during storage and transport. This applies in particular to the interim storage of profiles that have already been subjected to surface treatment. They may be removed from storage racks only by lifting them out.

For businesses that process aluminium as well as steel, it is a matter of course that strict spatial separation of these materials is ensured both during storage and processing. The formation of white rust in continuously hot-dip galvanized materials does not constitute a reason for complaint.

## 7.4 Bestellung

Lieferlängen von Profilen und Verpackungseinheiten von Zubehör und Beschlägen sind in der Programmliste aufgeführt. Die bei Profilen angegebene Außenabwicklung enthält bei Verbundprofilen die gesamte sichtbare Abwicklung. Die angegebenen Metergewichte beziehen sich auf den zugehörigen Werkstoff und bei Verbundprofilen sind die Gewichte der Verbundstege eingerechnet.

## 7.5 Transport und Lagerung

OTTOSTUMM | Mogs Profile werden werkseitig äusserst sorgfältig behandelt, um Korrosion und mechanische Beschädigungen in den Vertriebslagern und beim Transport zum Verarbeiter auszuschliessen.

Mit der Übergabe der Ware an einen Spediteur oder Frachtführer, spätestens jedoch mit Verlassen des Lagers oder des Lieferwerks, geht die Gefahr auf den Käufer über. Das Entladen sollte mit einem Brückenkran oder Gabelstapler durchgeführt werden. Wird mit Stapler abgeladen und transportiert, so nur mit breiten, auf grossen Abstand eingestellten Gabelzinken. Für die fristgerechte Meldung von Transportschäden und sonstigen Sachmängeln gelten die entsprechenden Hinweise in unseren Verkaufsbedingungen.

OTTOSTUMM | Mogs Profile müssen zwingend nach Werkstoff getrennt gelagert werden, um Korrosionsgefahr durch Fremdrost-Partikel auf nichtrostendem Stahl und Aluminium auszuschliessen. Zur Vermeidung von Korrosion muss eine trockene Lagerung in geeigneten Räumen sichergestellt sein. Kurzzeitig starke Temperaturschwankungen im Lagerraum sollten mit Rücksicht auf eventuelle Schwitzwasserbildung in den Profilstapeln vermieden werden.

Die Profile müssen auf Holz oder Kunststoff gelagert werden, welche keine aggressiven Stoffe enthalten dürfen, die an den Berührungsflächen zu den Profilen chemische Reaktionen auslösen könnten. Kratzer, Eindrücke oder sonstige Verformungen oder Beschädigungen der Oberfläche müssen bei Lagerung und Transport vermieden werden. Dies gilt in besonderem Mass beim Zwischenlagern von bereits oberflächenbehandelten Profilen. Die Entnahme aus Lagergestellen darf nur durch Herausheben erfolgen.

Bei Betrieben, die neben Stahl auch Aluminium verarbeiten, ist selbstverständlich eine strenge räumliche Trennung dieser Werkstoffe sowohl in der Lagerung als auch in der Verarbeitung einzuhalten. Weissrostbildung bei den kontinuierlich schmelztauchveredelten Werkstoffen stellt keinen Reklamationsgrund dar.

## 7.4 Commande

Le catalogue de produits répertorie les longueurs de livraison de profilés et les unités de conditionnement des accessoires et des ferrures. Le déroulement extérieur indiqué pour les profilés comprend le déroulement visible total dans le cas de profilés composites. Le poids au mètre indiqué se rapporte au matériau correspondant et, pour les profilés composites, le poids des plaques composites est inclus.

## 7.5 Transport et stockage

Les profilés OTTOSTUMM | Mogs font l'objet de très grandes précautions de manipulation en usine pour éviter tout risque de corrosion et tout dommage mécanique dans les dépôts de vente et lors de la livraison à l'exécutant.

Le risque est transféré à l'acheteur lorsque la marchandise est remise à une entreprise de transport ou au transporteur, ou au plus tard lorsque la marchandise quitte le dépôt ou l'usine. Les opérations de déchargement peuvent être effectuées avec un pont roulant ou un chariot élévateur. Si le déchargement et le transport s'effectuent à l'aide d'un chariot élévateur, ce dernier doit être alors équipé de bras de fourche larges réglés avec un grand écartement.

En ce qui concerne la notification dans les délais prescrits de tout éventuel dommage survenu lors du transport et de tout éventuel autre vice matériel, les consignes indiquées dans nos conditions de vente font foi.

Les profilés OTTOSTUMM | Mogs doivent impérativement être stockés séparément par matériau pour éviter tout risque de corrosion occasionnée par des particules de rouille erratique sur l'acier inoxydable et l'aluminium. Pour éviter toute corrosion, il convient de s'assurer que les marchandises soient stockées au sec dans des locaux appropriés. Il est recommandé d'éviter les fortes variations de température dans un laps de temps réduit à l'intérieur du dépôt de marchandises pour éviter la formation de condensation dans les empilements de profilés. Les profilés doivent reposer sur des surfaces en bois ou plastique, ces matériaux ne doivent contenir aucune matière corrosive qui pourrait déclencher une réaction chimique sur les surfaces en contact avec les profilés. Il convient d'éviter toute éraflure, marque ou autre déformation ou détérioration de la surface lors du stockage et du transport. Cela vaut notamment en cas de stockage intermédiaire de profilés dont la surface est déjà traitée. L'enlèvement des marchandises de leurs rayonnages doit uniquement se faire par levage. Pour les entreprises travaillant à la fois l'acier et l'aluminium, il convient bien entendu de respecter une séparation physique stricte de ces matériaux lors du stockage et de l'usinage. La formation de rouille blanche sur les matériaux revêtus en continu par immersion à chaud ne constitue pas un motif de réclamation.

## 7.6 Processing

### 7.6.1 General

Special attention must be paid to the strictly separate processing of the materials galvanized steel, stainless steel, Cor-Ten steel, bright steel and aluminium. No tools of any kind must be mutually shared. Width and height tolerances of  $\pm 1$  mm beyond the outer dimensions apply to the production of the frames unless expressly stated otherwise in the product chapters. For the sealing of joint zones not closed by welding in joined frame connections, we strongly recommend using a narrow joint sealant. OTTOSTUMM | Mogs door fittings are supplied with initial factory lubrication and do not need to be greased during installation. Information on further maintenance can be found in the processing guidelines. Window fittings must be greased slightly during installation in accordance with the instructions in the fitting packaging. Observe the wall thickness of 2 mm and - in particular when welding - the zinc-magnesium coating. Commercially available products for machining carbon steel are to be used as coolants and lubricants.

## 7.6 Verarbeitung

### 7.6.1 Allgemein

Auf eine absolut getrennte Verarbeitung der Werkstoffe Stahl, Edelstahl, Cor-Ten-Stahl, Stahl blank und Aluminium, muss besonders geachtet werden. Werkzeuge jeder Art dürfen nicht wechselseitig gemeinsam verwendet werden. Wenn nicht ausdrücklich in den Produkt-Kapiteln abweichend festgelegt, gelten für Fertigung der Rahmen Breiten- und Höhentoleranzen von  $\pm 1$  mm über das Außenmass. Für die Abdichtung von nicht durch Schweißen geschlossenen Fügezonen bei Rahmenverbindungen (stumpf und auf Gehrung) empfehlen wir dringend die Verwendung eines geeigneten dünnflüssigen Dichtstoffes. OTTOSTUMM | Mogs Türbeschläge werden mit einer werkseitigen Erstschmierung geliefert und müssen beim Einbau nicht gefettet werden. Angaben zur weiteren Wartung sind den Verarbeitungsrichtlinien zu entnehmen. Fensterbeschläge müssen beim Einbau entsprechend den Hinweisen in den Beschlagverpackungen leicht gefettet werden. Für die Zwischenreinigung bei der Verarbeitung und für die Endreinigung fertiger Bauteile liefern wir geeignete Mittel. Wir weisen darauf hin, dass manche im Handel erhältlichen Produkte Beschichtungen und Oberflächen von nichtrostendem Stahl oder angrenzende Bauteile angreifen können. Zu beachten ist die Wanddicke von 2 mm und - insbesondere beim Schweißen - der Überzug aus Zink-Magnesium. Als Kühl- und Schmiermittel sind handelsübliche Produkte für die Bearbeitung von Kohlenstoff-Stählen zu verwenden.

## 7.6 Mise en œuvre

### 7.6.1 Généralités

Il faut particulièrement veiller à ce que les matériaux en acier galvanisé, acier inoxydable, acier Cor-Ten, acier décapé ou encore en aluminium soient strictement séparés lors de l'usinage. Les outils de tous types ne doivent pas être utilisés pour tous les matériaux les uns à la place des autres. Sauf mention expresse contraire dans les chapitres dédiés au produit, la fabrication des cadres doit tenir compte de tolérances de largeur et de hauteur de  $\pm 1$  mm par rapport aux dimensions extérieures. Pour étancher les zones de joint qui ne sont pas fermées par soudage lors de l'assemblage (droit ou en onglet) des cadres, nous vous recommandons instamment d'utiliser le produit d'étanchéité pour joints étroits prévu à cet effet dans notre catalogue. Les ferrures des portes OTTOSTUMM | Mogs livrées ont été lubrifiées une première fois en usine et ne doivent pas être graissées lors de la pose. Pour les directives de maintenance ultérieure, il convient de se reporter aux directives de mise en œuvre. Les ferrures de fenêtre doivent quant à elles être légèrement graissées lors de la pose, conformément aux consignes indiquées sur leur emballage. Attention cependant à l'épaisseur de cloison de 2 mm et, notamment pour le soudage, au revêtement en zinc-magnésium. Les produits de refroidissement et de lubrification disponibles dans le commerce conviennent pour l'usinage des aciers au carbone.

### 7.6.2 Sawing

Particular attention must be paid to the clamping of sectional steel profiles. Special cutting supports corresponding to the profile shapes must be inserted for this purpose. Cuts are usually made with metal cold circular saws, which can make angle cuts within a range of  $\pm 90^\circ$ . However, high-performance band saws or hand saws can be used also for simple, straight cuts. Only HSS saw blades are to be used. Fine toothing is required for OTTOSTUMM I Mogs profiles. Cutting speed according to the material to be cut. Tooth pitch: 4-6 mm Saw blade thickness: 2.4 to 4 mm The specifications depend on the type of machine used. Universal cold circular saws are recommended as sawing machines.

### 7.6.2 Sägen

Besondere Aufmerksamkeit muss der Einspannung von Profilstahlrohren geschenkt werden. Hierzu sind spezielle, den Profilformen entsprechende Sägebeilagen einzulegen. Zuschnitte erfolgen in der Regel mit Metall-Kaltkreissägen, die Winkelschnitte im Bereich von  $\pm 90^\circ$  ausführen können. Es können aber auch für einfachere, gerade Schnitte Hochleistungsbandsägen oder Handsägen verwendet werden. Es sind nur HSS-Sägeblätter zu verwenden. Für dünnwandiges Material (OTTOSTUMM I Mogs Systemprofile) ist eine feine Zahnung erforderlich. Schnittgeschwindigkeit je nach zu schneidendem Material. Zähnteilung: 4-6 mm Sägeblattstärke: 2.4 bis 4 mm Die vorgegebenen Angaben sind vom verwendeten Maschinentyp abhängig. Empfohlen werden als Sägemaschinen Universal-Kaltkreissägen.

### 7.6.2 Sciage

Une attention particulière doit être portée lors du serrage des tubes profilés en acier. Il convient d'intercaler des guides découpe pour scie spéciaux correspondant à la forme des profilés. La découpe est en général effectuée à l'aide de scies circulaires à froid pour métal, capables d'exécuter des coupes d'angle de  $\pm 90^\circ$ . Cependant, il est également possible d'utiliser des scies à main ou des scies à ruban hautes performances pour les coupes droites simples. Seules les lames de scie HSS doivent être utilisées. Pour les matériaux à âme mince (profilés système OTTOSTUMM I Mogs), une fine denture est requise. Vitesse découpe selon le matériau à couper. Pas: de 4 à 6 mm Épaisseur de la lame: de 2.4 à 4 mm Les données indiquées dépendent du type de machine utilisé. Il est recommandé d'utiliser une scie circulaire universelle pour le sciage.

### 7.6.3 Drilling

Drilling jigs or templates should always be used. The drills - standard range (HSS) - must be ground exactly and always kept sharp (reground). Angles, cutting edges and relief cuts to the core must be symmetrical. Point angle of  $116^\circ$ - $118^\circ$ .

### 7.6.3 Bohren

Es sollte immer mit Bohrlehren oder Schablonen gearbeitet werden. Die Bohrer - übliches Sortiment (HSS) - müssen exakt geschliffen und immer scharf gehalten werden (nachsleifen). Winkel, Schneidkanten und Hinterschliffe zur Seele müssen symmetrisch sein. Spitzenwinkel  $116^\circ$ - $118^\circ$ .

### 7.6.3 Perçage

Il convient de toujours utiliser un guide ou un gabarit de perçage. Les forets (jeu HSS classique) doivent toujours être aiguisés, et avec précision (réaffûtage). Les angles et les arêtes découpe ainsi que les dépouilles vers l'âme doivent être symétriques. Angle au sommet de  $116^\circ$  à  $118^\circ$ .

| Drilling Ø<br>[mm] | Speed<br>[rpm] | Feed rate<br>[mm/rev.] |
|--------------------|----------------|------------------------|
| 3                  | 1000           | 0.11                   |
| 4.8                | 780            | 0.12                   |
| 5.2                | 730            | 0.125                  |
| 6                  | 625            | 0.13                   |
| 7                  | 560            | 0.14                   |
| 8                  | 500            | 0.145                  |
| 9.2                | 410            | 0.165                  |

| Bohr Ø<br>[mm] | Drehzahl<br>[U/min] | Vorschub<br>[mm/U] |
|----------------|---------------------|--------------------|
| 3              | 1000                | 0.11               |
| 4.8            | 780                 | 0.12               |
| 5.2            | 730                 | 0.125              |
| 6              | 625                 | 0.13               |
| 7              | 560                 | 0.14               |
| 8              | 500                 | 0.145              |
| 9.2            | 410                 | 0.165              |

| Perçage Ø<br>[mm] | Vitesse<br>[rpm] | Avance<br>[mm/tr] |
|-------------------|------------------|-------------------|
| 3                 | 1000             | 0.11              |
| 4.8               | 780              | 0.12              |
| 5.2               | 730              | 0.125             |
| 6                 | 625              | 0.13              |
| 7                 | 560              | 0.14              |
| 8                 | 500              | 0.145             |
| 9.2               | 410              | 0.165             |

Spray cooling for large cross-sections increases the tool life.

Sprühkühlung bei grösseren Querschnitten erhöht die Werkzeugstandzeiten.

Pour les coupes transversales importantes, le refroidissement par aspersion augmente la durée de vie en service des outils.



### 7.6.4 Tapping and thread cutting

Use HSS tools. The cutting speed is approx. 10% higher than with alloyed steels.

### 7.6.4 Gewindebohren und Gewindeschneiden

HSS-Werkzeuge verwenden. Die Schnittgeschwindigkeit ist ca. 10% höher als bei legierten Stählen.

### 7.6.4 Taraudage et filetage

Il convient d'utiliser des outils HSS. La vitesse de coupe est supérieure d'environ 10% par rapport aux aciers alliés.

### 7.6.5 Milling

The milling cutters - standard range (HSS) - must be ground exactly and always kept sharp (reground). Angles, cutting edges and relief cuts must be symmetrical. The required milling work must be carried out with tools for thin-walled profiles (with profile miller or machining centre for steel and stainless steel).

### 7.6.5 Fräsen

Die Fräser - übliches Sortiment (HSS) - müssen exakt geschliffen und immer scharf gehalten werden (nachscharfen). Winkel, Schneidkanten und Hinterschliffe müssen symmetrisch sein. Die erforderlichen Fräsarbeiten sind mit Werkzeugen für dünnwandige Profile durchzuführen (mit Kopierfräse bzw. Bearbeitungszentrum für Stahl und Edelstahl).

### 7.6.5 Fraisage

Les fraises (jeu HSS classique) doivent être exactement aiguisées, et toujours avec précision (réaffûtage). Les angles et les arêtes de coupe ainsi que les dépouilles doivent être symétriques. Les opérations de fraisage requises doivent être réalisées avec des outils pour profilés à âme mince (à l'aide d'une fraiseuse à copier ou un poste d'usinage pour acier et acier inoxydable).

### 7.6.6 Welding

M65 TB profiles can be welded with all common fusion or resistance welding methods. As with alloy steels, the use of oxyacetylene welding is not recommended (deformation due to the heating of a large surface of the profile). The methods suitable for galvanized steel (-02) are the following:

- Arc welding with metal under active gas protection (MAG).
- Cold metal transfer welding (CMT).

The method suitable for Cor-Ten (-07) and bright (-12) steel is the following:

- Arc welding with metal under active gas protection (MAG).

The method suitable for stainless steel (-05) is as follows:

- Arc welding with infusible electrode under inert gas protection (TIG).

When welding, care must be taken to avoid overheating the profiles.

We recommend the use of heat sinks located in close proximity of the welded area, as well as to proceed in small segment, always waiting for the profile to cool down.

The heat generated during welding of profiles and hinges must be dissipated using brass, copper and aluminium welding attachments. Keep minimum 3 mm distance from welding seam to polyamide web.

### 7.6.6 Schweißen

M65 TB-Profilen können mit allen gängigen Schmelz- oder Widerstandsschweißmethoden geschweißt werden. Wie bei legierten Stählen wird die Verwendung von Autogenschweißen nicht empfohlen (Verformung durch Erwärmung einer großen Oberfläche des Profils). Die besonders für verzinkten Stahl (-02) geeigneten Methoden sind folgende:

- Lichtbogenschweißen mit Metall unter Aktivgasschutz (MAG).
- Stabiles Kaltlichtbogenschweißen (CMT).

Die Methode, die besonders für Cor-Ten (-07) und blank (-12) Stahl geeignet ist, ist die folgende:

- Lichtbogenschweißen mit Metall unter Aktivgasschutz (MAG).
- Das für Edelstahl (-05) besonders geeignete Verfahren ist wie folgt:
- Lichtbogenschweißen mit unschmelzbarer Elektrode unter Inertgasschutz (WIG).

Beim Schweißen muss darauf geachtet werden, dass die Profile nicht überhitzt werden. Wir empfehlen die Verwendung von Kühlkörpern, die sich in unmittelbarer Nähe des geschweißten Bereichs befinden, sowie in kleinen Abschnitten vorzugehen und immer zu warten, bis das Profil abgekühlt ist.

Die beim Schweißen von Profilen und Bänder entstehende Wärme muss mit Schweißzusätzen aus Messing, Kupfer und Aluminium abgeführt werden.

Halten Sie einen Mindestabstand von 3 mm zwischen Schweißnaht und Polyamid-Isolator ein.

### 7.6.6 Soudage

Les profilés M65 TB peuvent être soudés avec toutes les méthodes courantes de soudage par fusion ou par résistance. Comme pour les aciers alliés, l'utilisation du soudage oxyacétylène n'est pas recommandée (déformation due à l'échauffement d'une grande surface du profilé). Les méthodes particulièrement adaptées à l'acier galvanisé (-02) sont les suivantes:

- Soudage à l'arc avec du métal sous protection active contre les gaz (MAG).
- Soudage à l'arc froid stable (CMT).

La méthode particulièrement adaptée pour l'acier Cor-Ten (-07) et décapé (-12) est la suivante:

- Soudage à l'arc avec du métal sous protection active contre les gaz (MAG).
- La méthode particulièrement adaptée à l'acier inoxydable (-05) est la suivante:
- Soudage à l'arc avec électrode infusible sous protection contre les gaz inertes (TIG).

Lors du soudage, il faut veiller à ne pas surchauffer les profilés.

Nous recommandons l'utilisation de dissipateurs thermiques situés à proximité de la zone soudée, ainsi que de procéder par petits segments, en attendant toujours que le profilé refroidisse.

La chaleur générée lors du soudage des profilés et des charnières doit être dissipée à l'aide d'accessoires de soudage en laiton, cuivre et aluminium.

Gardez une distance minimale de 3 mm entre le joint de soudure et la bande de polyamide.

### 7.6.7 Welding station

When welding elements, make sure the working surface is absolutely flat! A suitable welding table with fasteners is recommended for this purpose.

The welding station should always be well ventilated.

Smoke extraction systems are recommended here! The relevant regulations must be observed.

### 7.6.7 Schweißplatz

Beim Schweißen von Elementen ist auf eine absolut plane Arbeitsfläche zu achten! Hier empfiehlt sich ein dafür geeigneter Schweißstisch mit Befestigungsmitteln. Der Schweißplatz sollte immer gut belüftet sein. Hier sind Rauchabzugsanlagen zu empfehlen! Die einschlägigen Vorschriften sind zu beachten.

### 7.6.7 Zone de soudage

Pour souder plusieurs éléments, il convient de choisir une surface de travail parfaitement plane. Il est recommandé d'opter pour une table de soudage dotée d'éléments de fixation.

La zone de soudage doit se trouver dans un endroit bien aéré.

Il est recommandé d'installer un dispositif d'extraction. Les prescriptions applicables doivent être respectées.



### 7.6.8 Straightening work

If, despite all precautions, slight distortions occur in the frame and sash, they should be straightened using suitable spindle presses or other straightening machines.

### 7.6.8 Richtarbeiten

Sollten bei Rahmen und Flügel, trotz aller Vorkehrungen, geringe Verzüge auftreten, so sind diese unter Zuhilfenahme von geeigneten Spindelpressen oder anderen Richtmaschinen wieder gerade zu richten.

### 7.6.8 Redressage

Si un cadre ou un vantail devait présenter un gauchissement malgré toutes les dispositions prises, il doit être redressé à l'aide d'une presse à vis adaptée ou d'une autre machine de redressage.

### 7.6.9 Plastering

The weld seams are usually plastered with an angle grinder (for further information, refer to the processing guidelines). In order to achieve a clean visible surface of the element and ensure the exact function of the glazing bead, the corners must be treated with a file.

### 7.6.9 Verputzen

Die Schweißnähte werden üblicherweise mit dem Winkelschleifer verputzt (weitere Hinweise siehe Verarbeitungsrichtlinien). Um eine saubere Ansichtsfläche des Elementes zu erreichen und um die exakte Funktion der Glasleiste zu gewähren, ist es erforderlich, die Ecken mittels Feile zu bearbeiten.

### 7.6.9 Nettoyage

Les cordons de soudure sont finis avec la meuleuse d'angle (pour plus d'indications, voir les directives de traitement). Pour obtenir une surface visible de l'objet propre et pour assurer le bon fonctionnement des profils de parciose, il est nécessaire de passer les coins avec une lime.

## 7.7 Surface treatment

### 7.7.1 General notes, coating

The surface treatment serves corrosion protection and colour design. With steel profiles, it must always be carried out after machining. Exception: aluminium profiles. Coating accumulation should be avoided, in particular in the area of the sealing and glazing bead mounting zones.

Decisive are:

- EN ISO 12944 Corrosion protection of steel structures by protective paint systems
- DIN 55634 Paints, varnishes and coatings corrosion protection of supporting thin-walled building components made of steel
- Guideline from GSB or Qualicoat for piece coating of steel parts
- Also refer to VFF leaflet ST.01

In the case of high corrosion loads and a long protection period (e.g. windows near the coast) and special loads, the suitable corrosion protection system must be determined in each individual case.

The manufacturer of the coating material must prove the suitability of their product for the coating of the profiles and the corrosion protection of the overall system (primer and top coat, weld seam area, cutting edge).

### 7.7.2 Procedure

In order to achieve perfect adhesion of the coating system, an appropriate surface must be created by cleaning and roughening or chemical pre-treatment.

## 7.7 Oberflächenbehandlung

### 7.7.1 Allgemein, Beschichtung

Die Oberflächenbehandlung dient dem Korrosionsschutz und der farblichen Gestaltung. Sie ist grundsätzlich nach der Bearbeitung bei Stahlprofilen vorzunehmen. Ausnahme: Profile aus Aluminium. Beschichtungsanhäufungen sind insbesondere im Bereich der Dichtungs- und Glashalteleistenaufnahmezonen zu vermeiden.

Maßgebend sind:

- EN ISO 12944 Korrosionsschutz von Stahlbauten durch Beschichtungen und Überzüge
- DIN 55634 Beschichtungsstoffe und Überzüge Korrosionsschutz von tragenden dünnwandigen Bauteilen aus Stahl
- Richtlinie von GSB bzw. Qualicoat für die Stückbeschichtung von Stahlteilen
- Außerdem ist auf VFF Merkblatt ST.01 zu verweisen

Bei starker Korrosionsbelastung und langer Schutzdauer (z.B. Fenster in Küstennähe) und bei Sonderbelastungen, muss in jedem Einzelfall das geeignete Korrosionsschutz-System bestimmt werden. Der Hersteller des Beschichtungsstoffes muss die Eignung seines Produktes für die Beschichtung der Profile (walzblank bzw. kontinuierlich schmelztauchveredelt) und den Korrosionsschutz des Gesamtsystems nachweisen (Grund- und Deckbeschichtung, Schweißnahtbereich, Schnittkante).

### 7.7.2 Verfahren

Um eine einwandfreie Haftung des Beschichtungssystems zu erreichen, ist durch Reinigung und Aufrauen bzw. chemische Vorbehandlung eine entsprechend geeignete Oberfläche herzustellen.

## 7.7 Traitement de surface

### 7.7.1 Généralités, la peinture

Le traitement de surface sert à protéger contre la corrosion et à définir une couleur. Il doit en principe s'effectuer après l'usinage des profilés en acier. Exception: profilés en aluminium. Il convient d'éviter les accumulations de revêtement, notamment dans les zones de positionnement de parciose et de joint d'étanchéité.

Sont déterminantes:

- EN ISO 12944 Anticorrosion des structures en acier par systèmes de peinture et revêtements
- DIN 55634 Matériaux de revêtement et revêtements anticorrosion des éléments de construction en acier à parois minces et supportants
- Directive GSB ou Qualicoat pour revêtement de pièces d'éléments en acier
- Il faut également se référer à la fiche technique VFF ST.01

En cas de forte exposition à la corrosion et de grande durée de protection (par ex. les fenêtres à proximité de la mer) et dans certains cas exceptionnels, il convient d'élaborer un système de protection contre la corrosion adapté au cas par cas.

Le fabricant du matériau de revêtement doit fournir un certificat garantissant l'adéquation de son produit pour le revêtement des profilés (laminé à froid ou revêtu en continu par immersion à chaud) en indiquant la protection contre la corrosion de l'ensemble du système (couche de fond et couche de finition pour les zones de cordon de soudure et les arêtes découpées).

### 7.7.2 Procédure

Pour obtenir une parfaite adhérence du système de revêtement, la surface doit être préparée en conséquence par nettoyage et dépolissage ou prétraitement chimique.

### 7.7.3 Weld seam area

Welding beads and scale must be carefully removed with the grinding machine and, if necessary, reworked with a blasting gun and corundum sand.

### 7.7.3 Schweißnahtbereich

Schweißperlen und Zunder sind mit der Schleifmaschine sorgfältig zu entfernen, gegebenenfalls mit Strahlpistole und Korund nachzuarbeiten.

### 7.7.3 Zone de joint soudé

Les perles de soudure et les scales doivent être éliminées avec soin par meulage, et au besoin retravaillées au pistolet de sablage et au corindon.

### 7.7.4 Cleaning the surfaces

Due to the forming process and the subsequent machining, the profile surfaces are soiled with cooling lubricant, grease, cutting oil etc. To ensure perfect adhesion of the coating, the profiles must be completely cleaned. The choice of the cleaning process is incumbent on the coating company carrying out the work. Possible cleaning processes:

- A) Washing off with solvent mixtures
- B) Steam jet cleaning with or without chemical additives
- C) High-pressure hot-water cleaning with or without chemical additives
- D) Alkaline or acidic decoction degreasing in immersion or spraying process.

### 7.7.4 Reinigung der Oberflächen

Durch den Umformungsprozess und die nachfolgende Bearbeitung sind die Profiloberflächen mit Kühlschmierstoffen, Fetten, Schneidölen usw. verunreinigt. Um eine einwandfreie Haftung der Beschichtung sicherzustellen, sind die Profile vollständig zu reinigen. Die Wahl des Reinigungsverfahrens obliegt dem ausführenden Beschichtungsbetrieb. Mögliche Reinigungsverfahren:

- A) Abwaschen mit Lösungsmittelgemischen
- B) Dampfstrahlreinigung mit oder ohne Chemikalienzusatz
- C) Hochdruckheißwasserreinigung mit oder ohne Chemikalienzusatz
- D) Alkalische oder saure Abkochenfettung im Tauch- oder Sprühverfahren.

### 7.7.4 Nettoyage des surfaces

Le processus de transformation et l'usinage subséquent requièrent l'emploi de lubrifiants de refroidissement, de graisses, d'huiles découpe, etc., qui salissent la surface des profilés. Afin de garantir la bonne adhérence du revêtement, les profilés doivent être nettoyés en profondeur. Le choix du procédé de nettoyage incombe à l'entreprise de revêtement en charge. Procédés de nettoyage possibles:

- A) Rinçage à l'aide d'un mélange de solvants
- B) Nettoyage à la vapeur avec ou sans ajout de produit chimique
- C) Nettoyage haute pression à l'eau chaude avec ou sans ajout de produit chimique
- D) Dégraissage au trempé alcalin ou acide (trempage ou pulvérisation).

### 7.7.5 Mechanical roughening of the surface

Mechanical roughening significantly improves the adhesion between the coating and the substrate. In the simplest case, the profiles and frames are ground with abrasive paper or corundum plastic fleece (e.g. Scotch Brite). Disadvantage: very high input for profiled surfaces - no reliable process. In particular with larger quantities, overblowing (= sweep jets) with corundum at reduced pressure and a jet impact angle of < 30° is more economic and safer. Any abrasion and blasting abrasive residue must be removed completely.

Warning: In the case of continuously hot-dip galvanized profiles, the metal coating must not be removed.

### 7.7.5 Mechanisches Aufrauen der Oberfläche

Durch das mechanische Aufrauen wird die Haftung Beschichtung - Untergrund wesentlich verbessert. Im einfachsten Fall werden die Profile und Rahmen mit Schleifpapier oder mit Korund-Kunststoffvlies (z.B. Scotch Brite) angeschliffen. Nachteil: sehr hoher Aufwand bei profilierten Oberflächen - kein prozesssicheres Verfahren. Vor allem bei größeren Stückzahlen ist Überblasen (= Sweep-Strahlen) mit Korund bei vermindertem Druck und einem Strahlenauffreffwinkel < 30° wirtschaftlicher und sicherer. Abrieb und Strahlmittelrückstände sind vollständig zu entfernen.

Warnhinweis: Durch das mechanische Aufrauen darf im Falle der kontinuierlich schmelztauchveredelten Profile der Metallüberzug nicht abgetragen werden.

### 7.7.5 Dépolissage mécanique de la surface

Le dépolissage mécanique améliore, de façon significative, l'adhérence du revêtement sur le support. Dans les cas les plus simples, les profilés et les cadres sont dépolis à l'aide de papier émeri ou d'un film corindon-plastique (p. ex. au Scotch Brite). Inconvénient: coût très élevé sur surfaces profilées - méthode ne garantissant pas la fiabilité du processus. Lorsque le nombre d'éléments à traiter est conséquent, un soufflage au mince au corindon à une pression moindre et avec un angle inférieur à 30° est à la fois plus économique et plus sûr. Tous les résidus, y compris le produit de décapage, doivent être éliminés avec soin.

Avertissement: le dépolissage mécanique ne doit pas user le revêtement métallique dans le cas des profilés revêtus en continu par immersion à chaud.

### 7.7.6 Chemical surface treatment

Chemical pickling surface treatment is an alternative to mechanical roughening. The procedural instructions and safety regulations must be observed. Use a method compatible for galvanized profiles. The removal of any superficial white oxides only possible by mechanical treatment such as sweeping or grinding.

### 7.7.6 Chemische Oberflächenbehandlung

Die chemische Oberflächenbehandlung stellt eine Alternative zum mechanischen Aufrauen dar. Verwenden Sie eine Methode, die mit verzinkten Profilen kompatibel ist. Die Verfahrensanweisungen und Sicherheitsvorschriften sind zu beachten. Verwenden Sie eine Methode, die mit verzinkten Profilen kompatibel ist. Die Entfernung von Weißrost ist nur durch mechanische Behandlung wie Sweepen oder Schleifen möglich.

### 7.7.6 Traitement de surface chimique

Le traitement de surface chimique est une alternative au dépolissage mécanique. Les consignes d'application et de sécurité doivent être respectées. Utiliser une méthode compatible pour les profilés galvanisés. L'élimination de tout oxyde blanc superficiel est uniquement possible par traitement mécanique (meulage, soufflage).

### 7.7.7 Types of coating

M65 TB profiles can be powder coated or wet painted.

You'll find the different painting techniques in a specific chapter of this documentation (6.3.0).

### 7.7.7 Arten von Beschichtung

Profile der Serie M65 TB können sowohl Pulver- als auch Nasslackbeschichtet werden.

Sie finden die verschiedenen Beschichtungsmethoden in einem speziellen Kapitel dieser Dokumentation (6.3.0).

### 7.7.7 Types de peinture

Les profilés M65 TB peuvent être peints avec revêtement liquide et en poudre.

Vous trouverez les différentes techniques de peinture dans le chapitre spécifique de cette documentation (6.3.0).

### 7.7.8 Cor-Ten profile (-07) oxidation

The Cor-Ten steel is like a natural, "living" material. With the passage of time and exposure to weathering it takes on different and unique shades. Under normal conditions this phenomenon (formation and stabilization of the surface protective "patina") requires from a minimum of one to a maximum of four years. This natural oxidation process can also be obtained chemically, with different processes, for example as described below.

Guidelines for the oxidation and passivation process:

- Cleaning with a brush the surfaces to be treated, applying a neutral detergent and drying with a cotton rag;
- Application of a suitable product as oxidation starter (In this phase do not expose the surfaces directly to the weathering);
- Apply a film of demineralized water with a cotton rag, wait for a "medium" dark shade will be reached;
- Once the desired shade is obtained, apply a suitable passivating product. Take care to avoid any dripping.

Process of finishing:

- Apply the beeswax on the treated surfaces;
- As an alternative to beeswax, apply a suitable oil.

Each process (products and procedures) must be verified in relation to location environment. The choice between oil or wax must consider the final location (internal or external) of the windows and doors.

The finishing must be resumed and maintained following a plan, depending on weathering and exposure conditions.

About the finishing, the oil is the easiest one in terms of application and maintenance. It also allows the resuming of Cor-Ten surface in case of formation of halos due to water stagnation. Attention: the oil must be uniformly applied and after application dried with a cotton rag. Being a chemical process, pay attention to washout and chalking of the patina surface over the time. To limit these effects, it is recommended to plan periodic treatments of the surface with applications of suitable wax or oil.

To preserve the state of the existing artifacts and masonry where the Cor-Ten steel windows and doors will be installed, proper drainage system must be provided and washable and non-absorbent materials must be used.

### 7.7.8 Oxidationsprozess Cor-Ten-Stahl (-07)

Der Cor-Ten-Stahl ist ein natürlicher, "lebendiger" Baustoff. Im Laufe der Zeit und in Verbindung von Bewitterung nimmt Cor-Ten Stahl verschiedene und einzigartige Schattierungen an. Unter normalen Bedingungen benötigt dieses Phänomen (Bildung und Stabilisierung der oberflächenschützenden "Patina") zwischen einem und vier Jahren. Dieser natürliche Oxidationsprozess kann durch eine chemische Behandlung beschleunigt und beeinflusst werden. Hierzu stehen verschiedenen Verfahren zur Verfügung um dies zu erreichen wie beispielhaft unten beschrieben.

Richtlinien (Verfahrensbedingt) für den Oxidations- und Passivierungsprozess:

- Reinigung der zu behandelnden Oberflächen mit einer Bürste oder Schwamm unter Auftragen eines neutralen Reinigungs- bzw. Entfettungsmittels. Anschließendes sollte mit einem Baumwolltuch die Oberfläche abgetrocknet werden;
- Auftragen eines geeigneten Oxidationsbeschleunigers welcher um den Prozess in Gang zu bringen. (In dieser Phase sollte die Oberflächen nicht direkt der Bewitterung ausgesetzt werden);
- Anschließendes auftragen eines Films aus entmaterialisiertem Wasser (auch destilliertes Wasser möglich) mit einem Baumwollappen;
- Sobald der gewünschte Farbton erreicht ist, ein geeignetes Passivierungsprodukt (um den Korrosionsprozess zu beenden) auftragen. Achten Sie darauf, dass die Flüssigkeit gleichmäßig aufgetragen wird (ohne Tropfenbildung).

Mögliche Endbehandlungen:

- Auftragen von Bienenwachs auf die behandelten Flächen oder;
- Alternativ zum Bienenwachs kann ein geeignetes Öl verwendet werden.

Jeder Prozess (Produkte und Verfahren) sollte unter Einbezug der Standortumgebung überprüft werden, daher empfehlen wir die Herstellung eines Referenzmusters. Die Wahl zwischen Öl oder Wachs muss unter Einbezug des geplanten Standorts, innen, außen sowie Witterungs- und Expositionsbedingungen der Fenster und Türen Berücksichtigung finden und entsprechend gepflegt werden.

Was die Endbehandlung betrifft, ist das Öl die einfachste Variante in Bezug auf die Anwendungsfreundlichkeit und Pflege. Es ermöglicht auch die Wiederaufnahme der Cor-Ten-Oberflächenbehandlung im Falle der Bildung von Schattenbildern aufgrund von Wasserstagnation. Achtung: Das Öl muss gleichmäßig aufgetragen und nach dem Auftragen mit einem Baumwolltuch abgetrocknet werden. Da es sich um einen chemischen Prozess handelt, ist auf Auswaschungen und Verkreidung der Patina-Oberfläche im Laufe der Zeit zu achten. Um diese Effekte zu begrenzen, empfiehlt es sich die regelmäßige Nachbehandlungen der Oberfläche mit geeignetem Wachs oder Öl. Um den Zustand der vorhandenen Bauteile und des Mauerwerks zu erhalten, in dem die Cor-Ten-Stahlfenster und -Türen eingebaut werden, muss ein geeignetes Drainagesystem vorgesehen und abwaschbare und nicht saugfähige Materialien verwendet werden. Dies ist notwendig um bleibende Korrosionsspuren durch Aus- und Abwaschungen entgegenzuwirken.

### 7.7.8 Oxydation acier Cor-Ten (-07)

L'acier Cor-Ten est un matériau naturel et vivant qui, avec le passage du temps et l'exposition aux agents atmosphériques, prend des teintes différentes et uniques de temps en temps. Dans des conditions normales, ce phénomène de formation et de stabilisation de l'état de surface de la patine de protection peut se développer dans un délai de un à quatre ans maximum. Ce processus d'oxydation naturelle peut également être obtenu chimiquement, avec différents procédés comprenant, par exemple:

Directives pour le processus d'oxydation et de passivation :

- Nettoyage des surfaces à l'aide d'une brosse, application du détergent et séchage avec un chiffon en coton;
- Application de la solution de fond d'oxydation avec le produit de votre choix (éviter de laisser les cadres aux intempéries);
- Appliquer une couche d'eau déminéralisée avec un chiffon de coton, une teinte "moyenne" sera atteinte;
- Lorsque la tonalité souhaitée est atteinte, appliquer l'agent de passivation choisi en veillant à ne pas former de coulures.

A la fin du processus:

- Appliquez de la cire d'abeille sur la surface des profilés;
- Comme alternative à la cire d'abeille, on peut utiliser une huile spécifique.

Chaque procédure doit être vérifiée du point de vue des produits choisis et des procédures ainsi que par rapport à l'emplacement du chantier. Le choix de la finition du Cor-Ten avec de l'huile ou de la cire doit être fait en fonction de la typologie des châssis: intérieurs ou extérieurs. La finition doit être réparée et entretenue selon des périodes prédéfinies, en fonction de la quantité et de la manière dont les châssis sont exposés.

Entre les deux finitions, la finition à l'huile est plus facile à réaliser et à entretenir et permet également de reprendre le Cor-Ten en cas de formation d'auréoles dues à la stagnation de l'eau.

Attention : si vous choisissez d'utiliser de l'huile, vous devez faire particulièrement attention car après l'application, elle doit être séchée et "uniformisée" avec un chiffon en coton.

Étant donné qu'il s'agit d'un procédé chimique, une attention particulière doit être accordée à l'éventuel lessivage et au farinage de la patine de surface que cette finition peut générer au fil du temps.

Afin de limiter ces phénomènes, il est conseillé de prévoir des traitements périodiques avec des applications de cires ou d'huiles appropriées. En outre, si vous souhaitez préserver l'état des structures sur lesquelles les cadres en acier Cor-Ten doivent être installés, il faut prévoir des canaux de drainage spéciaux ou utiliser des matériaux lavables et non absorbants.

## 7.8 Montage sur site

### 7.8.1 Vitrage

Les systèmes de vitrage utilisés pour toutes les séries OTTOSTUMM | Mogs sont conformes aux normes applicables, aux dispositions des métiers du verre en matière de calage et aux directives des fabricants de verre isolant. Il convient notamment de respecter les prescriptions en matière de compensation

## 7.8 Installation on site

### 7.8.1 Glazing

The glazing systems of all OTTOSTUMM I Mogs series comply with the relevant standards, the cushioning regulations of the glazing trade and the guidelines of insulating glass manufacturers. Particular attention must be paid to the regulations regarding pressure compensation and drainage from free rebate spaces. All glazing systems are usually designed for glazing between elastomer profiles (EPDM or neoprene).

If necessary, a silicone-free lubricant is applied to the seals to facilitate installation.

The glass mass is determined and the glazing beads and sealing profiles are selected on the basis of the filling thickness according to the specifications in the program list and processing documents.

Wet glazing is possible and must be carried out in accordance with the generally applicable regulations.

In the case of acrylic glass (PMMA) and polycarbonate (PC) fillings, the risk of stress cracks in these sheets in contact with our EPDM seals cannot be excluded. The risk of incompatibility is beyond our control and must be clarified by the processor with the manufacturers of such fillings.

### 7.8.2 Joint sealing

For the sealing of structural attachment and construction joints, use specific and certified products, referring to the manufacturer's instructions.

### 7.8.3 Prevention of surface damage during installation

For a correct conservation of OTTOSTUMM I Mogs frames it is advisable to use counter frames, in order to carry out the installation only at the conclusion of the masonry and plastering works.

In case of installation at an early stage of the construction site, with the use of self-adhesive plastic films, the user is solely responsible for ensuring that the products used are fully compatible with the components.

For large objects, we recommend the interim acceptance of construction phases immediately after their completion.

### 7.8.4 Cleaning

In addition to the exposure to the sun and weather, exterior wall elements are exposed to aggressive air components and are therefore inevitably subject to soiling. This not only impairs the appearance of the components, but also poses an increased risk of corrosion due to the constant effect of the dirt deposits. The components must therefore be cleaned at intervals, which vary depending on the location. In the following we confine ourselves to a few

## 7.8 Montage am Bau

### 7.8.1 Verglasung

Die Verglasungssysteme aller OTTOSTUMM I Mogs Serien entsprechen den einschlägigen Normen, den Verklotzungsvorschriften des Glaserhandwerks und den Richtlinien der Isolierglashersteller. Besonders zu beachten sind die Vorschriften hinsichtlich Druckausgleich und Entwässerung aus freien Falzräumen.

Alle Verglasungssysteme sind in der Regel für die Verglasung zwischen Elastomer-Profilen (EPDM bzw. Neoprene) eingerichtet.

Soweit erforderlich sind die Dichtungen zum einfacheren Einbau mit einem silikonfreien Gleitmittel versehen.

Die Ermittlung der Glasmasse sowie die Auswahl von Glashalteleisten und Dichtungsprofilen in Abhängigkeit von der Füllungsdicke erfolgen entsprechend den Angaben in der Programmliste, bzw. in den Verarbeitungsunterlagen.

Nassverglasung ist möglich und muss entsprechend allgemein gültigen Regelwerken ausgeführt werden.

Bei Füllungen aus Acrylglas (PMMA) und Polycarbonat (PC) kann im Kontakt mit unseren EPDM-Dichtungen die Gefahr von Spannungsrissen in diesen Platten nicht ausgeschlossen werden. Das Risiko der Unverträglichkeit liegt ausserhalb unserer Kontrolle und ist vom Verarbeiter mit den Herstellern solcher Füllungen abzuklären.

### 7.8.2 Fugenabdichtung

Für die Abdichtung von Bauanschluss- und Konstruktionsfugen bieten wir in unserem Programm geeignete Dichtstoffe an, verwenden Sie ausschließlich freigegebenen und zertifizierte Produkte unter Bezugnahme der Anweisungen des Herstellers.

### 7.8.3 Verhütung von Oberflächenschäden an eingebauten Bauteilen

Für eine korrekte Erhaltung der OTTOSTUMM I Mogs-Rahmen ist es ratsam, immer Gegenrahmen zu verwenden, um die Installation erst nach Abschluss der Mauer- und Putzarbeiten durchzuführen.

Im Falle einer frühzeitigen Montage selbstklebenden Kunststofffolien, muss die ausführende Firma gewährleisten, dass die Produkte vollständig miteinander kompatibel sind, ist ausschliesslich der Anwender dafür verantwortlich, dass die verwendeten Produkte uneingeschränkt mit den Bauteilen verträglich sind. Wir empfehlen bei grösseren Objekten die Zwischenabnahme von Bauabschnitten sofort nach deren Fertigstellung.

### 7.8.4 Reinigung von Bauteilen

Außenwandelemente sind neben der Beanspruchung durch Sonne und Bewitterung aggressiven Luftbestandteilen ausgesetzt und unterliegen damit unvermeidlich einer Verschmutzung. Diese beeinträchtigt nicht nur das Aussehen der Bauteile, sondern stellt durch die ständige Einwirkung der Schmutzablagerungen auch ein erhöhtes Korrosionsrisiko dar. Die Bauteile müssen

de pression et de drainage hors des zones de feuillure vides.

En général, tous les systèmes de vitrage sont installés entre des profilés en élastomère (EPDM ou néoprène).

Les joints sont dotés, le cas échéant, d'un lubrifiant sans silicone afin de faciliter leur pose. Le calcul des dimensions de la vitre ainsi que le choix des parclozes et des profilés d'étanchéité en fonction de l'épaisseur de remplissage s'effectue conformément aux informations contenues dans le catalogue de produits ou dans les documents relatifs à la mise en œuvre. Le vitrage au silicone est possible et doit être exécuté conformément aux réglementations généralement applicables.

En ce qui concerne les remplissages en plexiglas (PMMA) et en polycarbonate (PC), il n'est pas possible d'exclure le risque de formation de fissures de contrainte sur les plaques une fois en contact avec nos joints EPDM. Le risque d'incompatibilité se situe en dehors de notre sphère de contrôle ; l'exécutant doit s'adresser aux fabricants des systèmes de remplissage concernés pour clarifier ce point.

### 7.8.2 Étanchement des joints

En ce qui concerne l'étanchement des joints de construction et de raccord de maçonnerie, utiliser des produits spécifiques et certifiés, en vous référant aux instructions du fabricant.

### 7.8.3 Prévention des dommages aux surfaces des éléments posés

Pour une conservation correcte des cadres OTTOSTUMM I Mogs, il est conseillé de toujours utiliser des contre-cadres, afin de ne réaliser l'installation qu'à la fin des travaux de maçonnerie et de plâtrage.

En cas d'installation à un stade anticipée du chantier, avec utilisation de films de protection en matière plastique autocollants, l'utilisateur est seul responsable de la vérification de la compatibilité totale des produits utilisés avec les éléments.

Pour les objets de très grandes dimensions, nous recommandons une réception intermédiaire des sections de construction dès que ces dernières sont achevées.

### 7.8.4 Nettoyage des éléments

Outre le soleil et les intempéries, les éléments de mur extérieur sont également exposés aux éléments agressifs contenus dans l'air, et se salissent donc inévitablement. Ceci ne détériore pas uniquement l'aspect extérieur des éléments, mais représente également un risque élevé de corrosion du fait de l'action constante des dépôts de saleté. Les éléments doivent par conséquent être nettoyés, à des intervalles à déterminer en fonction du site.

Nous nous limiterons ci-après à quelques consignes importantes:

il convient d'éliminer les salissures légères à l'aide d'une éponge et d'un chiffon en utilisant de l'eau à laquelle on ajoute un détergent neutre (pas de solution savonneuse). Rincer ensuite minutieusement à l'eau claire. En cas de salissures plus importantes, il convient de recourir à un détergent faiblement abrasif qu'il ne faudra toutefois pas utiliser sur la vitre. Si

essential notes:

Light soiling is removed with water and a neutral cleaning agent (no soapy water!) using a sponge and cloth. Then rise thoroughly with demineralized water.

If other cleaning agents are required, a test application on a concealed surface should first ensure that surfaces are neither mechanically nor chemically corroded. Cleaners with pH values below 5 and above 8 as well as abrasive or scouring agents such as steel wool or wire brushes must be excluded in any case. Further details can be found in the technical literature.

## 7.8.5 Use and maintenance

The Construction Products Ordinance must always be observed here. Any relevant product standards also apply.

If there are no malfunctions or damage caused by inappropriate handling, maintenance for private use can be limited to easily oiling or greasing accessible sliding fitting parts at large intervals. Maintenance work for large objects and public buildings should be carried out by a specialist, especially since it involves more extensive maintenance measures. By concluding a maintenance contract with the building owner, the processor can ensure that the quality of their work is maintained to the satisfaction of their customers over a long period of use. In this context, please also observe the maintenance instructions of the fitting manufacturers.

The following maintenance work is to be performed:

- E) Cleaning of elements, in particular moving parts and functional zones.
- F) Inspection of the seals between:
  - Sash and blind frame Replace damaged rebate gaskets.
  - Glass and sash frame
  - Element frame and building structure
  - If necessary, repair or replace the sealants or sealing profiles.
- G) Inspection of the corner and butt joint at the seals. If necessary, repair them with the adhesives and sealants.
- H) Subject the glazing to a visual inspection for cracks, including edge cracks, and replace it if necessary.
- I) Verification of all functions:
  - Check the fitting components for ease of movement and grease the movable parts if necessary. Bolted strips with plastic bearing bushings are maintenance-free and must not be lubricated.

The replacement of non-functional parts (fittings, accessories, glass etc.) is the responsibility of the authorised specialist company.

daher in Intervallen, die je nach Standort unterschiedlich sind, gereinigt werden. Wir beschränken uns nachfolgend auf einige wesentliche Hinweise:

Leichte Verschmutzungen werden mit Wasser unter Zusatz eines neutralen Reinigungsmittels (keine Seifenlauge!) mit Schwamm und Tuch entfernt. Danach wird mit klarem Wasser gründlich abgespült. Bei stärkerer Verschmutzung werden schwach abrasiv wirkende Reiniger erforderlich, die jedoch nicht auf Glas angewendet werden dürfen. Auf alle Fälle sollte zuvor durch eine Probeanwendung auf einer verdeckt liegenden Fläche sichergestellt werden, dass Oberflächen weder mechanisch noch chemisch angegriffen werden. Auszuschliessen sind in jedem Fall Reiniger mit pH-Werten unter 5 und über 8 sowie scheuernd oder schmirgelnd wirkende Mittel ebenso wie Stahlwolle oder Drahtbürsten. Weitere Details können der Fachliteratur entnommen werden.

## 7.8.5 Gebrauch und Wartung

Grundsätzlich ist hier die Bauproduktenverordnung zu beachten. Zusätzlich gelten soweit vorhanden, die einschlägigen Produktnormen. Sofern keine Funktionsstörungen oder durch unsachgemässen Umgang verursachte Schäden vorliegen, kann sich die Wartung bei privater Nutzung darauf beschränken, zugängliche gleitende Beschlagteile in grösseren Zeitabständen leicht zu ölen oder zu fetten. Wartungsarbeiten bei grösseren Objekten und bei öffentlichen Bauten gehören in die Hand des Fachmanns, zumal sie mit weitergehenden Erhaltungsmassnahmen verbunden sind. Hier kann der Verarbeiter durch den Abschluss eines Wartungsvertrags mit der Bauherrschaft sicherstellen, dass die Qualität seiner Arbeit über einen langen Nutzungszeitraum zur Zufriedenheit seines Kunden erhalten bleibt. Bitte beachten Sie in diesem Zusammenhang auch die Wartungsanweisungen der Beschlaghersteller.

Folgende Wartungsarbeiten sind durchzuführen:

- E) Reinigung der Elemente, vor allem der beweglichen Teile und Funktionszonen.
- F) Überprüfung der Abdichtungen zwischen:
  - Flügelrahmen und Blendrahmen beschädigte Anschlagdichtungen austauschen.
  - Glas und Flügelrahmen
  - Elementrahmen und Baukörper
  - ggf. Dichtstoffe bzw. Dichtungsprofile nachbessern oder auswechseln.
- G) Überprüfen der Eck- und Stossverbindung bei den Dichtungen; ggf. nachbessern mit den in Kapitel Hilfsmittel genannten Kleb- und Dichtstoffen.
- H) Überprüfen der Verglasung durch Sichtkontrolle auf Einläufe und Sprünge ggf. auswechseln.
- I) Überprüfen aller Funktionen:
  - Gängigkeit der Beschlagteile prüfen, ggf. Fetten der beweglichen Teile. Bei verschraubten Bändern mit Kunststofflagerbuchsen sind diese wartungsfrei und dürfen nicht geschmiert werden.

Der Austausch nicht funktionierender Teile (Beschlag, Zubehör, Glas usw.) ist Sache des autorisierten Fachbetriebes.

d'autres agents de nettoyage sont nécessaires, il faut s'assurer au préalable que les surfaces ne sont attaquées ni mécaniquement ni chimiquement en effectuant un essai d'application sur une partie cachée. En outre, les détergents dont le pH est inférieur à 5 ou supérieur à 8, les produits abrasifs ou corrosifs ainsi que la laine d'acier et la brosse métallique sont à proscrire.

Pour de plus amples informations, veuillez vous reporter à la documentation spécialisée.

## 7.8.5 Utilisation et entretien

Dans le cas présent, il faut en principe respecter le règlement relatif aux produits de construction. En outre, la norme de produit connexe en vigueur s'applique.

En cas d'utilisation privée, la maintenance peut se limiter à huiler ou à graisser légèrement les pièces de ferrure coulissantes de temps en temps, sous réserve qu'aucun dysfonctionnement ni dommage provoqué par une manipulation non appropriée ne survienne. Les travaux de maintenance réalisés sur les objets de très grandes dimensions et les bâtiments publics doivent être effectués par un spécialiste, d'autant plus s'ils sont liés à des mesures de conservation plus strictes. Dans le cas présent, l'exécutant peut garantir, par la conclusion d'un contrat de maintenance avec le maître d'ouvrage, que la qualité de son travail perdurera afin de satisfaire au mieux le client sur le long terme.

Nous vous remercions également de bien vouloir respecter les instructions d'entretien du fabricant de ferrures concernant ce point.

Les travaux de maintenance à réaliser sont les suivants:

- E) Nettoyage des éléments, avant tout des pièces mobiles et des zones de fonctionnement.
- F) Contrôle des joints d'étanchéité entre:
  - Le cadre de vantail et le cadre dormant, remplacer les joints de butée endommagés
  - Le vitrage et le cadre de vantail
  - Le cadre des éléments et le corps d'ouvrage
  - Le cas échéant, retoucher ou remplacer les produits d'étanchéité ou les profilés d'étanchéité.
- G) Contrôle des assemblages en coupe droite et en angle au niveau des joints d'étanchéité; le cas échéant, retouche à l'aide de l'un des produits d'étanchéité ou de collage mentionnés dans le chapitre "Auxiliaires de mise en œuvre".
- H) Contrôle visuel du vitrage à la recherche de rétrécissements ou de fissures; le cas échéant, remplacer.
- I) Contrôle de toutes les fonctions:
  - Contrôler la fonctionnalité des pièces de ferrure, le cas échéant graisser les pièces mobiles. Les paumelles vissées à l'aide de bagues en plastique ne nécessitent aucun entretien et ne doivent pas être graissées.

Le remplacement des pièces non fonctionnelles (ferrure, accessoire, verre, etc.) doit être réalisé par une entreprise spécialisée agréée.



## 7.9 Technical services

Our planning and drawing documents, processing guidelines and fitting installation plans make it easier for you to process our systems. Even without explicit indication, the processing guidelines of the basic series apply to all object-related construction suggestions. Furthermore, the consulting services of our company and our sales partners are at your disposal. Documents and consultations correspond to our best knowledge. However, no guarantee can be given for the absence of errors, unless the errors are based on intent or gross negligence on our part. We offer our processors seminars with intensive instruction in the theory and practice of OTTOSTUMM | Mogs systems. We also support other EDP software, such as FPPRO Emmigissoft and LogiKal® from ORGADATA etc. We keep our customers up to date with the latest technical and standardization information.

## 7.9 Technische Service-Leistungen

Unsere Planungs- und Zeichnungsunterlagen, Verarbeitungsrichtlinien und Beschlagsein-baupläne erleichtern Ihnen die Verarbeitung unserer Systeme. Auch ohne ausdrücklichen Hinweis gelten bei allen objektbezogenen Konstruktionsvorschlägen die Verarbeitungsrichtlinien der Basisserien mit. Darüber hinaus stehen Ihnen die Beratungsdienste unseres Hauses und unserer Vertriebspartner zur Verfügung. Unterlagen und Beratungen entsprechen unserem besten Wissen. Eine Gewähr für Fehlerfreiheit kann jedoch nicht übernommen werden, es sei denn, die Fehler beruhen auf Vorsatz oder grober Fahrlässigkeit unsererseits. Unseren Verarbeitern bieten wir Seminare mit intensiver Unterweisung in Theorie und Praxis der OTTOSTUMM | Mogs Systeme. Ausserdem unterstützen wir andere EDV-Programme wie z.B. FPPRO und LogiKal® von ORGADATA, etc. Durch aktuelle Informationen halten wir unsere Kunden in Technik und Normung auf dem Laufenden.

## 7.9 Support technique

Nos plans et dessins, directives de mise en œuvre et schémas de pose des ferrures vous facilitent la mise en œuvre de nos systèmes. Même sans mention expresse, les directives de mise en œuvre des gammes de base s'appliquent à toutes les propositions de construction de projets spéciaux. Les services de conseil de notre société et de nos partenaires commerciaux se tiennent en outre à votre disposition. Les documents et conseils sont fournis selon les meilleures connaissances disponibles. Nous ne pourrions toutefois pas être tenus responsables de fautes éventuelles, à moins que ces dernières ne reposent sur une faute intentionnelle ou une négligence grossière de notre part. Nous proposons à nos exécutants des séminaires intensifs portant sur l'utilisation théorique et pratique des systèmes OTTOSTUMM | Mogs. En outre, nous prenons en charge d'autres programmes informatiques, comme FPPRO et LogiKal® d'ORGADATA, etc. Nous tenons nos clients au courant de l'état de la technique et des normes grâce à des informations d'actualité.

## 7.10 Disclaimer

All the information contained in this documentation is given to the best of our knowledge and ability. However, we decline all responsibility for the use of any suggestions, examples of applications and/or data, or for typographical errors or scale reproductions. Details and solutions contained therein must be verified with reference to mechanical, functional and technical feasibility, as well as static compliance, on the basis of the regulations in force, releasing the companies Otto Stumm and Mogs from any liability of any kind. The Manufacturer is responsible for the technical performance characteristics of the product resulting from the manufacturing and assembly of the system, and for its suitability to be placed on the market in accordance with and in compliance with all current law. We reserve the right to make technical changes without prior warning. All items in this catalogue are subject to availability at the time of order. No part of this catalogue may be reproduced, published, distributed, reused by any means whatsoever, or copied, without our prior written permission.

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## 7.10 Haftungsausschluss

Alle enthaltenen Informationen in dieser Dokumentation wurden nach bestem Wissen und Gewissen erstellt. Wir lehnen jedoch jegliche Verantwortung für die Verwendung und Umsetzung der dargestellten Anwendungsbeispiele und/oder Daten, oder für typographische Fehler oder maßstäbliche Reproduktionen ab. Darin enthaltene Details und Lösungsvorschläge müssen in Bezug auf mechanische, funktionale und technische Machbarkeit sowie der statischen Dimensionierung, auf der Grundlage der geltenden Vorschriften überprüft werden und stellt die Firmen Otto Stumm und Mogs von jeglicher Haftung frei. Der Hersteller ist für die technischen Leistungseigenschaften und Rechtskonformität des Bauprodukts, welche sich aus der Herstellung und Montage des Bauprodukts sowie für seine Eignung zum Inverkehrbringen in Übereinstimmung mit der geltenden Bauproduktenverordnung verantwortlich. Wir behalten uns das Recht vor technische Änderungen ohne vorherige Informationen umzusetzen. Alle im Katalog dargestellten Artikel unterliegen der Verfügbarkeit zum Zeitpunkt der Bestellung. Kataloge dürfen im Gesamten oder in Teilen ohne vorherige schriftliche Zustimmung weder vervielfältigt, veröffentlicht oder verteilt werden.

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## 7.10 Avertissements

Nous avons apporté le plus grand soin à l'élaboration de cette documentation. Cependant nous déclinons toute responsabilité pour l'utilisation faite de nos propositions et de nos données, pour tous les erreurs typographiques ou les reproductions à l'échelle. Détails et solutions qui y sont contenus doit être vérifiée à l'avance à partir d'un point de vue mécanique-fonctionnelle et statique, dégageant les sociétés Otto Stumm et Mogs de toute responsabilité de quelque nature que ce soit. Le fabricant est responsable de la conformité technique et légale du produit résultant de l'assemblage du système et pour sa éligibilité à être mis sur le marché en accord et en conformité avec toutes les lois applicables. Nous nous réservons le droit de procéder à des modifications techniques sans préavis. Aucune partie de ce catalogue ne peut être reproduite, publiée, distribué, réutilisé par quelque moyen que ce soit, ou copié, sans l'autorisation écrite préalable de notre part.

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