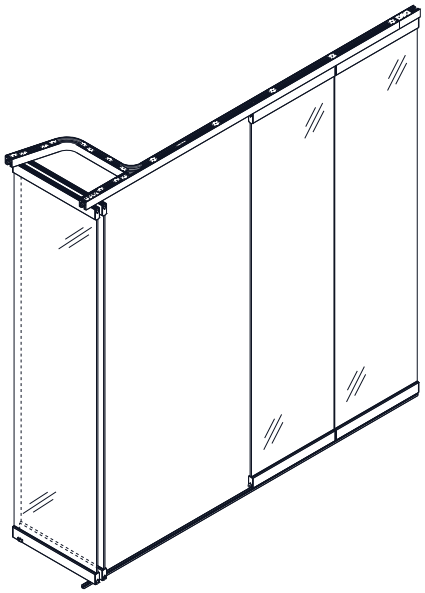
Hawa Aperto 60 GL 90°



Planung und Montage

Beschlag für Glasschiebewände 90° zur Schiebeachse gestapelt.

Planification et montage

Ferrures pour cloisons coulissantes en verre, avec rangement perpendiculaire à l'axe de coulissement.

Planning and installation

Hardware system for glass sliding walls that are stacking at right angle to the slide axis.

Pianificazione e montaggio

Ferramenta per porte scorrevoli in vetro parcheggiate a 90° in rispetto all'asse di scorrimento.

Planificación y montaje

Herraje para mamparas deslizantes de cristal apiladas a 90° del eje del deslizamiento.

Hawa Teile | Eléments Hawa | Hawa components | Componenti Hawa | Componentes Hawa

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Hawa Aperto 60 GL 90°

Patente / Brevets / Patents / Brevetti / Patentados

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	Visum/Visa/Visa/Visto/Visado **09.2014 / MFR**	

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b) 15.05.2008 / MFR (4078)
11.2011 BüT (4786)

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Hawa Sliding Solutions

Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Deutsch

Hawa Aperto 60 GL

Normstapelraum für 6 Schiebe- und 1 Drehtüre - minimale Türbreite 500 mm
Normstapelraum für 7 Schiebe- und 1 Drehtüre - minimale Türbreite 550 mm
Normstapelraum für 8 Schiebe- und 1 Drehtüre - minimale Türbreite 600 mm
Maximales Türgewicht 60 kg
Maximale Türhöhe 2600 mm
Minimale Türbreite 500 mm
Maximale Türbreite 950 mm
Glasdicke ESG-Glas 8/10 mm/$\frac{3}{8}$" USA
Es darf ausschliesslich Einscheiben-Sicherheitsglas (ESG) verwendet werden.

Spezialanlage Rücksprache mit Hawa Sliding Solutions AG

Français

Hawa Aperto 60 GL

Espace de parcage standard p. 6 portes coulissantes et 1 porte pivotante - largeur min. par porte 500 mm
Espace de parcage standard p. 7 portes coulissantes et 1 porte pivotante - largeur min. par porte 550 mm
Espace de parcage standard p. 8 portes coulissantes et 1 porte pivotante - largeur min. par porte 600 mm
Poids maximum par porte 60 kg
Hauteur maximum par porte 2600 mm
Largeur minimum par porte 500 mm
Largeur maximum par porte 950 mm
Epaisseurs de glace ESG 8/10 mm/$\frac{3}{8}$" USA
Il faut utiliser uniquement du verre de sécurité trempé (ESG).

Modèle spécial, veuillez consulter Hawa Sliding Solutions AG

English

Hawa Aperto 60 GL

Standard parking area for 6 sliding doors and 1 pivot door - minimum panel width 500 mm (1'7 $\frac{11}{16}$")
Standard parking area for 7 sliding doors and 1 pivot door - minimum panel width 550 mm (1'9 $\frac{21}{32}$")
Standard parking area for 8 sliding doors and 1 pivot door - minimum panel width 600 mm (1'11 $\frac{5}{8}$")
Maximum door weight 60 kg (132 lbs.)
Maximum door height 2600 mm (8'6 $\frac{3}{8}$")
Minimum door width 500 mm (1'7 $\frac{11}{16}$")
Maximum door width 950 mm (3'1 $\frac{13}{32}$")
Glass thicknesses ESG fully tempered monolithic glass 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$") /$\frac{3}{8}$" USA
Merely fully tempered monolithic glass (ESG) may be employed.

Special model, please consult Hawa Sliding Solutions AG

Italiano

Hawa Aperto 60 GL

Parcheggio normalizzato per 6 porte scorrevoli e 1 porta girevole - larghezza min. della porta 500 mm
Parcheggio normalizzato per 7 porte scorrevoli e 1 porta girevole - larghezza min. della porta 550 mm
Parcheggio normalizzato per 8 porte scorrevoli e 1 porta girevole - larghezza min. della porta 600 mm
Peso massimo della porta 60 kg
Altezza massima della porta 2600 mm
Larghezza minima della porta 500 mm
Larghezza massima della porta 950 mm
Spessore del vetro ESG 8/10 mm/$\frac{3}{8}$" USA
È permesso usare esclusivamente vetro di protezione monovetro (ESG).

Impianto speciale, consultare la Hawa Sliding Solutions AG

Español

Hawa Aperto 60 GL

Área de apilado normalizado para 6 paneles deslizantes y 1 pivotante - ancho min. del panel 500 mm
Área de apilado normalizado para 7 paneles deslizantes y 1 pivotante - ancho min. del panel 550 mm
Área de apilado normalizado para 8 paneles deslizantes y 1 pivotante - ancho min. del panel 600 mm
Peso máximo del panel 60 kg
Altura máxima del panel 2600 mm
Ancho mínimo del panel 500 mm
Ancho máximo del panel 950 mm
Espesor del cristal ESG 8/10 mm/$\frac{3}{8}$" USA
Debe ser utilizado exclusivamente cristal de seguridad monolítico, no laminado (ESG).

En caso de instalaciones especiales consultar con Hawa Sliding Solutions AG

Hawa Sliding Solutions
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

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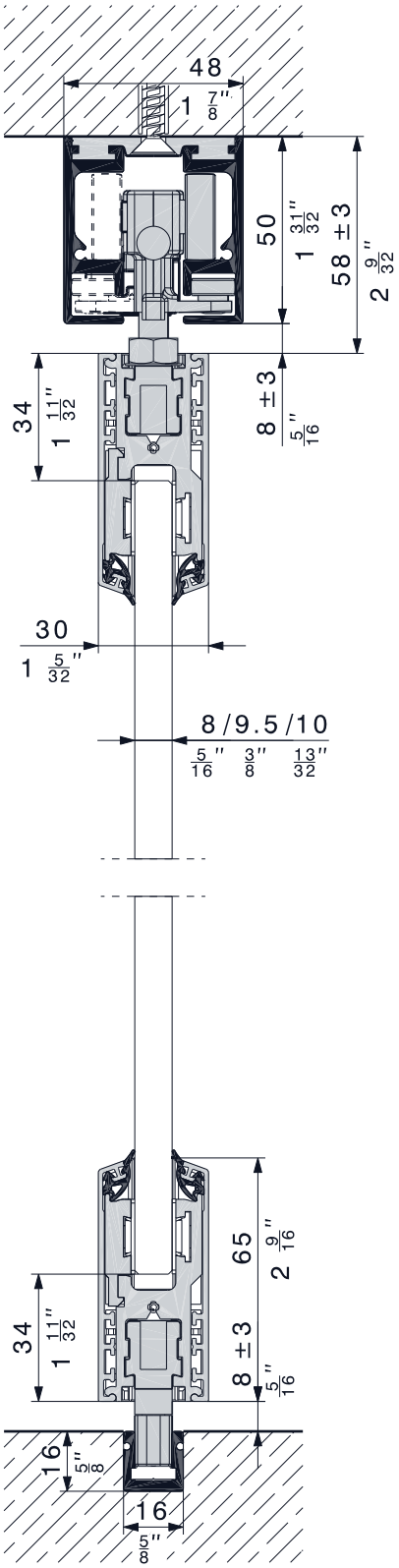
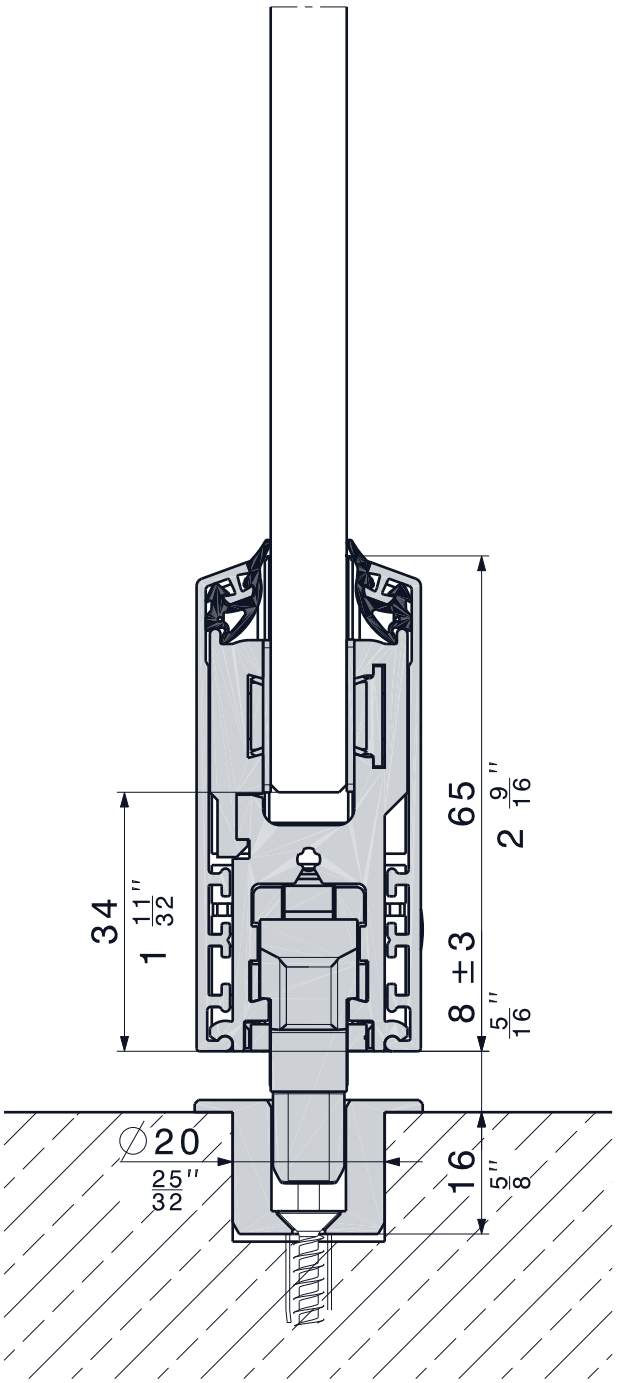




Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Subject to modification

Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

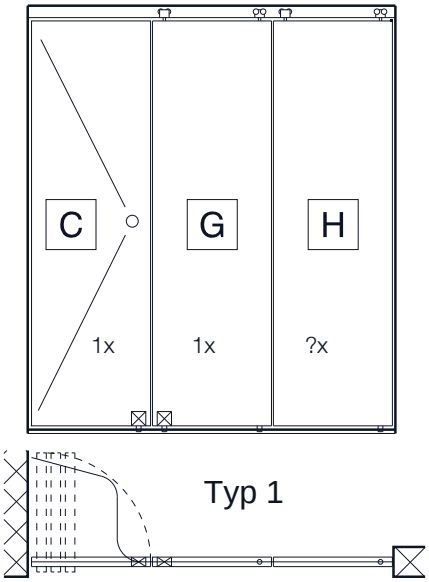
Hawa Sliding Solutions

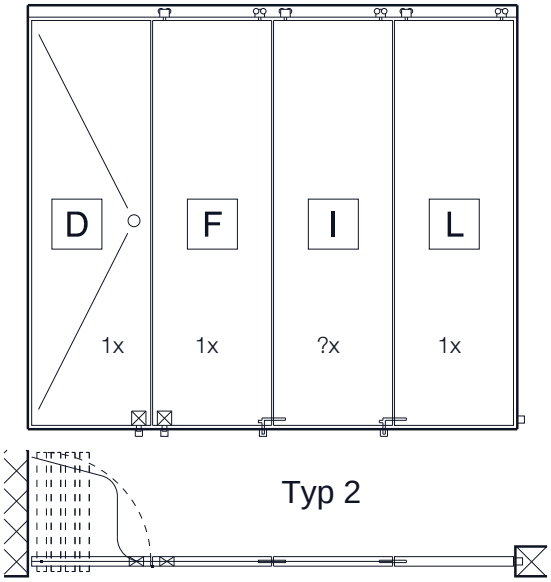
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

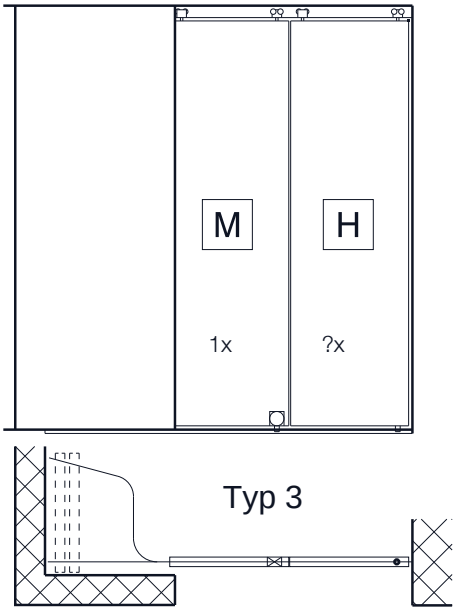
Anlage-Typen
Types d'installations
System types
Tipi sistemi
Tipos de sistemas

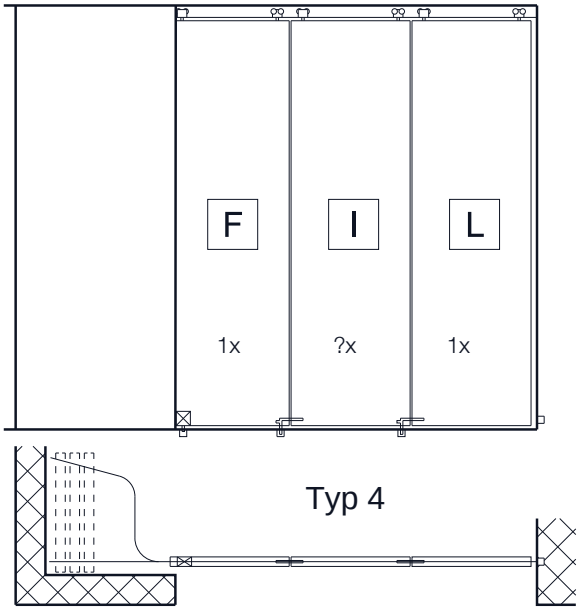
Mit Führungsschiene
Avec rail de guidage
With bottom guide channel
Con guida
Con riel de guía

Ohne Führungsschiene
Sans rail de guidage
Without bottom guide channel
Senza guida
Sin riel de guía









☐ Rundriegelschloss mit Führungszapfen
Serrure à verrou rond avec goujon de guidage
Round bar lock with guide pin
Serratura a chiavistello tondo con perno di guida
Pasador de vástago redondo con rodillo de guía

☒ Rundriegelschloss
Serrure à verrou rond
Round bar lock
Serratura a chiavistello tondo
Pasador de vástago redondo

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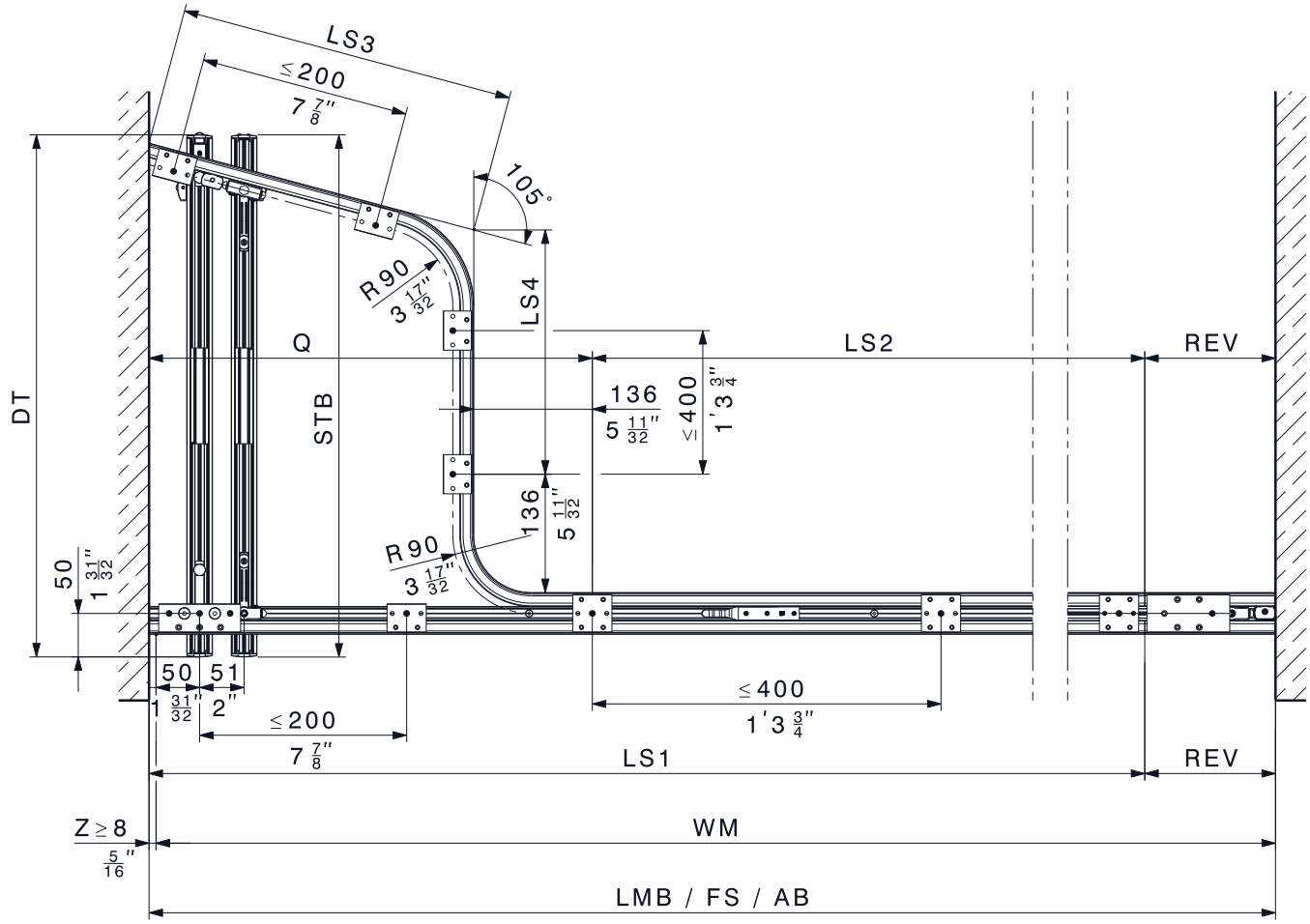
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Berechnungen ab Lichtmassbreite (LMB) für Anlagen mit Drehtüre
Calculs à partir de la largeur intérieure (LMB) pour installations avec portes pivotantes
Calculations as from the inside width (LMB) for installations with pivot doors
Calcolo a partire dalla larghezza interna (LMB) per costruzioni con porte girevoli
Cálculo a partir del ancho de luz (LMB) para instalaciones con puertas pivotantes

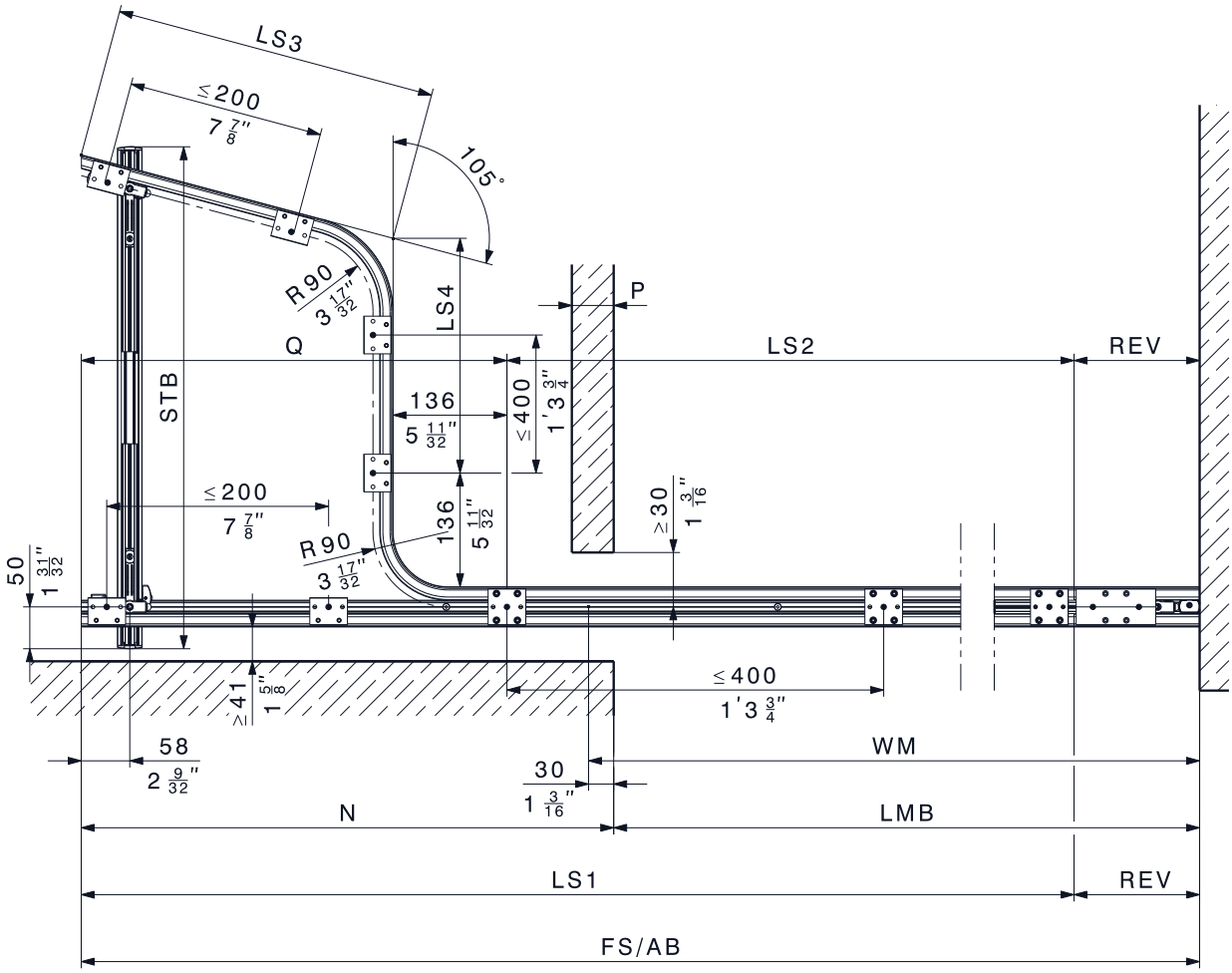


AB =	Anlagenbreite Largeur d'installation Installation width Larghezza installazione Ancho de instalación
AT =	Anzahl Türen inkl. Drehtüre Nombre de portes, y compris porte pivotante Number of doors, including pivot door Numero porte, incl. porta girevole Número de paneles, incluido puerta pivotante
DT =	Drehtüre Porte pivotante Pivot door Porta girevole Puerta pivotante
FS =	Führungsschiene Rail de guidage Bottom guide channel Guida Riel de guía
LMB =	Lichtmassbreite Largeur intérieur Inside width Larghezza interna Ancho de luz
LS =	Laufschiene Rail de roulement Top track Binario Riel de rodadura

Z =	
REV =	150
AT =	
LMB =	

WM = LMB – Z	
STB = $\frac{WM}{AT}$	
LS3 = (AT x 51) + 180	
LS4 = STB – 220 – (LS3 x 0.26)	
Q = (LS3 x 0.97) + 136	
LS1 = LMB – REV	
LS2 = LMB – Q – REV	
FS = LMB	
DT = STB	

Berechnungen ab Mass P für Anlagen mit Schiebetüren
Calculs à partir de la cote P pour installations avec portes coulissantes
Calculations based on dimension P for installations with sliding doors
Calcoli a partire dalla misura P per costruzioni con porte scorrevoli
Cálculos a partir de la dimensión P para instalaciones con paneles deslizantes



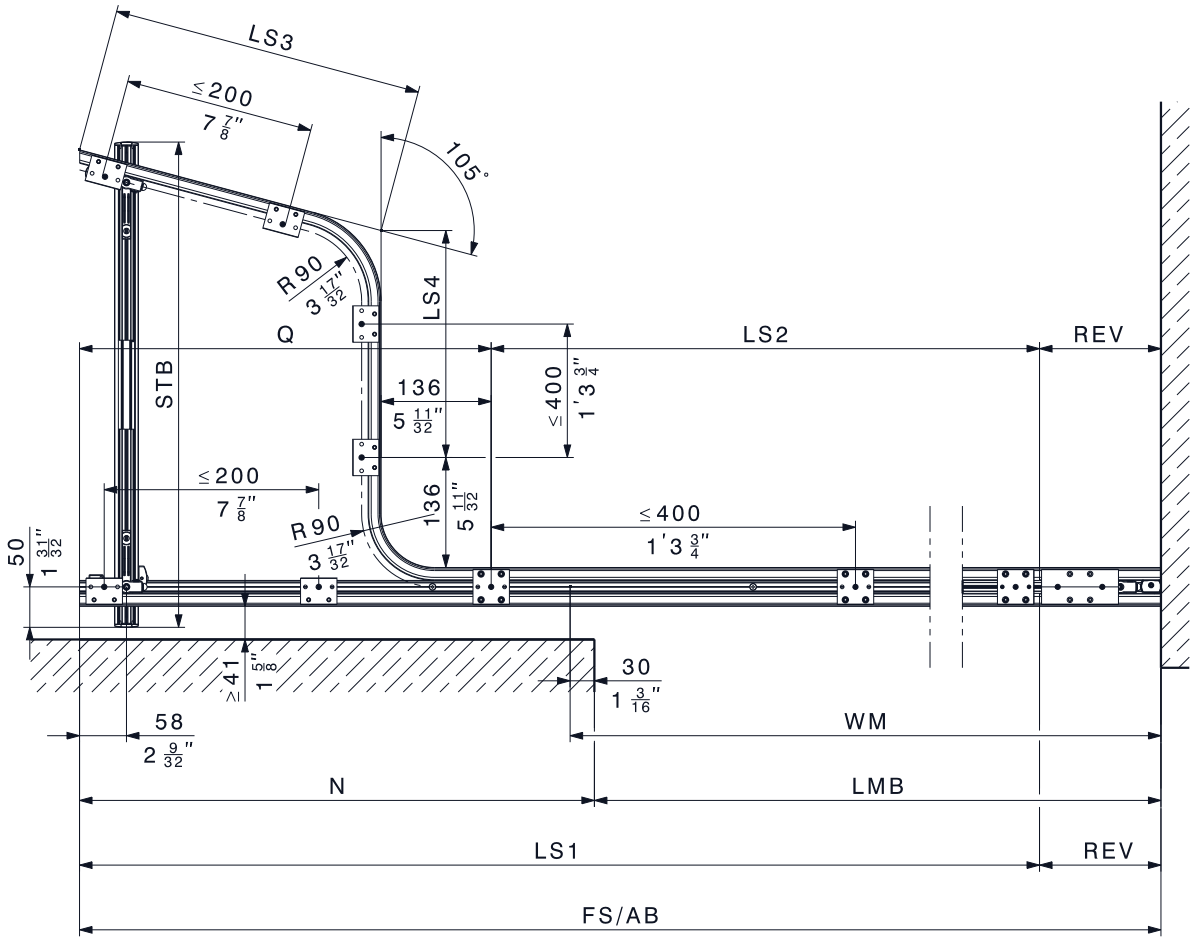
REV =	Laufschienen-Endstück Embout pour rails de roulement End-piece for top tracks Finecorsa binario Pieza final del riel de rodadura
ST =	Anzahl Schiebetüren Nombre de portes coulissantes Number of sliding panels Numero porte scorrevoli Número de paneles deslizantes
STB =	Schiebetürbreite Largeur de la porte coulissante Sliding door width Larghezza porta scorrevole Ancho del panel deslizante
WM =	Glasschiebewandmass Cote de la cloison coulissante Dimension of glass sliding wall Dimensione della parete scorrevole di vetro Ancho toal del tabique deslizante de vidrio
Z =	Luft Wand bis Türe Jeu entre mur et porte Clearance between wall and door Aria entre parete e porta Luz entre el muro y panel

	P
REV =	150
ST =	
LMB =	
P =	

	P
WM = LMB1 + 30	
STB = $\frac{WM}{ST}$	
LS3 = (ST x 68) + 80	
LS4 = STB – 220 – (LS3 x 0.26)	
Q = (LS3 x 0.97) + 136	
AB = LMB + P + (Q – 260 + STB)	
LS1 = AB – REV	
LS2 = LS1 – Q	
FS = AB	

Hawa Sliding Solutions
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

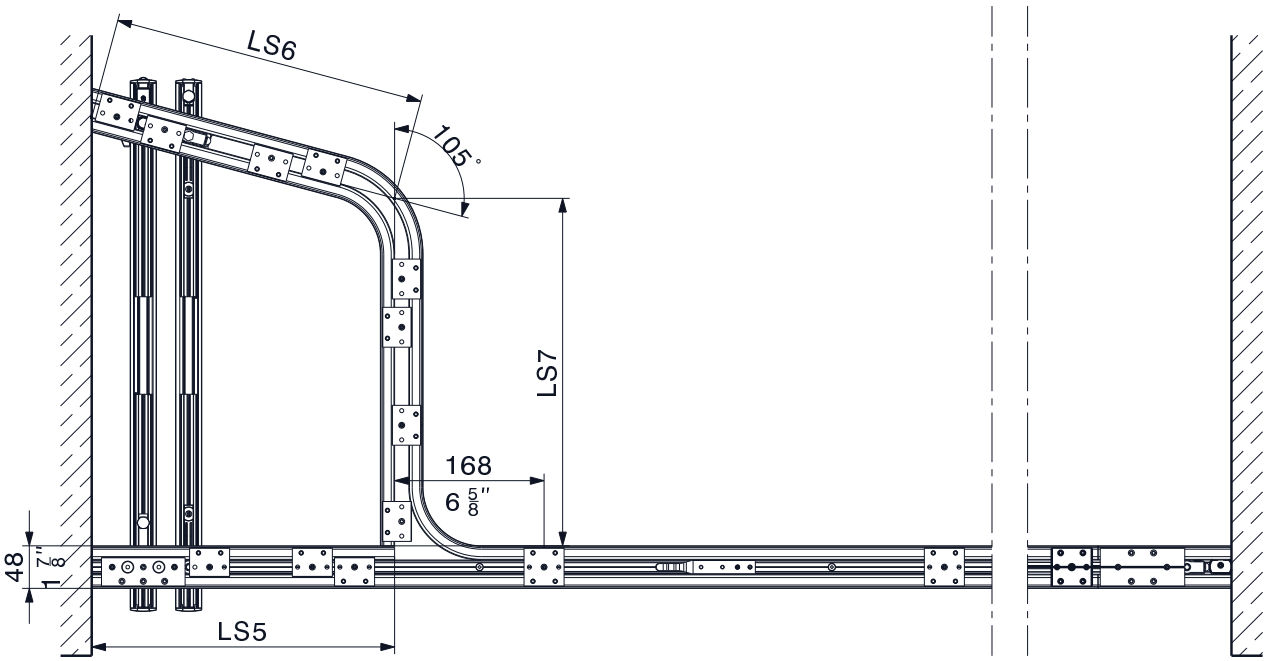
Berechnungen ab Mass N für Anlagen mit Schiebetüren
Calculs à partir de la cote N pour installations avec portes coulissantes
Calculations based on dimension N for installations with sliding doors
Calcoli a partire dalla misura N per costruzioni con porte scorrevoli
Cálculos a partir de la dimensión N para instalaciones con paneles deslizantes



	N
REV =	150
ST =	
LMB =	

	N
WM = LMB + 30	
STB = $\frac{WM}{ST}$	
LS3 = (ST x 68) + 80	
LS4 = STB – 220 – (LS3 x 0.26)	
Q = (LS3 x 0.97) + 136	
N = Q – 80	
LS1 = LMB + N – REV	
LS2 = LS1 – Q	
AB = LS1 + REV	
FS = AB	

Berechnung Stapelraum-Innenverblendung
Calcul de cache intérieur pour espace de parcage
Calculation of the stacking area inside covers
Calcolo zona di stipa-rivestimento interno
Cálculo del área de apilado con guardado a la vista



Q =	
LS3 =	
LS4 =	

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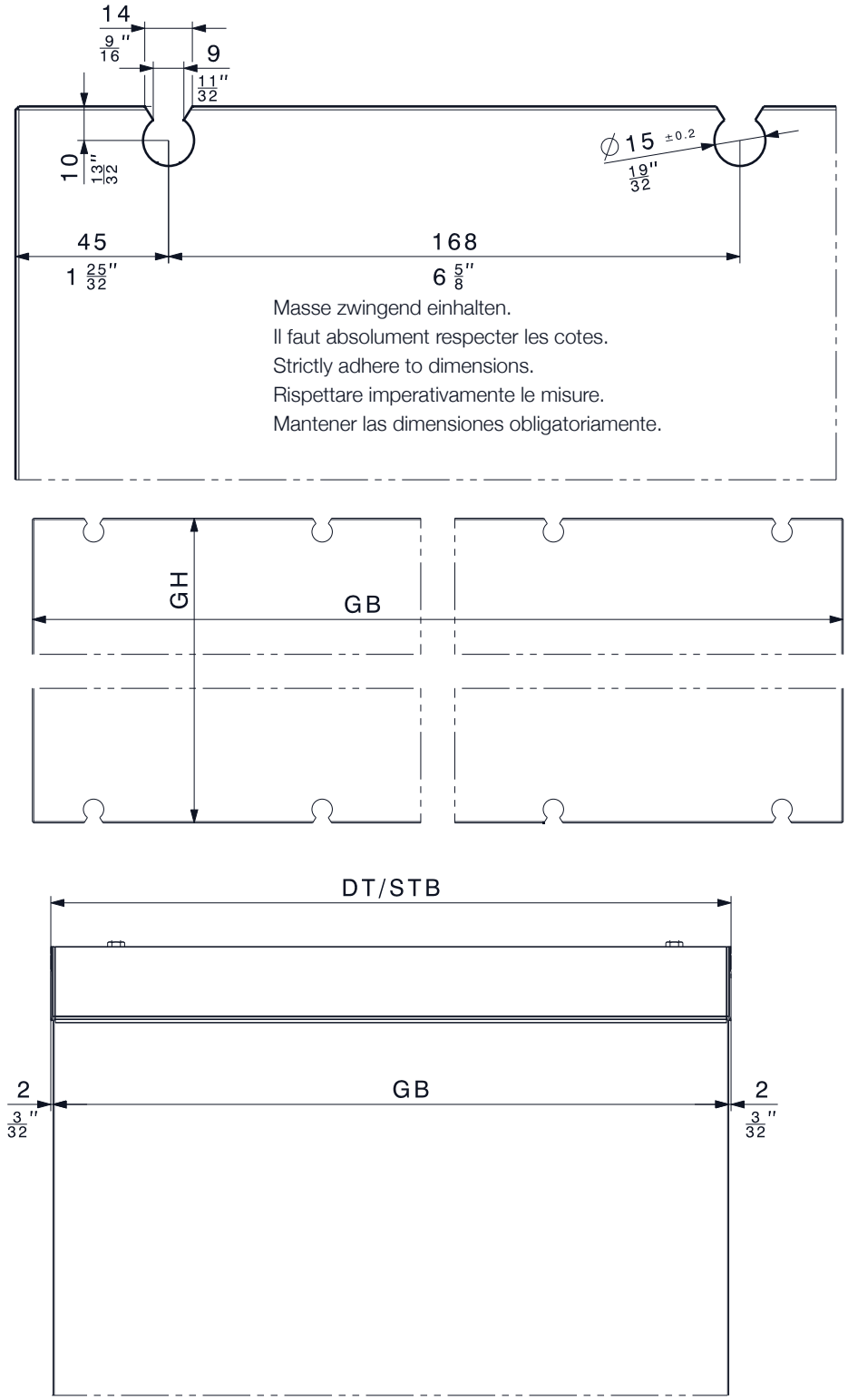
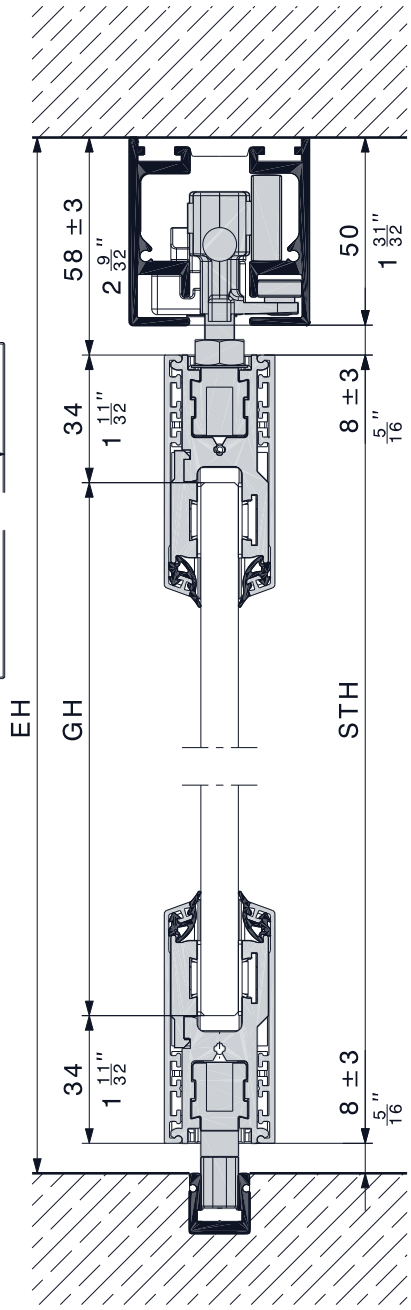
LS5 = Q – 168	
LS6 = LS3 – 33	
LS7 = LS4 + 111	

Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Subject to modification

Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

Glasausschnitt / Glasberechnung
Découpe de verre / calcul de verre
Glass cutout / glass calculation
Intaglio del vetro / calcolo del vetro
Muescas en el cristal / cálculo del cristal





Technische Änderungen vorbehalten
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Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

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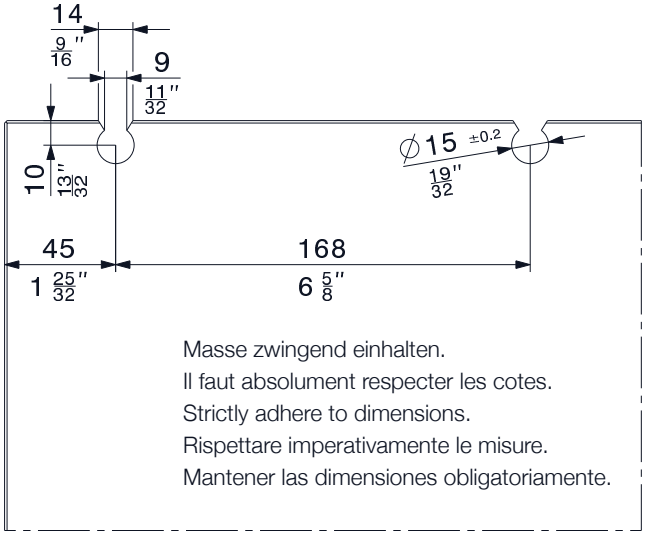
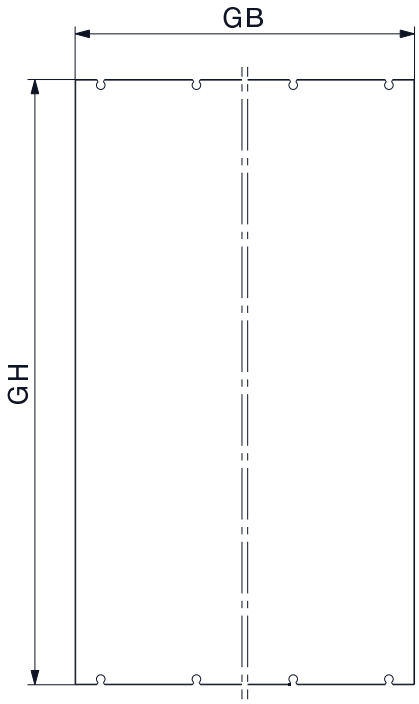
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Bestellung Glastüren
Commande des portes en verre
Order for glass doors
Ordinazione porte di vetro
Pedido de paneles de cristal





Alle Glaskanten gesäumt, im Glasausschnitt max. 1 mm.
Ensemble des chants de verre bordés, 1 mm max. dans la découpe de verre.
All-glass edges are seamed; maximum 1 mm in the glass cutout.
Tutti i bordi vetro rifilati, nell'intaglio del vetro max. 1 mm.
Cantear todos los cantos del cristal, en la muesca del cristal 1mm como máx.

Bezeichnung Désignation Designation Denominazione Designación	Anzahl Türen Nombre de portes Number of doors Numero porte Número de paneles	Glasbreite (GB) Largeur de glace (GB) Glass width (GB) Larghezza vetro (GB) Ancho del cristal (GB) STB* = ... GB = STB – 4	Glashöhe (GH) Hauteur de glace (GH) Glass height (GH) Altezza vetro (GH) Altura del cristal(GH) STH* = ... GH = STH – 68
Anzahl Türen total Nombre de portes au total Total number of doors Numero porte totale Total número de paneles		ESG** Glasdicke = ... mm Epaisseur de glace (ESG**) = ... mm Glass thickness (ESG**) = ... mm ESG* *spessore vetro = ... mm Espesor del cristal ESG* *= ..... mm	

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ver páginas 6/7/10

ESG**
Einscheibensicherheitsglas
Verre de sécurité trempé
Fully tempered monolithic glass
Vetro singolo temperato di sicurezza
Cristal monolitico

Hawa Sliding Solutions
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
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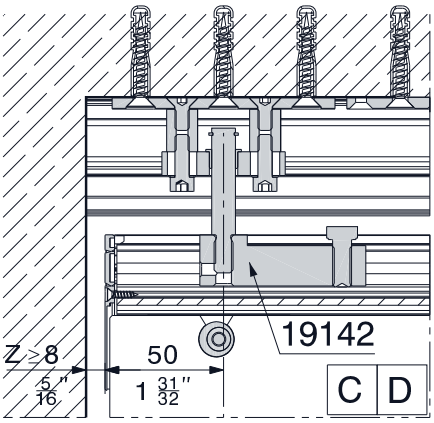
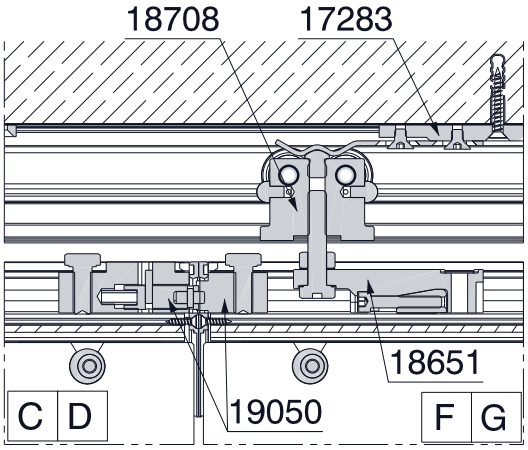
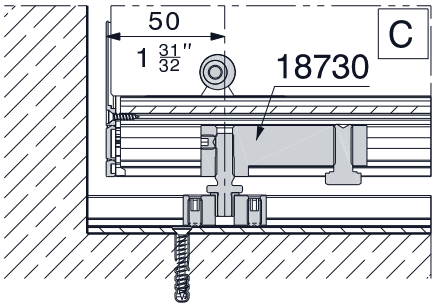
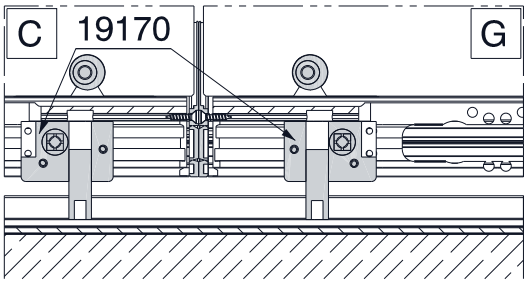
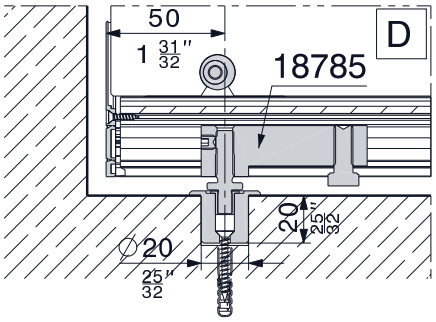
Komponenten Drehtüren
Composants des portes pivotantes
Components pivot doors
Componenti porte girevoli
Componentes puertas pivotantes

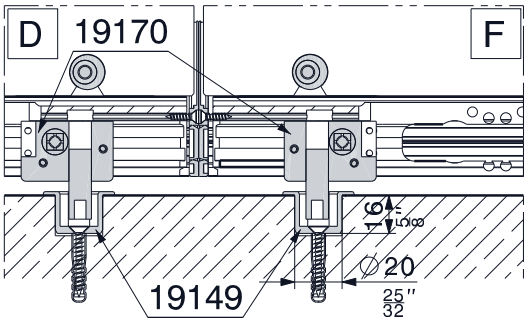












Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Subject to modification

Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

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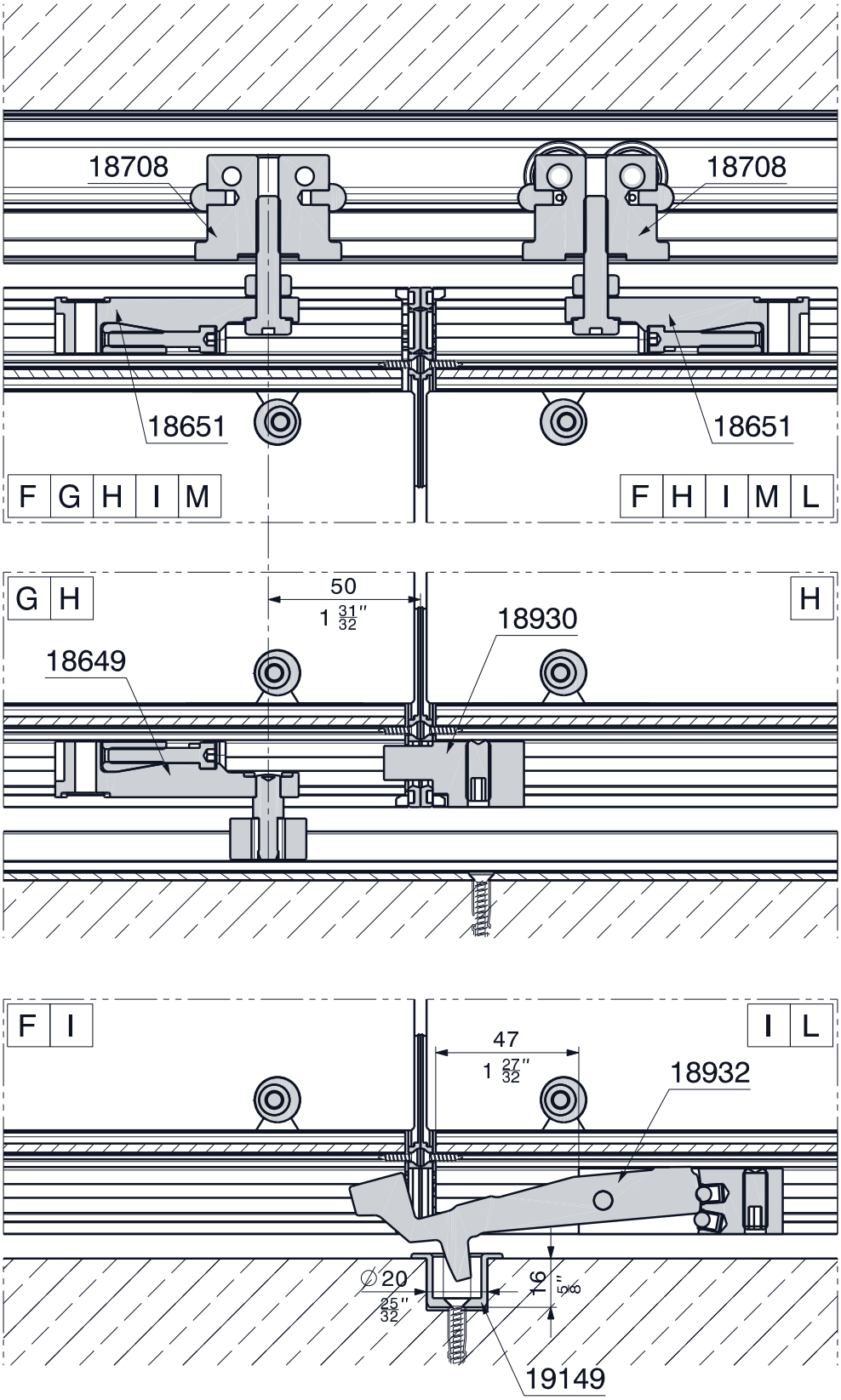
Komponenten Schiebetüren
Composants des portes coulissantes
Components sliding doors
Componenti porte scorrevoli
Componentes paneles deslizantes



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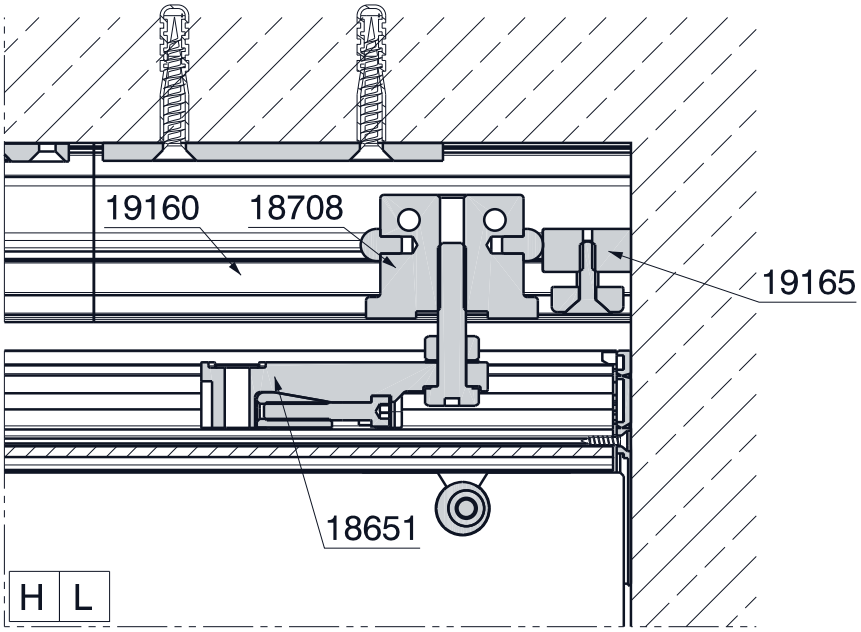
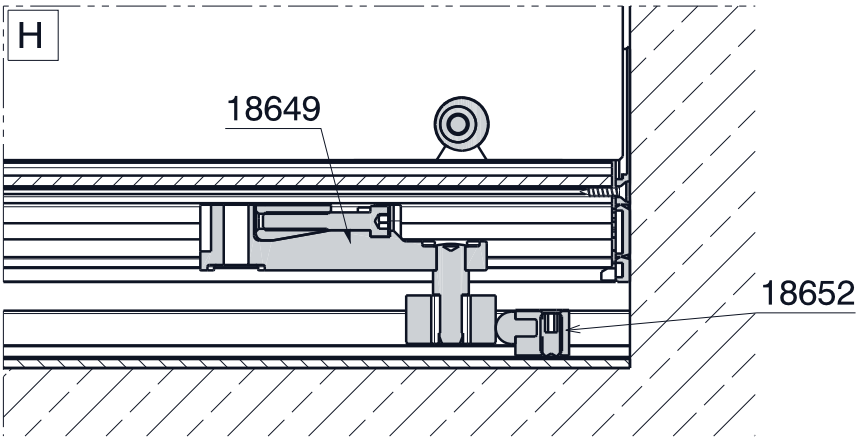
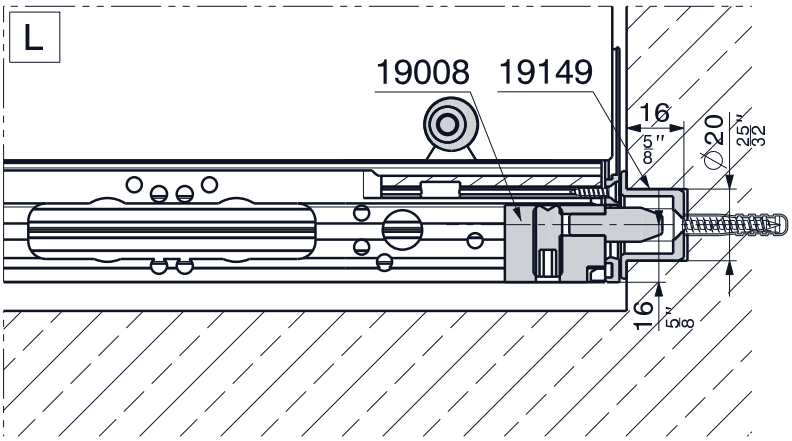
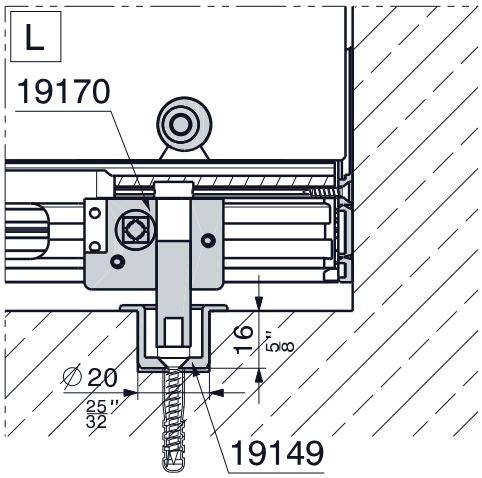
Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

Komponenten Wandanschluss
Composantes de raccordement mural
Wall joint components
Componenti collegamento a parete
Componentes de fijación al muro

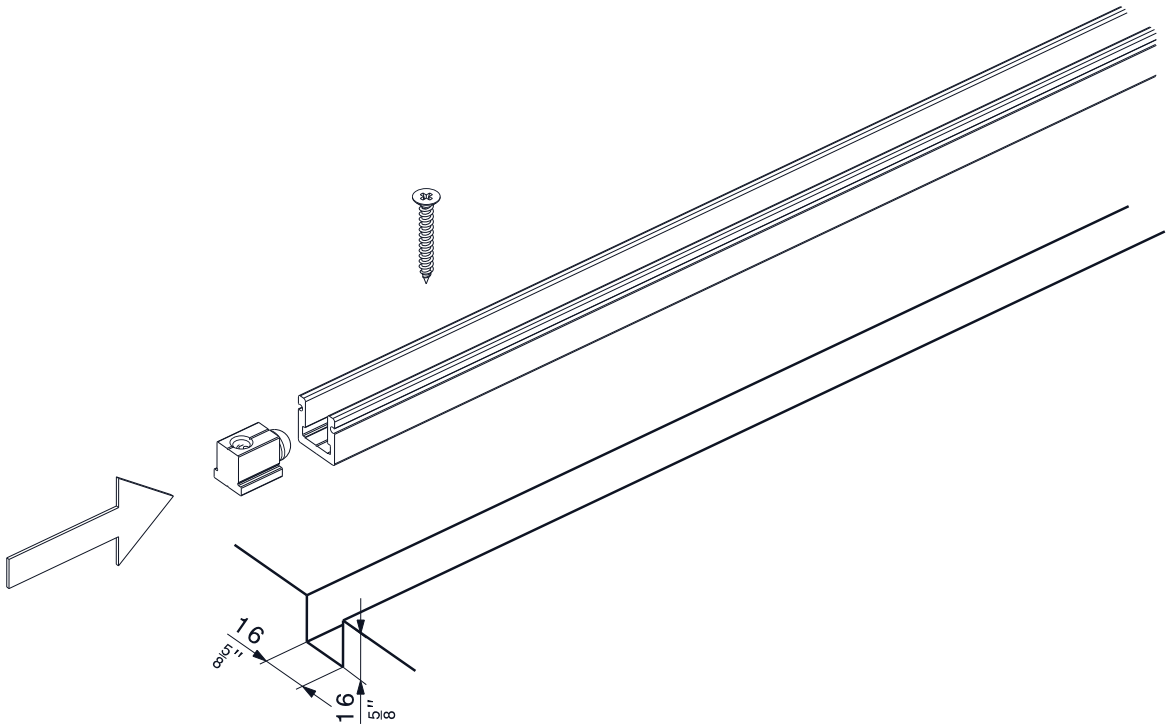


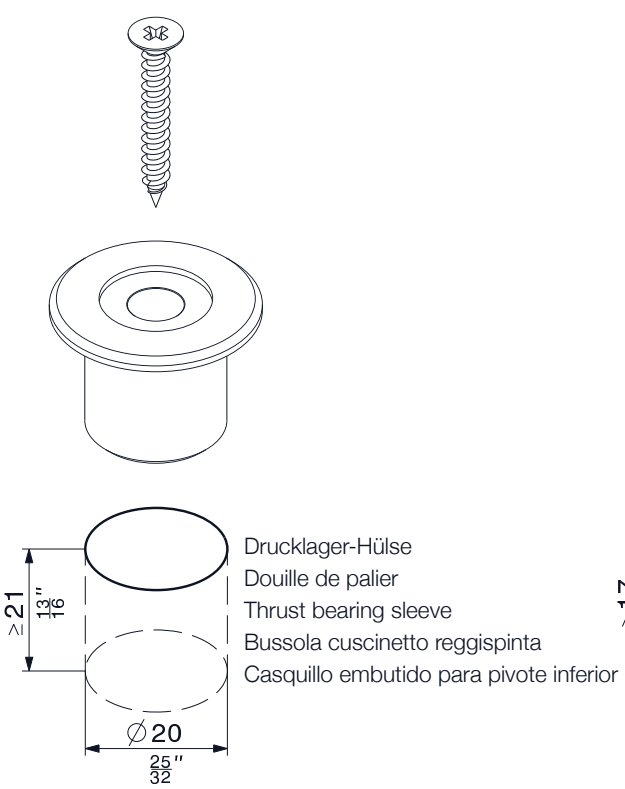




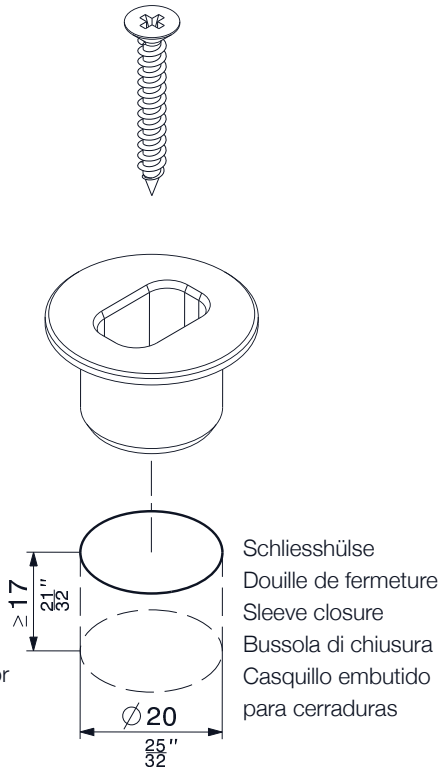


Montage Führungsschiene, Drucklager-Hülse und Schliesshülse
Montage des rails de guidage, douille de palier et douille de fermeture
Mounting of bottom guide channel, thrust bearing sleeve and sleeve closure
Montaggio guida, bussola cuscinetto reggispinta e bussola di chiusura
Montaje de guías inferiores, casquillo embutido p. pivot inferior y casquillo p. cerraduras



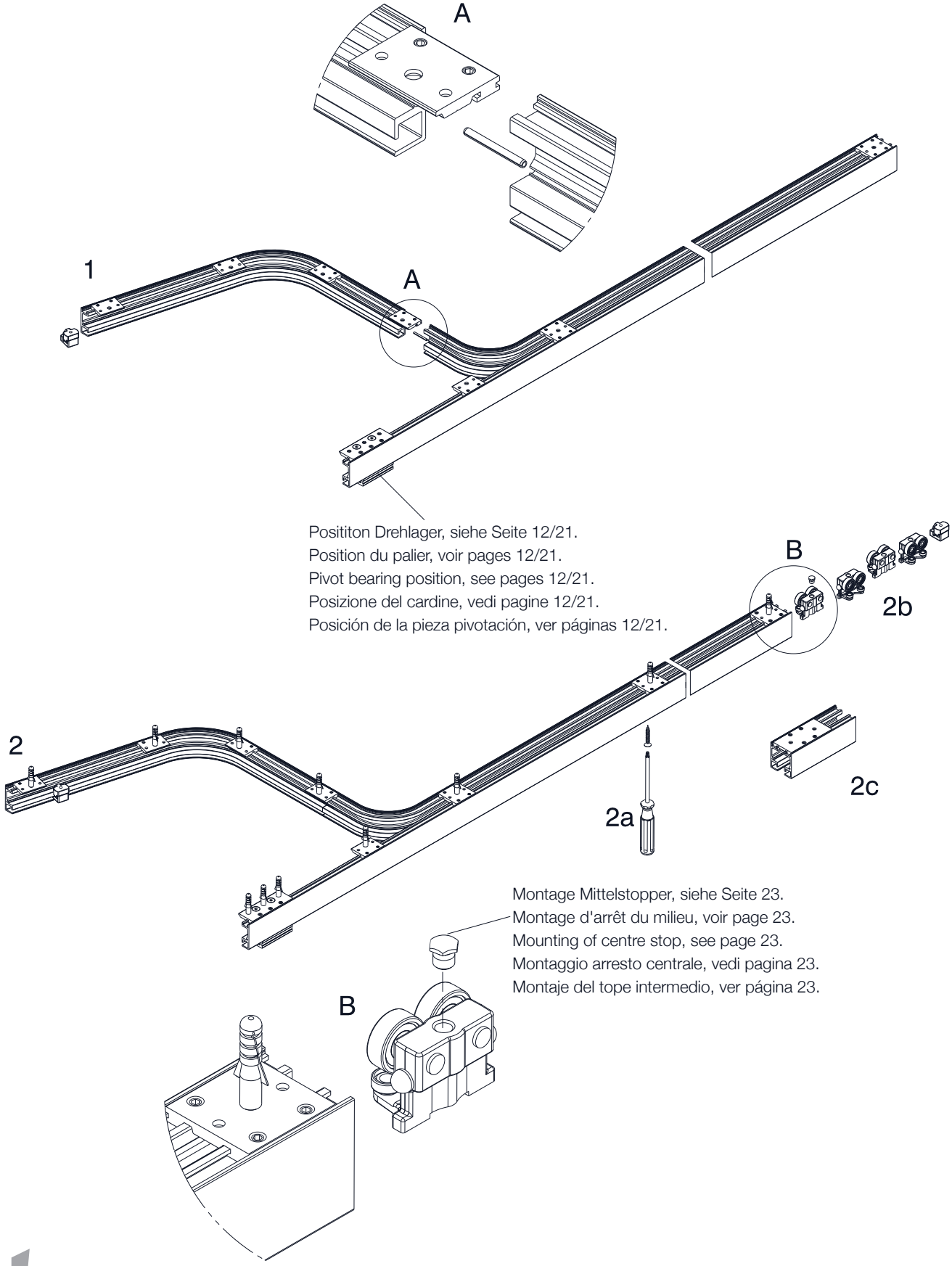


Drucklager-Hülse
Douille de palier
Thrust bearing sleeve
Bussola cuscinetto reggispinta
Casquillo embutido para pivote inferior

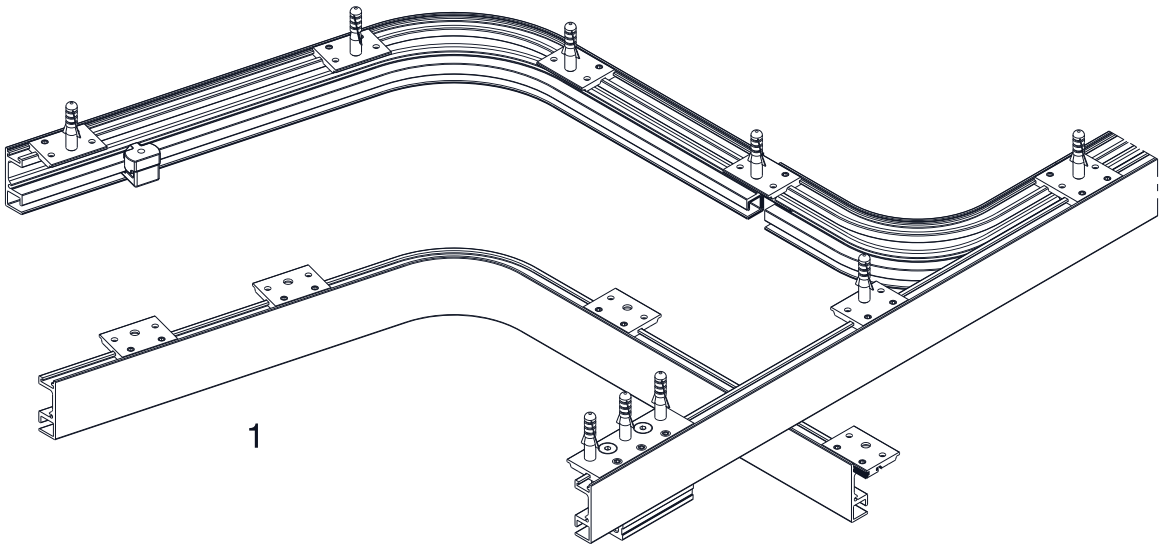


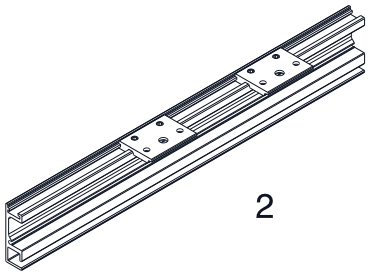
Schliesshülse
Douille de fermeture
Sleeve closure
Bussola di chiusura
Casquillo embutido
para cerraduras

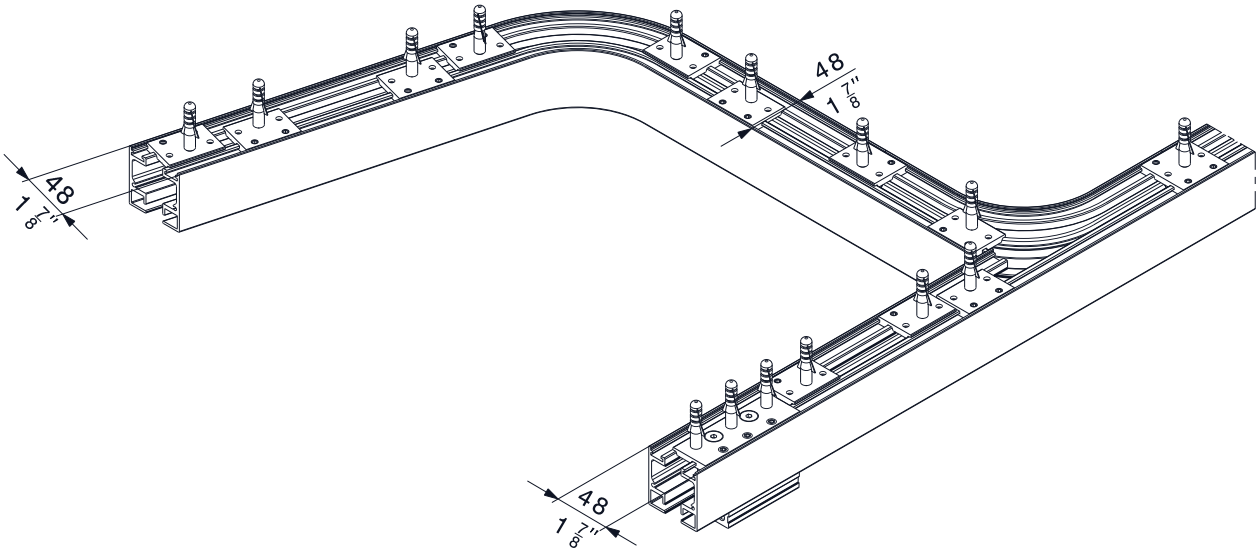
Montage der Laufschiene
Montage des rails de roulement
Mounting of top tracks
Montaggio dei binari
Montaje de los rieles de rodadura



Montage Stapelraum-Innenverblendung
Montage de cache intérieur pour espace de parcage
Mounting of the stacking area inside covers
Montaggio zona di stipa-rivestimento interno
Montaje del área de apilado con guardado a la vista







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Con riserva di apportare modifiche tecniche
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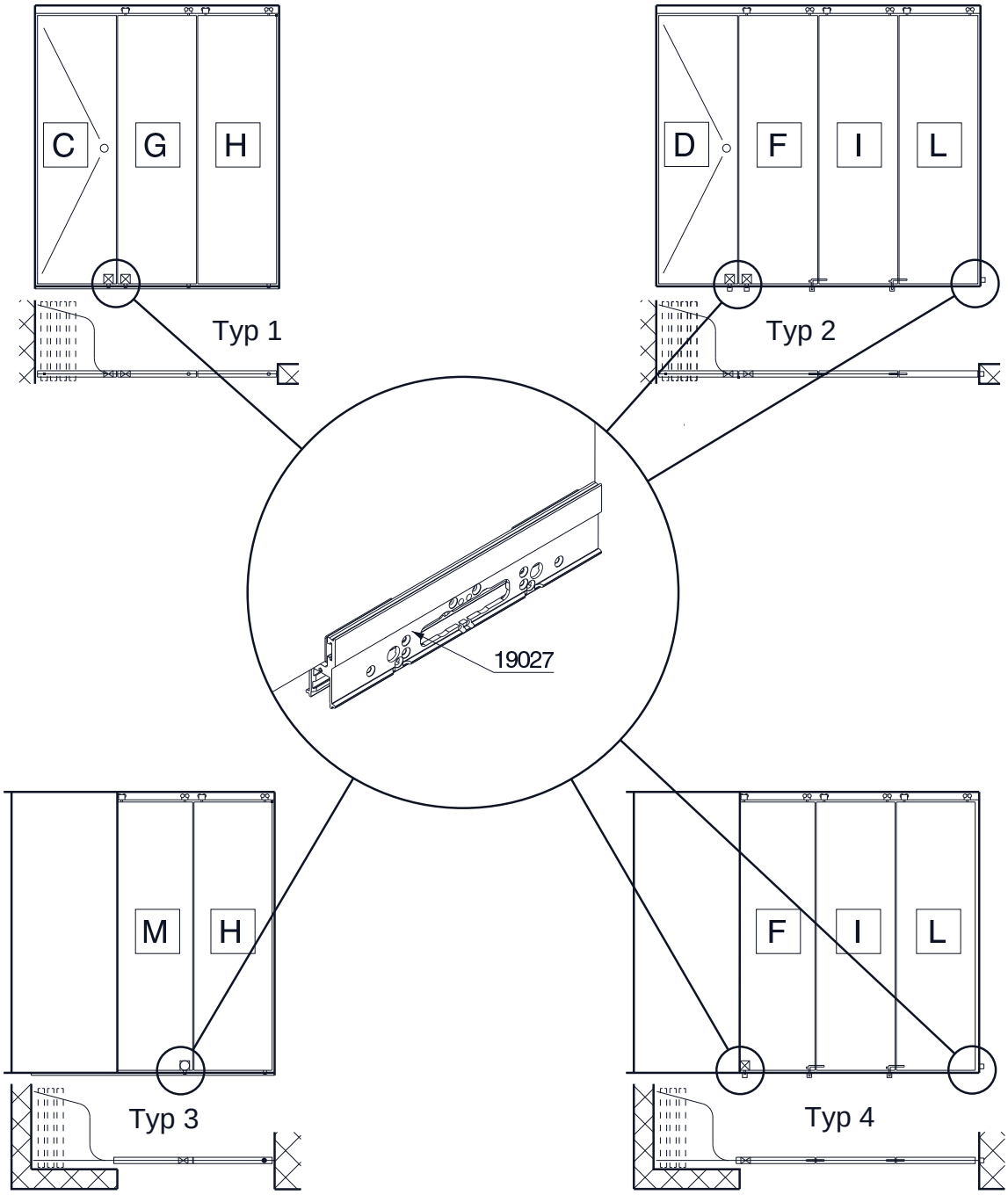
Position Glashalteprofil mit Schlossausfräsung
Position du profil porte-glace avec défonçage pour serrure
Position of glass retainer profile with lock cutout
Posizione profilo serravetro con fresatura serratura
Posición del perfil portacristal con fresado para cerradura

Mit Führungsschiene
Avec rail de guidage
With bottom guide channel
Con rotaia guida
Con riel de guía

Ohne Führungsschiene
Sans rail de guidage
Without bottom guide channel
Senza rotaia guida
Sin riel de guía



☐ Rundriegelschloss mit Führungszapfen
Serrure à verrou rond avec goujon de guidage
Round bar lock with guide pin
Serratura a chiavistello tondo con perno di guida
Pasador de varilla redonda con rodillo de guía

☒ Rundriegelschloss
Serrure à verrou rond
Round bar lock
Serratura a chiavistello tondo
Pasador de varilla redonda

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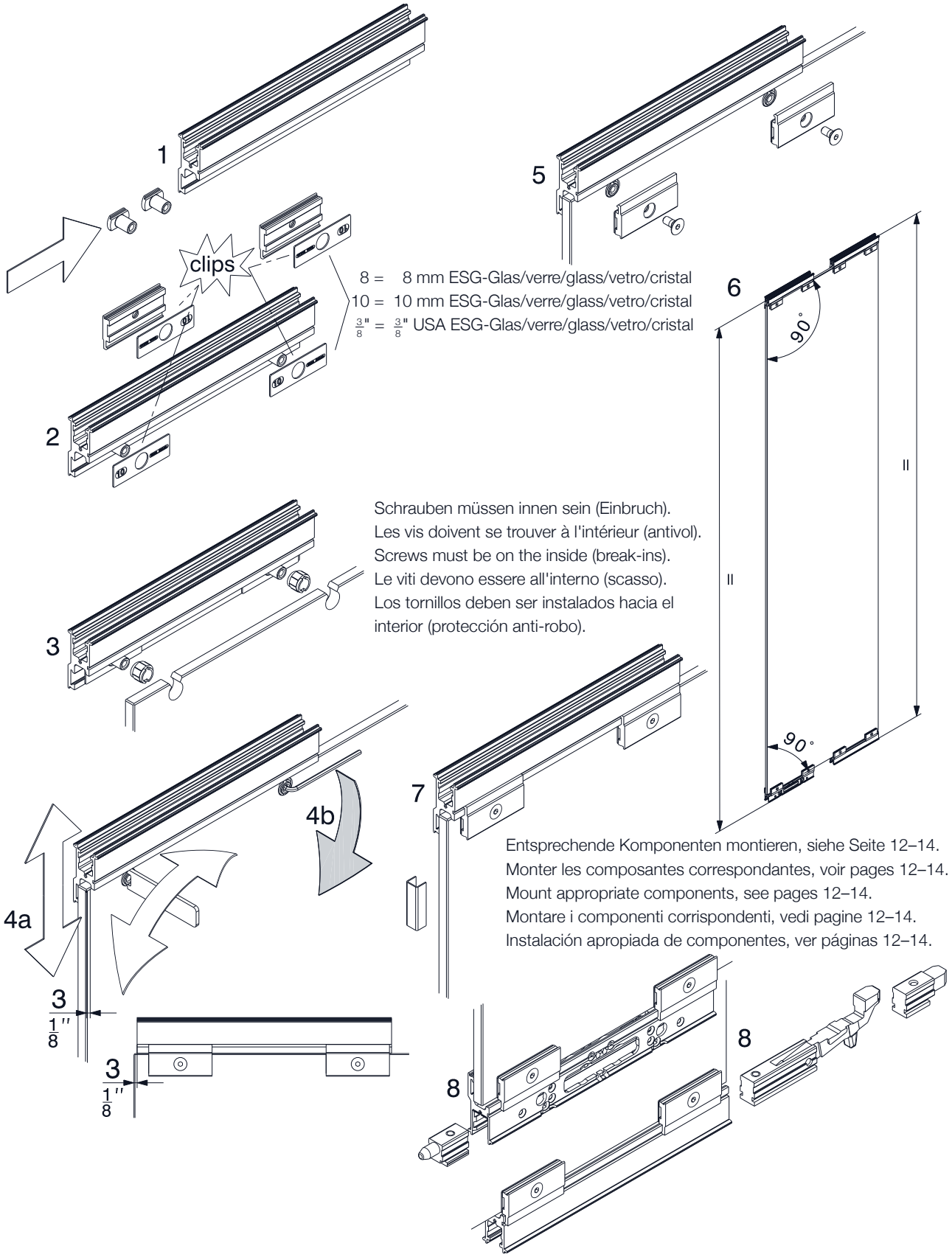
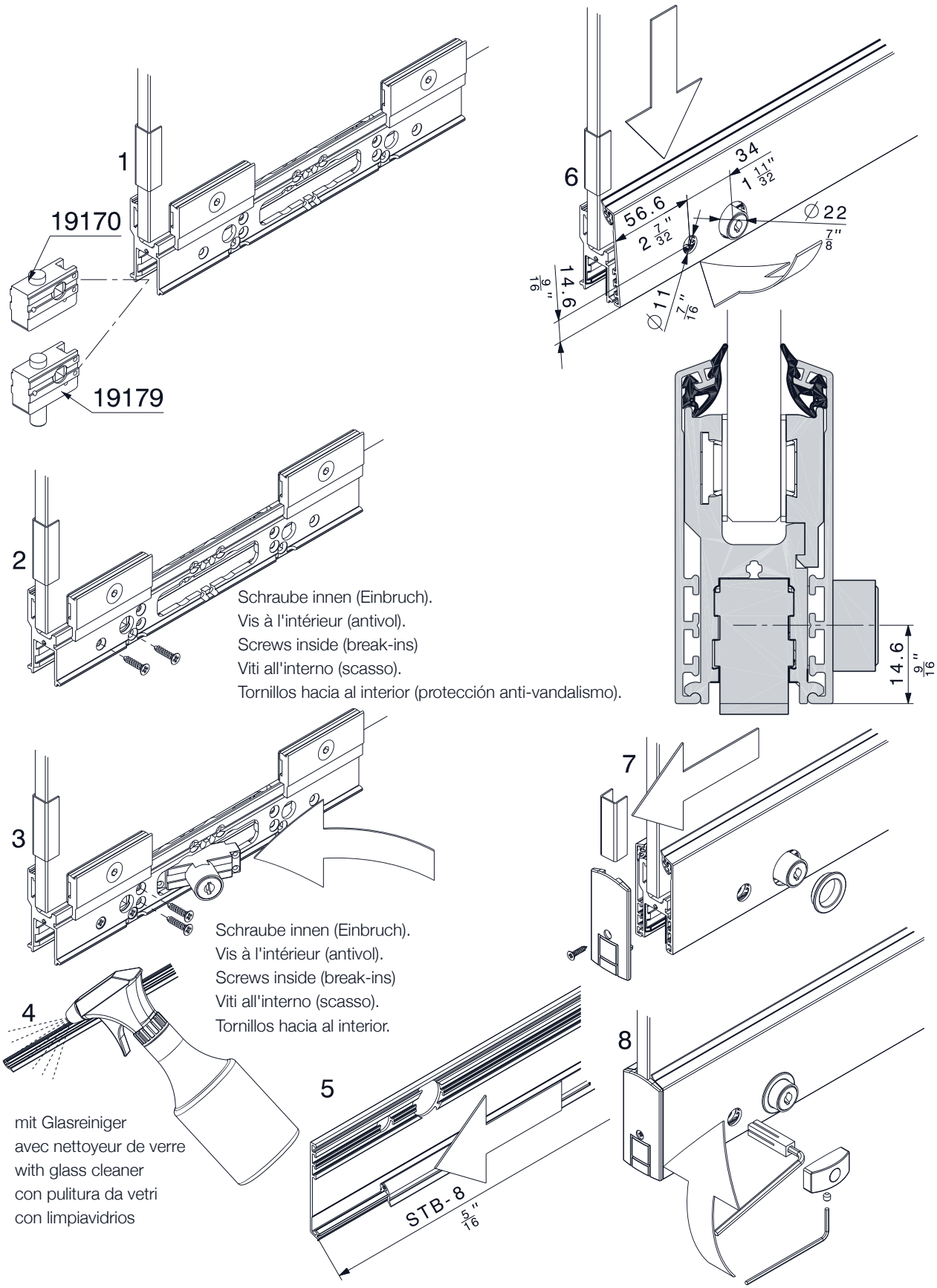
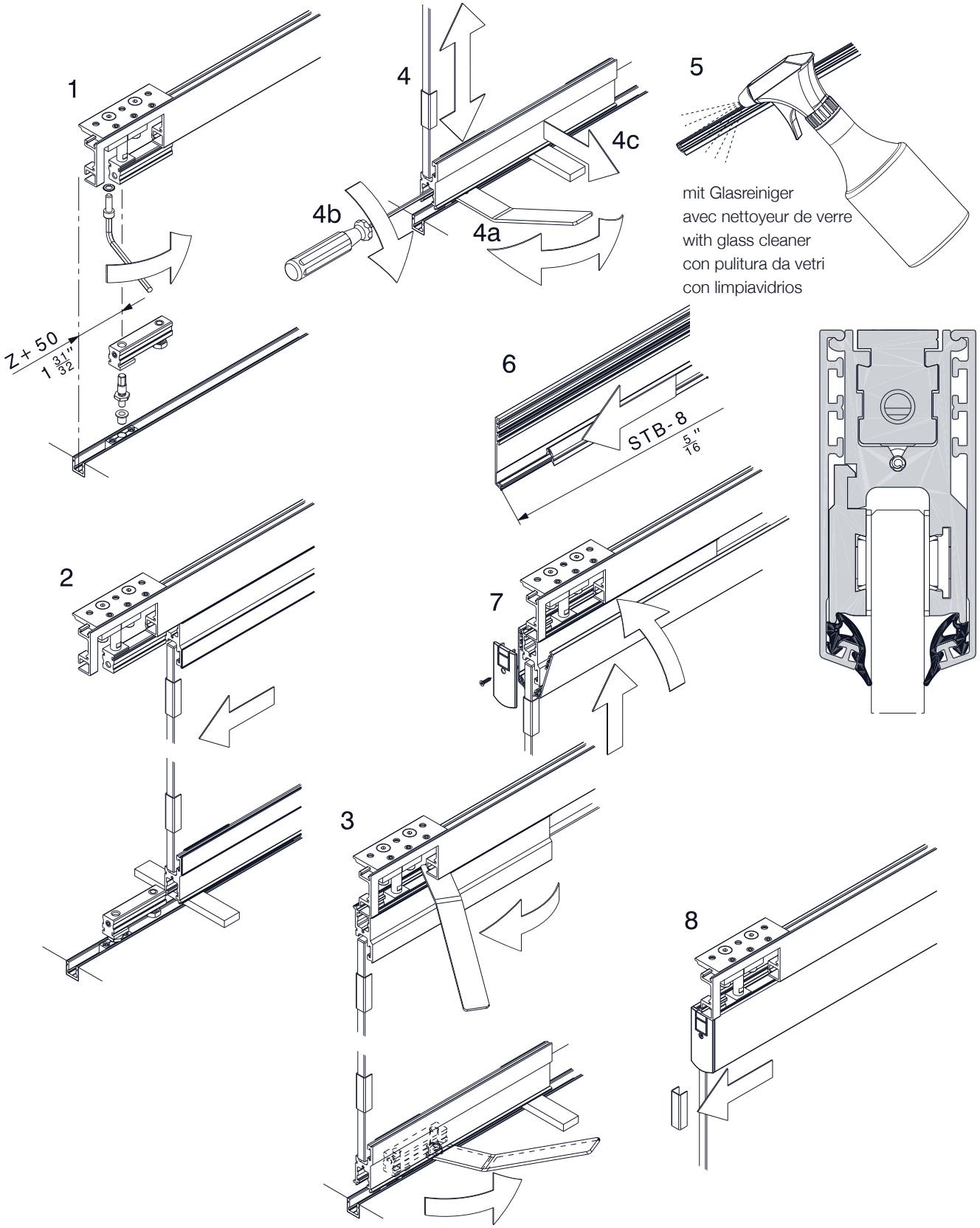
Montage Glashalteprofil
Montage du profil porte-glace
Mounting of glass retainer profile
Montaggio del profilo serravetro
Montaje del perfil portacristal



Montage von Rundriegelschloss mit Zylindermodul
Montage de la serrure à verrou rond avec bloc cylindre
Mounting of round bar lock with cylinder module
Montaggio della serratura a chiavistello tondo con modulo cilindro
Montaje del pasador de vástago redondo con módulo de cilindro



Montage der Drehtüre
Montage de la porte pivotante
Mounting of pivot door
Montaggio della porta girevole
Montaje de la puerta pivotante



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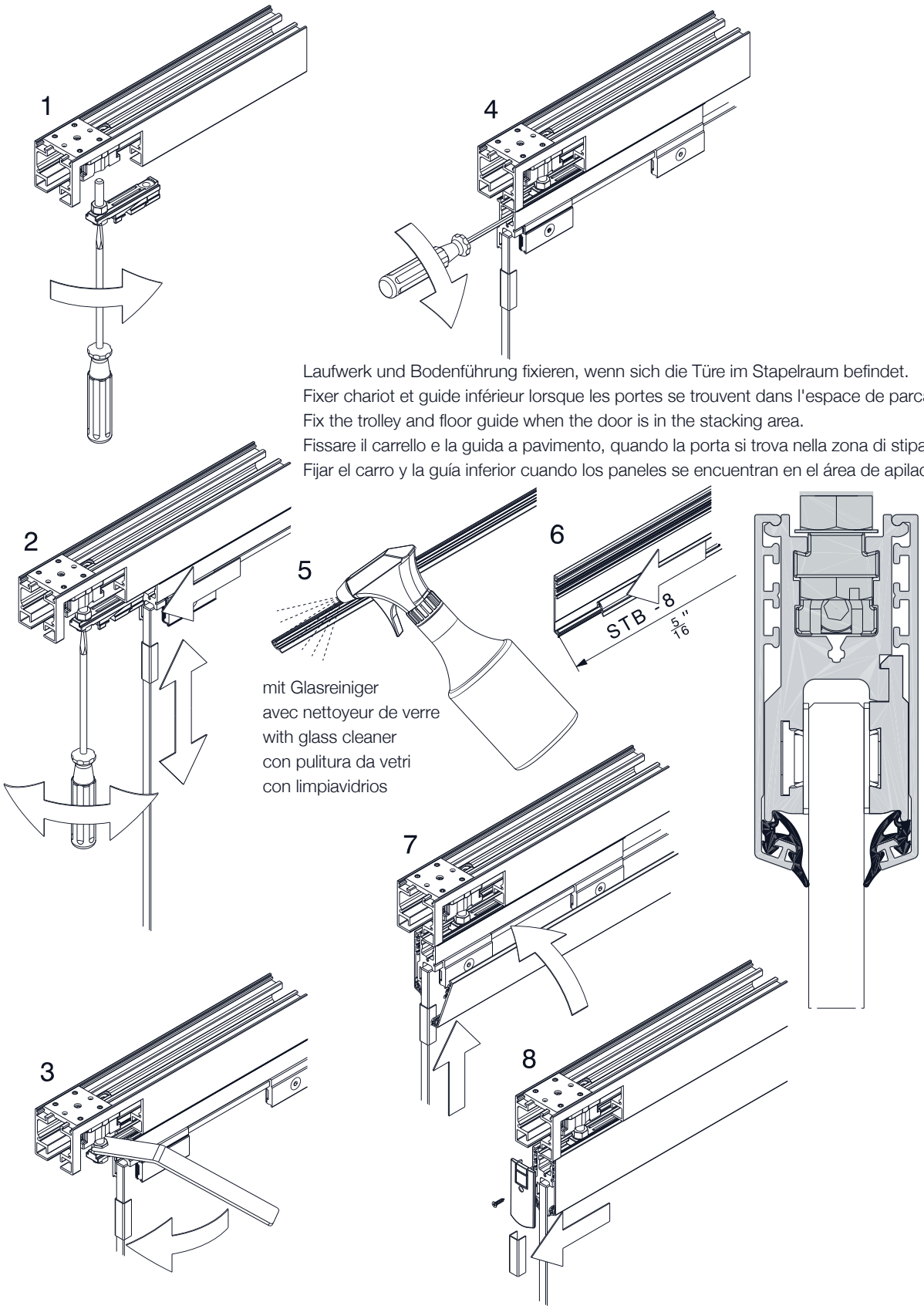
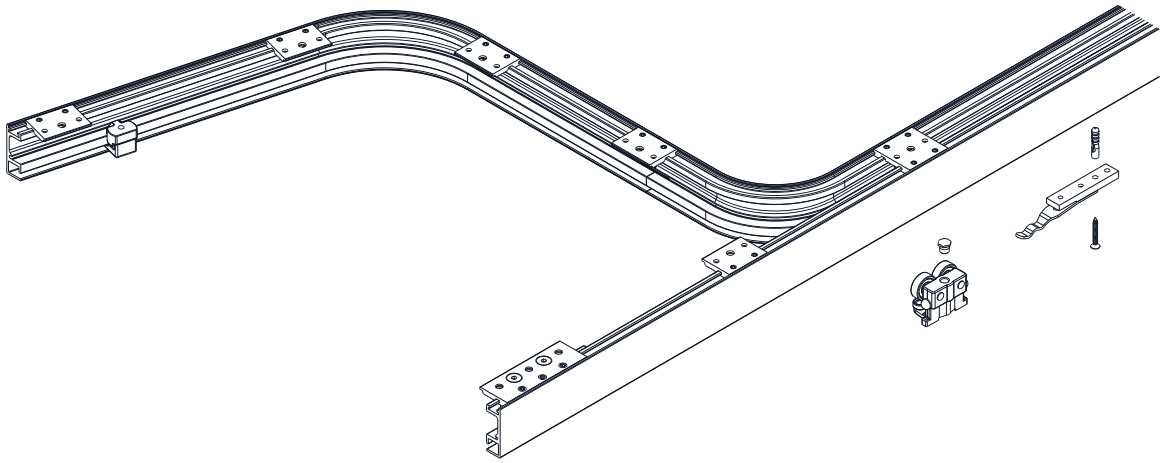
Montage der Schiebetüre
Montage de la porte coulissante
Mounting of sliding door
Montaggio della porta scorrevole
Montaje del panel deslizante

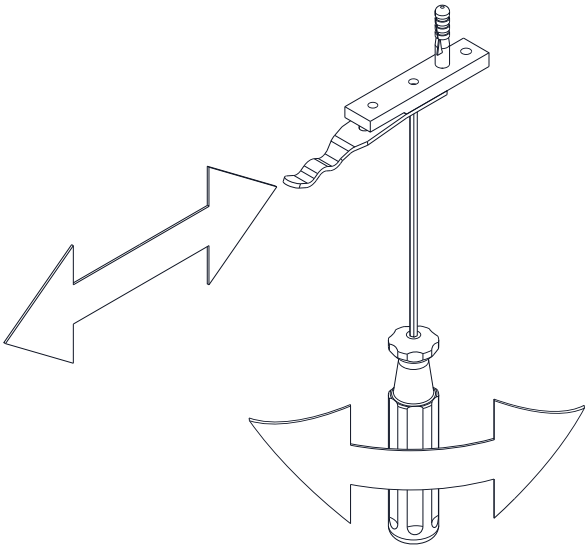


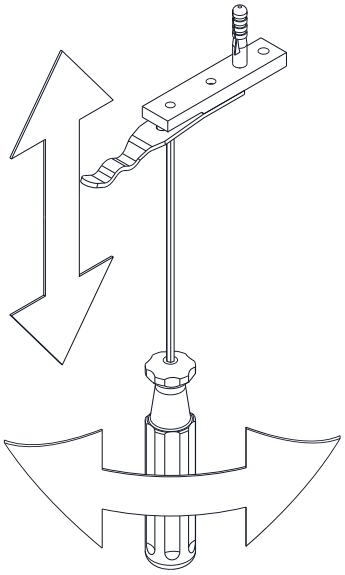
Laufwerk und Bodenführung fixieren, wenn sich die Türe im Stapelraum befindet.
Fixer chariot et guide inférieur lorsque les portes se trouvent dans l'espace de parcage.
Fix the trolley and floor guide when the door is in the stacking area.
Fissare il carrello e la guida a pavimento, quando la porta si trova nella zona di stipa.
Fijar el carro y la guía inferior cuando los paneles se encuentran en el área de apilado.

mit Glasreiniger
avec nettoyeur de verre
with glass cleaner
con pulitura da vetri
con limpiavidrios

Montage Mittelstopper
Montage d'arrêt du milieu
Mounting of centre stop
Montaggio arresto centrale
Montaje del dispositivo de retención intermedio







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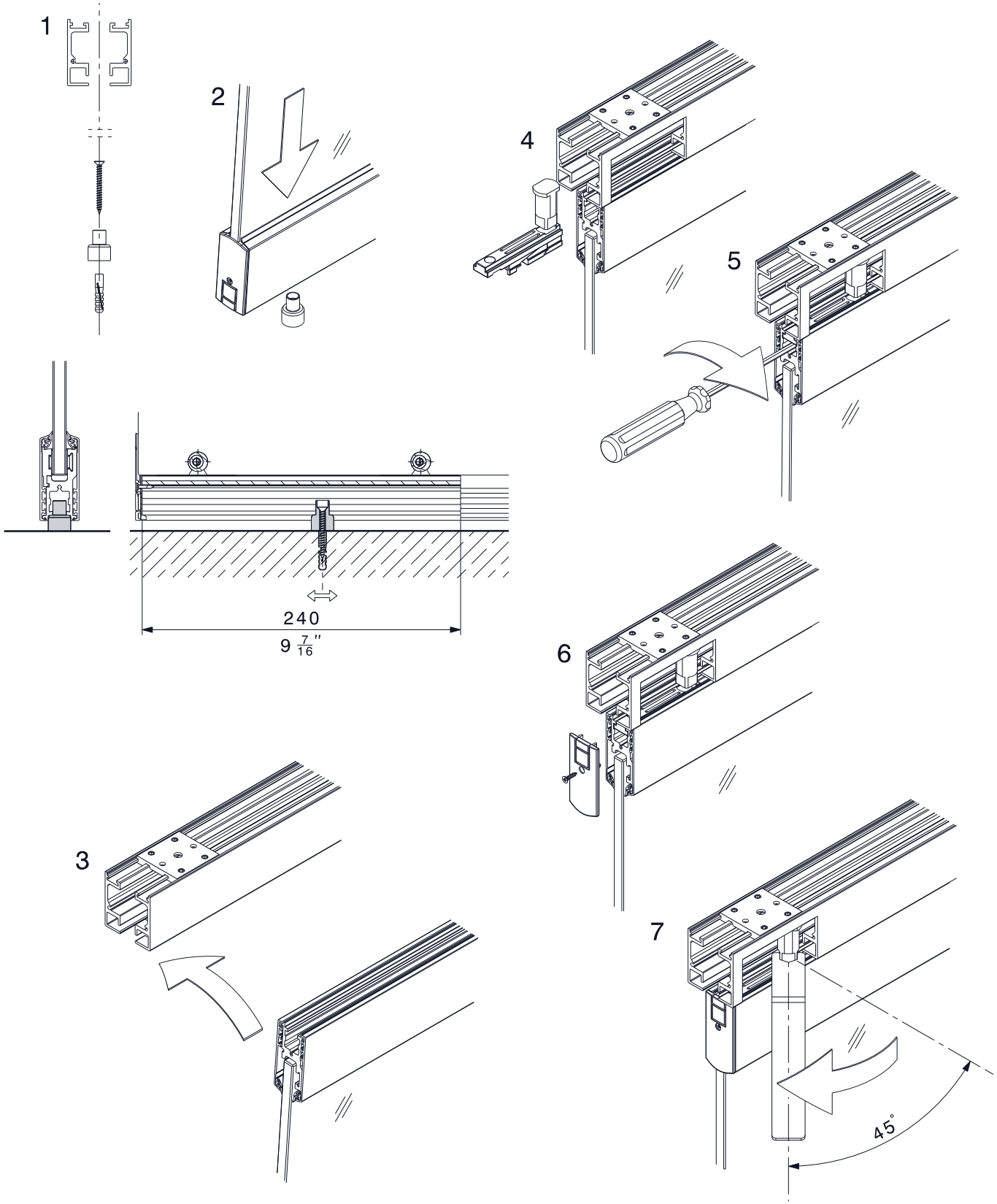
Montage Festverglasung
Montage glace fixe
Mounting of stationary glass
Montaggio vetrata fissa
Montaje del cristal fijo



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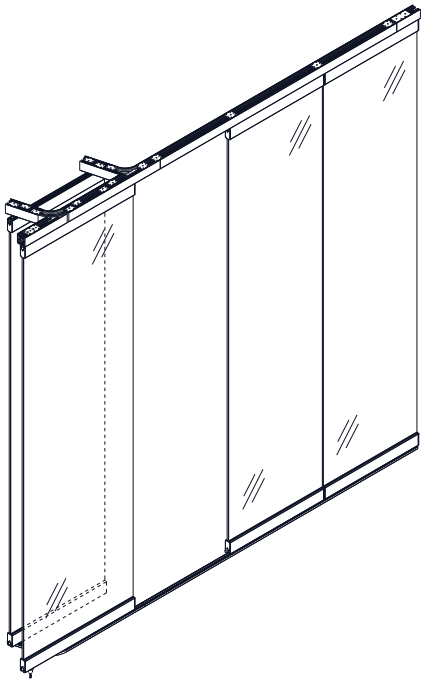
Beschlägeübersicht
Composants de la ferrure
Hardware system components
Assortimento ferramenta
Componentes de los herrajes

	19026
	19027
	18708
	18651
	18751
	18649
	18932
	18930
	19008
	19149
	19170
	19179
	19174
	19107
	19264
	19265
	19266
	19256
	19128

	8 mm ($\frac{5}{16}$) Glas, verre, glass, vetro, cristal	19269
	10 mm ($\frac{12}{32}$") Glas, verre, glass, vetro, cristal	19270
	$\frac{3}{8}$" Glas, verre, glass, vetro, cristal	19271
		19267
		19142
		18730
		18785
		19050

	2500 mm (8'2 $\frac{7}{16}$")	17795
	3500 mm (11'5 $\frac{13}{16}$")	17796
	6000 mm (19'8 $\frac{7}{32}$")	16891
	nach Mass sur mesure cut to size su misura a medida	17529
		17290
		16925
		19160
		18804
		19144

		17128
		17749
		17221
		19165
		17283
gebohrt, percé, predrilled, forato, pre-perforado	3500 mm (11'5 $\frac{13}{16}$")	18864
	6000 mm (19'8 $\frac{7}{32}$")	18216
	nach Mass sur mesure cut to size su misura a medida	18477
		18652
1 x uneloxiert non anodisé unanodized non anodizzato sin anodizar	800 mm (2'7 $\frac{1}{2}$")	19222
	1000 mm (3'3 $\frac{3}{8}$")	19223
	1200 mm (3'11 $\frac{1}{4}$")	19224
farblos eloxiert anodisé incolore plain anodized anodizzato incolore anodizado plato	800 mm (2'7 $\frac{1}{2}$")	19167
	1000 mm (3'3 $\frac{3}{8}$")	19168
	1200 mm (3'11 $\frac{1}{4}$")	19169
Edelstahl-Effekt imitation inox stainless-steel effect effetto acciaio inox efecto acero inoxid.	800 mm (2'7 $\frac{1}{2}$")	19176
	1000 mm (3'3 $\frac{3}{8}$")	19177
	1200 mm (3'11 $\frac{1}{4}$")	19178
		19175
		19714
		19715



Planung und Montage

Beschlag für Glasschiebewände parallel zur Schiebeachse gestapelt.

Planification et montage

Ferrures pour cloisons coulissantes en verre, avec rangement parallèle à l'axe de coulissement.

Planning and installation

Hardware system for glass sliding walls that are stacking parallel to the slide axis.

Pianificazione e montaggio

Ferramenta per porte scorrevoli in vetro parcheggiate parallelamente all'asse di scorrimento.

Planificación y montaje

Herraje para mamparas deslizantes de cristal apiladas paralelo al eje del deslizamiento.

Hawa Teile | Eléments Hawa | Hawa components | Componenti Hawa | Componentes Hawa

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Hawa Aperto 60 GL parallel | parallel | parallèle

Patente / Brevets / Patents / Brevetti / Patentados

-	Gezeichnet/Dessiné/Drafted/Disegnato/Dibujado **04.2003 / STJ**	
	Änderung/Modification/Modification/Modifica/Modificación **08.2014 / RHU**	
19200	**b**	Ersetzt/Remplace/Replaces/Sostituisce/Reemplaza **19200a**
		Visum/Visa/Visa/Visto/Visado **09.2014 / MFR**

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Planos sujetos a modificaciones

06.2003 / MFR (2956)
a) 12.2005 / BKU (3519)
b) 15.05.2008 / MFR (4078)
11.2011 BüT (4786)

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Deutsch

Hawa Aperto 60 GL
Normstapelraum für 8 Schiebe- und 1 Drehtüre
Maximales Türgewicht 60 kg
Maximale Türhöhe 2600 mm
Minimale Türbreite 500 mm
Maximale Schiebetürbreite 1100 mm
Maximale Drehtürbreite 1200 mm
Glasdicke ESG-Glas 8/10 mm/$\frac{3}{8}$" USA
Es darf ausschliesslich Einscheiben-Sicherheitsglas (ESG) verwendet werden.

Spezialanlage Rücksprache mit Hawa Sliding Solutions AG

Français

Hawa Aperto 60 GL
Espace de parcage standard p. 8 portes coulissantes et 1 porte pivotante
Poids maximum par porte 60 kg
Hauteur maximum par porte 2600 mm
Largeur minimum par porte 500 mm
Largeur maximum par porte coulissante 1100 mm
Largeur maximum par porte pivotante 1200 mm
Epaisseurs de glace ESG 8/10 mm/$\frac{3}{8}$" USA
Il faut utiliser uniquement du verre de sécurité trempé (ESG).

Modèle spécial, veuillez consulter Hawa Sliding Solutions AG

English

Hawa Aperto 60 GL
Standard parking area for 8 sliding doors and 1 pivot door
Maximum door weight 60 kg (132 lbs.)
Maximum door height 2600 mm (8'6 $\frac{3}{8}$")
Minimum door width 500 mm (1'7 $\frac{11}{16}$")
Maximum sliding door width 1100 mm (3'7 $\frac{5}{16}$")
Maximum pivot door width 1200 mm (3'11 $\frac{1}{4}$")
Glass thicknesses ESG fully tempered monolithic glass 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$") / $\frac{3}{8}$" USA
Merely fully tempered monolithic glass (ESG) may be employed.

Special model, please consult Hawa Sliding Solutions AG

Italiano

Hawa Aperto 60 GL
Parcheggio normalizzato per 8 porte scorrevoli e 1 porta girevole
Peso massimo della porta 60 kg
Altezza massima della porta 2600 mm
Larghezza minima della porta 500 mm
Larghezza massima della porta scorrevole 1100 mm
Larghezza massima della porta girevole 1200 mm
Spessore del vetro ESG 8/10 mm/$\frac{3}{8}$" USA
È permesso usare esclusivamente vetro di protezione monovetro (ESG).

Impianto speciale, consultare la Hawa Sliding Solutions AG

Español

Hawa Aperto 60 GL
Área de apilado normalizado para 8 paneles deslizantes y 1 puerta pivotante
Peso máximo del panel 60 kg
Altura máxima del panel 2600 mm
Ancho mínimo del panel 500 mm
Ancho máximo del panel deslizante 1100 mm
Ancho máximo de puerta pivotante 1200 mm
Espesor del cristal ESG 8/10 mm/$\frac{3}{8}$" USA
Debe ser utilizado exclusivamente cristal de seguridad monolítico, no laminado (ESG).

En caso de instalaciones especiales consultar con
Hawa Sliding Solutions AG

Hawa Sliding Solutions
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

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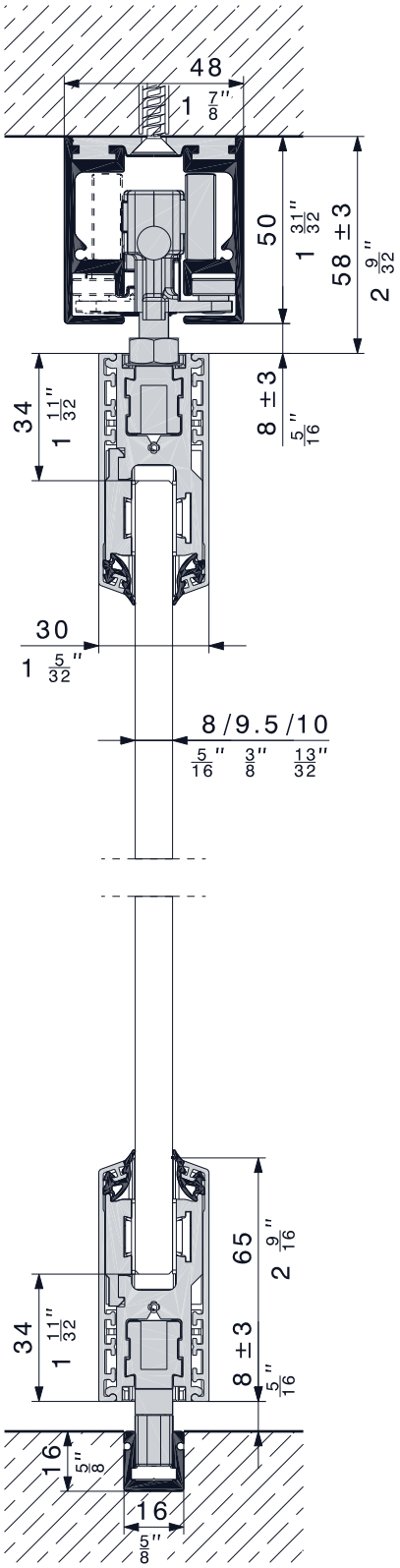

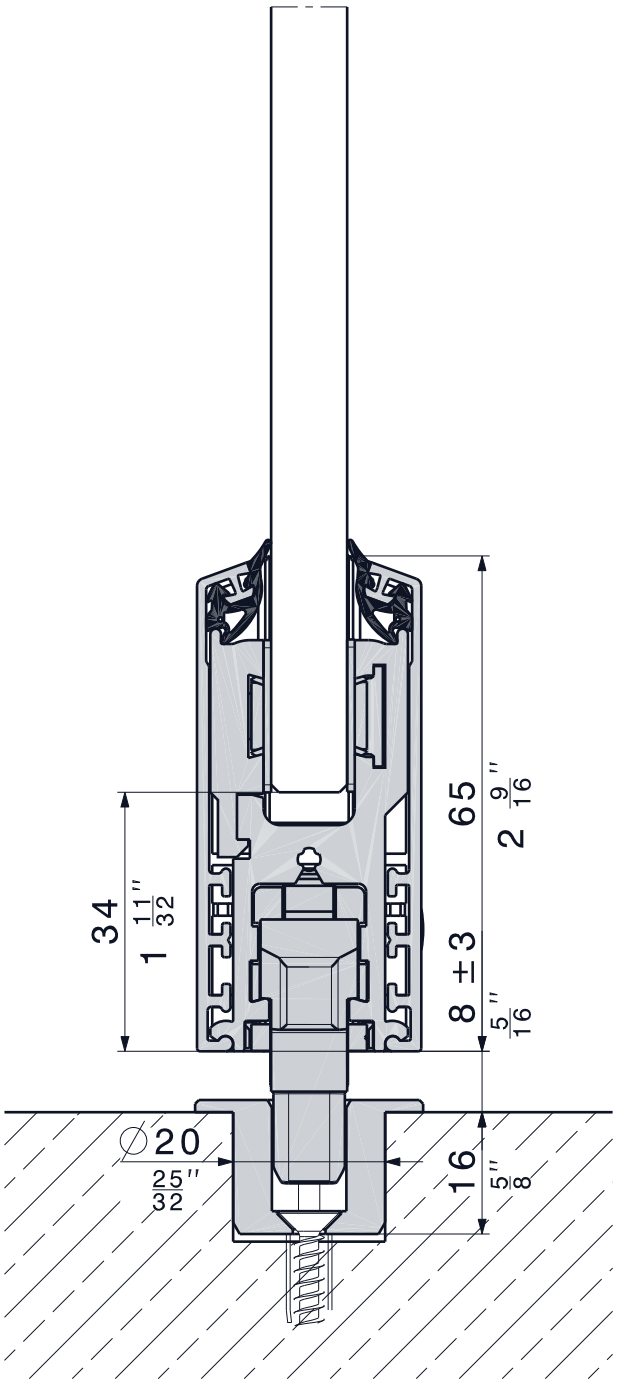

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Sous réserve de modifications techniques
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Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

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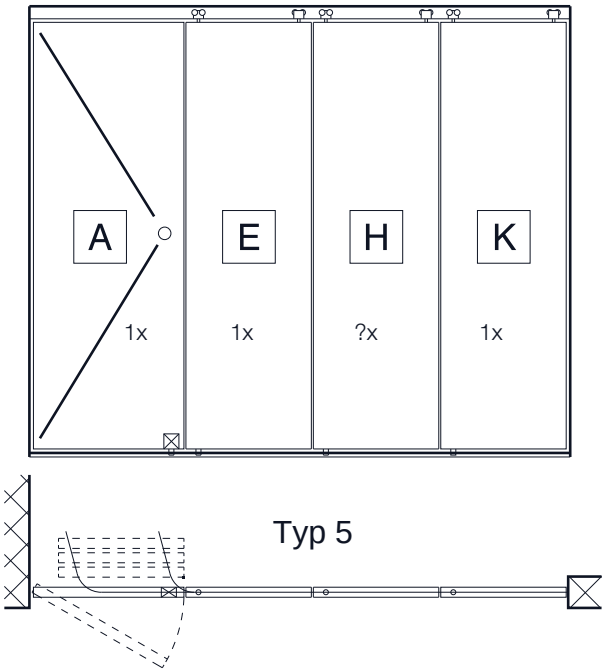
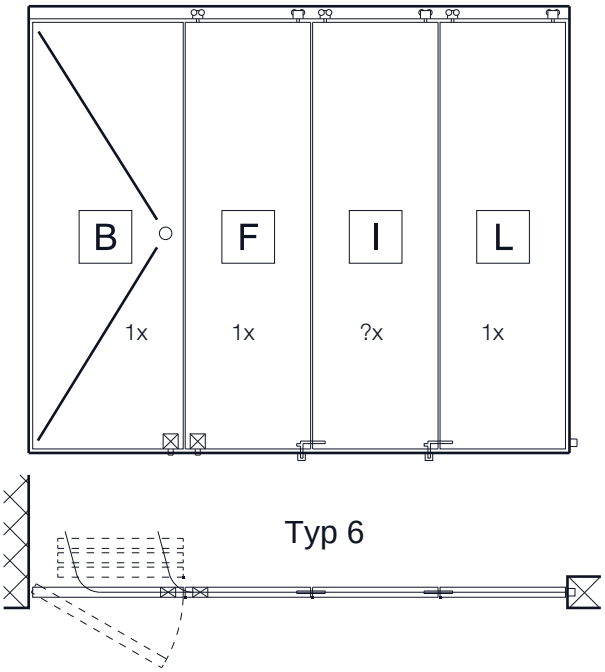
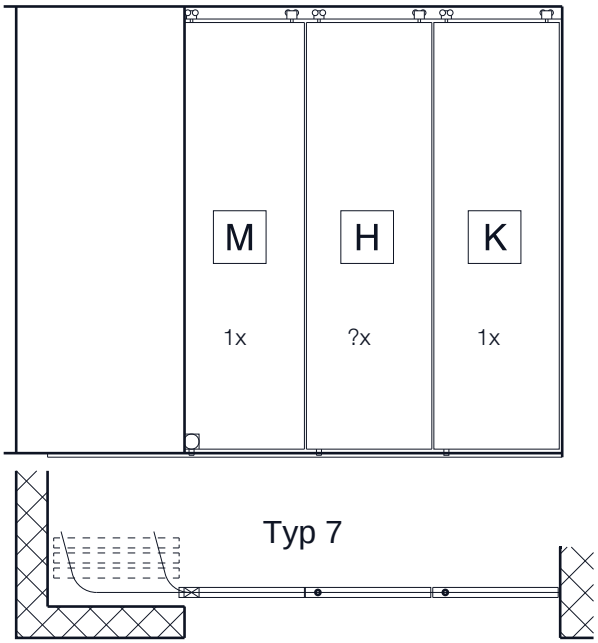
Anlage-Typen
Types d'installations
System types
Tipi sistemi
Tipos de sistemas

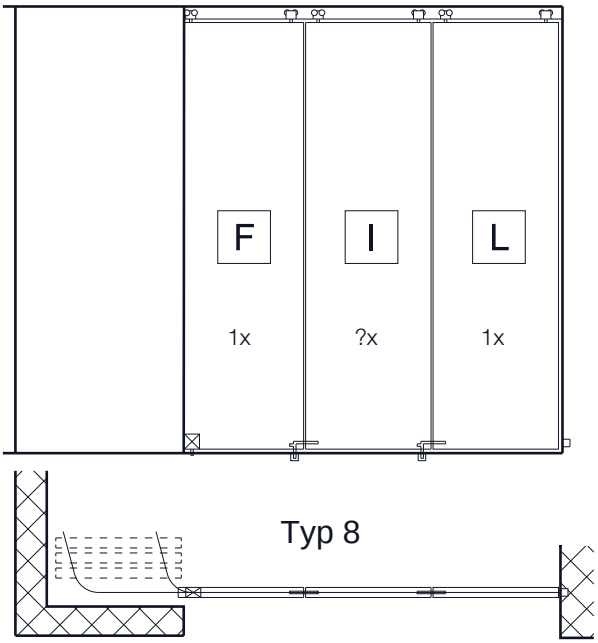
Mit Führungsschiene
Avec rail de guidage
With bottom guide channel
Con guida
Con riel de guía



Ohne Führungsschiene
Sans rail de guidage
Without bottom guide channel
Senza guida
Sin riel de guía



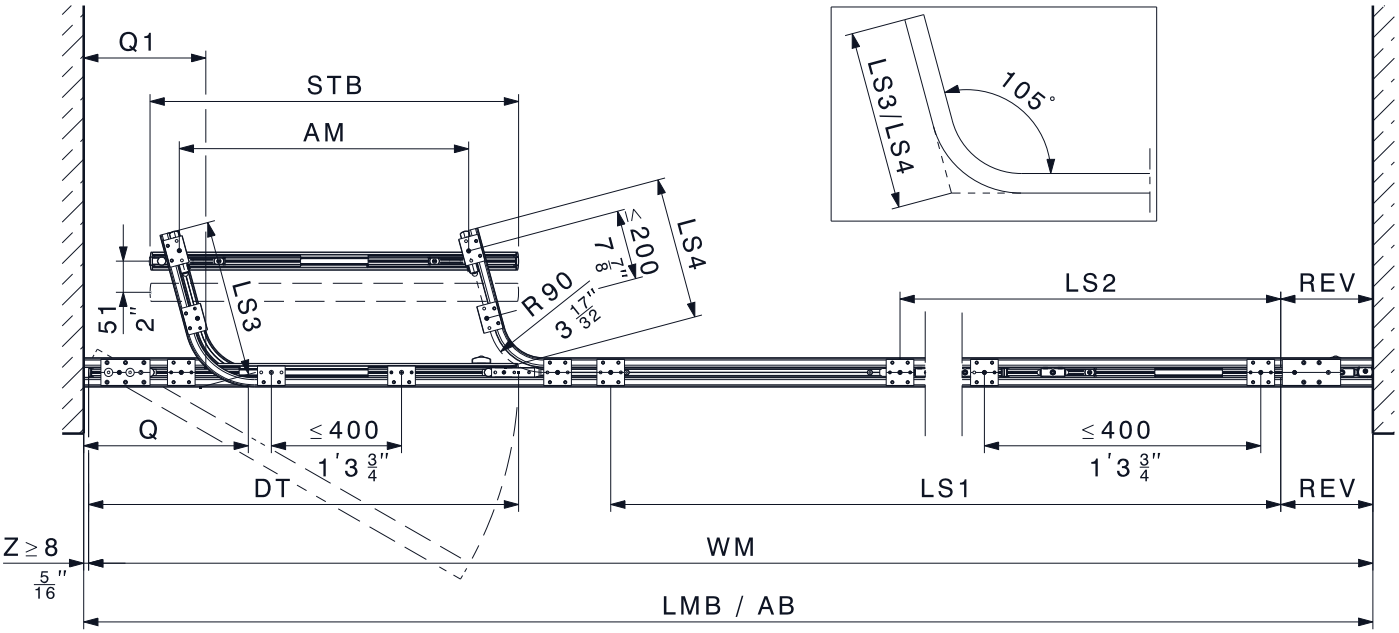




▢ Rundriegelschloss mit Führungszapfen
Serrure à verrou rond avec goujon de guidage
Round bar lock with guide pin
Serratura a chiavistello tondo con perno di guida
Pasador de vástago redondo con rodillo de guía

⊠ Rundriegelschloss
Serrure à verrou rond
Round bar lock
Serratura a chiavistello tondo
Pasador de vástago redondo

Berechnungen ab Lichtmassbreite (LMB) für Anlagen mit Drehtüre
Calculs à partir de la largeur intérieure (LMB) pour installations avec portes pivotantes
Calculations as from the inside width (LMB) for installations with pivot doors
Calcolo a partire dalla larghezza interna (LMB) per costruzioni con porte girevoli
Cálculo a partir del ancho de luz (LMB) para instalaciones con puertas pivotantes



AB =	Anlagenbreite Largeur d'installation Installation width Larghezza installazione Ancho de instalación
AM =	Achsmass Cote axiale Axial dimension Dimensione asse Dimensión de eje
AT =	Anzahl Türen inkl. Drehtüre Nombre de portes, y compris porte pivotante Number of doors, including pivot door Numero porte, incl. porta girevole Número de paneles, incluido puerta pivotante
DT =	Drehtüre Porte pivotante Pivot door Porta girevole Puerta pivotante
LMB =	Lichtmassbreite Largeur intérieur Inside width Larghezza interna Ancho de luz
LS =	Laufschiene Rail de roulement Top track Binario Riel de rodadura
REV =	Laufschienen-Endstück Embout pour rails de roulement End-piece for top tracks Finecorsa binario Pieza final del riel de rodadura

Z =	
REV =	150
AT =	
LMB =	

WM = LMB – Z	
STB = $\frac{WM - 100}{AT}$	
DT = STB + 100	
AM = STB – 73 – (AT x 14)	
Q = 212 + (AT x 14)	
LS1 = LMB – Q – 590 – REV	
LS2 = LS1 – AM	
LS3 = 53 + (AT x 51)	
LS4 = LS3 – 25	
Q1 = Q – 68	

Technische Änderungen vorbehalten
Sous réserve de modifications techniques
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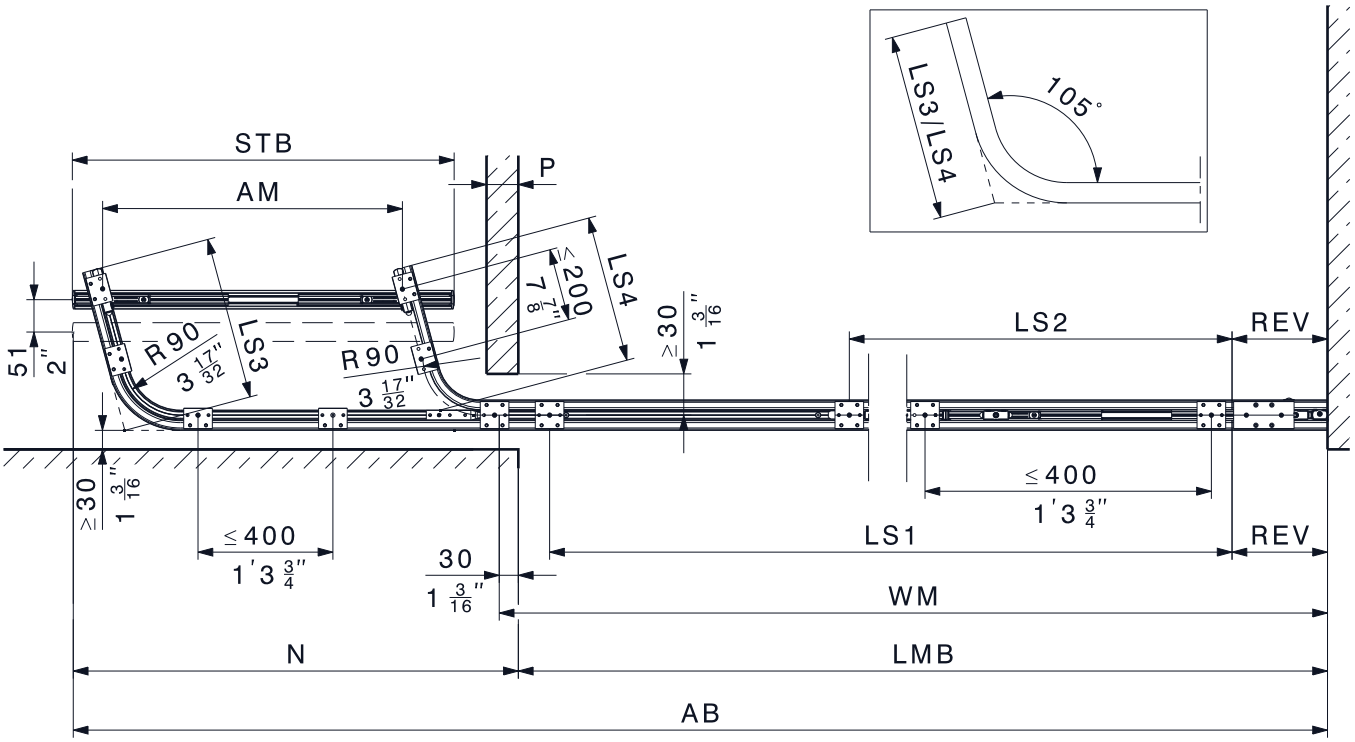
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Berechnungen ab Mass P für Anlagen mit Schiebetüren
Calculs à partir de la cote P pour installations avec portes coulissantes
Calculations based on dimension P for installations with sliding doors
Calcoli a partire dalla misura P per costruzioni con porte scorrevoli
Cálculos a partir de la dimensión P para instalaciones con paneles deslizantes



ST =	Anzahl Schiebetüren Nombre de portes coulissantes Number of sliding panels Numero porte scorrevoli Número de paneles deslizantes
STB =	Schiebetürbreite Largeur de la porte coulissante Sliding door width Larghezza porta scorrevole Ancho del panel deslizante
WM =	Glasschiebewandmass Cote de la cloison coulissante Dimension of glass sliding wall Dimensione della parete scorrevole di vetro Ancho toal del tabique deslizante de vidrio
Z =	Luft Wand bis Türe Jeu entre mur et porte Clearance between wall and door Aria entre parete e porta Luz entre el muro y panel

	P
REV =	150
ST =	
LMB =	
P =	

	P
WM = LMB + 30	
STB = $\frac{WM}{ST}$	
AM = STB – 86 – (ST x 14)	
LS1 = LS2 + AM	
LS2 = P + LMB – REV – 552 + (ST x 14)	
LS3 = (ST x 51) + 104	
LS4 = LS3 – 25	
AB = LMB + P + 64 + STB + (ST x 14)	

Technische Änderungen vorbehalten
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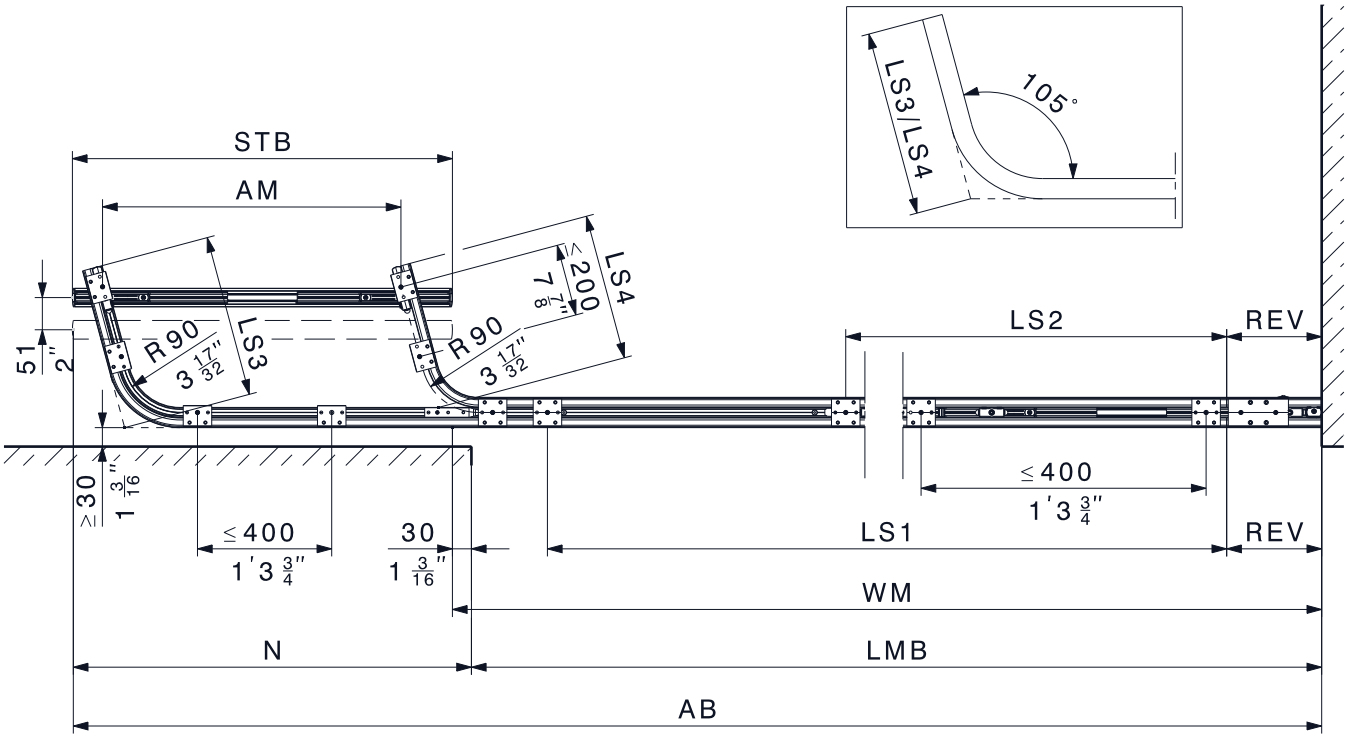
Berechnungen ab Mass N für Anlagen mit Schiebetüren
Calculs à partir de la cote N pour installations avec portes coulissantes
Calculations based on dimension N for installations with sliding doors
Calcoli a partire dalla misura N per costruzioni con porte scorrevoli
Cálculos a partir de la dimensión N para instalaciones con paneles deslizantes



	N
REV =	150
ST =	
LMB =	

	N
WM = LMB + 30	
STB = $\frac{WM}{ST}$	
AM = STB – 86 – (ST x 14)	
N = STB	
LS1 = LS2 + AM	
LS2 = LMB – REV – 36 – 580	
LS3 = (ST x 51) + 104	
LS4 = LS3 – 25	
AB = LMB + N	

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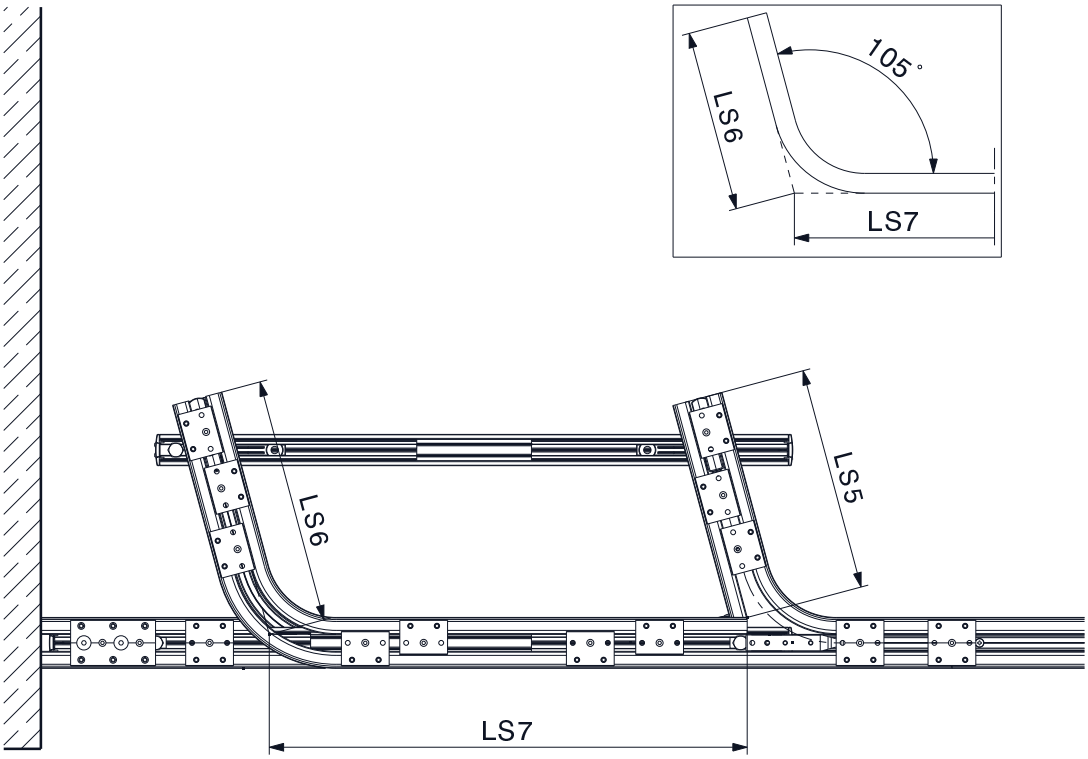
Berechnung Stapelraum-Innenverblendung, Führungsschiene
Calcul de cache intérieur pour espace de parcage, rail de guidage
Calculation of the stacking area inside covers, bottom guide channel
Calcolo zona di stipa-rivestimento interno, guida
Cálculo del área de apilado con perfil de cobertura a la vista, riel de guía



AM =	
LS1 =	
LS3 =	
LS4 =	

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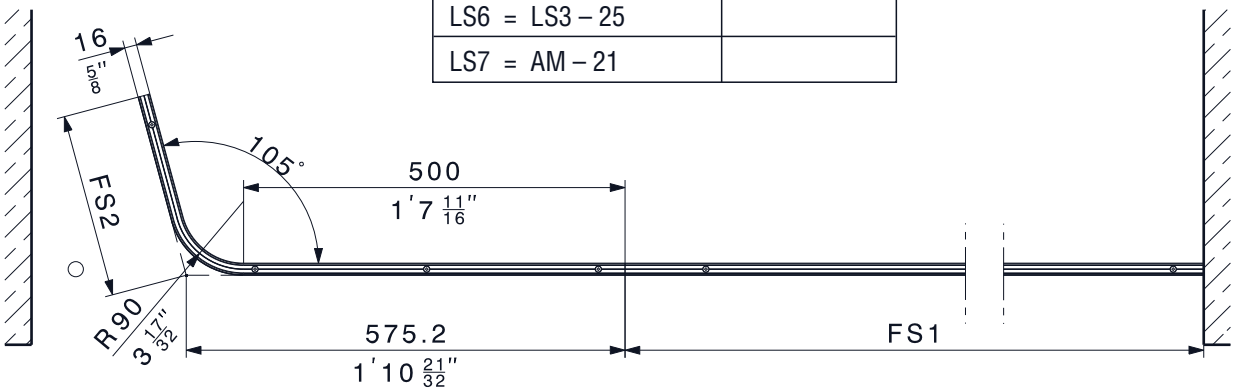
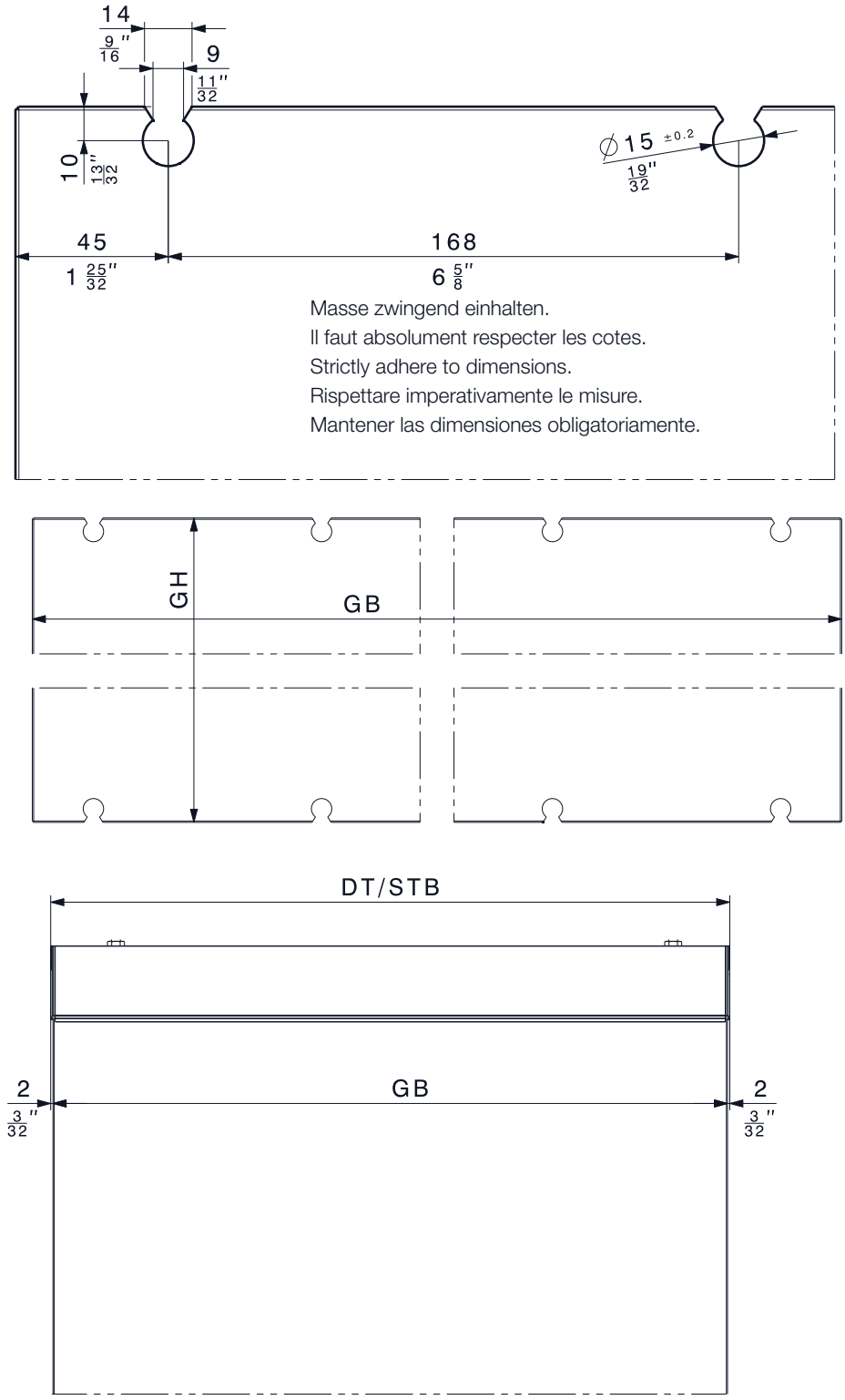
LS5 = LS4 – 21	
LS6 = LS3 – 25	
LS7 = AM – 21	

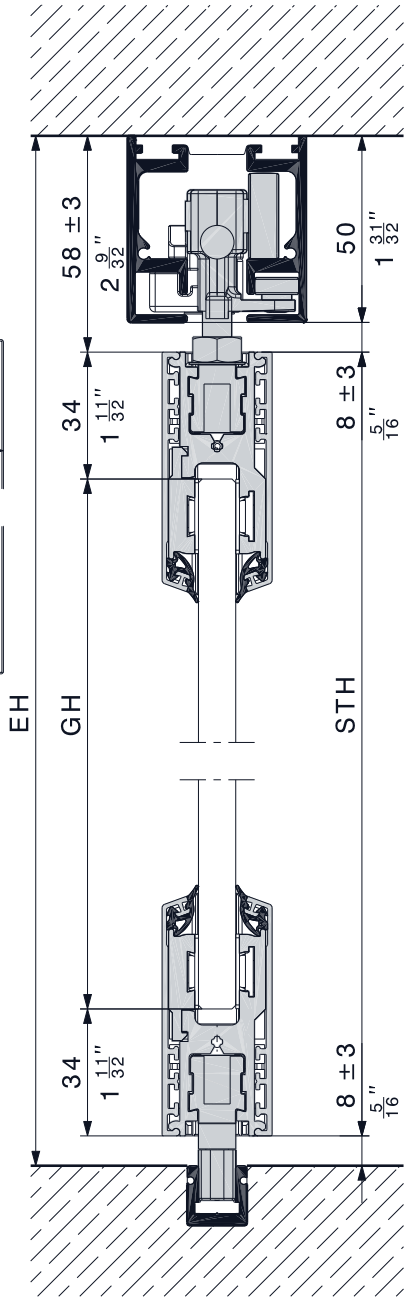


LS =	Laufschiene Rail de roulement Top track Binario Riel de rodadura
FS =	Führungsschiene Rail de guidage Bottom guide channel Guida Riel de guía

FS1 = LS1 + 230	
FS2 = LS3 – 13	

Glasausschnitt / Glasberechnung
Découpe de verre / calcul de verre
Glass cutout / glass calculation
Intaglio del vetro / calcolo del vetro
Muescas en el cristal / cálculo del cristal





Technische Änderungen vorbehalten
Sous réserve de modifications techniques
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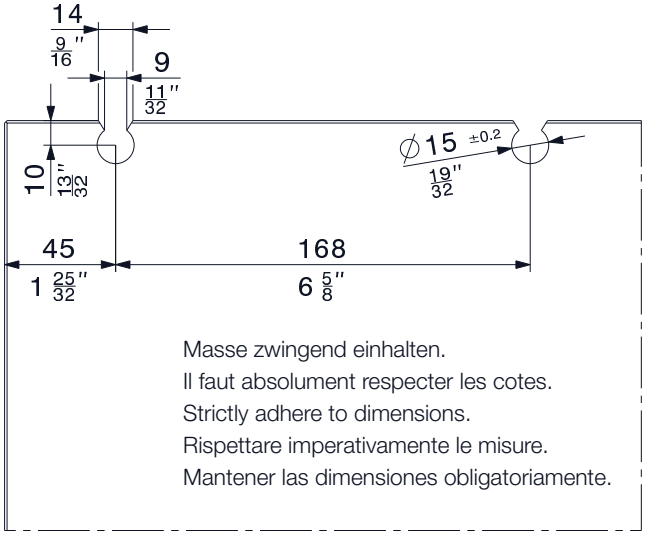
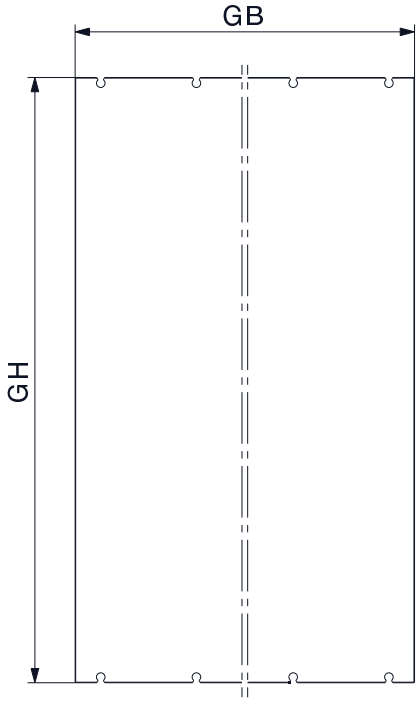
Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

Bestellung Glastüren
Commande des portes en verre
Order for glass doors
Ordinazione porte di vetro
Pedido de paneles de cristal





Alle Glaskanten gesäumt, im Glasausschnitt max. 1 mm.
Ensemble des chants de verre bordés, 1 mm max. dans la découpe de verre.
All-glass edges are seamed; maximum 1 mm in the glass cutout.
Tutti i bordi vetro rifilati, nell'intaglio del vetro max. 1 mm.
Cantear todos los cantos del cristal, en la muesca del cristal 1mm como máx.

Bezeichnung Désignation Designation Denominazione Designación	Anzahl Türen Nombre de portes Number of doors Numero porte Número de paneles	Glasbreite (GB) Largeur de glace (GB) Glass width (GB) Larghezza vetro (GB) Ancho del cristal (GB) DT = ... STB* = ... GB = STB – 4 DT – 4	Glashöhe (GH) Hauteur de glace (GH) Glass height (GH) Altezza vetro (GH) Altura del cristal (GH) STH* = ... GH = STH – 68
Anzahl Türen total Nombre de portes au total Total number of doors Numero porte totale Total número de paneles		ESG** Glasdicke = ... mm Epaisseur de glace (ESG**) = ... mm Glass thickness (ESG**) = ... mm ESG** spessore vetro = ... mm Espesor del cristal ESG** = ... mm	

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ESG**
Einscheibensicherheitsglas
Verre de sécurité trempé
Fully tempered monolithic glass
Vetro singolo temperato di sicurezza
Cristal monolitico

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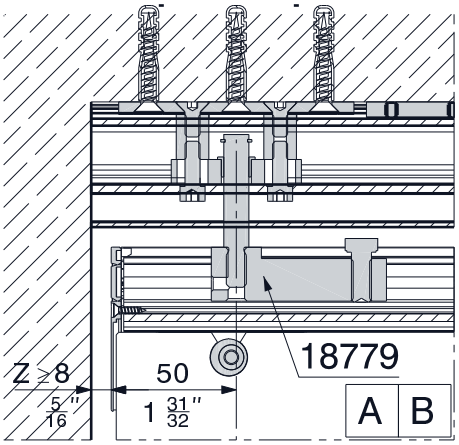
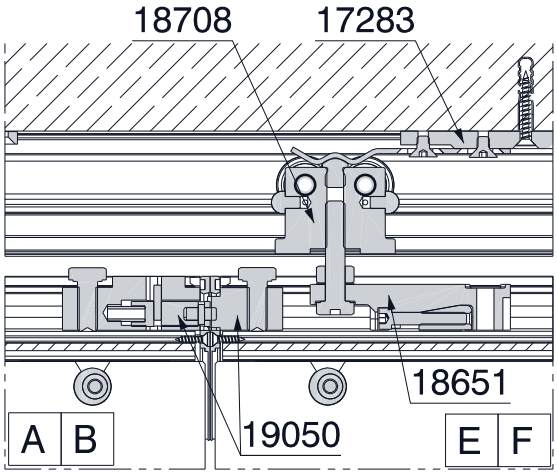
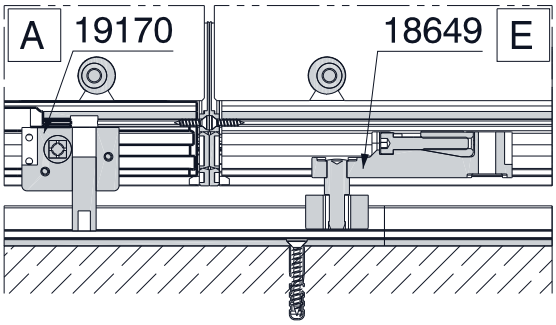
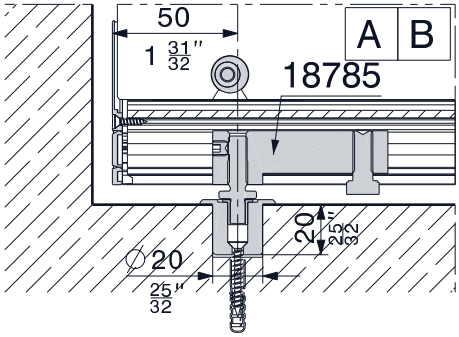
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

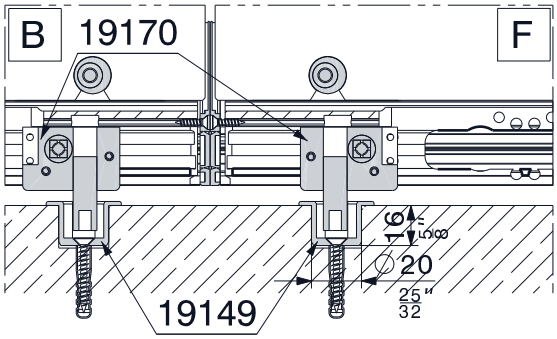
Komponenten Drehtüren
Composants des portes pivotantes
Components pivot doors
Componenti porte girevoli
Componentes puertas pivotantes











Technische Änderungen vorbehalten
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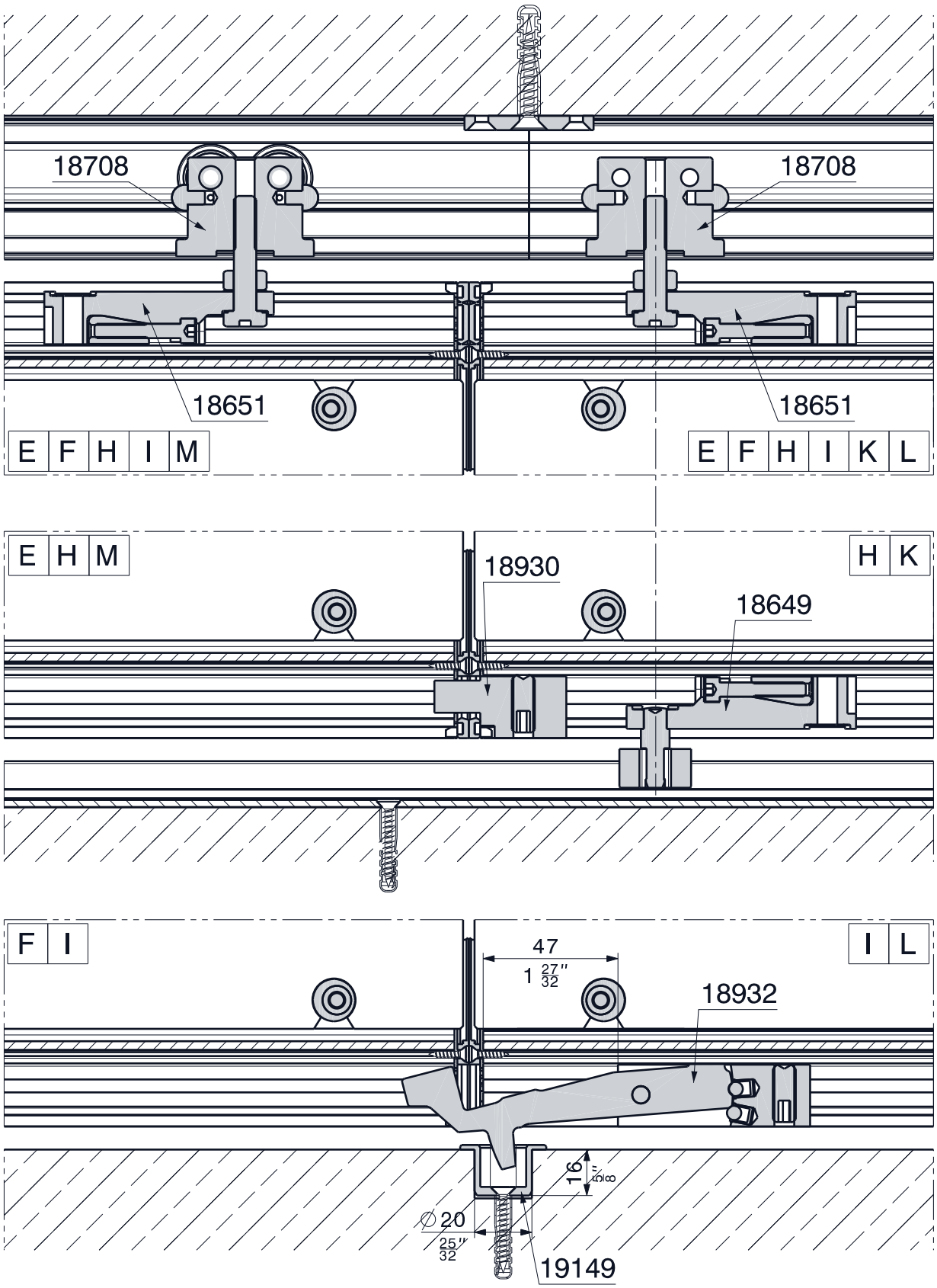
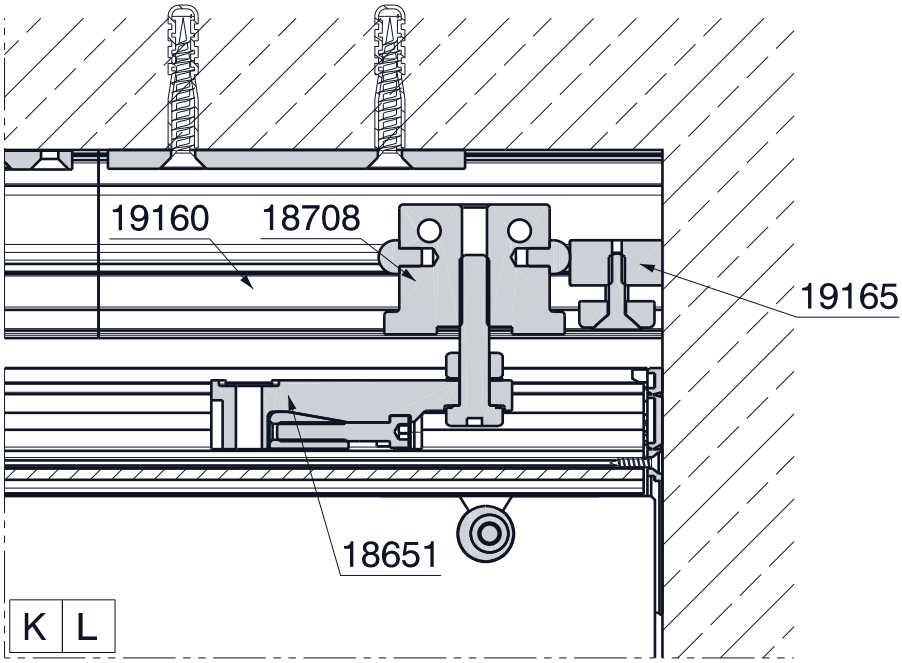
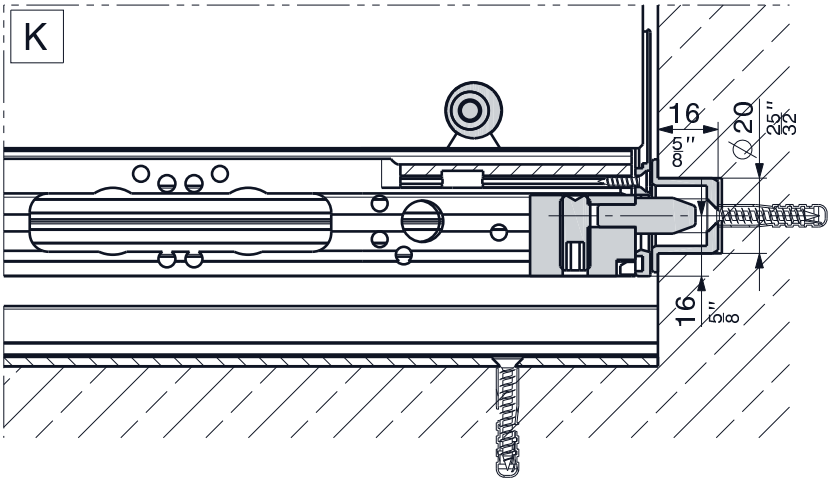
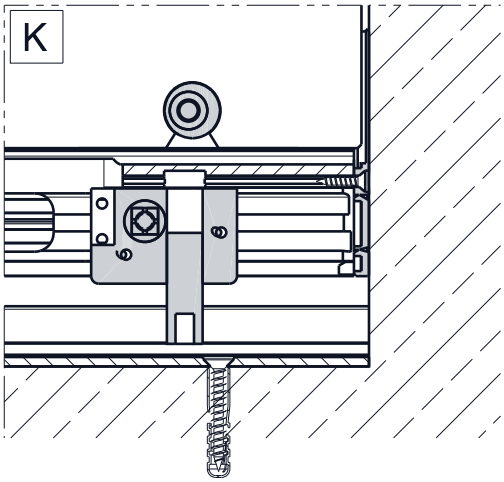
Komponenten Schiebetüren
Composants des portes coulissantes
Components sliding doors
Componenti porte scorrevoli
Componentes paneles deslizantes

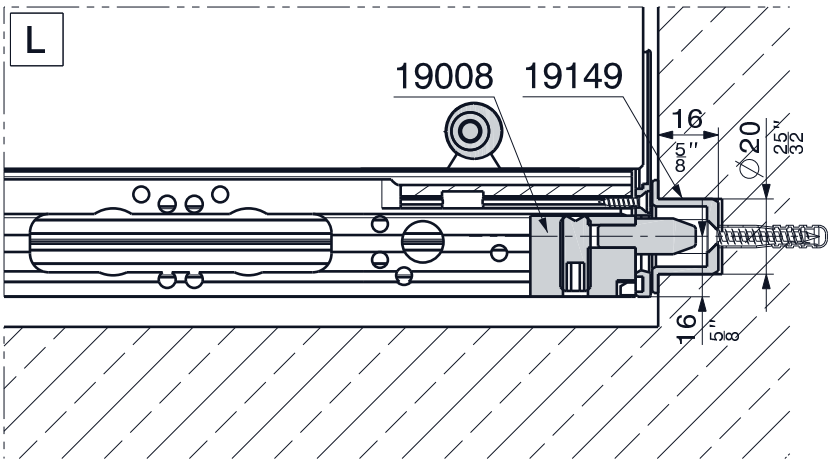


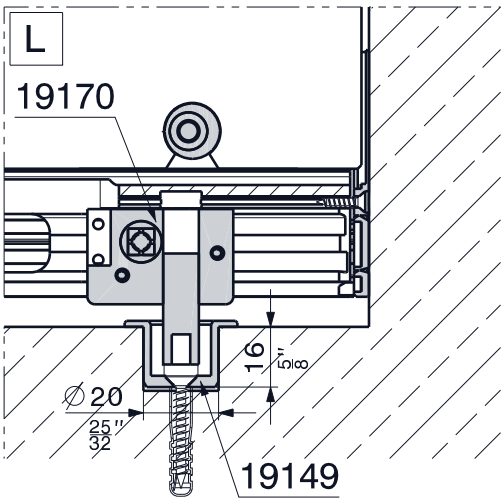
Komponenten Wandanschluss
Composantes de raccordement mural
Wall joint components
Componenti collegamento a parete
Componentes de fijación al muro



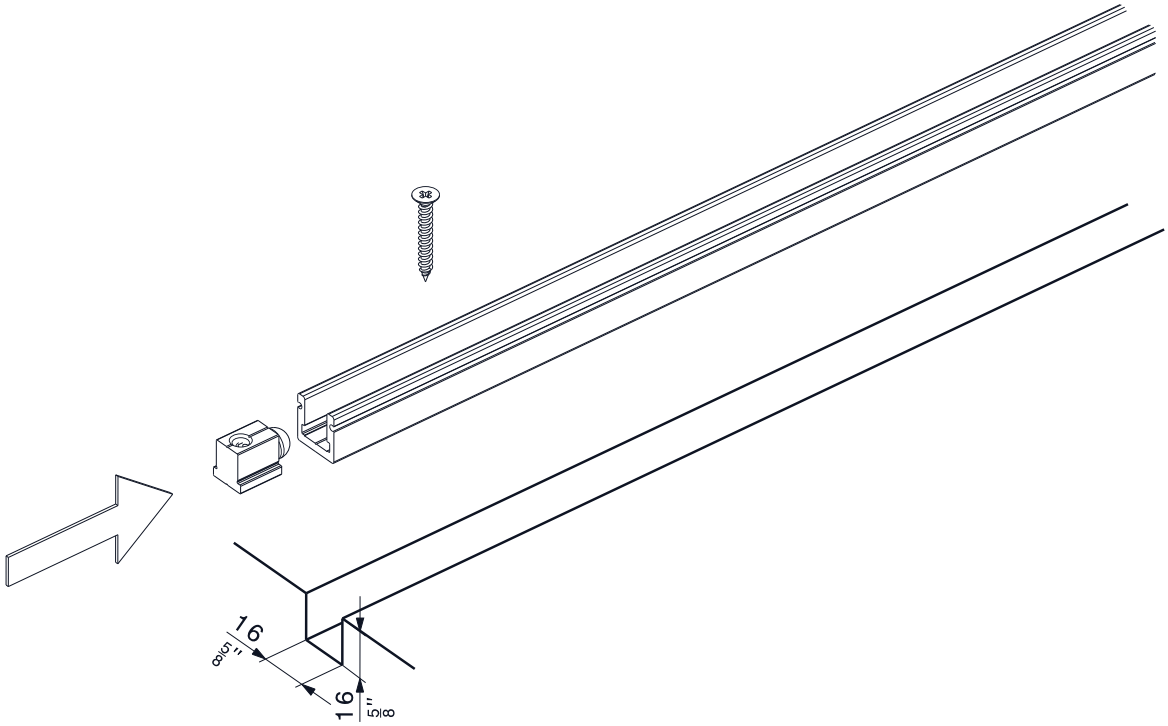


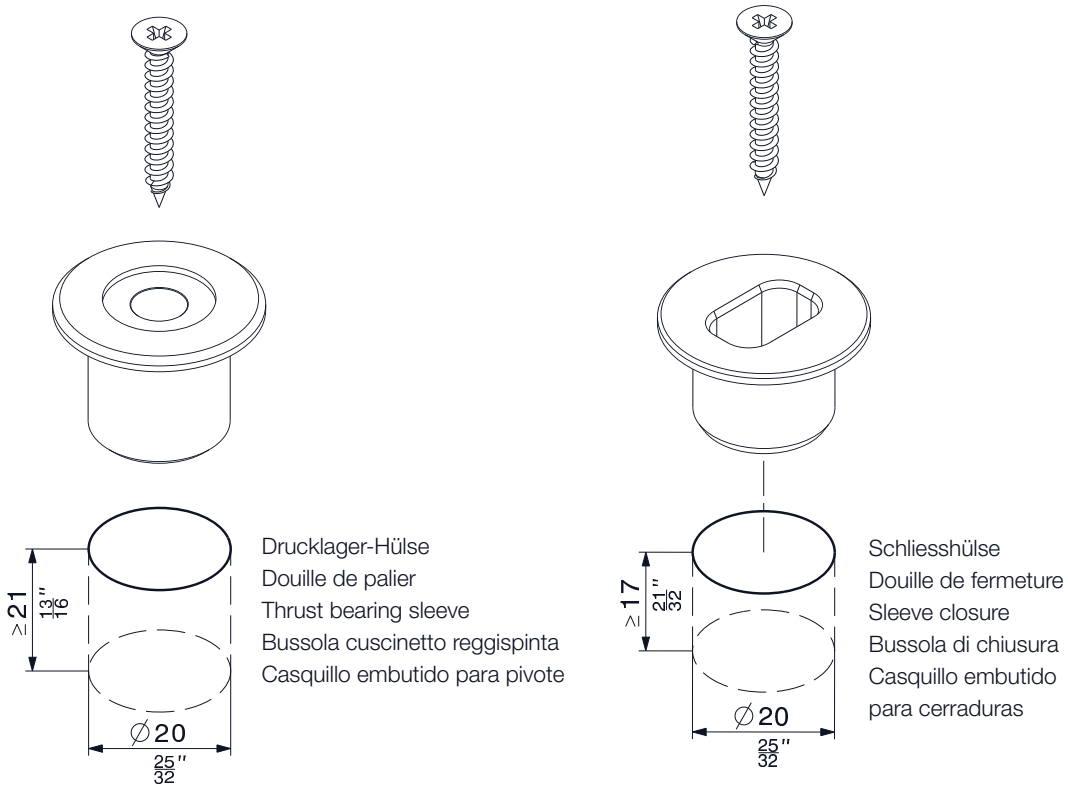






Montage Führungsschiene, Drucklager-Hülse und Schliesshülse
Montage des rails de guidage, douille de palier et douille de fermeture
Mounting of bottom guide channel, thrust bearing sleeve and sleeve closure
Montaggio guida, bussola cuscinetto reggispinta e bussola di chiusura
Montaje de los rieles de guía, casquillo embutido p. pivot inferior y casquillo p. cerraduras

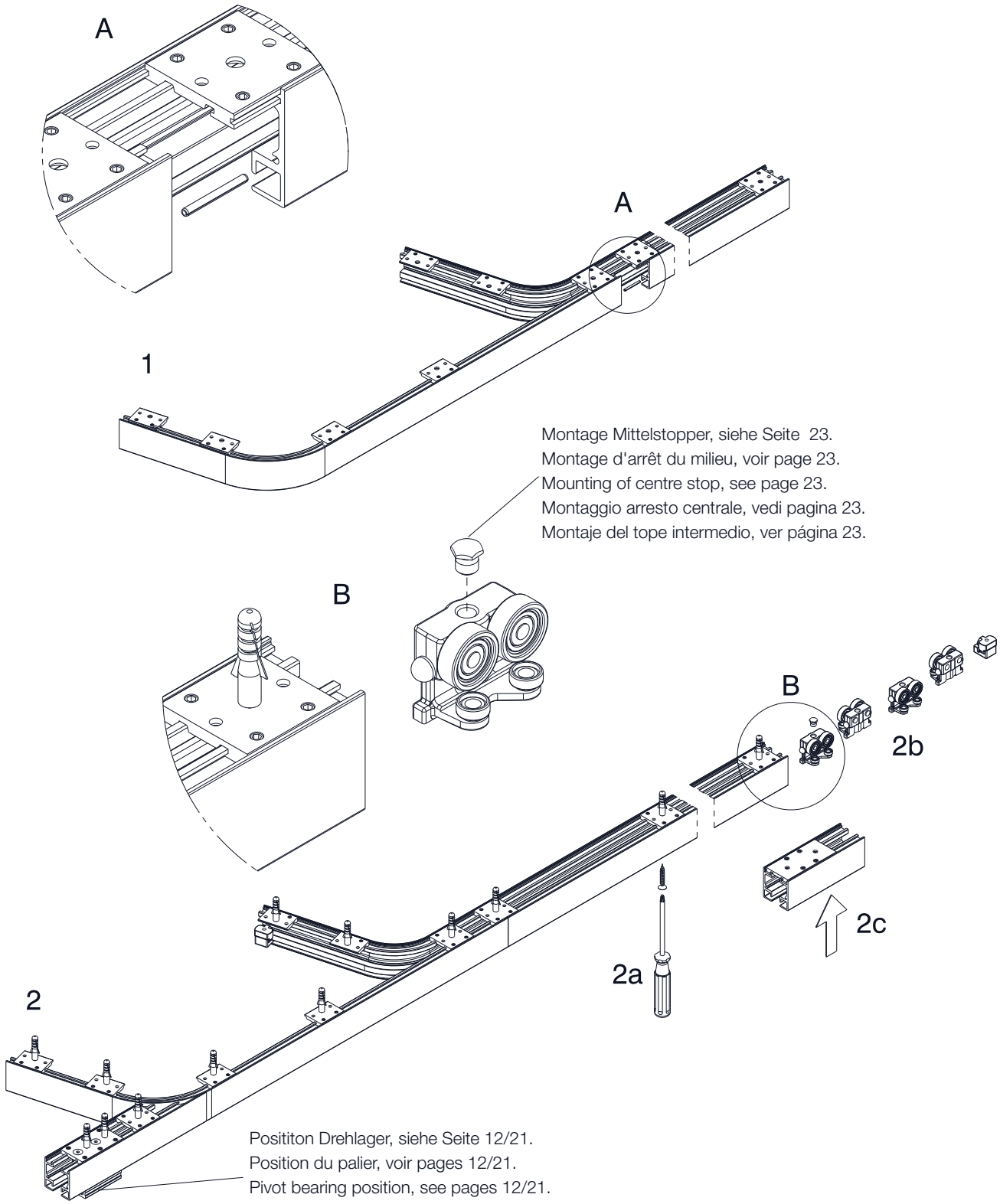




Drucklager-Hülse
Douille de palier
Thrust bearing sleeve
Bussola cuscinetto reggispinta
Casquillo embutido para pivote

Schliesshülse
Douille de fermeture
Sleeve closure
Bussola di chiusura
Casquillo embutido
para cerraduras

Montage der Laufschiene
Montage des rails de roulement
Mounting of top tracks
Montaggio dei binari
Montaje de los rieles de rodadura



Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Subject to modification

Con riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

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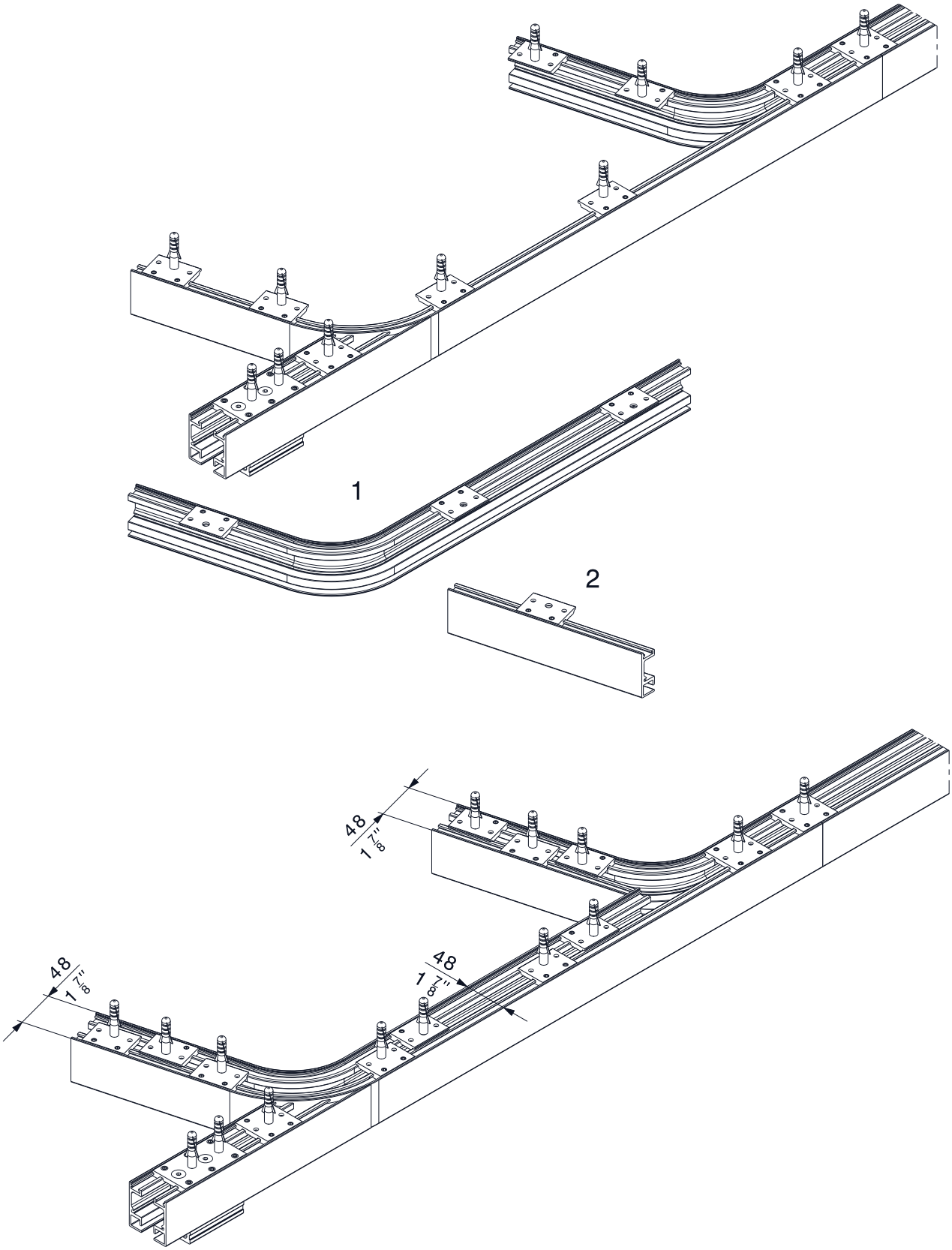
Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Montage Stapelraum-Innenverblendung
Montage de cache intérieur pour espace de parcage
Mounting of the stacking area inside covers
Montaggio zona di stipa-rivestimento interno
Montaje del área de apilado con perfil de cobertura a la vista



Technische Änderungen vorbehalten
Sous réserve de modifications techniques
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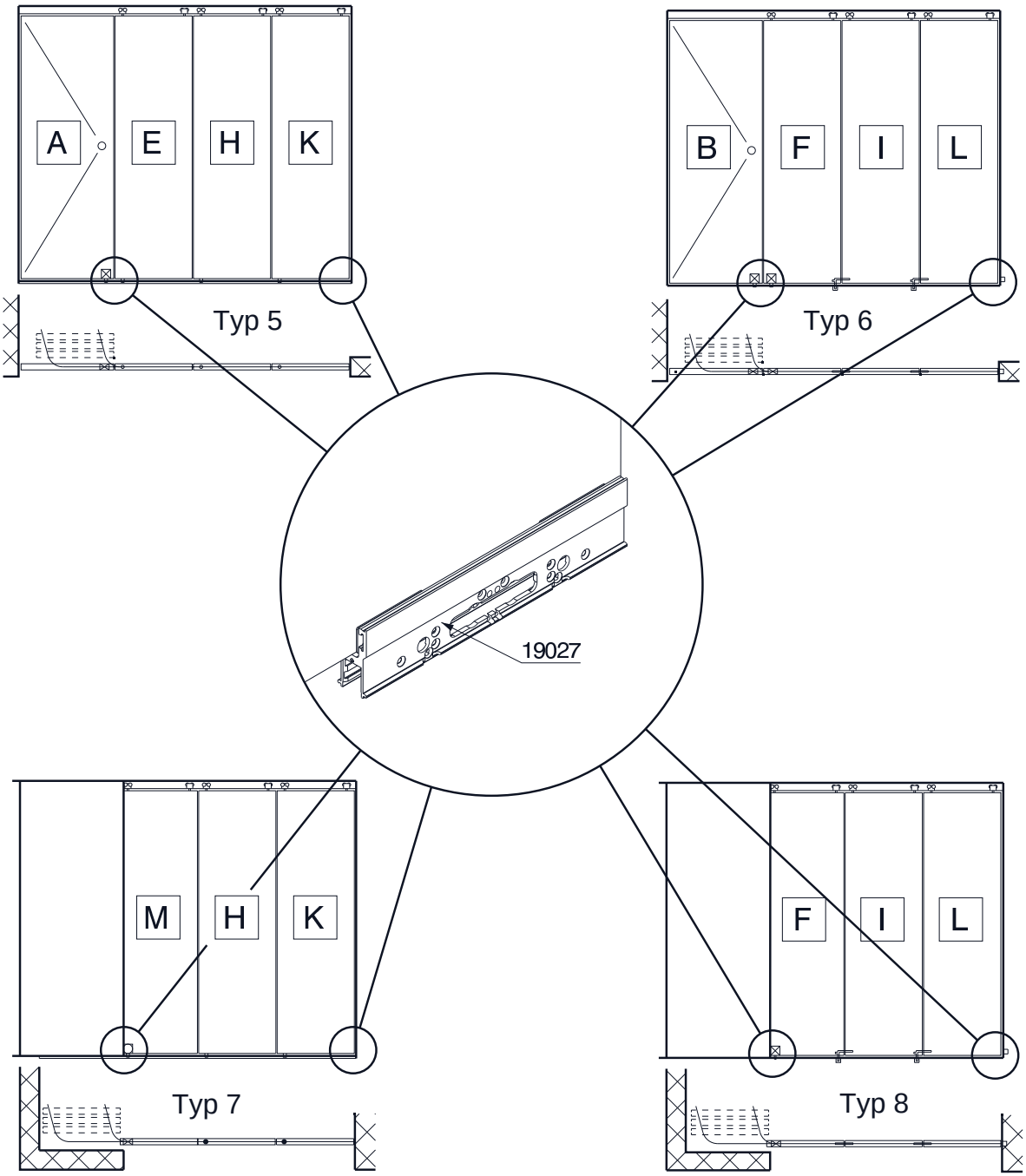
Position Glashalteprofil mit Schlossausfräsung
Position du profil porte-glace avec défonçage pour serrure
Position of glass retainer profile with lock cutout
Posizione profilo serravetro con fresatura serratura
Posición del perfil portacristal con fresado para cerradura

Mit Führungsschiene
Avec rail de guidage
With bottom guide channel
Con guida
Con riel de guía

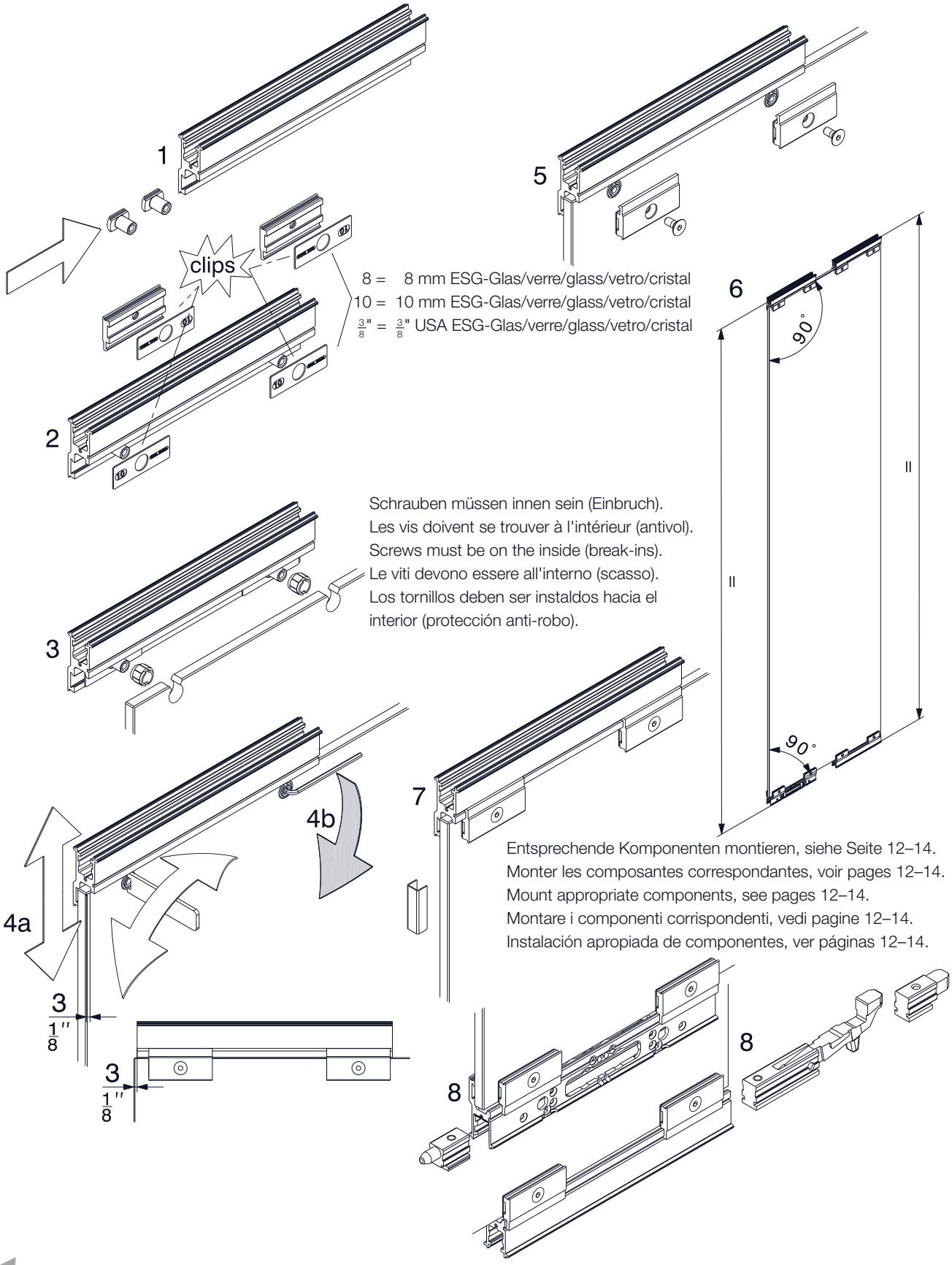
Ohne Führungsschiene
Sans rail de guidage
Without bottom guide channel
Senza guida
Sin riel de guía



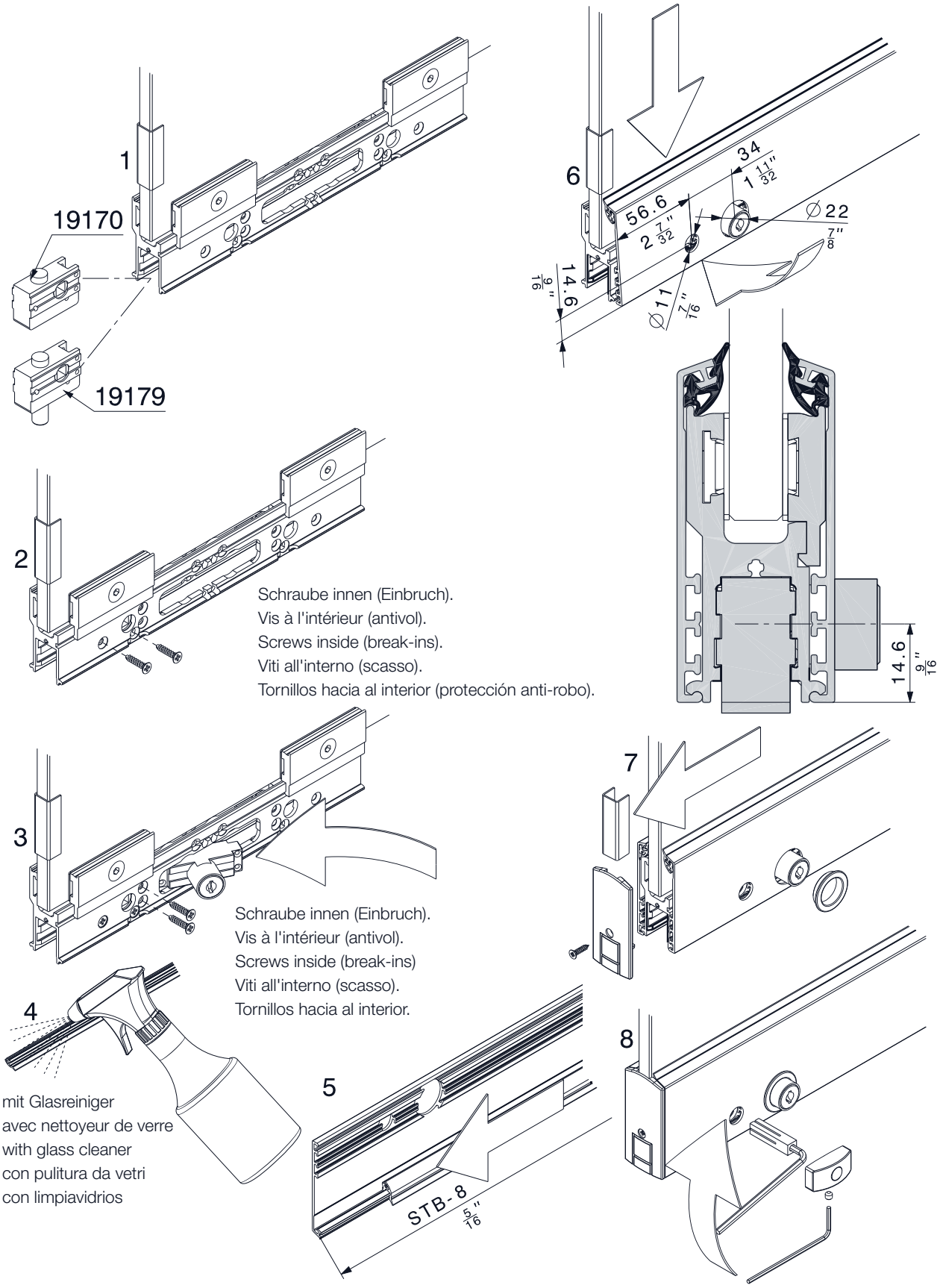
☐ Rundriegelschloss mit Führungszapfen
Serrure à verrou rond avec goujon de guidage
Round bar lock with guide pin
Serratura a chiavistello tondo con perno di guida
Pasador de varilla redonda con rodillo de guía

⊠ Rundriegelschloss
Serrure à verrou rond
Round bar lock
Serratura a chiavistello tondo
Pasador de varilla redonda

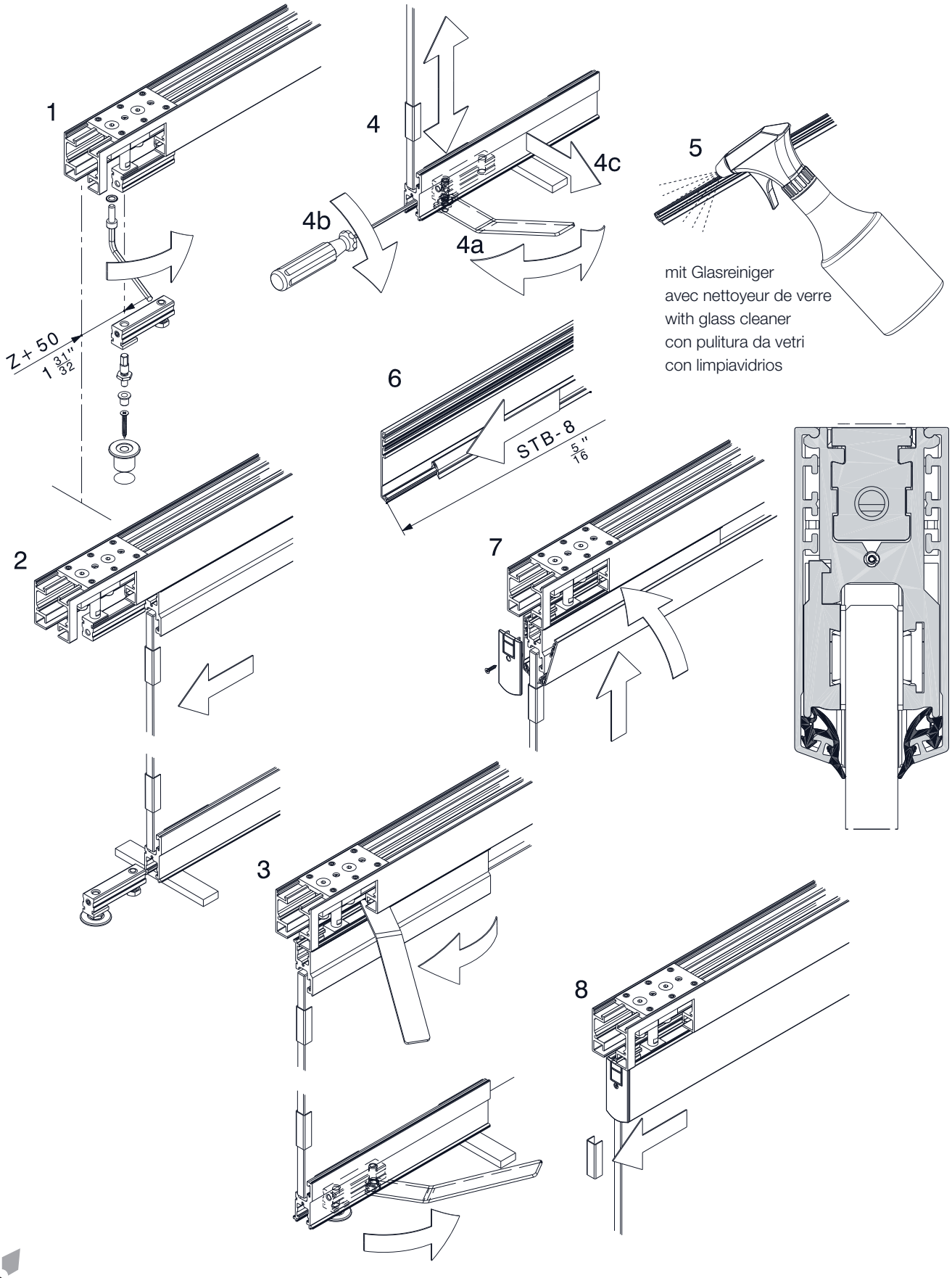
Montage Glashalteprofil
Montage du profil porte-glace
Mounting of glass retainer profile
Montaggio del profilo serravetro
Montaje del perfil portacristal



Montage von Rundriegelschloss mit Zylindermodul
Montage de la serrure à verrou rond avec bloc cylindre
Mounting of round bar lock with cylinder module
Montaggio della serratura a chiavistello tondo con modulo cilindro
Montaje cerradura de vástago redondo con módulo de cilindro



Montage der Drehtüre
Montage de la porte pivotante
Mounting of pivot door
Montaggio della porta girevole
Montaje de la puerta pivotante



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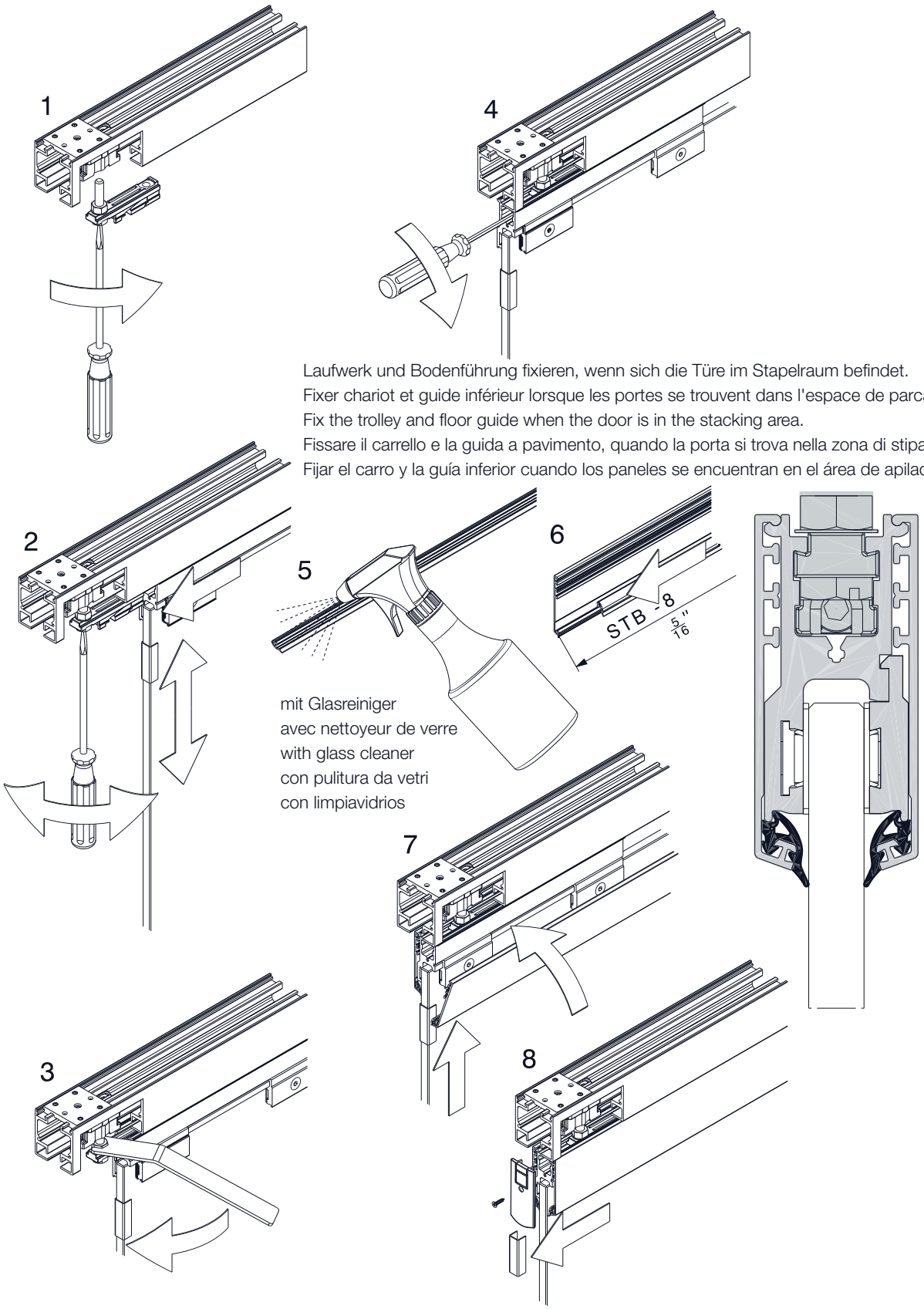
Montage der Schiebetüre
Montage de la porte coulissante
Mounting of sliding door
Montaggio della porta scorrevole
Montaje del panel deslizante



Laufwerk und Bodenführung fixieren, wenn sich die Türe im Stapelraum befindet.
Fixer chariot et guide inférieur lorsque les portes se trouvent dans l'espace de parcage.
Fix the trolley and floor guide when the door is in the stacking area.
Fissare il carrello e la guida a pavimento, quando la porta si trova nella zona di stipa.
Fijar el carro y la guía inferior cuando los paneles se encuentran en el área de apilado.

mit Glasreiniger
avec nettoyeur de verre
with glass cleaner
con pulitura da vetri
con limpiavidrios

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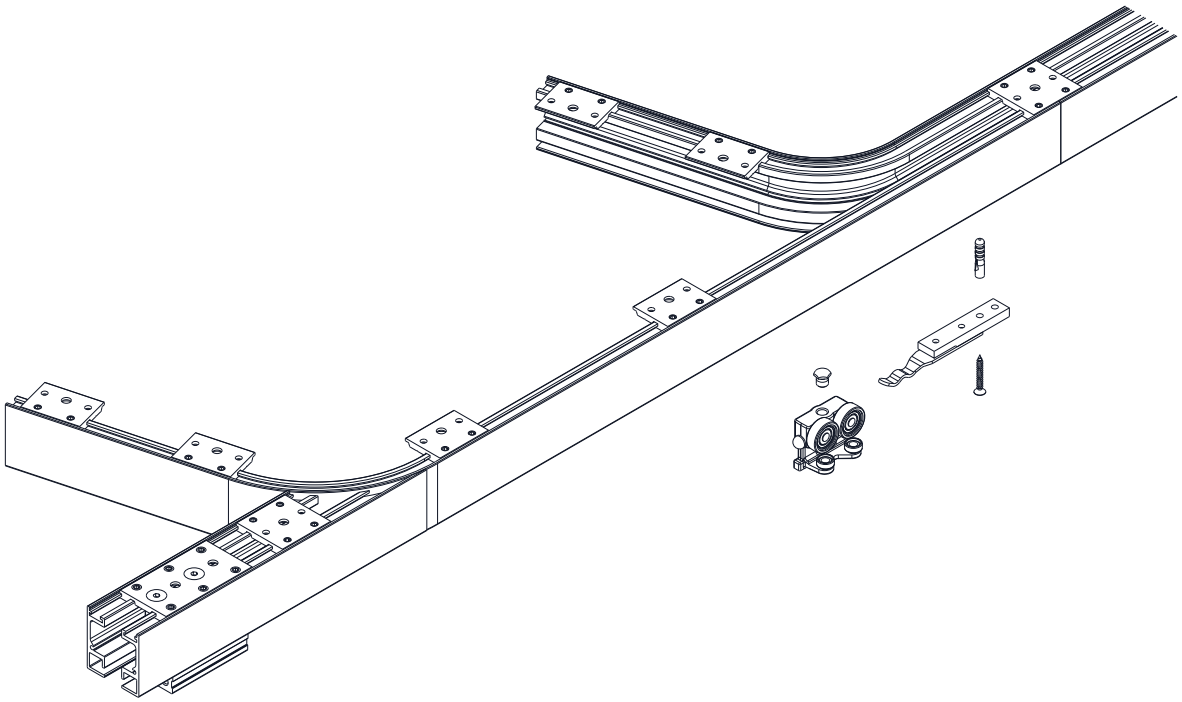
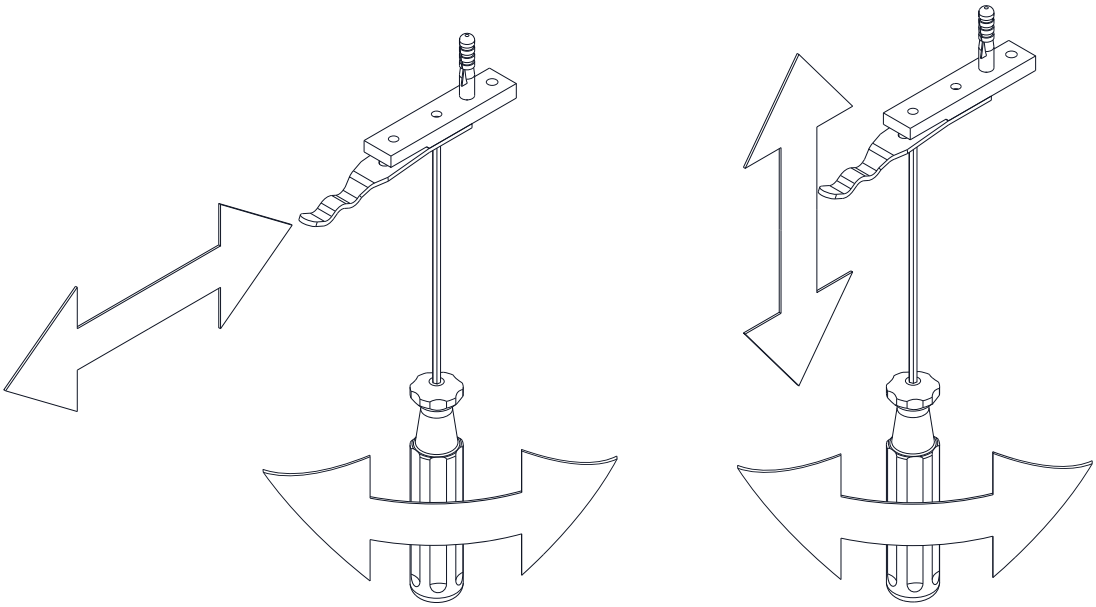
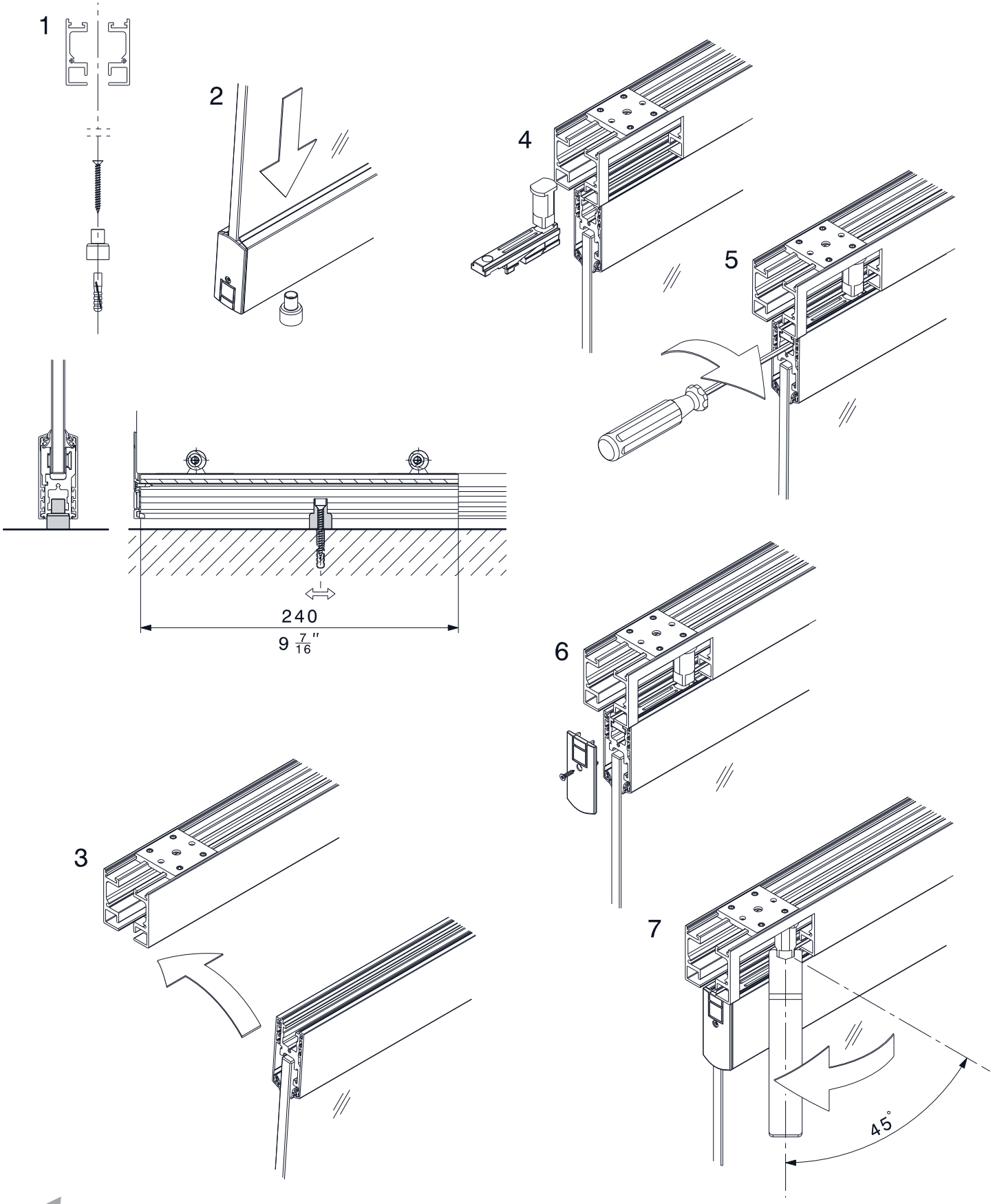
Montage Mittelstopper
Montage d'arrêt du milieu
Mounting of centre stop
Montaggio arresto centrale
Montaje del dispositivo de retención intermedio





Montage Festverglasung
Montage glace fixe
Mounting of stationary glass
Montaggio vetrata fissa
Montaje del cristal fijo



Beschlägeübersicht
Composants de la ferrure
Hardware system components
Assortimento ferramenta
Componentes de los herrajes

	19026
	19027
	18708
	18651
	18751
	18649
	18932
	18930
	19008
	19149
	19170
	19179
	19174
	19107
	19264
	19265
	19266
	19256
	19128

	8 mm ($\frac{5}{16}$) Glas, verre, glass, vetro, cristal	19269
	10 mm ($\frac{12}{32}$") Glas, verre, glass, vetro, cristal	19270
	$\frac{3}{8}$" Glas, verre, glass, vetro, cristal	19271
		19267
		18779
		18785
		19050

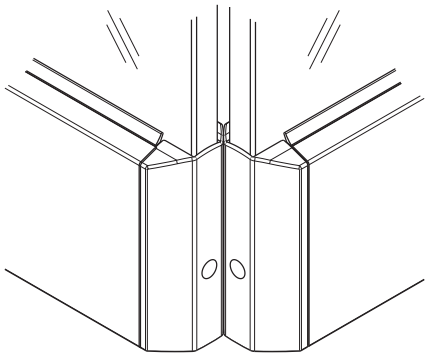
	2500 mm (8'2 $\frac{7}{16}$")	17795
	3500 mm (11'5 $\frac{13}{16}$")	17796
	6000 mm (19'8 $\frac{7}{32}$")	16891
	nach Mass sur mesure cut to size su misura a medida	17529
		17289
		17290
		19160
		18804
		19144

		17128
		17749
		17221
		19165
		17283
gebohrt, percé, predrilled, forato, pre-perforado	3500 mm (11'5 $\frac{13}{16}$")	18864
	6000 mm (19'8 $\frac{7}{32}$")	18216
	nach Mass sur mesure cut to size su misura a medida	18477
		18748
		18640
		18652
1 x uneloxiert non anodisé unanodized non anodizzato sin anodizar	800 mm (2'7 $\frac{1}{2}$")	19222
	1000 mm (3'3 $\frac{3}{8}$")	19223
	1200 mm (3'11 $\frac{1}{4}$")	19224
farblos eloxiert anodisé incolore plain anodized anodizzato incolore anodizado plato	800 mm (2'7 $\frac{1}{2}$")	19167
	1000 mm (3'3 $\frac{3}{8}$")	19168
	1200 mm (3'11 $\frac{1}{4}$")	19169
Edelstahl-Effekt imitation inox stainless-steel effect effetto acciaio inox efecto acero inoxid.	800 mm (2'7 $\frac{1}{2}$")	19176
	1000 mm (3'3 $\frac{3}{8}$")	19177
	1200 mm (3'11 $\frac{1}{4}$")	19178
		19175
		19714
		19715

Hawa Aperto 60 GL parallel 90° | parallel 90° | parallèle 90°

Montageanleitung

für Richtungsänderung von 16°– 90°.



Instructions de montage

pour changement de direction de 16° à 90°.

Installation instructions

for change in direction 16° – 90°.

Istruzioni di montaggio

per cambiamento di direzione di 16° – 90°.

Instrucciones de montaje

para cambios de dirección de 16° – 90°.

Metric specifications are exact - Inches are approximate

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Hawa Aperto 60 GL parallel 90° | parallel 90° | parallèle 90°

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Hawa Sliding Solutions

Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

Deutsch

Hawa Aperto 60 GL
Glasdicke Einscheibensicherheitsglas (ESG) 8/10mm/$\frac{3}{8}$" USA
Mit Objektplan und Montageanleitung 19200 (parallel) oder 19201 (90°) verwenden.
Glasberechnung siehe Montageanleitung 19200 (parallel) oder 19201 (90°).
Montage Profilzylinder siehe Beipackblatt 19784.

Anlagenplanung duch Hawa Sliding Solutions AG.

Français

Hawa Aperto 60 GL
Epaisseurs de verre de sécurité trempé (ESG) 8/10 mm/$\frac{3}{8}$" USA
A utiliser avec plan d'objet et instructions de montage 19200 (parallel) ou 19201 (90°).
Calcul de verre voir l'instructions de montage 19200 (parallel) ou 19201 (90°).
Montage cylindre profilé voir feuille d'instructions 19784.

Planification de l'installation par Hawa Sliding Solutions AG.

English

Hawa Aperto 60 GL
Toughened safety glass thicknesses (ESG) 8/10 mm ($\frac{5}{16}$"/$\frac{13}{32}$") / $\frac{3}{8}$" USA
Use in conjunction with architect's drawing and installation instructions no. 19200 (parallel) or 19201 (90°).
Glass calculation see installation instructions 19200 (parallel) or 19201 (90°).
Mounting of profile cylinder see instruction sheet 19784.

Installation planning by Hawa Sliding Solutions AG.

Italiano

Hawa Aperto 60 GL
Spessore del vetro singolo temperato di sicurezza (ESG) 8/10 mm/$\frac{3}{8}$" USA
Usare con piano oggetto e istruzioni di montaggio 19200 (parallel) o 19201 (90°).
Calcolo del vetro vedi istruzioni di montaggio 19200 (parallel) o 19201 (90°).
Montaggio cilindro profilato vedi foglio d'istruzioni 19784.

Progettazione dell'installazione tramite Hawa Sliding Solutions AG.

Español

Hawa Aperto 60 GL
Espesor del vidrio de seguridad de una sola hoja (ESG) 8/10 mm/$\frac{3}{8}$" USA
Usar en conjunto con dibujos de proyecto e instrucciones de montaje nº 19200 (parallel) o 19201 (90º).
Cálculo del vidrio ver instrucciones de montaje nº 19200 (parallel) o 19201 (90º).
Montaje cilindro perfilado ver hoja de instrucciones 19784.

Planificación de la instalación a través de Hawa Sliding Solutions AG.

Technische Änderungen vorbehalten
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Subject to modification
Ci si riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

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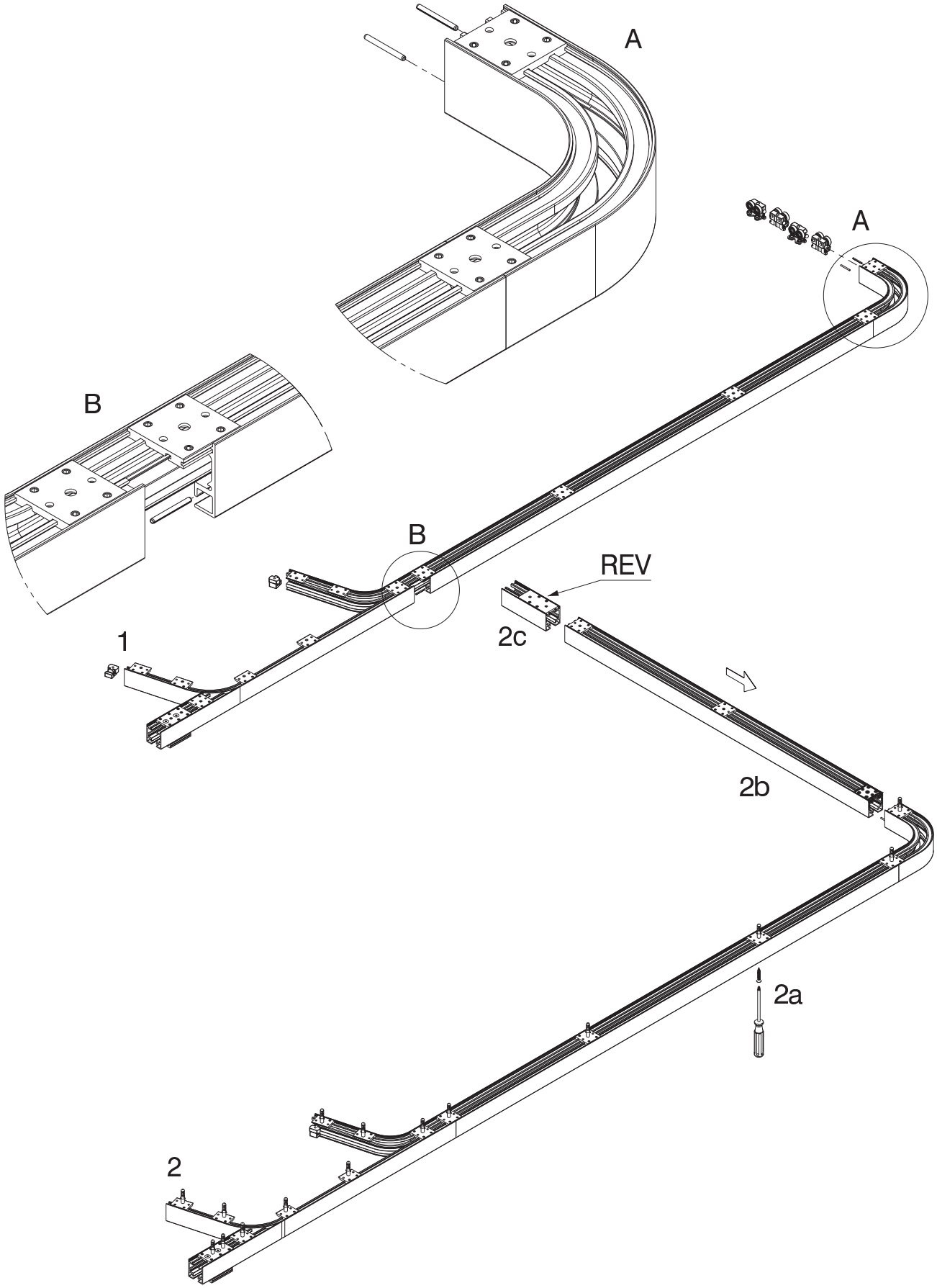
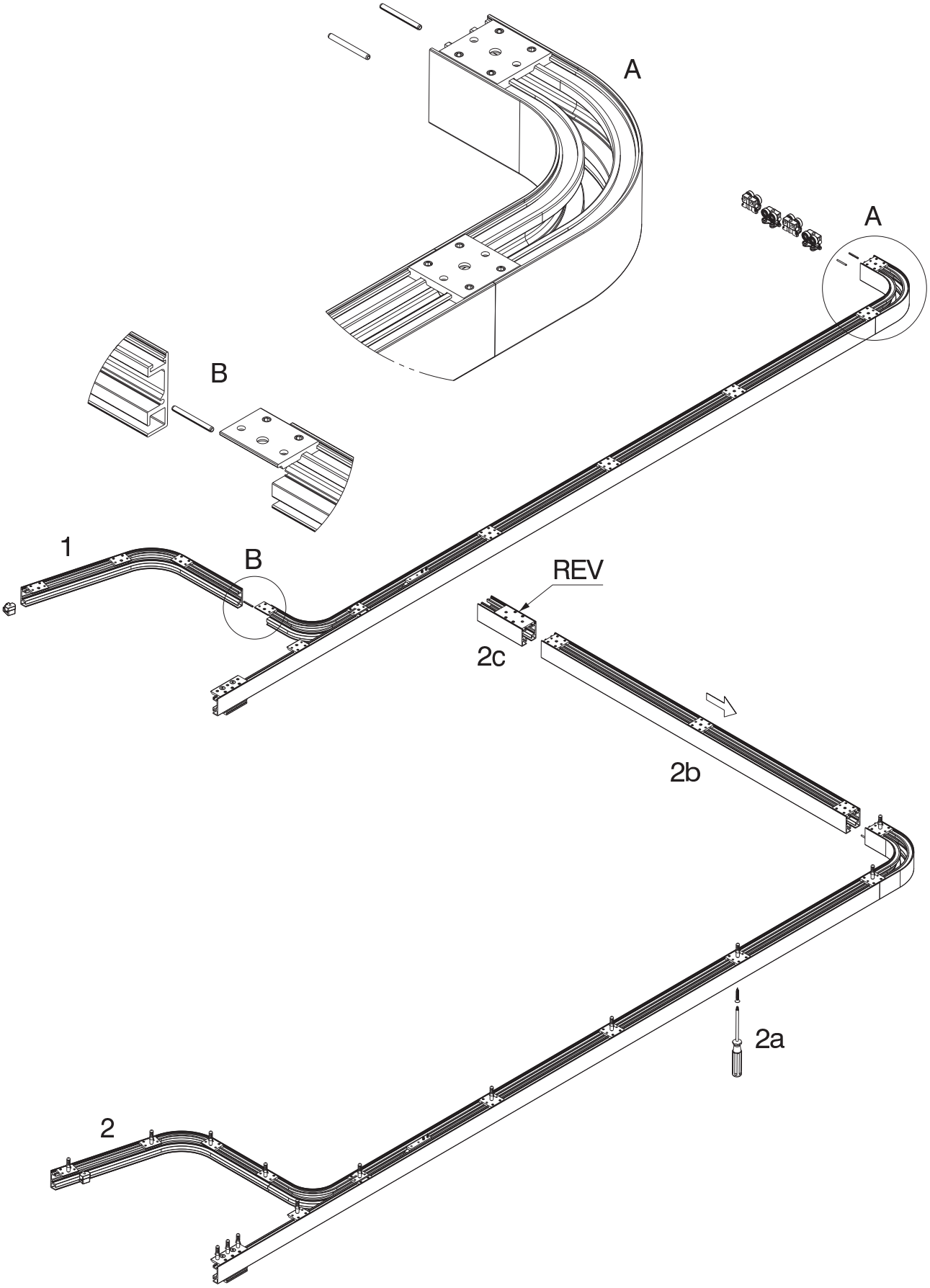
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com

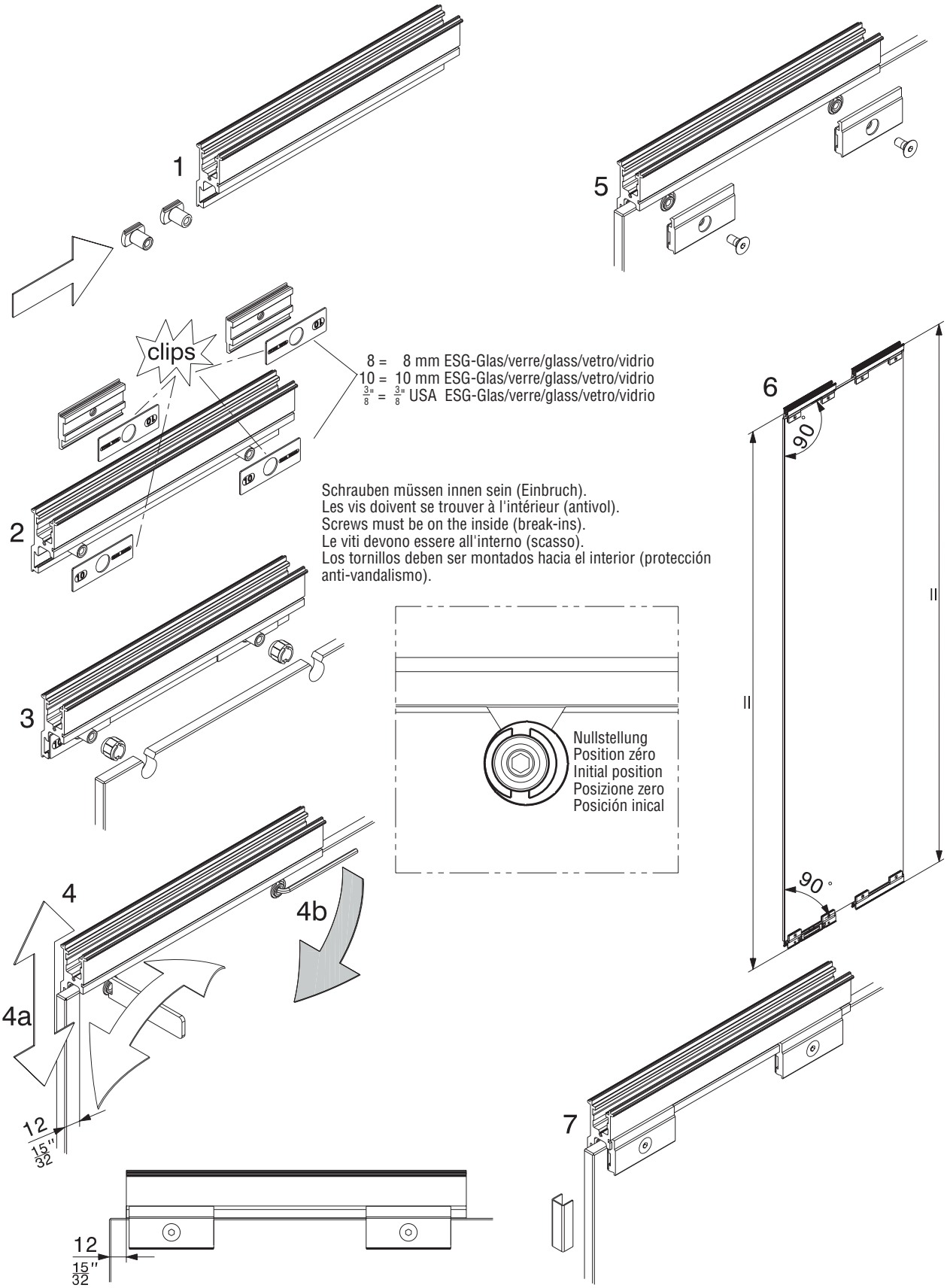
Montage Laufschiene parallel mit Richtungsänderung
Montage de rail de roulement en parallèle avec changement de direction
Installation of parallel top track with change in direction
Montaggio rotaia parallelo con cambiamento di direzione
Montaje del riel de rodadura paralelo con cambio de dirección



Montage Laufschiene 90° mit Richtungsänderung
Montage de rail de roulement à 90° avec changement de direction
Installation of 90° top track with change in direction
Montaggio rotaia a 90° con cambiamento di direzione
Montaje del riel de rodadura a 90° con cambio de dirección



Montage Glashalteprofil mit Richtungsänderung 16° – 90°
Montage de profil porte-glace avec changement de direction 16° – 90°
Installation of glass retainer profile for change in direction 16° – 90°
Montaggio profilo serravetro con cambiamento di direzione 16° – 90°
Montaje del perfil portavidrios para cambio de dirección 16° – 90°



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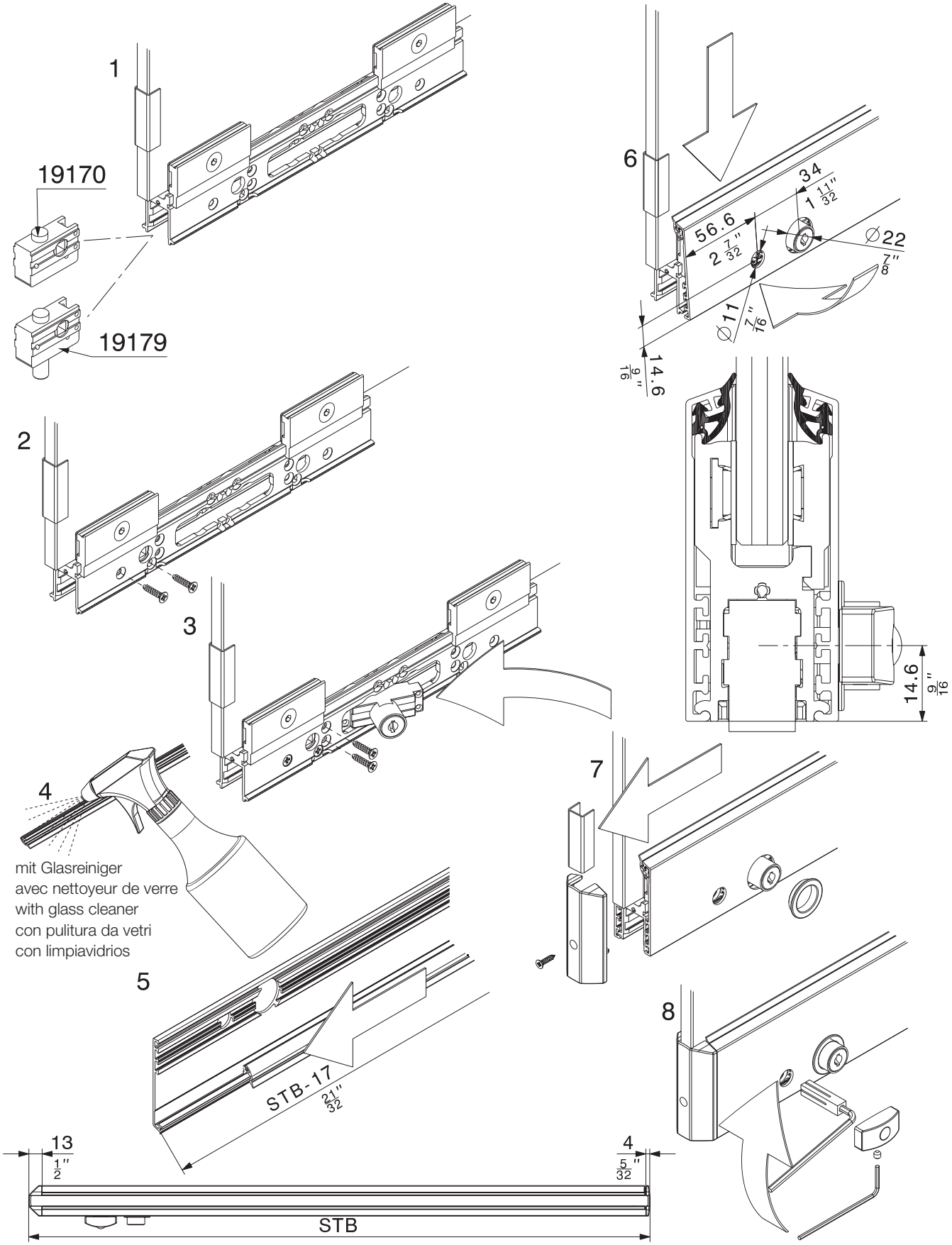
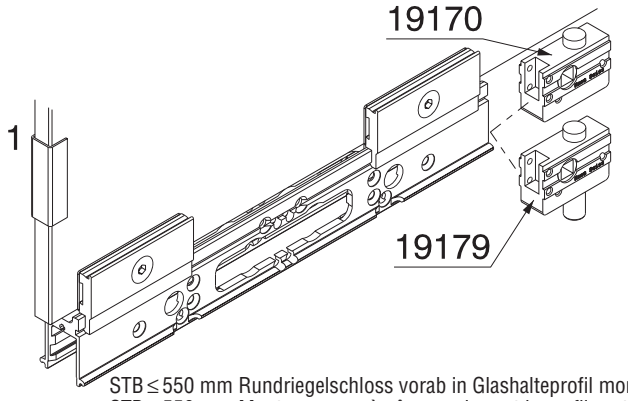
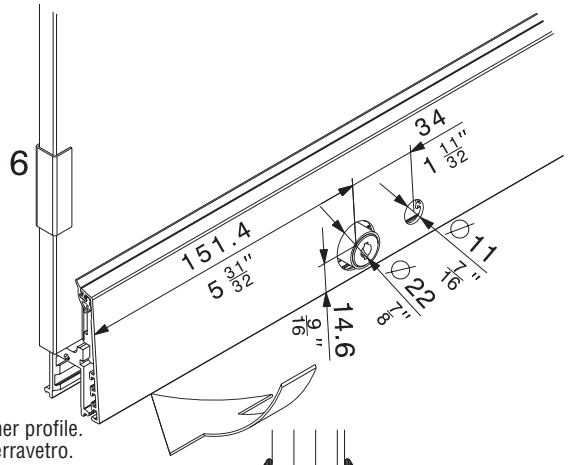
Montage von Rundriegelschloss und Zylindermodul (16° – 60° mit Führungsschiene)
Montage de serrure à pêne rond et de module de cylindre (16° – 60° avec rail de guidage)
Installation of round bolt lock and cylinder module (16° – 60° with bottom guide channel)
Montaggio serratura a chiavistello tondo e modulo cilindro (16° – 60° con guida)
Montaje del pasador de varilla redonda y el módulo de cilindro (16° – 60° con guía inferior)

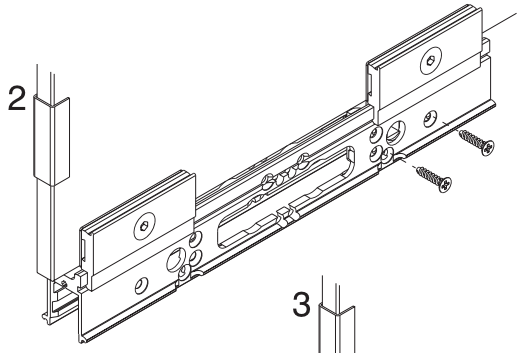


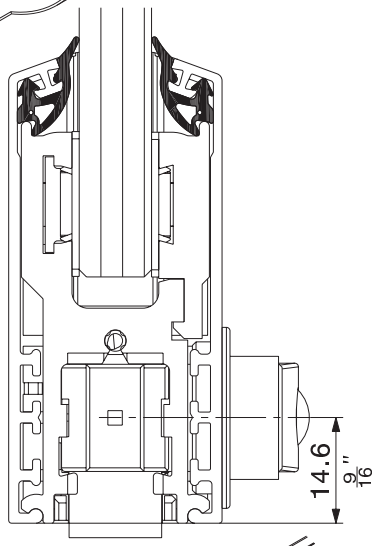
Montage von Rundriegelschloss und Zylindermodul (75° – 90° mit Führungsschiene)
Montage de serrure à pêne rond et de module de cylindre (75° – 90° avec rail de guidage)
Installation of round bolt lock and cylinder module (75° – 90° with bottom guide channel)
Montaggio serratura a chiavistello tondo e modulo cilindro (75° – 90° con guida)
Montaje del pasador de varilla redonda y el módulo de cilindro (75° – 90° con guía inferior)

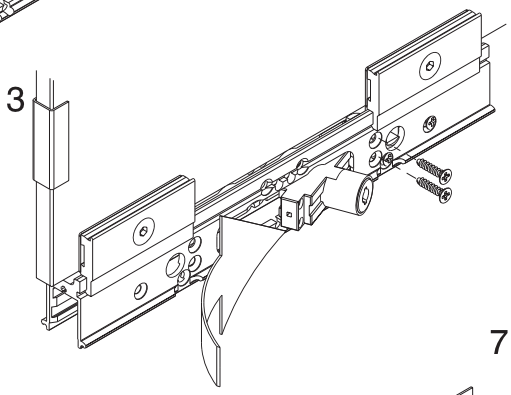




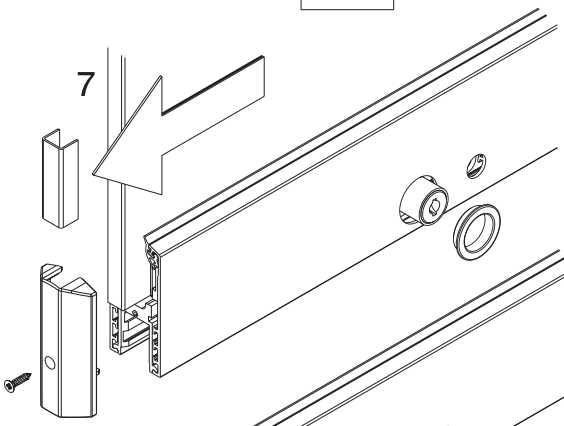
STB ≤ 550 mm Rundriegelschloss vorab in Glashalteprofil montieren.
STB ≤ 550 mm Monter serrure à pêne rond avant le profil porte-glace.
STB ≤ 550 mm (1'9 21/32") Install round bolt lock before mounting glass retainer profile.
STB ≤ 550 mm Montare la serratura a chiavistello tondo prima del profilo serravetro.
STB ≤ 550 mm Montar el pasador de varilla redonda antes de colocar el perfil portavidrios.

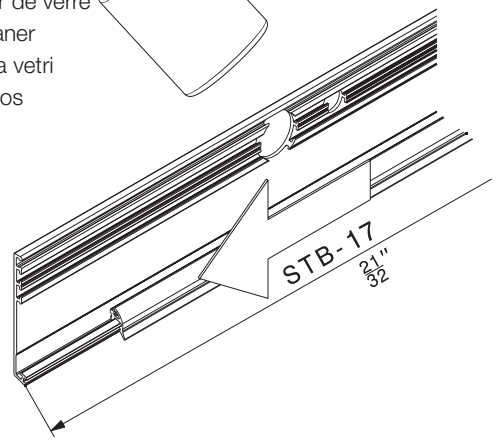


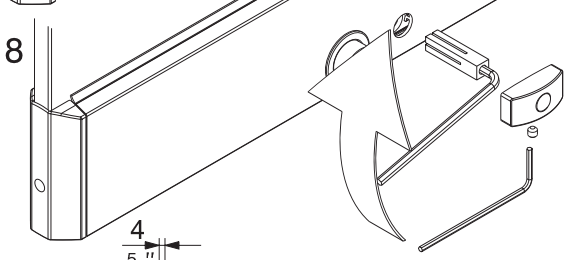




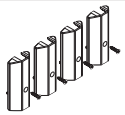
mit Glasreiniger
avec nettoyeur de verre
with glass cleaner
con pulitura da vetri
con limpiavidrios







Zusatzbeschlag für Hawa Aperto 60 GL mit Richtungsänderung
Ferrure supplémentaire pour Hawa Aperto 60 GL avec un changement de direction
Supplementary hardware for Hawa Aperto 60 GL featuring a change in direction
Ferramenta supplementare per Hawa Aperto 60 GL con cambiamento di direzione
Herraje suplementario para Hawa Aperto 60 GL con cambios de dirección

	19268

Technische Änderungen vorbehalten
Sous réserve de modifications techniques
Subject to modification

Ci si riserva di apportare modifiche tecniche
Bajo reserva de modificaciones técnicas

Hawa Sliding Solutions

Hawa Sliding Solutions AG Untere Fischbachstrasse 4, 8932 Mettmenstetten, Schweiz
Tel. +41 44 787 17 17, Fax +41 44 787 17 18, info@hawa.com, www.hawa.com