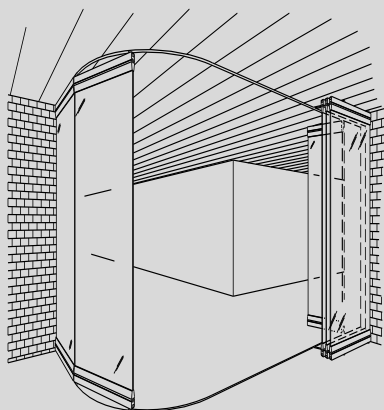


HAWA-Variotec 150/GV



Installation instructions

Modular hardware system for elegant all-glass sliding walls weighing from 100 and 150 kg (220 and 330 lbs.) per panel.

Glass thicknesses 10–12,7 mm ($\frac{13}{32}$ "– $\frac{1}{2}$ ").

Patents

23847 a

1 Table of contents

Content	Page
1 Table of contents	2
2 Product information	4
3 Technical data	5
4 Safety instructions	6
5 Abbreviations	7
6 Drawing symbols	8
7 System design	9
7.1 Pivot door (DT)	10
7.2 Sliding door (ST)	11
8 Design options	
8.1 Installation situation	12
8.2 Top tracks (LS) and bottom guide channels (FS)	13
8.2.1 Top tracks (LS)	13
8.2.2 Curved top tracks and curves	13
8.2.3 Top-fixing plates	13
8.2.4 Servicing unit (REV)	14
8.2.5 Couplings	14
8.2.6 Cover caps for the dual track	14
8.2.7 Top track stops	14
8.2.8 Matching segment for dual top tracks	15
8.2.9 Bottom guide channels (FS)	15
8.3 Glass suspension and retainer profiles (TGP)	16
8.3.1 Cover caps	16
8.4 Locks and floor bolts	17
8.5 Floor lock	18
9 Stacking areas	
9.1 90° stacking area	19
9.2 Parallel stacking area	19
9.3 Door types for HAWA-Variotec 150/GV	19
9.4 Pivot door (DT)	20
9.5 Swing door (PT)	21
9.6 Sliding door (ST) 90°	22
9.7 Sliding doors (ST) 90° with wall connection	23
9.8 Locking door 90°	24
9.9 Sliding doors (ST) parallel	25
9.10 Sliding doors (ST) parallel with wall connection	26
9.11 Locking door, parallel	27
9.12 Sliding pivot door (SDT)	28
9.13 Surface mounted top door closer	29
9.14 Sliding swing door (SPT)	30

10 Stacking area designs		
10.1	Parallel stacking area without concealed interior	31
10.2	Parallel stacking area with concealed interior	31
10.3	90° stacking area without concealed interior	32
10.4	90° stacking area with concealed interior	32
11 Top track assembly methods		
11.1	Top-fixing plates	33
11.2	Installing top tracks (LS)	34
11.3	Installing the top track cover cap (LS)	35
11.4	Installing the sub-structure (UK)	36
11.4.1	Installation recommendation when using the Hawa connection bracket 17045	36
11.4.2	Installation recommendation when using the Hawa connection bracket 17045	37
11.5	Installing the bottom guide channels (FS)	38
11.6	Installing the floor mounted sleeve	38
12 Pre-assembly		
12.1	Installing the glass suspension and retainer profile (TGP)	39
12.2	Pre-assembly of the siding door (ST)	40
12.3	Pre-assembly of the siding door (ST) with wall connection	41
12.4	Pre-assembly of the siding pivot door (SDT) and sliding swing door (SPT)	42
12.5	Pre-assembly of the sliding swing door (SPT)	43
12.6	Installing the locks	44
12.6.1	Installing the two-bolt safety lock	44
12.6.2	Installing the deadbolt lock	44
12.7	Installing the pivot bearing	45
12.8	Pre-assembly pivot door catch	46
13 Installing the doors		
13.1	Installing the pivot door (DT)	47
13.2	Installing the swing door (PT)	48
13.3	Installing the sliding door (ST)	49
13.4	Installing the sliding pivot door (SDT)	50
13.5	Installing the sliding swing door (SPT)	51
13.6	Installing the external pivot bearing (special assembly instruction 16945)	52
13.7	Suspension points for directional changes	53
13.8	Track stop dimensions	54
14 Installing optional components		
14.1	Installing fixed glass (FESTV)	55
14.2	Installing the glass suspension and retainer profile (TGP) for fixed glass (FEST)	56
14.3	Installing fixed glass (FEST)	57
14.4	Glass suspension and retainer profile 230 mm (9")	58
14.5	Installing glass edge protection profiles	59
14.6	Installing brush seals	59
14.7	Ceiling connection bracket for the curved top track	60
14.8	Installing edge brackets	61
15 Cleaning notes		62
16 Maintenance work and wearing parts		62

2 Product information

Intended use

Hardware for glass sliding doors made of ESG or VSG.

Intended place of use

This hardware should only be installed and used in dry rooms.
Use in external areas only after consultation with Hawa Sliding Solutions AG.

Article number

Articles are identified by a 5-digit number.

General notes

The document «Safety Instructions (22991)» is an integral component of these installation instructions

 Hawa Components

Metric dimensions apply - dimensions stated in inches are for information only.

Please retain these instructions; replacements are available at www.hawa.com

Disposal

Materials, accessories and packaging should be recycled in an environmentally friendly manner.

3 Technical data

Doors

- Maximum door height 3500 mm (11'5 $\frac{13}{16}$ ")
- Maximum door height for SDT + SPT 3000 mm (9'10 $\frac{1}{8}$ ")
- Minimum door width 700 mm (2'3 $\frac{5}{16}$ ")
- Minimum door width for SPT 850 mm (2'9 $\frac{15}{16}$ ")
- Maximum door width 1500 mm (4'11 $\frac{1}{16}$ ")
- Maximum door width for SDT + SPT 1100 mm (3'7 $\frac{5}{16}$ ")

Attention

- The dimensions of the door elements are also limited by the maximum door weight.
- The dimensions of the overall installation are limited by the parking room design.

Top track profiles

- Width 63 mm (2 $\frac{1}{2}$ ") x Height 93 mm (3 $\frac{21}{32}$ ") x max. Length 6000 mm (19'8 $\frac{7}{32}$ ")

Geometry of the top track profile

- straight
- curved, minimum axis radius of 4000 mm (13'1 $\frac{1}{2}$ ")

Glass suspension and retainer profiles

- Width 36 mm (1 $\frac{7}{16}$ ") x Height 105 mm (4 $\frac{5}{32}$ ") x max. Length 6500 mm (21'3 $\frac{29}{32}$ ")
- Width 36 mm (1 $\frac{7}{16}$ ") x Height 230 mm (9 $\frac{1}{16}$ ") x max. Length 6000 mm (19'8 $\frac{7}{32}$ ") (square plinth profile)

Bottom guide channel

- Width 32/20 mm (1 $\frac{9}{32}$ " / $\frac{25}{32}$ ") x Height 28 mm (1 $\frac{1}{8}$ ") x max. Length 6000 mm (19'8 $\frac{7}{32}$ ")

Door weight

- maximum door weight for trolley 13778 = 100 kg (220 lbs.)
- maximum door weight for trolley 13818 = 150 kg (330 lbs.)
- maximum door weight for trolley 13821, 13820 = 90 kg (198 lbs.) (SDT+SPT)

Seals (optional)

- 2 sets of 2 horizontal brush seals for top and bottom
- vertical glass edge protection profiles and rubber profiles

Locks / Bolts

- Single-bolt safety lock (with and without guide pin)
- Two-bolt safety lock
- Deadbolt lock
- Floor lock lever

Stacking area situation

- Parallel to the top track axis
- 90° to the top track axis
- Special stacking area
- Stacking areas with and without concealed interior

Glass

- Either ESG (toughened safety glass) or VSG (laminated safety glass) made from ESG must be used
- Glass thickness ESG: 10, 12 and 12.7 mm ($\frac{13}{32}$ " , $\frac{19}{32}$ " and $\frac{1}{2}$ ")
- Glass thickness VSG made from ESG: 10,4–12,8 mm ($\frac{13}{32}$ – $\frac{1}{2}$ ")
- A maximum offset of 2 mm ($\frac{3}{32}$ ") in the glass cutout is permissible for VSG made from ESG
- Minimum seam on all glass edges, max. 1 mm ($\frac{1}{16}$ ") seam in glass cutout

Door variants

- Stationary doors
 - DT Pivot doors (with pivot bearing)
 - PT Swing doors (with floor spring)
 - Slidable doors
 - ST Sliding doors
 - STD Sliding pivot doors (with top door lock)
 - SPT Sliding swing doors (with floor spring)
 - Fixed glass
 - FESTV Fixed glass in a dual top track
 - FEST Fixed glass on ceiling or UK
- For door type details please see document 23912.

4 Safety instructions

The symbols for notes relevant to safety (hazard warnings) as used in this assembly instruction have the following meanings:

DANGER

Danger: Indicates an imminent danger with a high risk that can result in death or serious physical injury if not avoided. This signal word is reserved for extreme danger.

WARNING

Warning: Indicates a possible danger with a moderate risk that can result in death or (serious) physical injury if not avoided.

CAUTION

Caution: Indicates a hazard with low risk that can result in light to moderate injury or material damage.

Note







Indicates practical information and tips that enable the optimum use of machines, equipment or devices.

5 Abbreviations

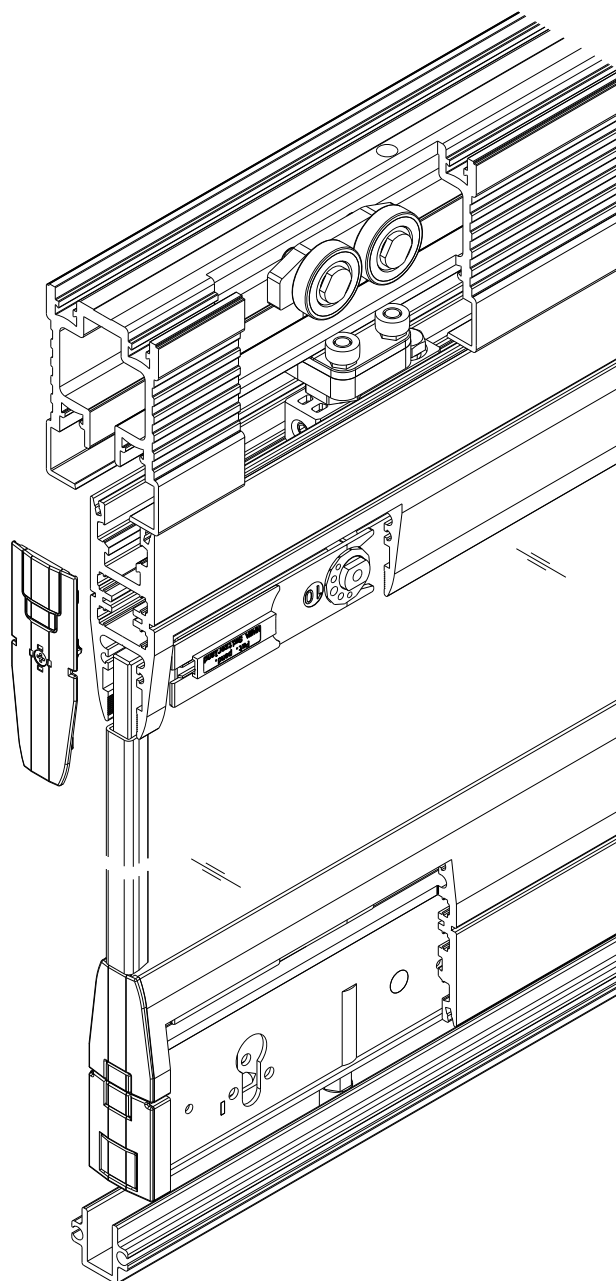
AP	Suspension point
BD	Brush seal
DT	Pivot door
ESG	Toughened safety glass
FEST	Fixed glass with suspension bracket
FESTV	Fixed glass with double top track
FS	Bottom guide channel length / Bottom guide channel
GB	Glass width
LS	Top track length/ top track
PT	Swing door
Q	Variable
REV	Servicing unit
SDT	Sliding pivot door
SPT	Sliding swing door
ST	Sliding door
STB	Sliding door width
STH	Sliding door height
TGP	Glass suspension and retainer profile
VSG	Laminated safety glass
UK	Sub-structure
WM	Wall dimension
Z	Air gap (if there are multiple air gaps = Z1, Z2...)

6 Drawing symbols

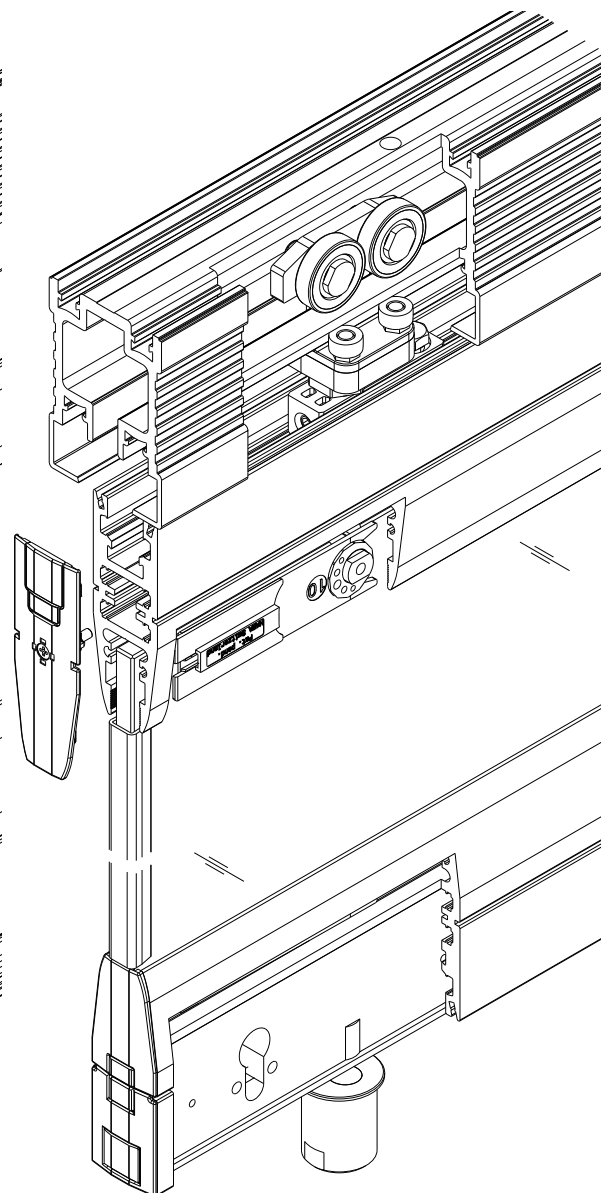
	ST Single-wheeled trolley	13778 (100 kg) [220 lbs.]
	ST Two-wheeled trolley	13818 (150 kg) [330 lbs.]
	SPT Single-wheeled trolley	13820 (90kg) [198 lbs.]
	SDT Two-wheeled trolley	13821 (90 kg) [198 lbs.]
	Two-bolt safety lock	13785 / 13786 (17/22 mm) [$\frac{11}{16}$ "/> $\frac{7}{8}$ "]
	One-bolt safety lock	13856 / 13857 (17/22 mm) [$\frac{11}{16}$ "/> $\frac{7}{8}$ "]
	Two-bolt safety lock	13784 with square/hexagon socket
	One-bolt safety lock	13855 with square/hexagon socket
	Deadbolt lock, square/hexagon socket	14087 / 17130
	Floor lock	19820 / 19821
	Centring piece	19818
	Centring piece 0-18°	16629
	Guide with suspension block	13781
	One-bolt safety lock with guide pin	13999 / 14000 (17/22 mm) [$\frac{11}{16}$ "/> $\frac{7}{8}$ "]
	One-bolt safety lock with guide pin	14076 with square/hexagon socket
	Deadbolt lock with guide pin	14171 with square/hexagon socket

7 System design

With top track



With floor mounted sleeve



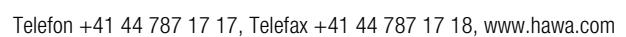
Technical drawings of the 105 series ball bearing unit, showing four views: front, side, top, and bottom. The drawings include detailed dimensions for the housing, ball, and shaft components.

Front View: Shows the unit's profile with a width of 63 mm and a height of 105 mm. The housing has a width of 63 mm and a height of 105 mm. The ball has a diameter of 10 mm. The shaft has a diameter of 10 mm. The unit is shown with a mounting bracket.

Side View: Shows the unit's profile with a height of 105 mm and a width of 10 mm. The housing has a height of 105 mm and a width of 10 mm. The ball has a diameter of 10 mm. The shaft has a diameter of 10 mm. The unit is shown with a mounting bracket.

Top View: Shows the unit's profile with a width of 105 mm and a height of 10 mm. The housing has a width of 105 mm and a height of 10 mm. The ball has a diameter of 10 mm. The shaft has a diameter of 10 mm. The unit is shown with a mounting bracket.

Bottom View: Shows the unit's profile with a width of 105 mm and a height of 10 mm. The housing has a width of 105 mm and a height of 10 mm. The ball has a diameter of 10 mm. The shaft has a diameter of 10 mm. The unit is shown with a mounting bracket.



8 Design options

8.1 Installation situation

The plan view of every installation is unique. Different ceiling designs call for corresponding top track fastenings.

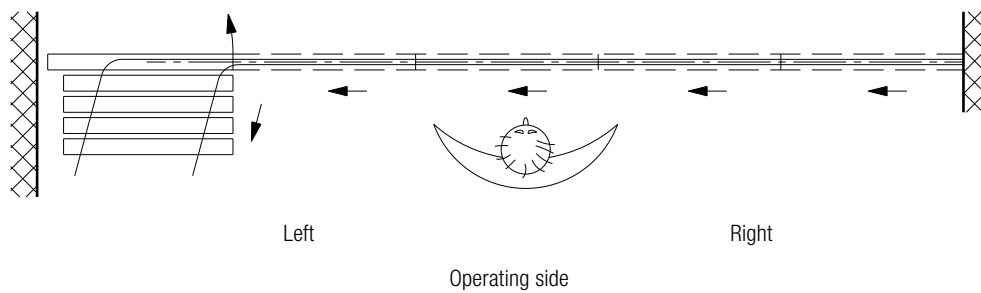
We view every installation from the operating side, i.e. from inside the room. When we speak of a stacking area on the left, then the stacking area is on the left as seen from inside the room.

The pivot bearing of a sliding pivot door is on the left when viewed from the operating side.

The following symbol indicates the operating side in every drawing:



Example: Installation with a left-hand pivot door and left-hand parallel stacking

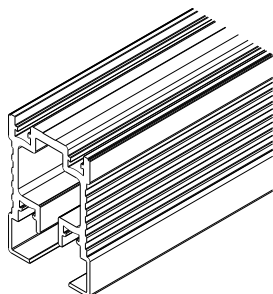


8.2 Top tracks (LS) and bottom guide channels (FS)

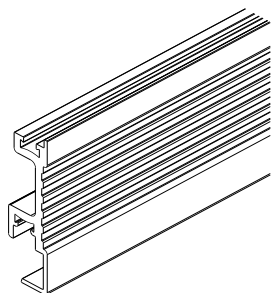
All top tracks and bottom guide channels are made of plain anodized aluminium.

8.2.1 Top tracks (LS)

The basic element is a straight top track designed as a dual top track.

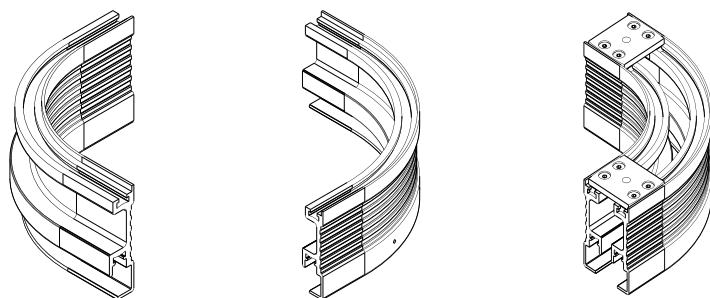


Single top tracks are used in stacking areas without concealed interior or for making curves.



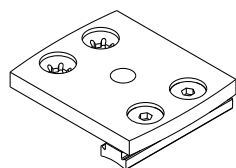
8.2.2 Curved top tracks and curves

The dual top track design consists of two single top tracks connected together with suspension straps. Axis radius 127 mm (5").

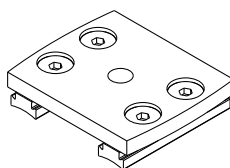


8.2.3 Top-fixing plates

Top-fixing plates are used to create curves; they are also used in stacking areas. They serve to attach the top tracks to the ceiling or sub-structure. They are fitted in the stacking area at intervals of 140 mm (5 $\frac{17}{32}$ ") and also directly above track joints.



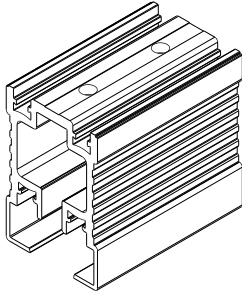
Top-fixing plates for a single top track



Top-fixing plates for dual top tracks

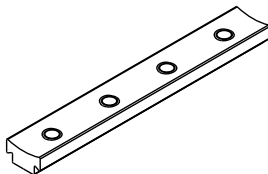
8.2.4 Servicing unit (REV)

The servicing unit is always fitted in front of the branch to the stacking area. Dismantling the servicing unit enables doors to be quickly removed and refitted (for instance when replacing trolleys).



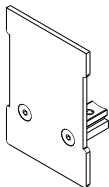
8.2.5 Couplings

They have to be fitted to every connection between top tracks.



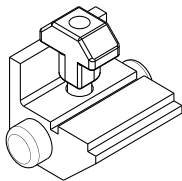
8.2.6 Cover caps for the dual track

These are fitted to every open end on double top tracks in stacking areas with concealed interior.

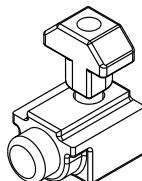


8.2.7 Top track stops

The adjustable bumpers fitted in the top tracks are reliable end stops for the sliding doors. A bumper is required at the end of the stacking area.



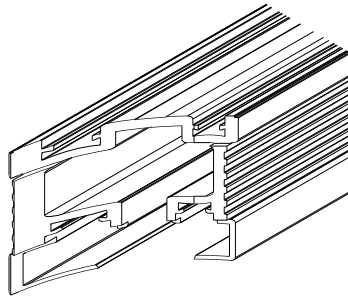
Track stops for a single top track



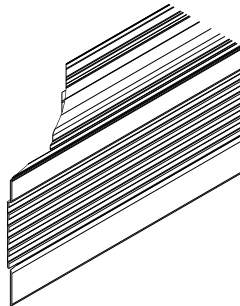
Track stops for a dual top track

8.2.8 Matching segment for dual top tracks

Used as a connection profile in parallel stacking areas for holding the pivot door components. It is used in directional changes for aesthetic reasons.



Right-hand matching segment 45°-90°



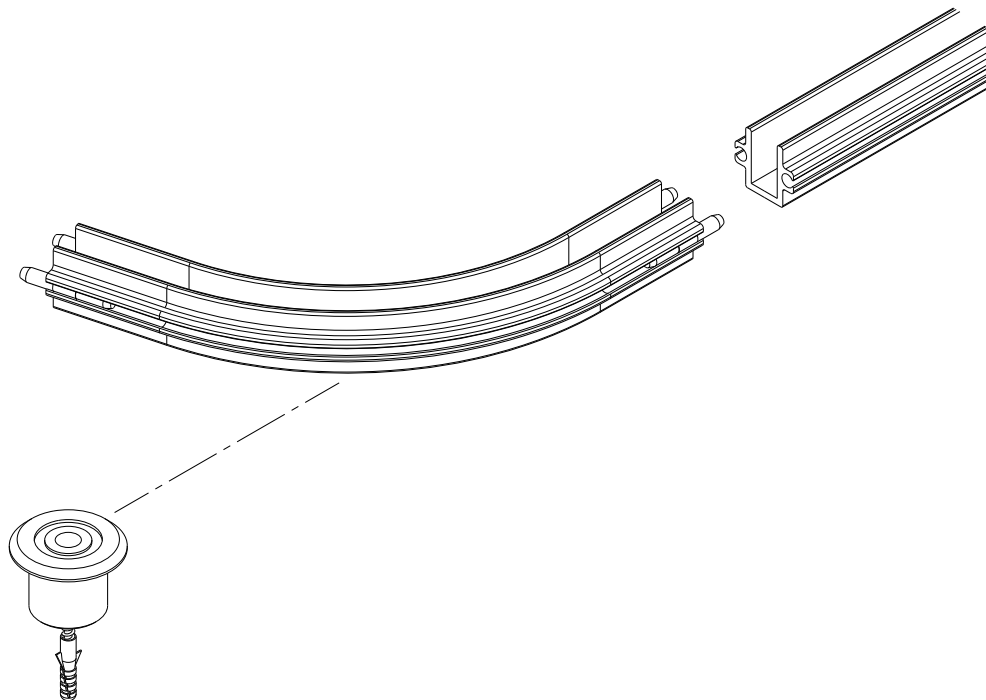
Left-hand matching segment 45°-90°

8.2.9 Bottom guide channels (FS)

The use of bottom guide channels ensures smooth and stable sliding. It also prevents the sliding doors from swinging out of control. Recommended for every installation.

The locks are locked inside the bottom guide channel.

A bottom guide channels cannot be used on installations with sliding pivot or sliding swing doors. It is not possible to install a strike plate/pivot bearing lock or a floor spring.



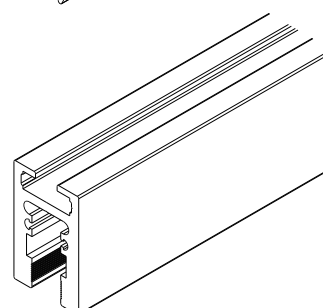
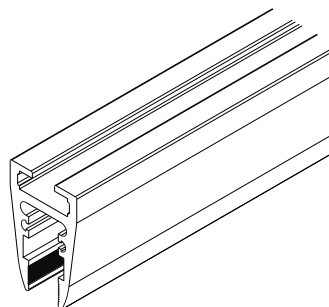
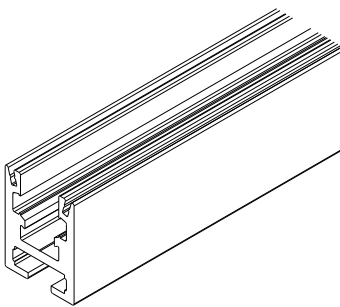
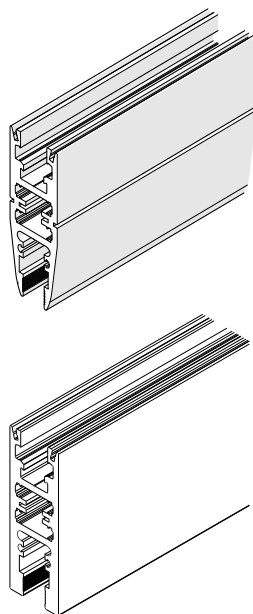
8.3 Glass suspension and retainer profiles (TGP)

Glass suspension and retainer profiles fulfil various functions at the same time:

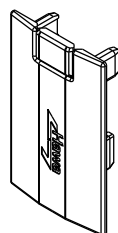
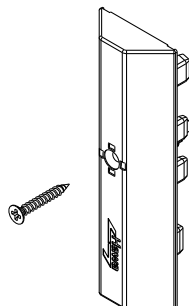
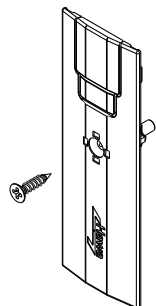
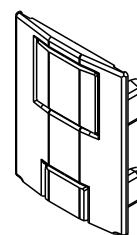
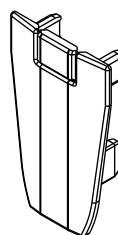
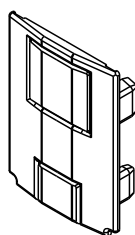
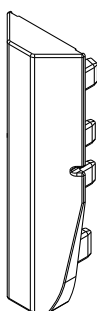
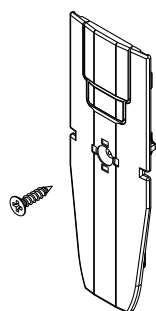
- They enable the integration of all functional and operating elements such as floor bolts, locks, guide pins, centring part, the mechanical elements for sliding swing doors such as bolts, coupling mechanism, etc., without any loss of stability. The glass suspension and retainer profiles do not have any elements protruding from the side (with the exception of the security collar for the cylinder and the thumbturn).
- One or two brush seals can be fitted if required; retrospective fitting is also possible.
- A cover cap must be clipped or screwed to the face side. It protects the profile and the glass.

Glass suspension and retainer profile

Separate suspension profile and retainer profile for sliding pivot doors and sliding swing doors.



8.3.1 Cover caps



8.4 Locks and floor bolts

Locks and floor bolts are available in various designs to provide security. Locks and bolts are always operated from the operating side of the sliding doors (on the inside). At least one door element should have a lock that can be operated from the outside to enable access (e.g. when opening or closing a shop).

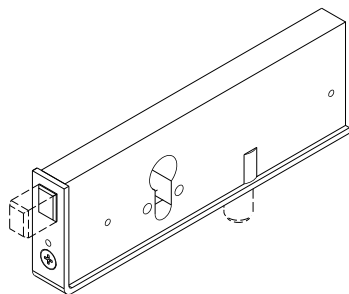
The hardened steel bolts on two-bolt safety locks have a stroke of 20 mm ($\frac{25}{32}$ "). One bolt slides vertically into the bottom guide channel or floor socket whilst the other slides horizontally into the glass suspension and retainer profile of the adjacent sliding door, thereby centring the doors.

All locks can be used on the left or right. The distance from the outer edge of the sliding door to the vertical bolt is 123 mm ($4\frac{27}{32}$ "); it can be extended to a maximum of 200 mm ($7\frac{7}{8}$ ") by moving the lock.

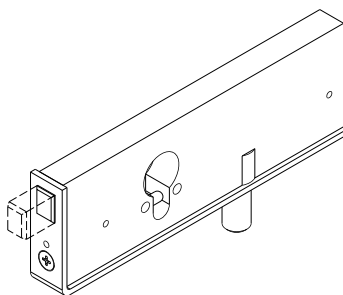
A distance of 60 mm ($2\frac{3}{8}$ ") from the outer edge of the sliding door to the vertical bolt can be achieved by using a deadbolt lock (square/hexagon socket type only).

Safety locks with one or two bolts are available with and without guide pins for 17 mm ($\frac{11}{16}$ ") profile cylinders, 22 mm ($\frac{7}{8}$ ") round cylinders and square/hexagon socket locks.

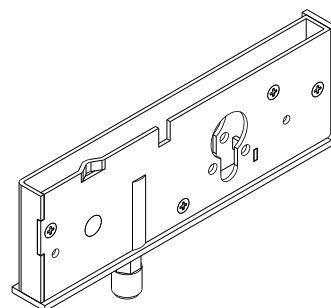
Single-bolt safety lock



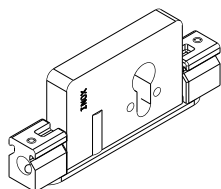
Two-bolt safety lock



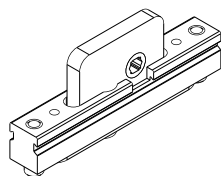
Single-bolt safety lock with guide pin



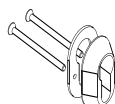
Bar bolt lock



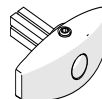
Pivot bearing lock/
deadbolt lock



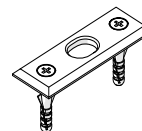
Security collar



Thumbturn



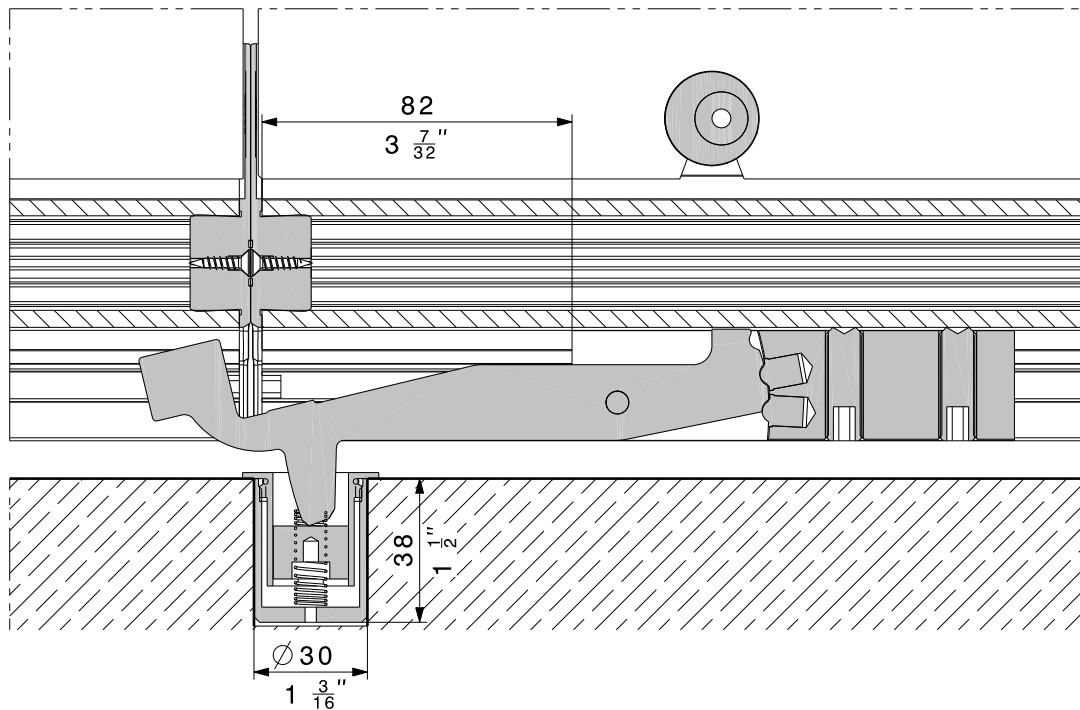
Strike plate



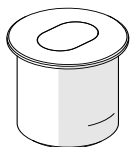
8.5 Floor lock

The sliding doors on installations without a bottom guide channel can be operated via a floor lock lever on the front side. The locks move downwards and into the adjacent doors. Foot operation provides a high degree of operating comfort when opening and closing the locks.

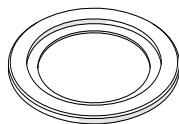
The floor bolt lever 0–18° allows directional changes of up to 18°.



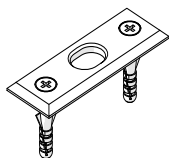
Floor mounted sleeve with sprung lid



Rosette for floor-mounted sleeve



Strike plate



9 Stacking areas

The stacking area is used to store the doors when they are opened. The dimensions, arrangement and number of sliding doors must be known to enable the required stacking area dimensions to be calculated.

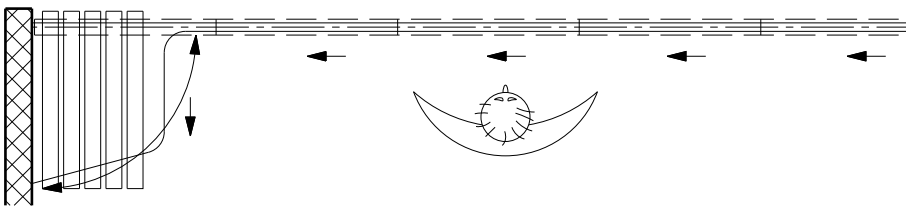
The configuration of the stacking area depends on the situation of the building and the installation. The following variants are possible:

- 90° to the top track axis
- Parallel to the top track axis
- Special stacking areas with sliding elements in variable positions

9.1 90° stacking area

Elements stacked at 90° in the stacking area stand at right angles to the direction of the sliding axis. Pivot doors and sliding doors have the same width.

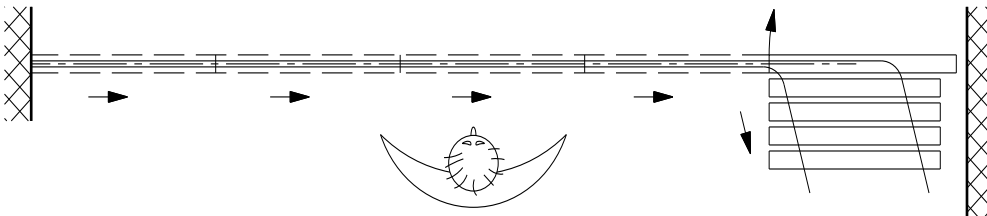
Stacking area 90°, left



9.2 Parallel stacking area

Elements stacked in parallel in the stacking area stand parallel to the direction of the sliding axis. The pivot door is 100 mm ($3\frac{15}{16}$ ") wider than the sliding doors.

Parallel stacking area, right



9.3 Door types for HAWA-Variotec 150/GV

We work with different door types and their corresponding sub-assemblies to simplify planning and installation.

We differentiate between installations with and without bottom guide channels. Stacking areas are differentiated by stacking method and cover design.



The following sub-assemblies have variable components. Changes due to different sliding wall parameters will lead to changes in the components. Example: Glass fixing components must be adapted to the glass used.

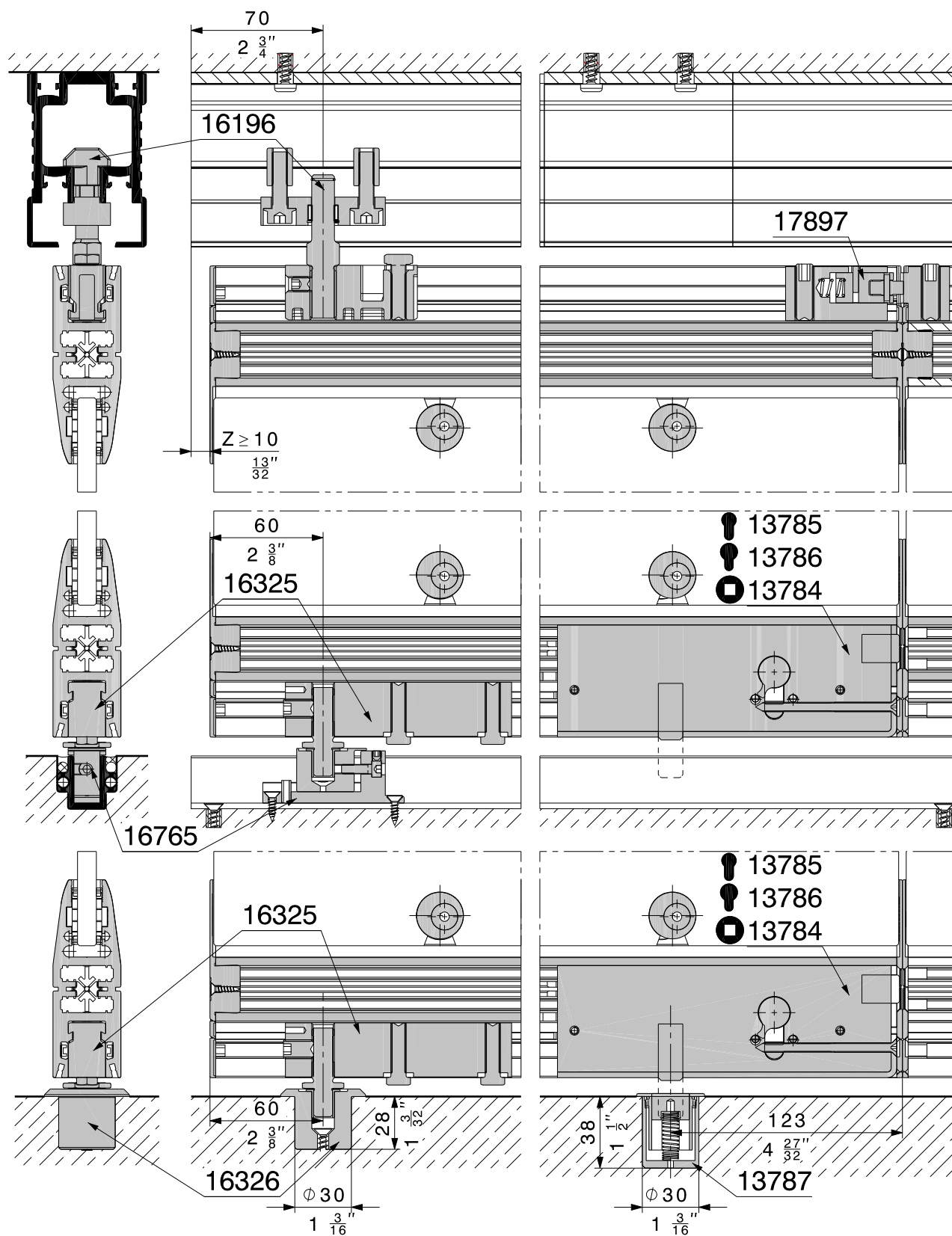
The sub-assemblies for ST sliding doors do not include trolleys; they have to be added separately. Exception: The trolley for SDT and SPT is predefined.

The following door types and sub-assemblies are used:

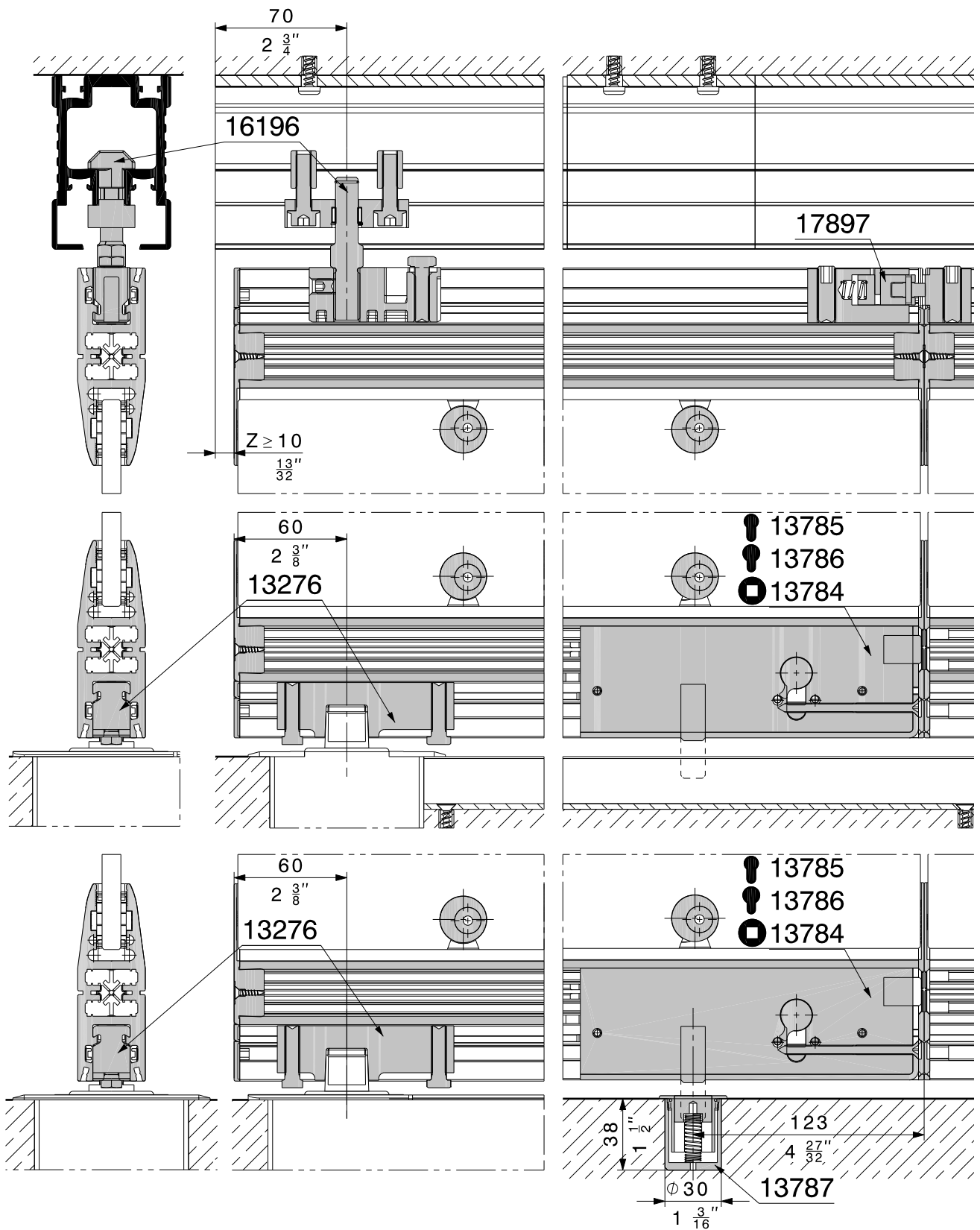
- Pivot door (DT)
- Swing door (PT)
- Sliding door (ST)
- Sliding pivot door (SDT)
- Sliding swing door (SPT)
- Fixed glass with suspension bracket (FEST)
- Fixed glass with double top track (FESTV)

Please see document 23912 for door type details.

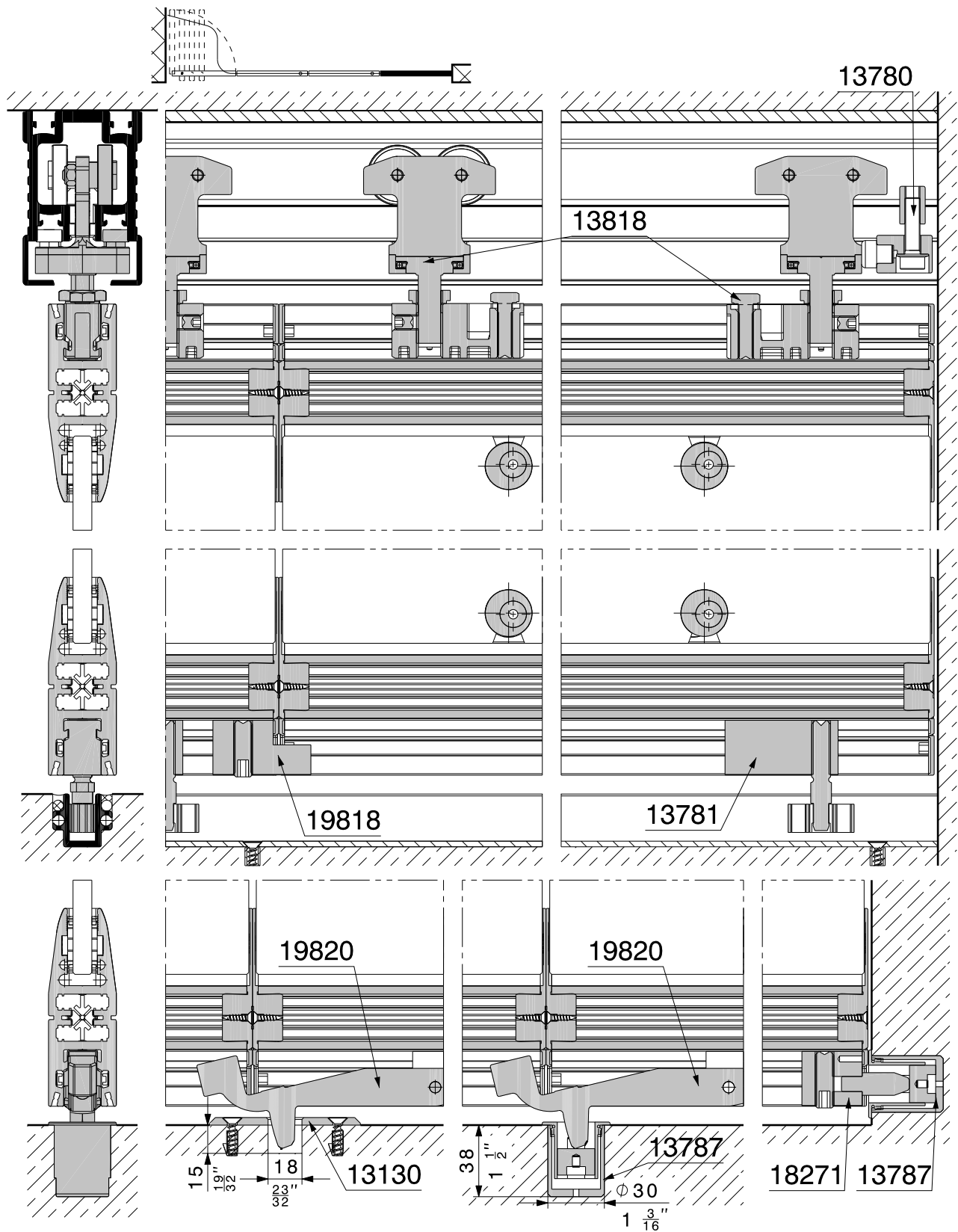
9.4 Pivot door (DT)



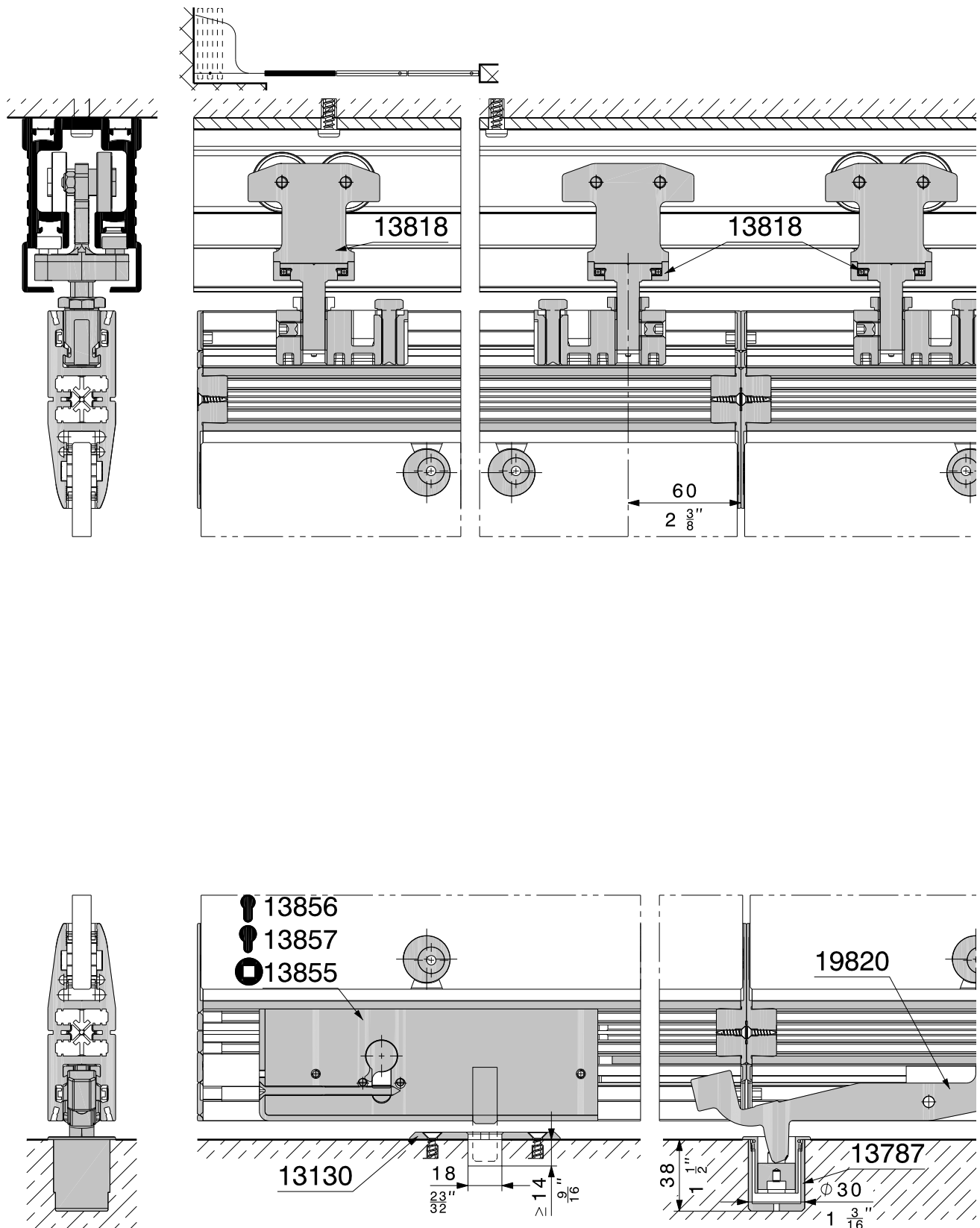
9.5 Swing door (PT)



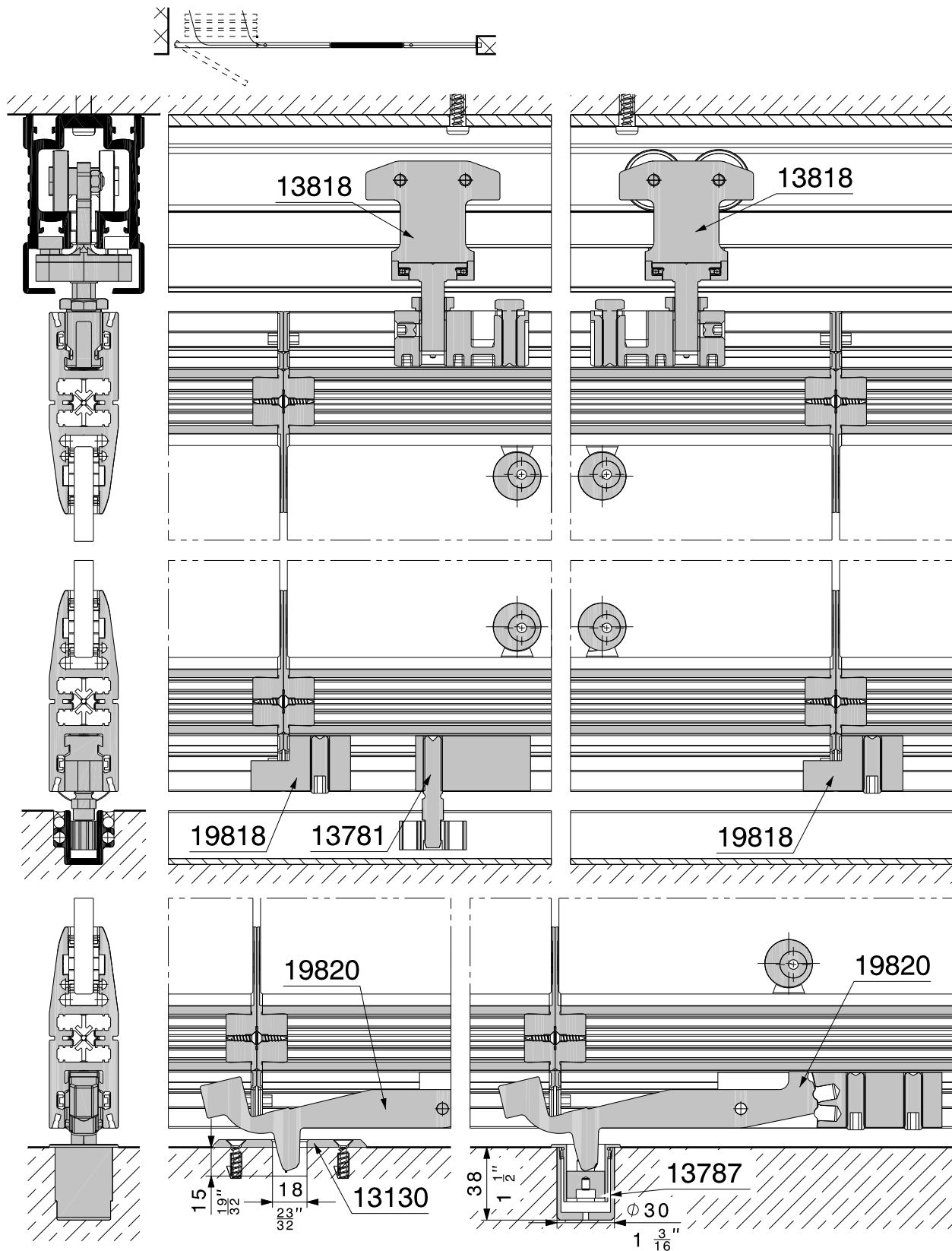


9.7 Sliding doors (ST) 90° with wall connection


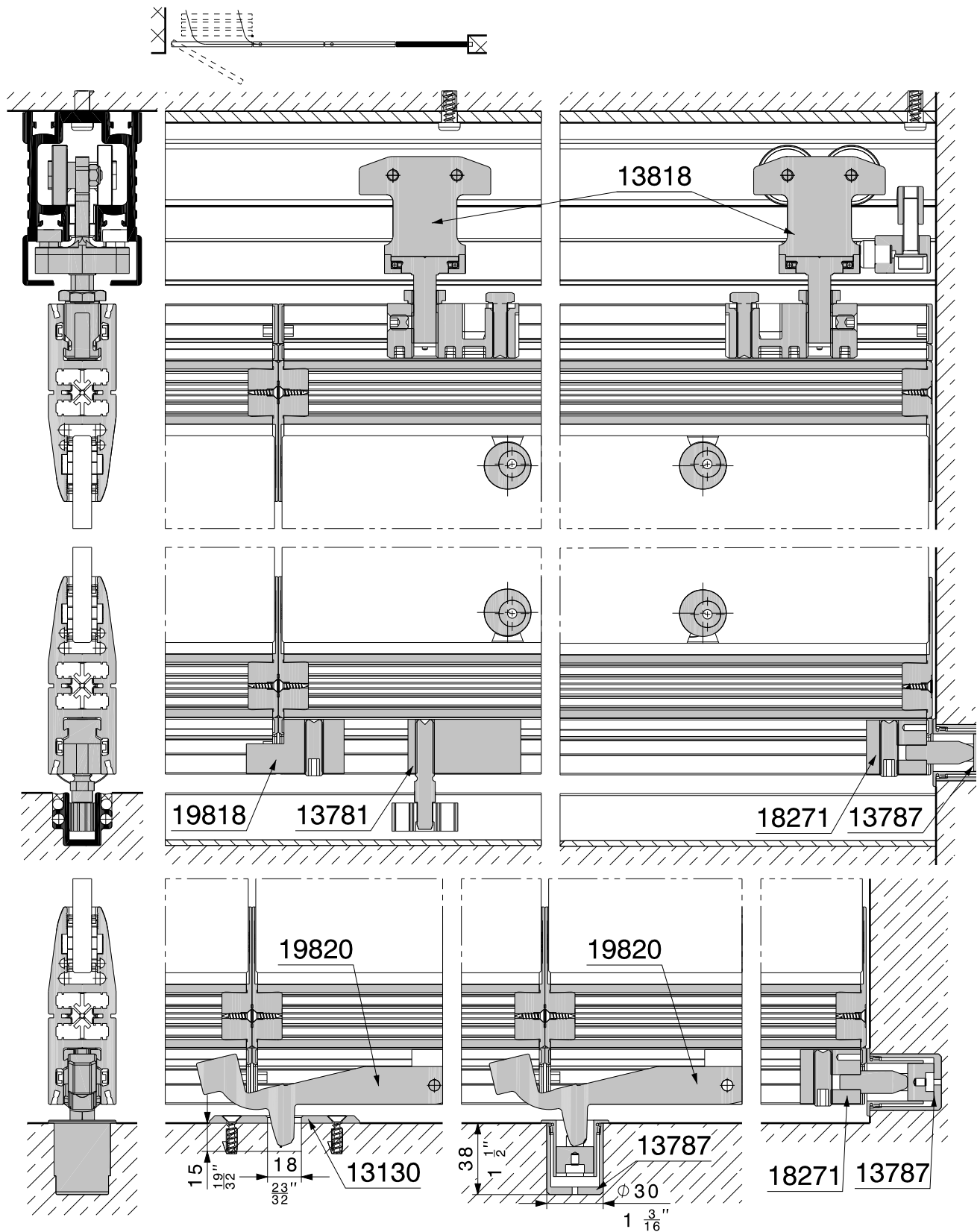
9.8 Locking door 90°



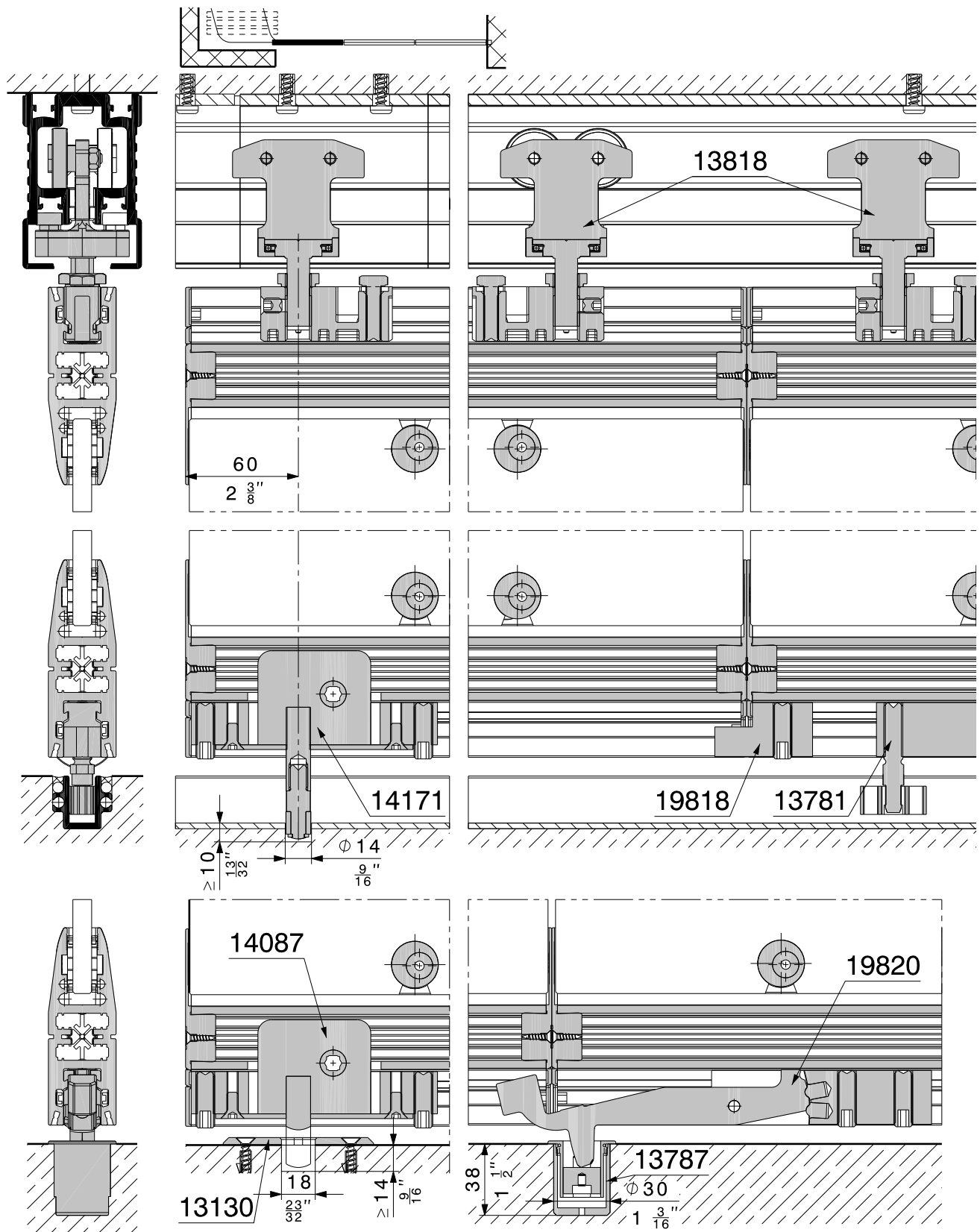
9.9 Sliding doors (ST) parallel



9.10 Sliding doors (ST) parallel with wall connection



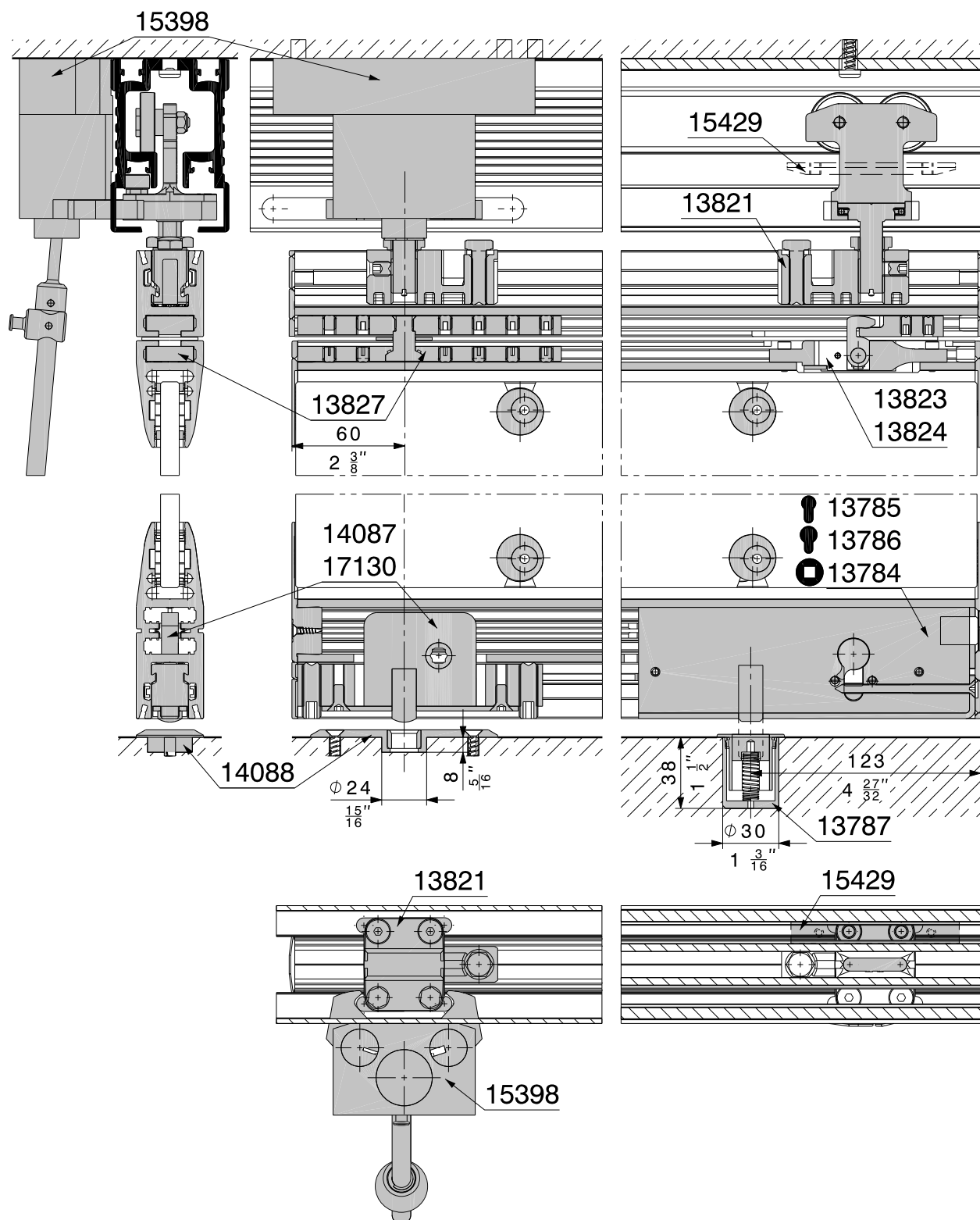
9.11 Locking door, parallel



9.12 Sliding pivot door (SDT)

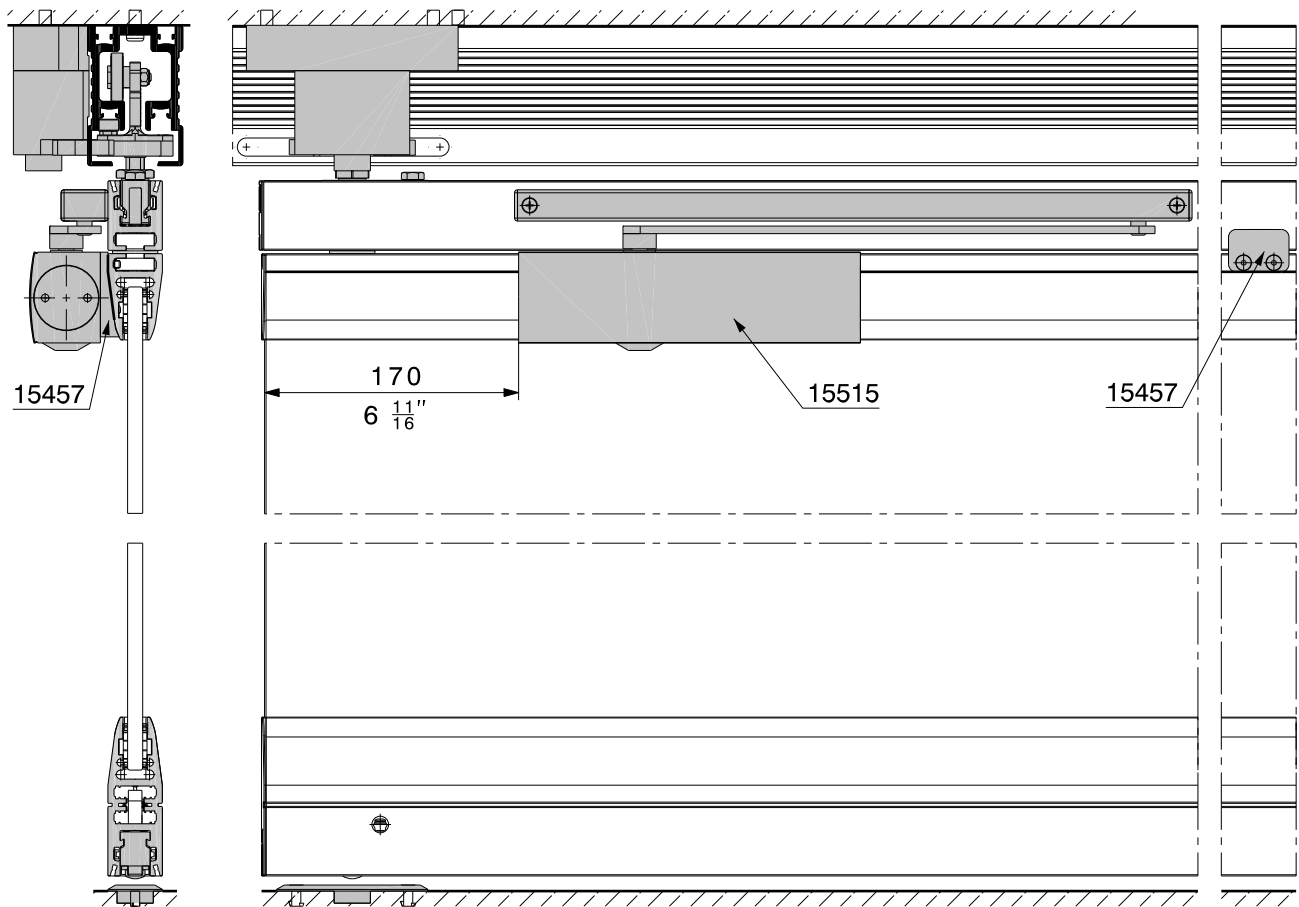
Sliding pivot doors and sliding swing doors must be fitted with a holding device (15398) and a stopping plate (15429).

The top pivot bearing 13827 is a **wearing part** (no claims under warranty); it should be inspected and if necessary replaced after approx. **250,000 movements**.

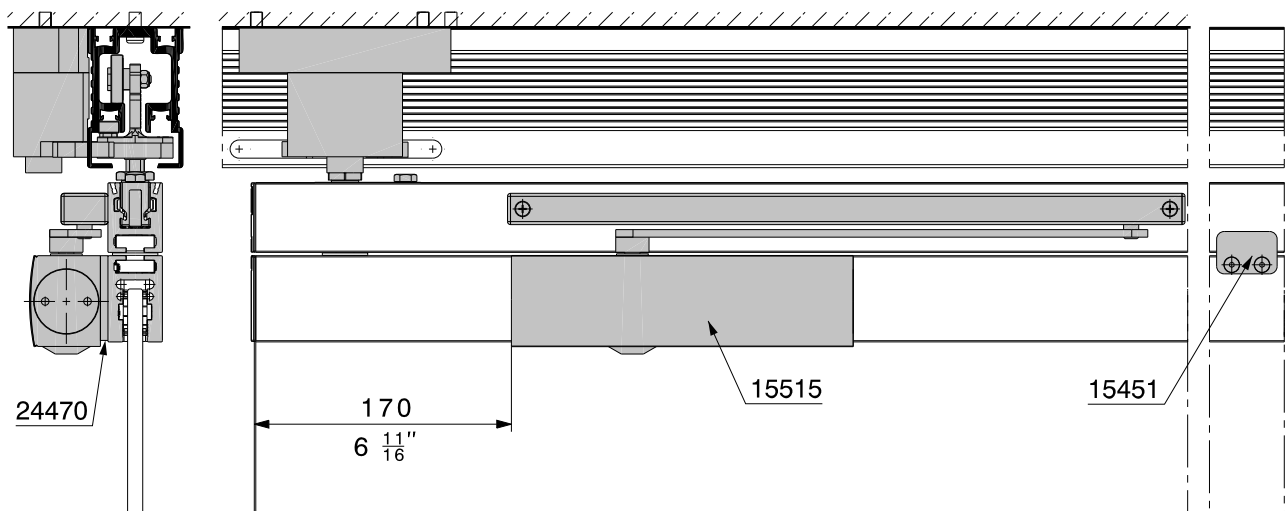


Maximum sliding door width: 1100 mm (3'7 1/8")
 Maximum sliding door height: 3000 mm (9'10 1/2")
 Maximum door weight: 90 kg (198 lbs.)

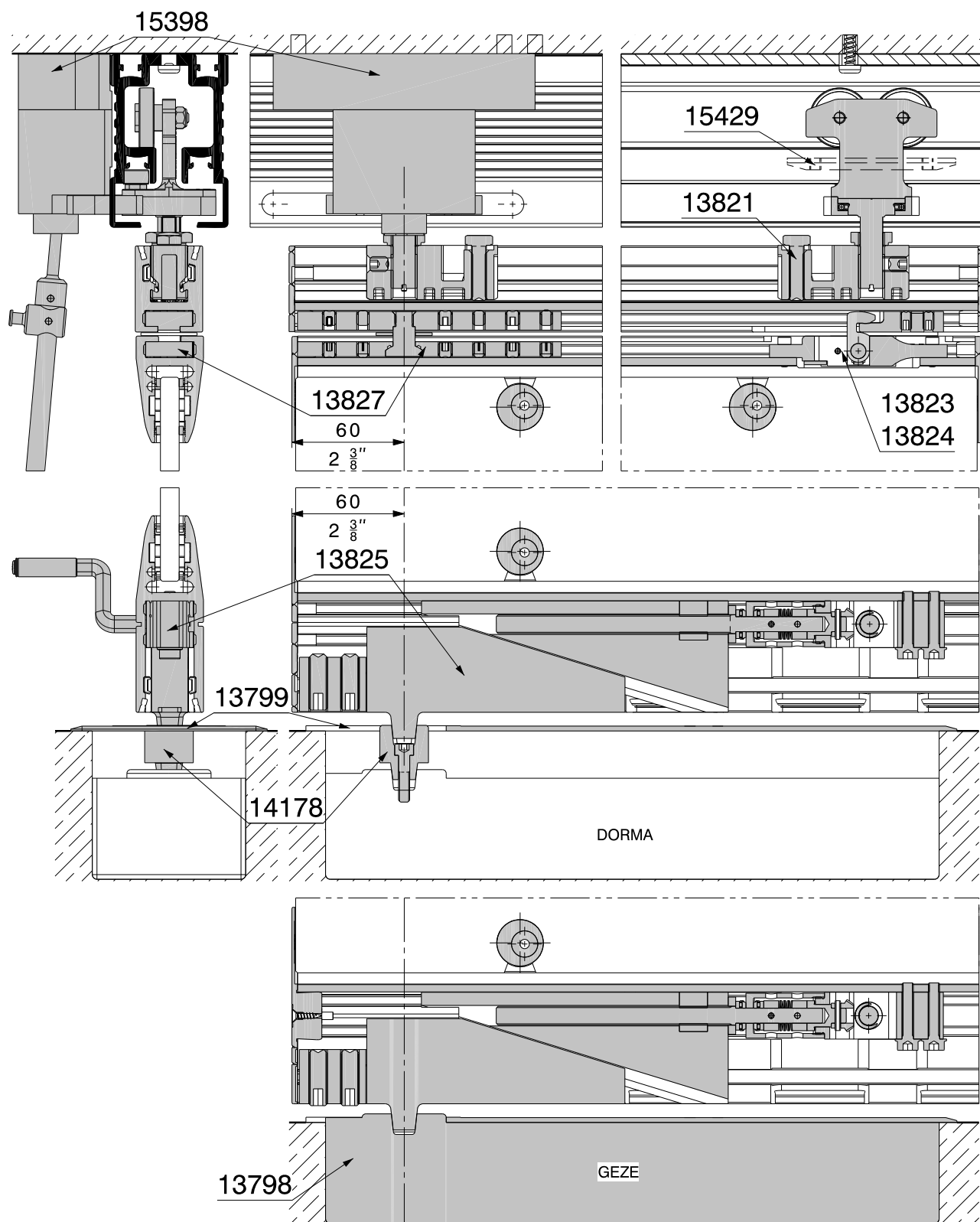
9.13 Surface mounted top door closer



Maximum sliding door width: 1100 mm (3'7 ¹/₁₆"")
 Minimum sliding door width: 740 mm (2'5 ⁵/₁₆"")
 Maximum sliding door height: 3000 mm (9'10 ¹/₈"")
 Maximum door weight: 90 kg (198 lbs.)



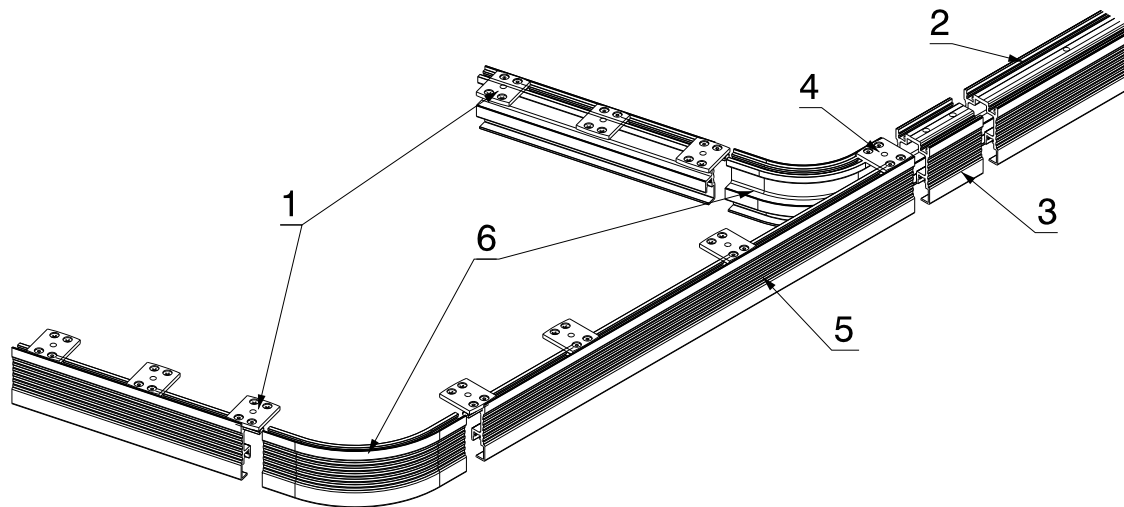
9.14 Sliding swing door (SPT)



Maximum sliding door width: 1100 mm (3'7 ¹/₁₆"")
 Minimum sliding door width: 850 mm (2'9 ¹/₂"")
 Maximum sliding door height: 3000 mm (9'10 ¹/₈"")
 Maximum door weight: 90 kg (198 lbs.)

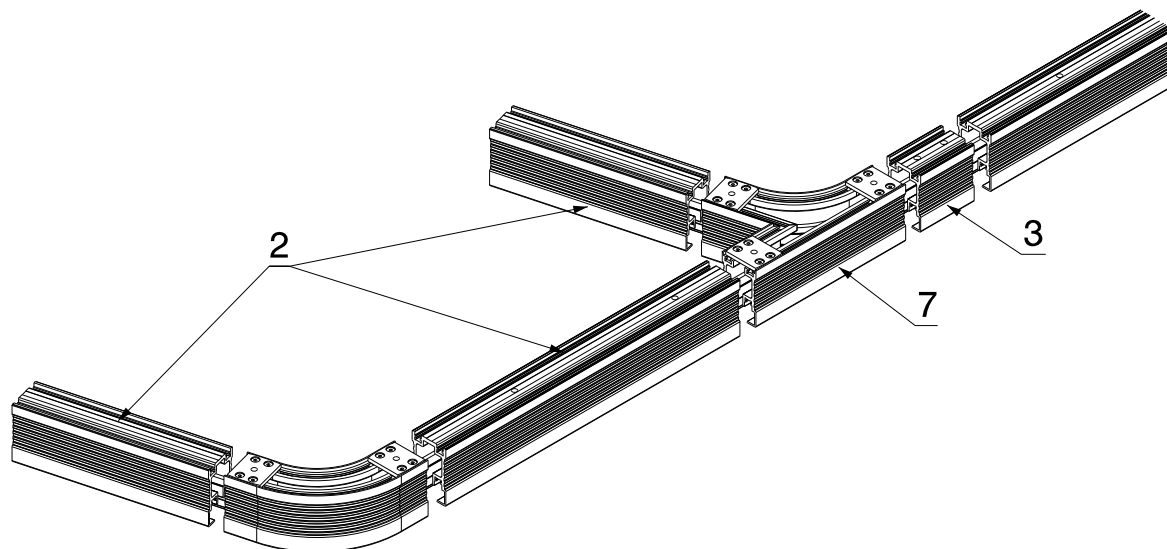
10 Stacking area designs

10.1 Parallel stacking area without concealed interior



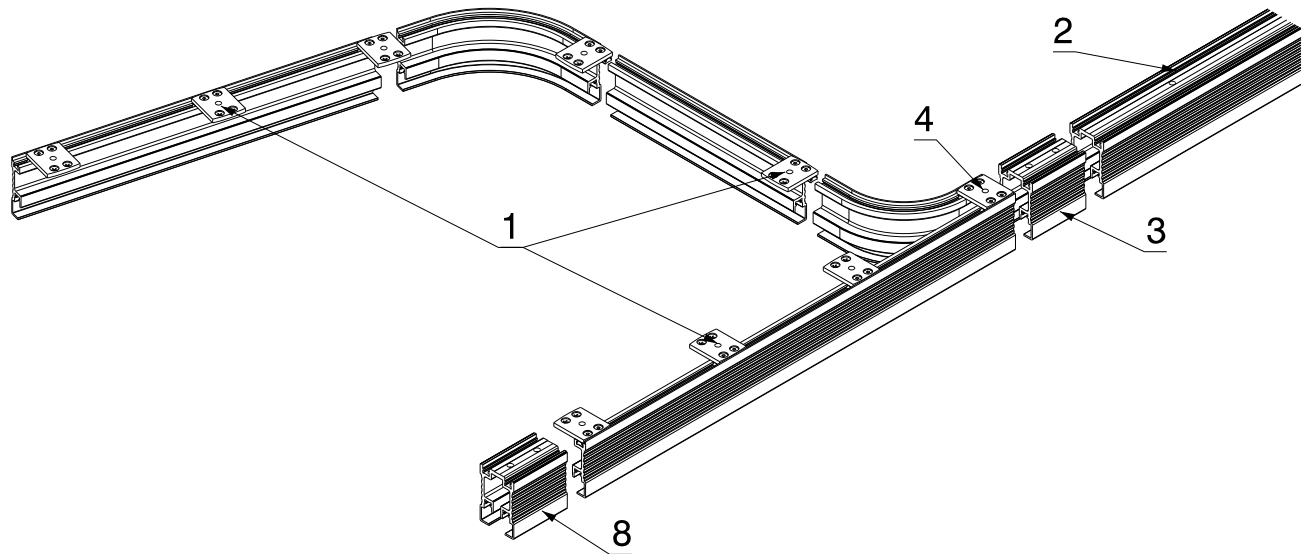
- 1 Top-fixing plate for single top track, maximum spacing 140 mm ($5\frac{17}{32}$ ")
- 2 Dual top track
- 3 Servicing unit
- 4 Top-fixing plate for two single top tracks
- 5 Single top track
- 6 Top track curve

10.2 Parallel stacking area with concealed interior



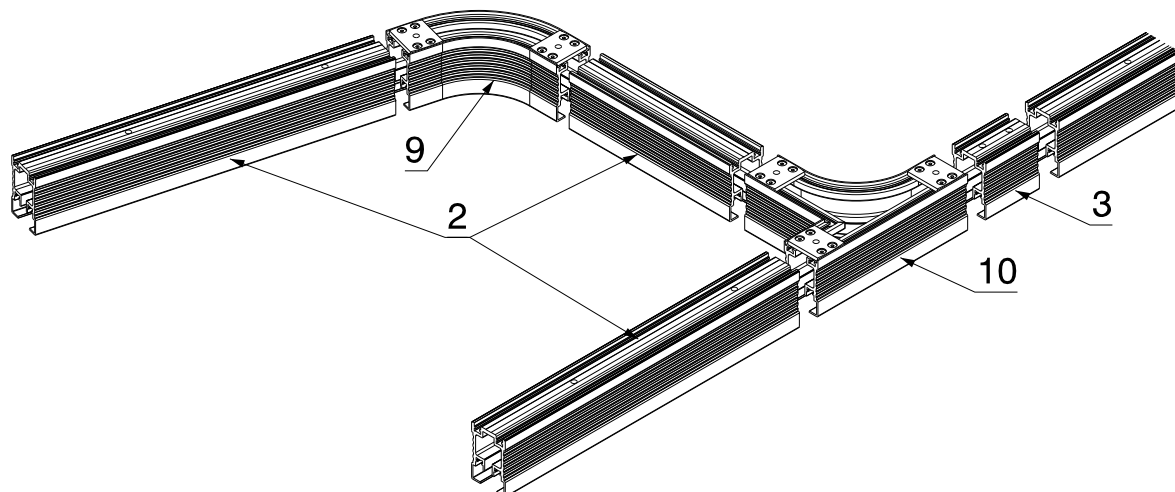
- 2 Dual top track
- 3 Servicing unit
- 7 Stacking area branch

10.3 90° stacking area without concealed interior



- 1 Top-fixing plate for single top track, maximum spacing 140 mm ($5\frac{17}{32}$ ")
- 2 Double top track
- 3 Servicing unit
- 4 Top-fixing plate for two single top tracks
- 8 Servicing unit for holding the pivot bearing

10.4 90° stacking area with concealed interior



- 2 Dual top track
- 3 Servicing unit
- 9 Double curve
- 10 Stacking area branch

11 Top track assembly methods

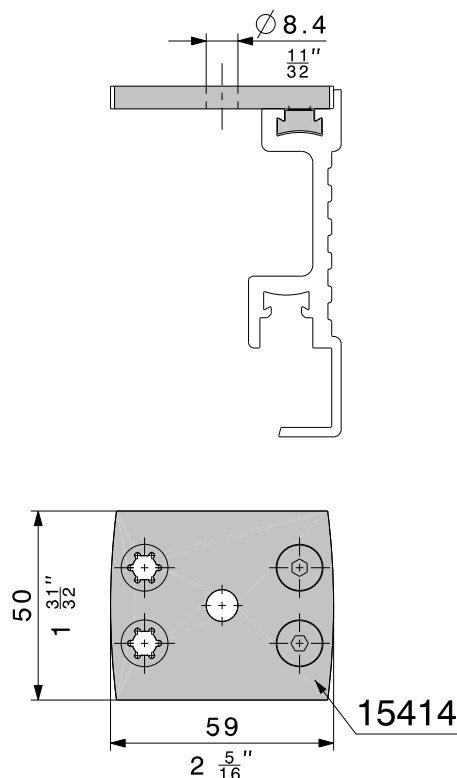
The installation and fixing of the sliding wall system must take static requirements into account. The weight load on the top track and sub-structure are calculated as follows:

- Per metre and per suspension point based on the weight of the sliding doors
- Suspension points: ~300 mm ($11\frac{13}{16}$ ") spacing for dual top tracks and 140 mm ($11\frac{11}{16}$ ") in the parking space
- The parking space in question with regard to the overall weight derived from the number of doors in the parking space x the weight of a sliding door

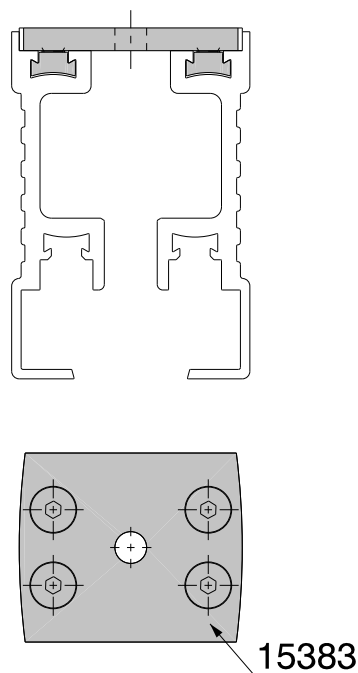
The top track must be absolutely horizontal when fitted. Horizontal unevenness between floor and ceiling must be equalised by placing spacers between the top track and the ceiling.

11.1 Top-fixing plates

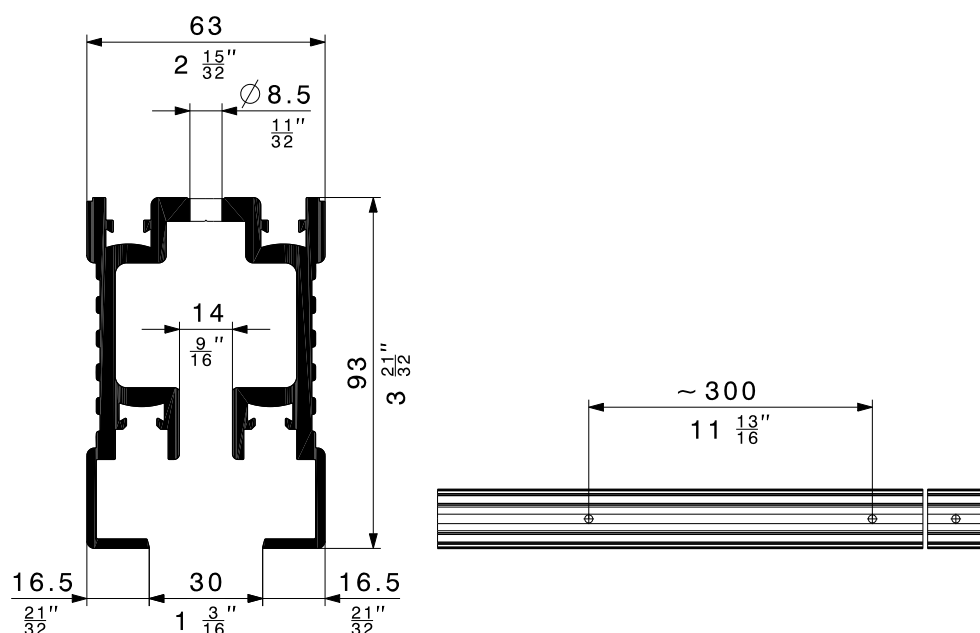
1x single top track



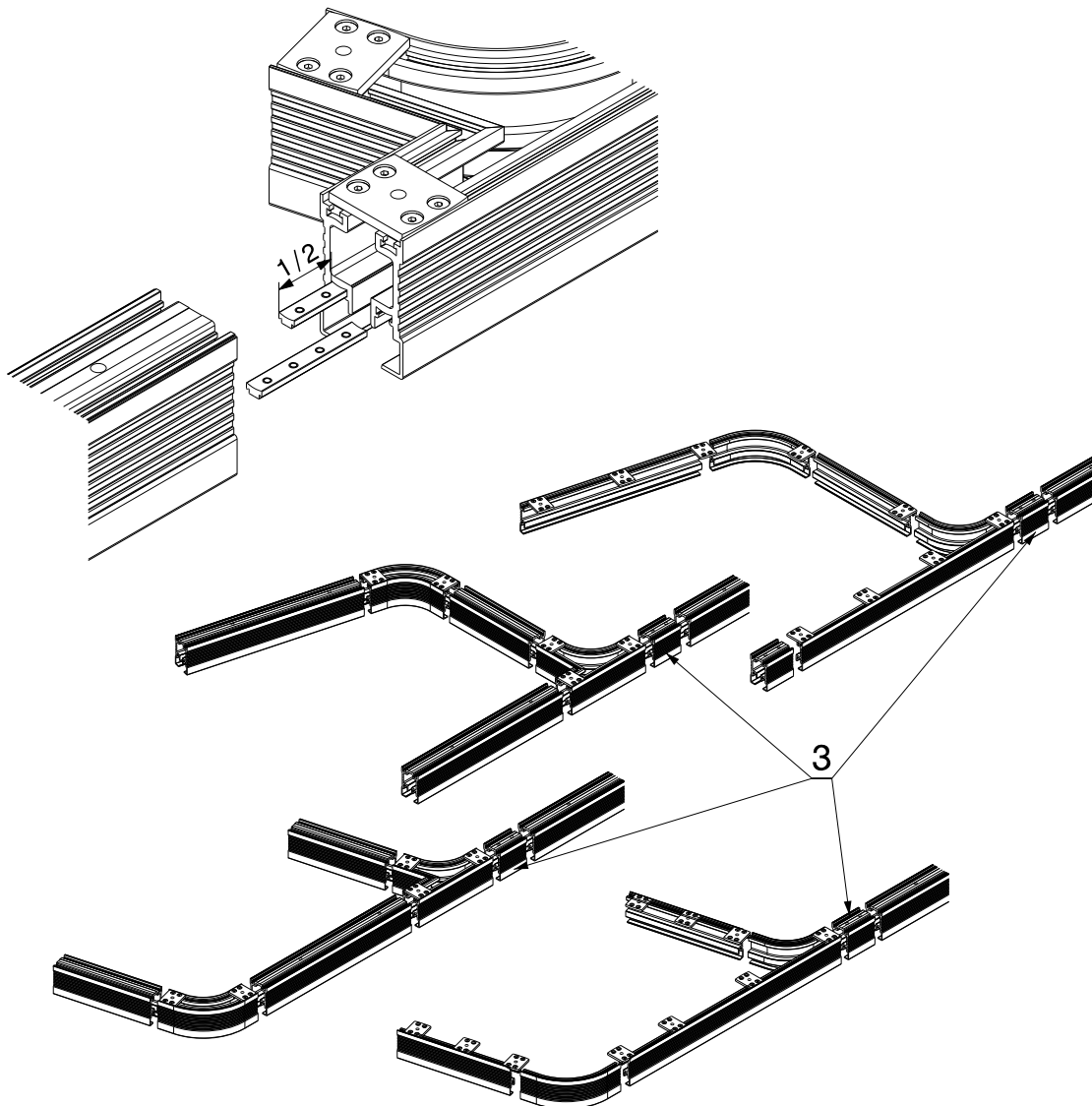
2x single top track



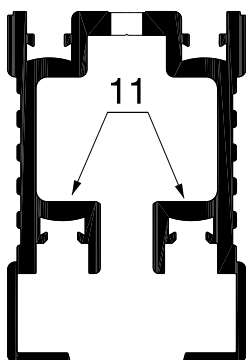
Dual top track drill holes




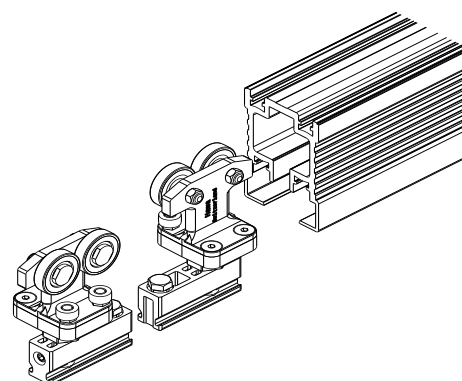
11.2 Installing top tracks (LS)



- 3 The servicing unit (REV) is always positioned in front of the stacking area.

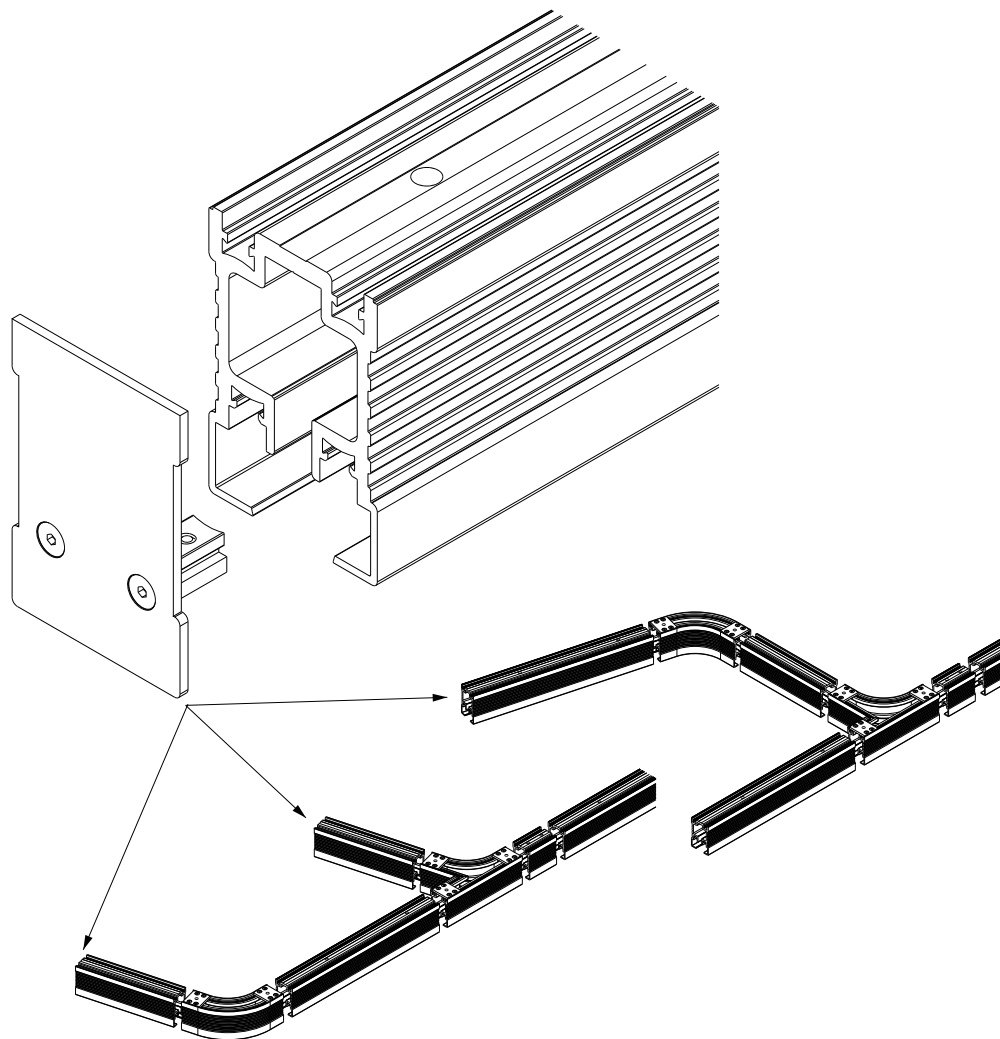



-  11 Clean the running surface before inserting the trolleys. Dirt will damage the rollers and can impair running properties.



Insert the trolleys in accordance with the design. Trolleys can be inserted into fitted top tracks through the servicing unit (REV).

11.3 Installing the top track cover cap (LS)




 The cover cap is only used on stacking areas with concealed interior.

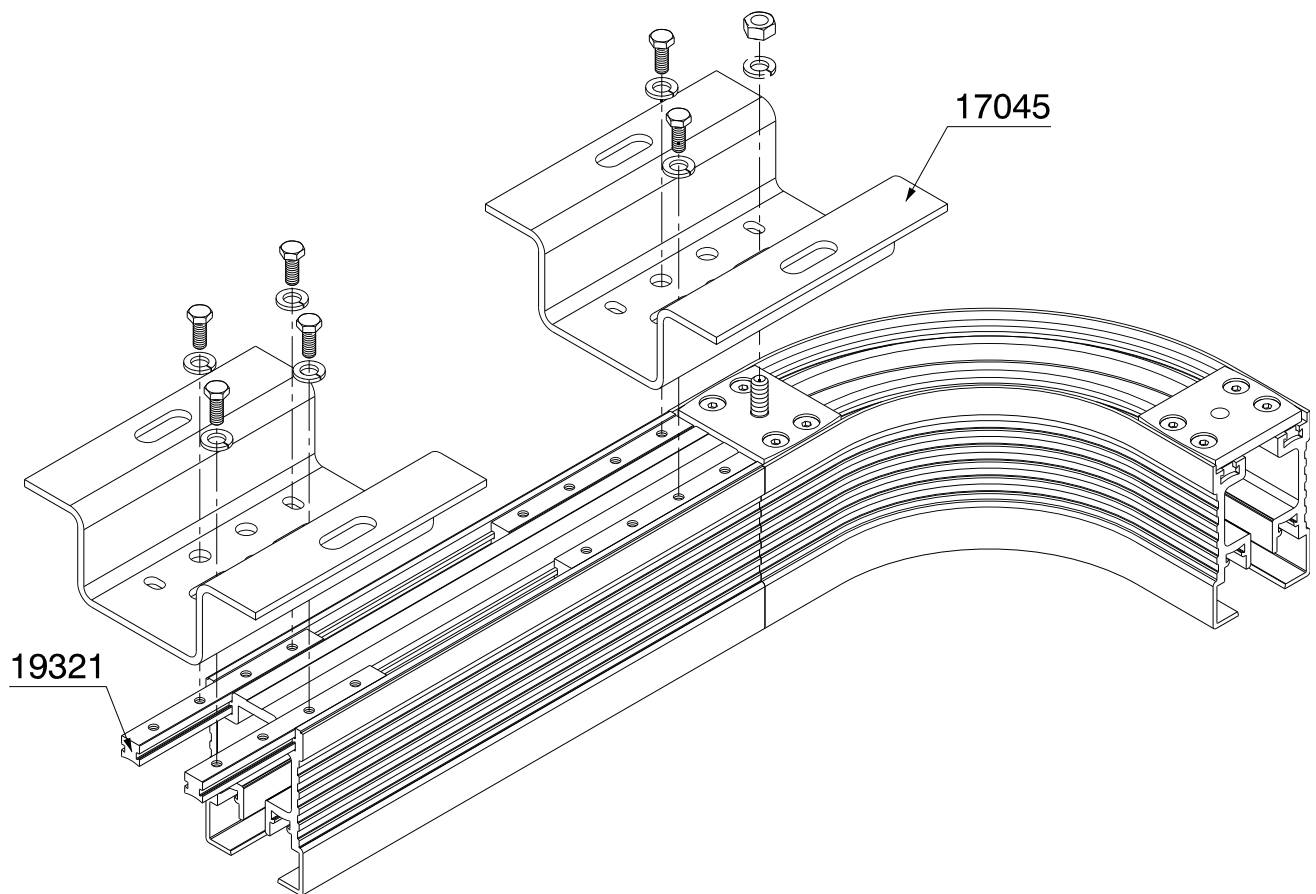
11.4 Installing the sub-structure (UK)

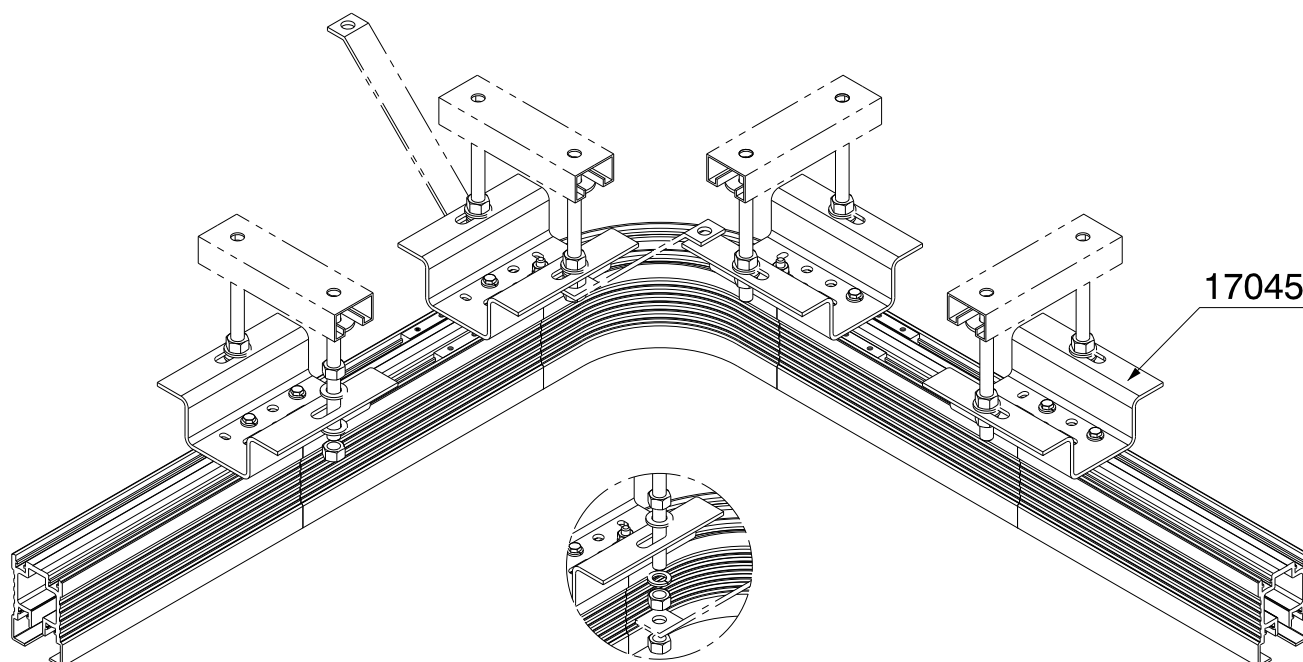
Suspension beneath the ceiling covering depending on the design. A load-bearing steel sub-structure with bolting surfaces must be provided for the horizontal installation of top tracks. The design of the steel sub-structure must correspond with static requirements.

The sub-structure required for ceiling connection is not included in the bid or scope of delivery provided by Hawa AG; it must be designed and provided by the building owner or others.

 Details of the ceiling and installation situation must be made available for the project design as they determine the height of the sliding elements and therefore the glass dimensions. Ceilings that may be subject to retrospective subsidence or sagging require an adjustable sub-structure.

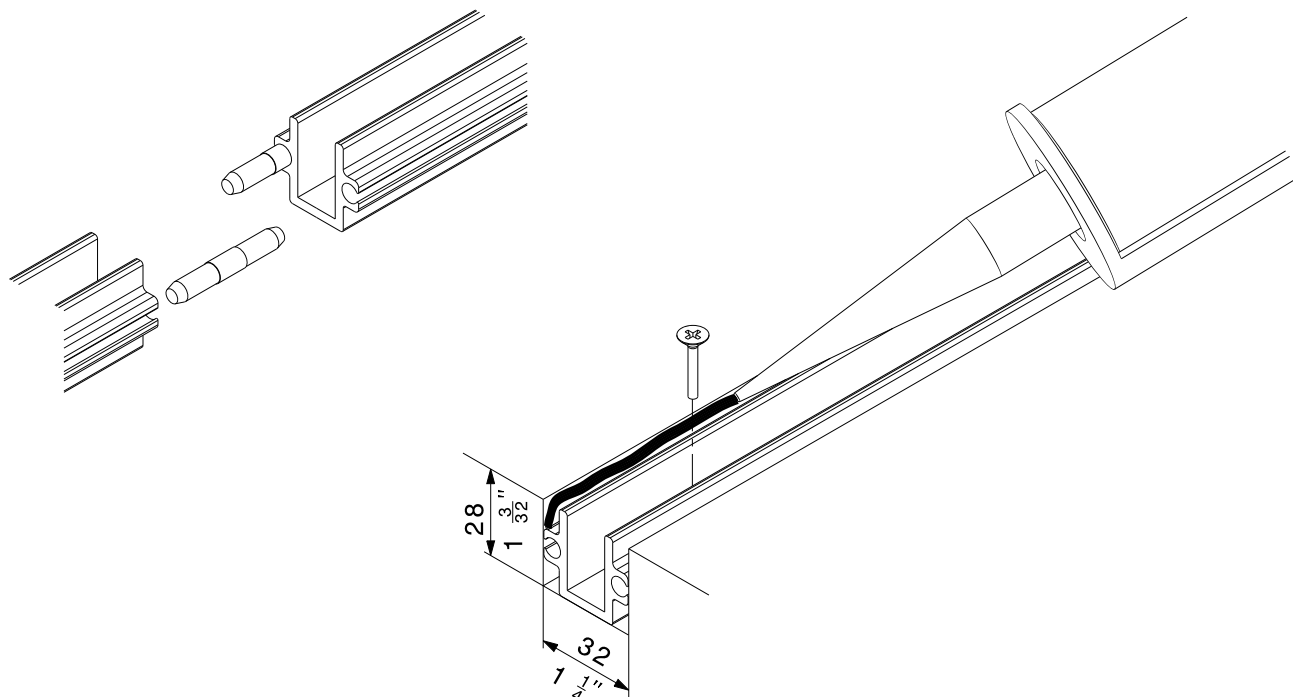
11.4.1 Installation recommendation when using the Hawa connection bracket 17045



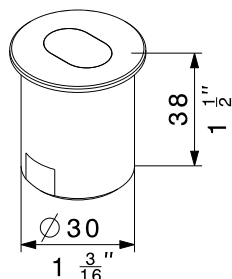
11.4.2 Installation recommendation when using the Hawa connection bracket 17045

 The sub-structure must be braced against vibrations in all directions. The sub-structure must remain rigid.

11.5 Installing the bottom guide channels (FS)



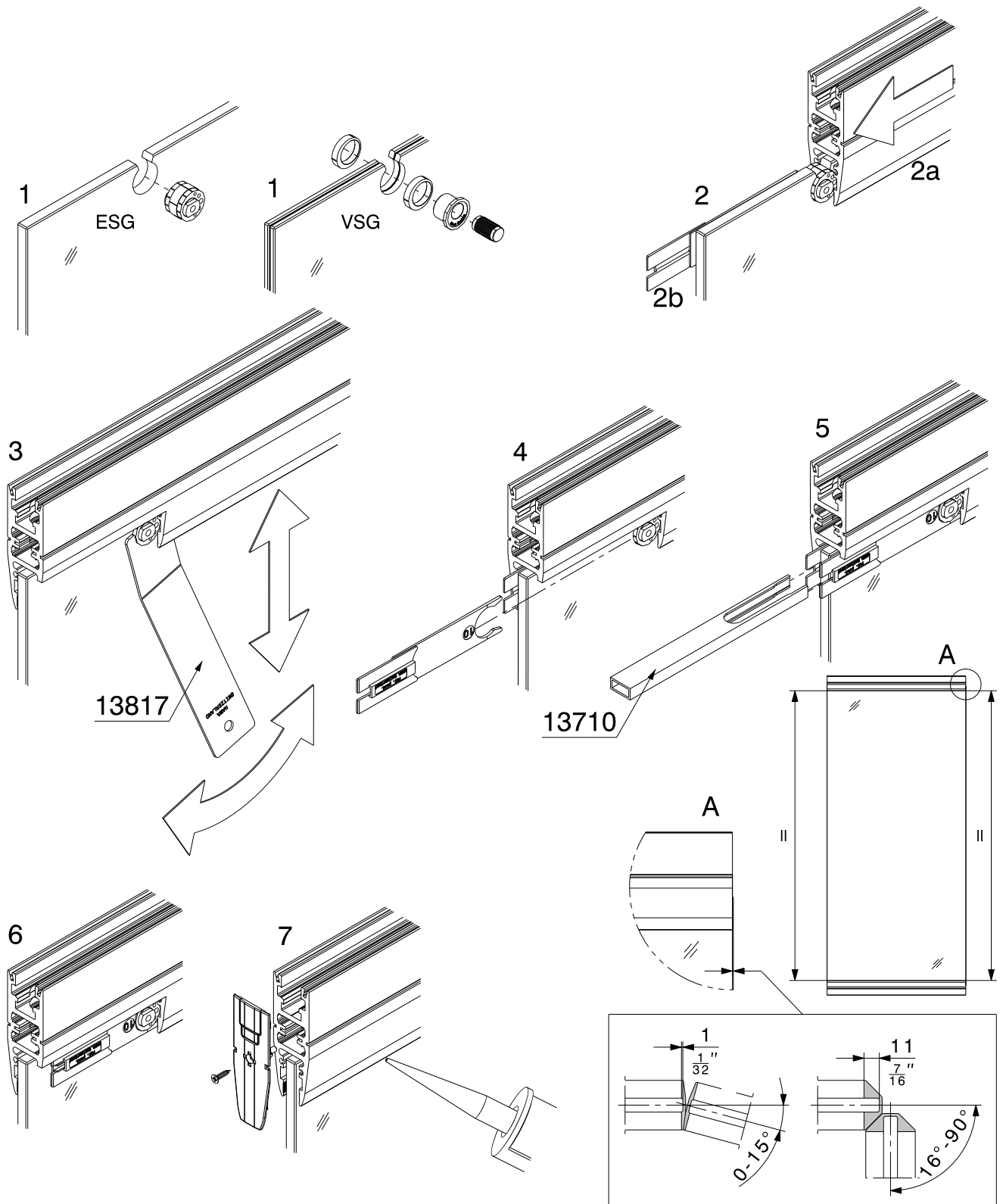
11.6 Installing the floor mounted sleeve



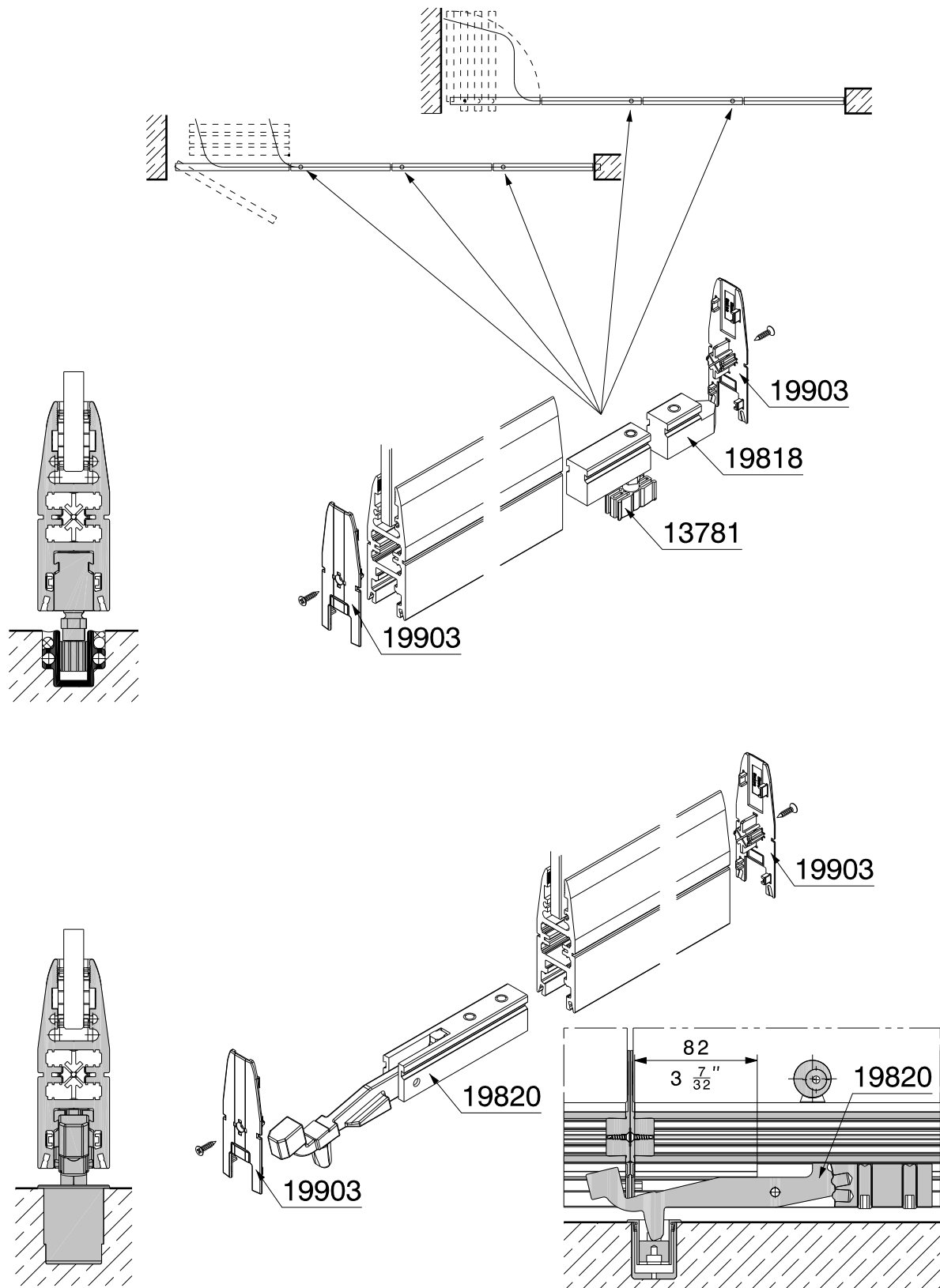
 The floor mounted sleeve is pushed into the floor; it is not fixed into place.


12 Pre-assembly

12.1 Installing the glass suspension and retainer profile (TGP)

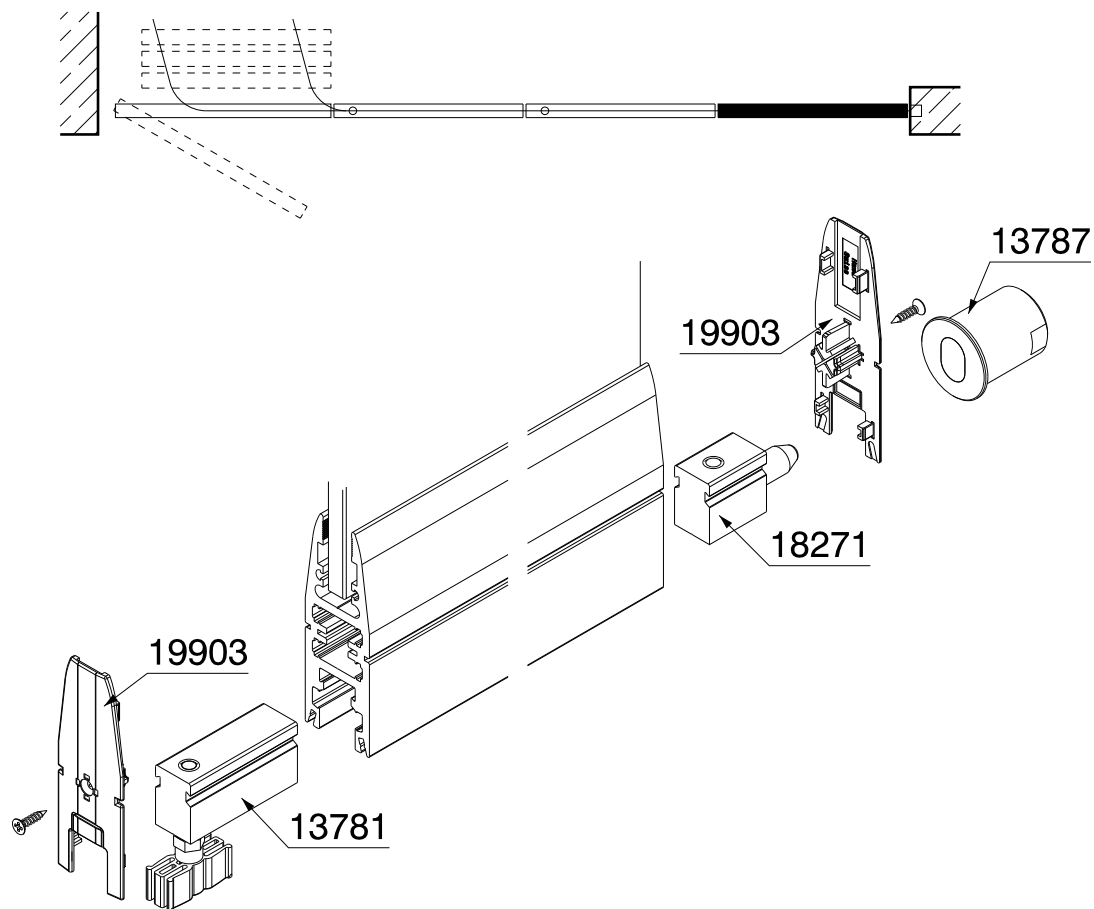


12.2 Pre-assembly of the sliding door (ST)

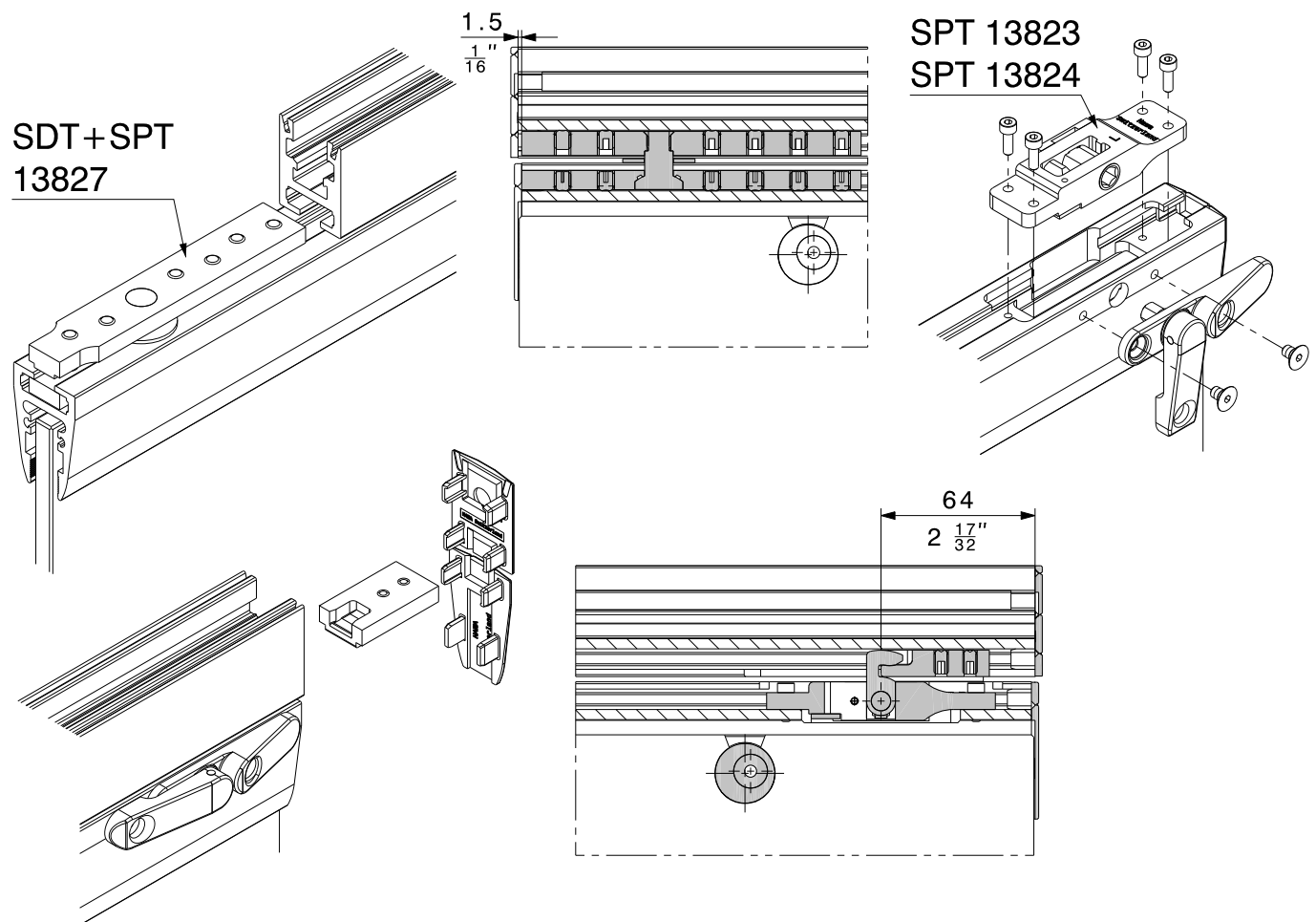


 The floor locking lever 19820 must always be fitted to the side closest to the stacking area.

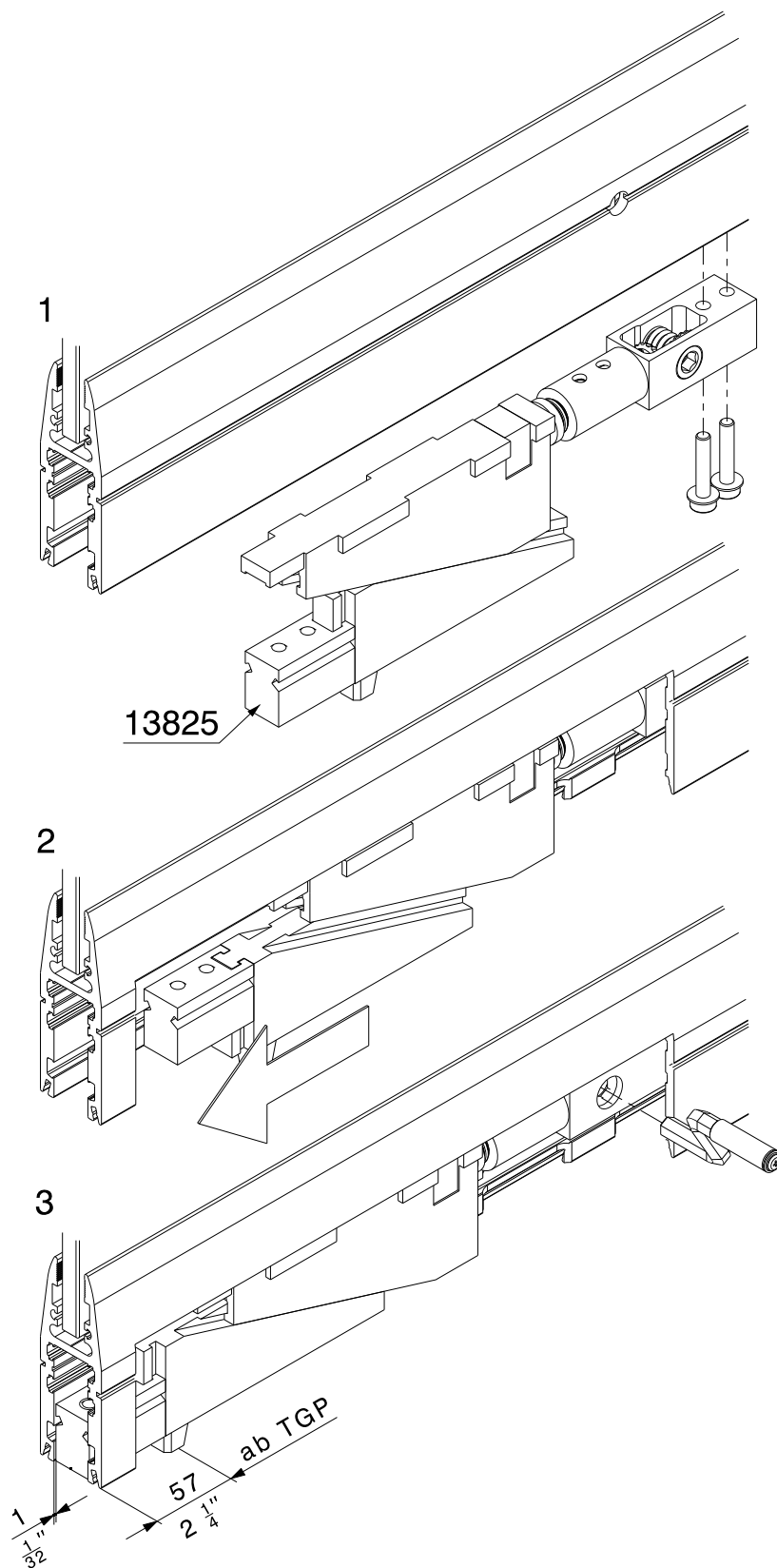
12.3 Pre-assembly of the sliding door (ST) with wall connection



12.4 Pre-assembly of the siding pivot door (SDT) and sliding swing door (SPT)

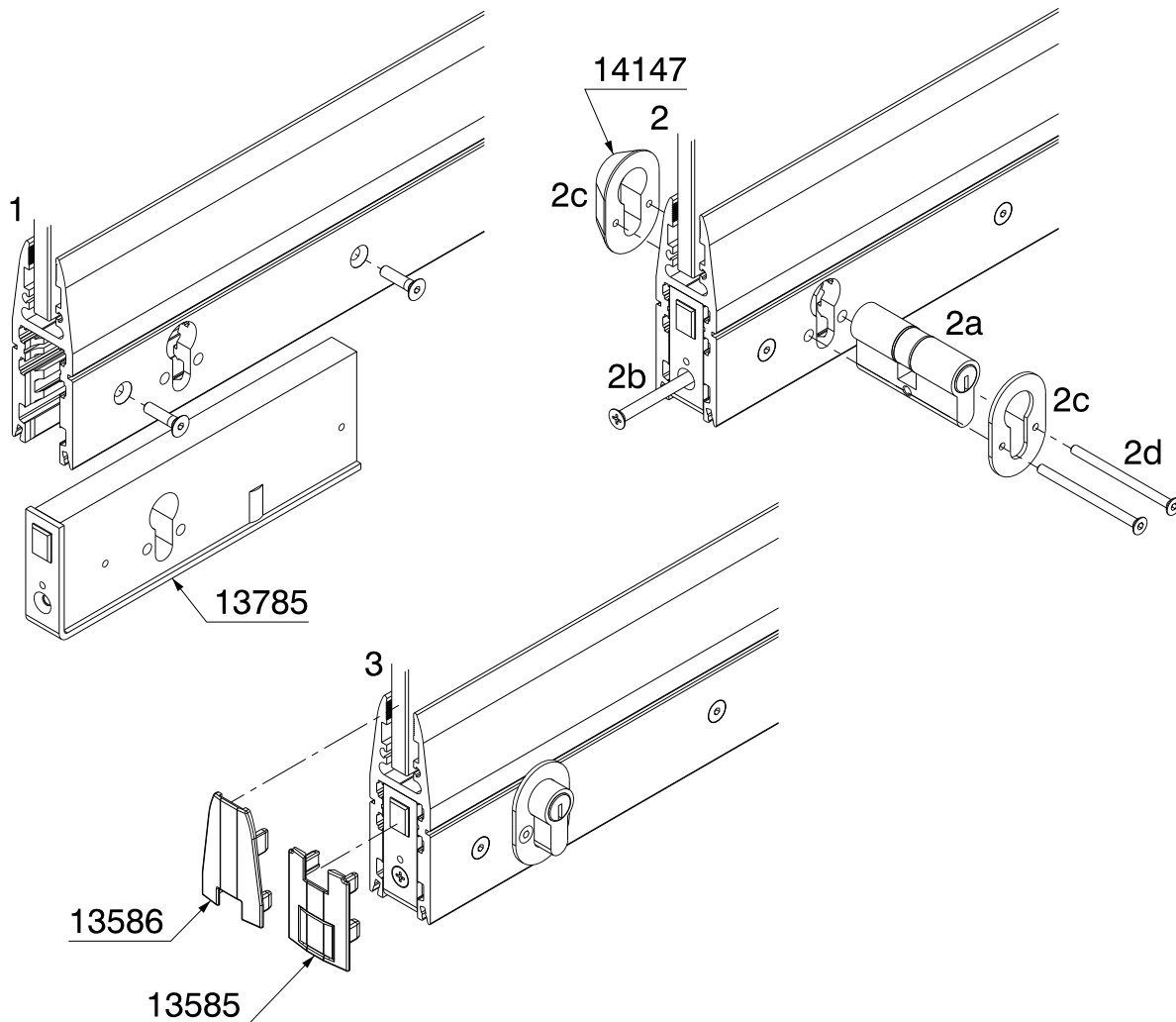


12.5 Pre-assembly of the sliding swing door (SPT)

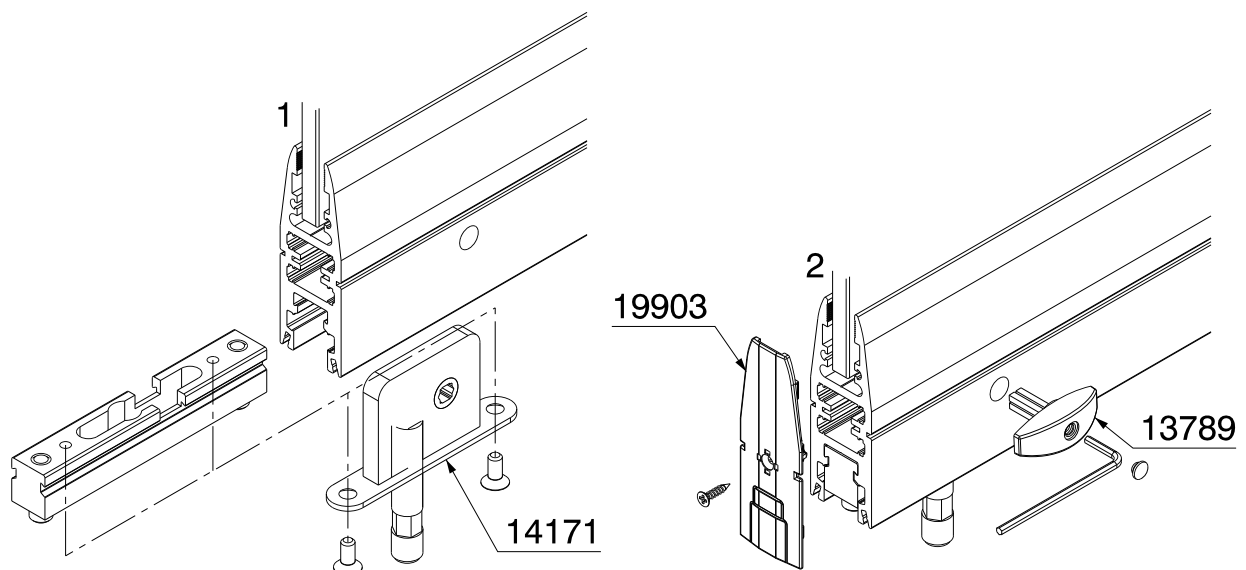


12.6 Installing the locks

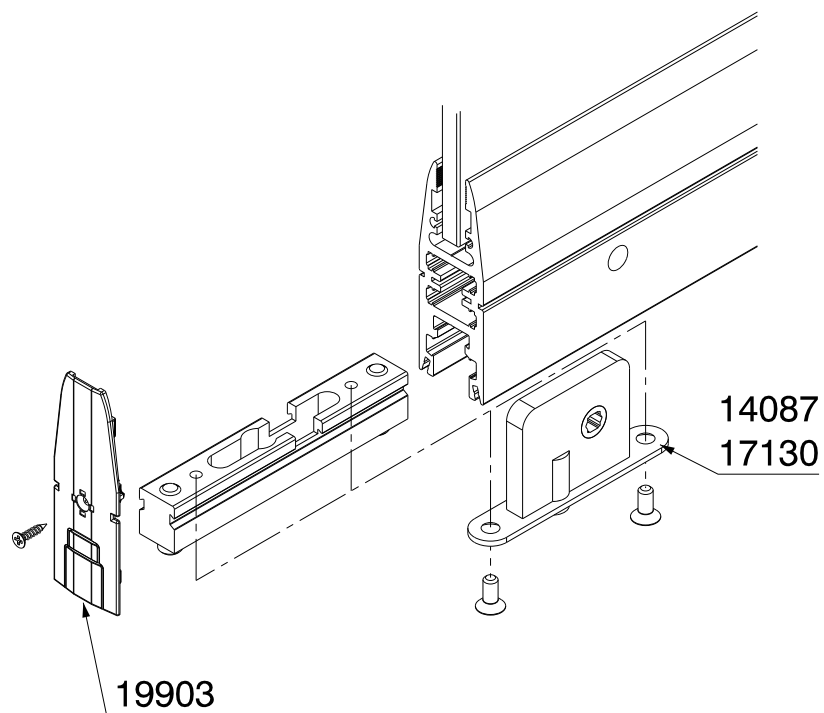
12.6.1 Installing the two-bolt safety lock



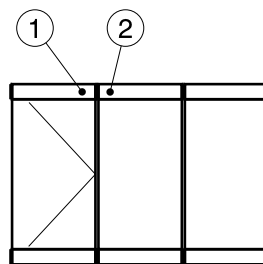
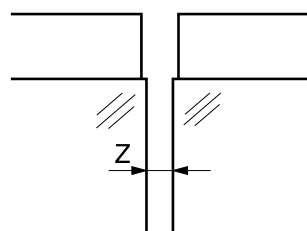
12.6.2 Installing the deadbolt lock



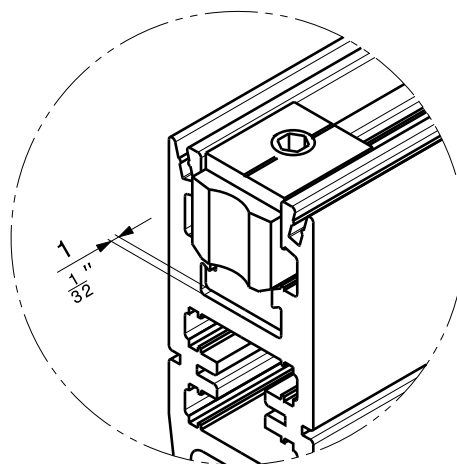
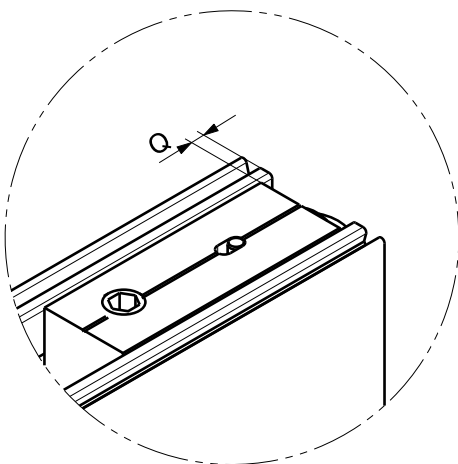
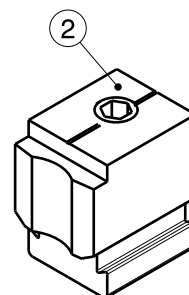
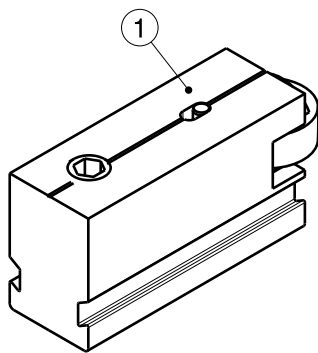
12.7 Installing the pivot bearing



12.8 Pre-assembly pivot door catch

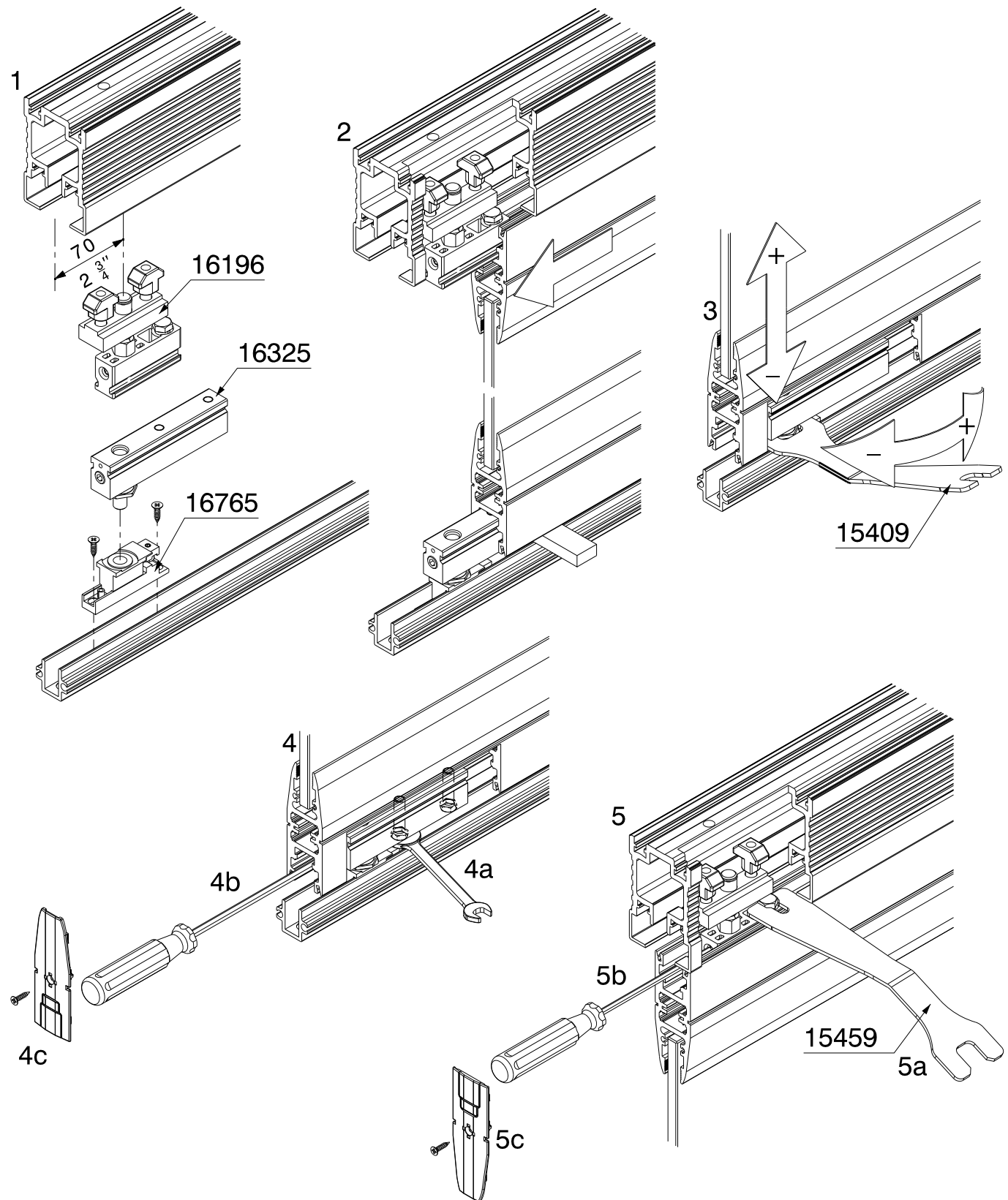


Z	8 mm ($\frac{5}{16}$ ")	7 mm ($\frac{9}{32}$ ")	6 mm ($\frac{1}{4}$ ")	5 mm ($\frac{7}{32}$ ")	4 mm ($\frac{5}{32}$ ")
Q	1 mm ($\frac{1}{16}$ ")	2 mm ($\frac{3}{32}$ ")	3 mm ($\frac{1}{8}$ ")	4 mm ($\frac{5}{32}$ ")	5 mm ($\frac{7}{32}$ ")

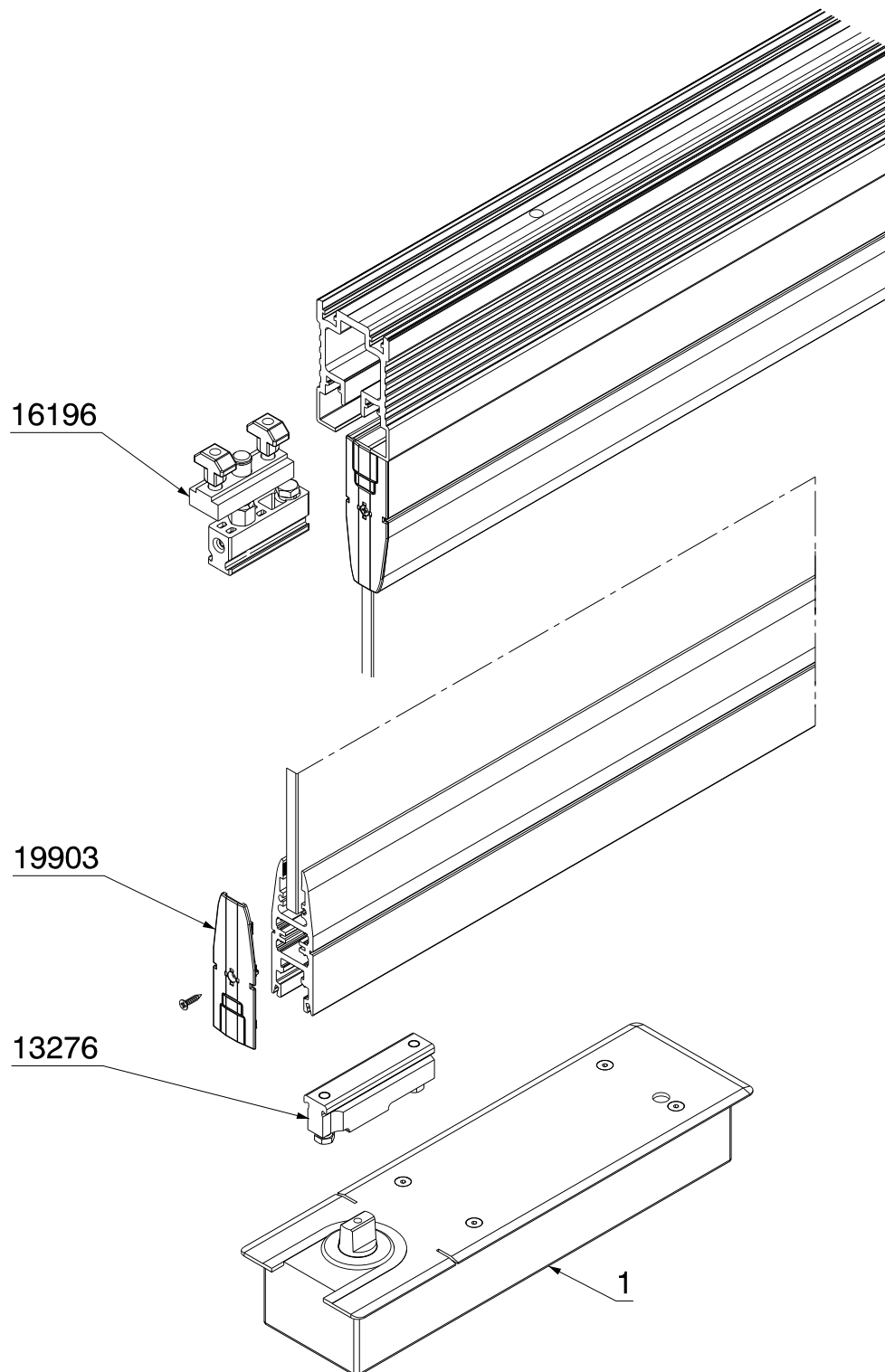


13 Installing the doors

13.1 Installing the pivot door (DT)



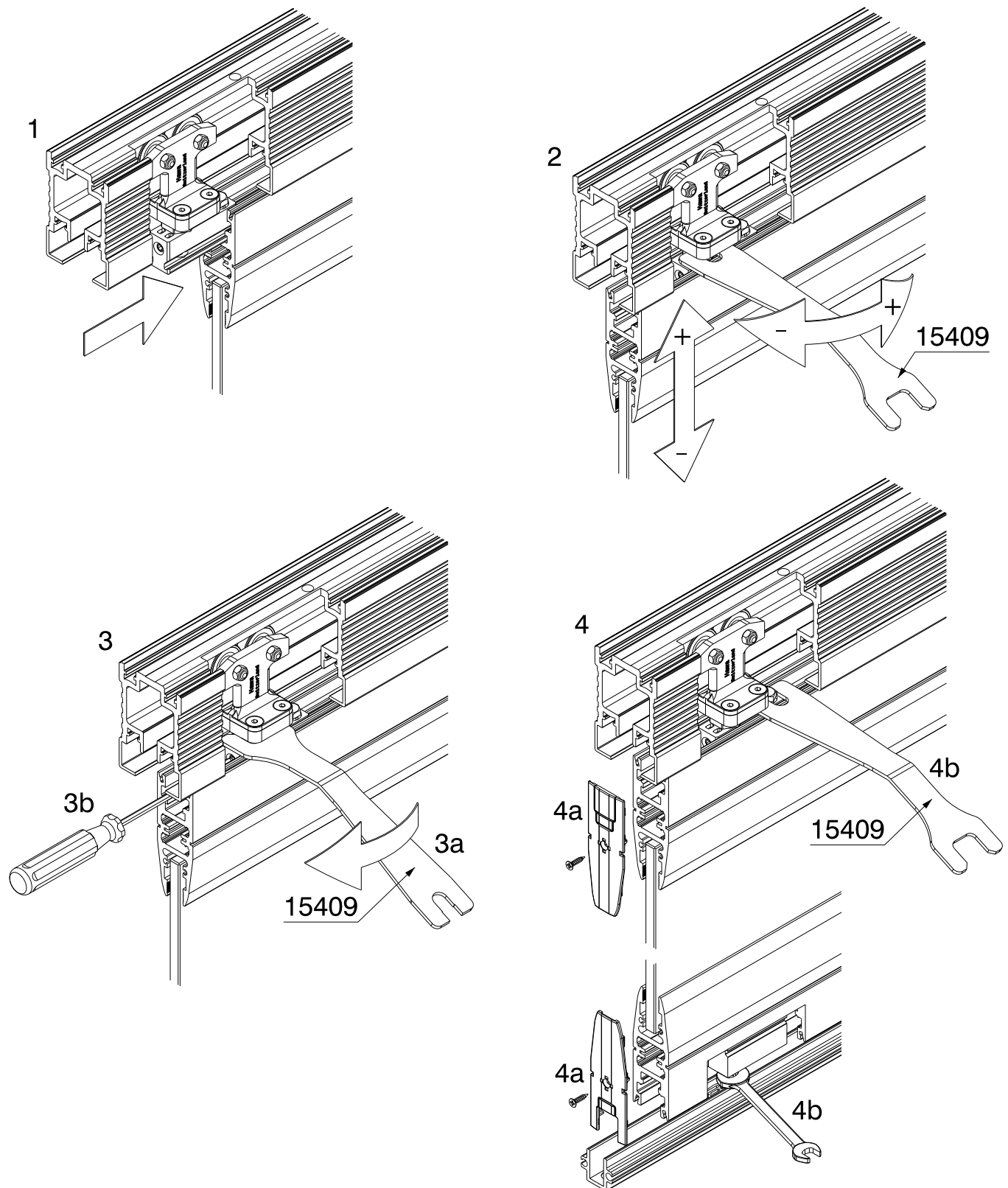
13.2 Installing the swing door (PT)




1 Standard floor door closer.

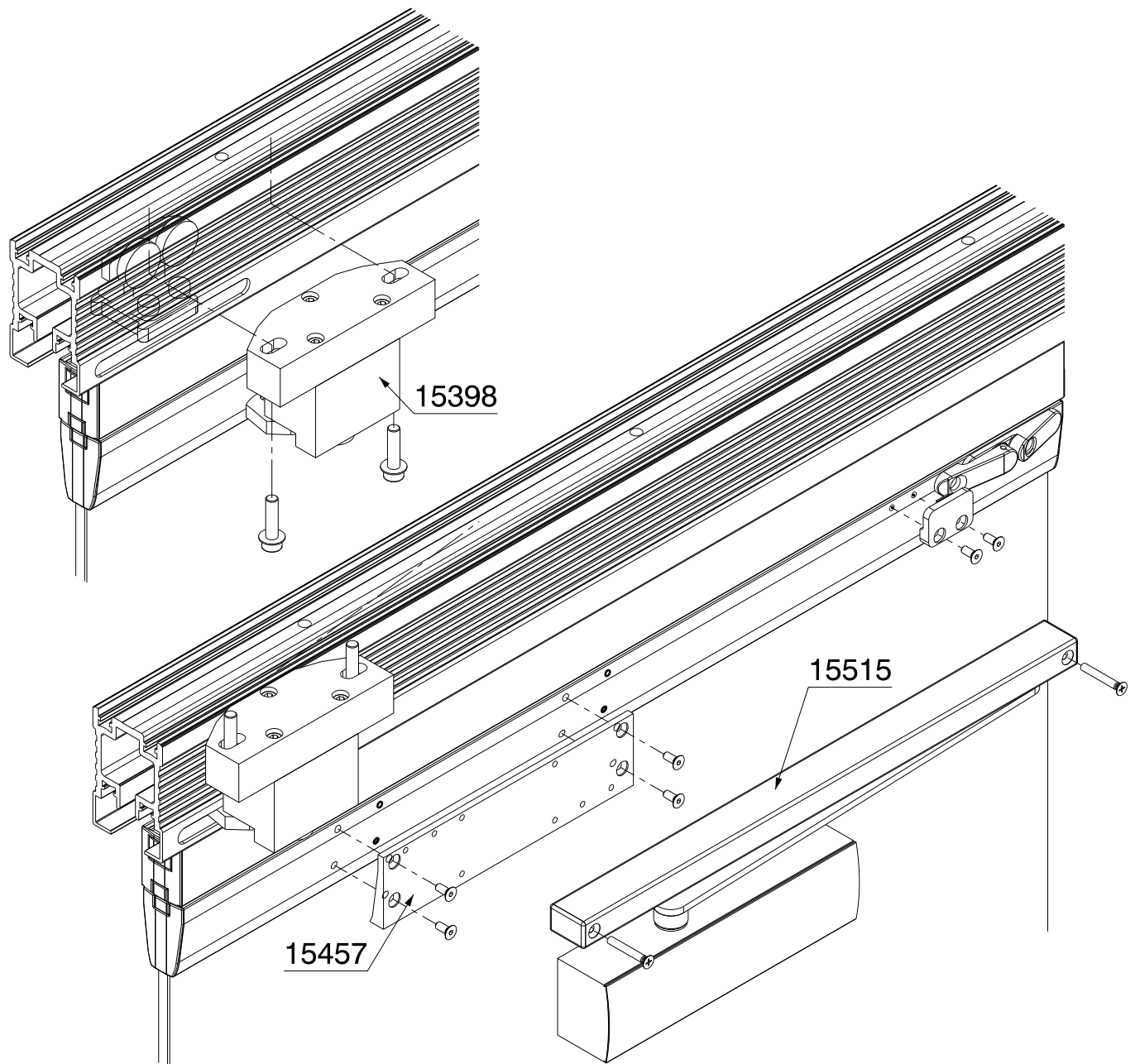
 Adjust the floor door closer in accordance with the manufacturer's instructions.

13.3 Installing the sliding door (ST)

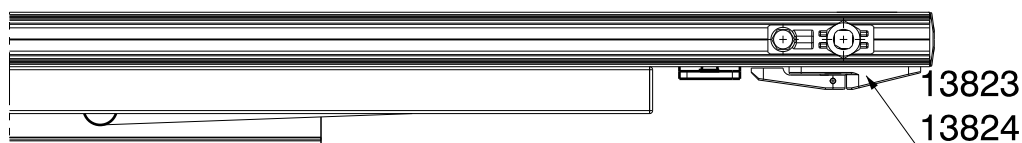


 Secure the trolleys and guide when the doors are in the stacking area.

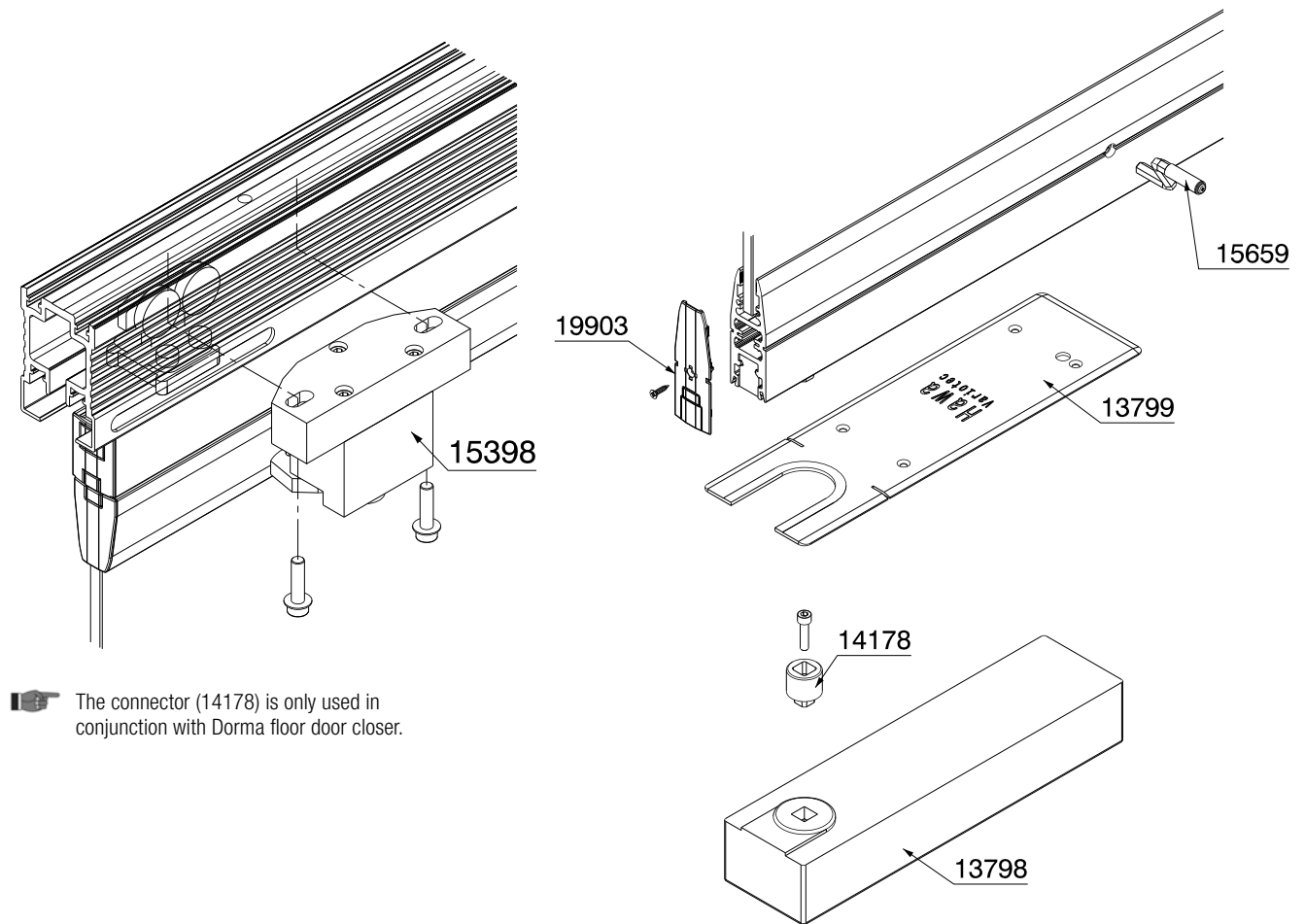
13.4 Installing the sliding pivot door (SDT)





Install and adjust the top door closer in accordance with the installation instructions provided by GEZE. The installation instructions are located in the GEZE packaging.

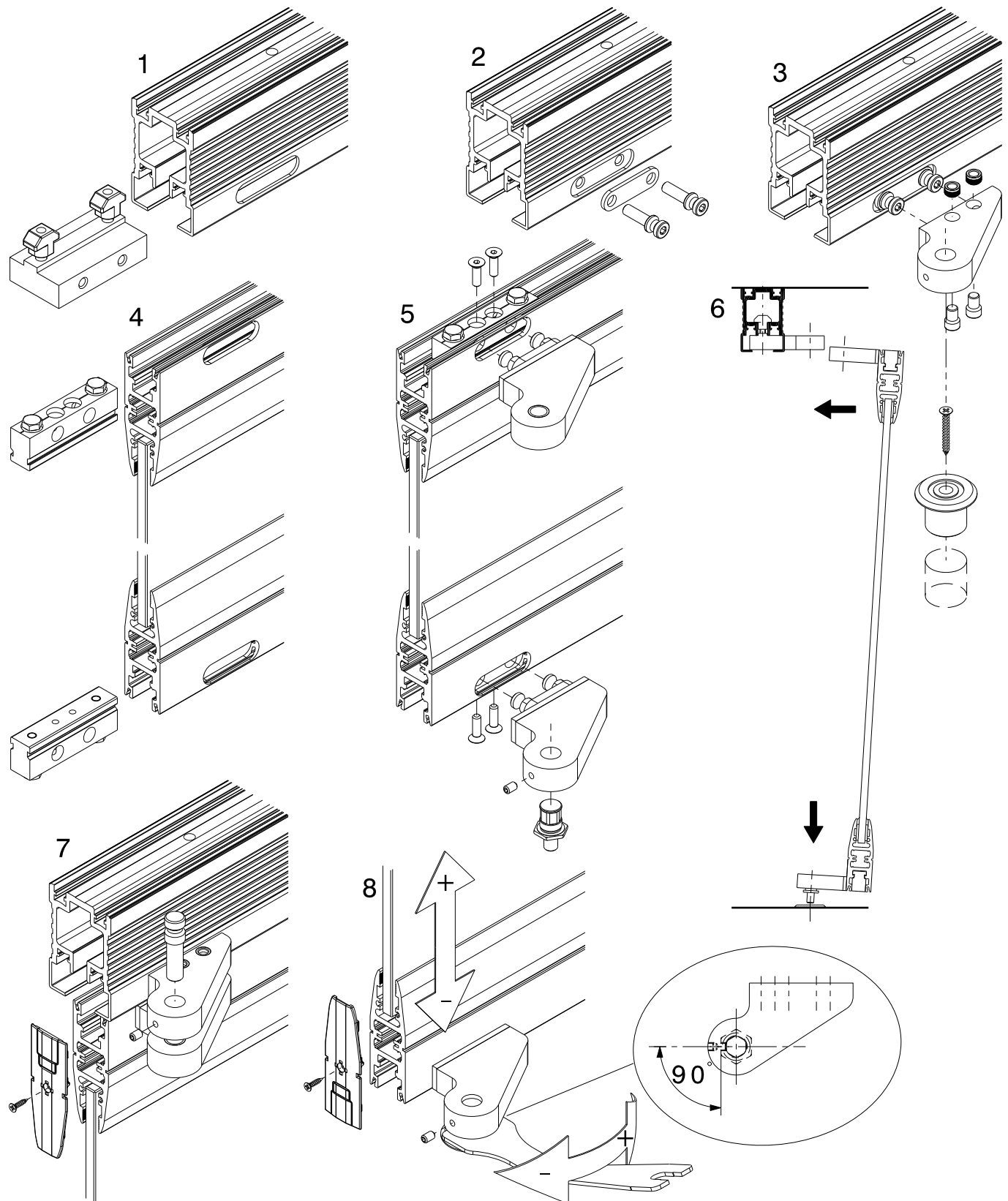


13.5 Installing the sliding swing door (SPT)

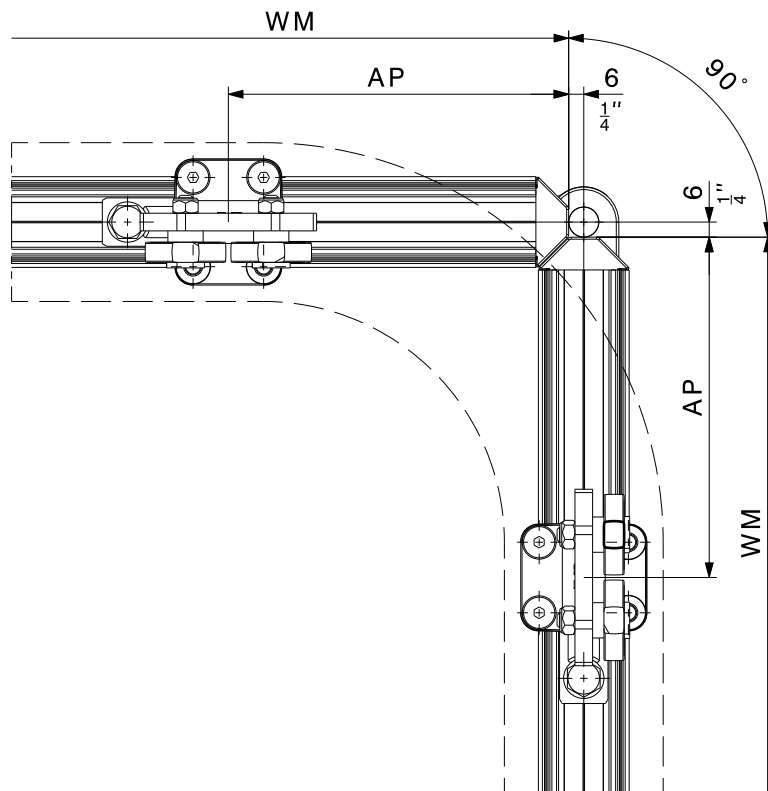


 The connector (14178) is only used in conjunction with Dorma floor door closer.

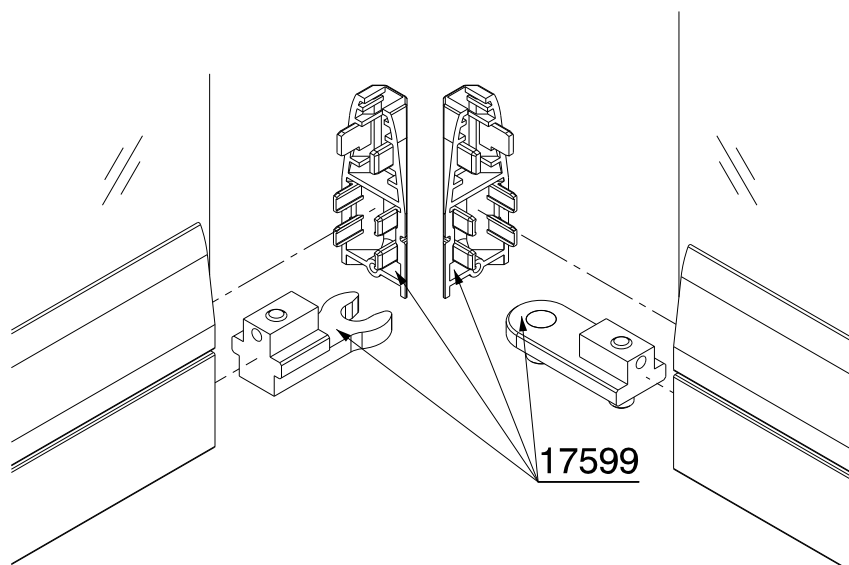
 Adjust the floor door closer in accordance with the manufacturer's instructions. The installation instructions are located in the packaging.

13.6 Installing the external pivot bearing (special assembly instruction 16945)

13.7 Suspension points for directional changes

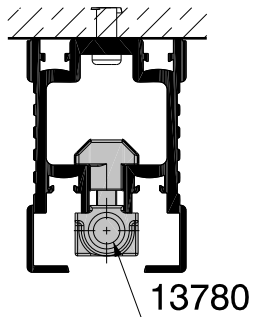


	AP
0°–15°	≥ 60 mm (2 ³ / ₈ ")
16°–30°	≥ 60 mm (2 ³ / ₈ ")
31°–45°	≥ 64 mm (2 ¹⁷ / ₃₂ ")
46°–60°	≥ 83 mm (3 ⁹ / ₃₂ ")
61°–75°	≥ 106 mm (4 ¹ / ₁₆ ")
76°–90°	≥ 135 mm (5 ⁵ / ₁₆ ")

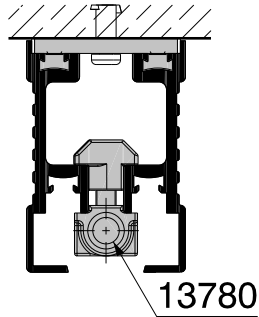


13.8 Track stop dimensions

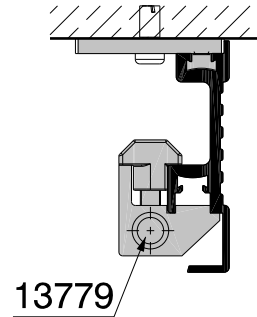
Dual top track



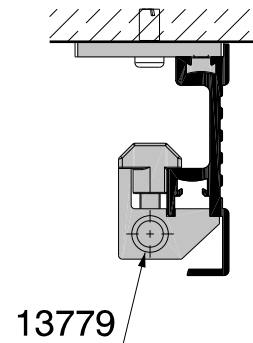
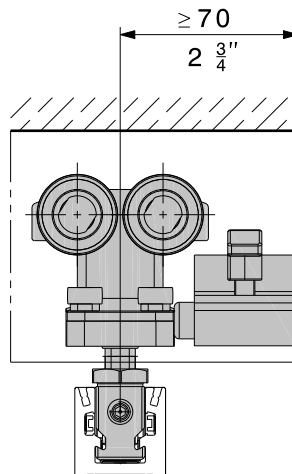
2x single top track for stacking area with concealed interior



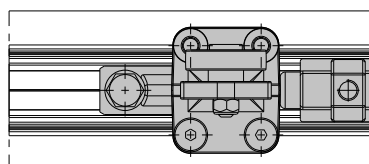
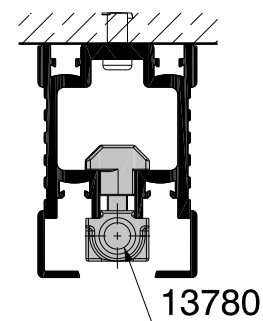
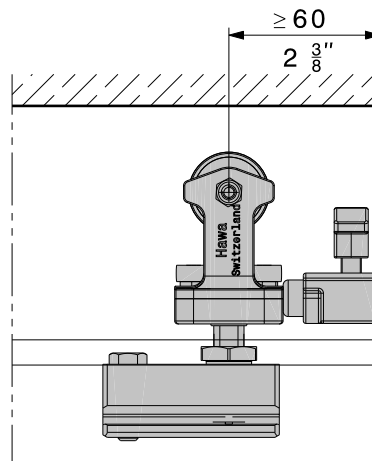
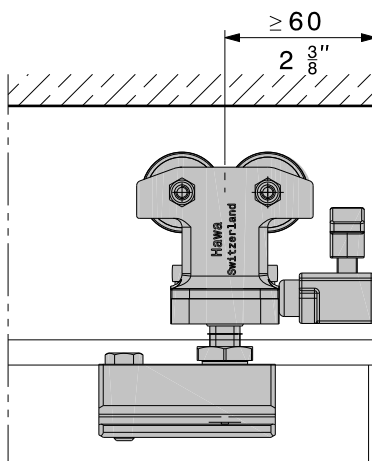
1x single top track



Track stop in the stacking area

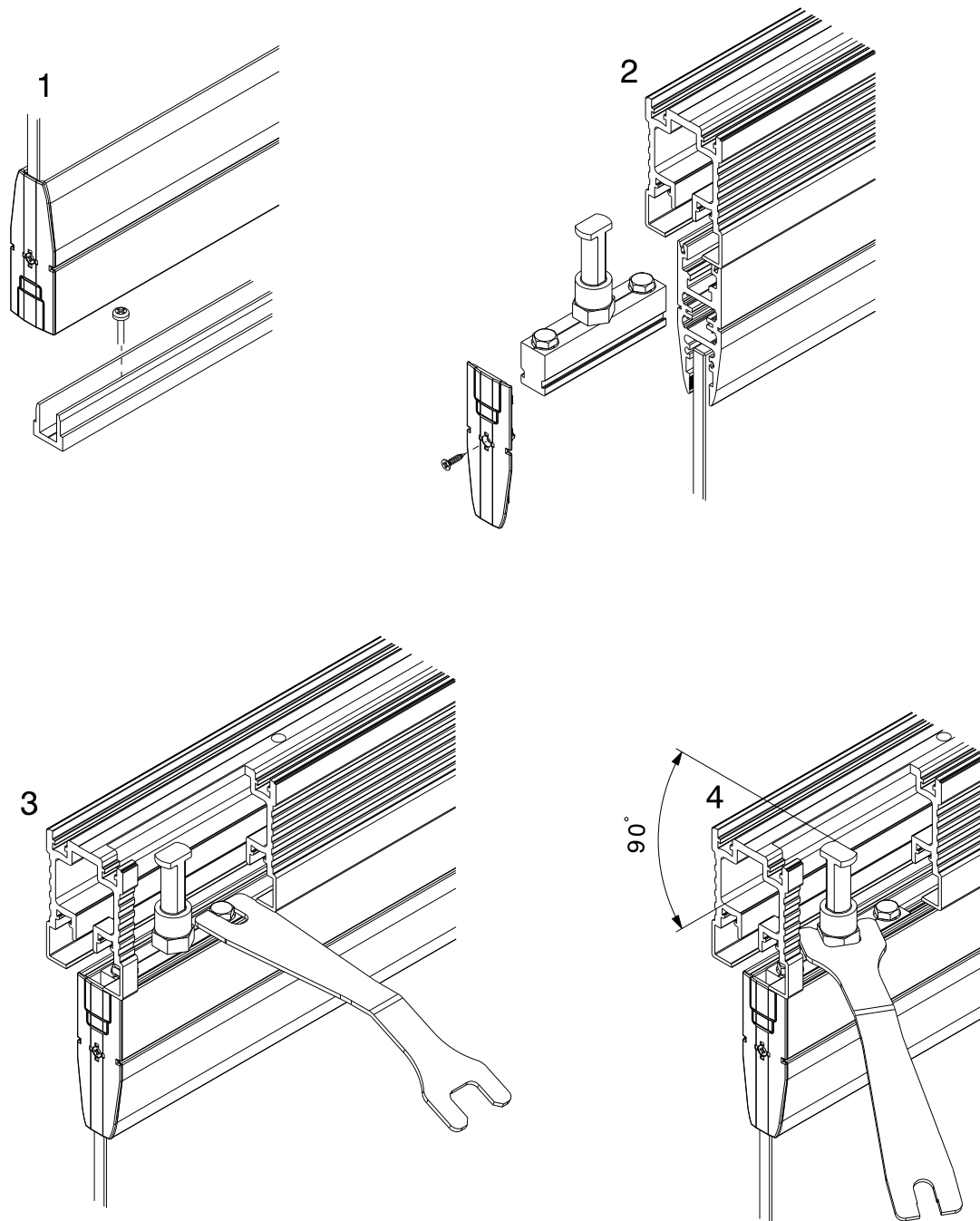


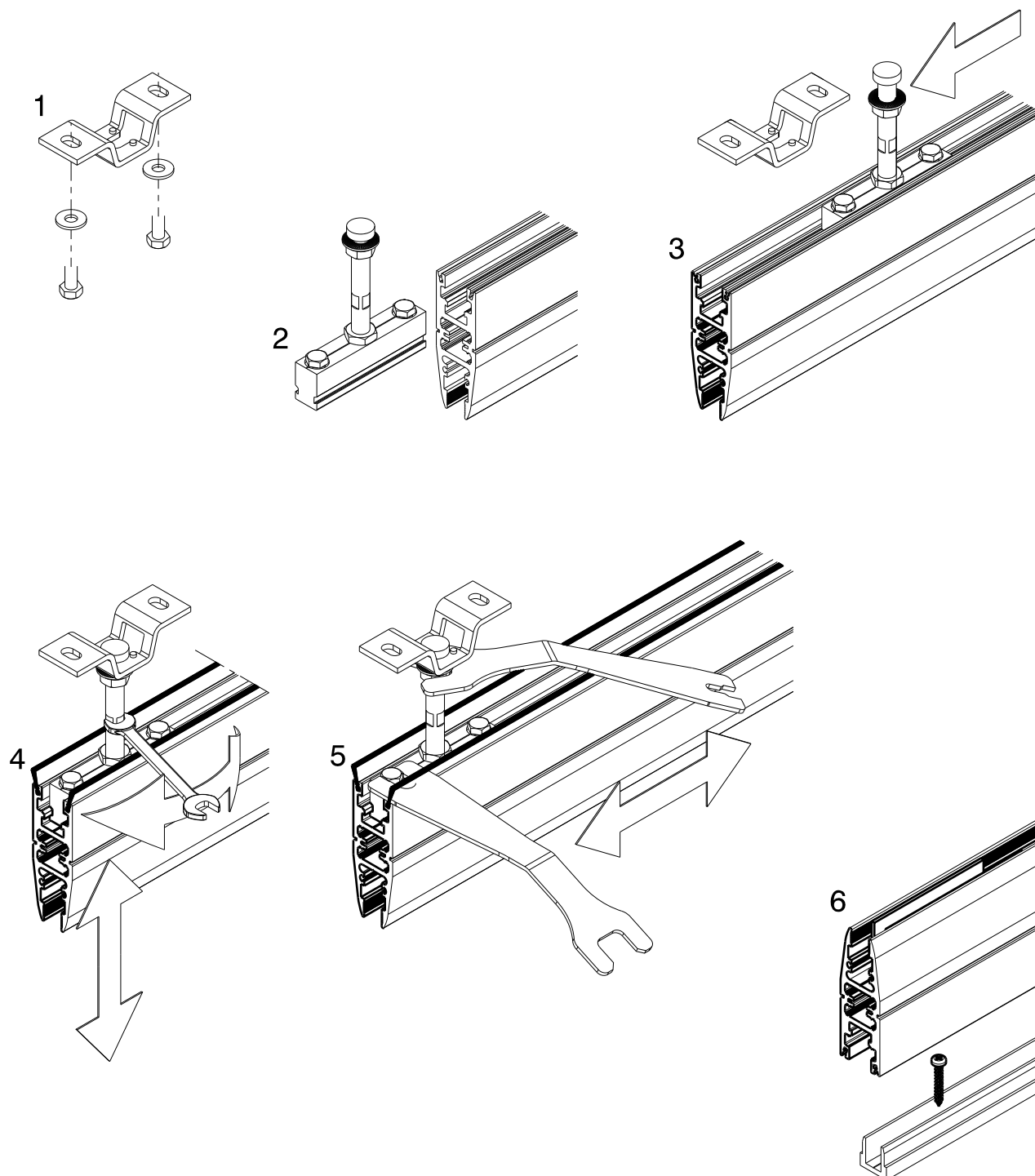
Track stop at the end of the wall

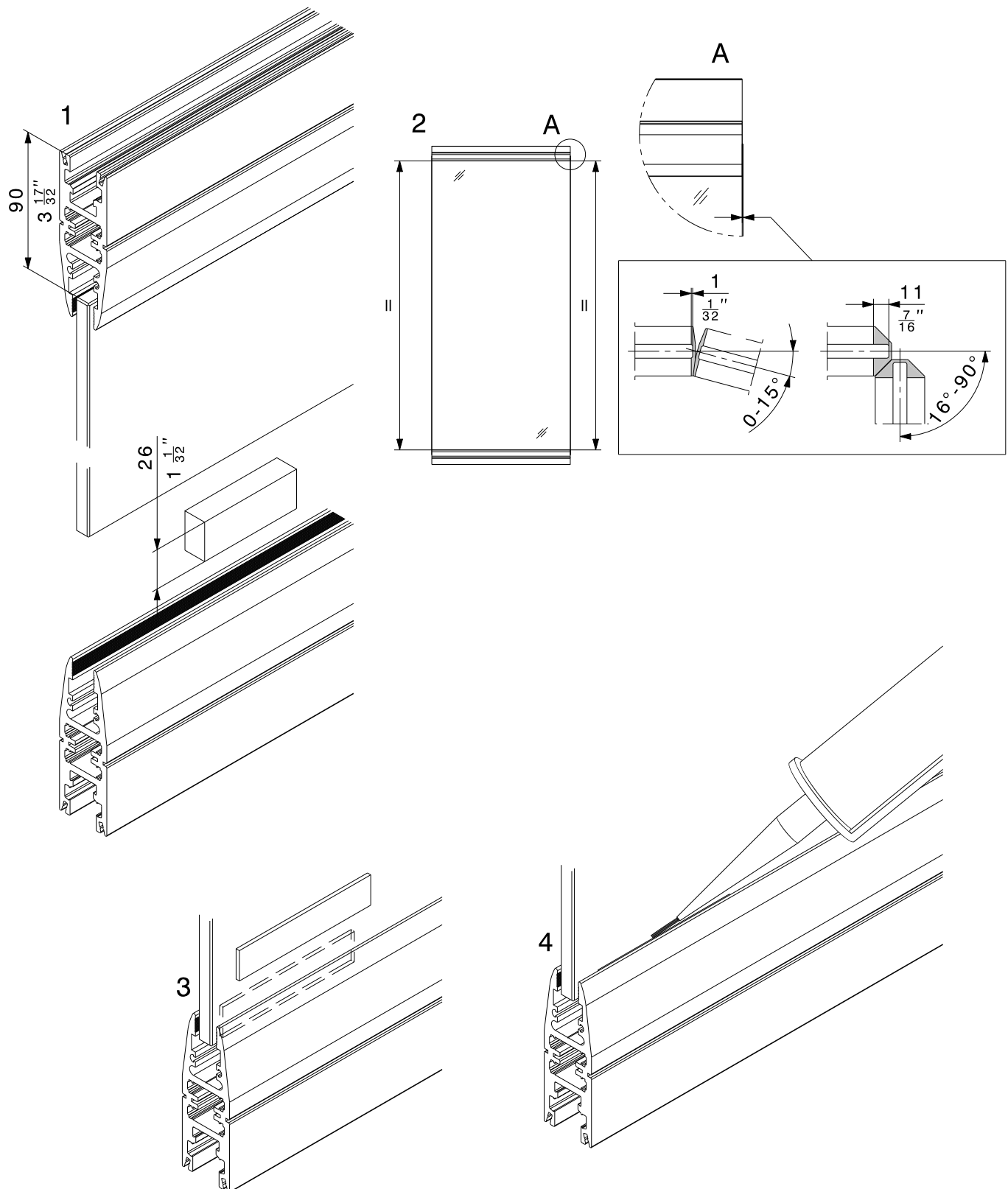


14 Installing optional components


14.1 Installing fixed glass (FESTV)

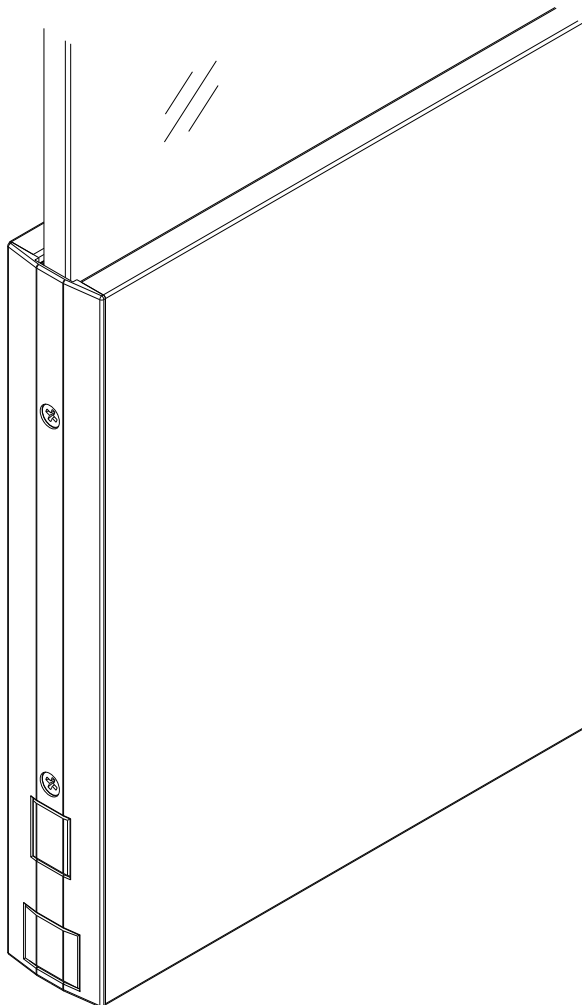


14.2 Installing the glass suspension and retainer profile (TGP) for fixed glass (FEST)

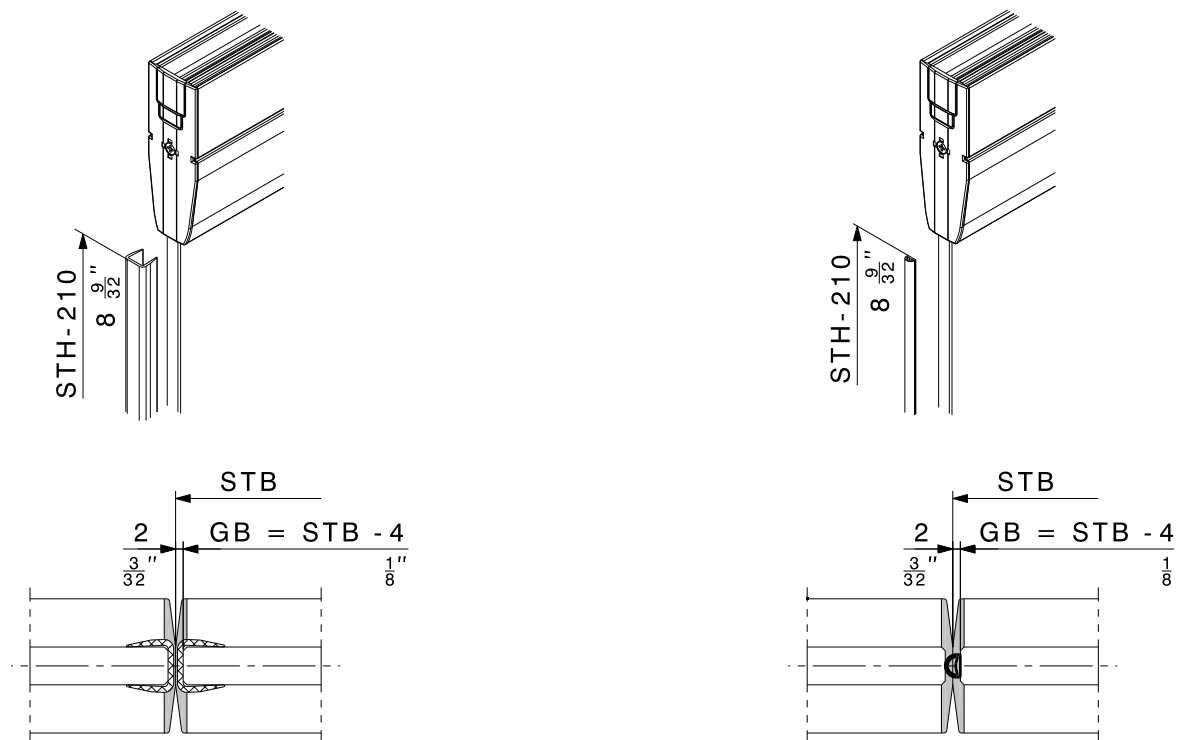
14.3 Installing fixed glass (FEST)

14.4 Glass suspension and retainer profile 230 mm (9 $\frac{1}{16}$ ")

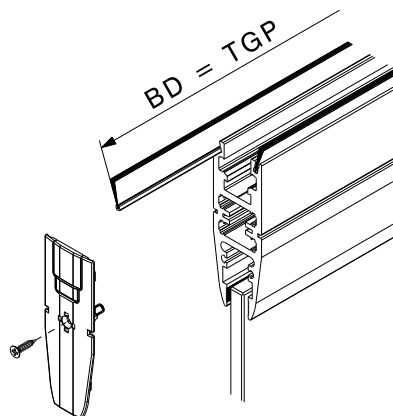
 The glass suspension and retainer profile 230 mm (9 $\frac{1}{16}$ ") must be assembled in the same way as the glass suspension and retainer profile; see "Installing the glass suspension and retainer profile (TGP)".



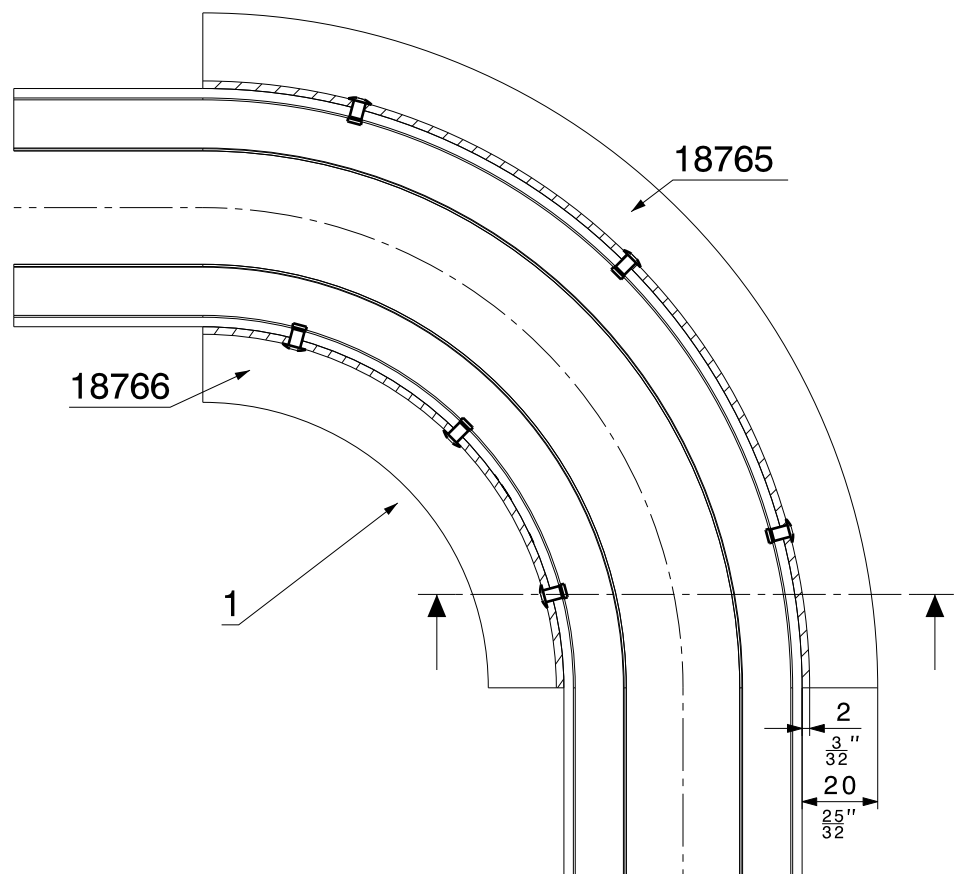
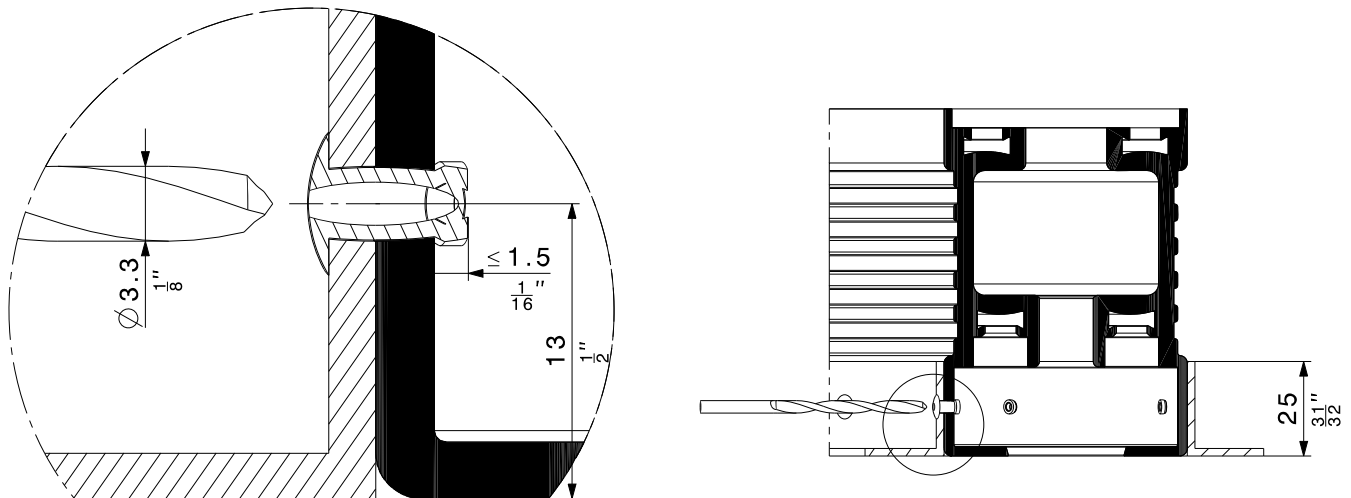
14.5 Installing glass edge protection profiles



14.6 Installing brush seals

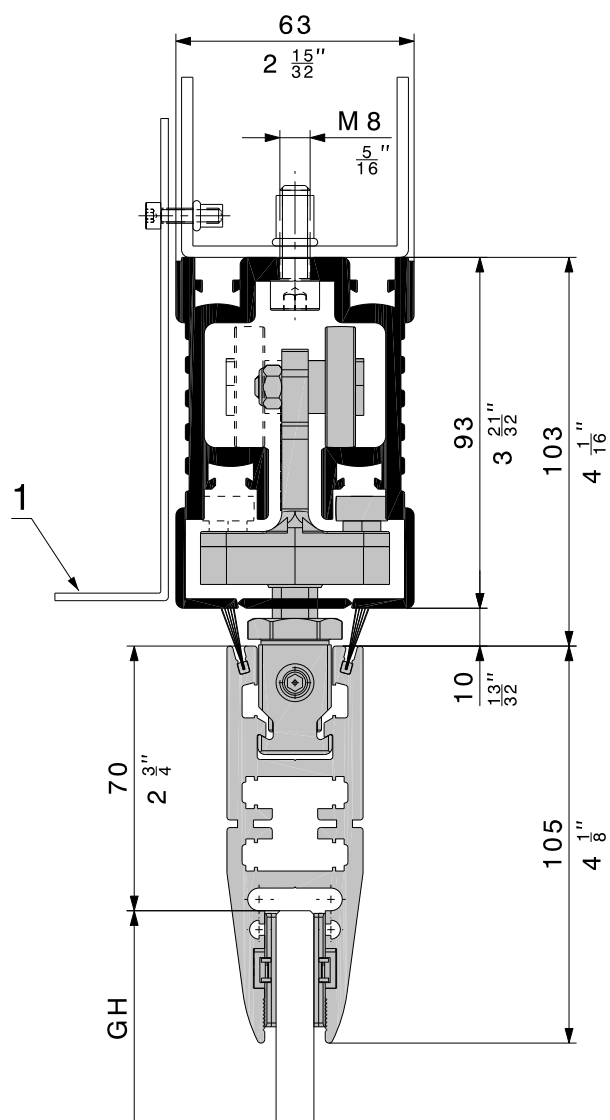


14.7 Ceiling connection bracket for the curved top track



- 1 Only use the POP standard flat round rivet provided ($\varnothing 3,2 \text{ mm}$ [$\frac{1}{8}''$], clamping length $1,6 \text{ mm} - 3,2 \text{ mm}$ [$\frac{1}{16}'' - \frac{1}{8}''$]).
Rivet: aluminium, pin: steel.

14.8 Installing edge brackets



- 1 Maximum load 2 kg (4,4 lbs.) per metre

15 Cleaning notes

Cleaning work is not necessary.

16 Maintenance work and wearing parts

The condition and functionality of the following components should be checked at least **twice a year** (depending on the intensity of use).

- 13827 Pivot bearing
- 13798 Floor door closer
- 15515 Surface-mounted top door closer
- 13825 Coupling mechanism
- 16765 Thrust bearing, adjustable
- 16326 Thrust bearing sleeve
- 16196 Pivot bearing
- All trolleys (13778, 13818, 13821, 13820)
- All locks (13855–13857, 13784–13786, 13999, 14000, 14076, 21225, 14171, 14087, 17130)



Hawa Sliding Solutions AG
8932 Mettmenstetten
Switzerland
Tel. +41 44 787 17 17
Fax +41 44 787 17 18
www.hawa.com

