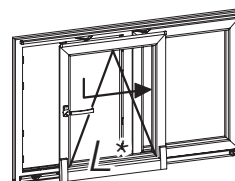
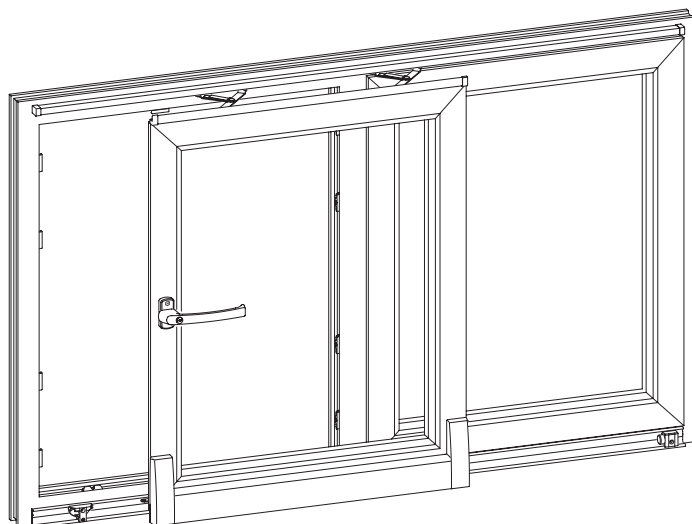


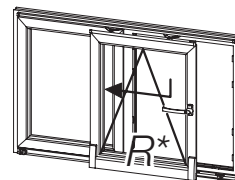
ATRIUM® HKS 160 S **ATRIUM® HKS 100 S** **Mounting instructions**

GB

Standard • RC2



* HAUTAU version Left
= DIN EN 12519 Right
(right-opening)



* HAUTAU version Right
= DIN EN 12519 Left
(left-opening)

All figures within this document refer to HAUTAU version Left (DIN EN 12519 Right).

For assembling the HAUTAU versions Right (DIN EN 12519 Left) measures have to be applied mirrored.

Notes:

- These instructions specify the installation with HAUTAU central locking components/hardware. If different hardware is being used please follow installation instructions of central locking manufacturer.
- These instructions describe the installation of fittings in standard version. For further **mounting applications** you need the **following additional instructions**:
 - ATRIUM® HKS 160/100 S Additional instructions – timber frames, 4 mm fittings cavity (top: 12 mm smooth fittings cavity); item code: 227194.
 - ATRIUM® HKS 160/100 S Mounting instructions – handle 161 EG-Pzl / 160 EG-PzA; Artikelcode: 223977.
 - ATRIUM® HKS 200 Additional instructions – displaceable guide block; item code: 224487.
- **Before start-up, the fitting parts are to be greased** acc. to Maintenance and operating instructions (item code: 221268).

Contents

	page		page
Applications, abbreviations	2	Mounting of guide track, bottom track, stay connecting profile and stay system	12
Important information	3	Hanging sash	13
Packing units	4	Installation of guide block, horizontal sash alignment ..	14
Fittings	5	Setting of sash closing pressure (overrebate height), buffer installation	15
Sash preparation	6	Bogie safety device, cover installation	16
Cutting connecting tracks to size	7	Vertical section top, horizontal section handle EG ...	17
Installation of central locking	8	Vertical section bottom	18
Mounting of bogies, parallel alignment of bogies	9	Handle sections scheme C	19
Mounting of handle, strikers and tilt lock bearings ...	10	Information for FFH > 2350 mm (ATRIUM HKS® 160 S, only) ..	19
Scheme C: Mounting of guide track, strikers and tilt lock bearings	11		

Applications, Abbreviations

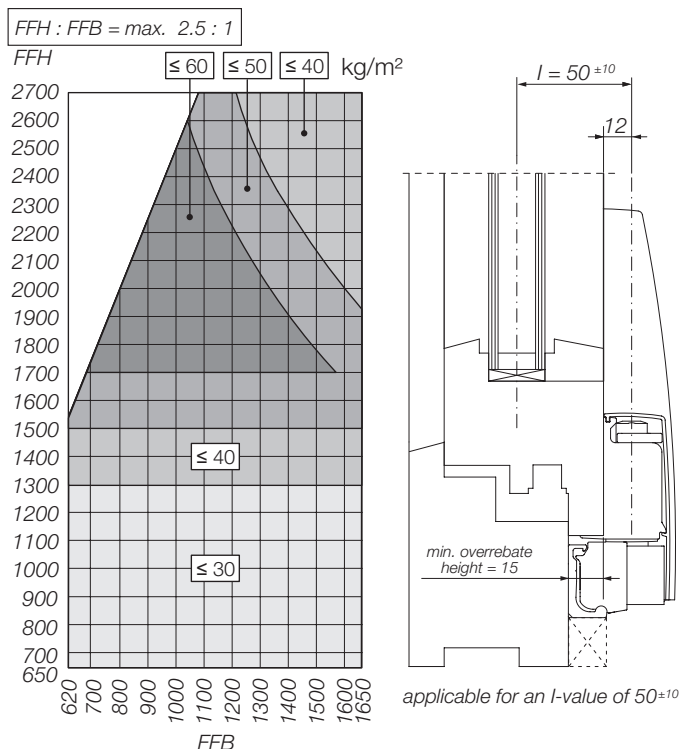
Applications

The limits of application quoted in these instructions are binding and must not be exceeded.
Please also comply with admissible sizes, manufacturing instructions and processing guidelines given by the profile manufacturer.

ATRIUM® HKS 160 S

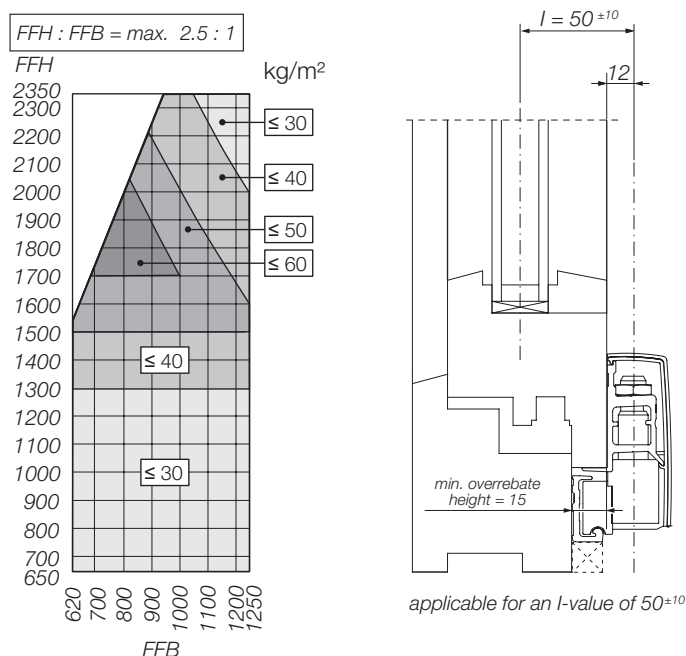
Sash rebate width (FFB) [mm]	620 bis 1650
Sash rebate height (FFH) [mm]	650 bis 2700*
Sash weight (FG) [kg]	max. 160
RC2	possible

*) For FFH > 2350 mm please refer to special information at the end of the document, too.



ATRIUM® HKS 100 S

Sash rebate width (FFB) [mm]	620 bis 1250
Sash rebate height (FFH) [mm]	650 bis 2350
Sash weight (FG) [kg]	max. 100
RC2	not possible



Abbreviations

D	Backset	GUL	Handle side down, version left
EG	Espag	GUR	Handle side down, version right
FFB	Sash rebate width	OKFF	Top edge finish-floor level
FFH	Sash rebate height	RC2	Resistance class 2
FFK	Sash rebate edge	UL	Non-handle side down, version left
FG	Sash weight	UR	Non-handle side down, version right

Important information

Intended use

Tilt-and-slide-fittings ATRIUM® HKS 160 S and ATRIUM® HKS 100 S are intended for use only in stationary buildings. They are used for the horizontal opening and closing of windows and window doors. The Tilt-and-slide-elements must be installed perpendicularly, and under no circumstances may they be in a skewed position.

Prerequisite

- These installation instructions and the installation of the fittings demand specialist knowledge corresponding to successfully completed training in at least one of the following trades: construction carpenter, construction metal worker, window and glass facade installer.
- Applications mentioned on page 2 of these mounting instructions apply to the HAUTAU fitting system ATRIUM® HKS 160 S and ATRIUM® HKS 100 S. Quoted tightening speeds and torques are binding.
- When **installing the fittings**, use screws which are **long enough** and which reach right **up to the steel reinforcement** in case of PVC profiles.
- **Under all circumstances comply with the handling guidelines of the profile manufacturer.**
- Fittings must not be used for timbers with aggressive contents and/or surface treatments.
- Tilt-and-slide elements may be surface-treated only **before** the installation of the fitting parts.
Subsequent surface treatment may have a negative effect on the operability of the fitting parts.
In this case, all guarantee claims against the fitting manufacturer are nullified.
- The steel component parts described in these installation instructions have been passivated and sealed as per DIN EN 12329 using a colourless process. They must not be used in environments with aggressive and corrosive air components.
- Keep the runner rail and all rebates free of deposits and contamination, in order to avoid damage to the fitting and to ensure optimum functioning. **In particular, protect the fitting from cement or plaster residues.**
- Do not use acid-curing sealants, as these can result in corrosion of the fitting parts.
- Avoid directly exposing the fitting to moisture, and prevent acid-containing cleaning agents from coming into contact with the fitting.
- The fitting manufacturer shall not be liable for any malfunction of or damage to the fittings as well as the windows or French doors fitted, if the malfunctions of the tilt-and-slide hardware can be traced back to the use of bought-in fittings, insufficient invitation to tender, non-observation of the rebating instructions or application diagrams.
- The installing party shall be responsible for the adherence to the functional dimensions given in these mounting instructions and workshop drawing as well as for a perfect installation of the fittings and safe attachment of all components.

User information

- Hand out product together with maintenance and operating instructions to end-user.
- Chose a clearly visible position at installed window sash for instruction sticker (sliding direction DIN left and DIN right).
For HAUTAU central locking: instruction sticker can be found in box “Corners for ATRIUM® HKS”.
- **Please comply with the “Requirements/instructions on the product and on liability (VHBH)”. Please inform the end-user about the content of the “Requirements/instructions for end-users (VHBE)”.**
- Keep these installation instructions in a safe place.

Fixing screws for fittings

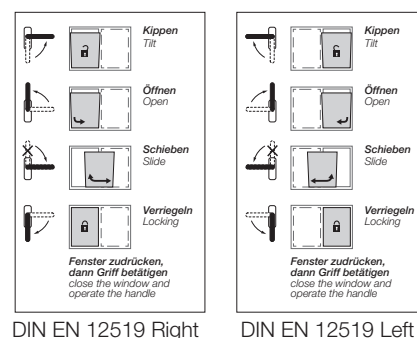
Not included in scope of delivery. Length must be chosen according to profiles used.

Countersunk screws mm 4.0 x ...

Countersunk screws mm 4.0 x ..., **Important:** Head diameter d_k 7 mm

Countersunk screws mm 4.8 x ...

Instruction sticker

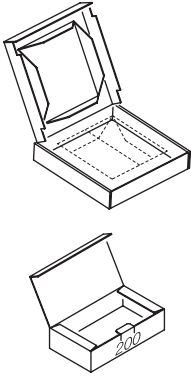
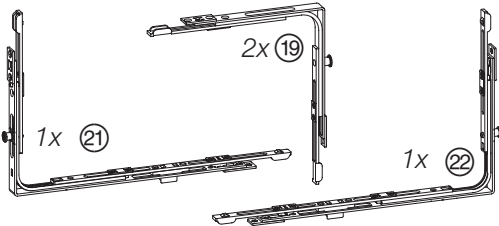



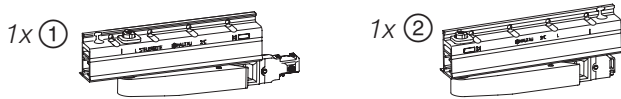

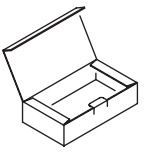
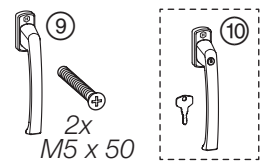





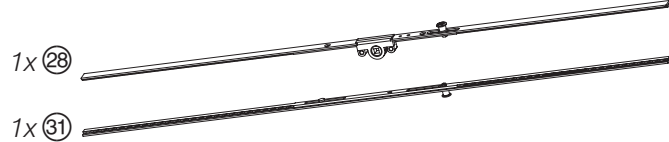

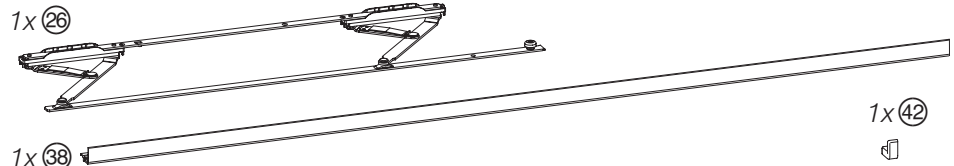

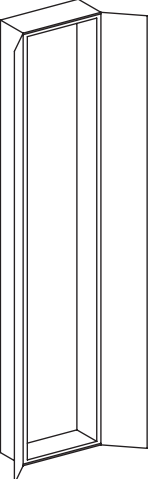
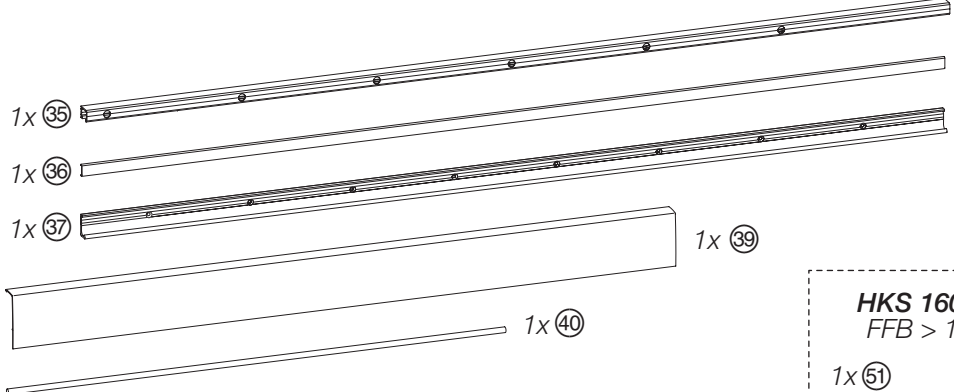

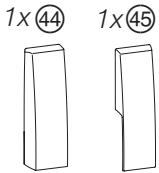
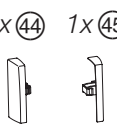
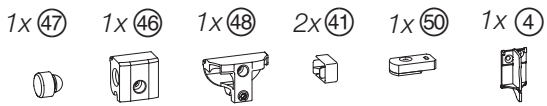
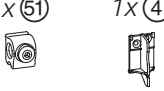


DIN EN 12519 Right

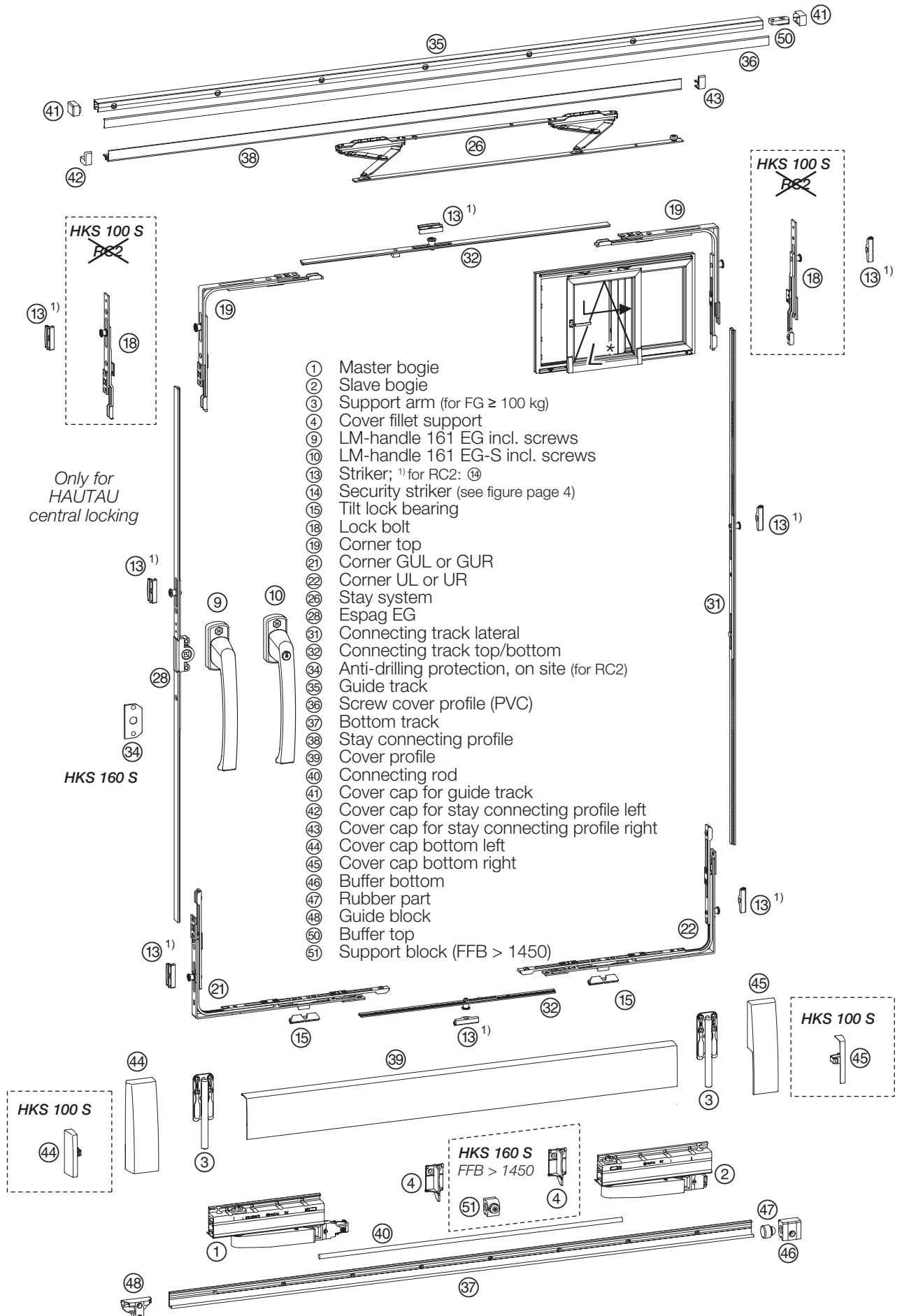
DIN EN 12519 Left

All measurements in these instructions are indicated in millimetres (mm).

Packing units

	<p><i>Only for HAUTAU central locking</i></p> <div data-bbox="443 338 943 562">  <p>2x 19 1x 21 1x 22</p> </div> <div data-bbox="970 322 1129 539"> <p>HKS 100 S</p> <p>RC2</p>  <p>2x 18</p> </div> <div data-bbox="1166 331 1230 421">  <p>Instruction sticker</p> </div> <div data-bbox="1161 427 1230 517">  <p>Maintenance and operating instructions</p> </div> <div data-bbox="443 591 1066 689">  <p>1x 1 1x 2</p> </div> <div data-bbox="1129 591 1369 689"> <p>HKS 160 S</p>  <p>2x 3</p> </div>
	<p><i>Only for HAUTAU central locking</i></p> <div data-bbox="443 725 703 891">  <p>2x 9 M5 x 50 1x 10</p> </div>
	<div data-bbox="443 949 592 1025">  <p>2x 15</p> </div> <div data-bbox="756 927 895 1032">  <p>10 x 13</p> </div> <div data-bbox="927 913 1114 1055"> <p>RC2</p>  <p>10 x 14</p> </div>
	<div data-bbox="443 1084 970 1160">  <p>2x 32</p> </div> <div data-bbox="1002 1084 1262 1160"> <p>HKS 100 S</p> <p>1x 32</p> <p>RC2</p> </div>
	<div data-bbox="443 1182 1114 1323">  <p>1x 28 1x 31</p> </div>
	<div data-bbox="443 1361 1401 1525">  <p>1x 26 1x 38</p> </div> <div data-bbox="1310 1458 1481 1525"> <p>1x 42 1x 43</p>  </div>
	<div data-bbox="443 1554 1401 1944">  <p>1x 35 1x 36 1x 37 1x 39 1x 40</p> </div> <div data-bbox="432 1973 507 2123">  </div> <div data-bbox="528 1973 687 2145">  <p>1x 44 1x 45</p> </div> <div data-bbox="703 1966 874 2145"> <p>HKS 100 S</p>  <p>1x 44 1x 45</p> </div> <div data-bbox="916 2040 1465 2145">  <p>1x 47 1x 46 1x 48 2x 41 1x 50 1x 4</p> </div> <div data-bbox="1246 1823 1485 2018"> <p>HKS 160 S</p> <p>FFB > 1450</p>  <p>1x 51 1x 4</p> </div>

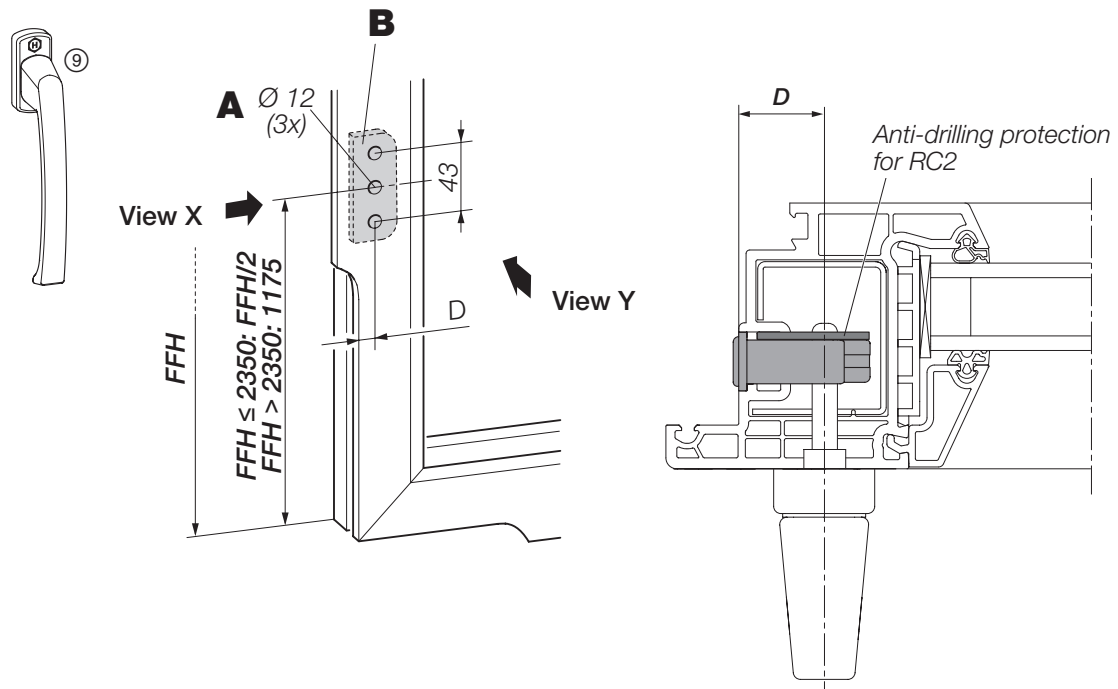
Fittings



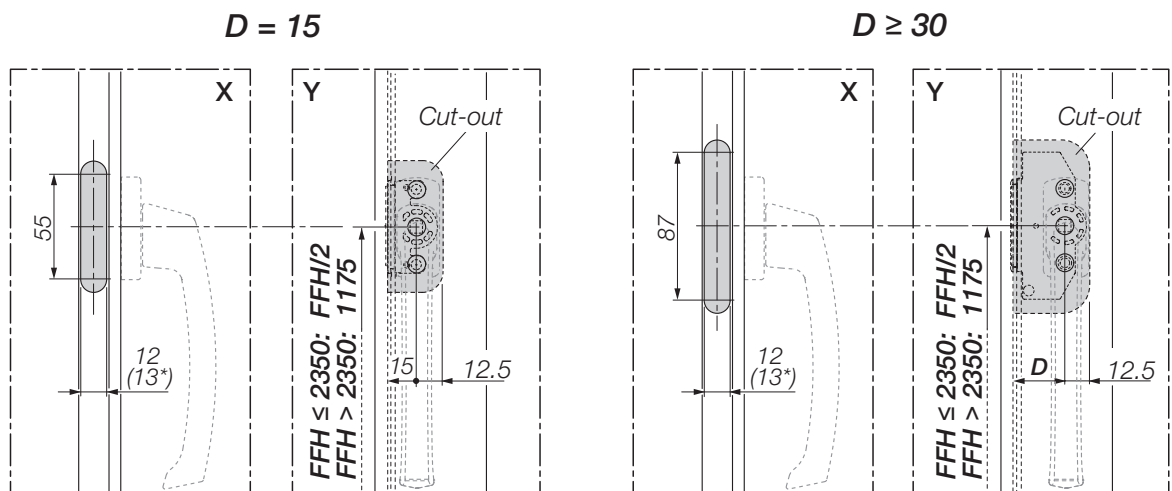
Sash preparation

Handle bores, milling for gear box

- A** Mark bore holes. Drill bore holes with $\varnothing 12$.
- B** Carry out milling for gear box (see detail).



Detail **B**

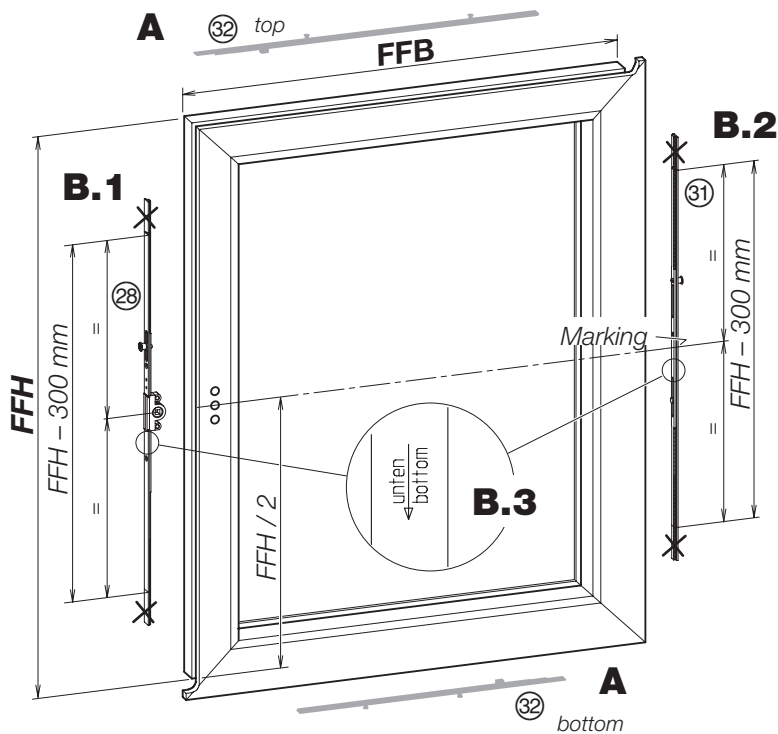


* for anti-drilling protection in case of version RC2

Cutting connecting tracks to size

Cutting connecting tracks to size (for HAUTAU central locking)

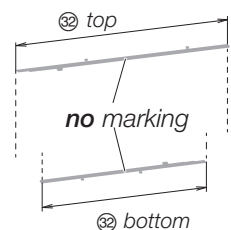
- A** Identify connecting tracks ③② (A.1) and cut them (A.2/A.3). Consider labelling "handle side" (A.4).
- B** FFH ≤ 2350 mm: shorten espag EG ②⑧ as well as connecting track lateral ③① (B.1/B.2). Consider labelling (B.3).
For FFH > 2350 mm please refer to pages 19-20.



A.1

Identification of connecting tracks ③②

- No centre marking? - OK
- Longer track? → ③② top → A.2*
- Shorter track? → ③② bottom → A.3



*) in case of corners top ①⑨, only

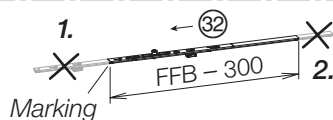
A.4

Griffseite
handle side

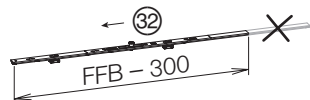
A.2* connecting track ③② top

*) in case of corners top ①⑨

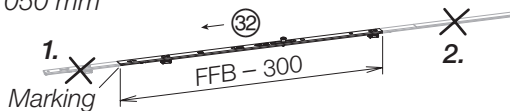
FFB 620 ... 700 mm



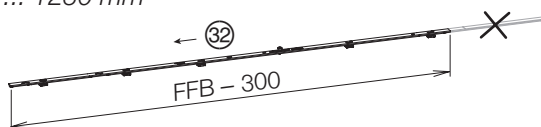
FFB 701 ... 900 mm



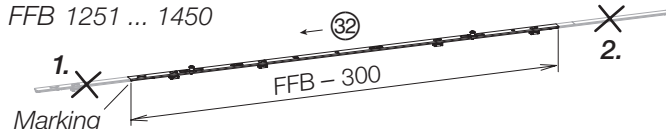
FFB 901 ... 1050 mm



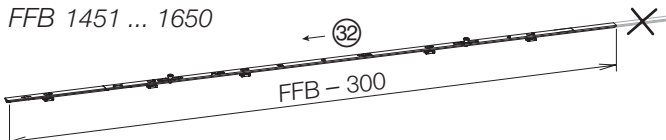
FFB 1051 ... 1250 mm



FFB 1251 ... 1450 mm

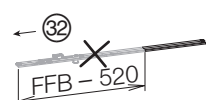


FFB 1451 ... 1650 mm



A.3 connecting track ③② bottom

FFB 620 ... 700 mm



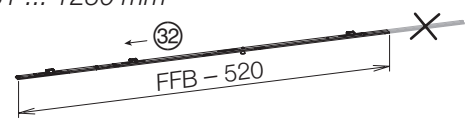
FFB 701 ... 900 mm



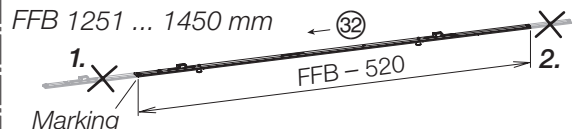
FFB 901 ... 1050 mm



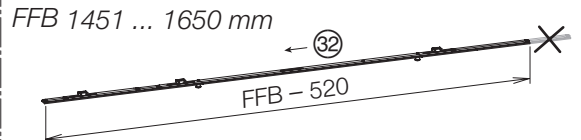
FFB 1051 ... 1250 mm



FFB 1251 ... 1450 mm




FFB 1451 ... 1650 mm

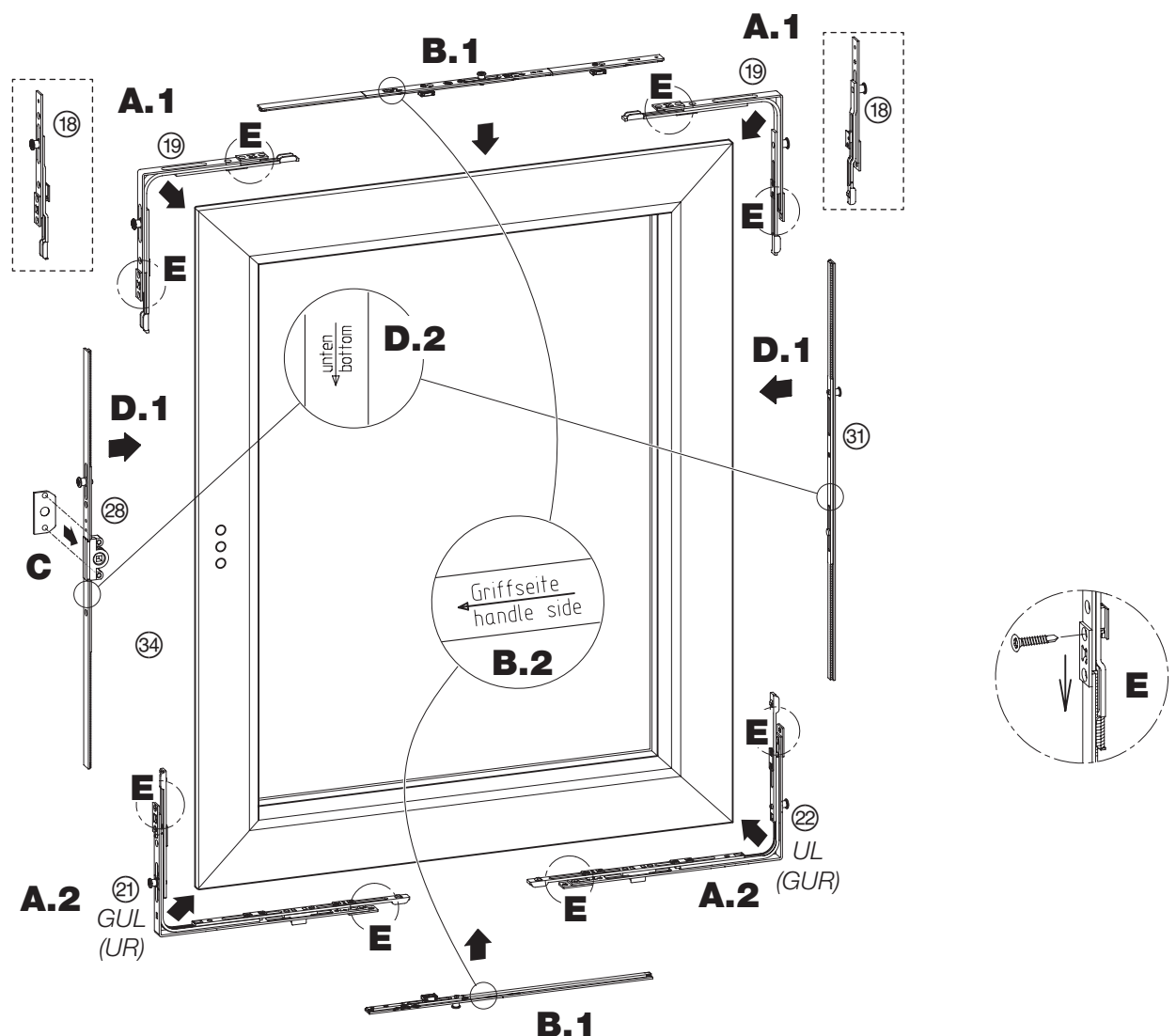


Installation of central locking

Installation of central locking (for HAUTAU central locking)

- A** Fix corner top ⑰ or lock bolts ⑱ (A.1) as well as corners bottom ⑳/㉔ (A.2) by means of screws.
- B** Fix connecting track top ㉓ (in case of corners top) and connecting track bottom ㉓ by means of screws (B.1). Consider labelling "handle side" (B.2).
- C** Only for RC2-version: attach anti-drilling protection ㉔ (delivered on site) onto gear box.
- D** FFH ≤ 2350 mm: screw connecting track lateral ㉓ as well as espag EG ㉔ (D.1). Consider labelling (D.2).
For FFH > 2350 mm please refer to pages 19-20.
- E** Move and fix adjustment system for connecting tracks at corners.

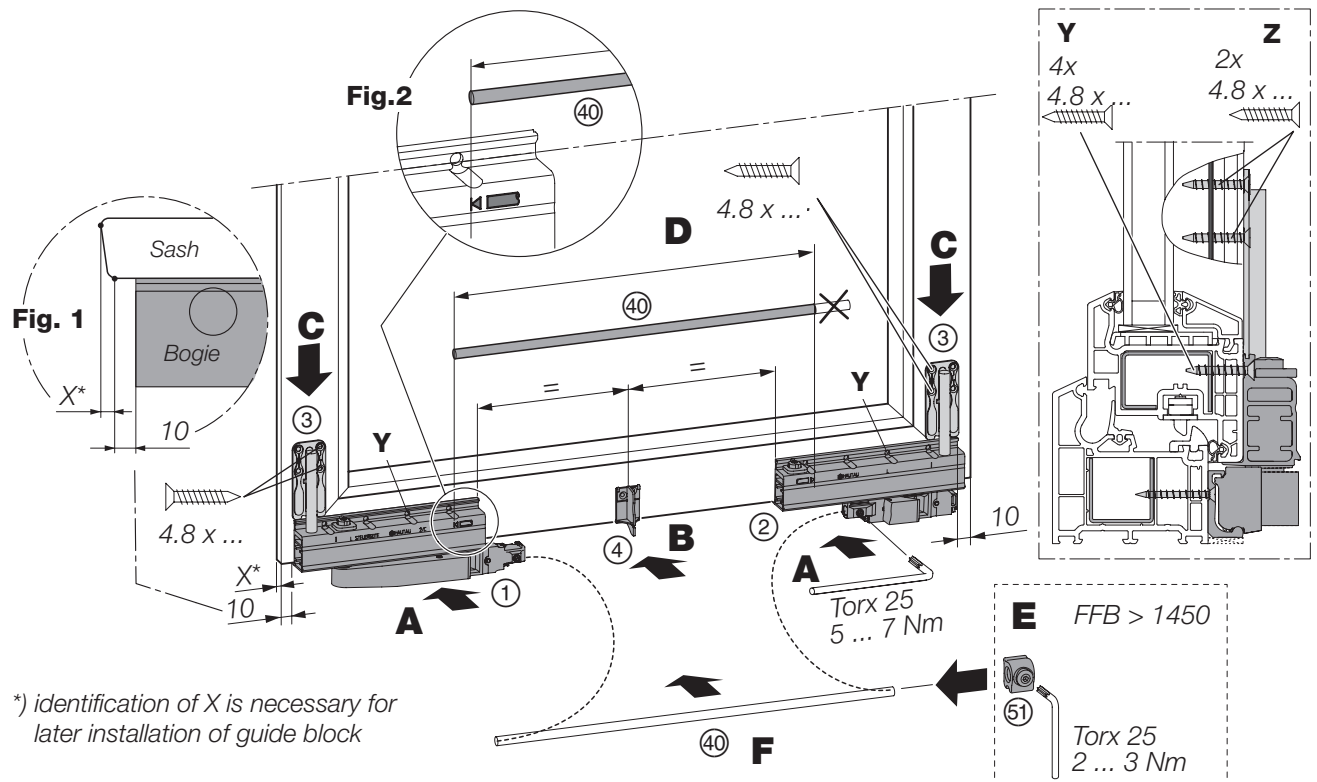
Please use: 
4.0 x ...



Mounting of bogies, parallel alignment of bogies

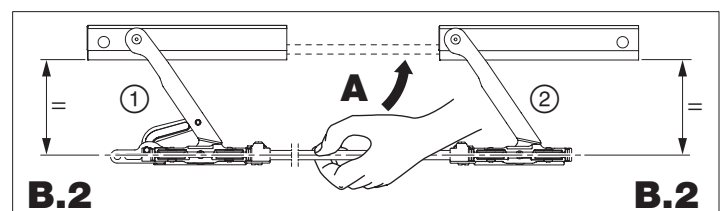
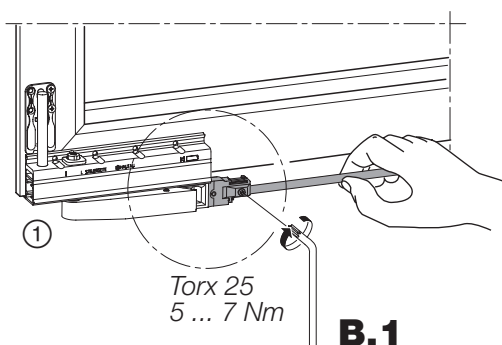
Mounting of bogies

- A** Tighten bogies ①/② with four screws 4.8 x ... each at sash. Keep a lateral distance of 10 mm to outer sash edges and ensure flush positioning with bottom edge (see reference edge for profiles with edge radius in figure 1). Screw length has to be chosen such as to ensure proper fastening in steel reinforcement (**Y**).
- B** Fix cover fillet support ④ with two screws 4.8 x ... in centre position between bogies. For FFB > 1450, arrange both cover fillet supports equally between bogies.
- C** For HKS 160 S: insert and click support arms ③ into the profiles of the bogies and fasten with two screws 4.8 x ... each (see figure for screw bores). Screw length has to be chosen such as to ensure proper fastening in steel reinforcement (**Z**).
- D** Cut connecting track ④① to size according to marks on bogies (see figure 2).
- E** For FFB > 1450: move support block ⑤① in centre position of connecting rod. Fasten (Torx 25, 2 ... 3 Nm).
- F** Insert connecting rod in couplings of bogies ① and ②. Tighten bogie ② on non-handle side with Torx 25 (5 ... 7 Nm).



Parallel alignment of bogies (to ensure uniform entry of sash into frame)

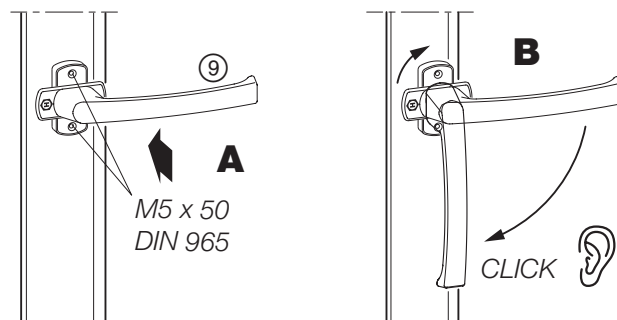
- A** Grab connecting rod centered and bring it into position "close".
- B B.1:** In this position, tighten connecting rod firmly at bogie ① on handle side (Torx 25, 5 ... 7 Nm).
- B.2:** Now, both bogies ① + ② have to be parallel in position "open", too.



Mounting of handle, strikers and tilt lock bearings

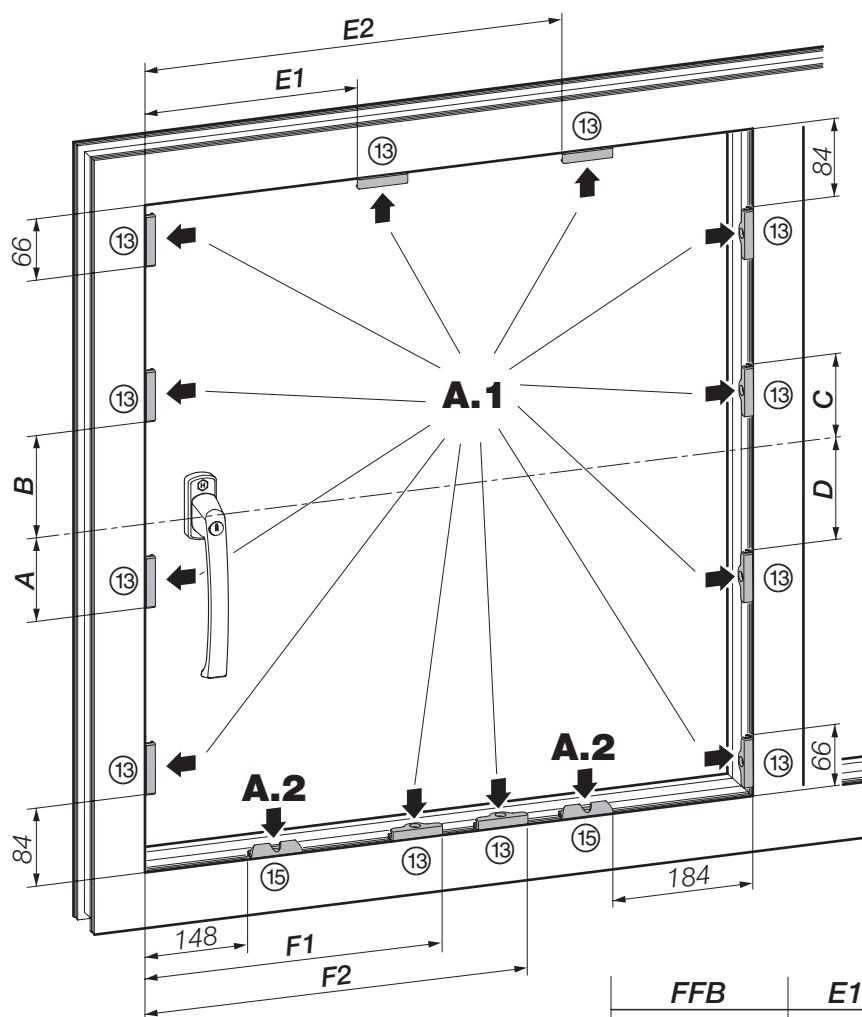
Mounting of handle

- A** Mount handle ⑨ on sash at a position of 90°. Turn rosette and tighten handle with two screws M 5 x 50.
- B** Make sure that handle can be easily moved. Move back rosette into home position.



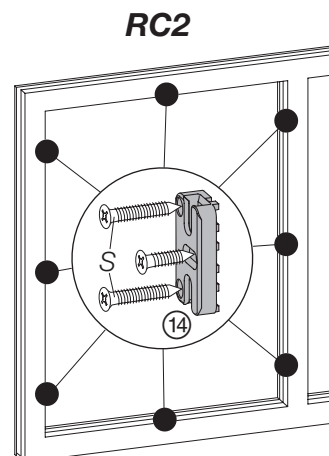
Mounting of strikers and tilt lock bearings at frame (for HAUTAU central locking)

- A.1** Fix strikers ⑬ (for version RC2: ⑭) according to chart (for FFH > 2350 mm refer to page 20). In case of version RC2 (see detail): screw length (S) has to be chosen such as to ensure proper fastening in steel reinforcement.
- A.2** Fix tilt lock bearings ⑮.



All measurements mentioned below are valid for 12 mm fittings cavity.

Please use:



FFH	A	B	C	D
650 ... 1100	90 ¹⁾	—	90 ¹⁾	—
1000 ... 1450	—	110 ²⁾	—	110 ²⁾
1451 ... 2350	309	341	309	341

¹⁾ for gear size 110

²⁾ for gear size 140

FFB	E1	E2	F1	F2
620 ... 700	262	—	—	—
701 ... 900	412	—	383	—
901 ... 1050	504	—	486	—
1051 ... 1250	654	—	636	—
1251 ... 1450	304	904	396	866
1451 ... 1650	504	1104	596	1066

Scheme C: Mounting of guide track, strikers and tilt lock bearings



Mounting sequence for frames

in case of lack of space:

- A** - insert both stay systems (26) laterally into guide tracks (35).
- Attach cover caps (41) on ends of guide tracks.
- Tighten guide track at frame with screws 4.0 x ...
Refer to section "Mounting of guide track", too.

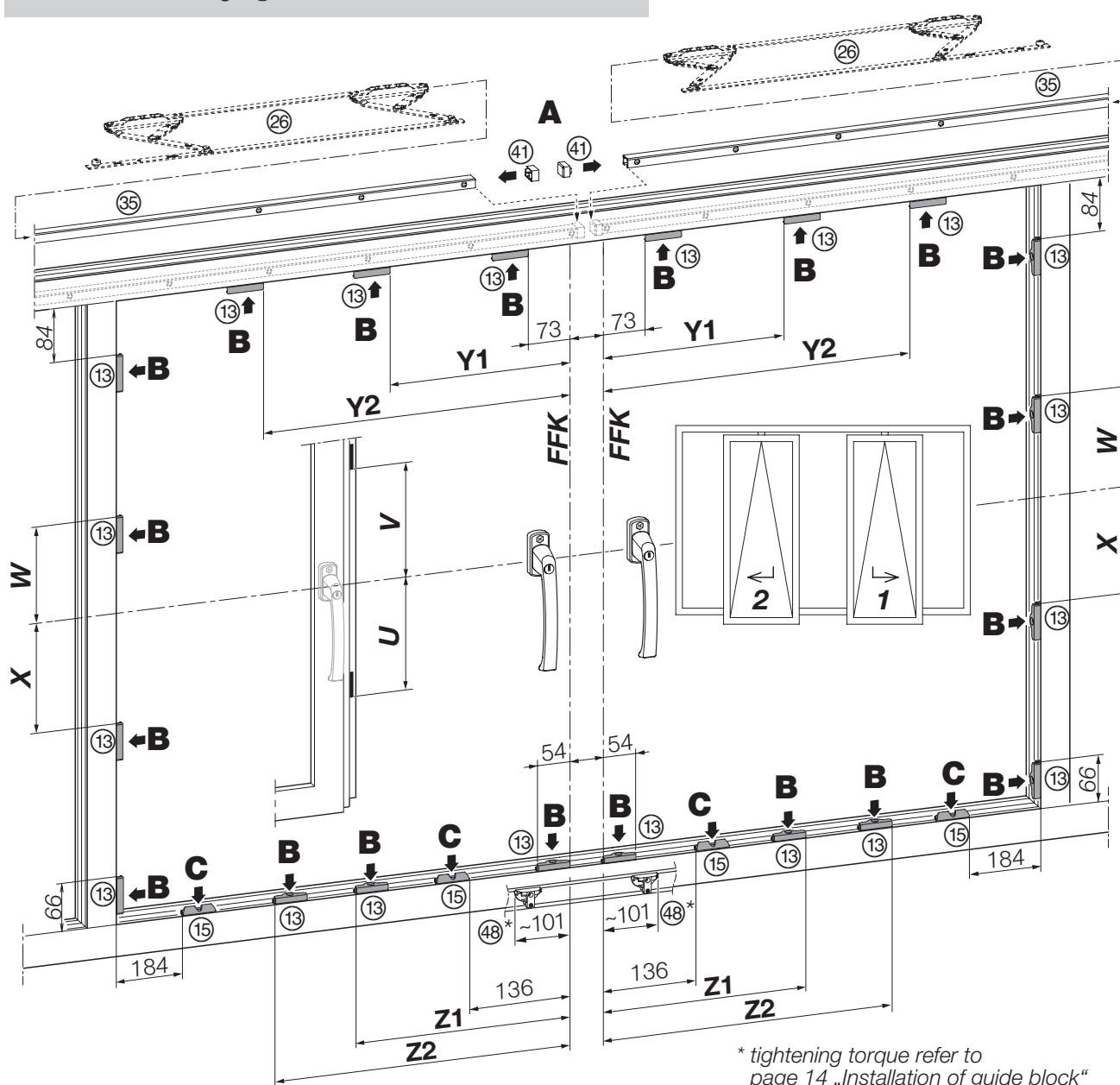
for HAUTAU central locking:

- B** Fix strikers (13) according to chart.
- C** Fix tilt lock bearings (15).

All measurements
mentioned below
are valid for 12 mm
fittings cavity.

Please use:

4.0 x ...



* tightening torque refer to
page 14 „Installation of guide block“

FFB	Y1	Y2	Z1	Z2
620 ... 700	250	—	—	—
701 ... 900	400	—	371	—
901 ... 1050	492	—	474	—
1051 ... 1250	642	—	624	—
1251 ... 1450	292	892	384	854
1451 ... 1650	492	1092	584	1054

FFH	U	V	W	X
650 ... 1000	90	—	90	—
1001 ... 1450	—	110	—	110
1451 ... 2350	309	341	309	341

Mounting of guide track, bottom track, stay connecting profile and stay system

Mounting guide track to frame

A Total length of guide track (35): distance between outer edges of sliding sash and fixed sash minus 8 mm.

B Tighten guide track with screws 4.0 x ... (d_k 7), as shown (B.1).

i Important notices:

The screw heads must not jut out from the guide rail under any circumstances.

If the screw heads do protrude, they will cause material damage (B.2).

Oil the sliding surfaces along the entire length of the guide rails (B.3).

C Shorten cover profile (36) according to size of guide track and clip on guide track.

Mounting bottom track to frame

D Shorten bottom track (37) until it is flush with outer corners of sliding sash and fixed sash.

E Fix bottom track at frame at a distance of 35 +1 mm from bottom edge of bottom track to bottom edges of sashes. Use screws 4.0 x ... (d_k 7) (fig. 1).

i Important notices: The screw heads must not jut out from the running rail under any circumstances. If the screw heads do protrude, they will cause material damage (fig.2).

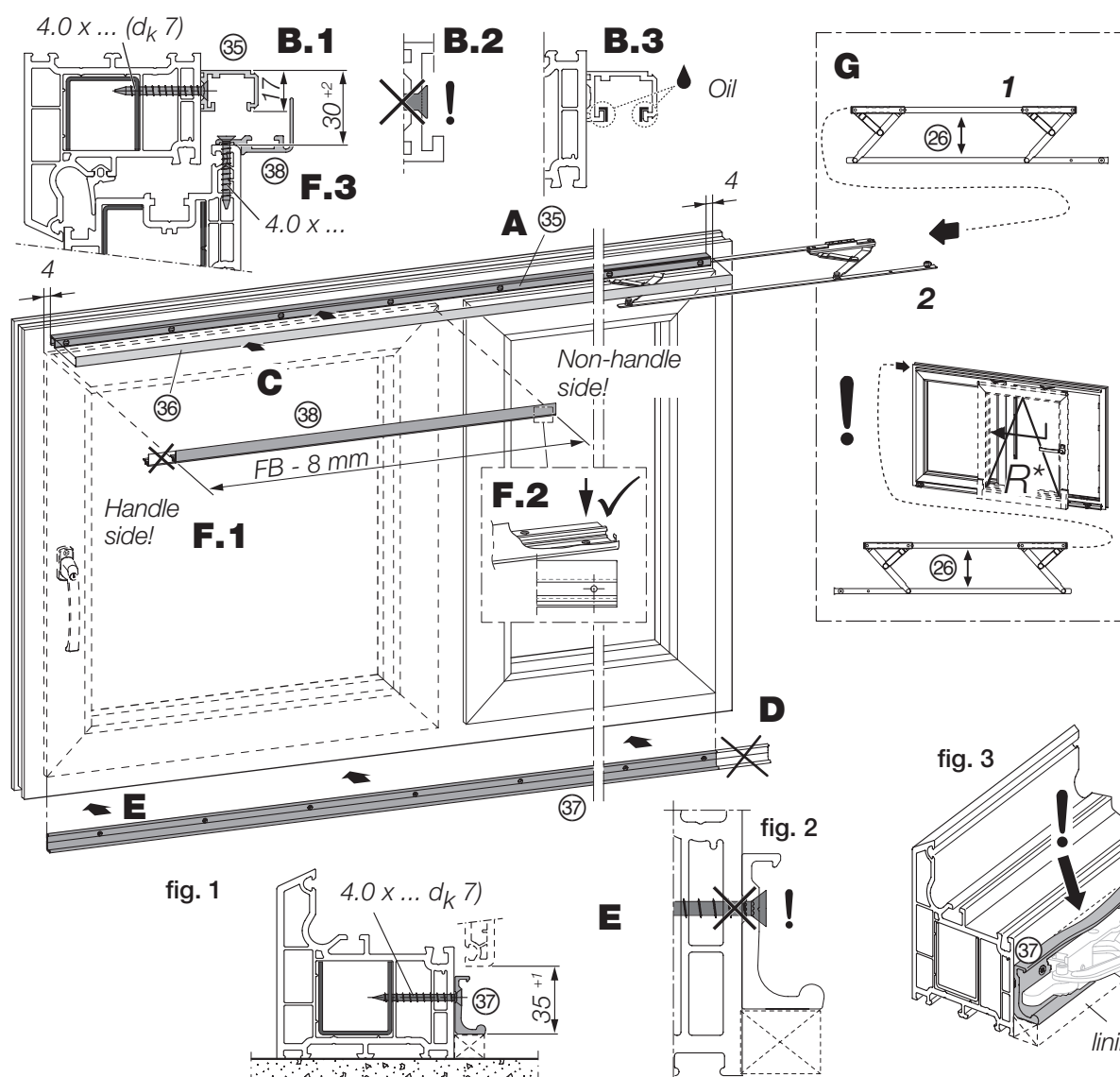
In case of visible deformation or unusual (well audible) noise in the area of bottom track, provide continuous lining (on site) at bottom track for load transfer (fig. 3).

Mounting stay connecting profile to sash

F Cut stay connecting profile (38) to size from the **handle side**: sash width minus 8 mm (F.1). On the non-handle side the bore hole has to remain (F.2). Screw stay connecting profile centered to sash with screws 4.0 x ... (F.3).

Mounting of stay system in guide track

G Open stay system (26) (1) and push it into guide track as illustrated (2). Take care to choose the right side!



Hanging sash


Installing sash onto guide track

- A** Bring handle in slide position. Lift sash slightly in oblique position and place it together with bogie rollers on front edge of bottom track (37). Check position of rolls by sliding the sash and adjust, if necessary.

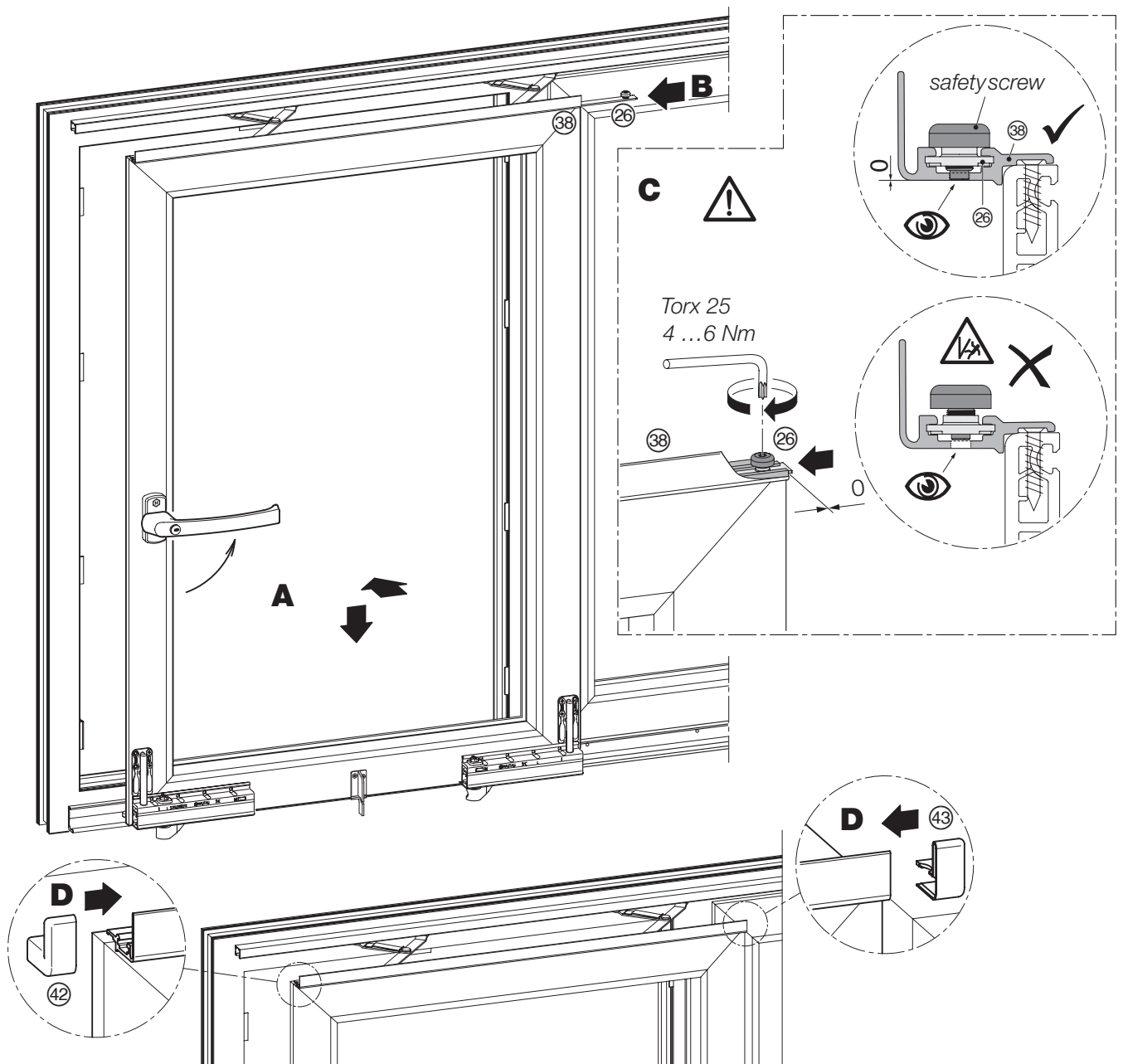
Connecting sash with guide track

- B** Push stay system (26) into stay connecting profile (38).

- C** Put sliding track in flush position with sash border and tighten safety screw (Torx 25; min. 4 ... 6 Nm).

 **Warning:** The safety screw must be positive fitted into the hole of the stay connecting profile (38). If you could not see the screw, the sash is not sufficiently secured. Severe injuries could be the consequence.

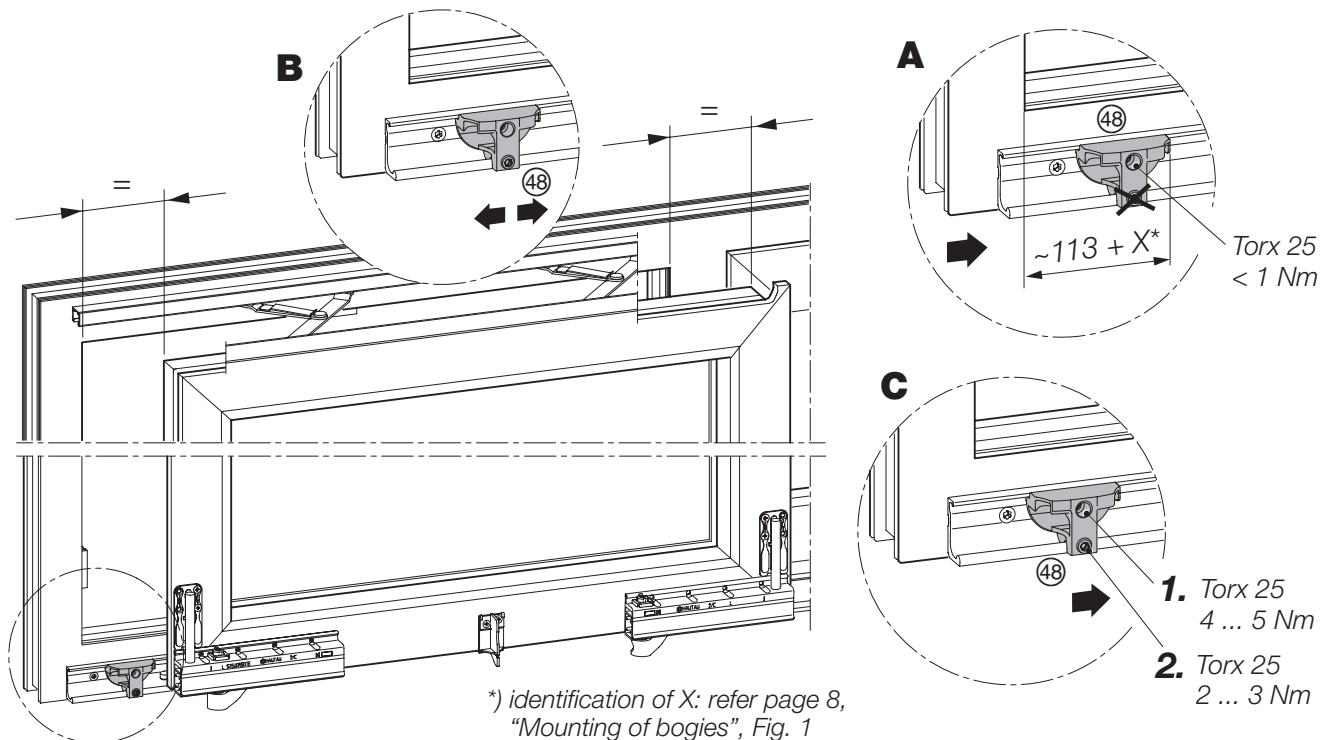
- D** Attach cover caps left (42) and right (43) on ends of stay connecting profile.



Installation of guide block, horizontal sash alignment

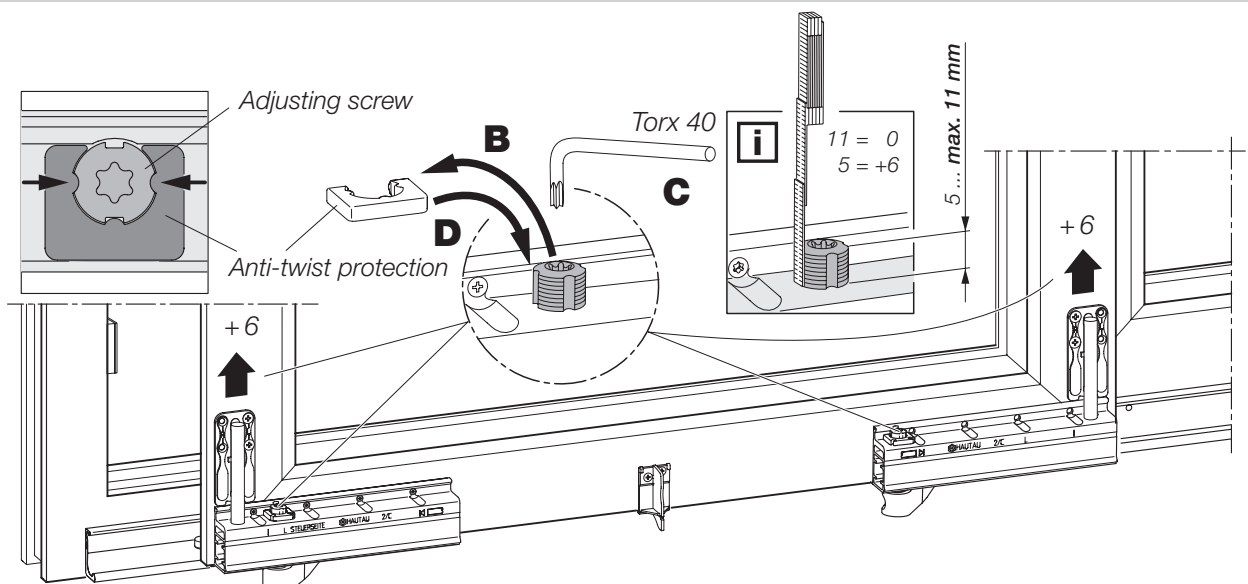
Installation of guide block

- A** Set guide block ④⑧ on handle side at a distance of approx. 113 mm + X* from the inner edge of the frame (for scheme C: refer to dimension on page 11). Tighten it slightly with the upper screw (Torx 25, < 1 Nm).
- B** Put sash in tilt position and check fittings cavity on both sides (12 mm). Reset guide block, if necessary.
- C**
 1. Tighten upper screw firmly at guide block (Torx 25, 4 ... 5 Nm).
 2. Then tighten bottom screw (Torx 25, 2 ... 3 Nm).



Horizontal sash alignment

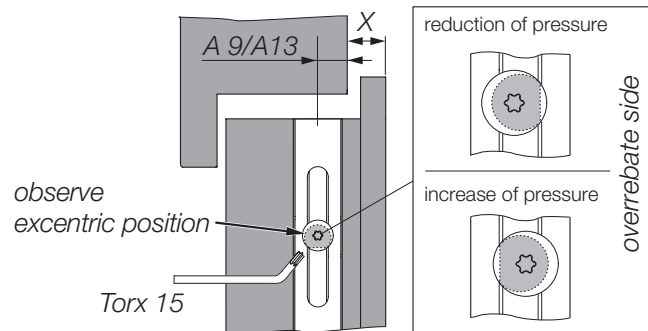
- A** Check fittings cavity top and bottom on both sides (not shown).
- B** Remove anti-twist protections.
- C** Lift bogies (Torx 40) by means of adjusting screws in order to align sash. The adjusting screws are allowed to be turned out **max. 11 mm**.
 - ⚠ **Attention:** If the adjusting screws are turned out more than 11 mm, the bogies will be destroyed.
- D** Put anti-twist protections on adjusting screws; at first, correct orientation of adjusting screws, if necessary.



Setting of sash closing pressure, buffer installation

Setting of sash closing pressure (overrebate height)

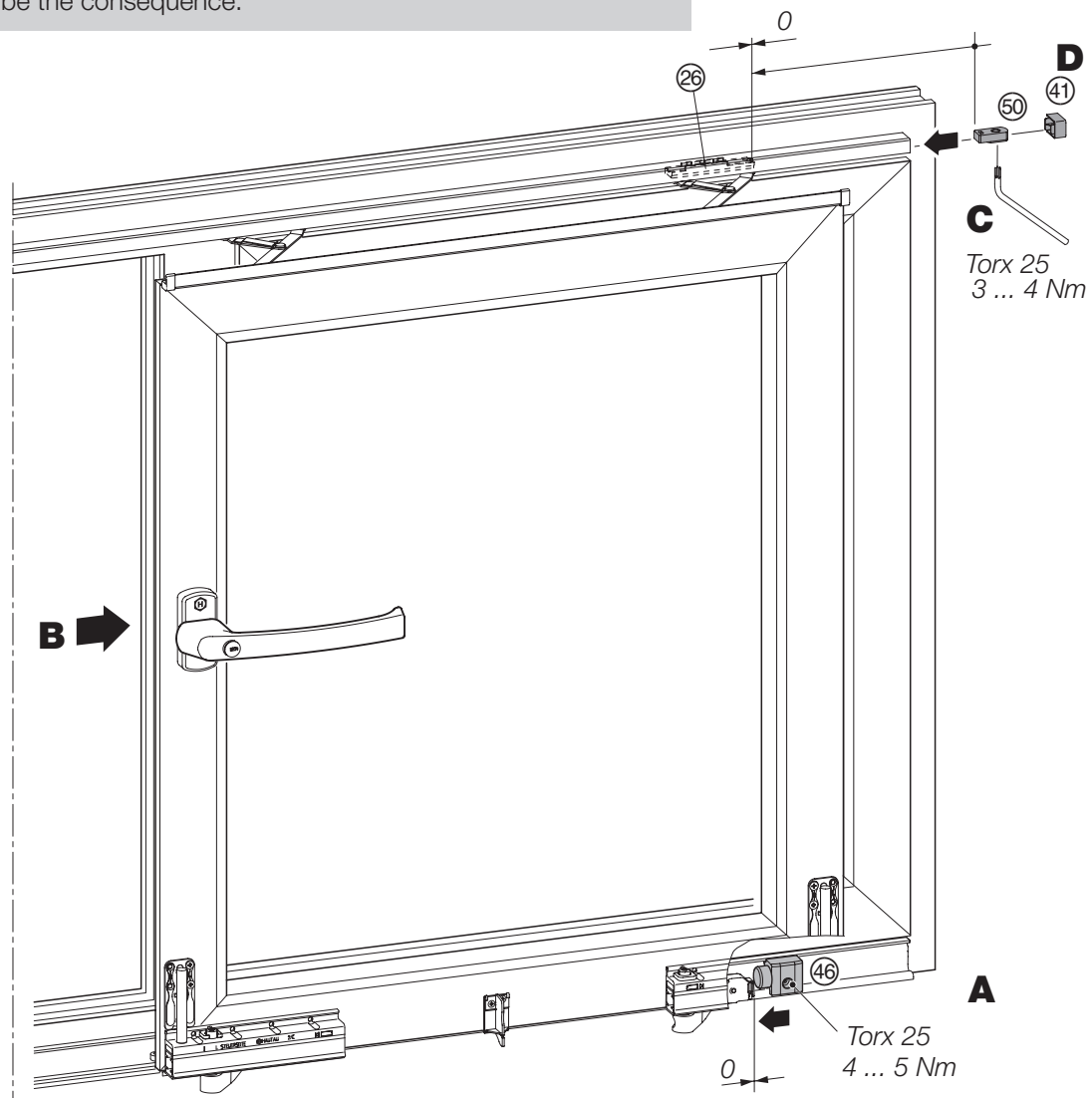
Check closing behaviour of sash.
Set of sash closing pressure: adjust overrebate height (X) by means of Torx 15.



Installation of buffers

- A** Screw bottom buffer ④⑥ in required position at bottom track (Torx 25, 4 ... 5 Nm).
- B** Move sash right to buffer.
- C** Insert top buffer ⑤① into guide track (until stay system) and tighten it firmly (Torx 25, 3 ... 4 Nm).
- D** Attach cover caps ④① on ends of guide track.


i Important information: If the window sash does not run simultaneously to upper and lower end stop, material damages can be the consequence.



Bogie safety device, cover installation

Activate bogie safety device, assemble cover(s) for bogies

A Move bogie safety device (1) of both bogies backwards until they engage in position as shown (2).

 **Warning:** If the bogie safety device has not locked correctly or not locked at all in position as shown, the sash is not sufficiently secured (3). Severe injuries could be the consequence.

B Cut cover profile (39) to size:

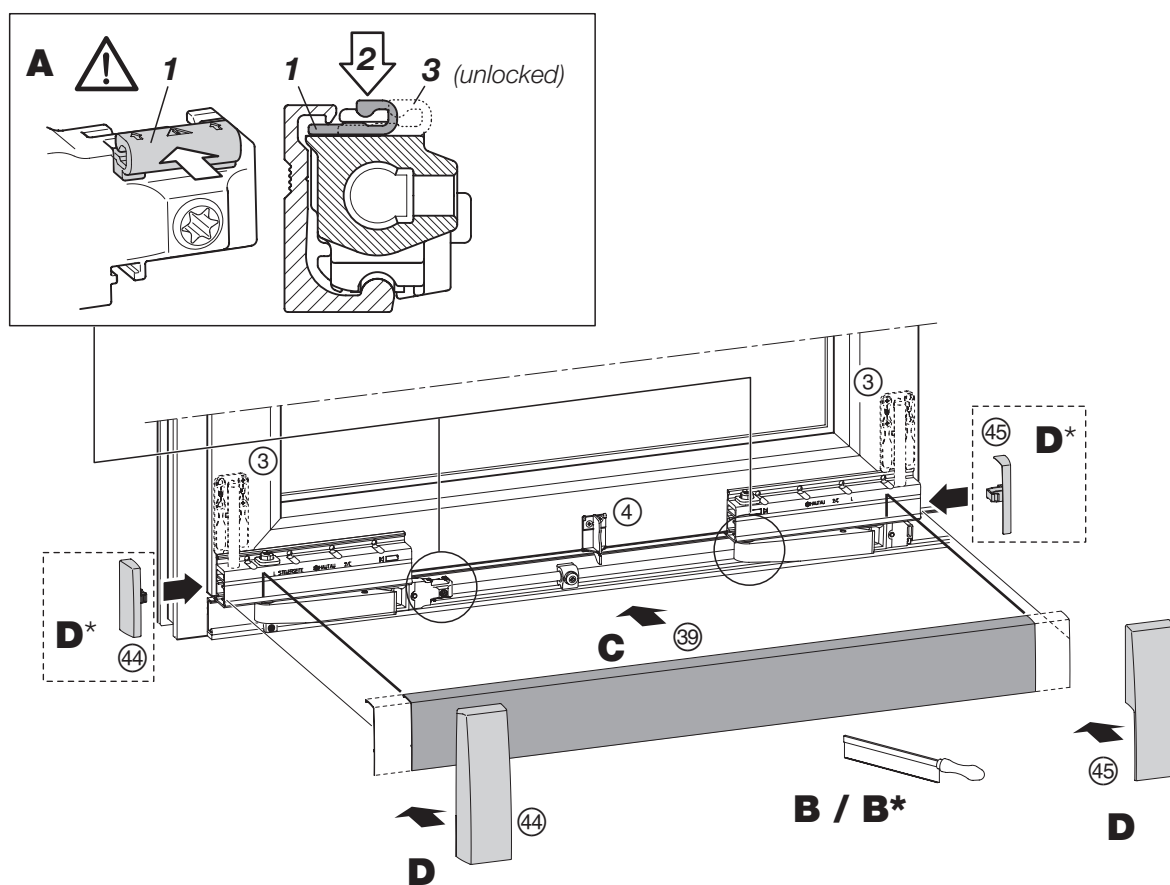
Sash with support arms (3): acc. to bogie marks,

* Sash w/o support arms: acc. to outer edges of bogies.

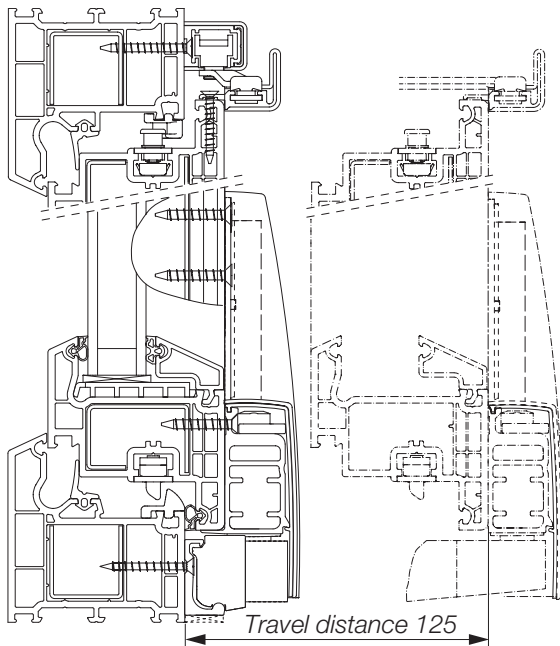
C Align cover profile according to bogie marks (or outer edges of bogies) and clip on the bogie profiles as well as on the cover fillet support(s) (4).

D Sash with support arms (3): Clip cover cap down left (44) and cover cap down right (45) to support arms (3).

* Sash w/o support arms: Clip cover cap down left (44) and cover cap down right (45) from the side to cover profile. Clip them into bogie afterwards.

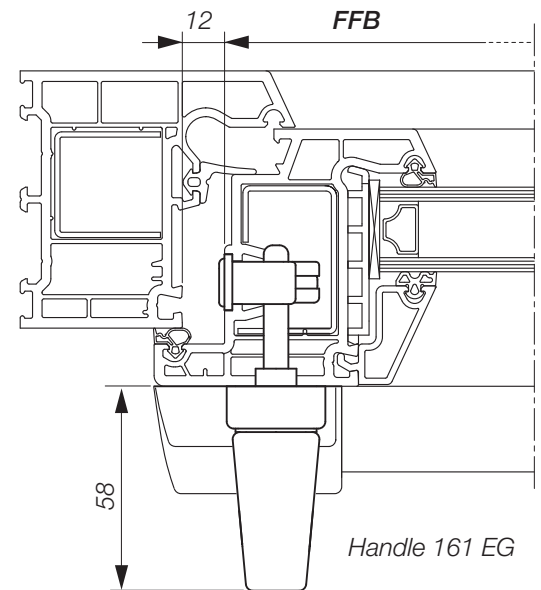


Vertical section top, horizontal section handle EG

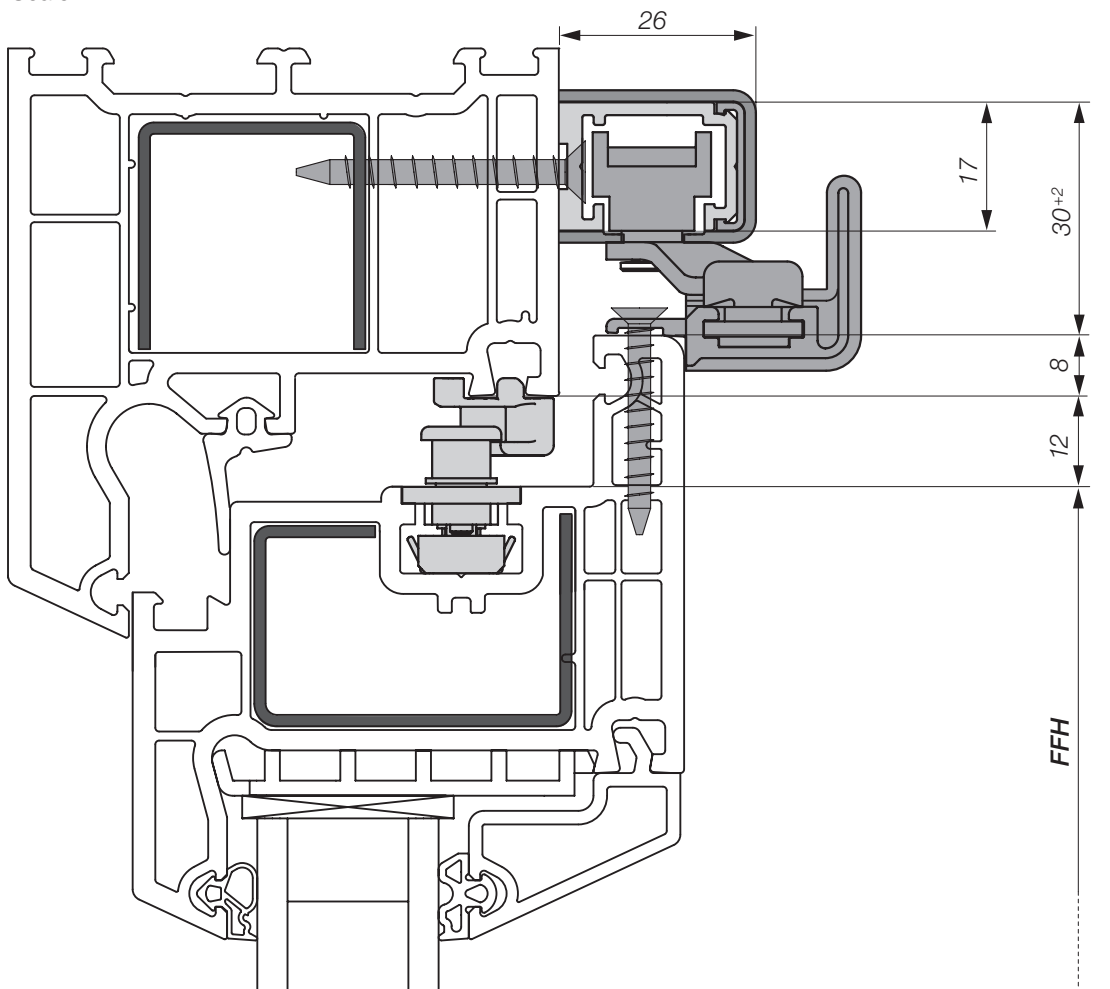


no scale

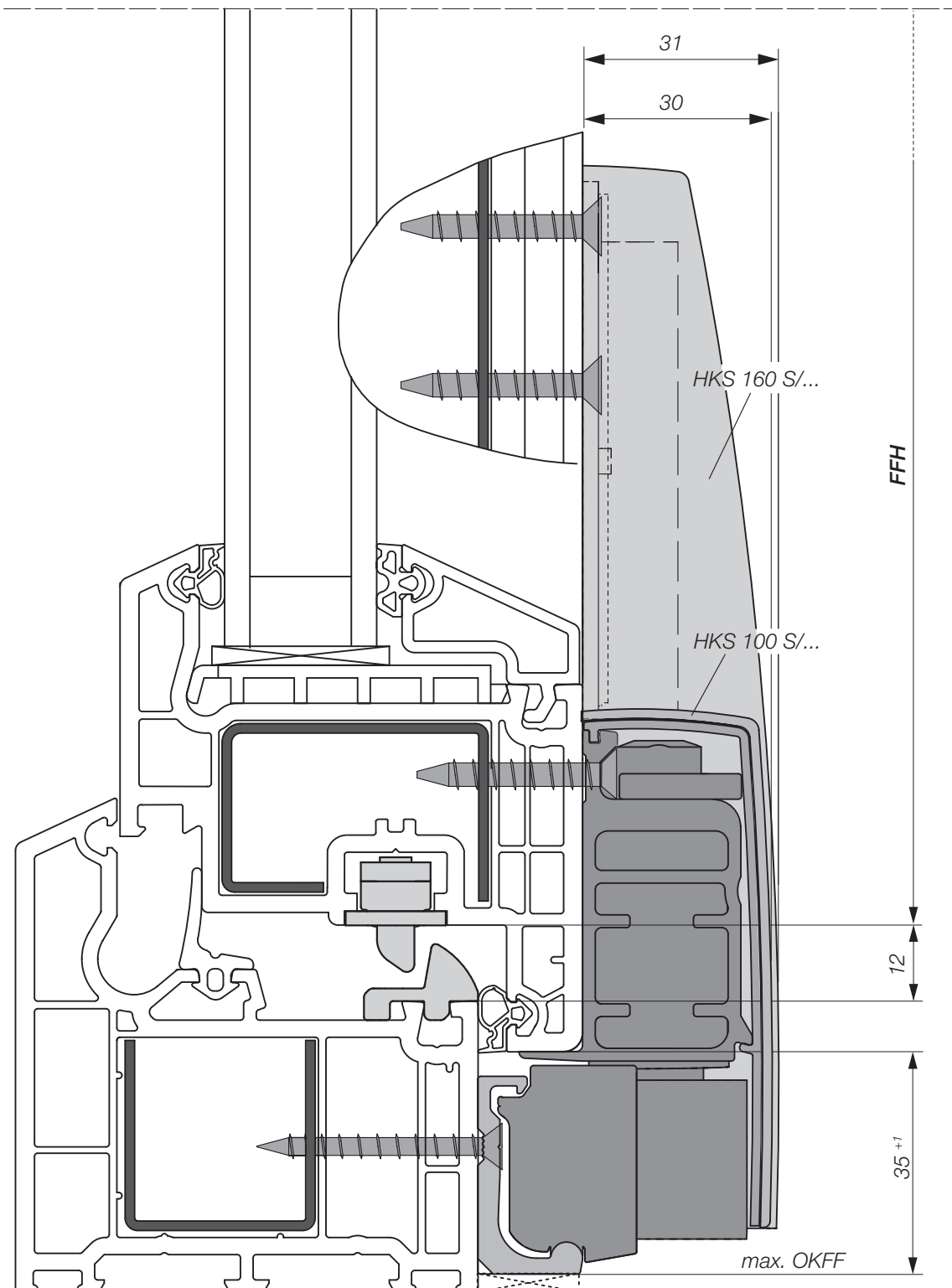
Horizontal section handle EG



Vertical section top Scale 1:1



Vertical section bottom



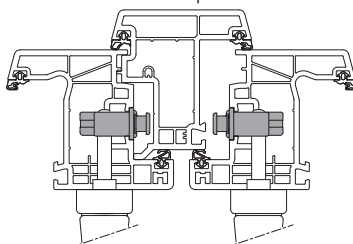
Scale 1:1

Handle sections scheme C, Information for FFH > 2350 mm (ATRIUM HKS® 160 S, only)

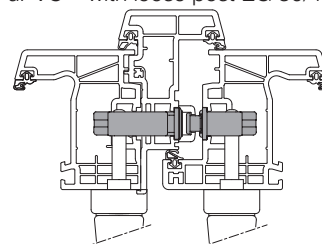


Handle sections scheme C

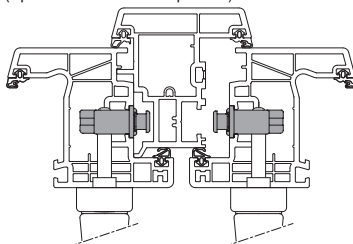
uPVC – with loose post EG 15/15



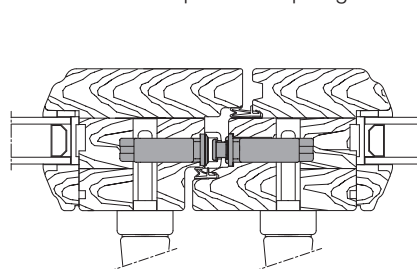
uPVC – with loose post EG 30/15



uPVC – with loose post EG 15/15
(special striker required)

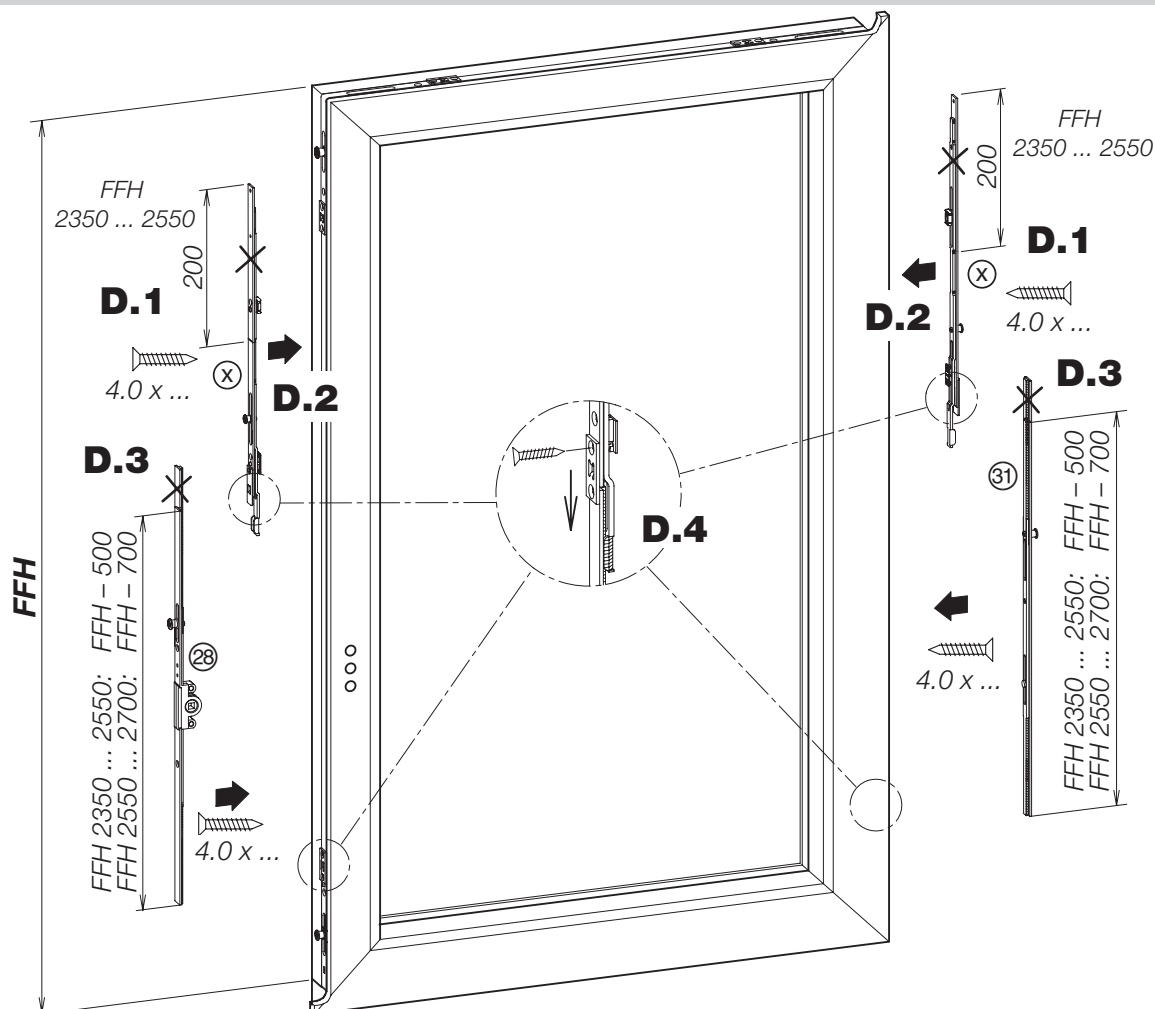


Timber – without post with open groove EG 30/30



Information for FFH > 2350 mm (ATRIUM® HKS 160 S, only): Cutting lateral tracks to size and fixing (for HAUTAU central locking)

- D.1** For FFH 2350 ... 2550: shorten linkages (X).
- D.2** Fix linkages below the upper corners by means of screws.
- D.3** Shorten and screw connecting track lateral (31) as well as espag EG (28) at the upper end (see lettering).
- D.4** Move and fix adjustment system for connecting track lateral and espag EG at corners and at linkages.



Mounting sequence for frames (for HAUTAU central locking)

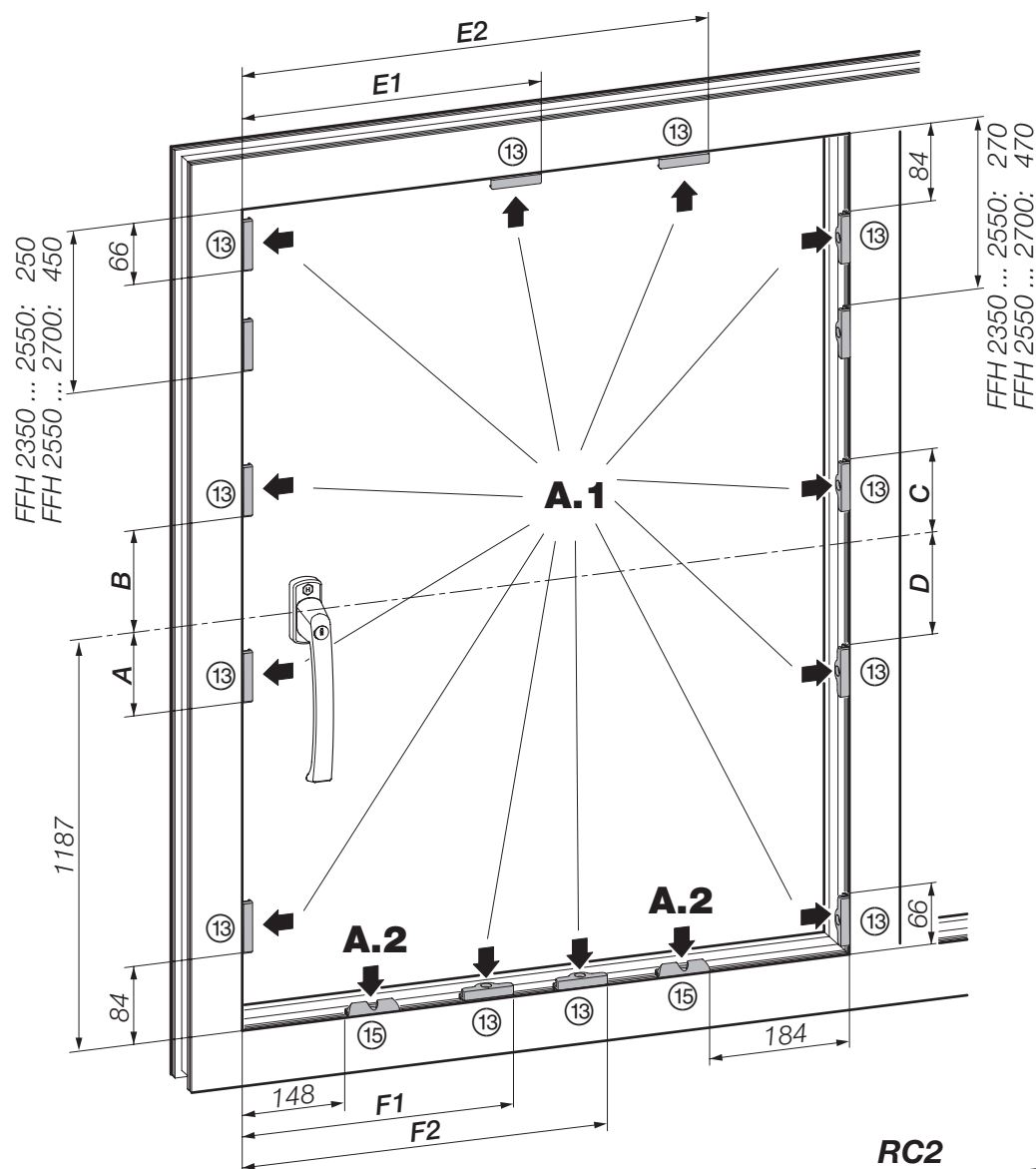
A.1 Fix strikers (13) (for version RC2: (14)) according to chart.

A.2 Fix tilt lock bearings (15).

Please use:



All measurements
mentioned below
are valid for 12 mm
fittings cavity.



FFH	A	B	C	D
2350 ... 2700	309	341	309	341

FFB	E1	E2	F1	F2
901 ... 1050	504	-	486	-
1051 ... 1250	654	-	636	-
1251 ... 1450	304	904	396	866
1451 ... 1650	504	1104	596	1066

