Frame Parts Overview

FERCO

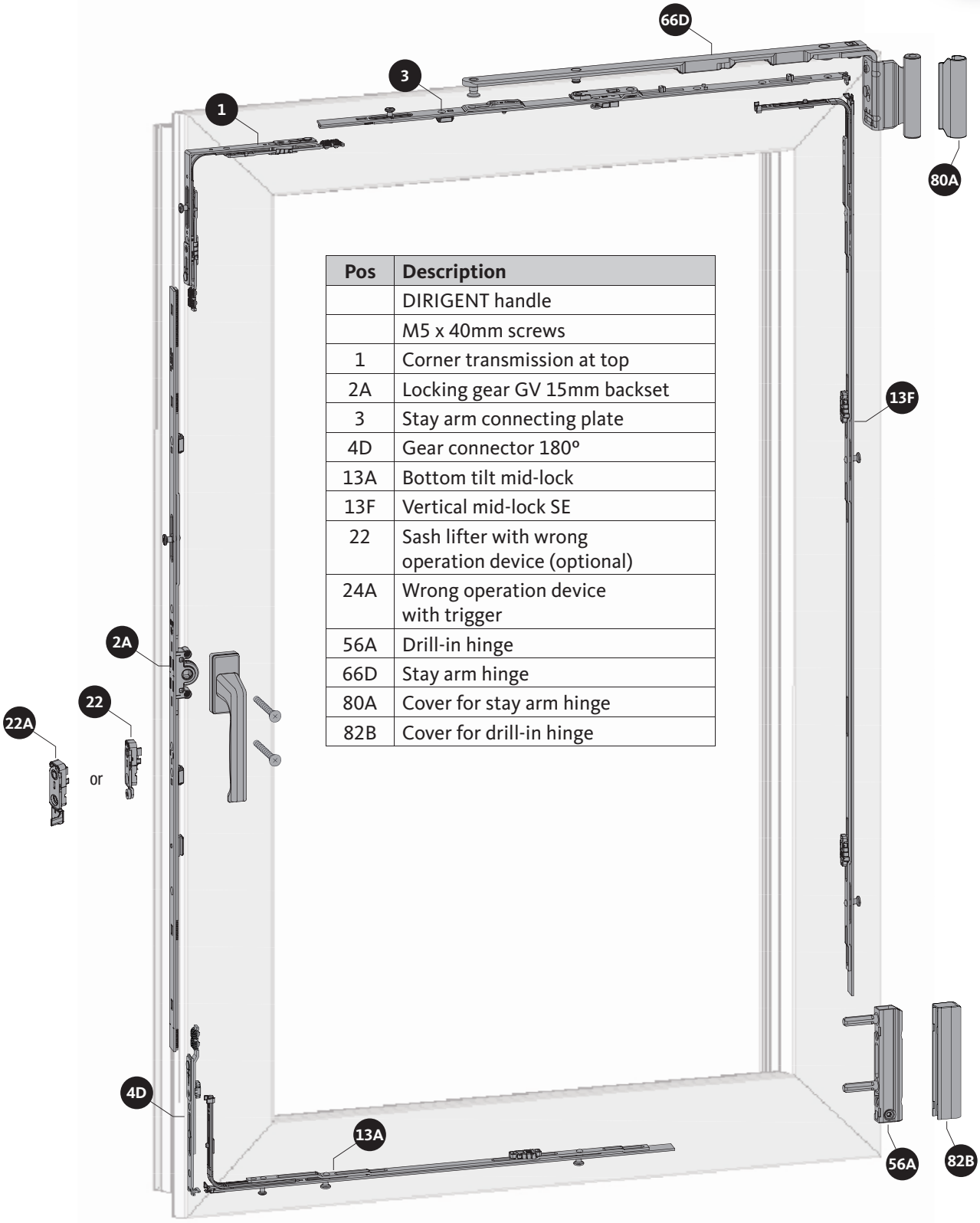
Pos	Description
9	Locking cam keeper
11	Mushroom keeper for tilt function
23	Run-up plate (only with item #22)
52A	Stay bearing
53	Stay bearing pin
54A	Pivot hinge
81A	Cover for stay bearing
84A	Cover for pivot hinge

Sash Parts Overview

FERCO

max. 100 kg

RH



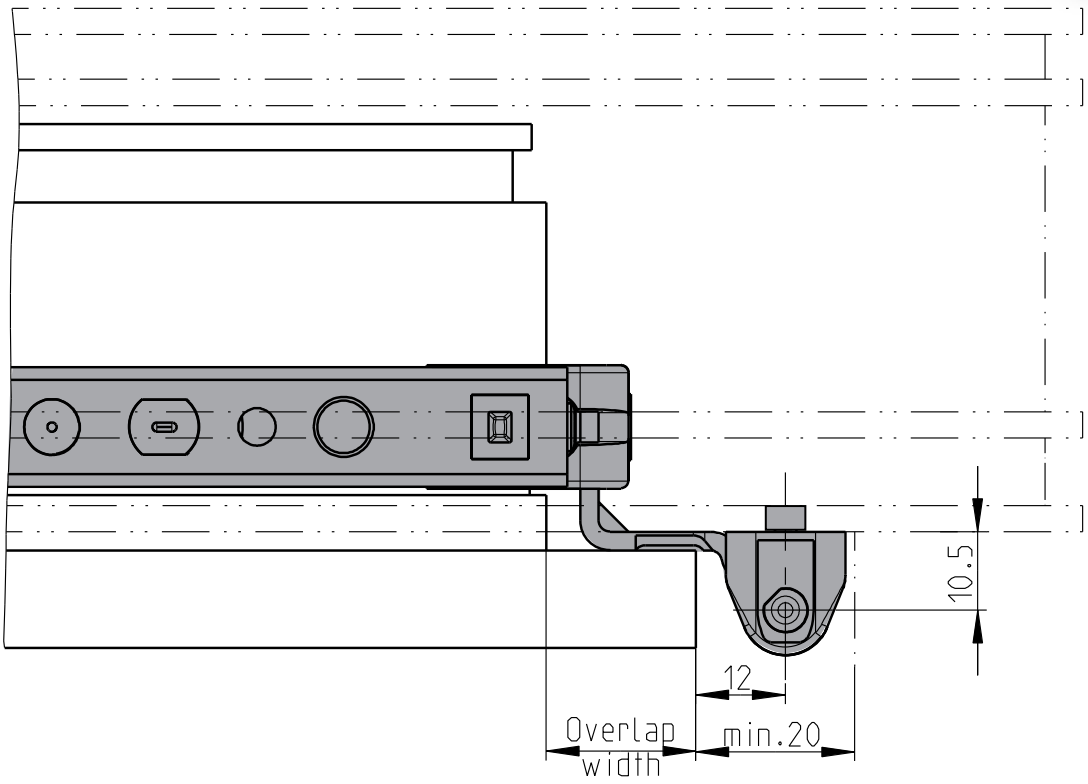
Pos	Description
	DIRIGENT handle
	M5 x 40mm screws
1	Corner transmission at top
2A	Locking gear GV 15mm backset
3	Stay arm connecting plate
4D	Gear connector 180°
13A	Bottom tilt mid-lock
13F	Vertical mid-lock SE
22	Sash lifter with wrong operation device (optional)
24A	Wrong operation device with trigger
56A	Drill-in hinge
66D	Stay arm hinge
80A	Cover for stay arm hinge
82B	Cover for drill-in hinge

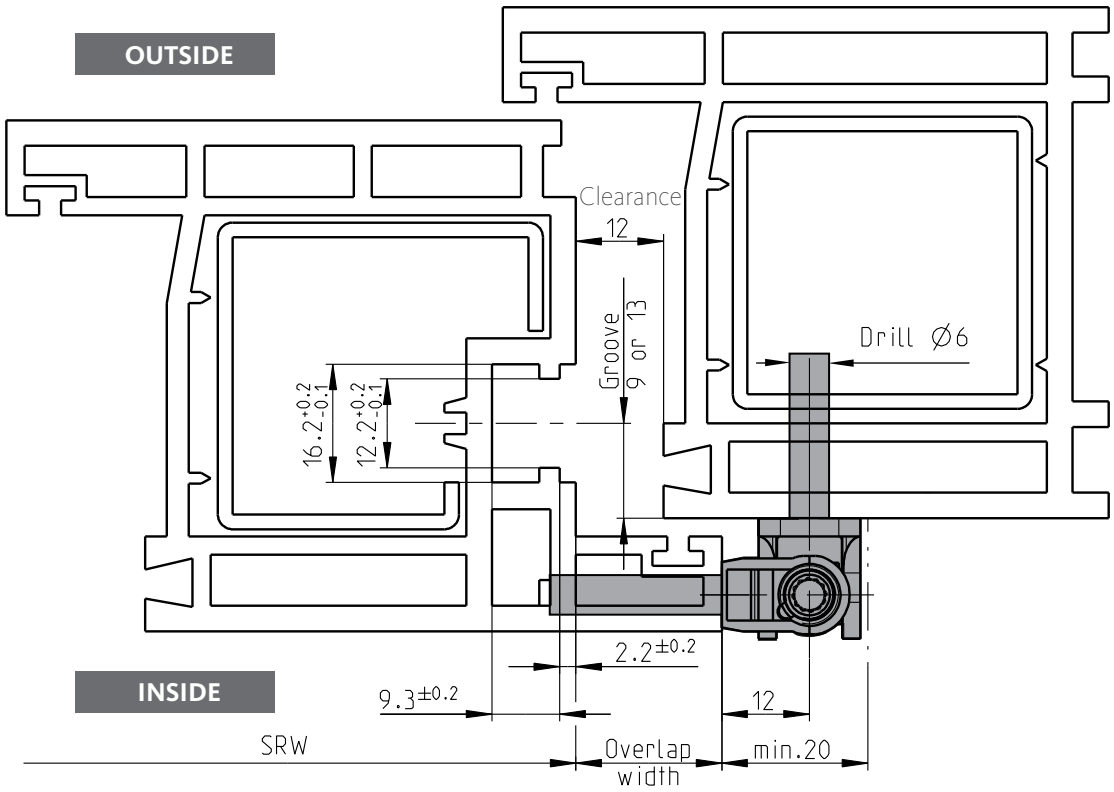
PVC Profile Dimensions

FERCO

max. 100 kg

RH



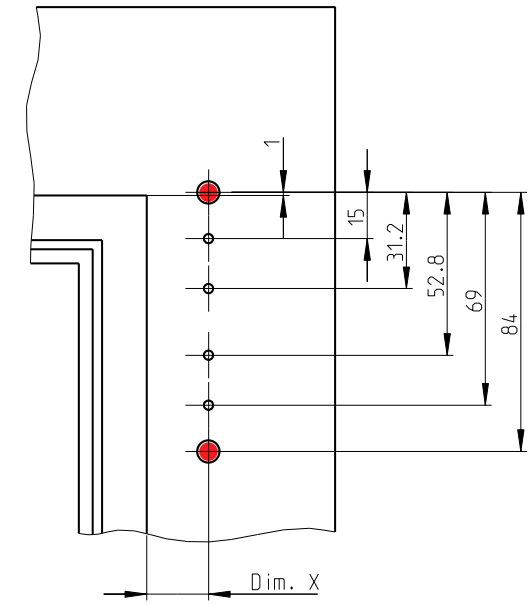


Frame Preparation

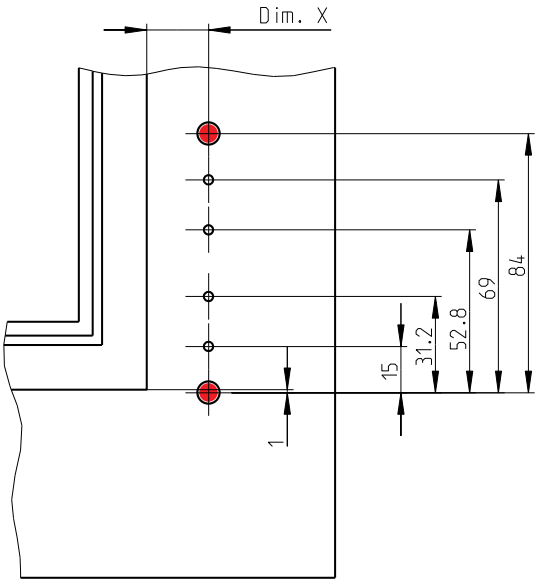
with Drilling Jig 6-27412

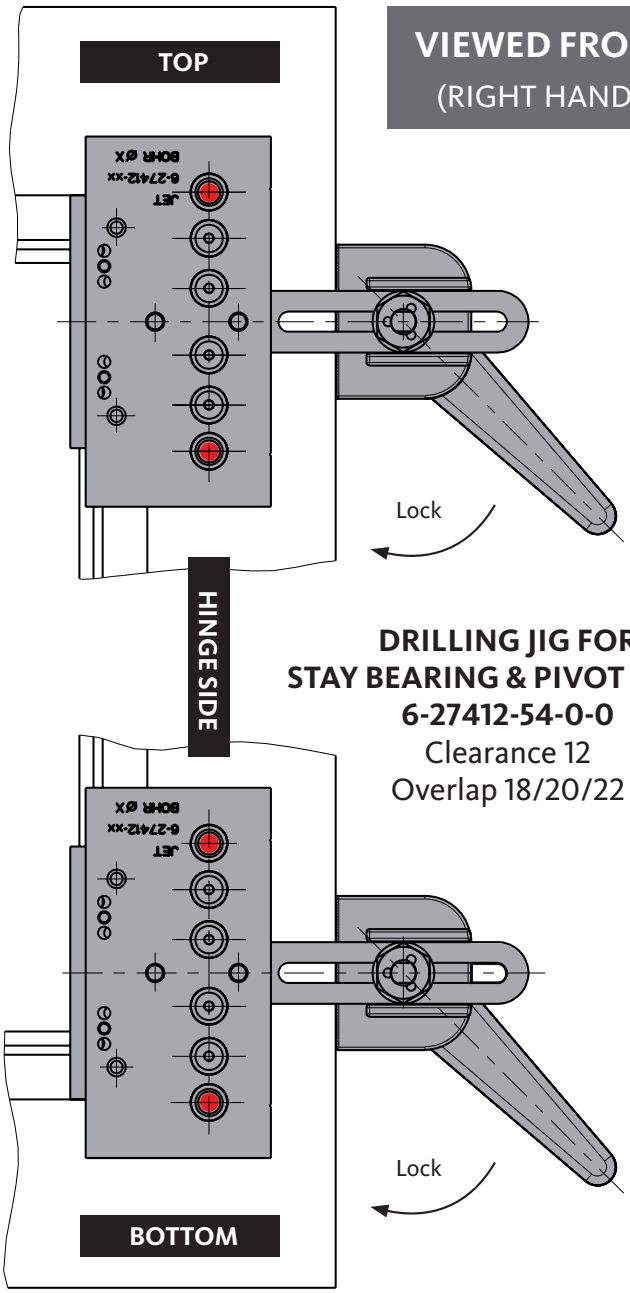
FERCO

RH



Dim. X = Overlap width,
adjustable on drilling jig scale





STEP 1

- Lay the frame on a clean table inside facing up and the hinge side toward you, left or right.
- Place the drilling jig at top, make sure the jig is tight into the corner and clamp the lever as shown, drill 2 holes with 6mm diameter drill bit for stay bearing legs.
- Place the drilling jig at bottom and drill 2 holes with 6mm diameter drill bit through the PVC walls and the steel reinforcement for pivot hinge legs.

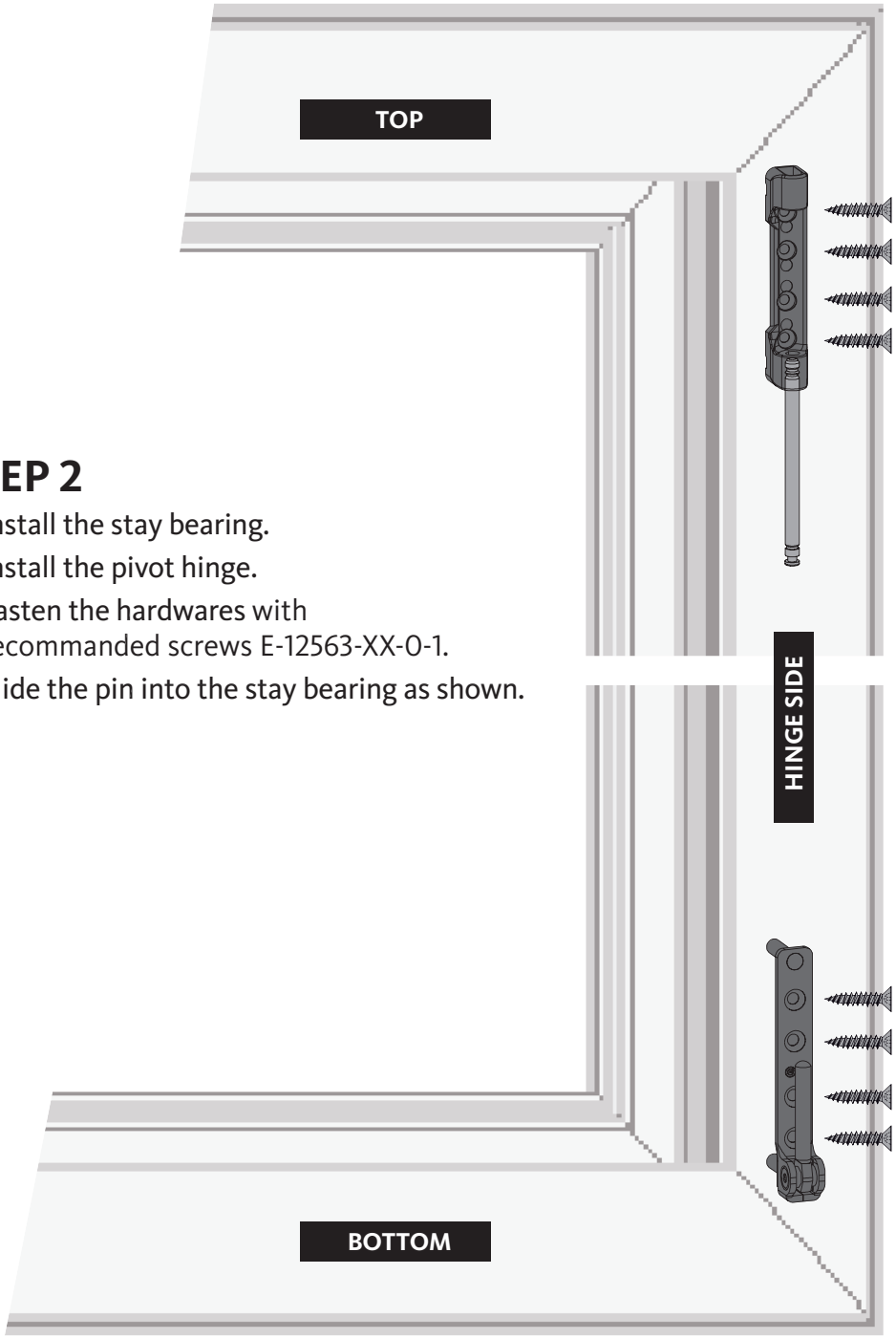
Hardware Installation on Frame

Install the stay bearing and the pivot hinge

FERCO

max. 100 kg

RH



STEP 2

- Install the stay bearing.
- Install the pivot hinge.
- Fasten the hardwares with recommanded screws E-12563-XX-0-1.
- Slide the pin into the stay bearing as shown.

Sash Preparation

with Drilling Jig 6-38847

FERCO

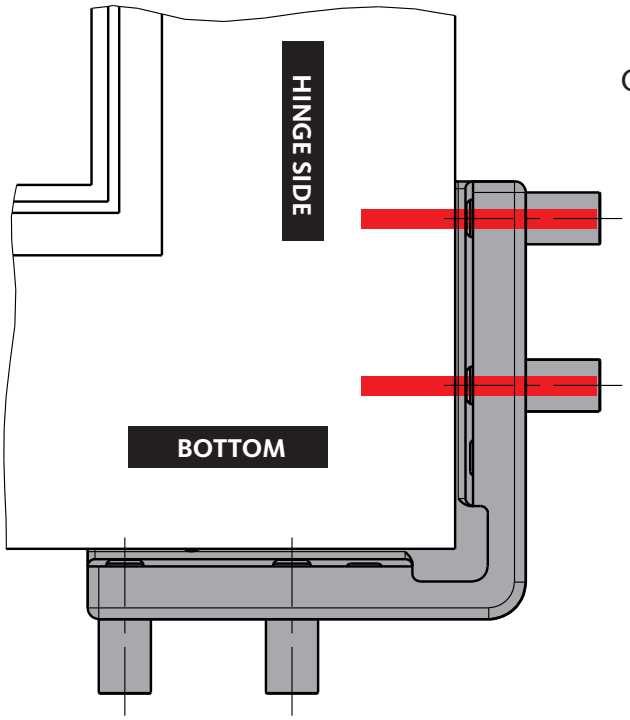
max. 100 kg

RH

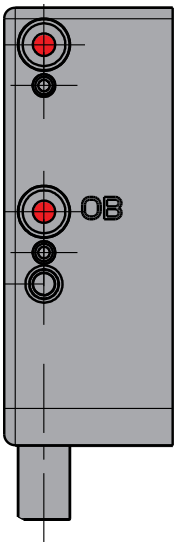
STEP 3

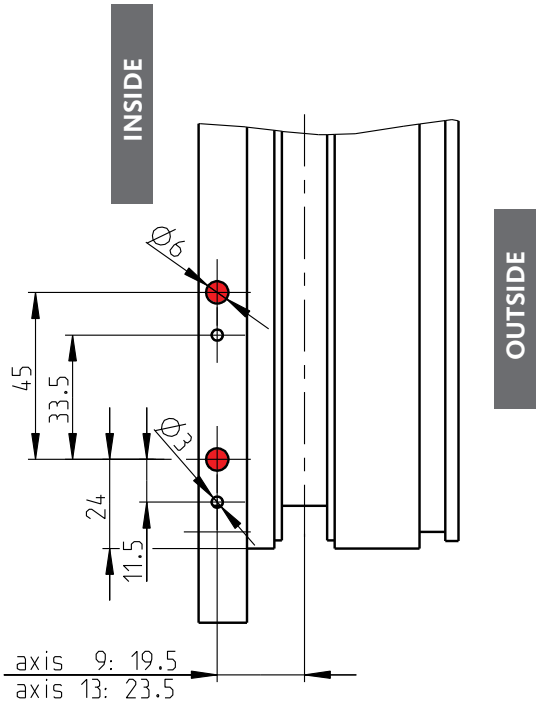
- Place and press firmly the drilling jig at bottom from hinge side of sash, left or right.
- Drill 2 holes (in red) with 6mm diameter drill bit for drill-in hinge legs.

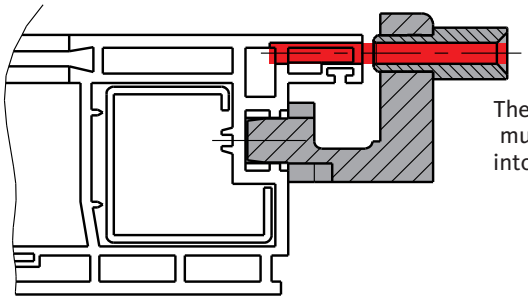
VIEWED FROM INSIDE
(RIGHT HAND SHOWN)



DRILLING JIG FOR DRILL-IN HINGE
6-38619-13-0-0
Clearance 12
Overlap 18/20/22
Axis 9/13







The inner edges of the jig must be sitting squarely into the hardware groove

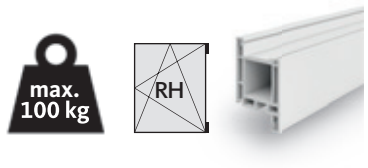
Hardware Installation on Sash

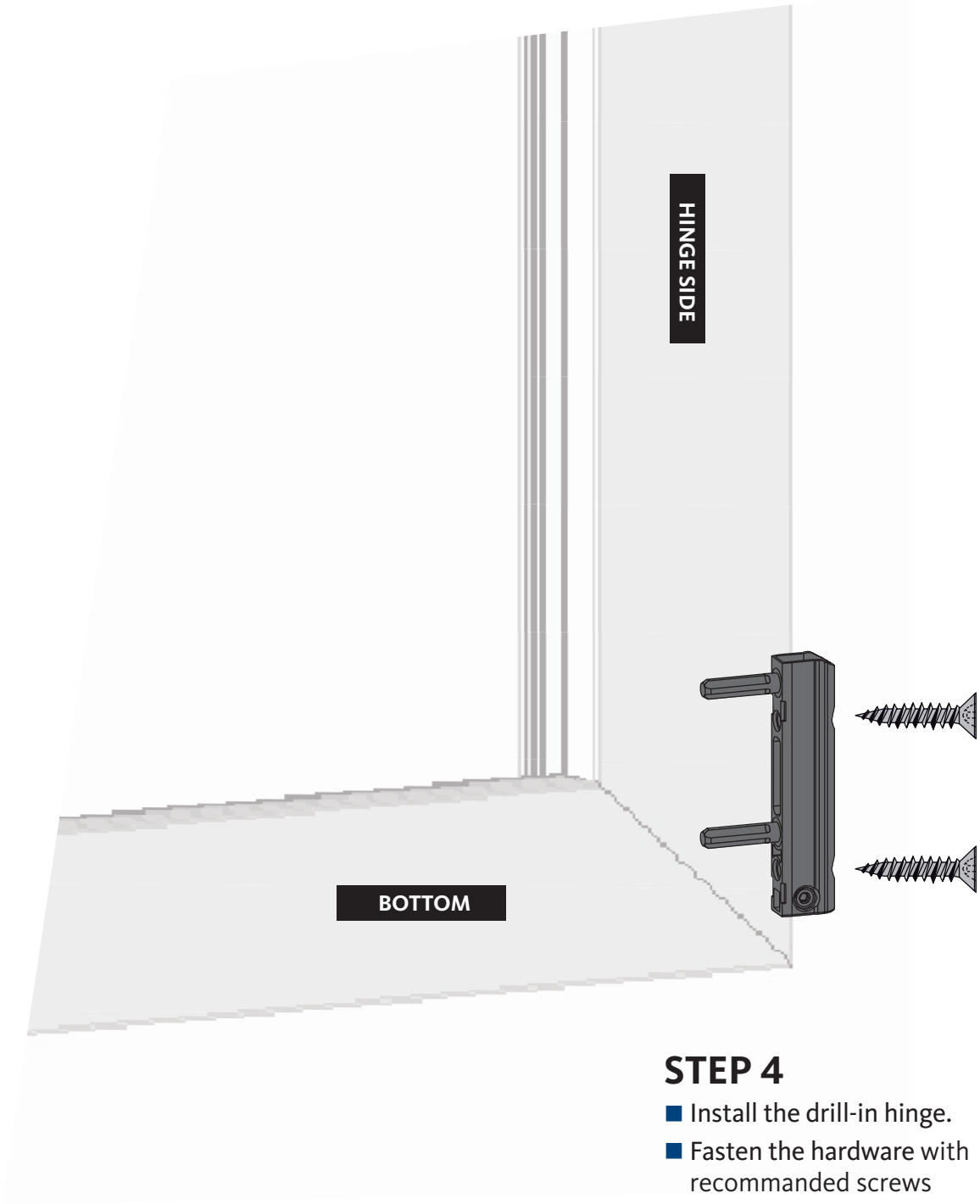
Install the drill-in Hinge

FERCO

max. 100 kg

RH





STEP 4

- Install the drill-in hinge.
- Fasten the hardware with recommanded screws E-12562-XX-0-1.

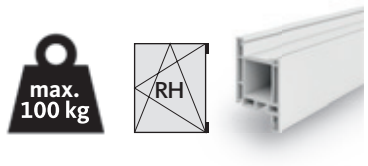
Sash Preparation

Gear Lockcase and Handle Cut-out

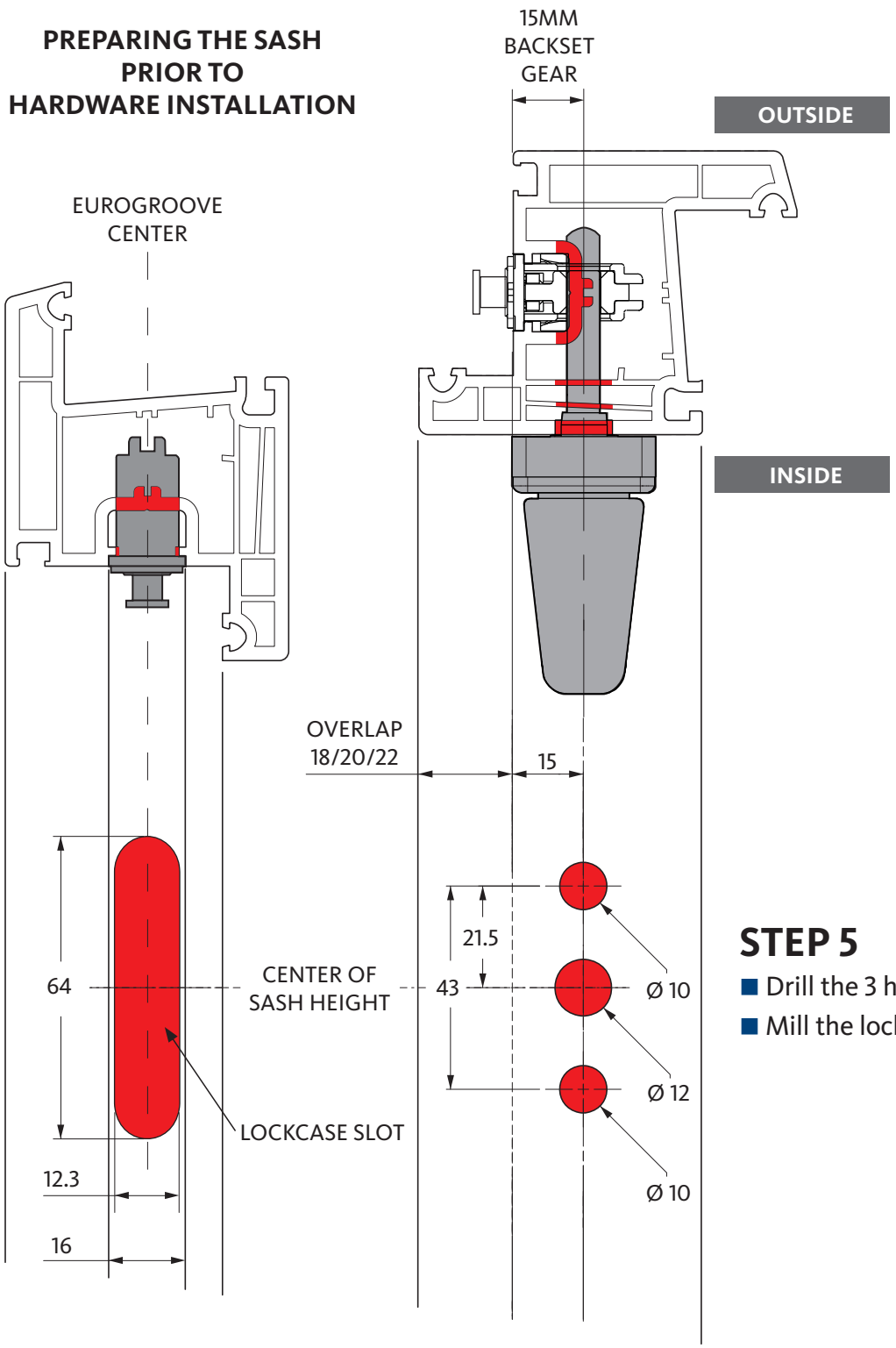
FERCO

max. 100 kg

RH



PREPARING THE SASH PRIOR TO HARDWARE INSTALLATION

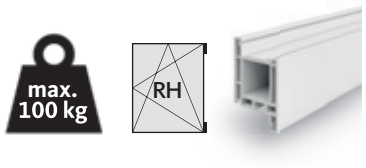


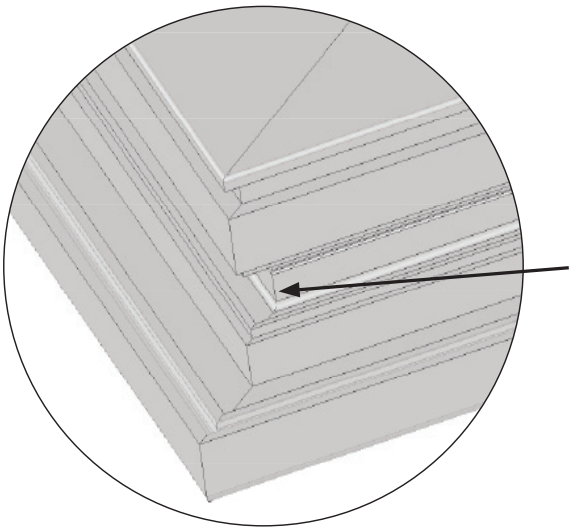
STEP 5

- Drill the 3 handle holes.
- Mill the lockcase slot.

Sash Preparation

Layout the sash as shown





Make sure all the corners of eurogroove were cleaned

Hardware Installation

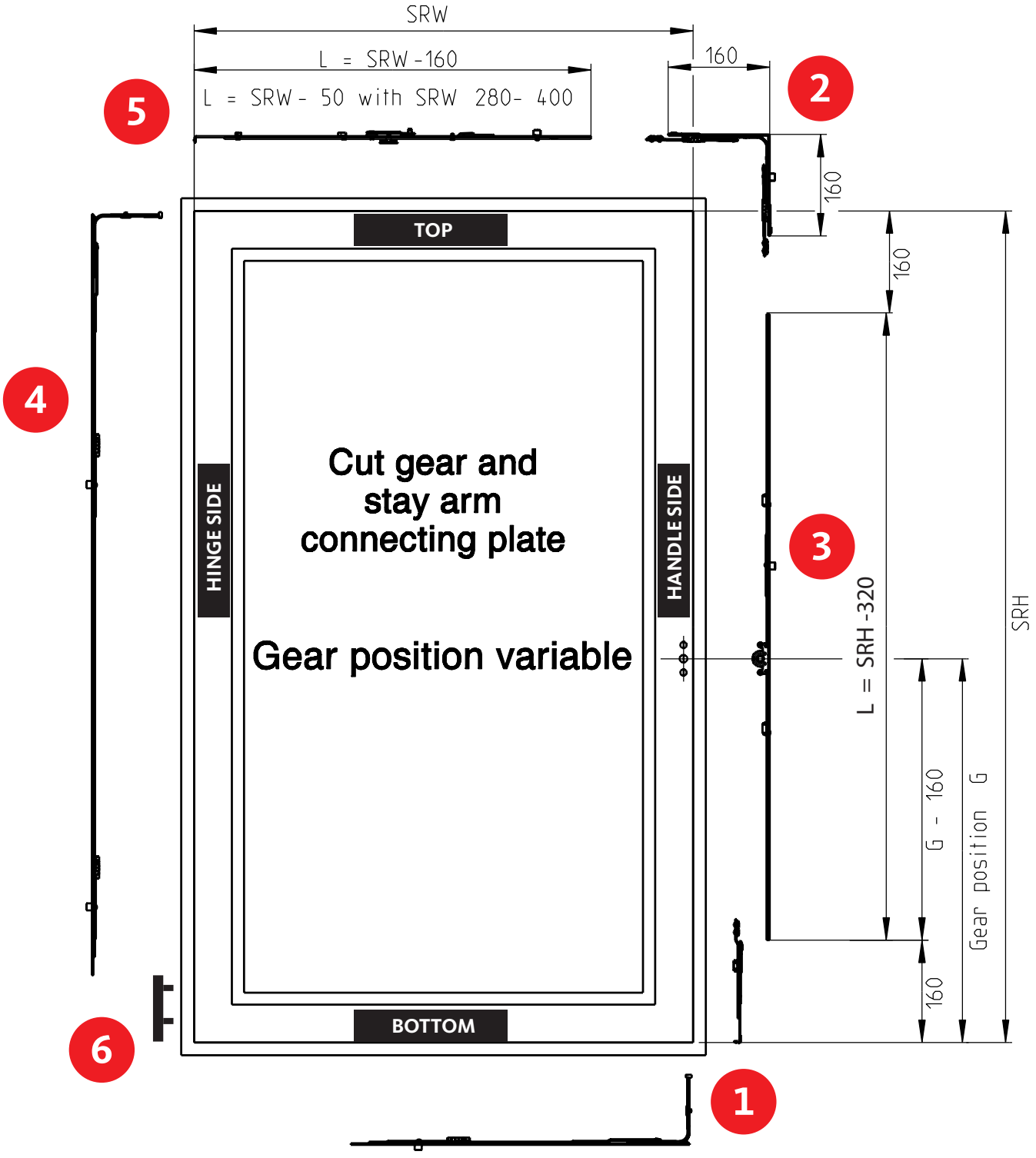
Sash Rebate Width (SRW) – Sash Rebate Height (SRH)

FERCO

max. 100 kg

RH

HARDWARE CUT SHEET



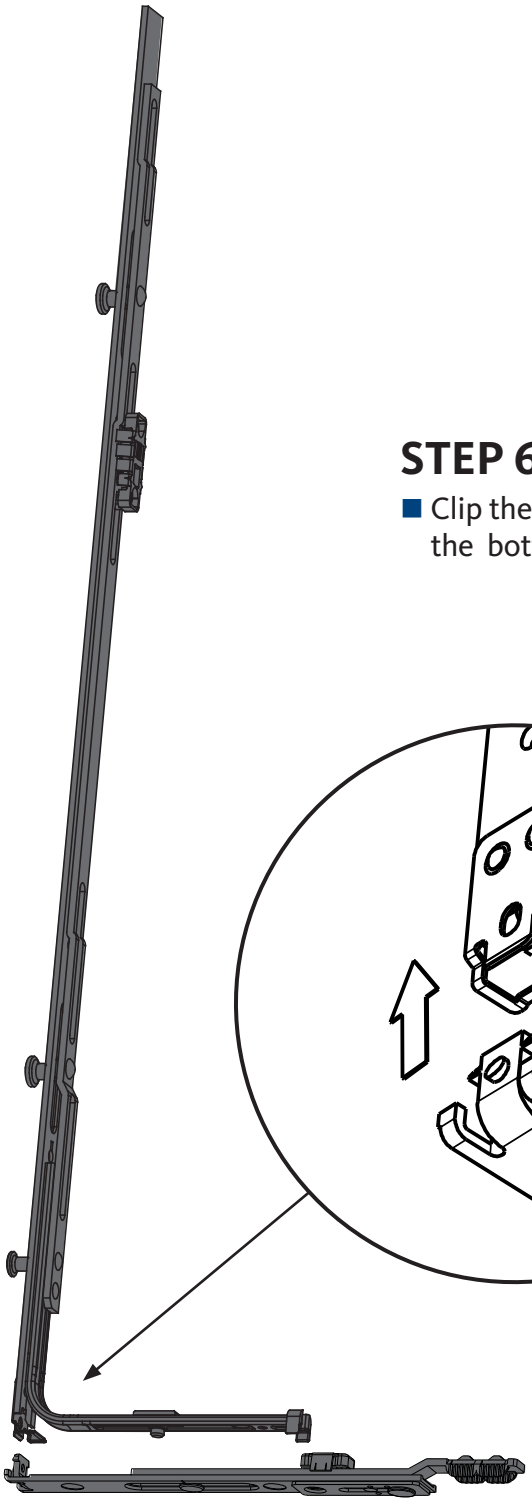
Hardware Installation on Sash

Install the gear connector with the bottom T&T middle lock

FERCO

max. 100 kg

RH



STEP 6

- Clip the gear connector to the bottom tilt midlock.

Hardware Installation on Sash

Install the corner tranmission

FERCO

max. 100 kg

RH

STEP 7

- Snap the assembly into the eurogroove.

STEP 8

- Snap the corner transmission into the eurogroove.

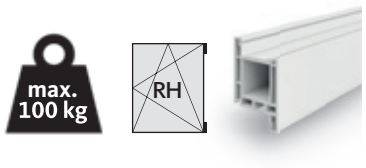
Hardware Installation on Sash

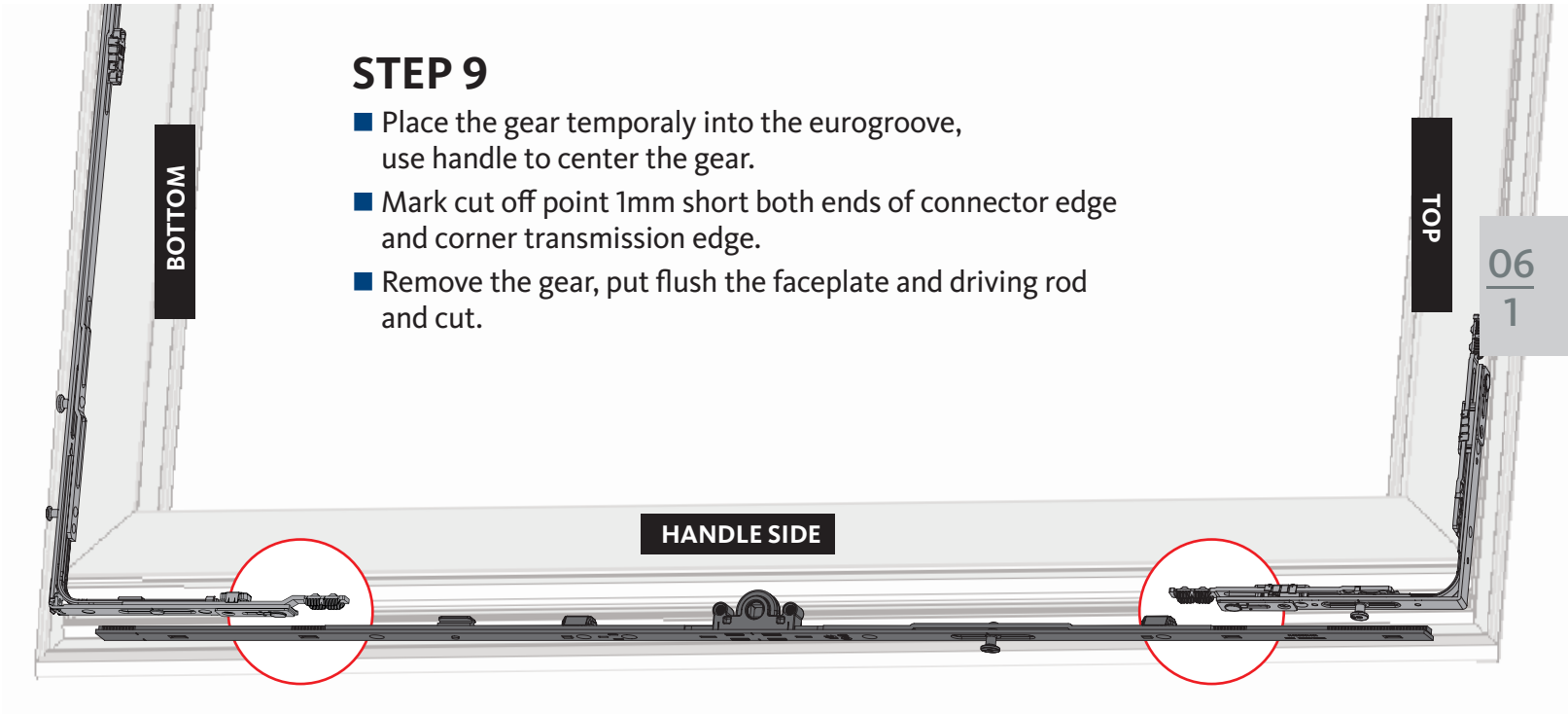
Install the gear

FERCO

max. 100 kg

RH

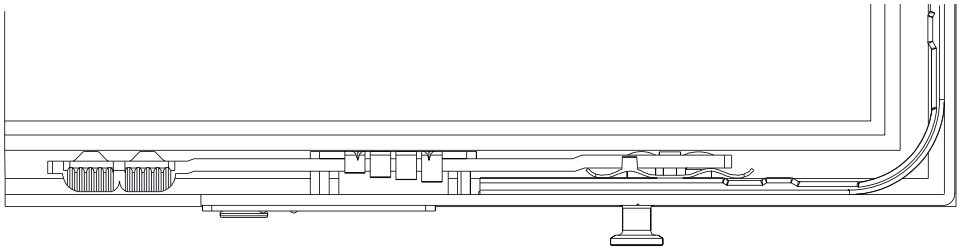


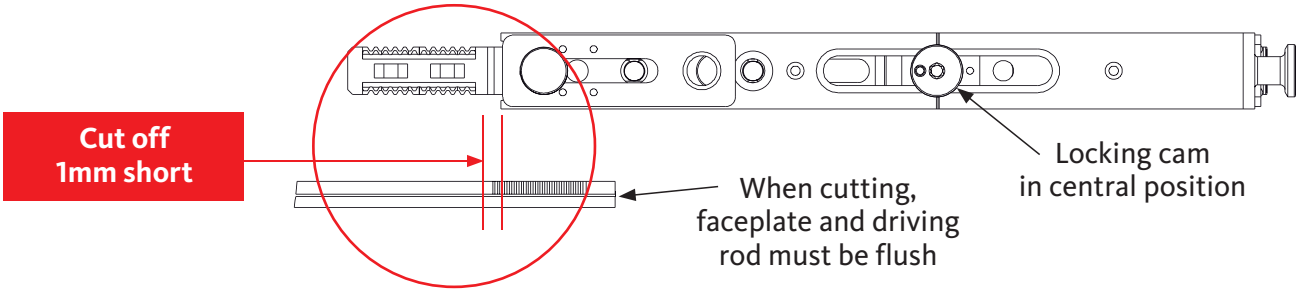


STEP 9

- Place the gear temporaly into the eurogroove, use handle to center the gear.
- Mark cut off point 1mm short both ends of connector edge and corner transmission edge.
- Remove the gear, put flush the faceplate and driving rod and cut.

06
1





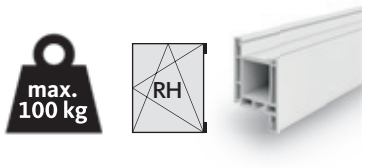
Hardware Installation on Sash

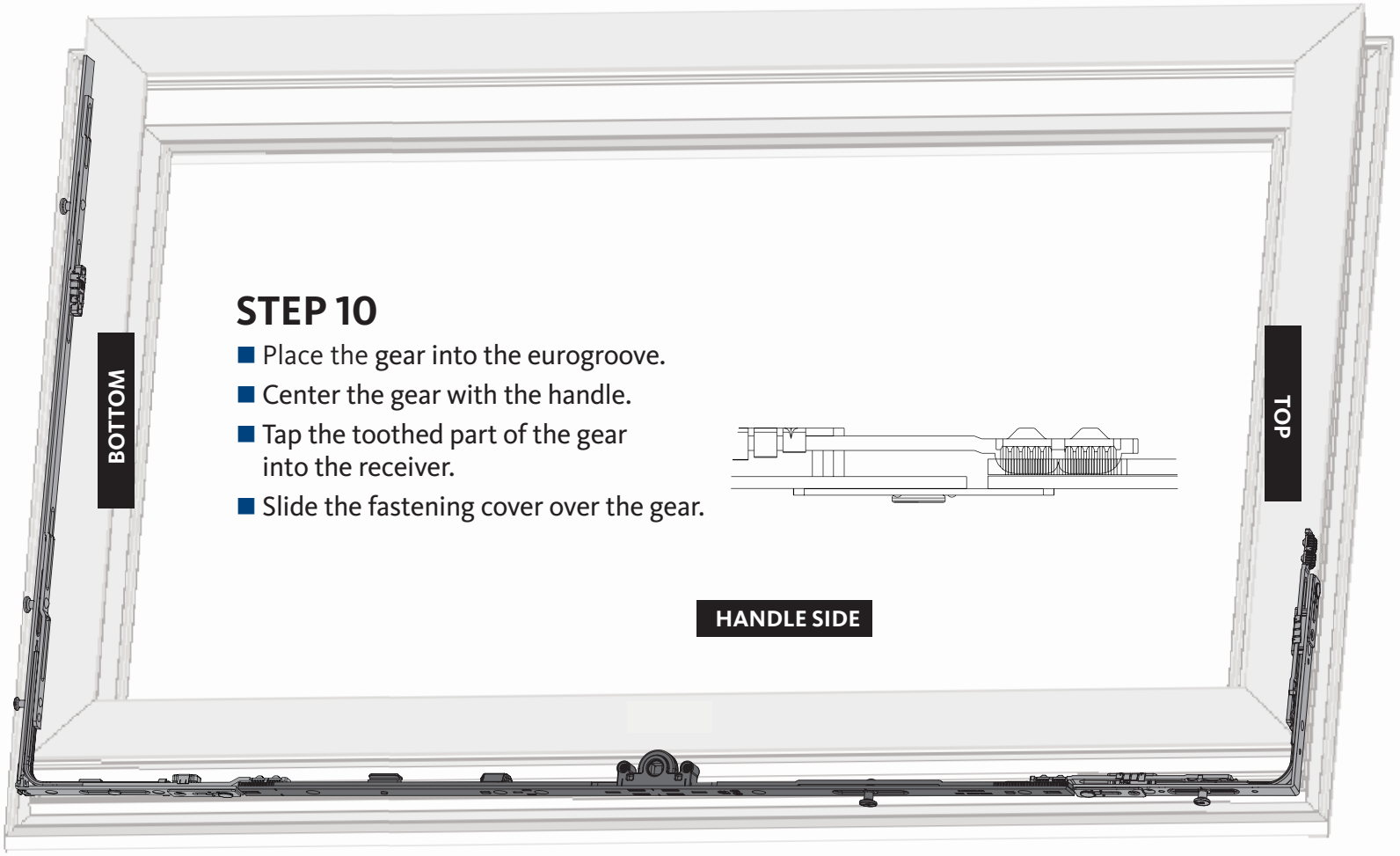
Install the gear

FERCO

max. 100 kg

RH





STEP 10

- Place the gear into the eurogroove.
- Center the gear with the handle.
- Tap the toothed part of the gear into the receiver.
- Slide the fastening cover over the gear.

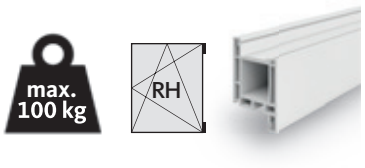
Hardware Installation on Sash

Install vertical midlock

FERCO

max. 100 kg

RH



STEP 11

- Snap the vertical midlock into the eurogroove.

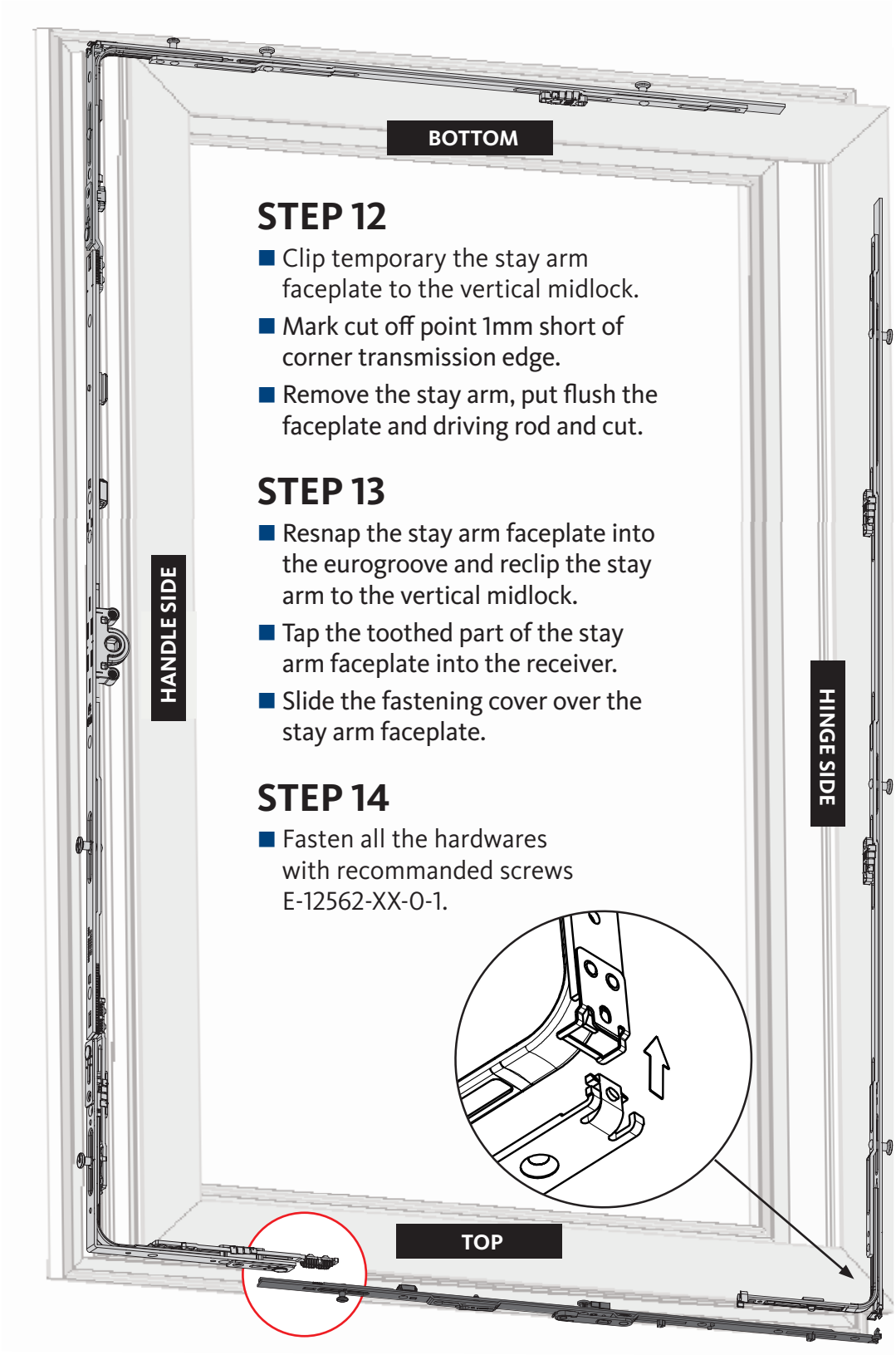
Hardware Installation on Sash

Install the stay arm faceplate

FERCO

max. 100 kg

RH



STEP 12

- Clip temporary the stay arm faceplate to the vertical midlock.
- Mark cut off point 1mm short of corner transmission edge.
- Remove the stay arm, put flush the faceplate and driving rod and cut.

STEP 13

- Resnap the stay arm faceplate into the eurogroove and reclip the stay arm to the vertical midlock.
- Tap the toothed part of the stay arm faceplate into the receiver.
- Slide the fastening cover over the stay arm faceplate.

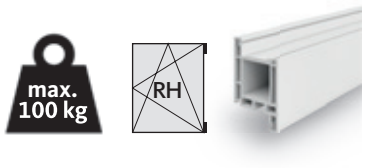
STEP 14

- Fasten all the hardwares with recommanded screws E-12562-XX-0-1.

Hardware Installation on Sash

Stay arm hinge

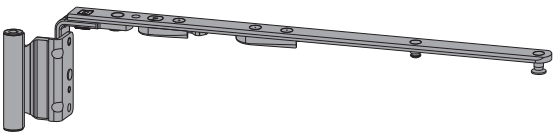
FERCO

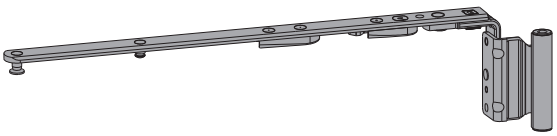


LEFT HANDED

VIEWED FROM INSIDE

RIGHT HANDED





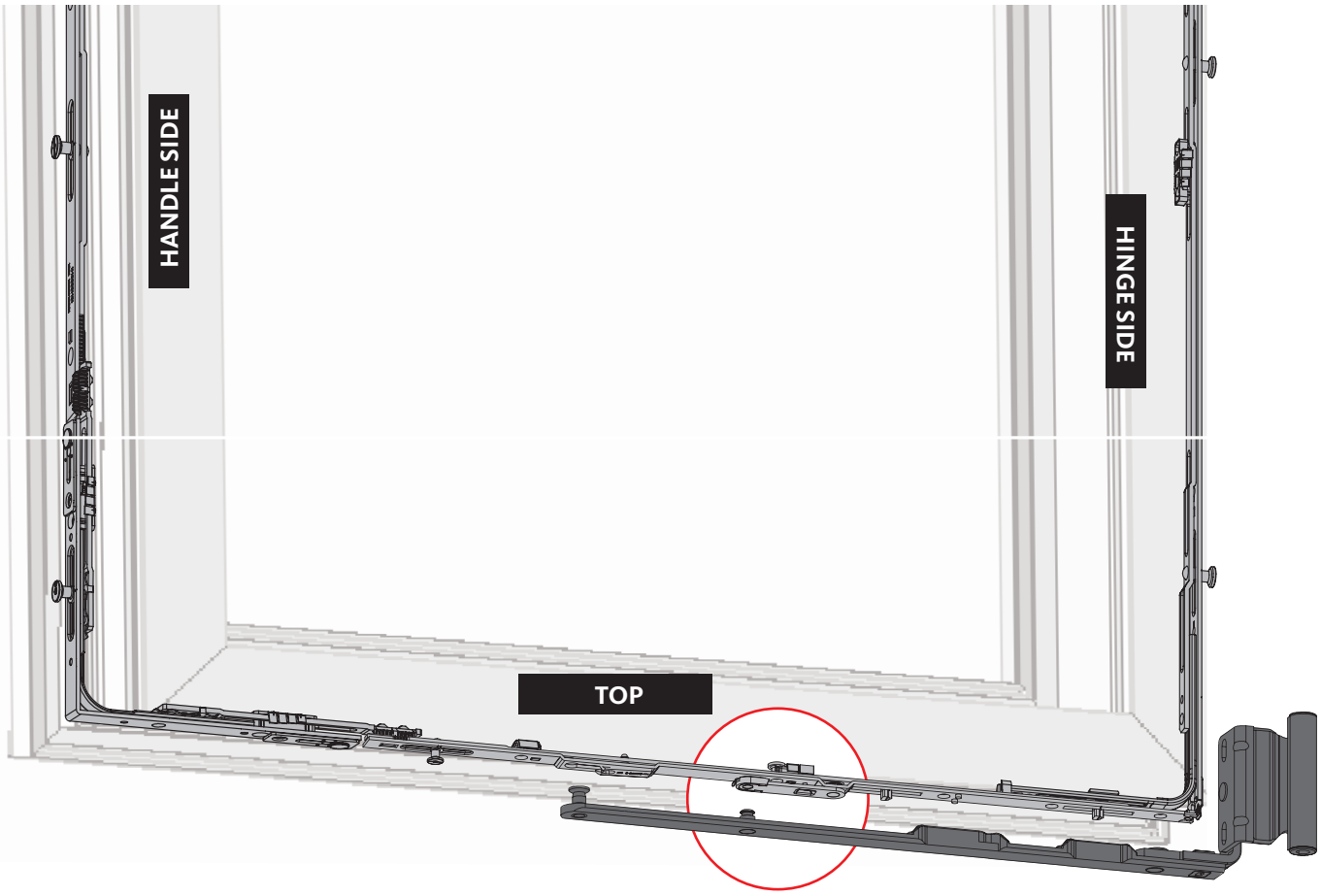
Hardware Installation on Sash

Install the stay arm hinge

FERCO

max. 100 kg

RH



STEP 15

- Hook the stay arm into the stay arm faceplate.
- Press the pin down into the red connector.

Window Assembly

Mounting the sash to the frame

FERCO

max. 100 kg

RH

STEP 17

- Align stay arm hinge onto top hinge bearing.
- Push the pin into top hinge bearing.

STEP 16

- Lift sash and push bottom hinge sash bearing onto bottom frame bearing.

Window Assembly

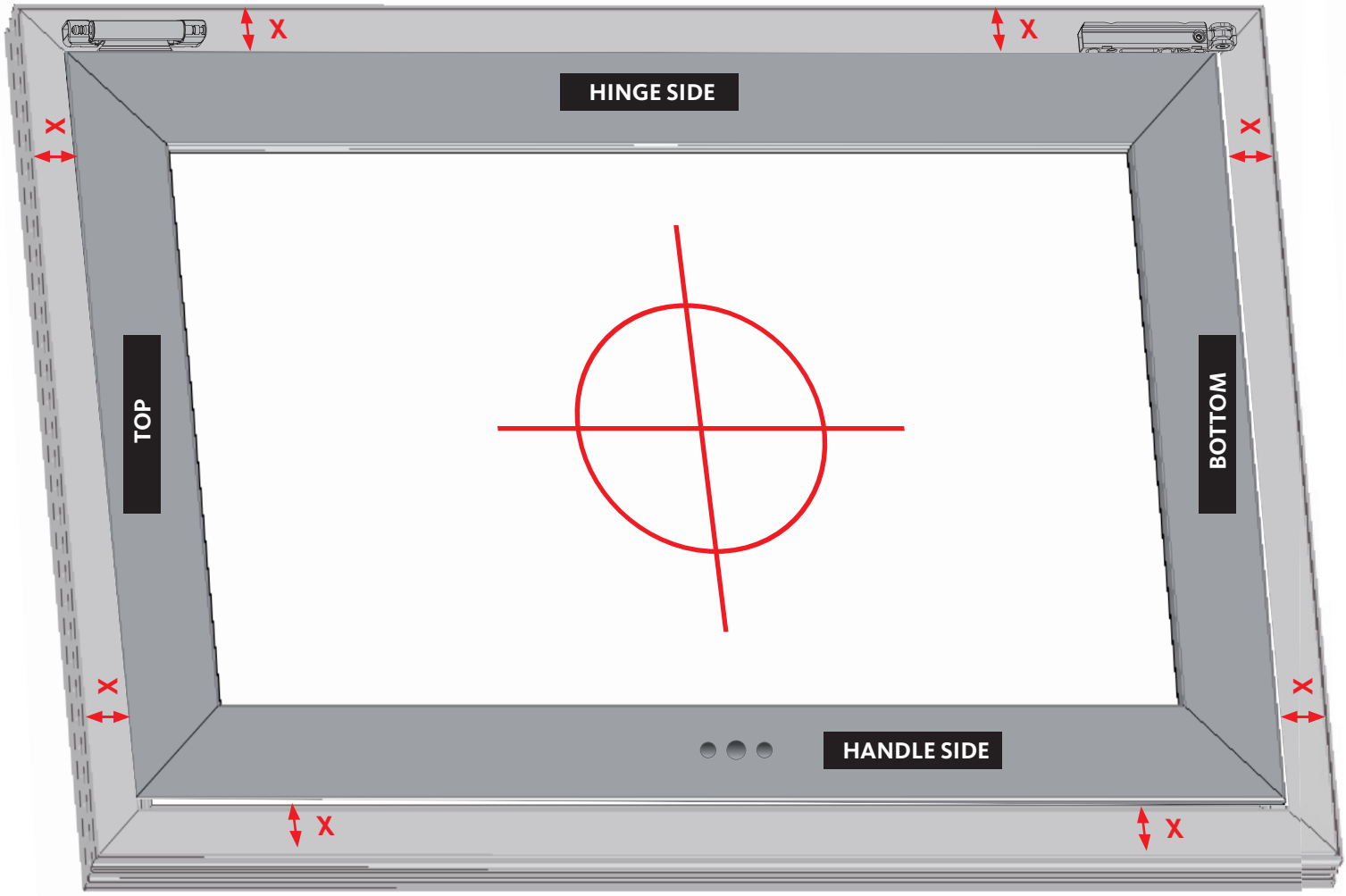
Mounting the sash to the frame

FERCO

max. 100 kg

RH

CENTER SASH IN FRAME



STEP 18

- Measure all around the window, make sure the dimensions X are the same.
- Make the adjustments if necessary.

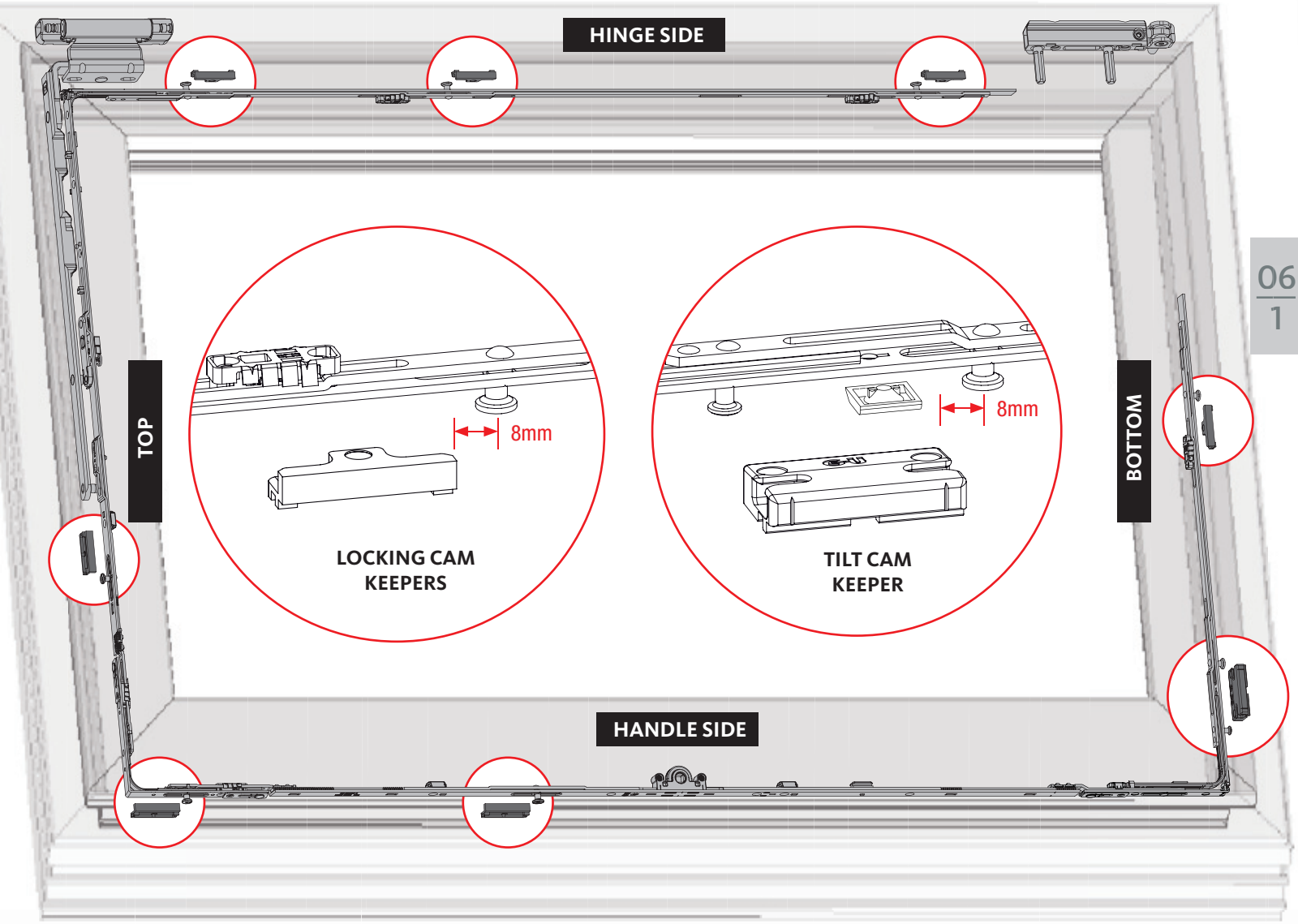
Window Assembly

Install the keepers

FERCO

max. 100 kg

RH



STEP 19

- Mark each cam center on the frame with a pencil.
- Add second mark at 8mm of center mark (**clockwise** around frame for **right handle**, **counterclockwise** around frame for **left handle**).

STEP 20

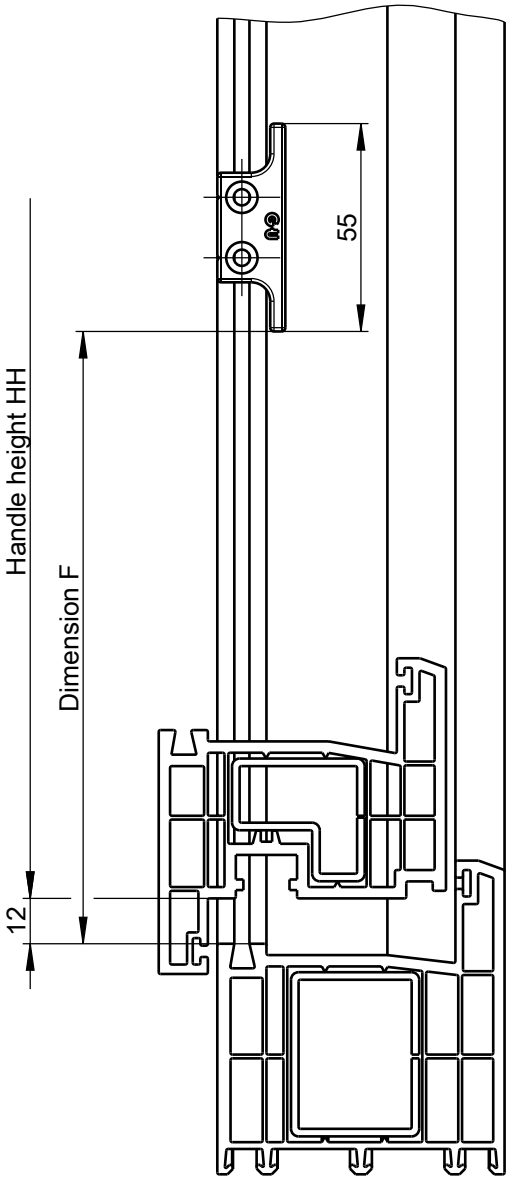
- Install locking keepers around the frame.
- Install tilt keeper at bottom of the frame.
- Install run-up block to the bottom tilt midlock as shown.

Window Assembly

Install the wrong operation device

FERCO

Position of run-up stop for sash lifter



Variable handle height	
SRH	Dimension F
751-1200	Dim. G - 158
951-1450	Dim. G - 158
1201-1700	Dim. G - 158
1451-1950	Dim. G - 158
1951-2800	Dim. G - 367

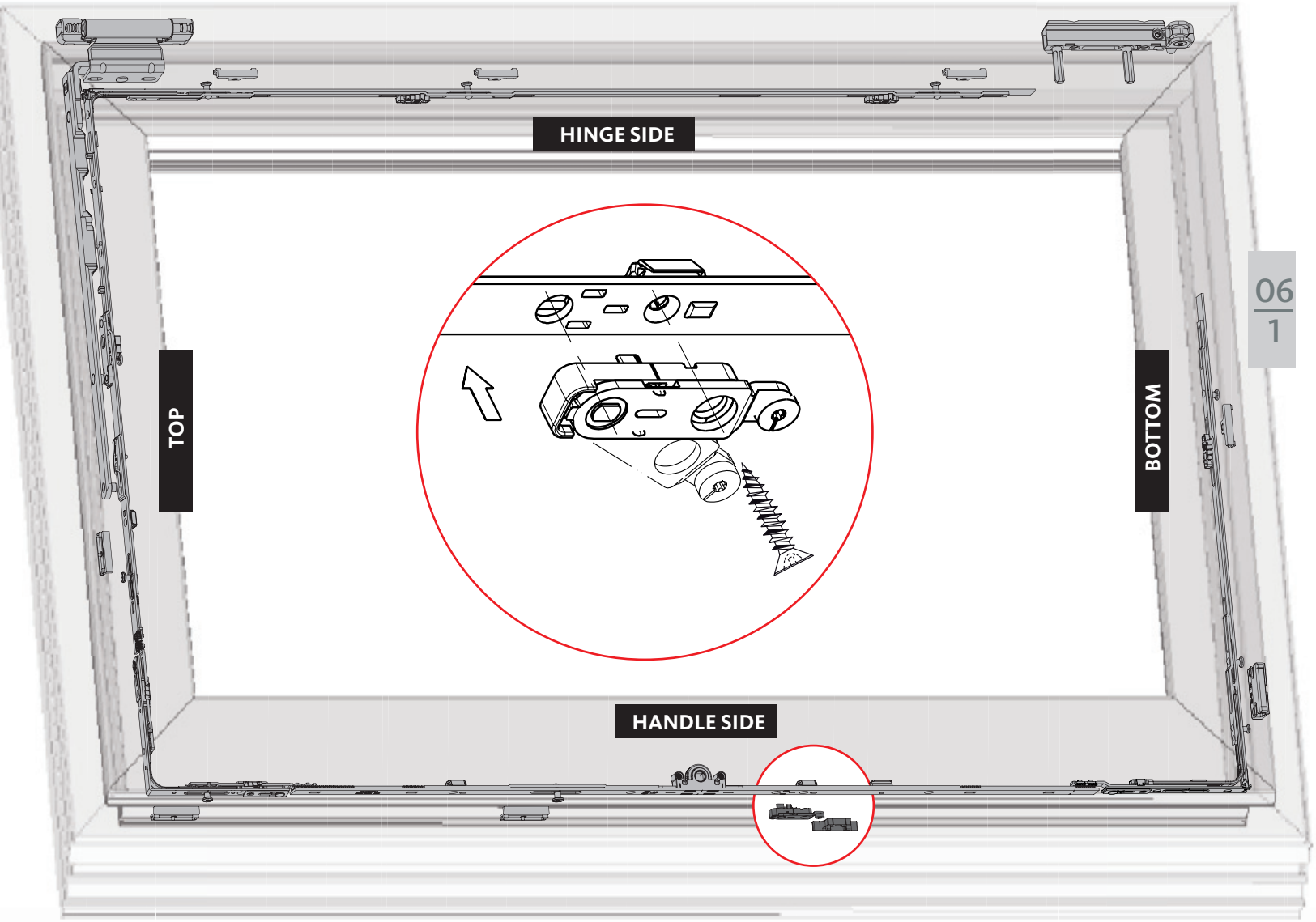
Window Assembly

Install the wrong operation device

FERCO

max. 100 kg

RH



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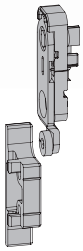
1

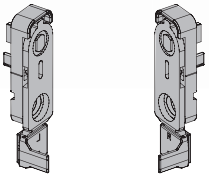
STEP 21

- Install the wrong operation device to the gear. (Only require for locking gears G-22082/3/4/5/6)



Wrong operation device with sash lifter

or



Left (L) Right (R)

Wrong operation device

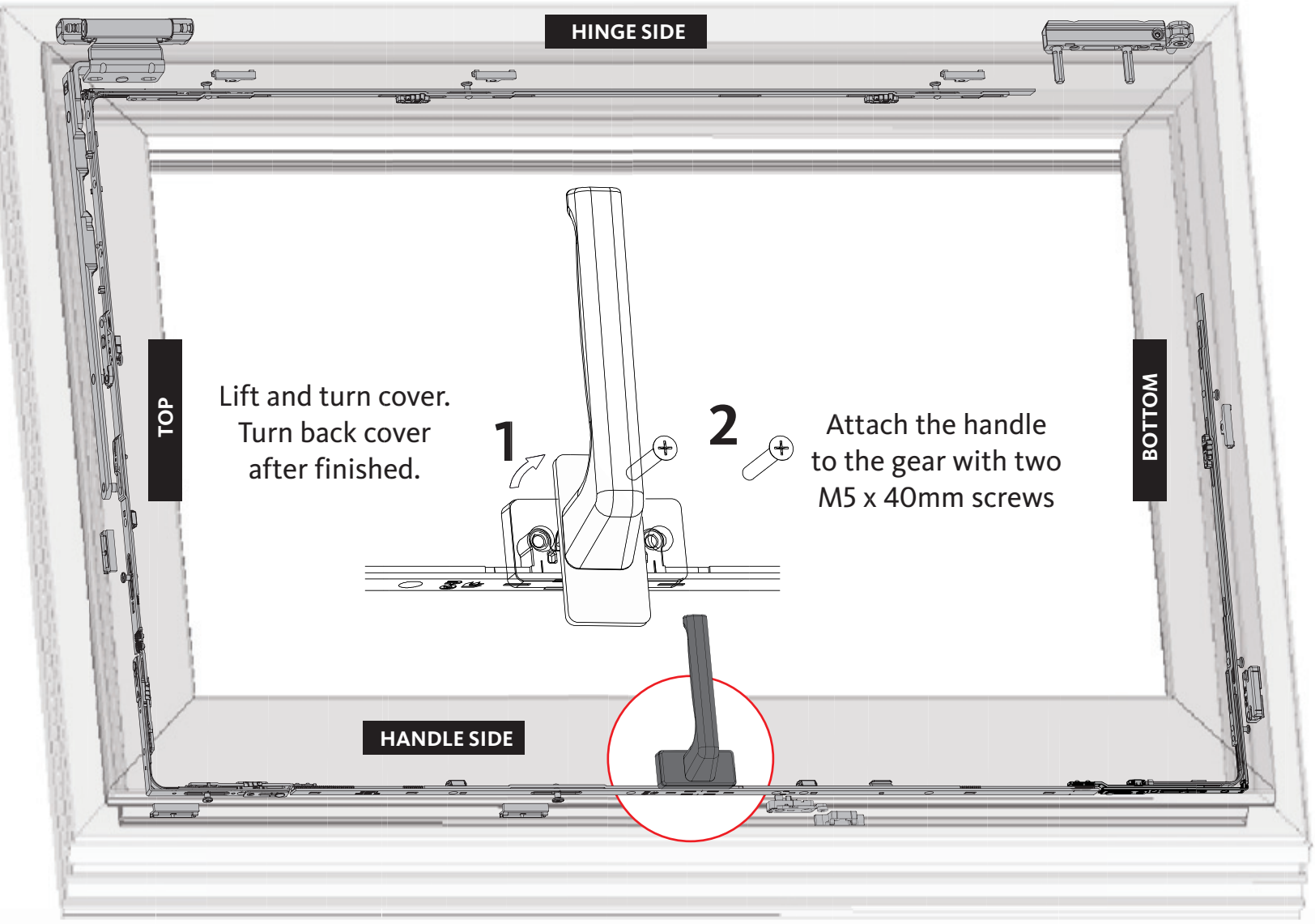
Window Assembly

Install the handle

FERCO

max. 100 kg

RH



STEP 22

- Install the handle in turn position.

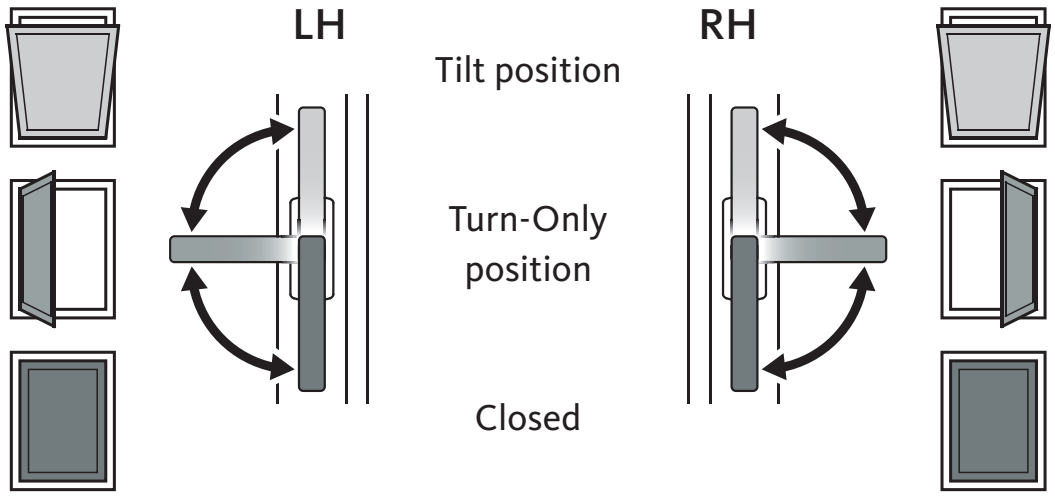
Window Assembly

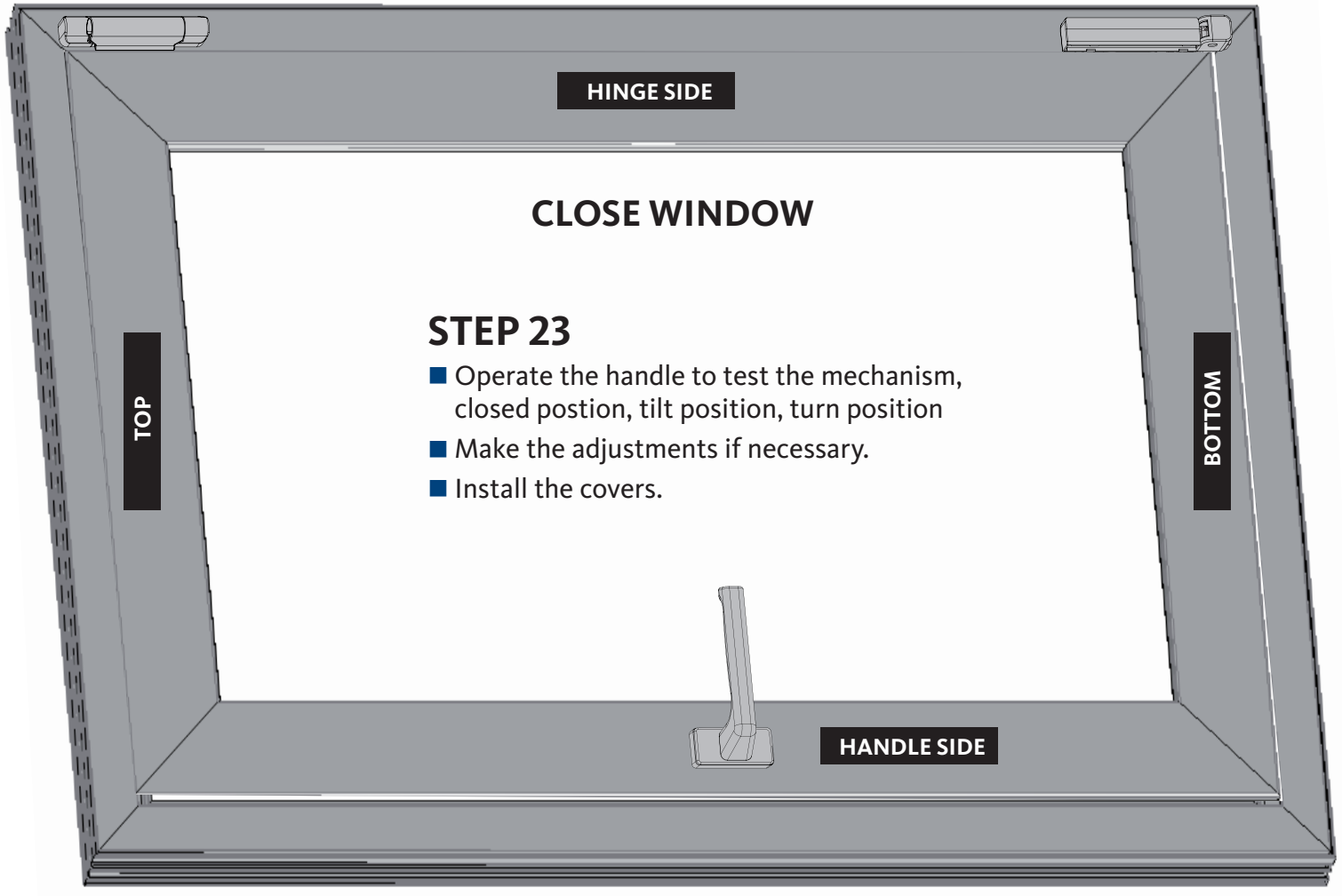
Testing the window

FERCO

max. 100 kg

RH





Accessories & Tools

FERCO

Multi Functional Adjusting Tool

Description	PU	Part Number
Includes rachet and bits	1	6-37291-00-0-1

* = Color PU = Packaging Unit

Construction Pull Handle for Stay-Bearing Pin

Description	PU	Part Number
Handle with 7mm square spindle and pull tap for stay-bearing pin	1	6-38513-02-0-9

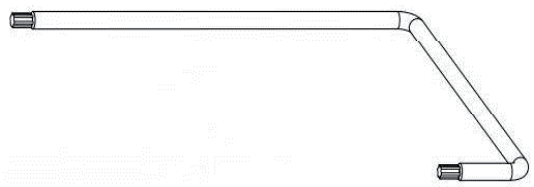
* = Color PU = Packaging Unit

Accessories & Tools

FERCO

Torx 15 T-Key

Description	Color	PU	Part Number
Torx key	Steel	1	H-00346-15-0-0
	* = Color	PU = Packaging Unit	



Torx 15 Adjusting Key

Description	PU	Part Number
U-shaped 110 x 100 x 25mm	1	9-43631-00-0-6
* = Color	PU = Packaging Unit	

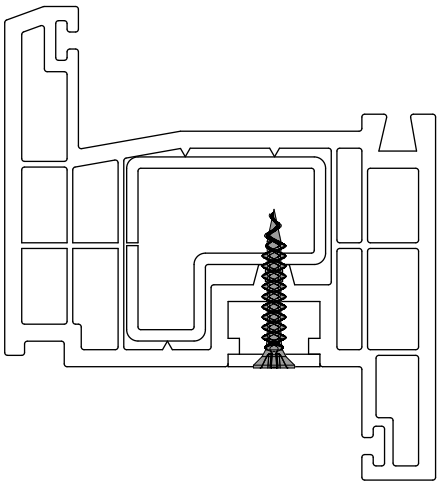
Torx Allen Key for Unijet Cam Adjustment

Description	PU	Part Number
L-shaped 100 x 24mm	1	H-00809-15-0-0
* = Color	PU = Packaging Unit	

Accessories & Tools

FERCO

Installation diagram



D1 Screws for Hardware Installation				
Description	**Dimension mm**	**Color**	**PU**	**Part Number**
D1 screws	4.2 x 20	Zinc	1000	E-12562-20-0-1
D1 screws	4.2 x 22	Zinc	1000	E-12562-22-0-1
D1 screws	4.2 x 25	Zinc	1000	E-12562-25-0-1
D1 screws	4.2 x 30	Zinc	1000	E-12562-30-0-1
D1 screws	4.2 x 35	Zinc	1000	E-12562-35-0-1
D1 screws	4.2 x 40	Zinc	1000	E-12562-40-0-1
		* = Color	PU = Packaging Unit	

Product characteristics

- Classic hardware screw, incorporating the latest technology, with double-pitch thread
- Also ideal for thin-walled profiles
- High overtorquing and extraction values in PVC
- Roller-sorted quality for automatic screwing
- Steel, case hardened

Applications

- Fastening of Tilt&Turn hardware in normal and thin-walled PVC profiles and also in steel or GFRP inserts
- Fastening of closing parts, hinges and bearings

Processing

- Screwing with speeds of approx. 1,500 to 2,000 rpm
- Can be screwed into steel; pre-drilling required (see technical data and requirements)
- Can be screwed into GFRP without pre-drilling

Technical data and requirements	
Head diameter	7.3 mm
Drive	Philips PH 2
Thread type	Double-pitch thread
Sheet metal thickness	Pre-drill diameter
1.5 mm	3.0 mm
2.0 mm	3.2 mm
2.5 mm	3.5 mm

Accessories & Tools

FERCO

B1 Screws for Hardware Installation				
Description	**Dimension mm**	**Color**	**PU**	**Part Number**
B1 screws	3.9 x 13	Zinc	1000	E-12563-13-0-1
B1 screws	3.9 x 16	Zinc	1000	E-12563-16-0-1
B1 screws	3.9 x 19	Zinc	1000	E-12563-19-0-1
B1 screws	3.9 x 25	Zinc	1000	E-12563-25-0-1
B1 screws	3.9 x 32	Zinc	1000	E-12563-32-0-1
		* = Color	PU = Packaging Unit	

Product characteristics

- Roller-sorted quality for automatic screwing
- Steel, tempered

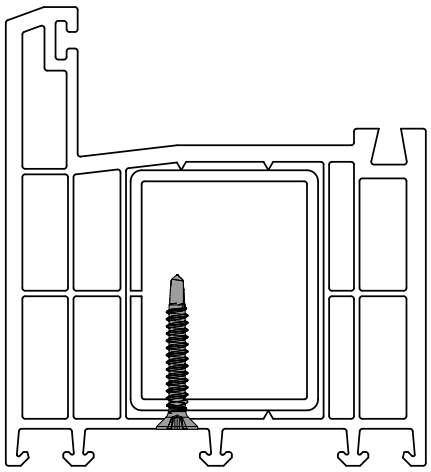
Applications

- Fastening of steel reinforcement up to 3.0 mm in PVC windows in which the reinforcement is close together
- Fastening of hardware components

Processing

- Screwing with speeds of approx. 1,500 to 2,000 rpm

Installation diagram



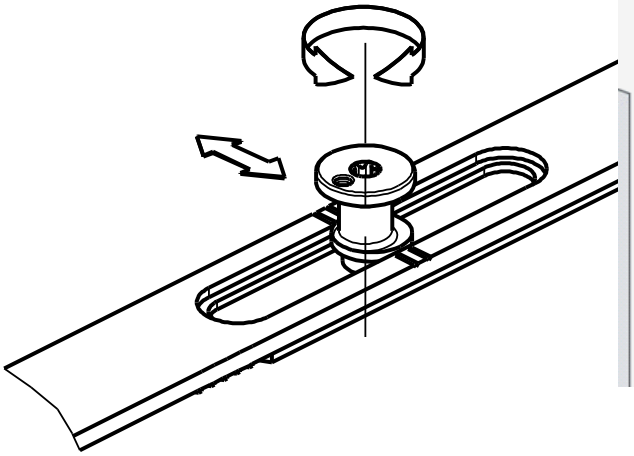
Technical data and requirements	
Head diameter	7.5 mm
Drive	Philips PH 2
Thread type	ST thread

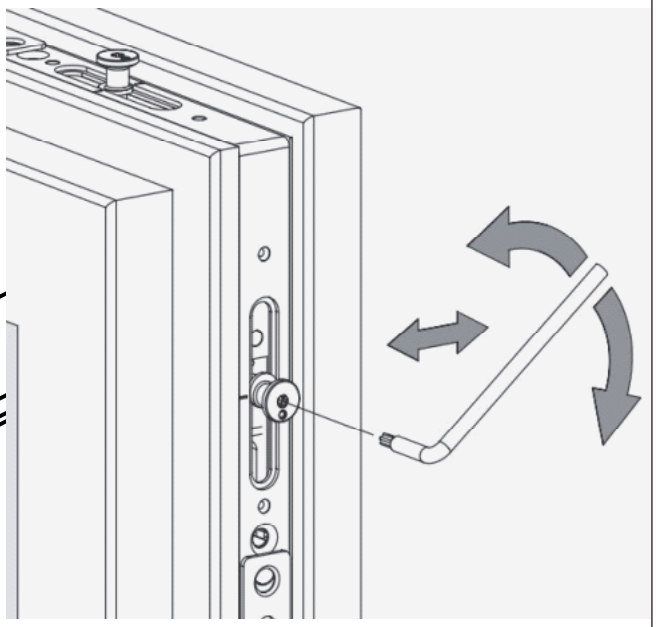
Locking Cam Adjustments with Torx 15 Key

FERCO

Cam adjustment

Adjustment ±1 mm
with T15





UNI-JET Cleverle - Locking Cam Adjustments

- ±1mm adjustment with Torx 15 key.
- Gasket pressure adjustment all around the sash via "Cleverle" locking cams.
- Clearance compensation with standard strikers: from 8.5 to 15.0mm.
- Clearance compensation with Se security strikers: from 8.5 to 14.0mm.
- Automatic vertical locking-cam movement: 1.2mm.
- Locking-cam diameter: 11mm.
- Due to the fact that the clearance between sash and the frame isn't always ideal, the locking points with the "Cleverle" automatic locking-cam adjust independently, automatically and "clever" to the existing clearance tolerances.

  Thanks to the specially cranked connecting rods located at the locking points under the faceplate, the mushroomshaped locking cams locate themselves into the required position and return afterwards to the neutral position.

Wrong Operation Device & Sash Lifter Adjustment with Torx 15 Key

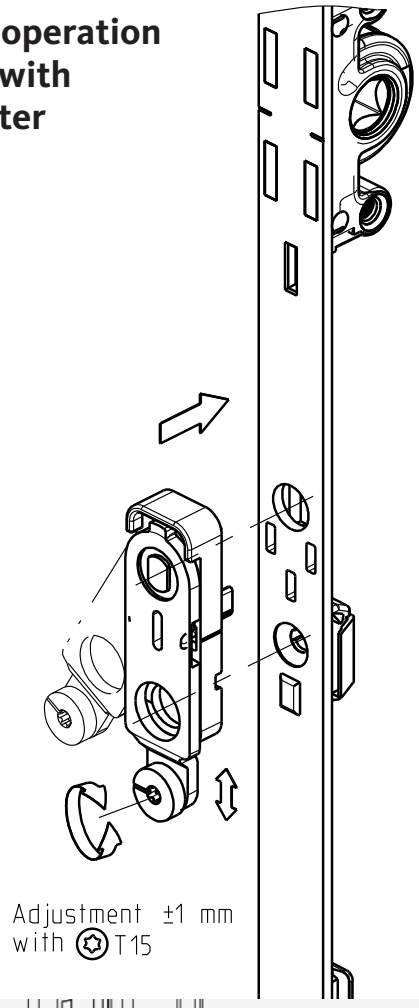
FERCO

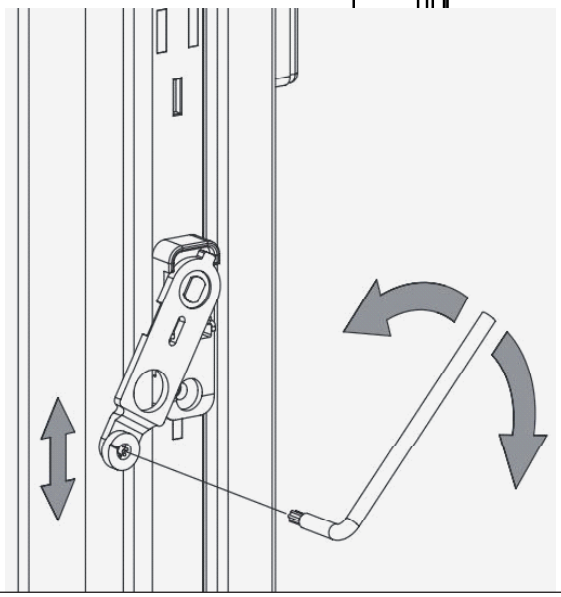
RH

Wrong Operation Device with Sash Lifter

- Vertical adjustment: ±1mm with Torx 15 key.
- Non-handed version - helping to maintain low stockkeeping levels.
- Prevents mishandling the window reliably (incorrect handle operation), e.g. when the window is in the Turn-Mode, it's not possible to turn the handle into the Tilt-Mode if the sash isn't lying up against the frame).
- Lifts the sash gently into the frame and with it the closed position, providing for easy and convenient window operation (same function as a sash run-up).
- Also available as a mere mishandling device (without sash-lifter, triggered directly on the frame and for this reason no lifting mishandling device striker is required on the frame).
- The "Flügelfix" lifting mishandling device with integrated sash-lifter is clipped on to the pre-punched gear-drive and screw-fixed. Subsequently the required direction is activated by pulling (component is non-handed).

Wrong operation device with sash lifter

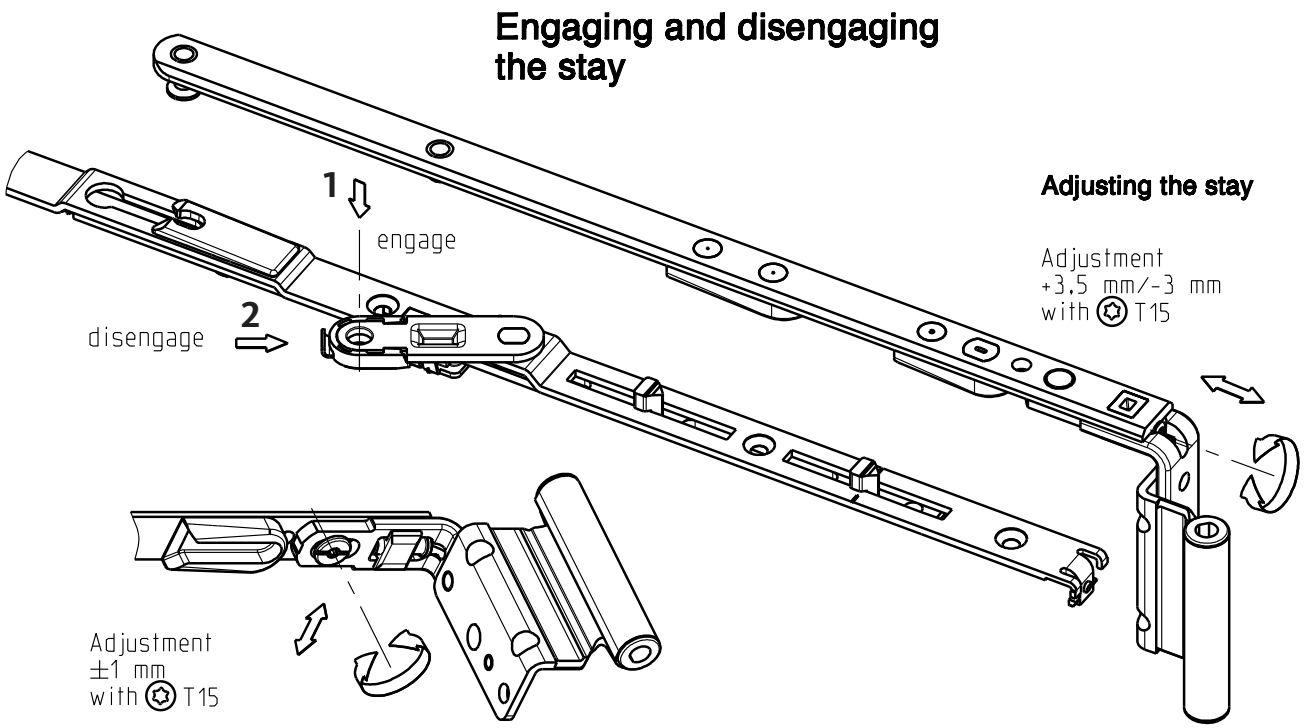




Stay Arm Adjustments

FERCO

RH

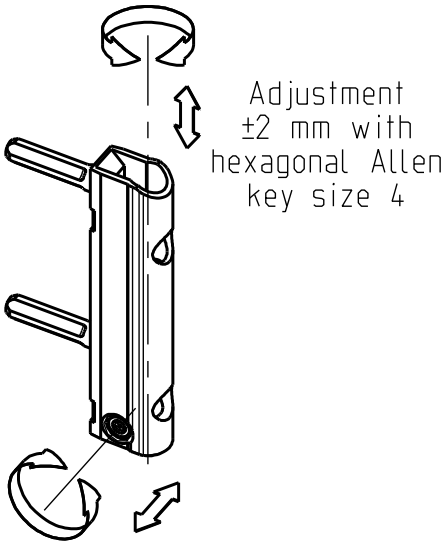


UNI-JET Stay-arm and Stay-guide

- Lateral adjustment: +3.5mm / -3mm with Torx 15 key
- Gasket pressure adjustment: ±1mm with Torx 15 key.
- (2) Quick hinging and unhinging: to release the stay-arm from the stay-guide, simply push in the safety spring on the stay-guide (alternatively pull out the stay-bearing pin: refer to the stay-bearing chapter).
- Stay-arms are non-handed (for 13mm axis), helping to maintain low stockkeeping levels (Left and right-handed T&T stay-arms for 9mm axis).
- An integrated anti-slam device holds the sash securely in the tilted position - even in draughty conditions.
- The bevelled edge on the stay-arms enables free movement when tilting small sashes (e.g. from SRH 280mm) and with this, prevents damaging the profile surface.
- Note: the stay-hinge may not be removed after it has been attached ("click").
- The illustration shows a (non-handed) component that shall be installed in a right-handed window (Always viewed from the inside).

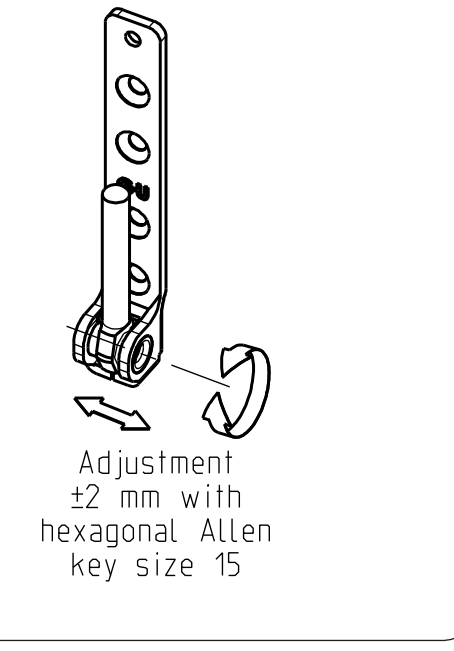
Drill-in Hinge & Pivot Hinge Adjustments

FERCO



UNI-JET Drill-in Hinge D

- Vertical adjustment: ±2mm with long 4mm Allen key.
- Gasket pressure adjustment: ±1mm with Torx 15 key.
- Tested hardware-components load-bearing capacity within the framework of a total hardware set: 100kg.
- Non-handed version - helping to maintain low stockkeeping levels.
- The gasket level is not interrupted by the drill-in hinge.
- Removing the cap before adjusting the corner-hinge no longer required.

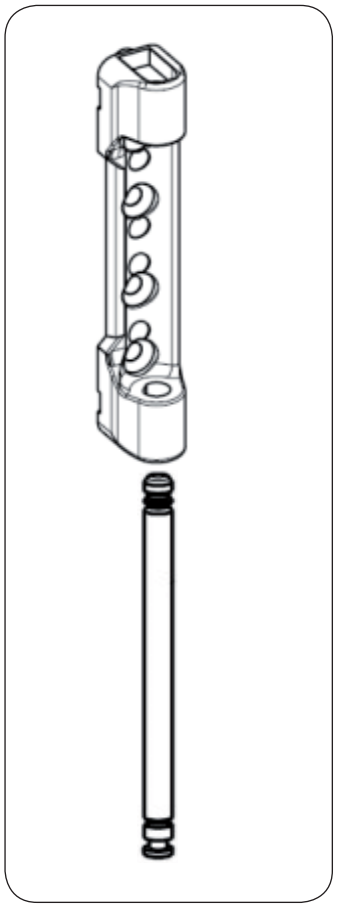


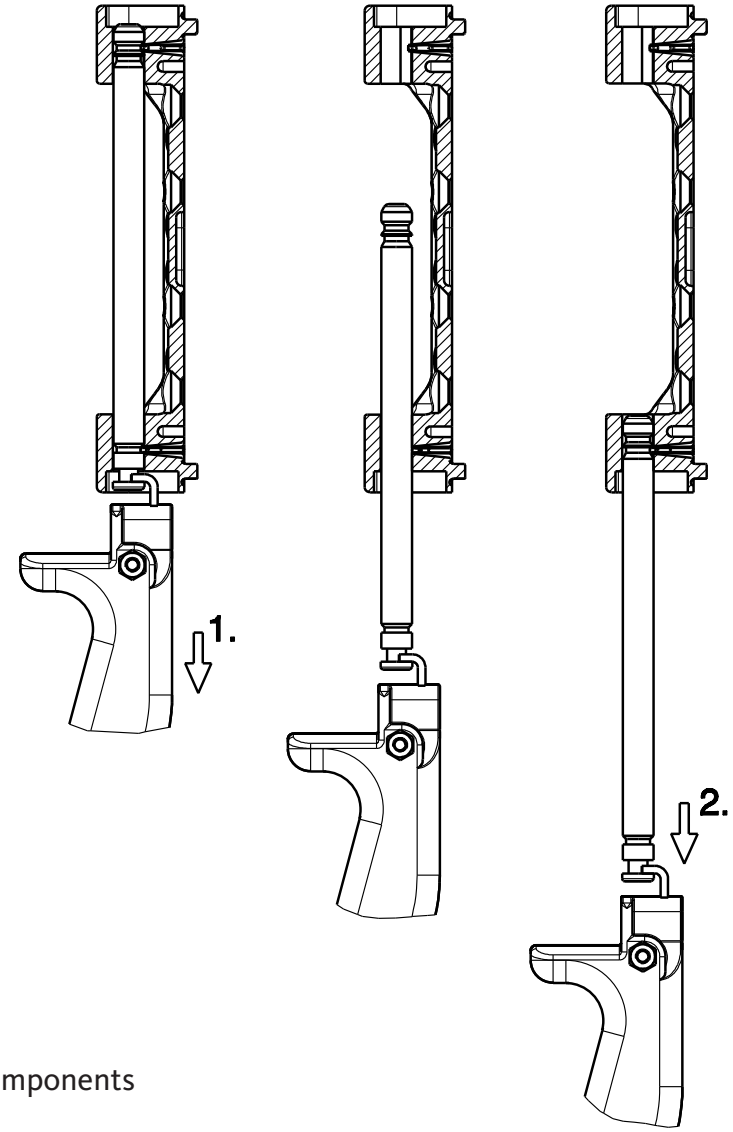
UNI-JET Pivot-rest D

- Lateral adjustment: ±2mm with Torx 15 key.
- Tested hardware-components load-bearing capacity within the framework of a total hardware set: 100kg.
- efficient drilling pattern: drilling and screw-fixing pattern the same (symmetrical, supporting-pin distance 84 mm). The symmetrical drilling and screw-fixing pattern for stay-bearing and pivot-rest is specially designed to ensure optimal screw-fixing in the steel-reinforcement.
- Non-handed version - helping to maintain low stockkeeping levels.

Instructions

Removing the Stay Bearing Pin with Pull Handle Tool





UNI-JET Stay-bearing D

- Cohesive elegant design of the hinge components (no visible screws).
- Aesthetical, concealed stay bearing pin.
- Tested hardware-components load-bearing capacity within the framework of a total hardware set: 150kg.
- Stay-bearing pin remains in the stay bearing upon unhinging und with it, can't get lost.
- Non-handed version - helping to maintain low stockkeeping levels.

Instructions

Removing the Stay Bearing Pin with Standard Tools