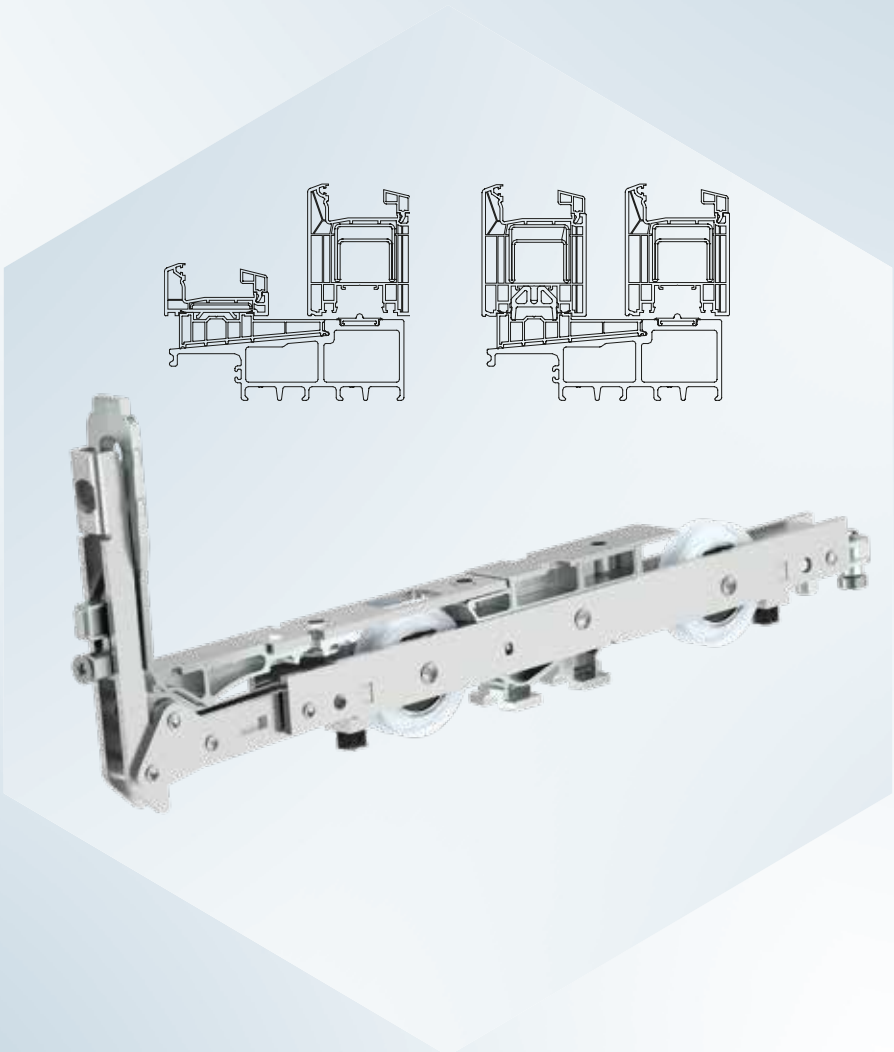
TECHNOLOGY IN MOTION

www.maco.eu

ASSEMBLY INSTRUCTIONS

Lift&slide hardware
Rehau Synego



ONLY FOR
CERTIFIED SPECIALISTS!

MACO
RAIL-SYSTEMS

Table of contents

Important information

Target group

This documentation is intended exclusively for specialist companies and certified specialists. The work described may only be carried out by specialist personnel.

Instructions for use and safety

Assemble all hardware parts professionally as described in this manual and observe all safety instructions.

Overloading or improper operation of the lift and slide hardware may cause the sash to jump out of its guide, fall out and cause serious injury. If overloading of the lift and slide hardware is expected under special circumstances, such as in Schools, Kindergartens etc., this must be prevented using the appropriate measures,

e.g.

- Adjustment of the buffer stop to reduce the opening width, or
- Installation of a profile cylinder to prevent improper use.

Please observe the terms of our functional warranty (https://www.maco.eu/assets/757813) as well as the conditions of our surface warranty for MACO TRICOAT-PLUS hardware (https://www.maco.eu/assets/757713).

Observe the “Guidelines and Instructions on Product and Liability (GIPL)” of the Quality Association of Locks and Hardware. This policy describes all safety-related issues for end-users for window and balcony door topics. (Download available on the website of the Quality Association of Locks and Hardware).

For MACO lift and slide hardware HS, the application ranges given on page 7 must not be exceeded. In addition, REHAU‘s specifications for the lift and slide door hardware, in particular on possible restrictions on sash dimensions and sash weight, must be strictly adhered to.

Assemble the complete hardware only from MACO hardware parts and the required REHAU accessories.

When using Accoya (registered trademark of Titan Wood Limited) and acid-treated woods (e.g. Oak, Teak, Larch), use only the TRICOAT-PLUS fittings.

Use the specified screw sizes as specified in this guide.

Turn the screws straight (unless otherwise stated) and do not over-tighten, otherwise smooth operation of the hardware may be impaired.

Fix the screws of the supporting components (e.g. rollers, running rail and guide rail) in the reinforcement profile.

Around the rollers, ensure a positive transfer of the compressive forces onto the reinforcement profile!

With the spacer-block setting, observe the technical guideline No. 3 of the glazier trade “Blocking of glazing units”.

Do not use acid-curing sealants, as these can lead to corrosion of the hardware parts.

Keep the runner of the roller track, the threshold and all folds free of deposits and dirt, and in particular of cement or plaster residues. Avoid direct moisture on the hardware and contact of the hardware with acidic cleaning agents.

Attach the operating label in a clearly visible manner to the built-in lift and slide sash. The operating label can be found in the base carton.

Do not make any constructive changes to the hardware parts.

If you are not sure, please ask your MACO contact person for advice.

Certification

The MACO hardware mentioned in the assembly instructions are tested and regularly monitored in standardised tests in accordance with EN 13126. The achieved standards Class H3 does not refer to the individual element system. Due to a wide range of influencing factors, individual element systems may experience minor deviations from standardised testing, such as:

- the influence of processing tolerances
- the effect of assembly tolerances after the installation of the element in the building
- the use of accessories (e.g. weather seals, sealing rails, handles, etc.)
- the use of additional equipment (e.g. sliding damper, swing-check damper, operating force reduction, etc.) and/or attachments (e.g. Aluminium shells, sun protection on the sash, insect protection)
- External environmental influences (e.g. humidity, sunlight, high or low temperatures, temperature fluctuations, etc.) or
- room-side influences (moisture, aggressive cleaning agents, etc.)

Key

HS Lift&slide unit

FH Sash height

FB Sash width

RAB Frame outer width

RAH Frame outer height

L **L** Total length

GM Handle height

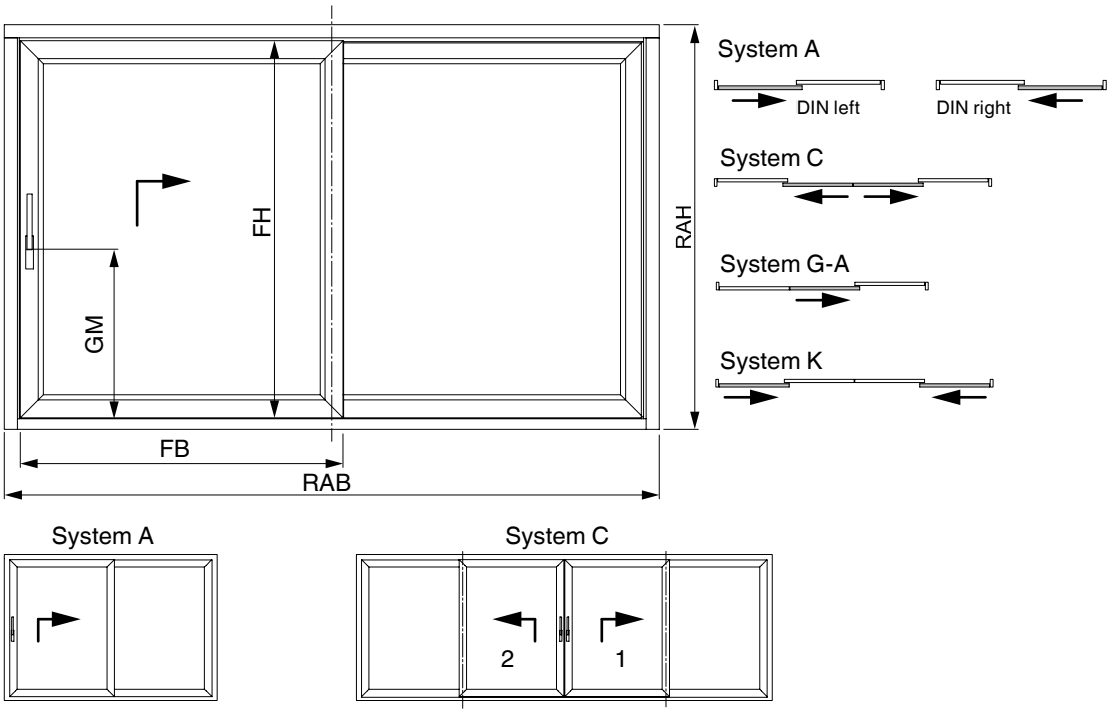
DM Backset drive gear

O Optional

{ } Dimensions for flat roller track

Dimensions in [mm]: All dimensions without units are specified in [mm]

Design and application range



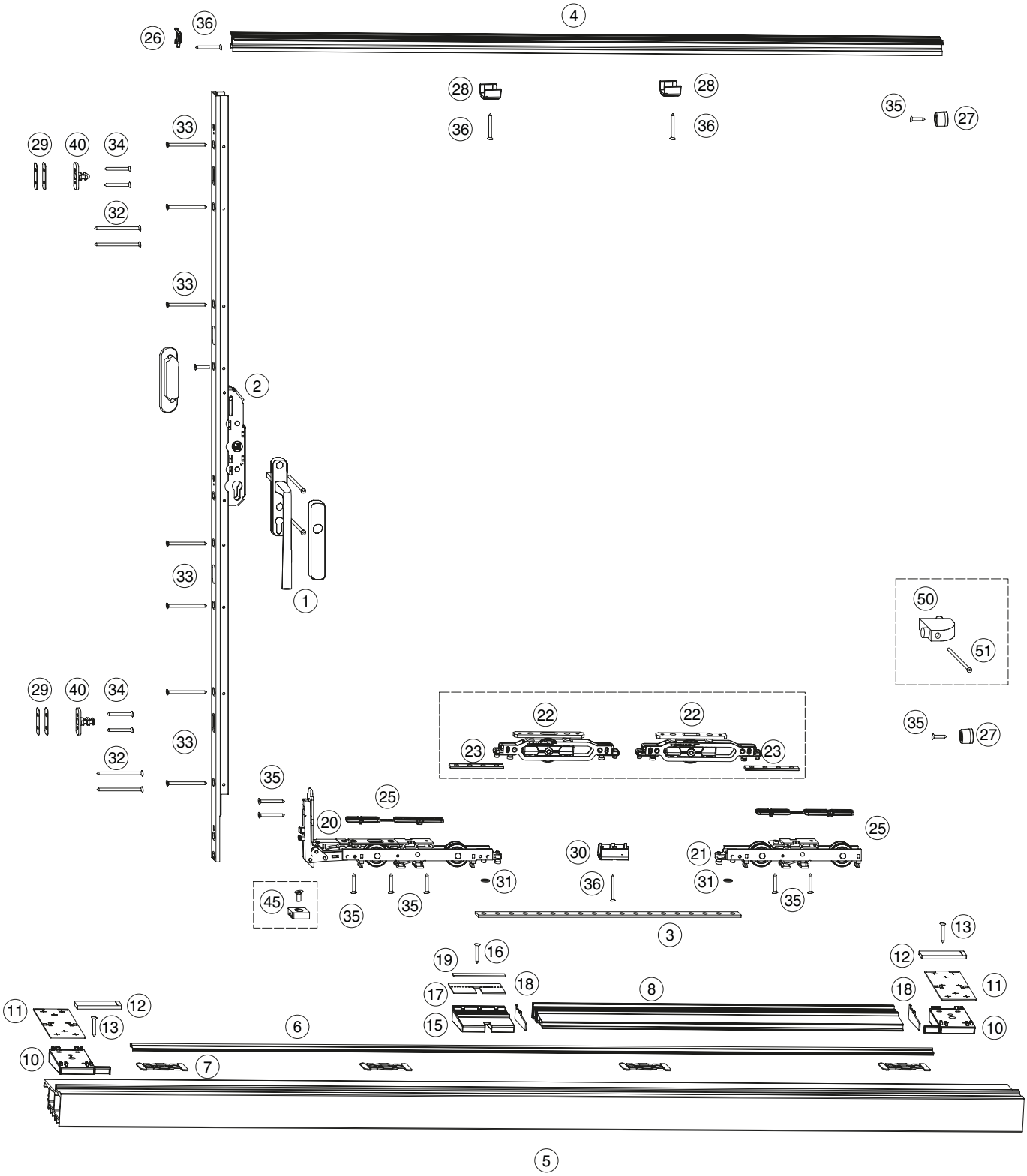
Application range

The application ranges stated in the table apply for MACO L&S 300.
The maximum application ranges and weights specified by the profile manufacturer apply when processing the profiles and must be observed.

Designation	Unit	Department
		Flat roller track
FB (Sash width)	(mm)	900 - 3320
FH (Sash height)	(mm)	713 - 2828
Weight of sliding sash	(kg)	max. 400*
DM	(mm)	37.5
GM drive gear size 1 - 2	(mm)	399
GM drive gear size 3 - 4	(mm)	999

*From a sash weight of over 200kg, we recommend installing a drive damper.
(The drive damper can be ordered via the Technical Online Catalogue (TOM) or via the Catalogue.)

Hardware overview



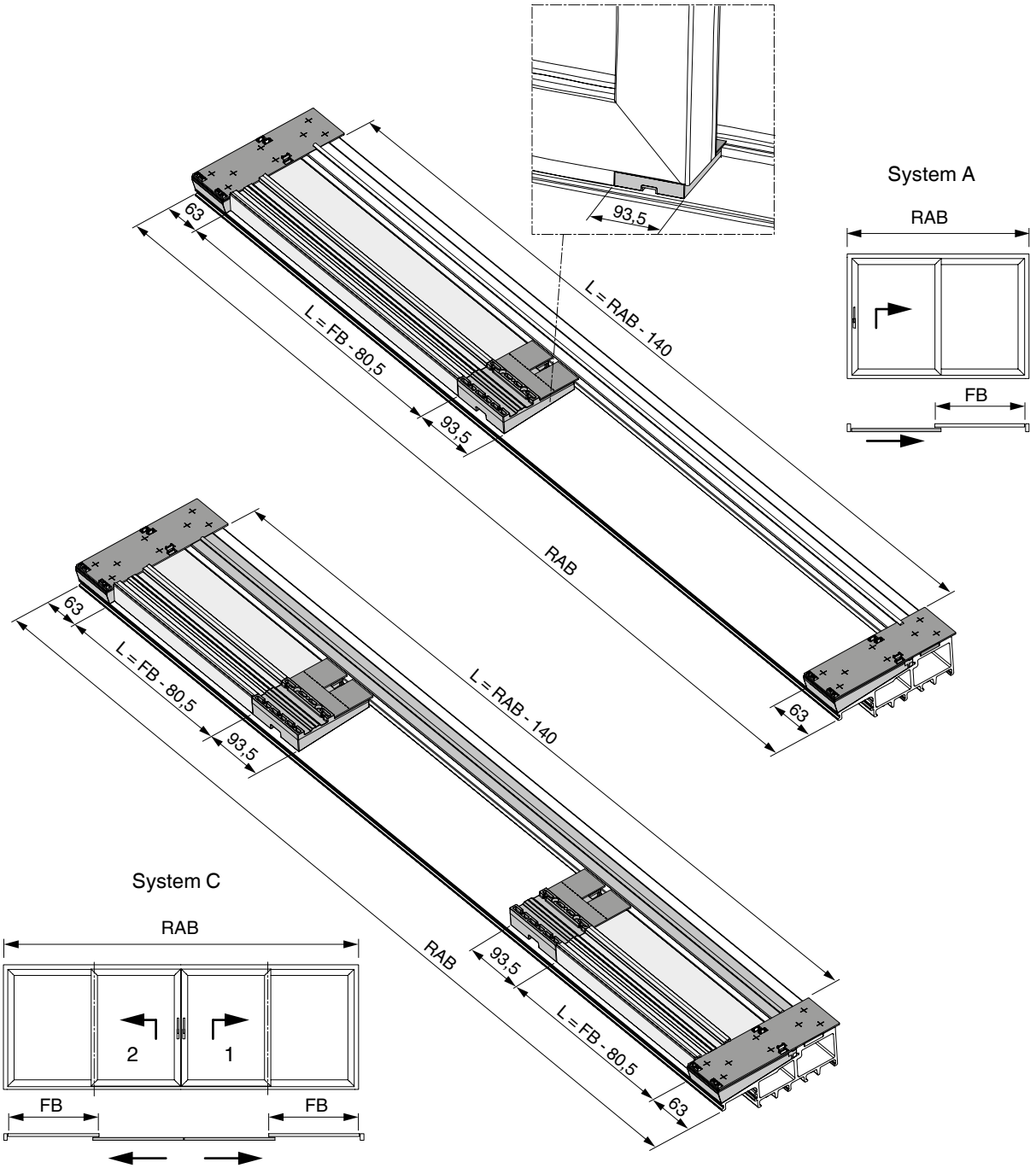
Hardware overview

Pos.	Description
1	L&S handle
2	L&S drive gear
3	Perforated connecting rod L&S 16.4 x 4
4	Rehau Synego top guide
5	MACO GRP threshold with slot-in groove
6	MACO Fibertherm flat roller track
7	MACO Fibertherm bullet catch for flat roller track
8	MACO intermediate PVC profile
10	Connecting plate for Fibertherm Rehau Synego, silver
11	EPDM seal for 2 mm connection plate
12	EPDM seal for 6 mm roller track groove
13	Countersunk self-tapping screws B 4.8 x 32
15	Sealing plate with drainage for Rehau Synego intermediate profile, silver
16	Pozidrive hardware bolt 4 x 30 silver
17	EPDM seal for Rehau Synego centre seal plate
18	EPDM seal for Rehau Synego intermediate profile
19	EPDM clip-on seal for Rehau Synego centre seal plate
20	300 kg front L&S roller without brushes
21	300 kg back L&S roller without brushes
22 - 23	Additional roller package L&S 400 kg, silver
25	L&S roller underlay 5 mm, stackable
26	Seal for Rehau Synego guide track
27	Soft buffer stop 20 mm high, grey
28	Slider for top guide track Rehau , silver
29	Packer for L&S KU lock bolt thickness = 0.5 + 1 mm, silver
30	Rod guide for flat roller track
31	Washer M8 DIN433
32	Countersunk self-tapping screws B 4.8 x 90
33	Countersunk self-tapping screws B 4.8 x 65
34	Countersunk self-tapping screws B 4.8 x 50
35	Countersunk self-tapping screws B 4.8 x 32
36	Countersunk self-tapping screws B 3.5 x 32
40	Interlocking device
45	L&S locking block 300/400 kg

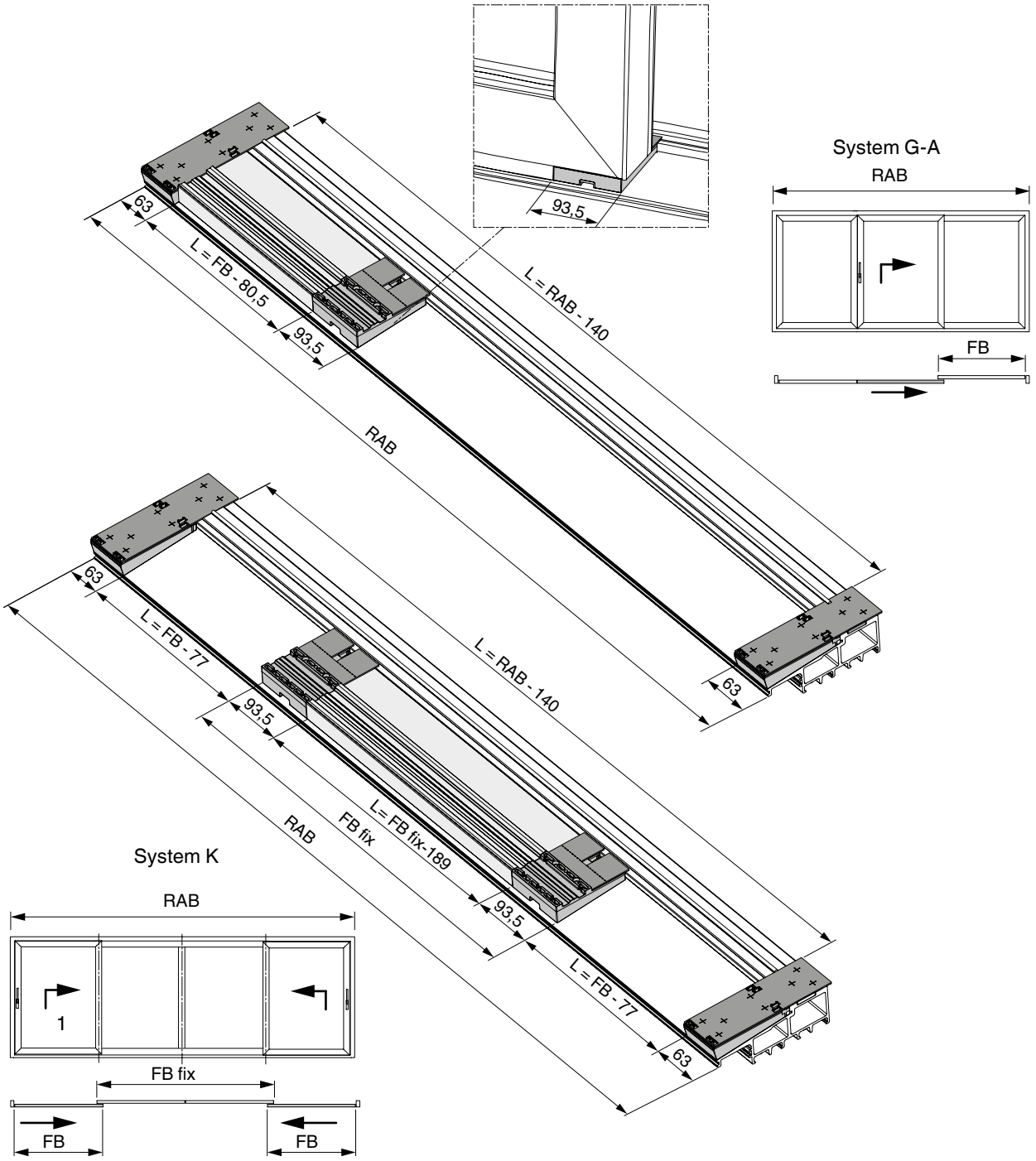
OPTIONAL

Pos.	Description
50	Stop buffer package 28 mm gap
51	Countersunk self-tapping screws B 4.8 x 80

Calculation formulae for system A + C

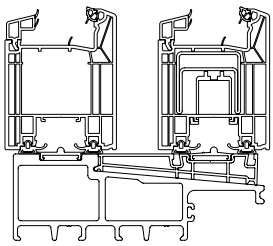


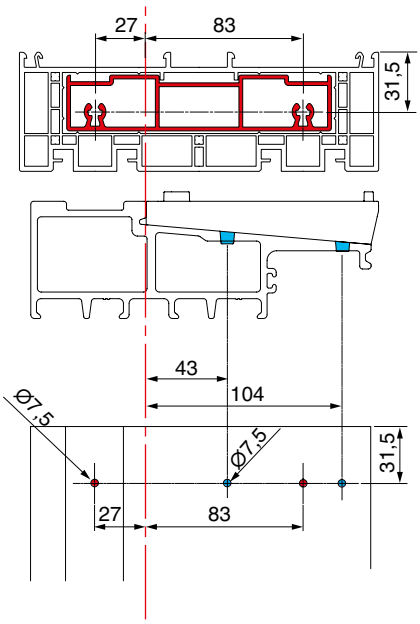
Calculation formulae for system G-A + K

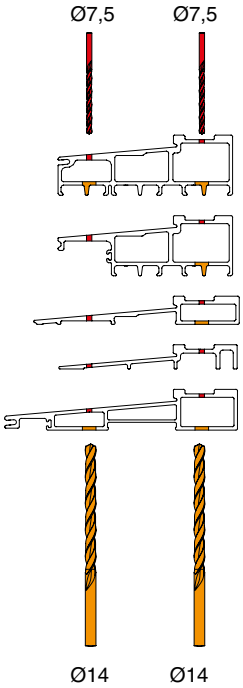


Installation on frame

Threaded connection threshold and aluminium reinforcement

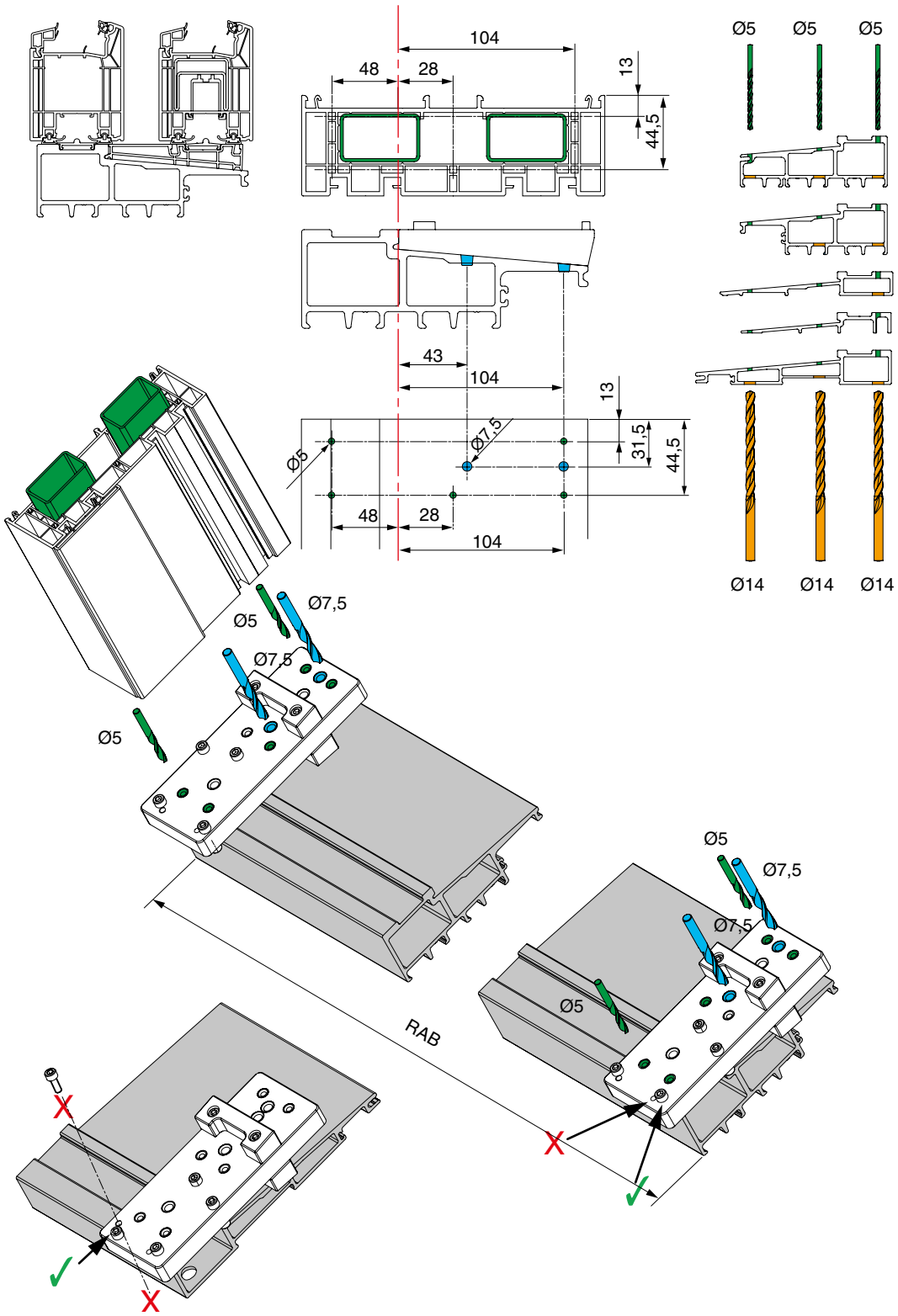






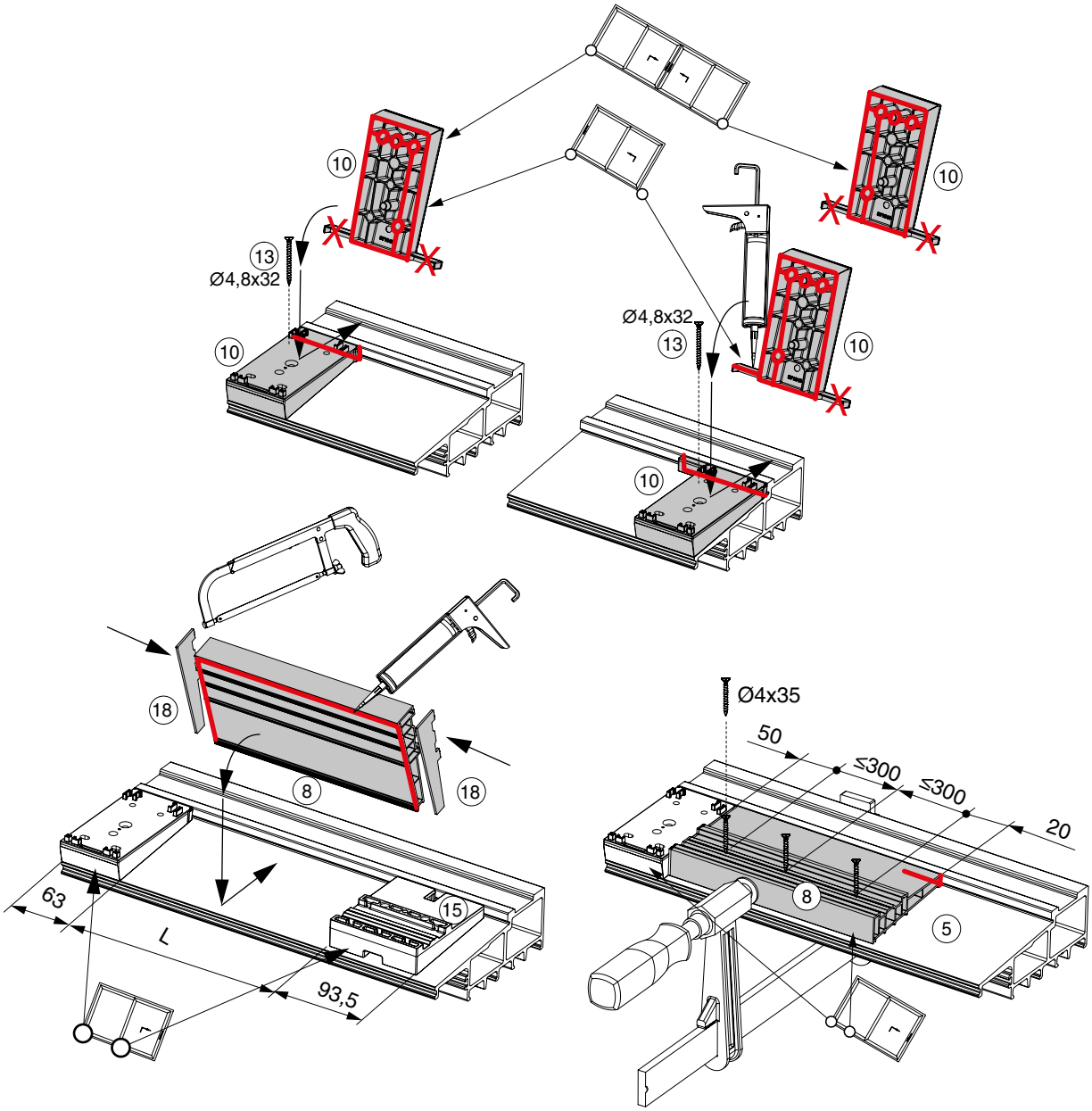
Installation on frame

Threaded connection threshold and steel reinforcement



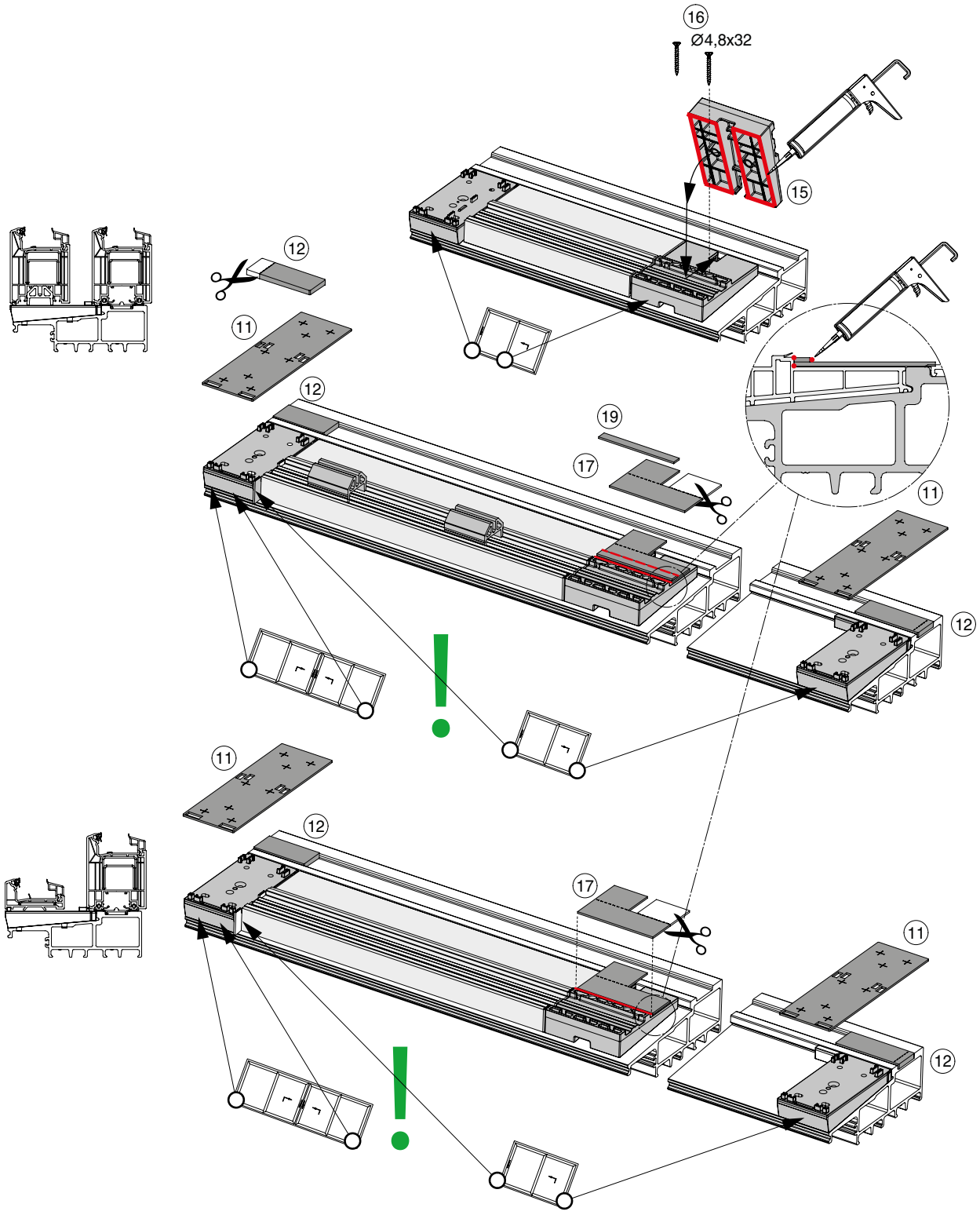
Installation on frame

Installing the threshold



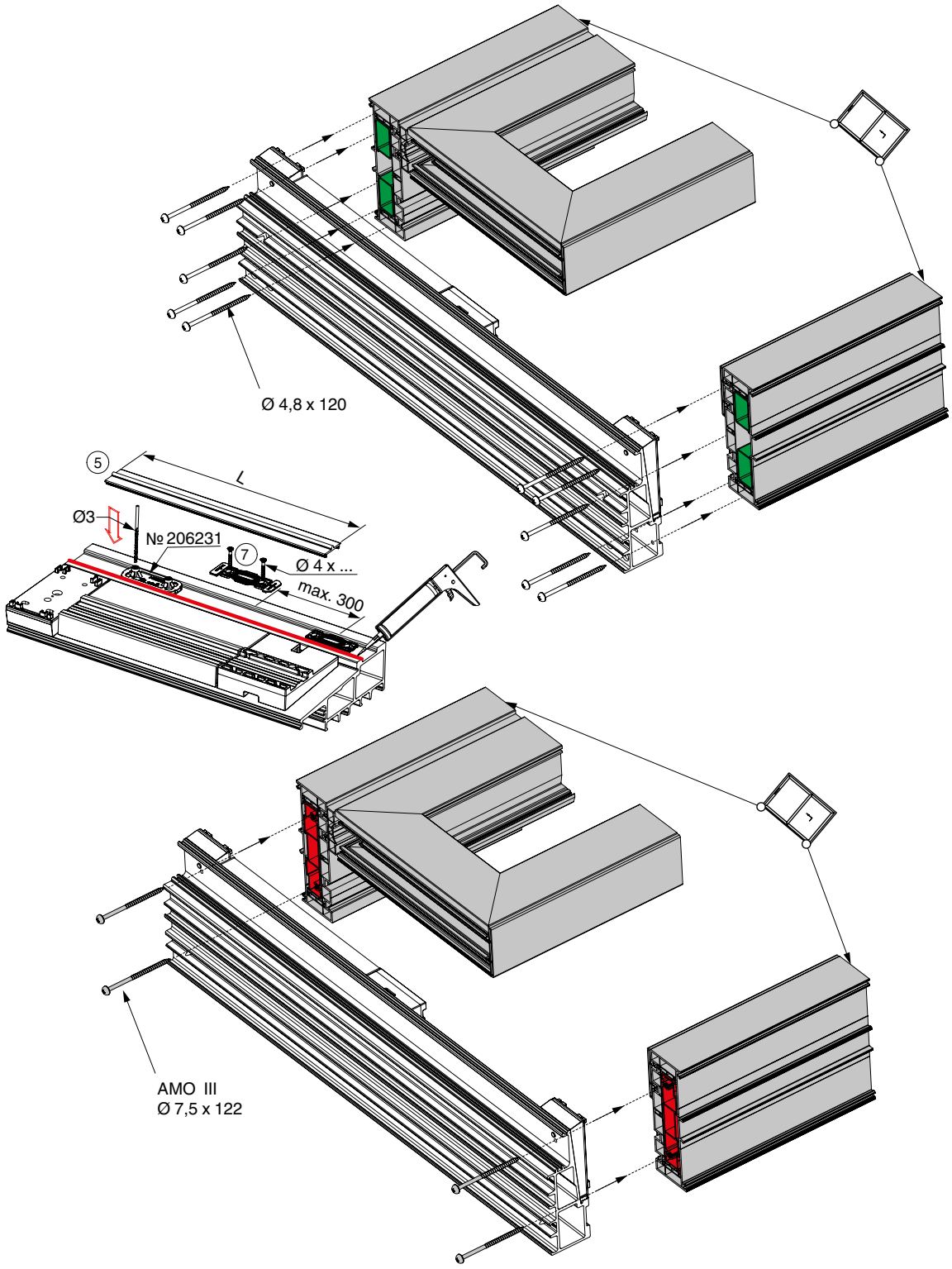
Installation on frame

Installing the threshold



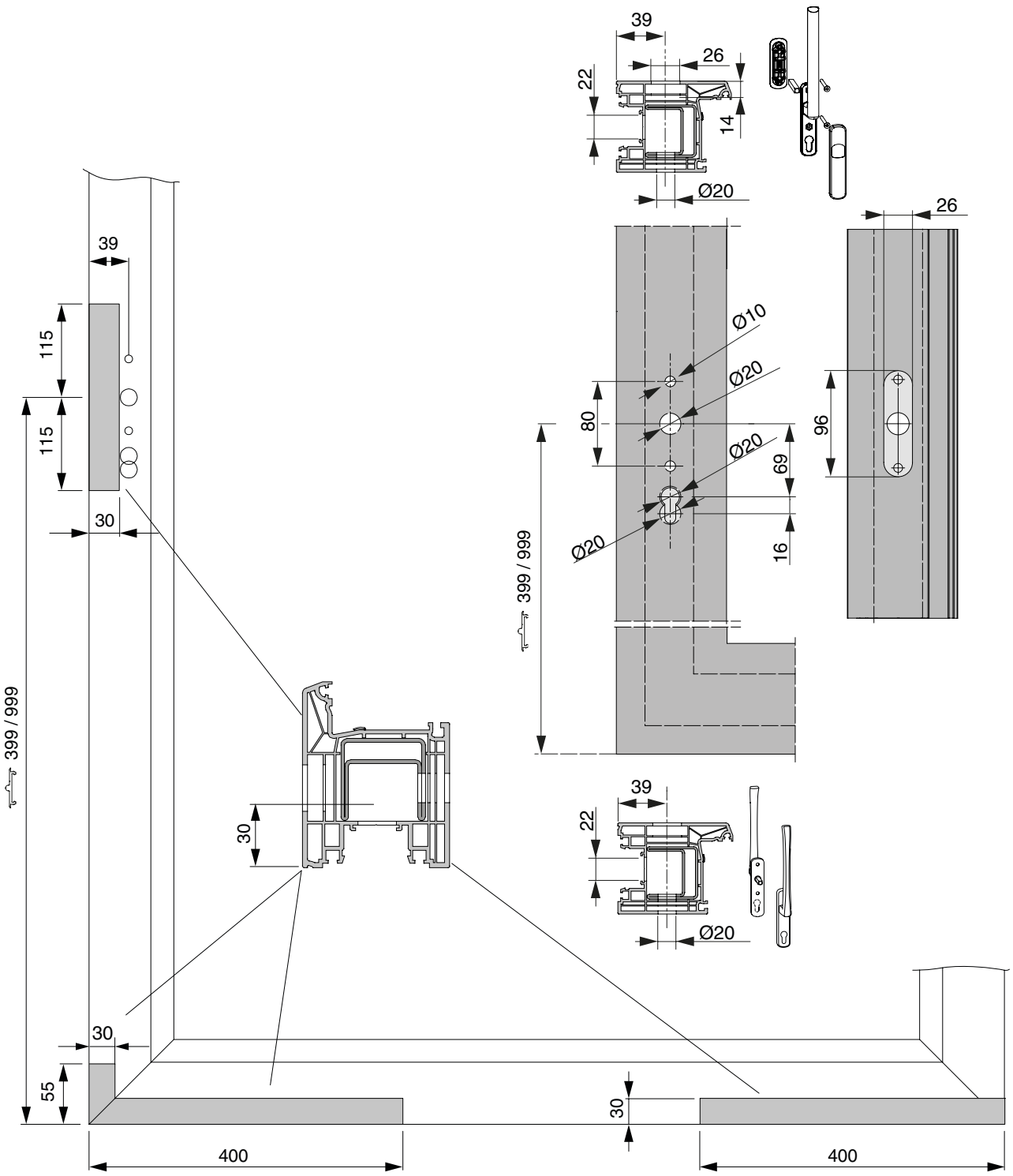
Installation on frame

Installing the threshold



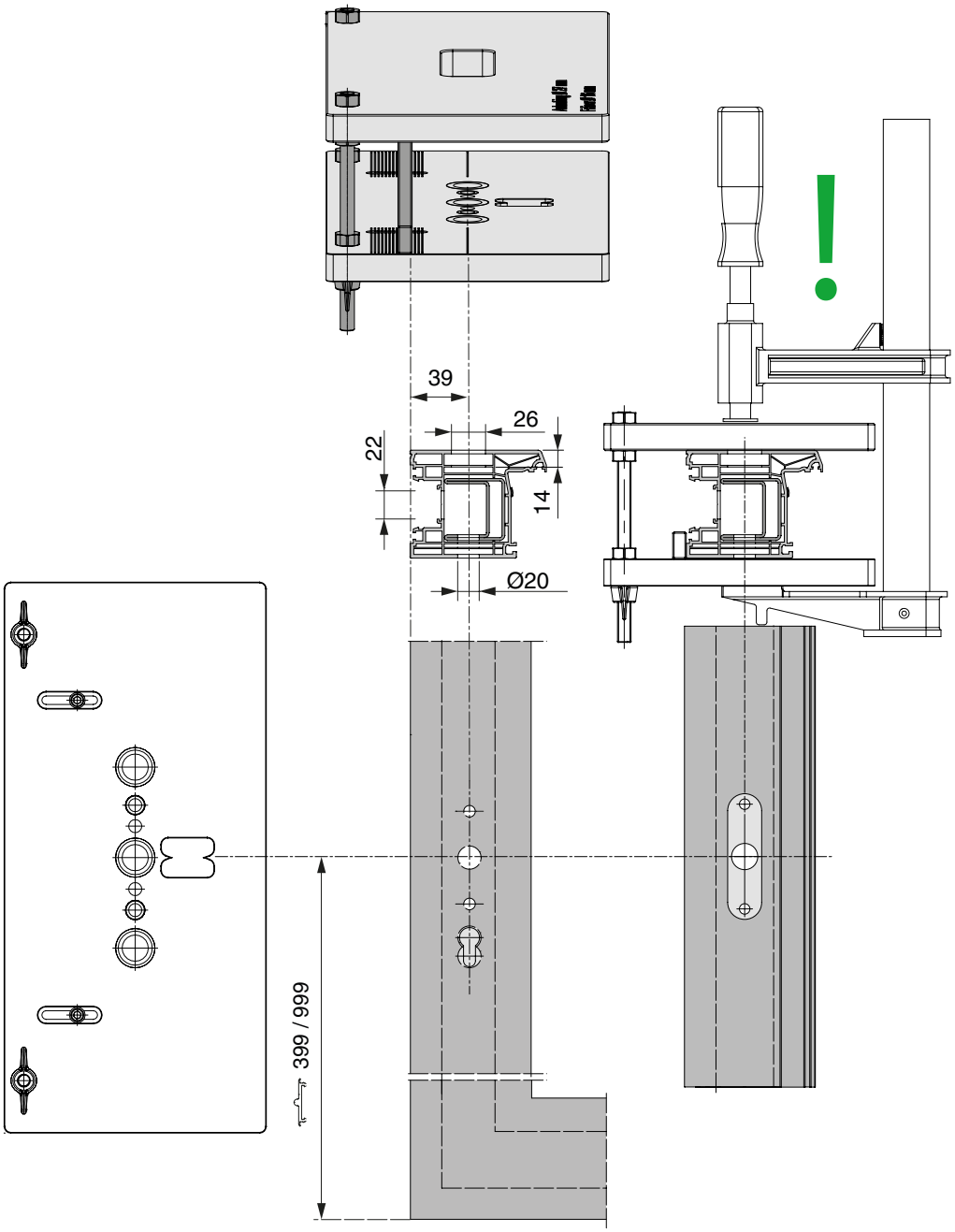
Installing on sash

Drilling and milling pattern for L&S drive gear and handle



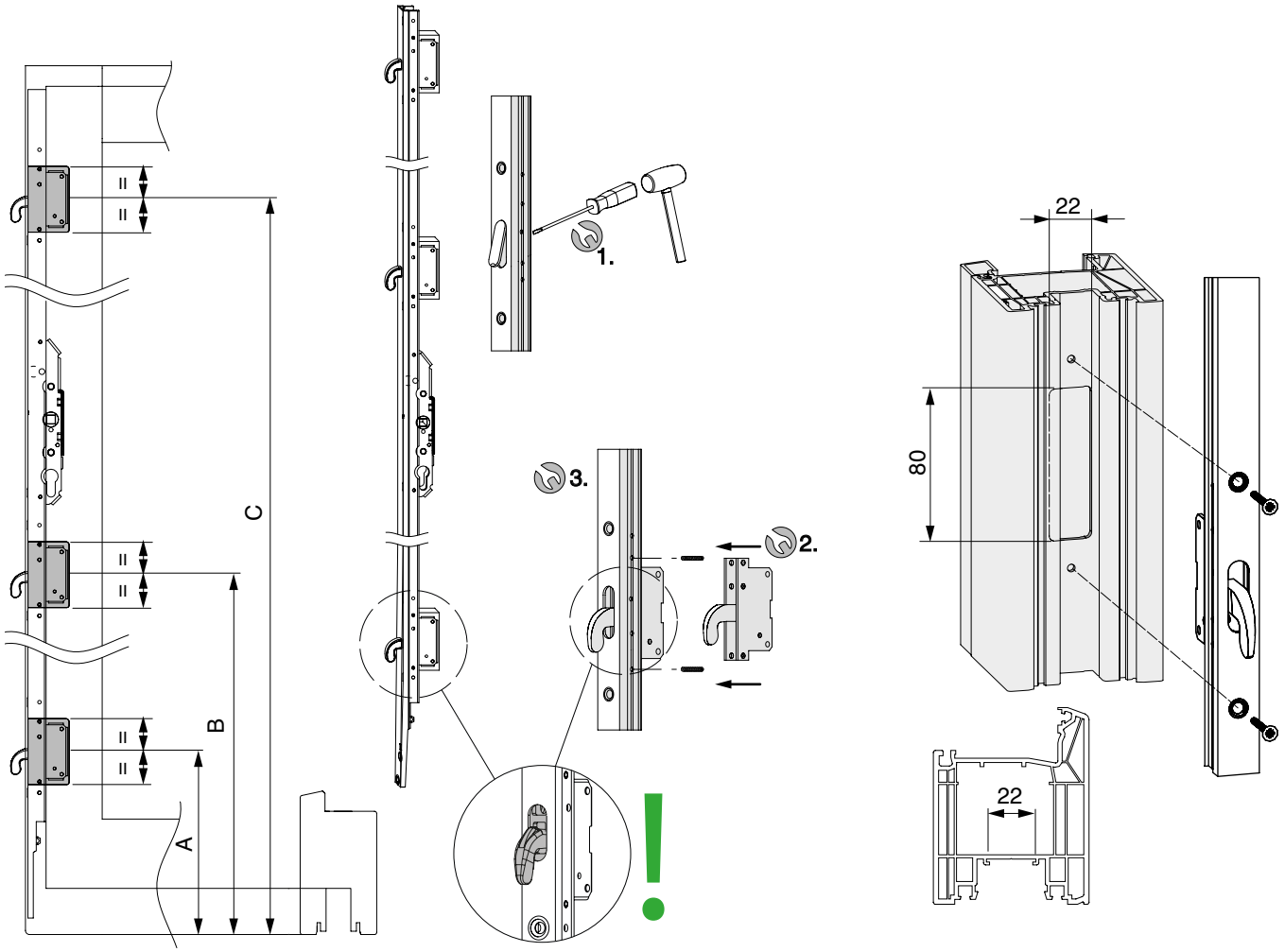
Sash installation

Drilling and milling jig



Sash installation

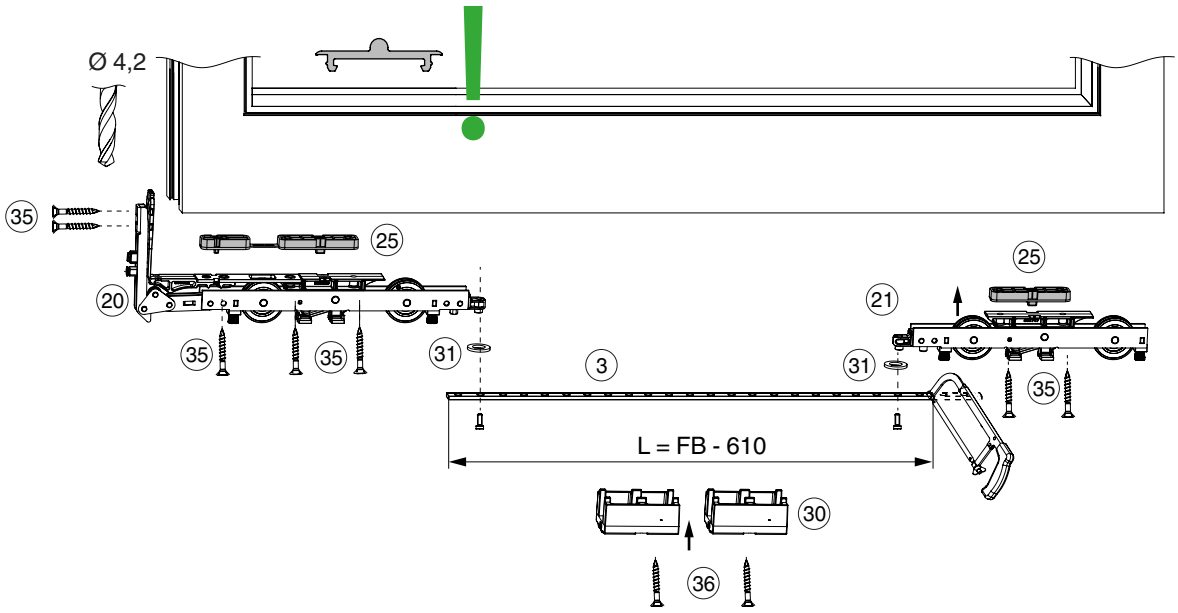
Bohren und Fräsen für Hakengetriebe



	A	B	C
Gr. 1	210	580	-
Gr. 2-3	210	1080	-
Gr. 4	210	798	1678
Gr. 5	210	1210	2110
Gr. 6	210	1410	2510
Gr. 7	210	1410	2510

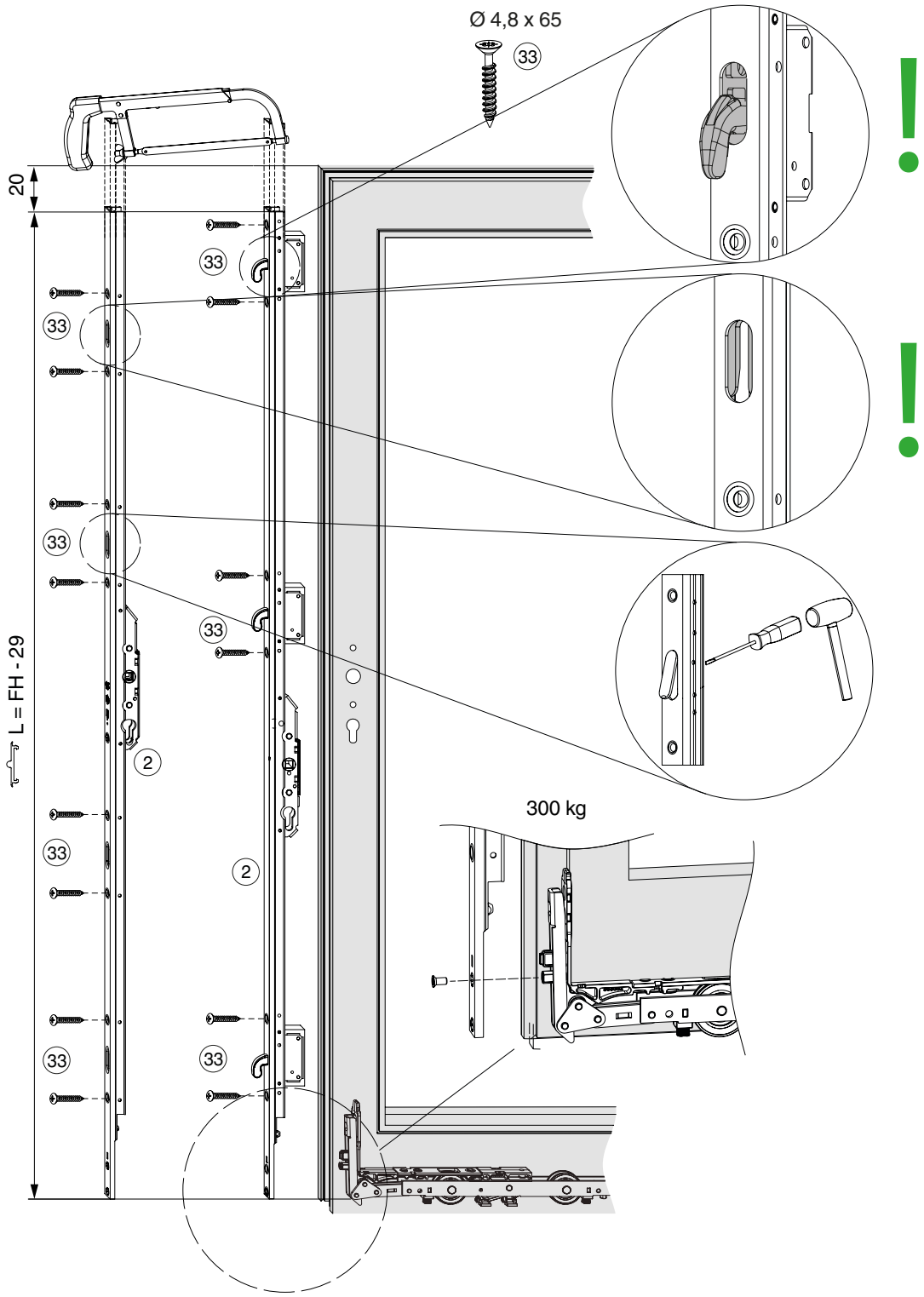
Installing on sash

Roller assembly



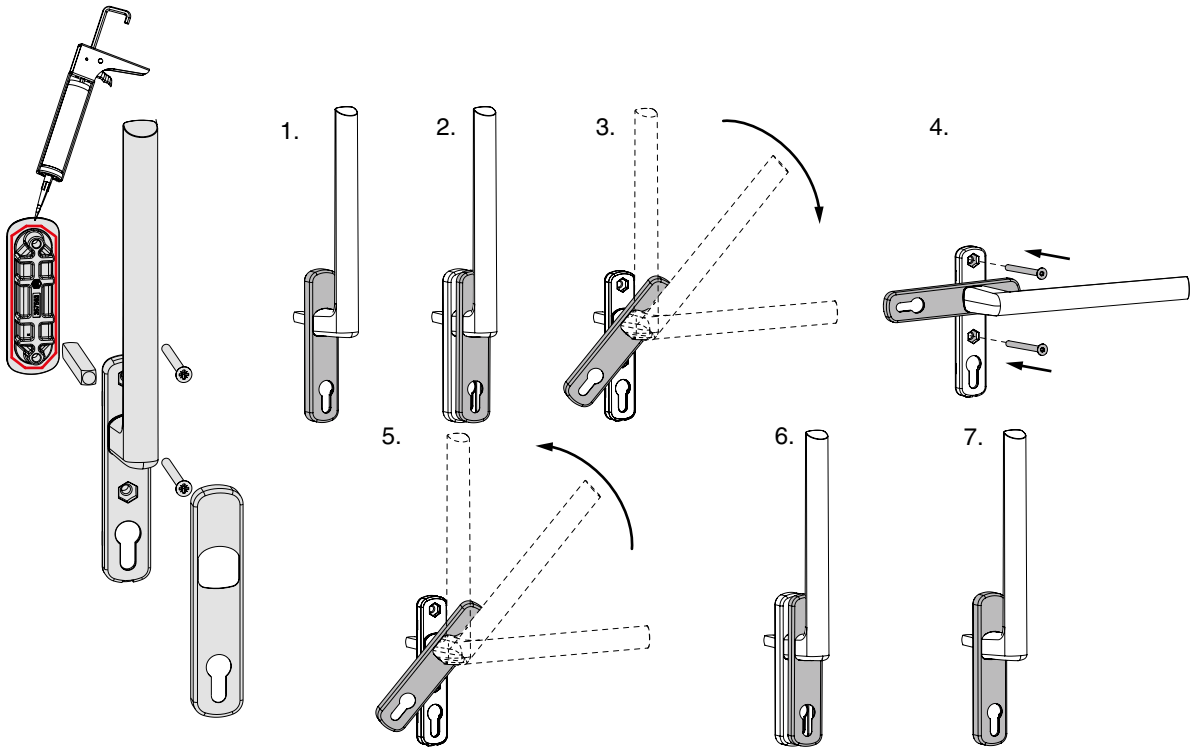
Installing on sash

Drive gear assembly



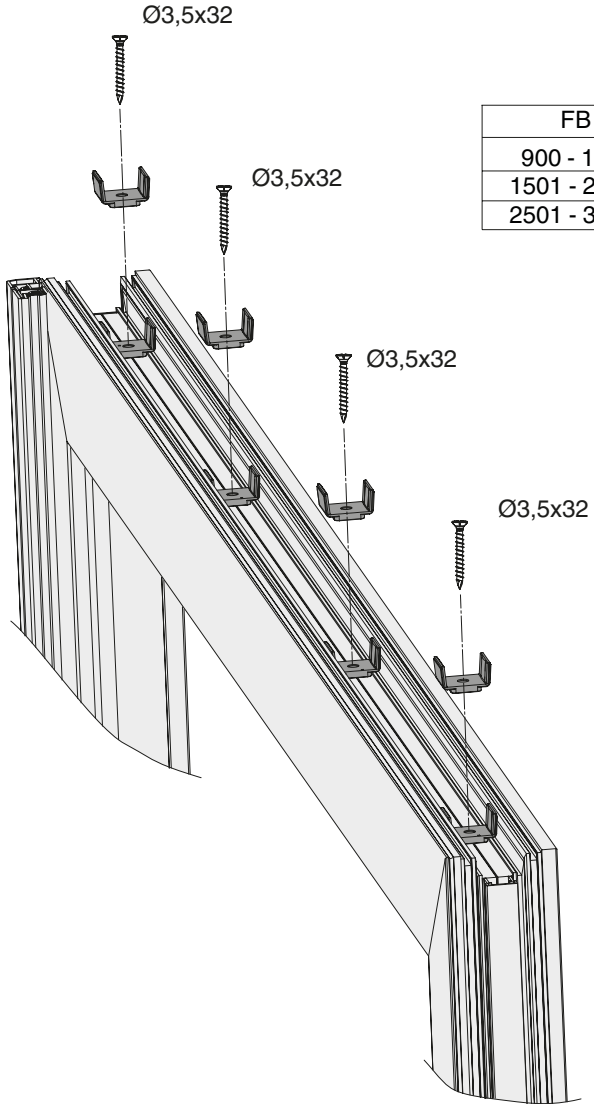
Installing on sash

Handle fitting

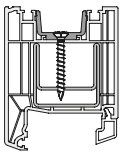


Installing on sash

Slider assembly

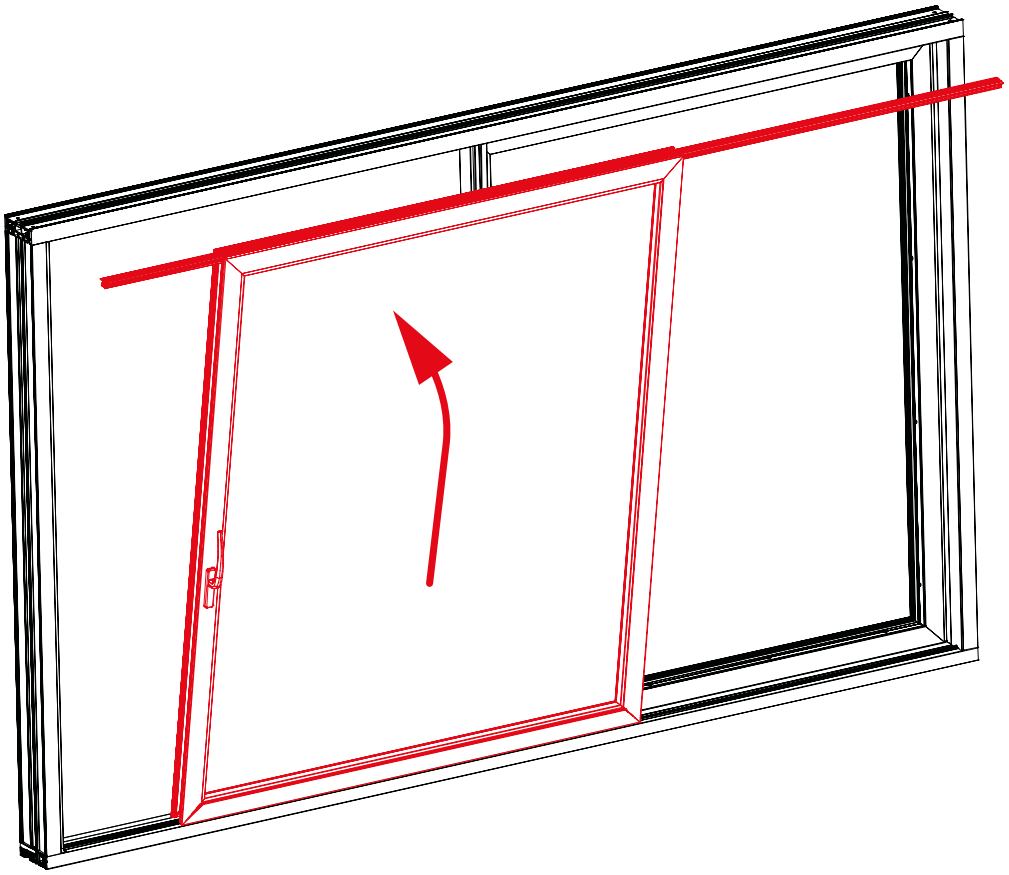


FB	Slider
900 - 1500	2
1501 - 2500	3
2501 - 3000	4



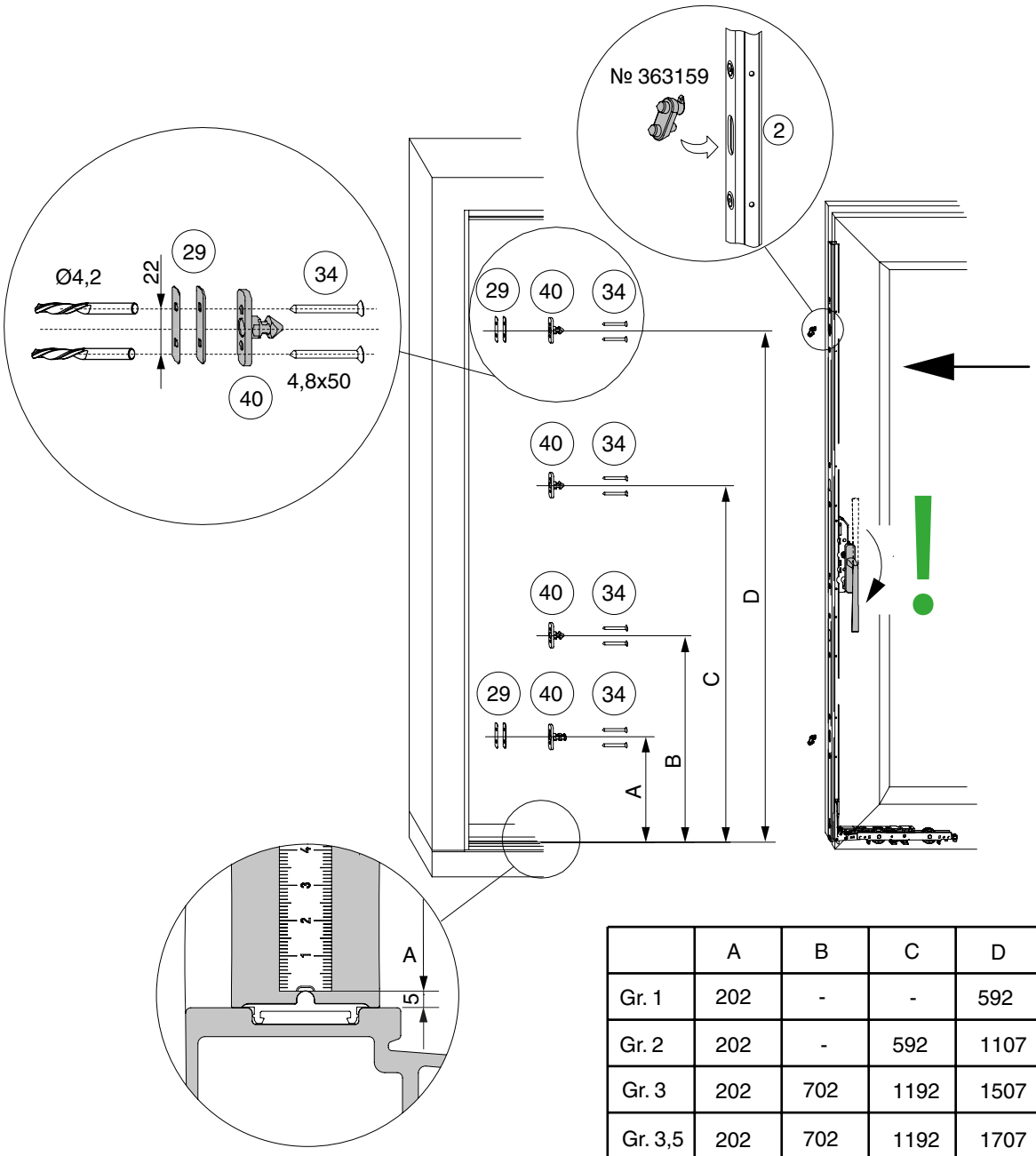
Installing on sash

Insertion



Installation on sash and frame

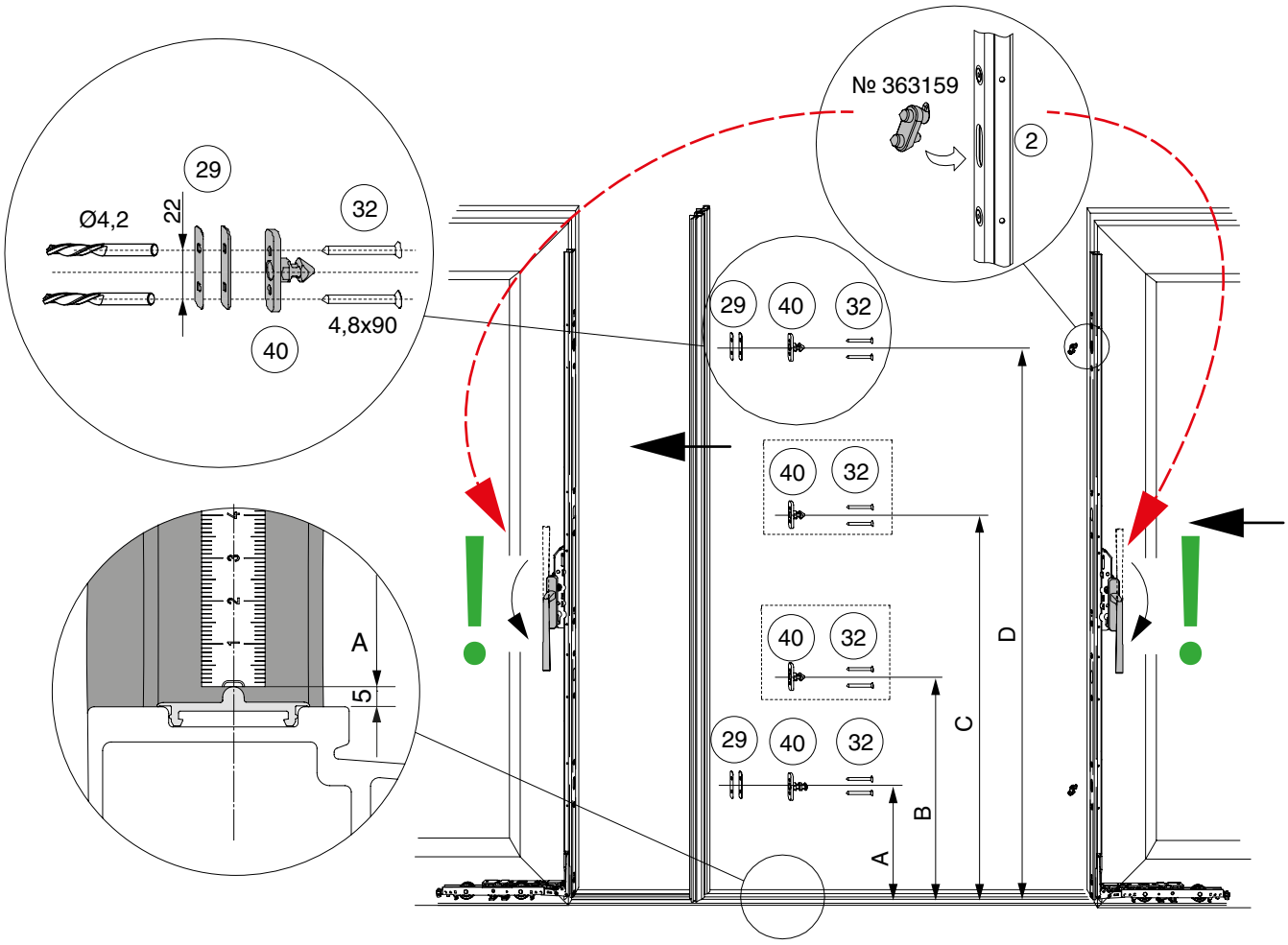
Locking bolt system A, K



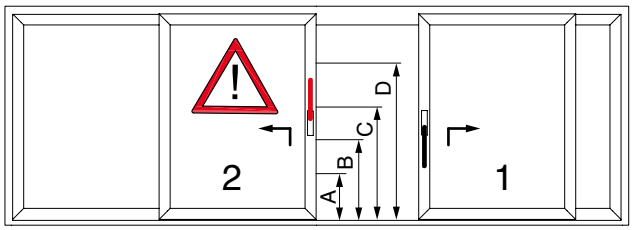
	A	B	C	D
Gr. 1	202	-	-	592
Gr. 2	202	-	592	1107
Gr. 3	202	702	1192	1507
Gr. 3,5	202	702	1192	1707
Gr. 4	202	702	1192	1907
Gr. 5	202	702	1192	2307

Installation on sash and frame

Locking bolt system C, G-A



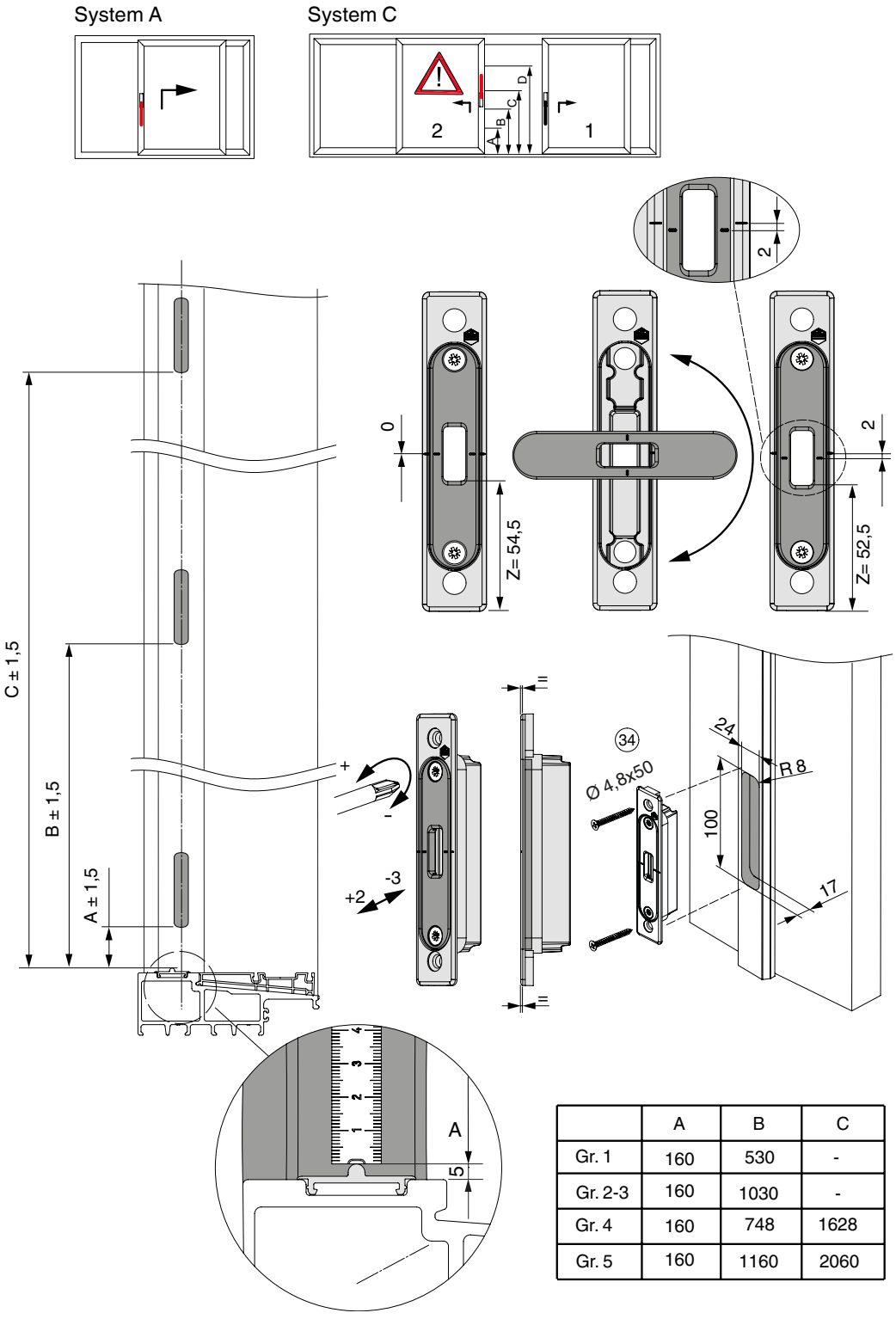
System C



	A	B	C	D
Gr. 1	202	-	-	592
Gr. 2	202	-	592	1107
Gr. 3	202	702	1192	1507
Gr. 3,5	202	702	1192	1707
Gr. 4	202	702	1192	1907
Gr. 5	202	702	1192	2307

Installation on sash and frame

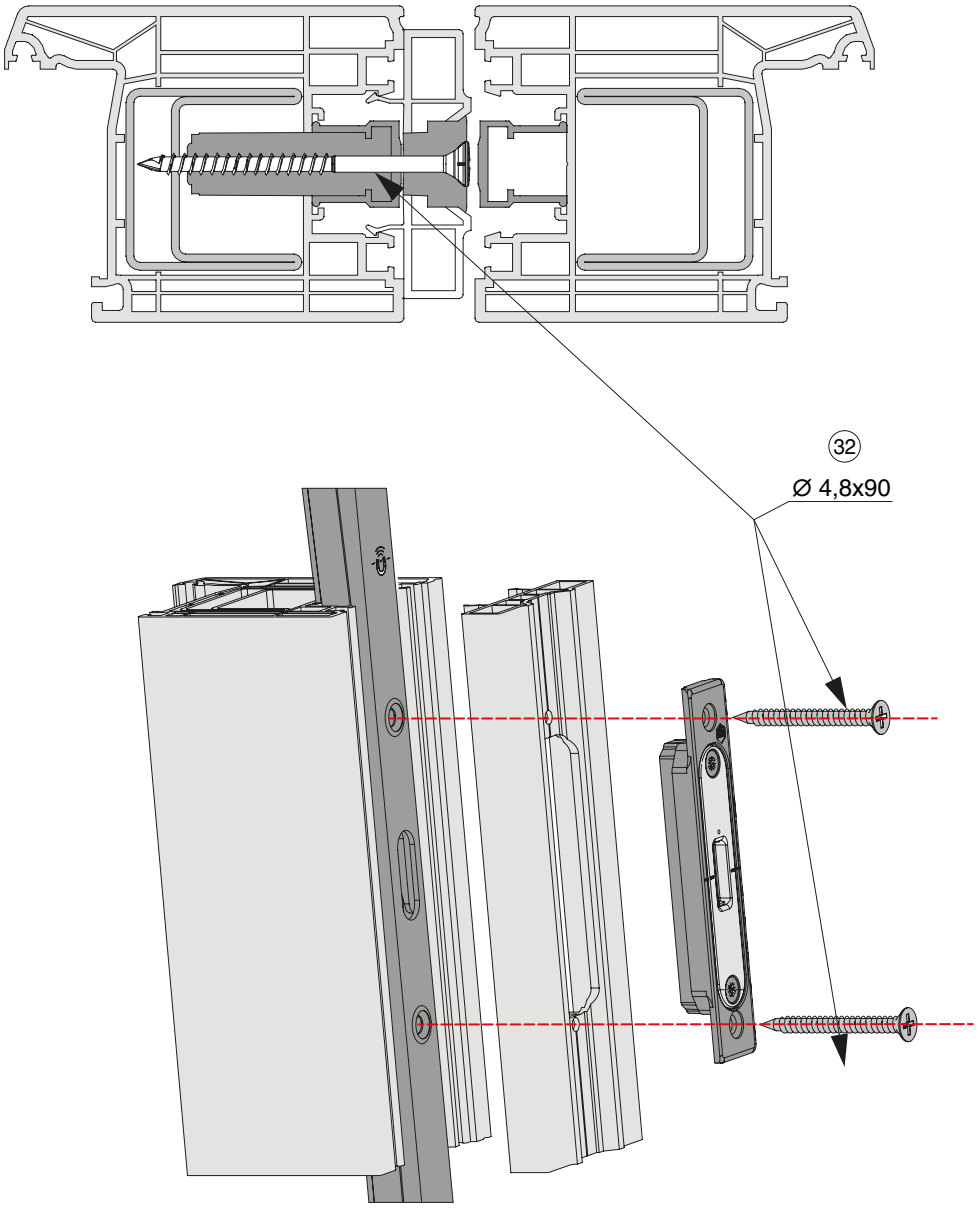
Striker plate for hook drive gear



	A	B	C
Gr. 1	160	530	-
Gr. 2-3	160	1030	-
Gr. 4	160	748	1628
Gr. 5	160	1160	2060

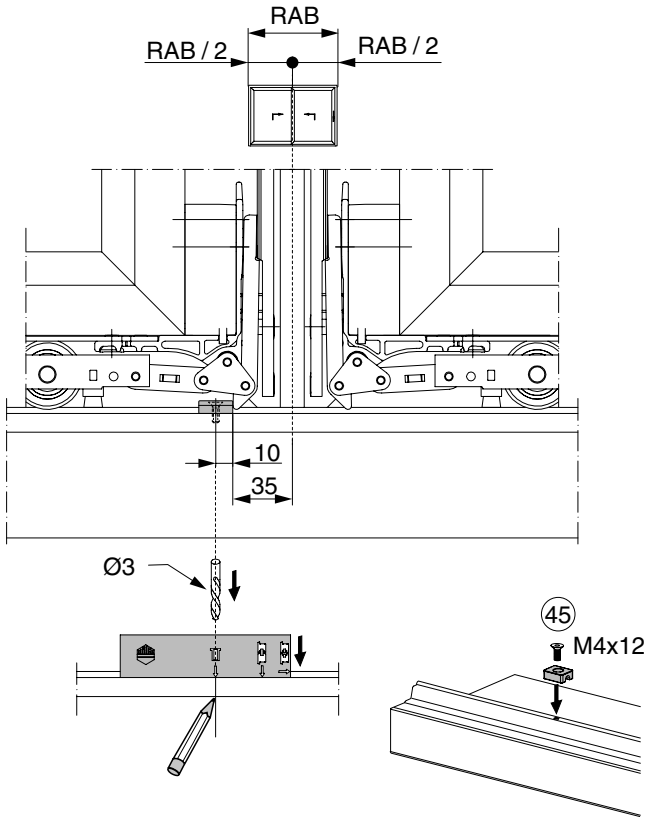
Installation on sash and frame

Striker plate for hook drive gear system C, G-A



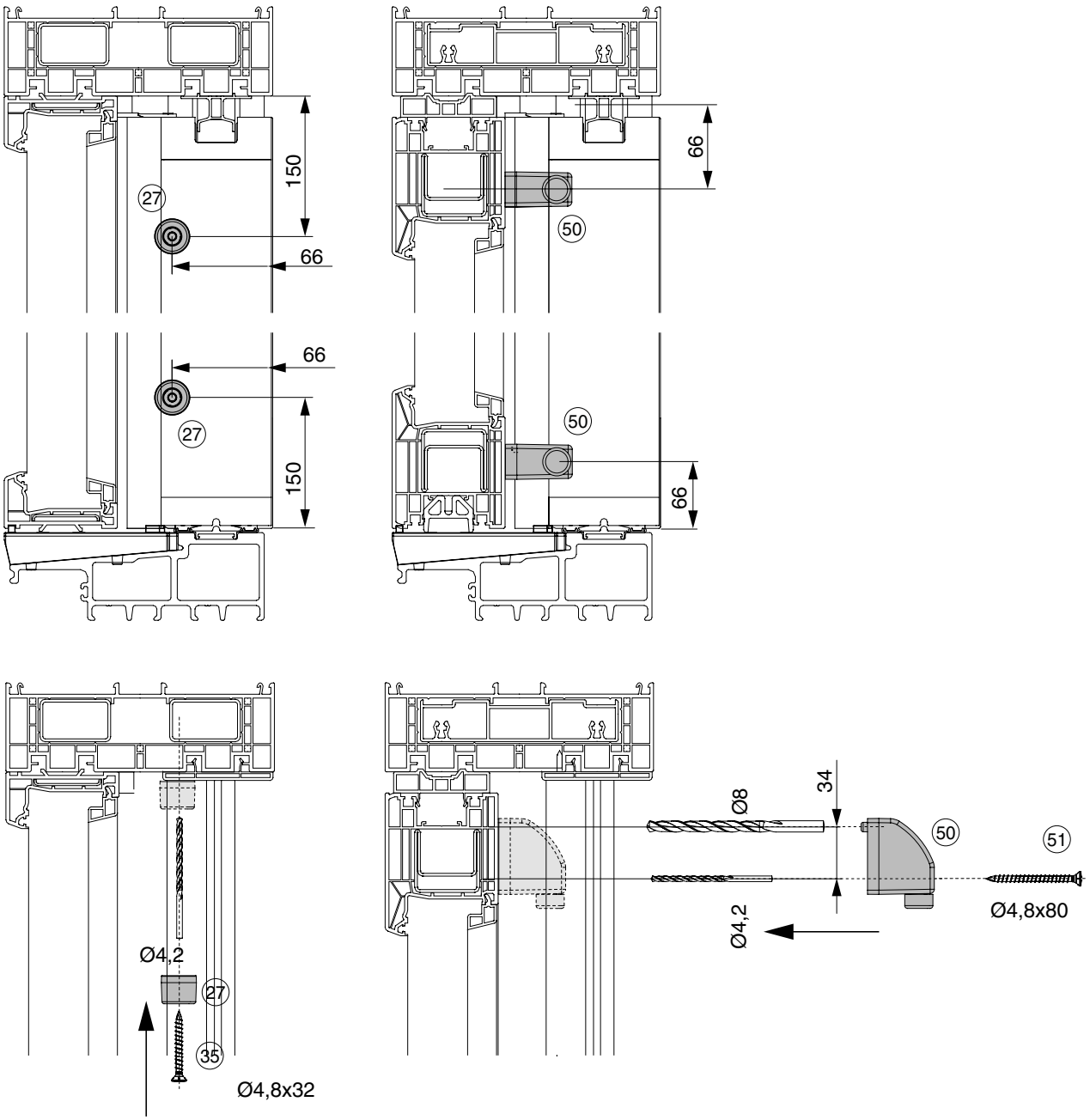
Installation on sash and frame

Locking block

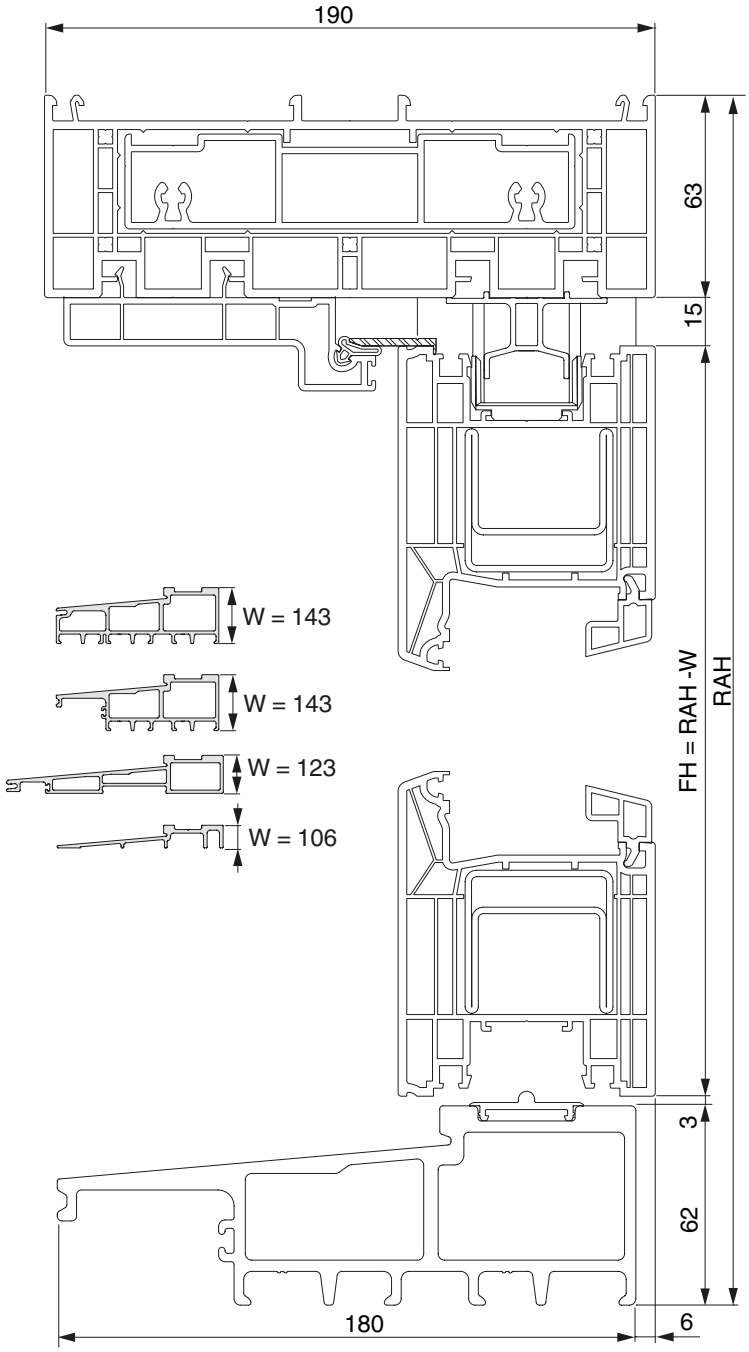


Installation on sash and frame

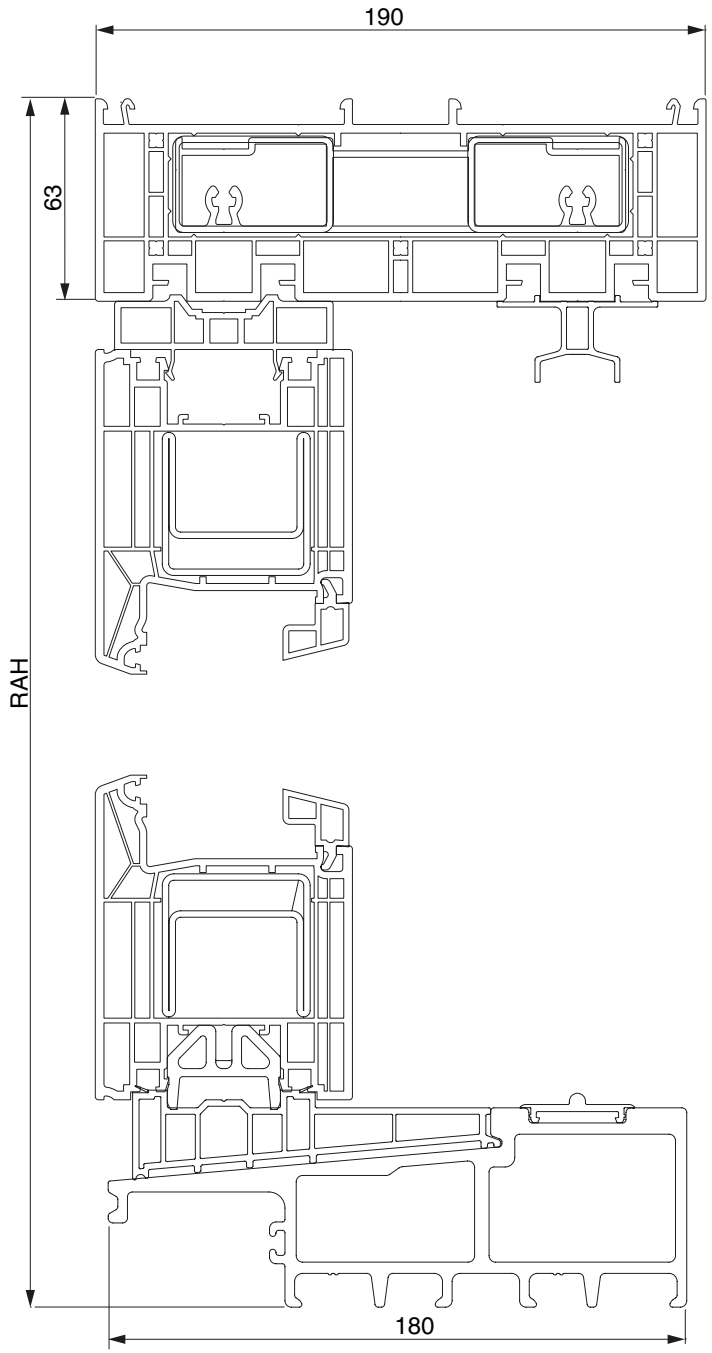
Buffer stops



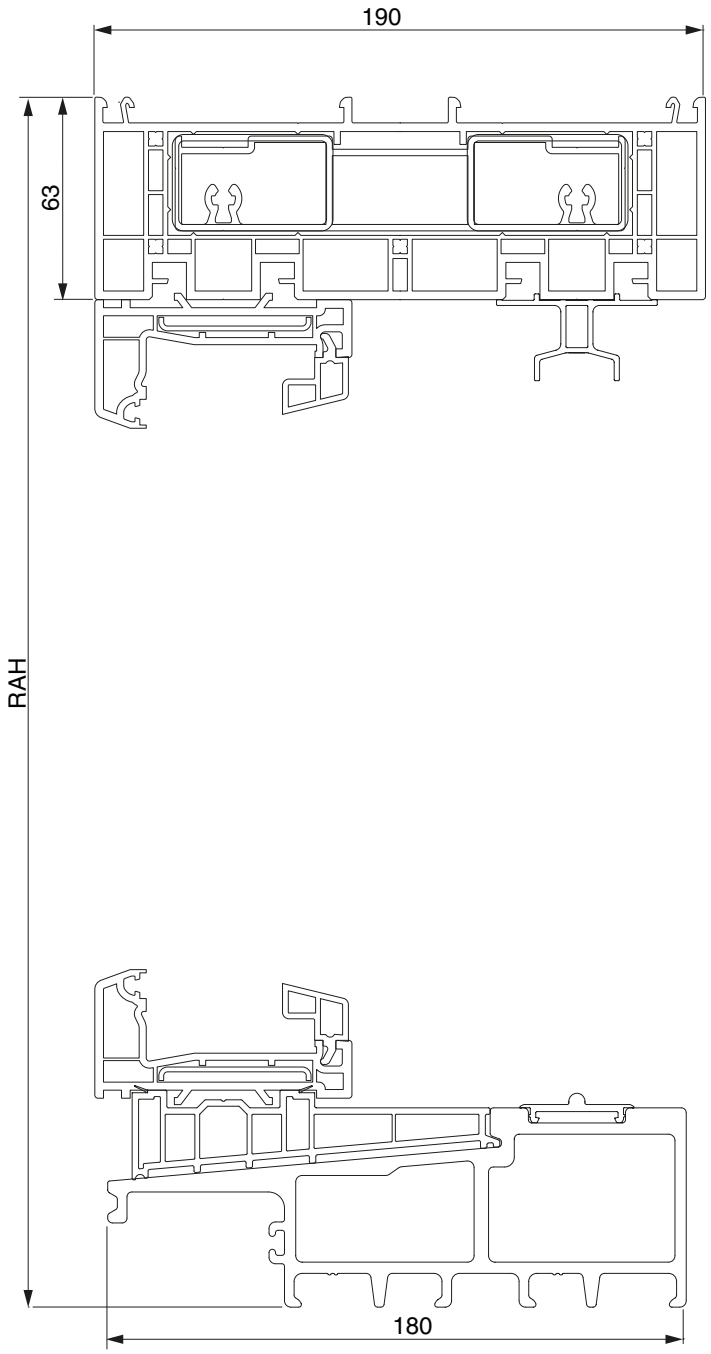
Vertical section of sliding sash



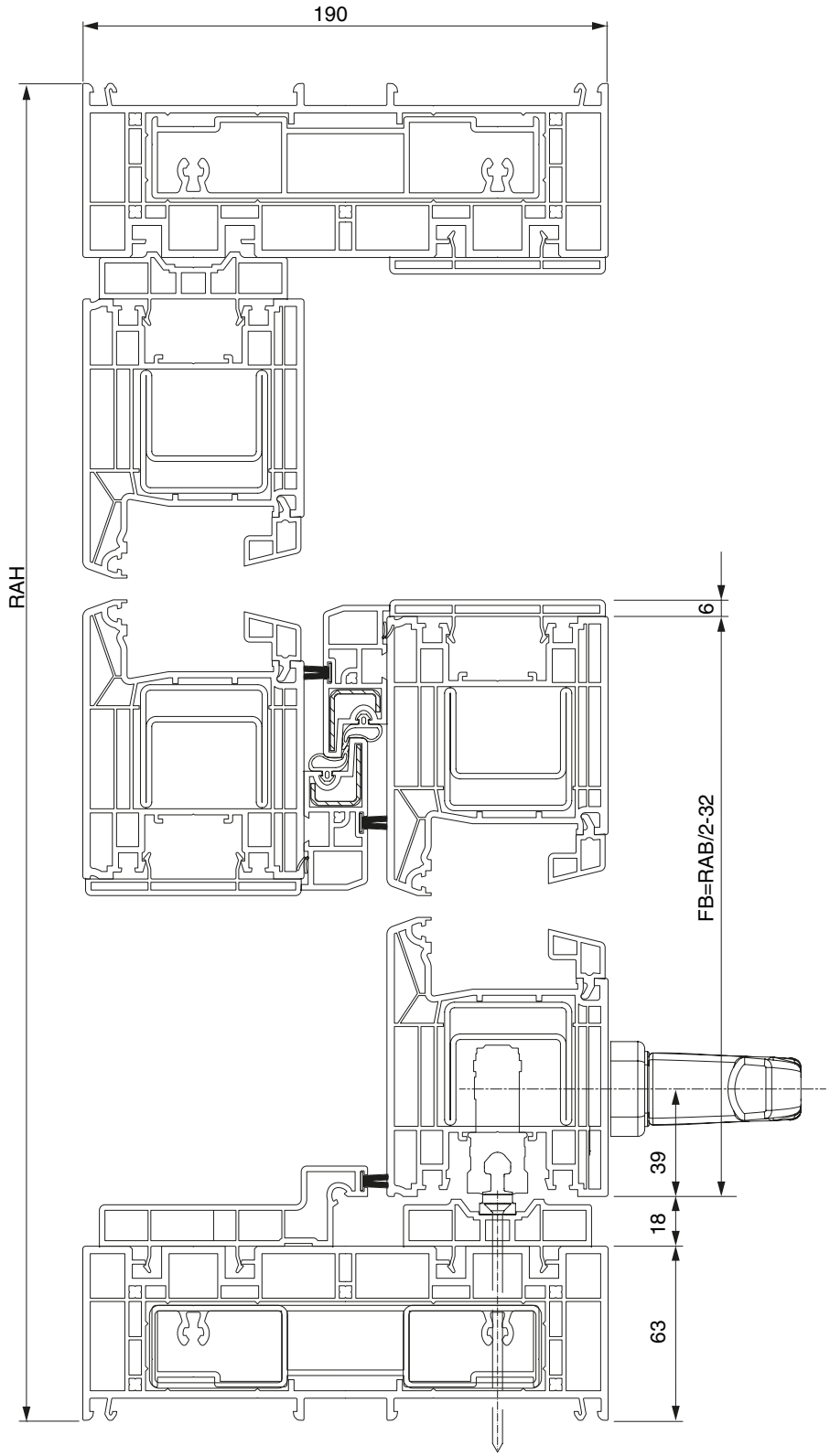
Vertical section of fixed sash Classic



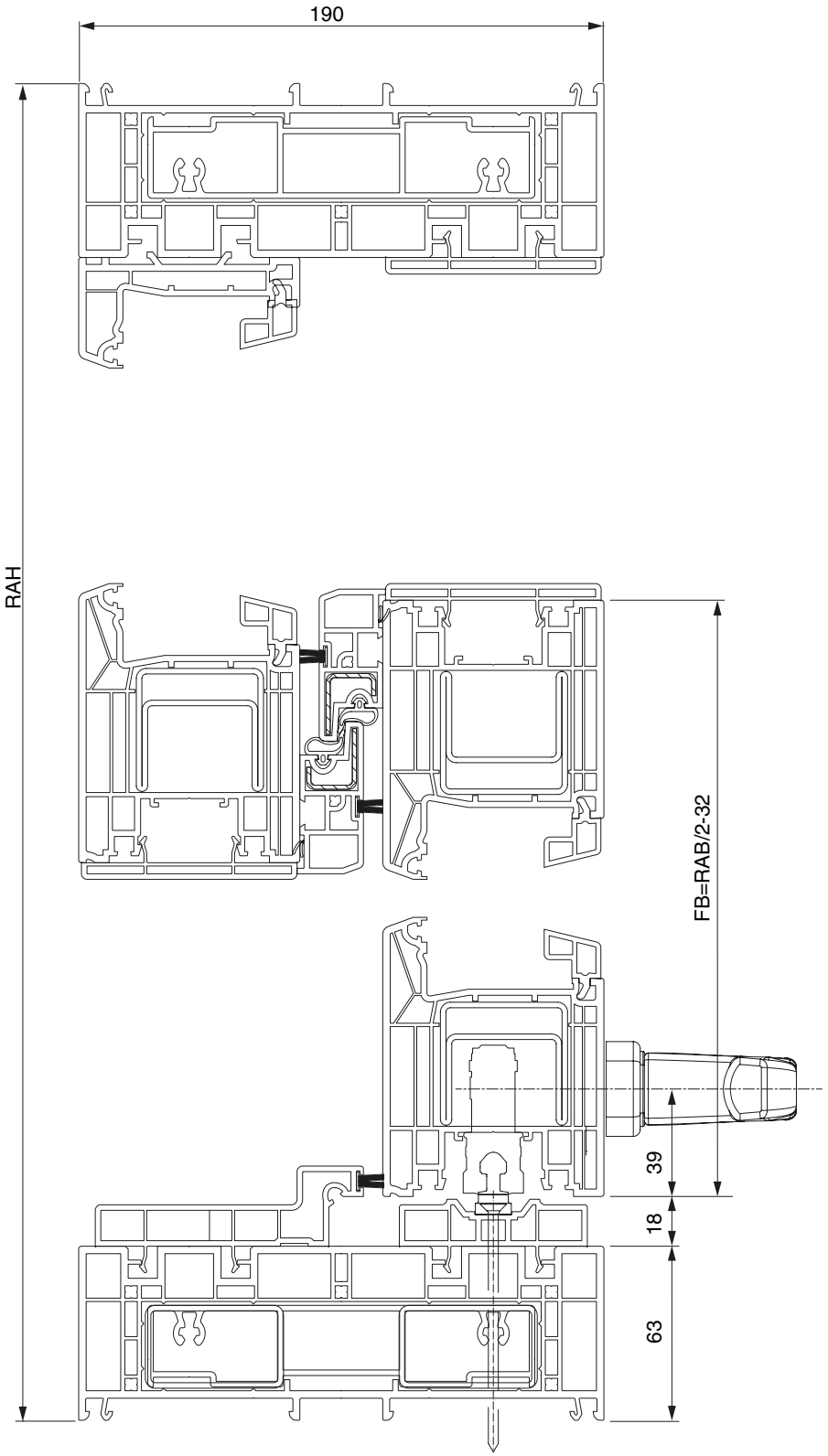
Vertical section of fixed sash Design



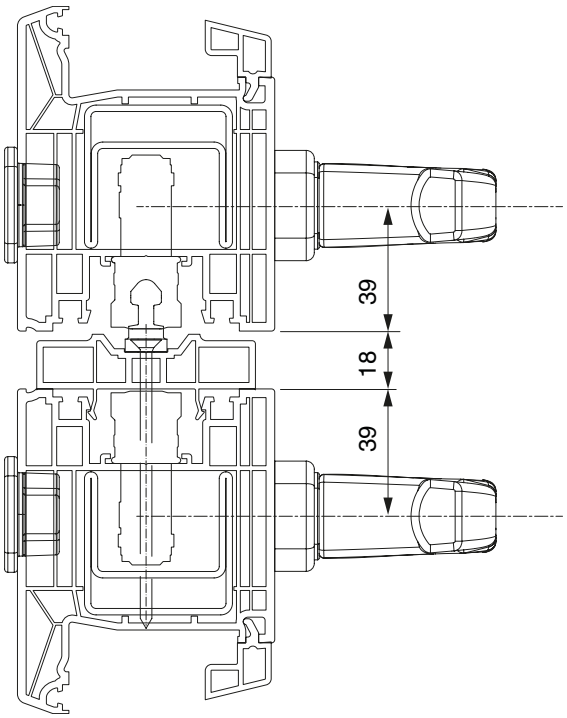
Horizontal section Classic



Horizontal section Design



Horizontal section system C



Notes

MACO
RAIL-SYSTEMS

MAYER & CO
BESCHLÄGE GMBH
Alpenstraße 173
A-5020 Salzburg

Tel.: +43 662 6196-0
E-Mail: maco@maco.eu
www.maco.eu

Created: 12/2017 - Changed: 06.03.2020
Order no. 758561EN

This print document is revised regularly.
The latest version is available at
https://www.maco.eu/assets/758561en
or scan the QR code.