TECHNOLOGY IN MOTION

ASSEMBLY INSTRUCTIONS

MULTI SKY
Hardware for skylights
Timber and PVC

Only
for use by certified specialists!
Not for end users!

Key

	Sash rebate height
	Sash rebate width
	Sash rebate width and height
	Maximum sash weight

Abbreviations

SRW	=	sash rebate width	MM	=	MULTI-MATIC
SRH	=	sash rebate height	MM-KS	=	MULTI-MATIC with tilt lock bolt
FL	=	air gap	TO	=	Pot (hinge-side)
Ü	=	rebate leg	DT	=	dual-drill holes
V	=	offset	AS	=	surface mounted (hinge-side)
FT	=	rebate depth			

Notes:

If not otherwise specified, the dimensions are stated in millimetres and packing units in items per box.

All illustrations are purely symbolic.

Further technical documents can be found in our online catalogue (TOM) at extranet.maco.eu

This print document is continuously revised and the current version can be downloaded from www.maco.eu.

If you have any ideas or suggestions for improving our instructions, please send them by e-mail to: feedback@maco.eu

Contents

Assembly instructions for timber or PVC central locking system and the hinge-side used (PVC, AS, DT) are also binding and must be followed.

# General processing information

Intended purpose

These assembly instructions are binding for the "MULTI SKY" hardware components.

Use and assembly of the components is only permitted in the manner described below. This skylight components are not intended for any other use and therefore any other such use does not correspond to the intended purpose. The following points
must also be observed:

- The application ranges, sash weights and processing guidelines of the system supplier are binding and must be observed.
- The centre of gravity and the position of the glass pane can affect the application range and max. weights and must be requested as necessary.
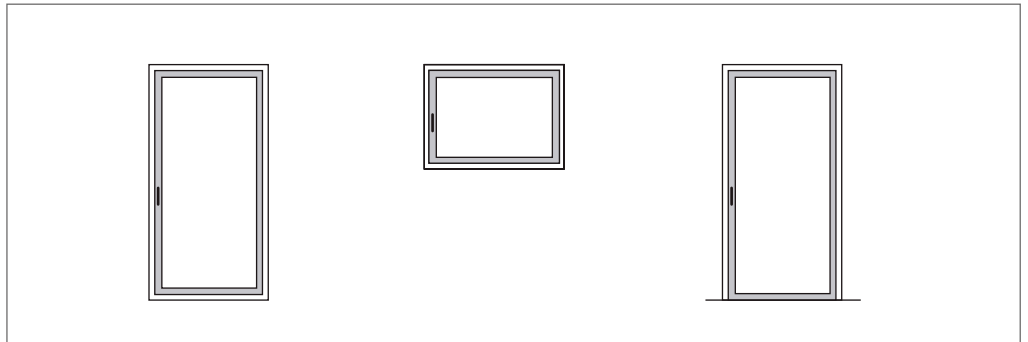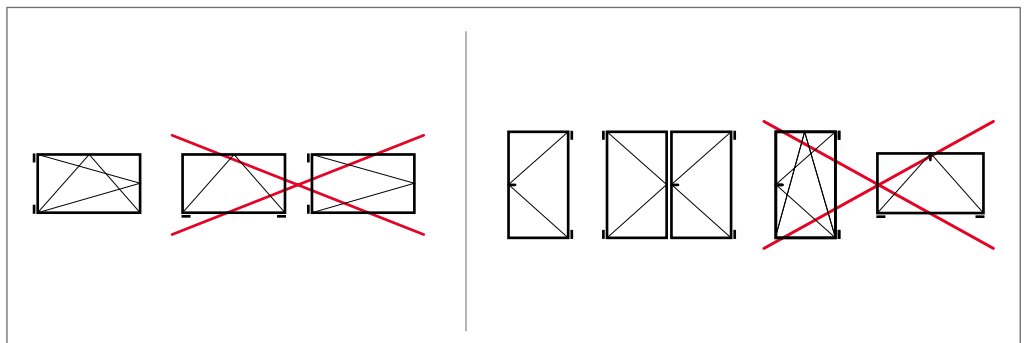
❶ Application materials

PVC   Timber
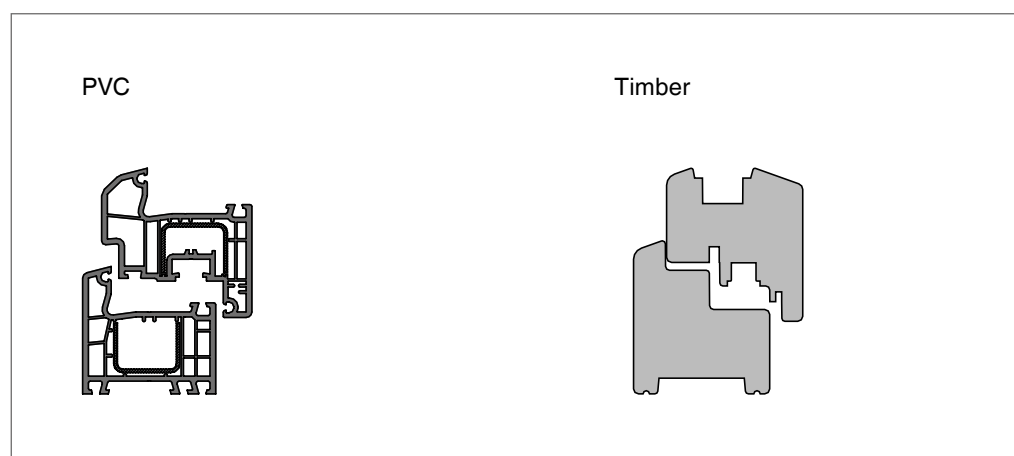
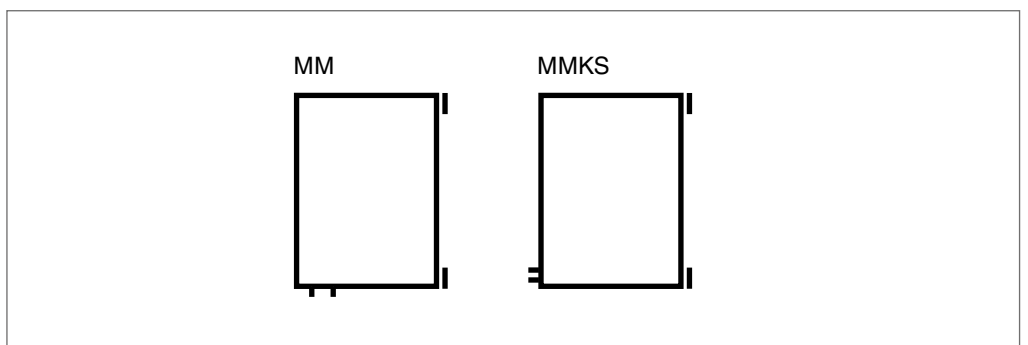**❷ Application types and sash versions**
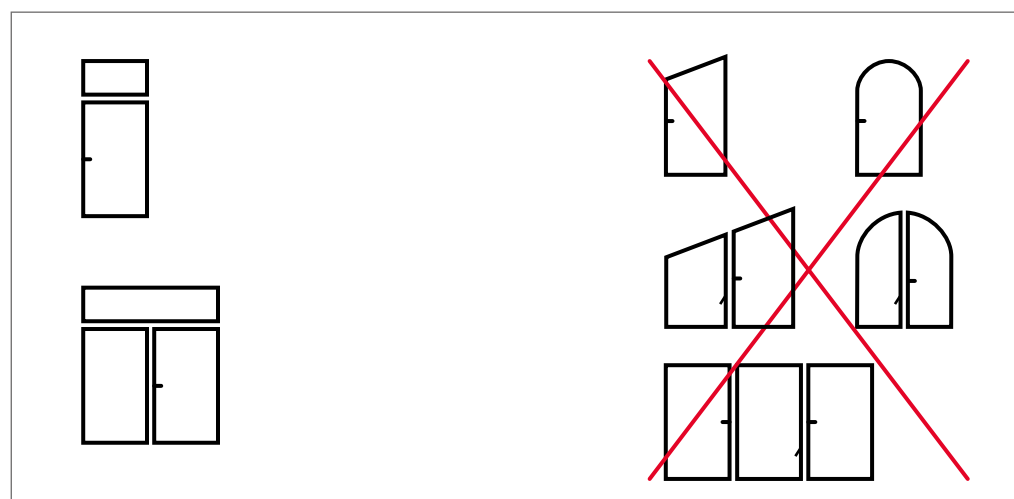
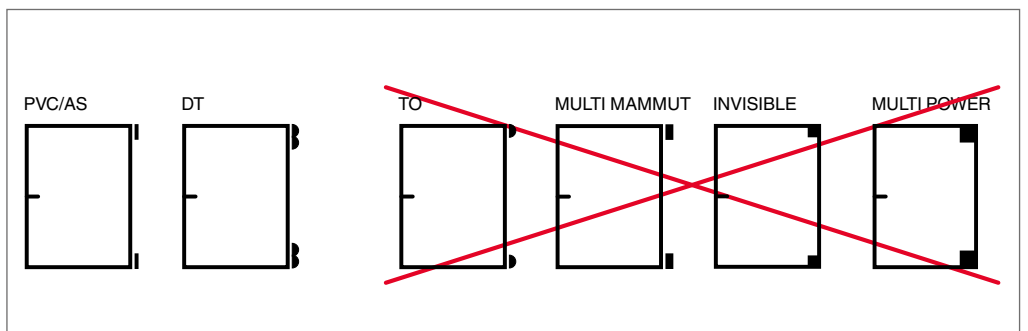**❸ Window manufacture types**

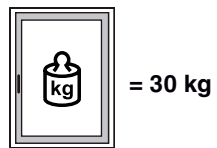**❹ Opening modes for skylight sash   Opening modes for central sash**

❺ Hardware range

MM   MMKS
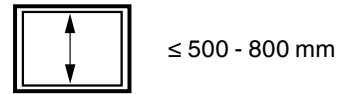

❻ Hinge-side

PVC/AS   DT   TO   MULTI MAMMUT   INVISIBLE   MULTI POWER

❼ Maximum sash weight for skylight

= 30 kg

❽ Application range for skylight sash

≤ 600 - 1300 mm

≤ 500 - 800 mm
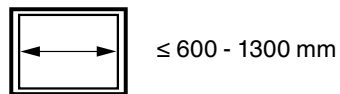
9   **Sash profile - air gap, rebate leg and offset**

4/15-9
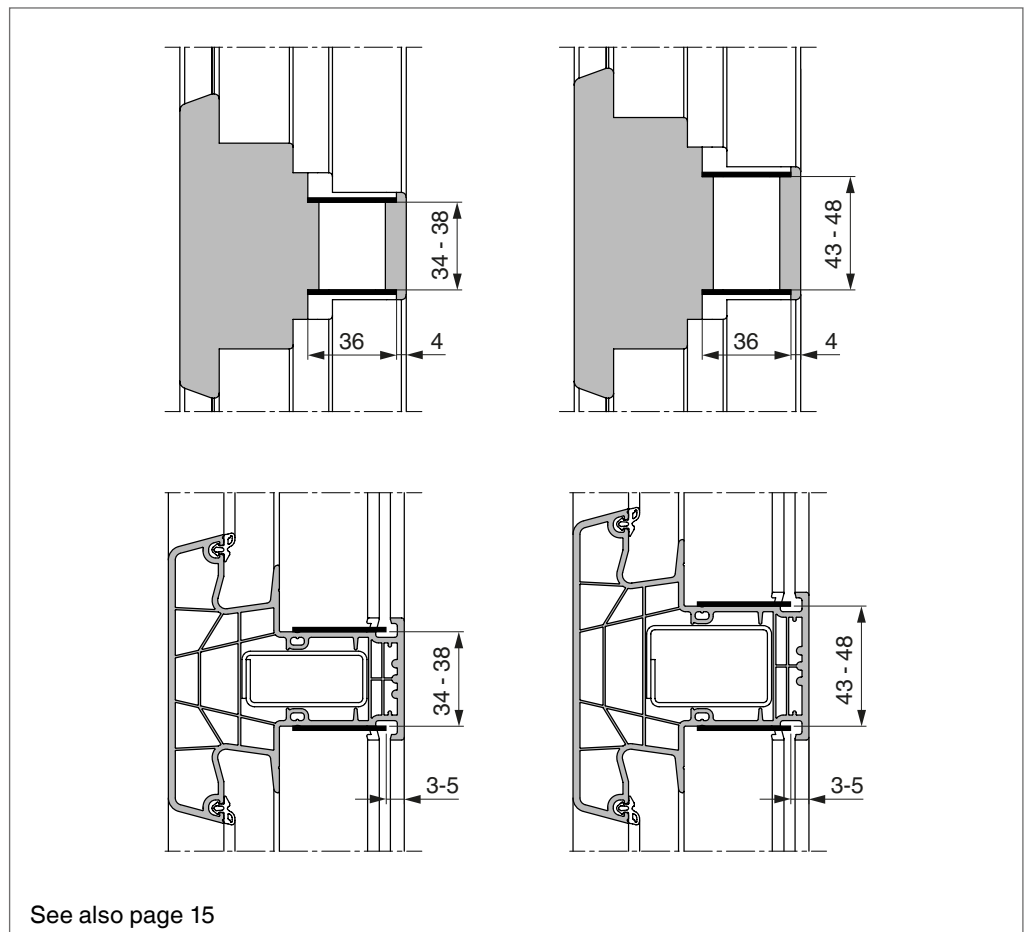
4/18-13

4/18-9

12/18-13

12/18-9

12/20-13

12/20-9
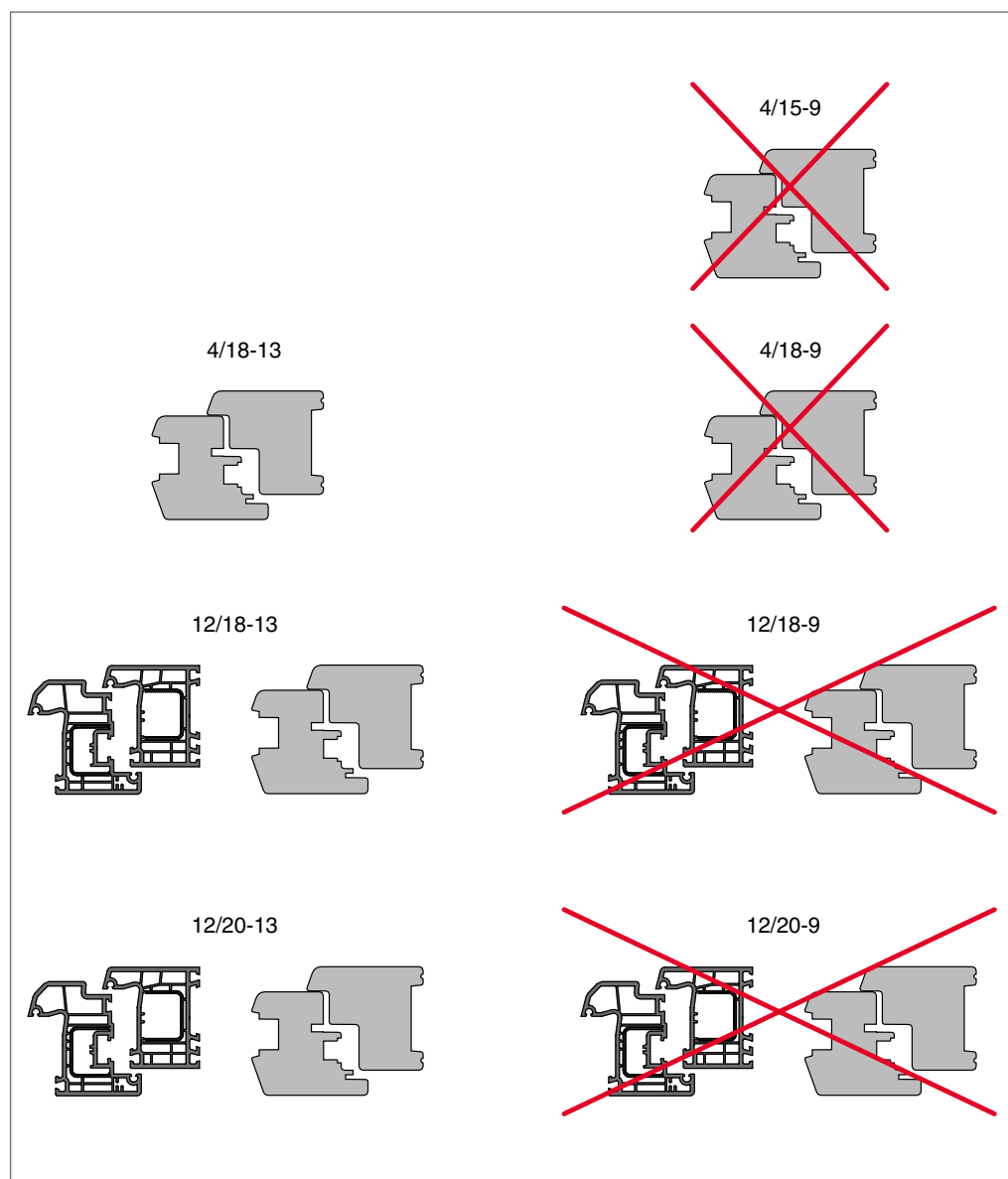
10   **Fitting groove**

The fitting groove must be created according to the specifications in our print and online catalogues.

⓫ Frame rebate

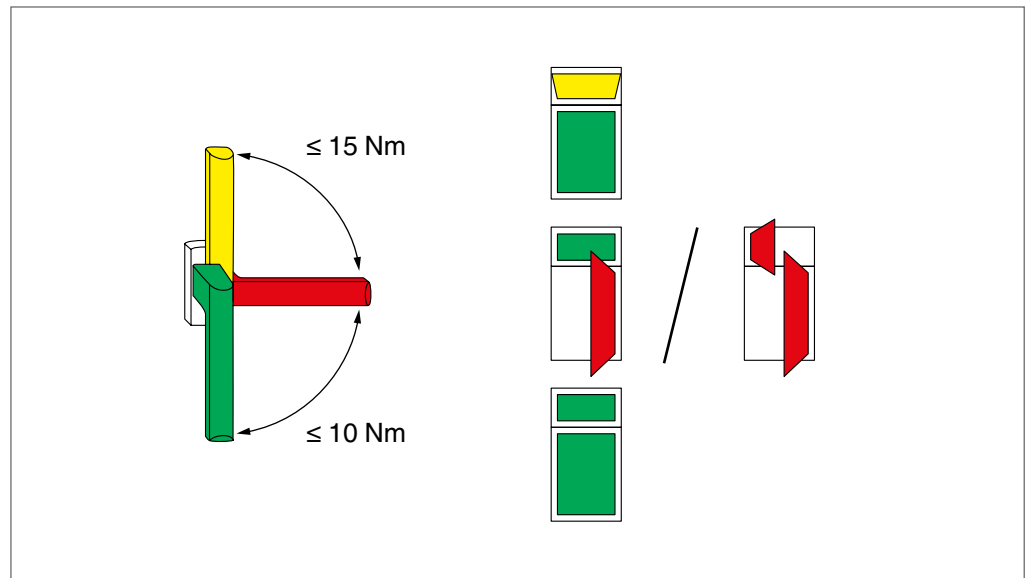FT24

FT18

FT30

FT20

⓬ Transom profile

34 - 38

36   4

43 - 48

36   4

34 - 38

3-5

43 - 48

3-5
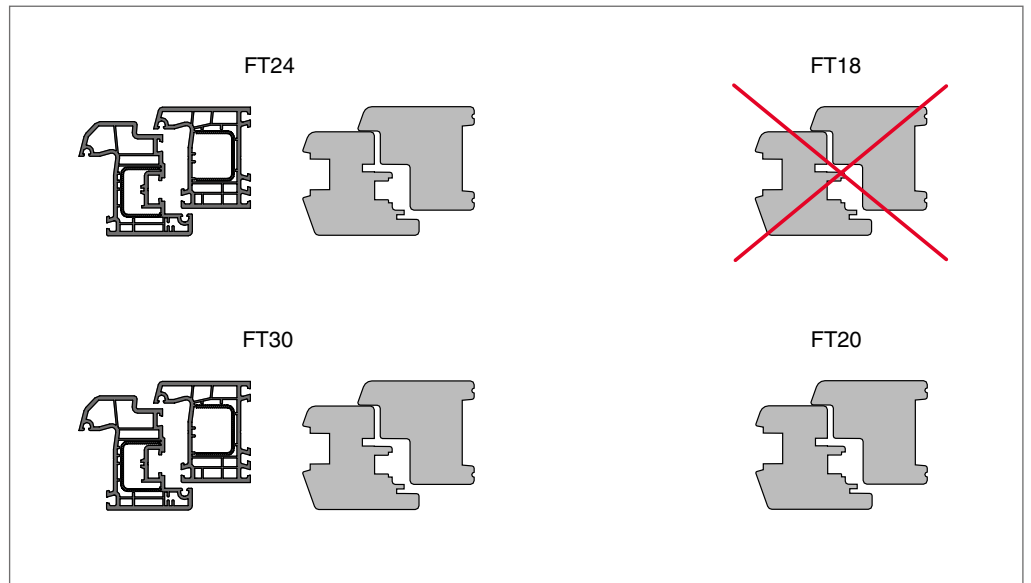
See also page 15

⑬ Handle operation

⑭ Application diagram

For the central sash, the relevant application diagram applies, depending on the hinge-side used, and must be observed. Further information can be found in the corresponding assembly instructions.
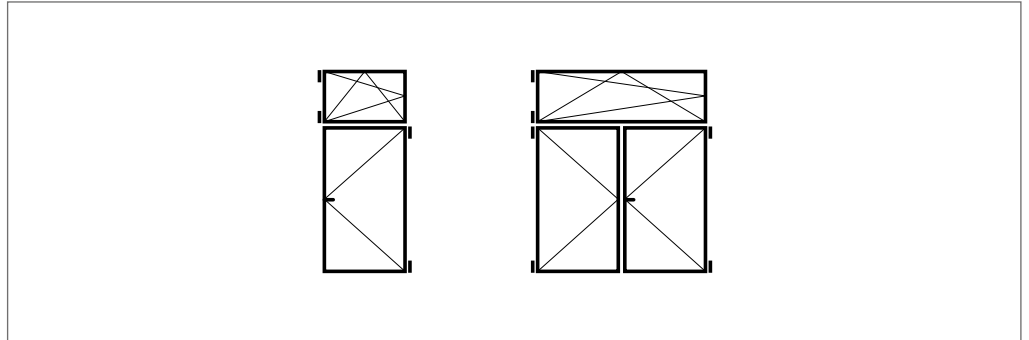
⚠ **There is no individual application diagram for the skylight sash.**
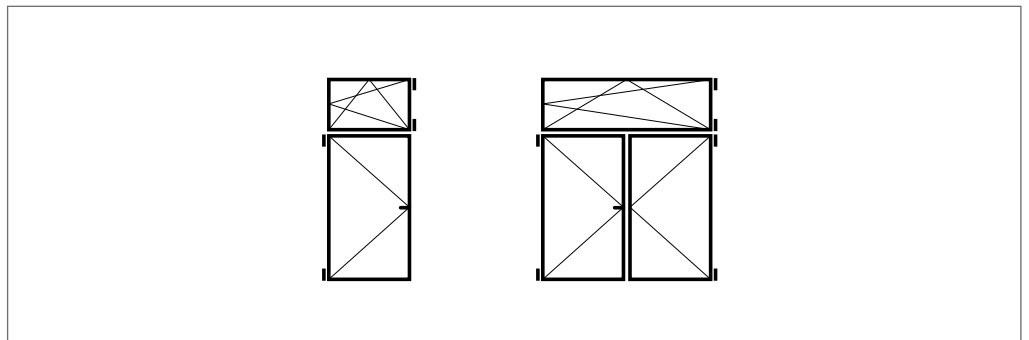**The maximum sizes and the maximum sash weight must be observed.**

All notes regarding the use of application diagrams in our print and online catalogues must be taken into account.
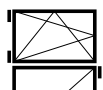
⑮ Possible versions

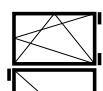Central sash hinge-side right / skylight sash hinge-side left

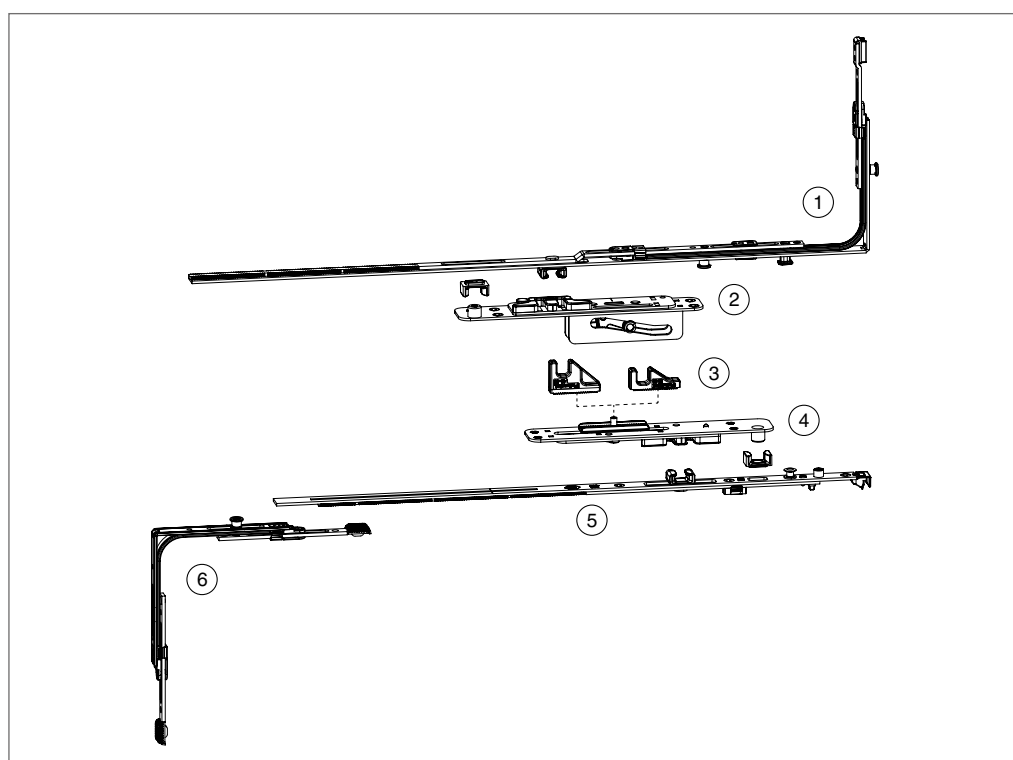Central sash hinge-side left / skylight sash hinge-side right

Content of the basic pack

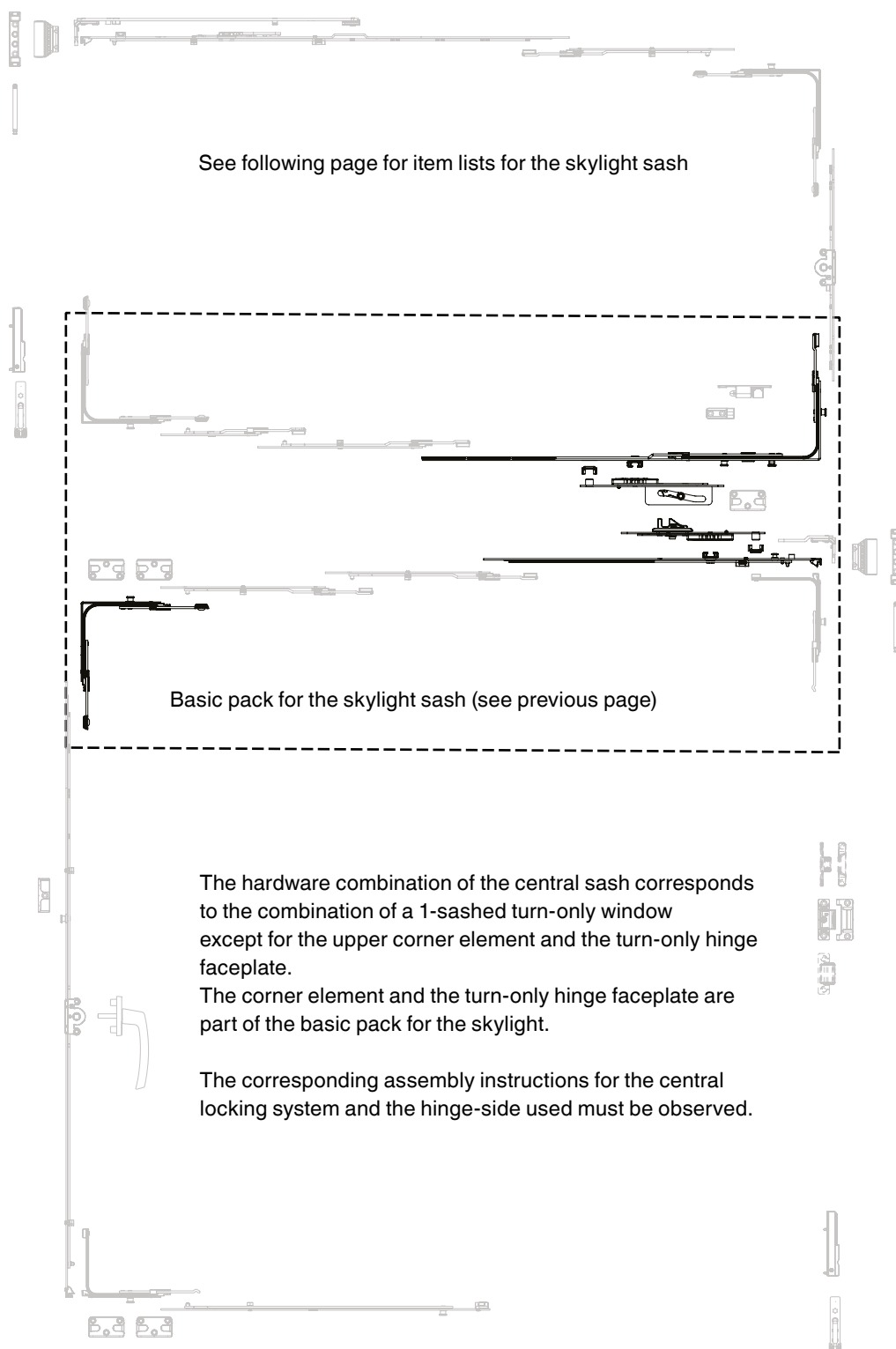Item no.105360 = basic pack for left skylight (figure below)

Item no.105359 = basic pack for right skylight

① Corner element for skylight control

② Transom kinematics top right / left for skylight control

③ Connector plate distance 34 - 38 mm (pre-mounted - for transom 42 - 46 mm) and connector plate distance 43 - 48 mm (for transom 51 - 56 mm)

④ Transom kinematics bottom right / left for skylight control

⑤ Turn-only hinge - sash part, croppable for skylight control

⑥ Corner element for skylight control

Hardware combination

Overview of the central sash and skylight sash

See following page for item lists for the skylight sash

Basic pack for the skylight sash (see previous page)

The hardware combination of the central sash corresponds
to the combination of a 1-sashed turn-only window
except for the upper corner element and the turn-only hinge
faceplate.
The corner element and the turn-only hinge faceplate are
part of the basic pack for the skylight.

The corresponding assembly instructions for the central
locking system and the hinge-side used must be observed.

Hardware combination

Skylight sash overview

1	Scissor stay faceplates for comfort scissor stays				⊞	№
silver		right	800	0	601 - 800	**215053**
			1050	1	801 - 1.050	**215055**
		left	800	0	601 - 800	**215054**
			1050	1	801 - 1.050	**215056**

2	Rebated scissor stay arms for comfort scissor stays		⊞	kg	№
silver		right	490 - 1.400	80	**215051**
		left	490 - 1.400	80	**215052**

3	Faceplate extensions fixed and extendable			L		№
silver	faceplate extension MM, extendable		0	140		**206630**
		with 1 i.S.	1	140		**201841**
			0	235		**206197**
		with 1 i.S.	1	235		**201750**

	Centre locks extendable i.S.			L	⊞	№
silver	1280V	with 1 i.S.	1	470	801 - 1.280	**201840**[1]

4	Corner elements standard i.S.			№
silver	with 1 i.S.	320 - 1.650	360 - 2.450	**222201**

5	T&T drive gears BS 15 VHH i.S.	L				✂		№
silver		800	640	15	0	470 - 800	200	-	**201746**

6   Corner element for skylight control

7   Transom kinematics top right / left for skylight control

8   Transom kinematics bottom right / left for skylight control

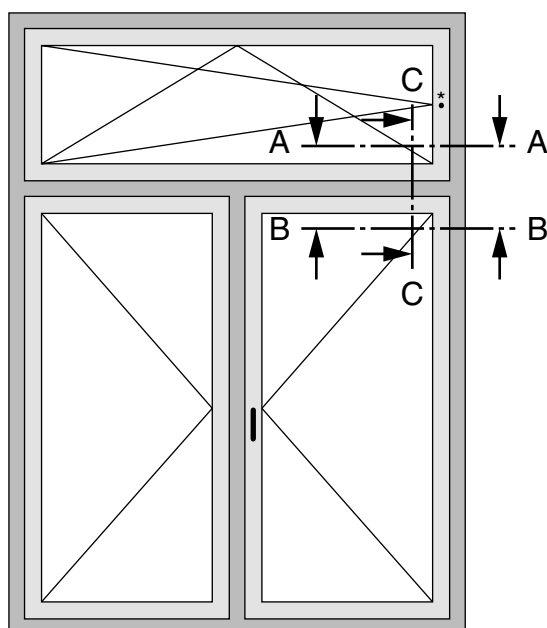9   Turn-only hinge - sash part, croppable for skylight control (⊡ 430 - 600)

10   Corner element for skylight control

11	Self-catching turn locks	№
silver	turn-restrictor self-catching	**10534**
		10535

Installing the fittings on the frame

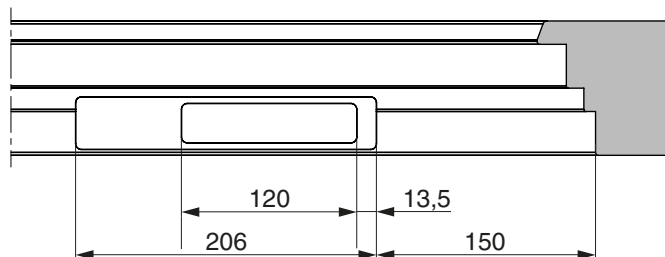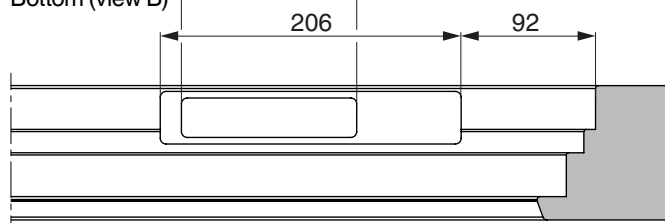**Routing pattern for transom kinematics 12L**

Drill hole for emergency opening with handle, if desired.
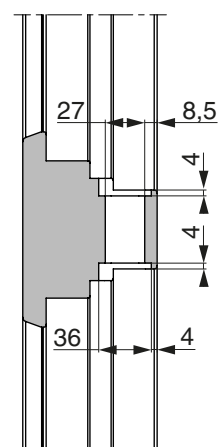
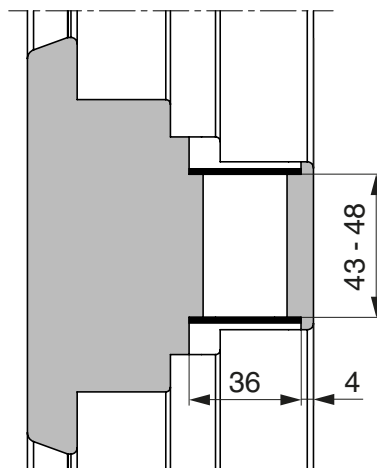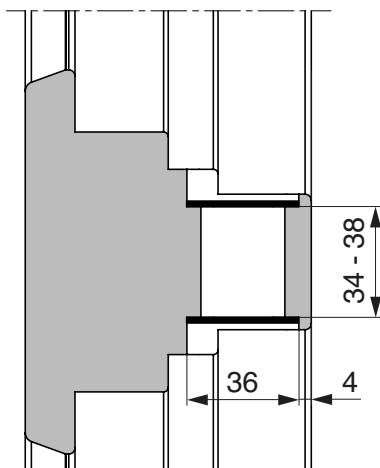**Routing pattern for transom kinematics (timber example)**

Top (view A)

120	13,5	
206		150

Bottom (view B)

206	92

Section C-C

27   8,5

4

4

36   4

Installing the fittings on the frame
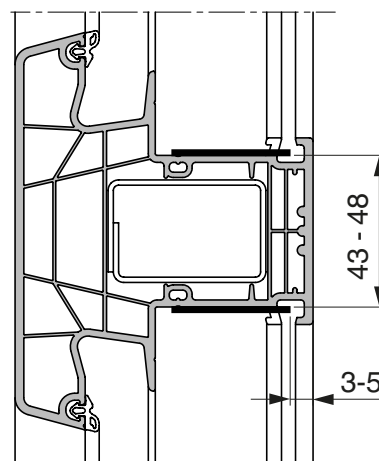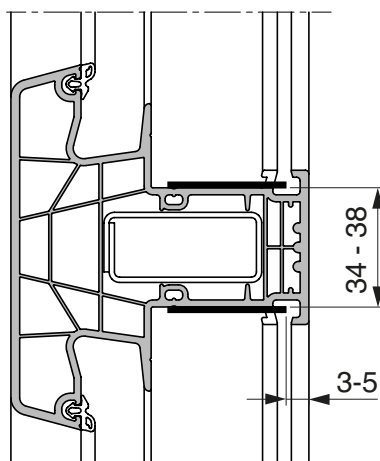
Installing the fittings on the frame

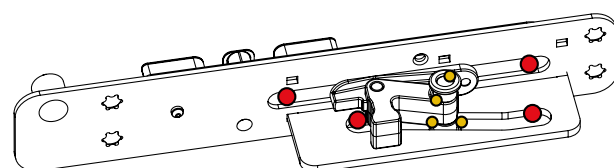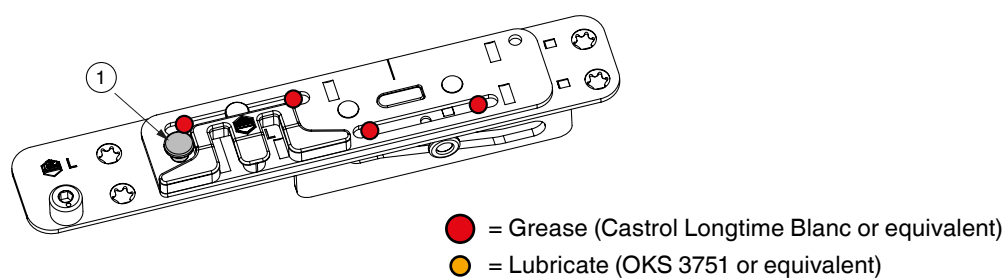**Drilling-hole pattern for transom kinematics 12L**

Top
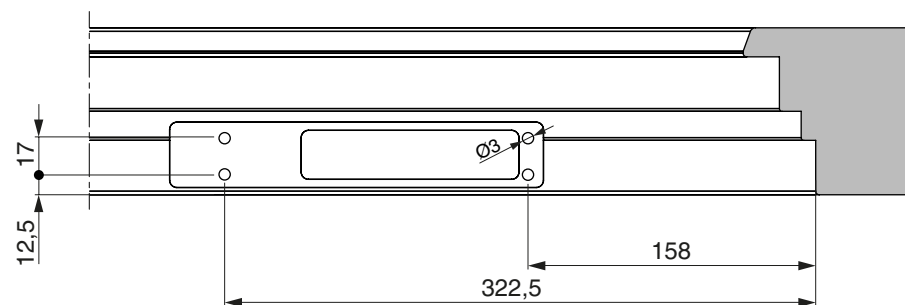
Bottom
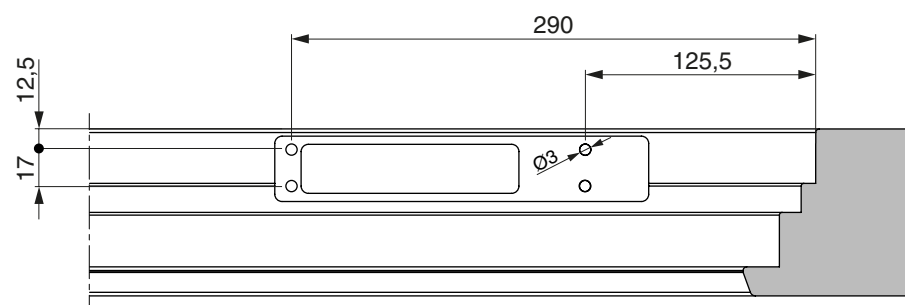
Installing the fittings on the frame

Lubrication points for transom kinematics, top

The blue fixing pin must be removed before greasing/lubrication.

🔴 = Grease (Castrol Longtime Blanc or equivalent)
🟠 = Lubricate (OKS 3751 or equivalent)

The blue fixing pin ① must be reinserted after greasing/lubrication.

Lubrication points for transom kinematics, bottom

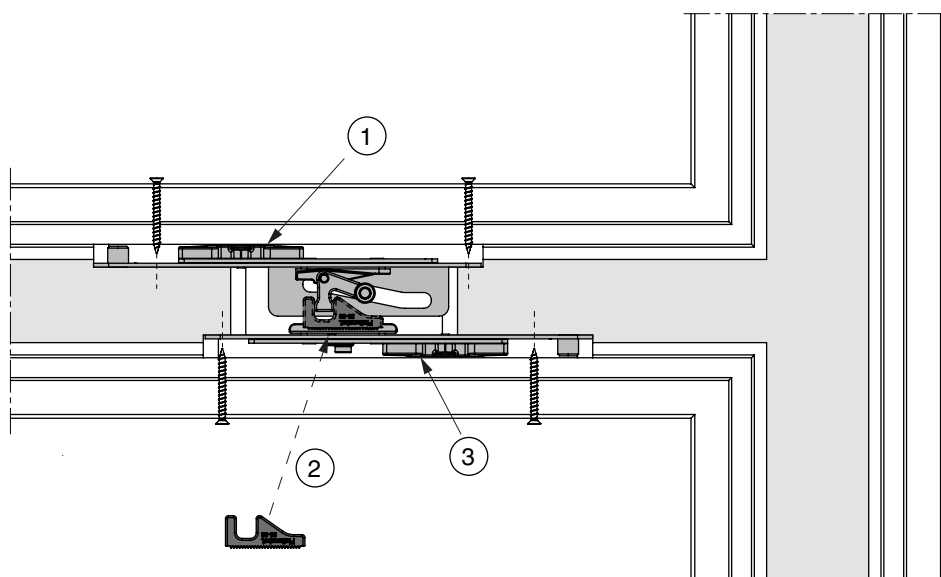The blue fixing pin must be removed before greasing/lubrication.

🔴 = Grease (Castrol Longtime Blanc or equivalent)
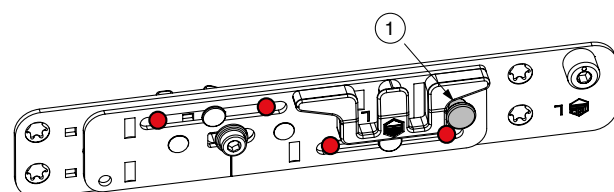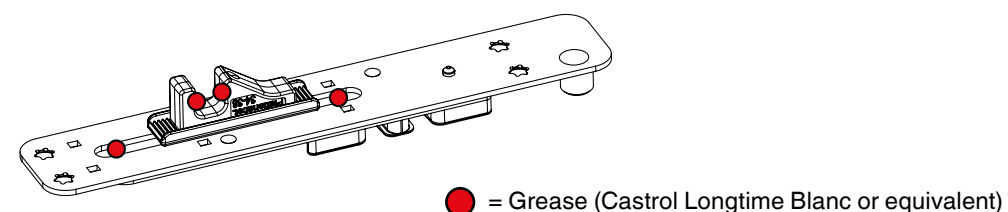
The blue fixing pin ① must be reinserted after greasing/lubrication.

Installing the fittings on the frame

**Installing the kinematics components**

<table>
<tr><td>

⚠ **IMPORTANT!**

The screw fixing of the top transom kinematics must go through the reinforcement.

</td><td>

1. Insert top transom kinematics ① into routing and secure with screws (full thread), min. Ø 4 x 30 mm.

2. Select connector for transom kinematics ② according to transom profile (see page 11) and screw onto the bottom transom kinematics in the correct location and position (notch).

3. Insert bottom transom kinematics ③ into routing and secure with screws (full thread), min. Ø 4 x 30 mm.

</td></tr>
</table>

Installing the fittings on the frame

Timber installation example
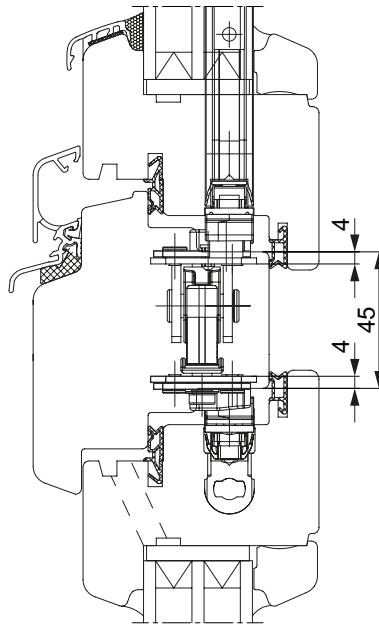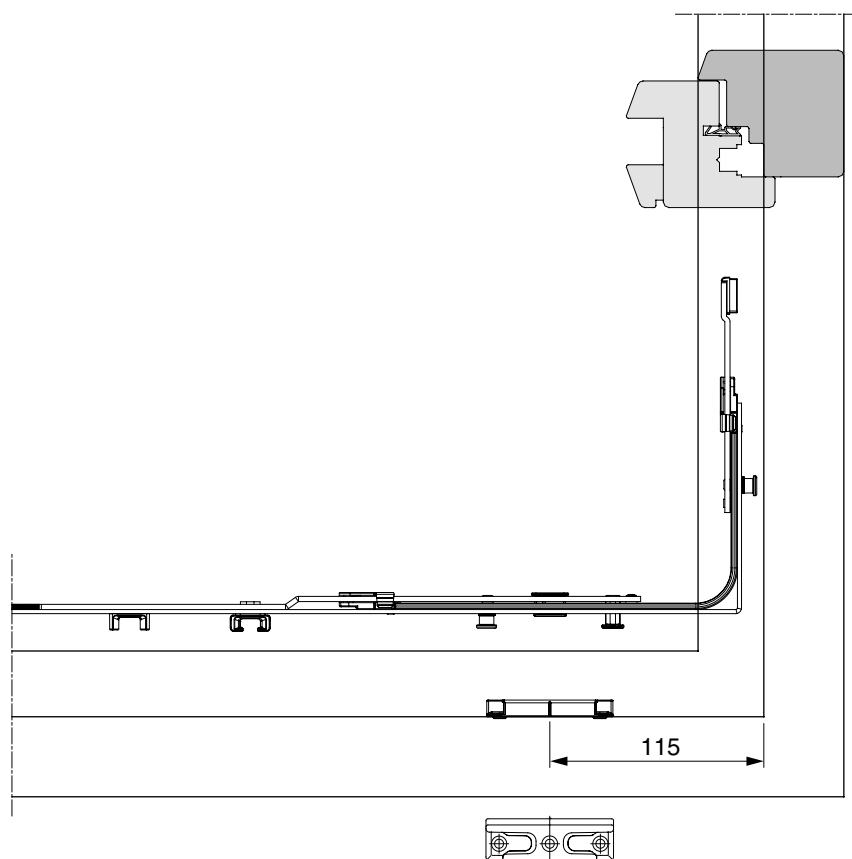

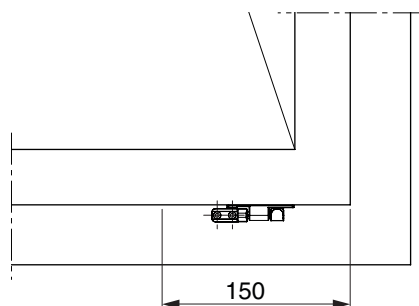**PVC installation example**
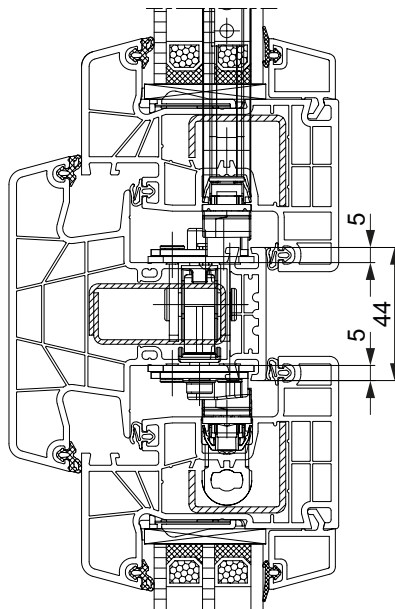
Installing the fittings on the frame

Installing the tilt striker plate for skylight sash 12L

115

Installing the turn lock

150

Installing the fittings on the sash

Installing the fittings on the central sash
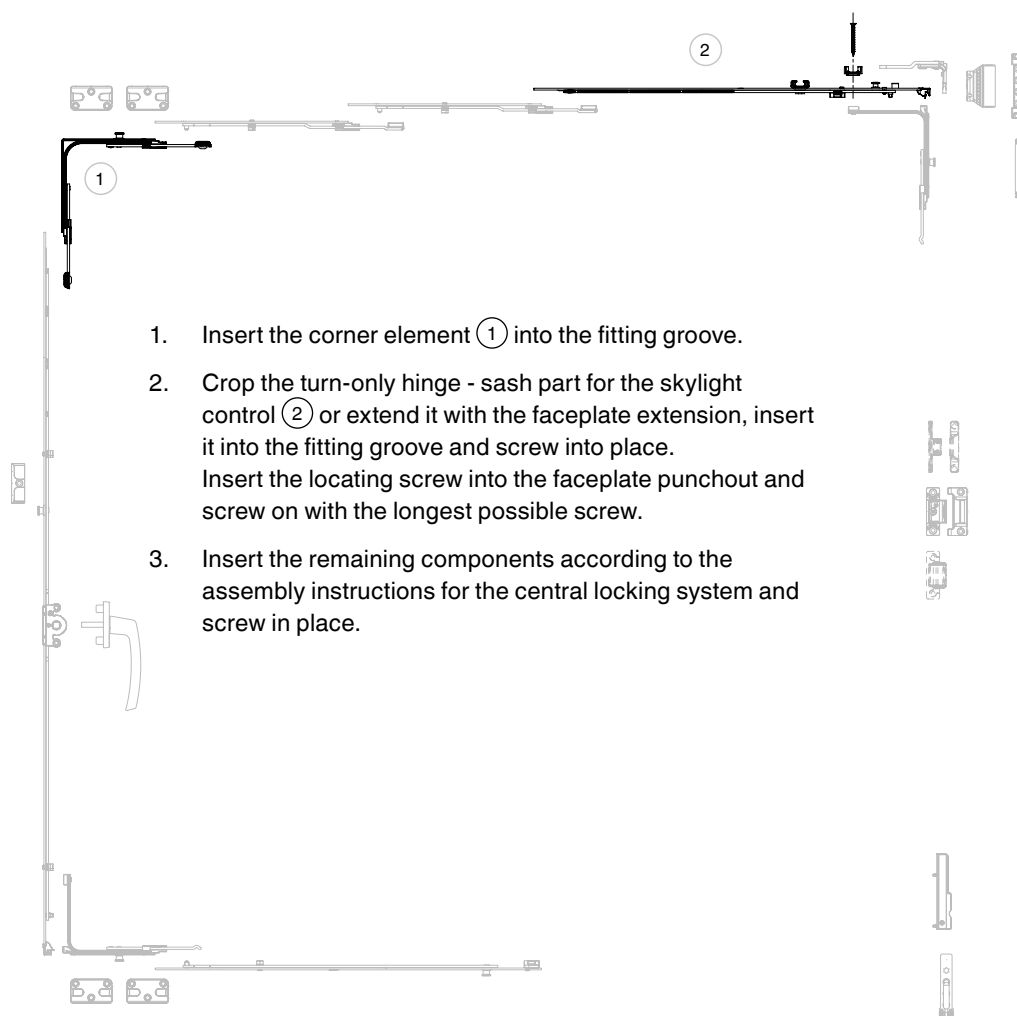
1. Insert the corner element ① into the fitting groove.

2. Crop the turn-only hinge - sash part for the skylight control ② or extend it with the faceplate extension, insert it into the fitting groove and screw into place.
Insert the locating screw into the faceplate punchout and screw on with the longest possible screw.

3. Insert the remaining components according to the assembly instructions for the central locking system and screw in place.

Installing the fittings on the sash

Installing the fittings on the skylight sash
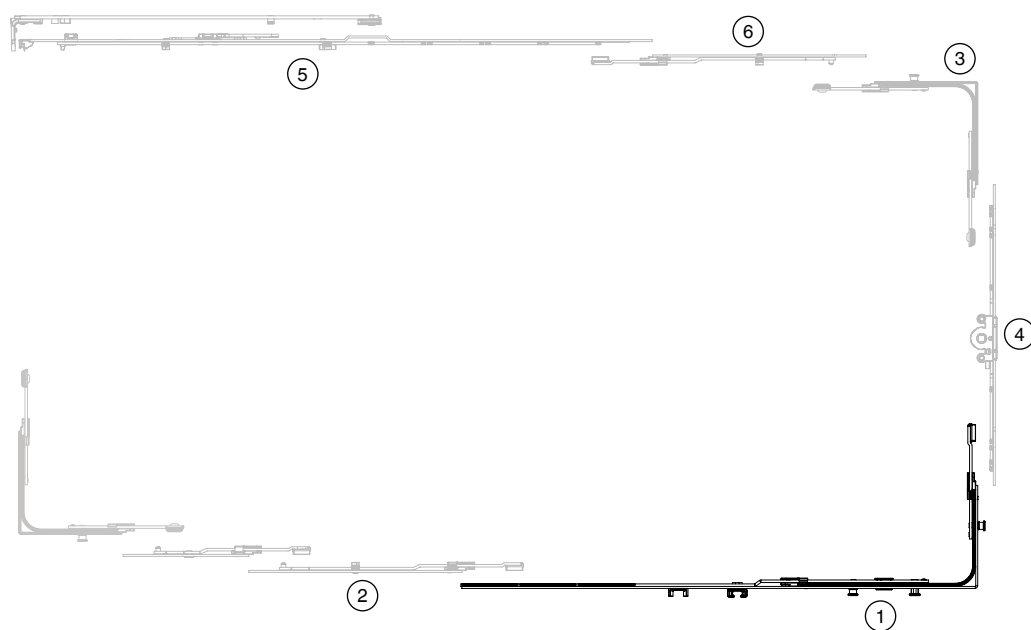
1. Insert the corner element for the skylight control ① into the fitting groove. From S.R.W. 800 mm (timber) / 1000 mm (PVC) insert faceplate extension / centre lock ② and screw in place (recommendation). The specifications of the profile manufacturer are binding and must be observed.
   Insert the locating screw into the faceplate punchout and screw on with the longest possible screw.

2. Insert the corner element ③.

3. Crop drive gear ④, insert and screw in place.
   If the drive gear is also to be used for emergency opening, the drill hole for the sprocket must be created.

4. Crop comfort scissor stay ⑤, insert in fitting groove and screw in place. From S.R.W 1050 mm, use faceplate extension ⑥.
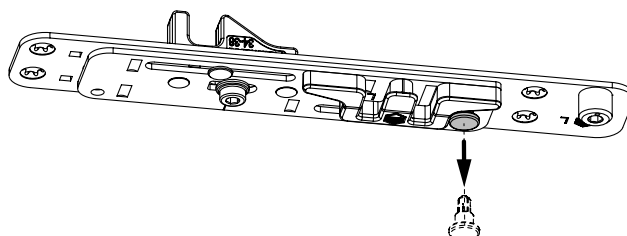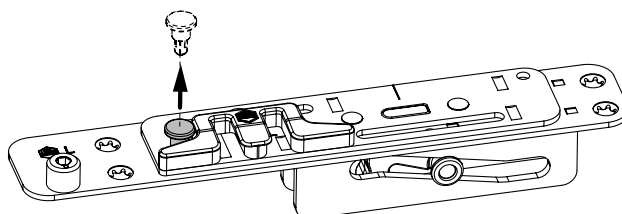
Hinging the sash in the frame

The central sash and the skylight sash are hinged in the frame according to the assembly instructions of the hinge-side used.

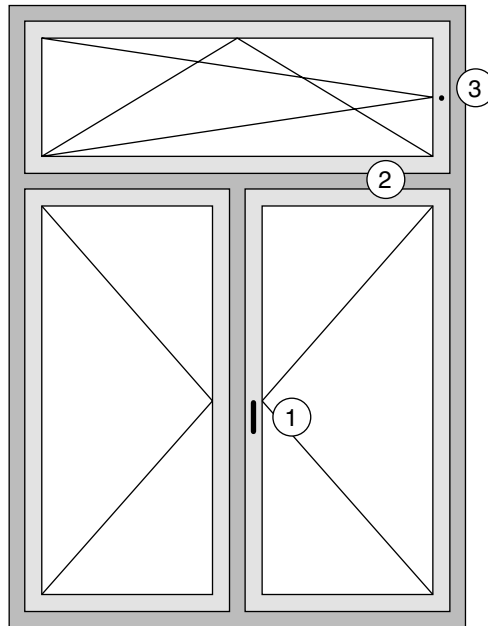**Removing the centre die anchorage from the skylight kinematics**

Pull fixing pin behind the connector fork upwards/downwards.

Tearing through the central locking system

1. Tear through the central locking system of the central sash ①.
2. Ensure that the fixing pins in the top and bottom kinematics ② have been removed (see page 23).
3. Tear through the central locking system of the skylight sash ③ if possible via drill hole for emergency opening. Otherwise tear through with the handle on the central sash.
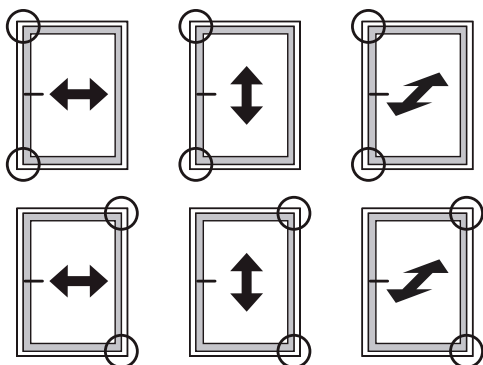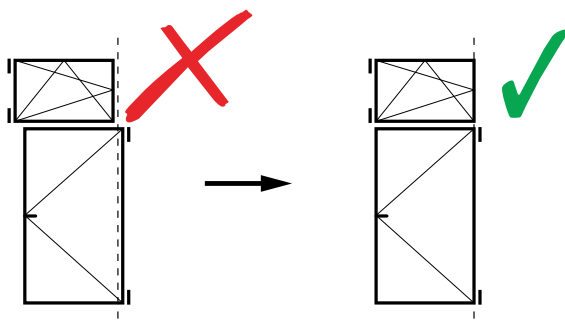
Skylight settings

Lateral, gasket compression and height adjustments

See assembly instructions for the hinge-side used.

Coordination of the two central locking systems / skylight sash tilt depth
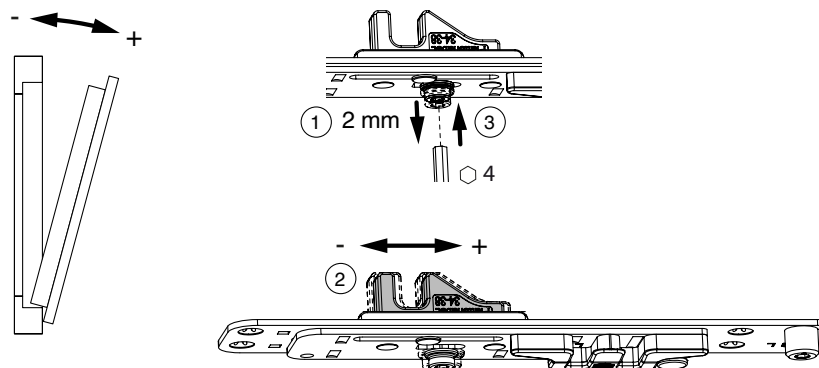
1. Unscrew the screw ① with wrench size 4 by approximately 2 mm (connector in cogging can be moved freely).

2. Shift connector ② to the desired position.
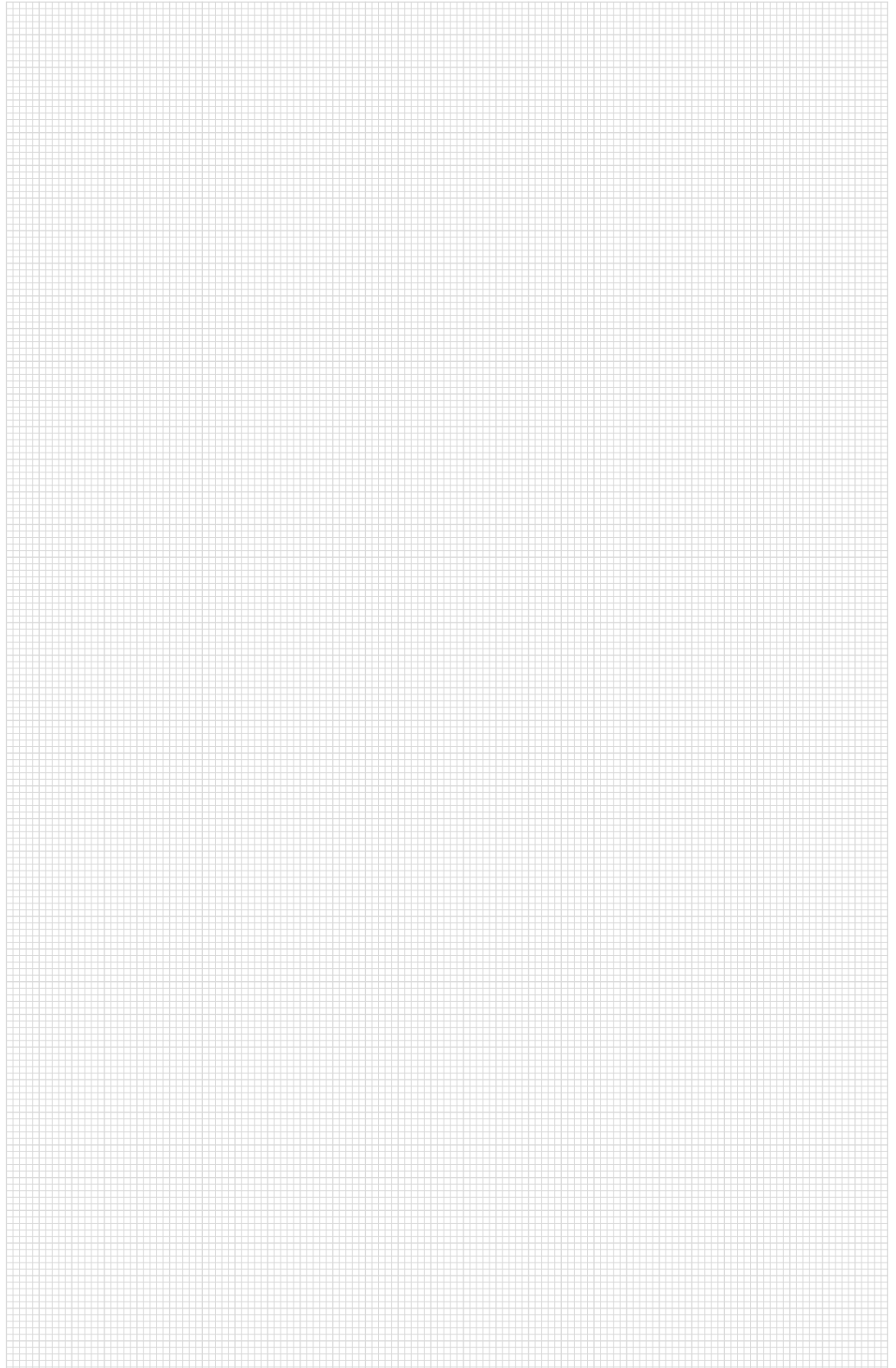
3. Fix the connector in position with the screw ③.

Skylight settings

Skylight kinematics maintenance
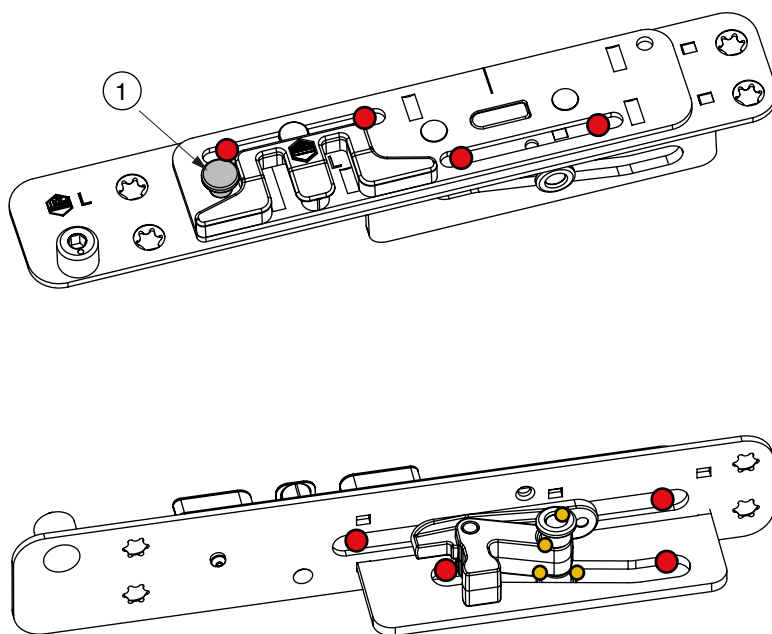
The lubrication quantities and intervals can be found in the operating and maintenance instructions, order number 757071.

Notes

MACO
MULTI-MATIC

Satisfied?

We appreciate your

feedback@maco.eu