



TECHNOLOGY IN MOTION

MACO MULTI

TURN-ONLY AND
TURN&TILT HARDWARE



Maintenance and adjustment instructions
for turn-only, turn&tilt, tilt-first and
tilt windows

CERTIFIED SPECIALIST



Contents

Safety and warning information	3 - 4
Measures to preserve the surface finish	4 - 5
Setting the turn-only, turn&tilt and tilt-first sash	6 - 12
Setting the scissor stay or turn-only hinge - sash part – lift/lower	6 - 8
Setting the scissor stay or turn-only hinge – gasket compression	8 - 9
Pivot post setting	10 - 12
Tilt-only sash setting	13
Setting the closing element, the bullet catch and the sash lifter	14 - 15
Hinging and unhinging the sash	16 - 17
Exchange of window rebate seals	18



WARNING!

These maintenance instructions are only intended for certified specialists and their trained employees.

In addition to these maintenance instructions, the operation and maintenance instructions for the end user must always be observed (757071EN).

These instructions can also be downloaded from www.maco.eu, order number 757070EN.

Safety and warning information



WARNING!

Risk of injury due to improper maintenance operations.

Improper maintenance can lead to serious personal injury or material damage. For this reason:

- › Before starting work, ensure there is sufficient room for carrying out assembly work.
- › Ensure that the assembly site is kept clean and tidy. Loose components and tools lying around or on top of each other can cause an accident. Only use intact tools.
- › Work, such as the adjustment of hardware – particularly near to the pivot post and the scissor stay – as well as the replacement of parts and the hinging and unhinging of the sash must only be carried out by trained, skilled personnel.



WARNING!

Risk of injury due to heavy sashes.

Non-compliance can result in serious personal injury or material damage. For this reason:

- › Correctly assess the weight of the sash before starting work.
- › Large and/or heavy sashes should always be hinged and unhinged by several people.
Overloading can result in serious long-term effects (back problems).



WARNING!

Windows with damaged or defective hardware components must be secured to prevent any kind of use. Damaged or defective hardware components must be replaced immediately.



NOTE!

When replacing hardware components, you must observe the relevant assembly instructions and/or the package leaflet. Once hardware components have been replaced, the plastic drive track retaining clip must be, 'snapped' on first operation. You must always check that the repaired sash functions correctly.

**NOTE!**

Warranty claims can only be accepted if all maintenance operations have been carried out in full and according to the maintenance intervals (specified in the end user operating instructions), and this can be verified.

**NOTE!**

Warranty claims can only be accepted if the unit has been installed correctly and by a certified specialist.

Measures to preserve the surface finish

Protection against soiling:

- › The hardware should be kept free of debris and soiling. Immediately remove soiling during the building stage caused by plaster, mortar or similar with water.
- › Protect hardware components from contamination (dust, dirt, paint, etc.).

**WARNING!**

Faulty or damaged parts must be immediately put right.

Protection against corrosion:

- › Ventilate the hardware and or the rebate areas so that they are not exposed to direct moisture or condensation (important during the building stage).
- › Aggressive vapours in conjunction with small formations of condensation can lead to fast corrosion of the hardware components.
- › Timber frames and sashes with a high concentration of (tannic) acid must be treated with suitable surface coatings to ensure that these contents do not evaporate from the timber.



- › No acetic acid or cross-linked acidic sealing compounds or those with the above mentioned contents may be used.
- › The hardware must not be damaged with sharp edged tools.
- › Clean the fittings with a moist cloth, avoid permanent wetness!



ATTENTION!

Removal of lubrication can lead to malfunction!

Protection against malfunction:

- › In order for the fittings to function permanently, they must be properly lubricated again after cleaning.
- › During cleaning, grease used to lubricate the fittings can be wiped off or smudged to such an extent that it becomes ineffective. For this reason, the lubrication applied at the factory must be restored.
- › Carry this out in accordance with our operating and maintenance instructions for Turn-Only, Tilt&Turn and Tilt&Turn windows – end users (order number 757071en), section Maintenance instructions: Lubrication points and lubrication point legend.

Protection against corrosive, acidiferous cleaning agents:

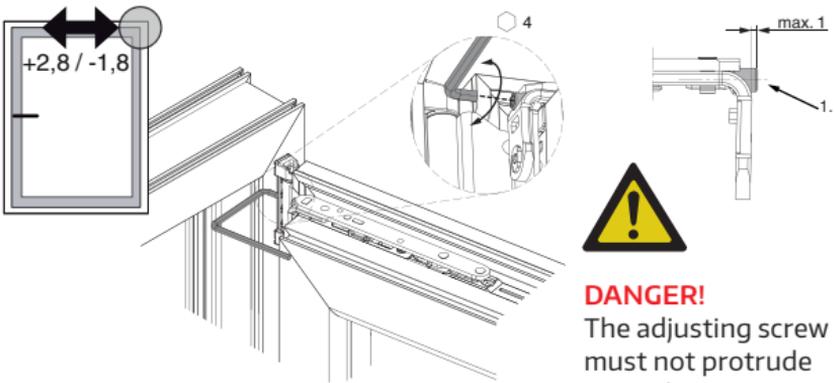
- › Clean the fittings with a soft, lint-free cloth and a mild, pH-neutral cleaning agent in diluted form only. Never use aggressive, acidic, solvent-based or abrasive cleaners (scouring pads, steel wool, etc.). This can result in damage to the hardware!
- › If hardware is damaged in this manner, it may impair the function and the safety characteristics. This can result in personal injury.
Defective or damaged points must be repaired and restored immediately.
- › We recommend re-treating the cropped edges of TRICOAT-PLUS fittings with the TRICOAT-PLUS touch-up paint.

Adjustment values are always specified in regard to the hinge-side air gap and/or the bottom horizontal air gap.

Setting scissor stay or turn-only hinge

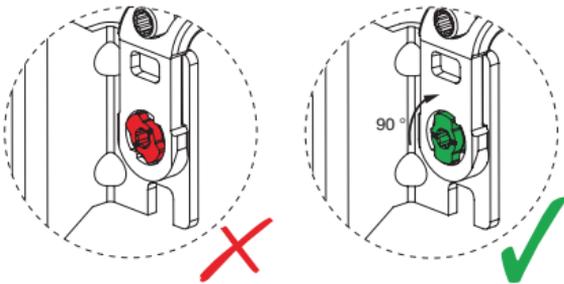
1. Lift/lower

> MULTI-MATIC / MULTI-TREND corner hinge version

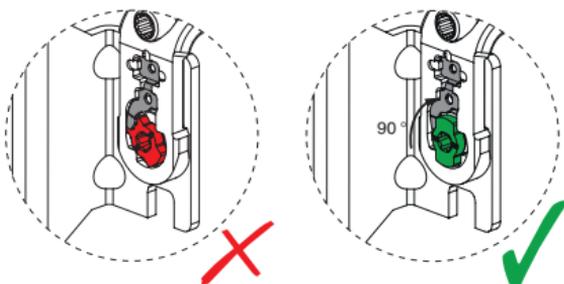


The bayonet bolt on the rebated scissor stay support arm is only for the side adjustment! CHECK that the bayonet bolt is exactly at 90°! If it is not, the sash can fall out of the window frame.

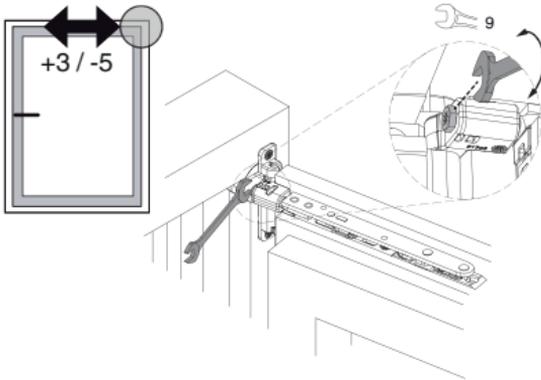
Version up to 2020



Version from 2020



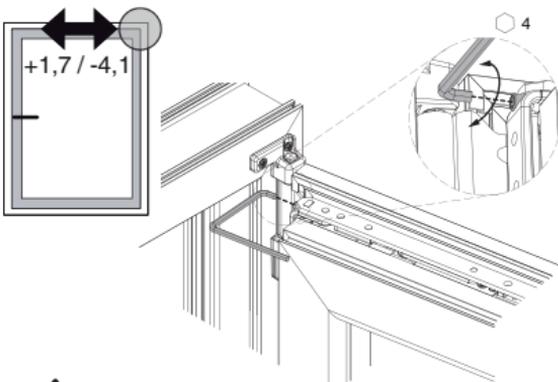
› MULTI-MATIC / MULTI-TREND stay and hinge



DANGER!

The sash may only be lowered to the third notch and/or to the red mark, otherwise the sash can fall out!

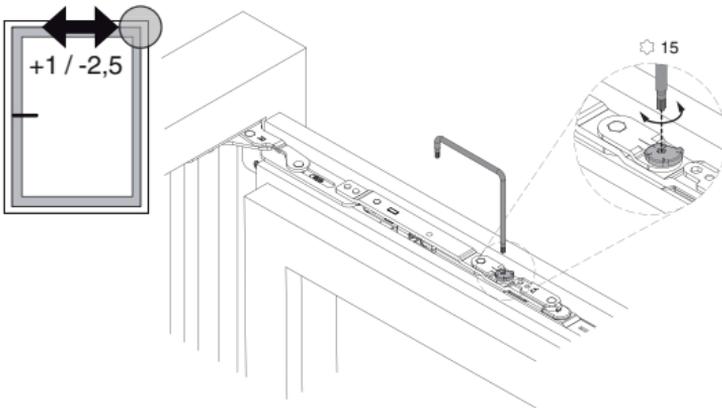
› MULTI MAMMUT



DANGER!

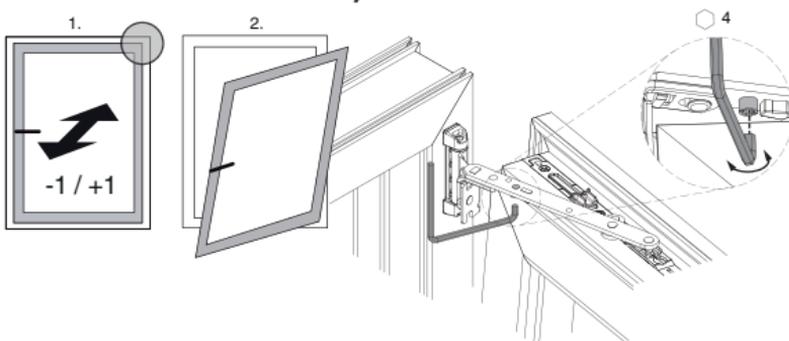
The side adjustment of the scissor stays up to version 2 requires the mandatory use of feeler gauge item no. 468684 to ensure that the minimum adjustment measurement is not underrun!

› MULTI POWER

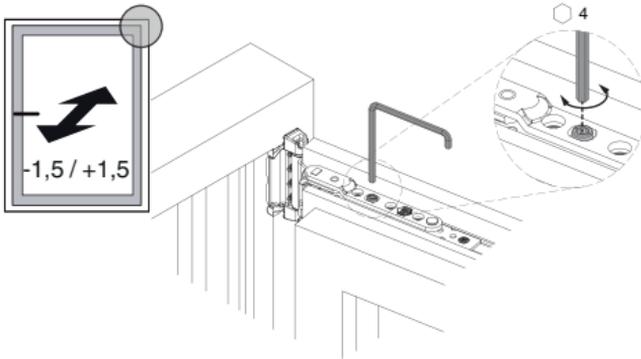


2. Gasket compression

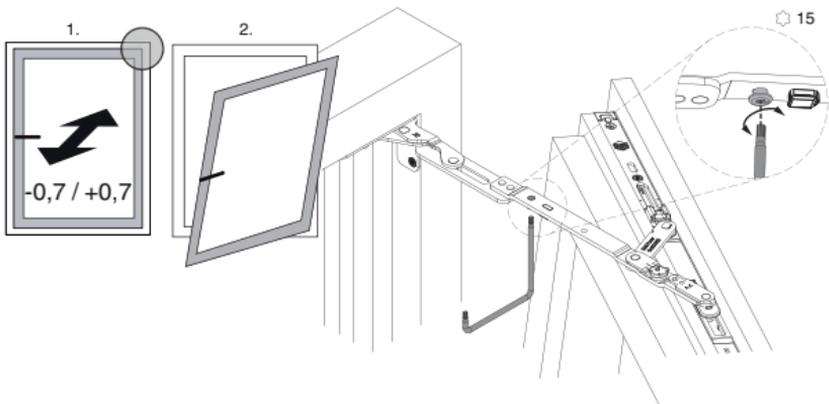
› MULTI-MATIC scissor stay



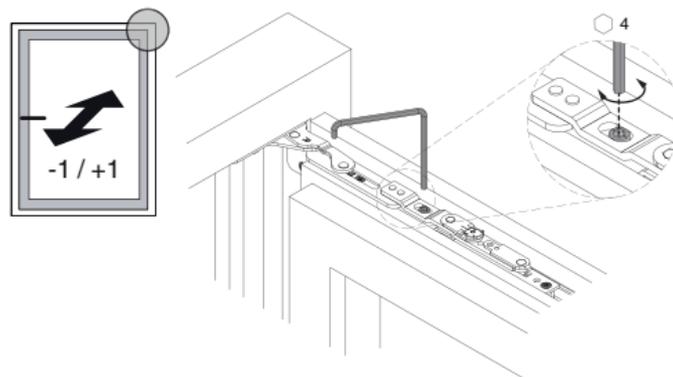
> MULTI-MATIC turn-only hinge - sash part



> MULTI POWER scissor stay

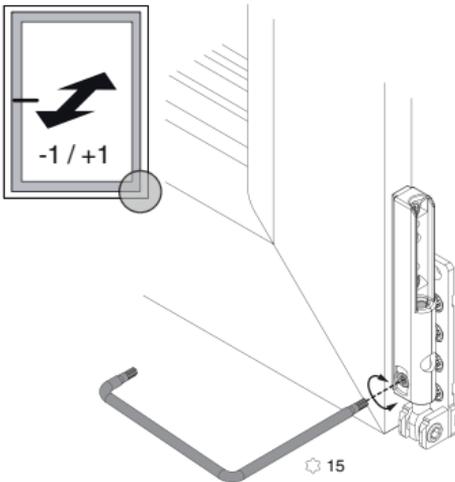
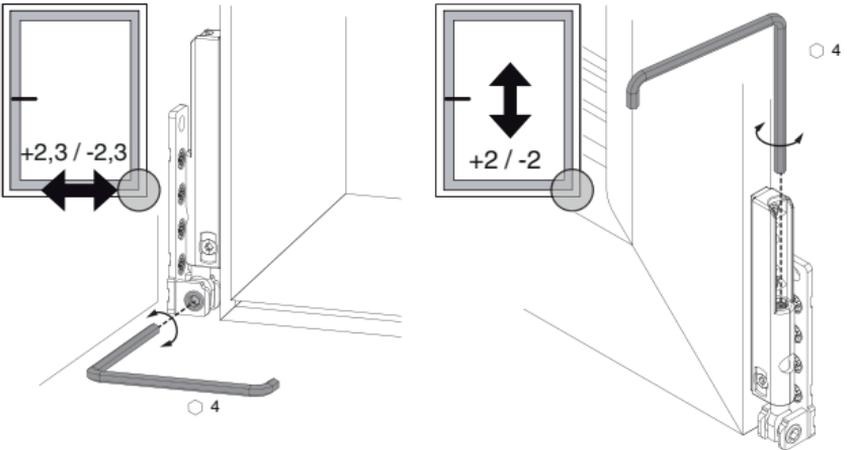


> MULTI POWER turn-only hinge - sash part

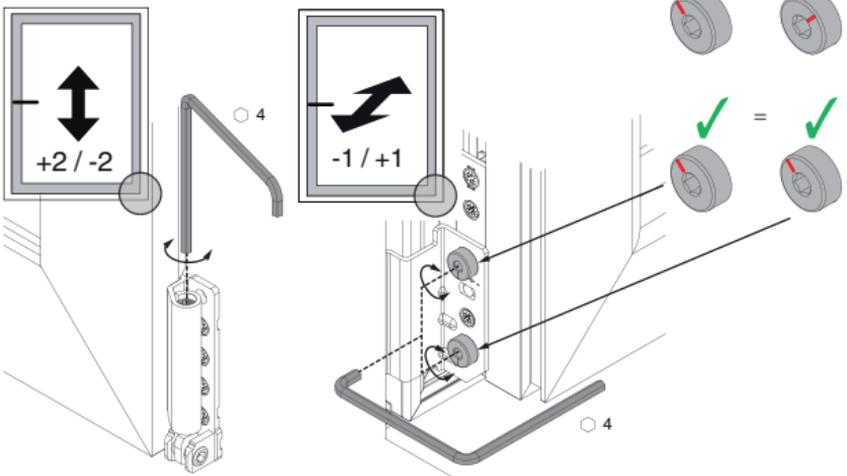


Pivot post setting

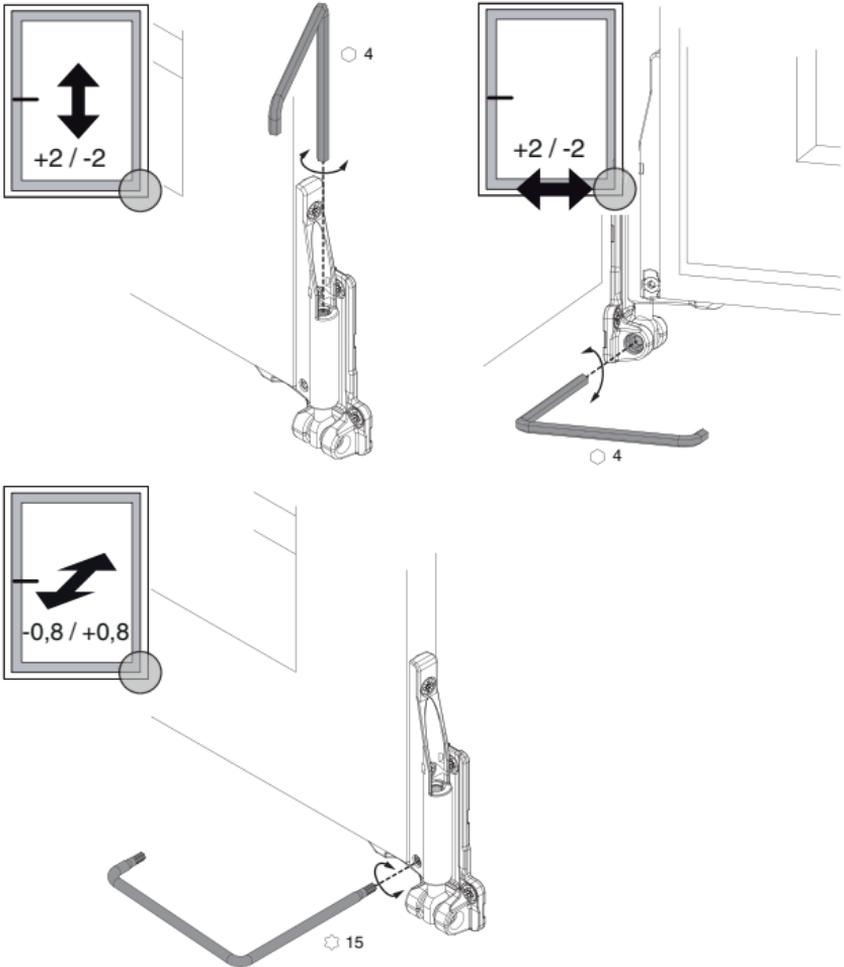
> PVC / DT / TO / AS pivot post



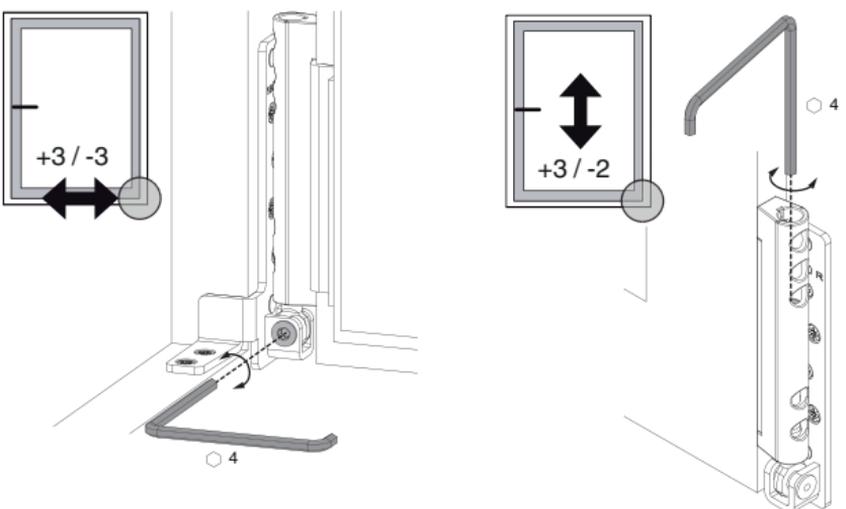
> PVC / AS rebated corner support



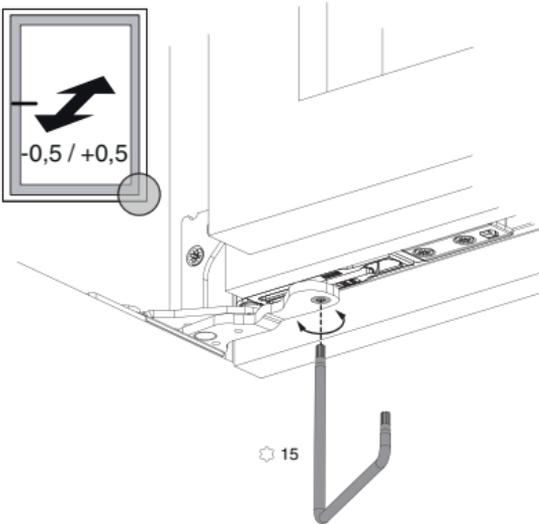
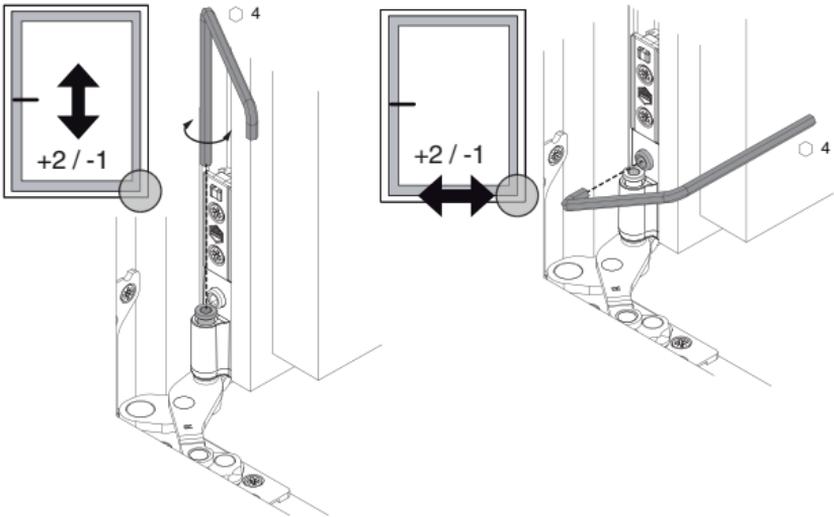
> Drill-in pivot post



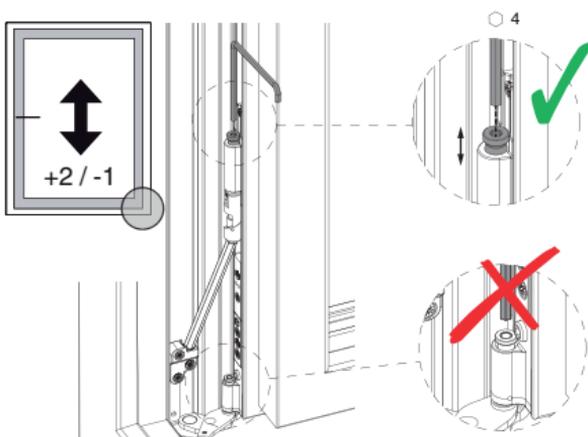
> MULTI MAMMUT pivot post



> MULTI POWER pivot post

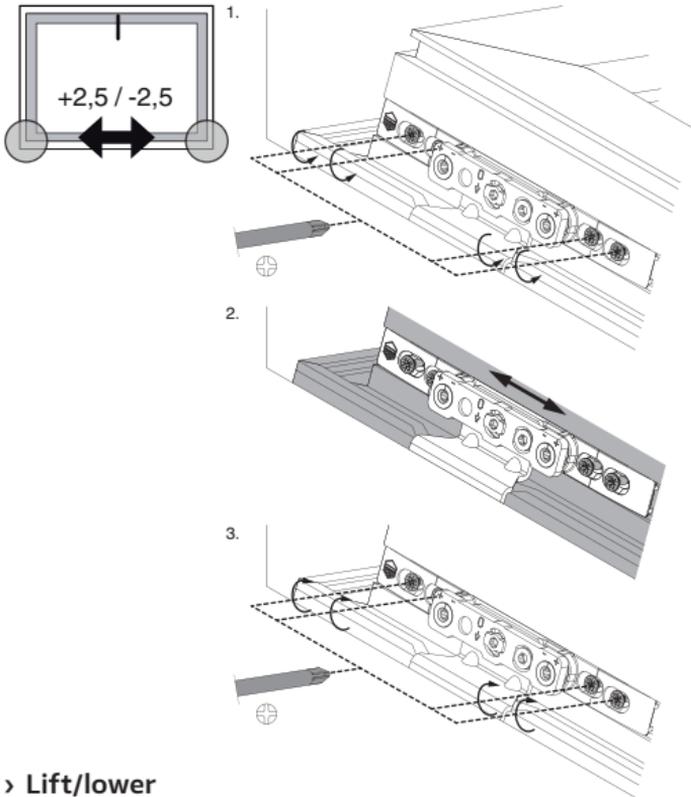


> MULTI POWER load transfer

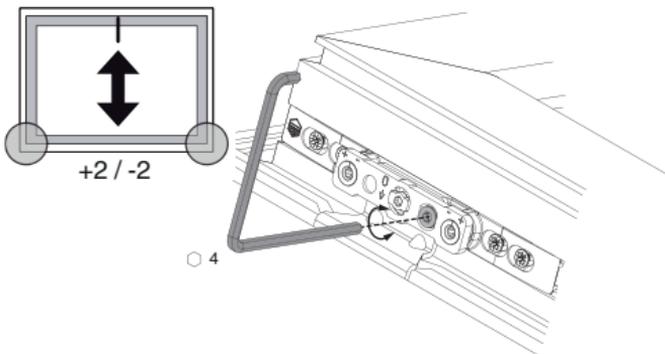


Tilt-only sash setting

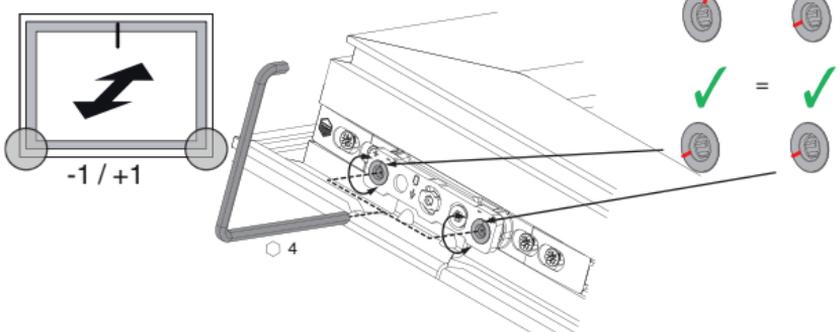
> Side adjustment



> Lift/lower

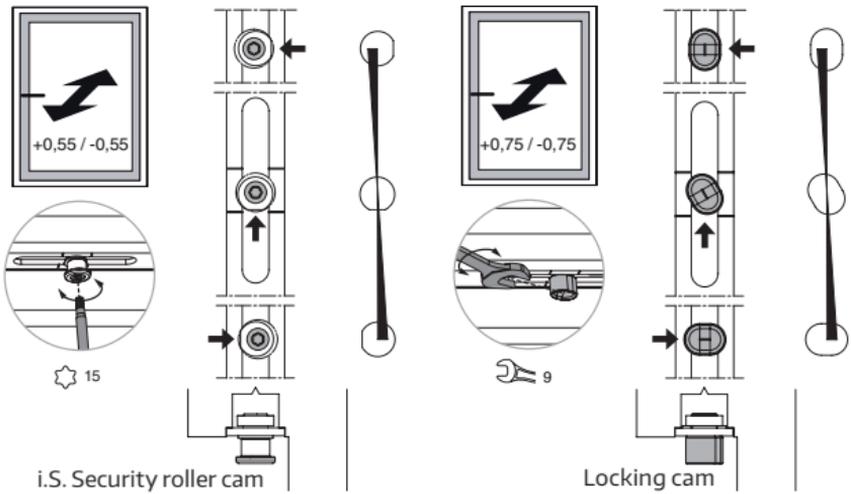


> Gasket compression

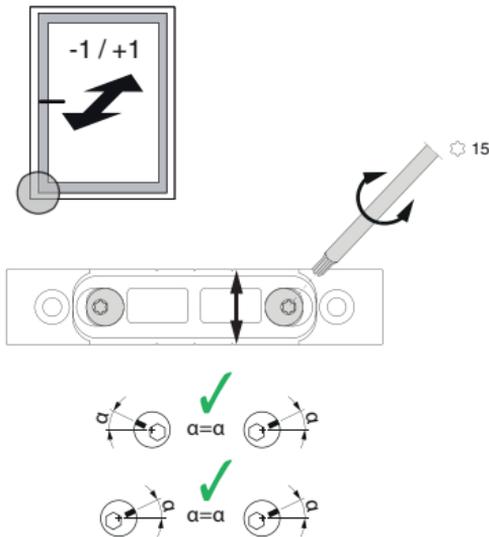


Setting the closing element, the bullet catch and the sash lifter

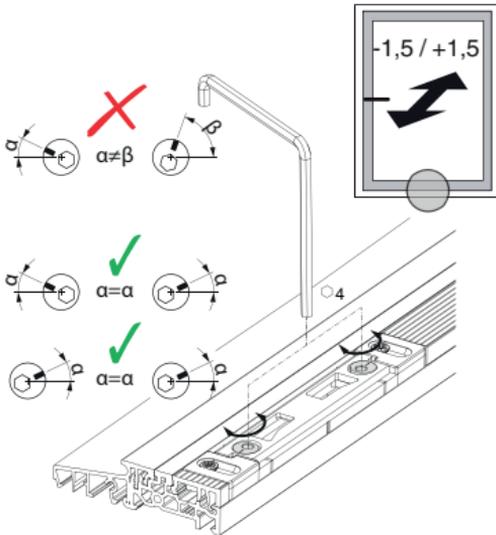
> Setting the gasket compression on the cam



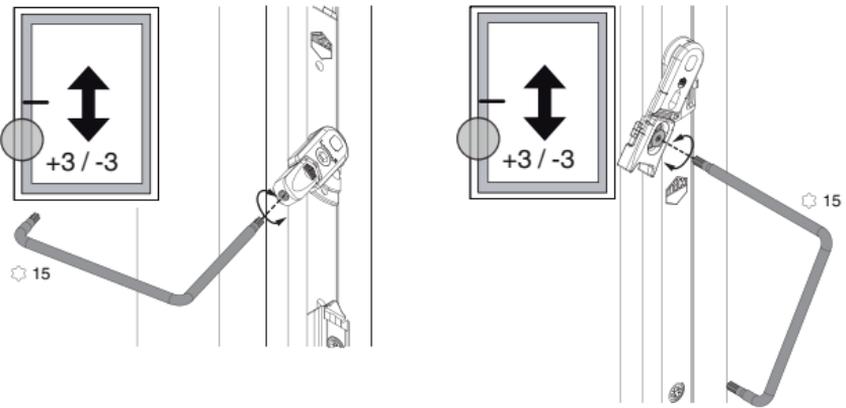
> Adjustment of the shootbolt striker plate



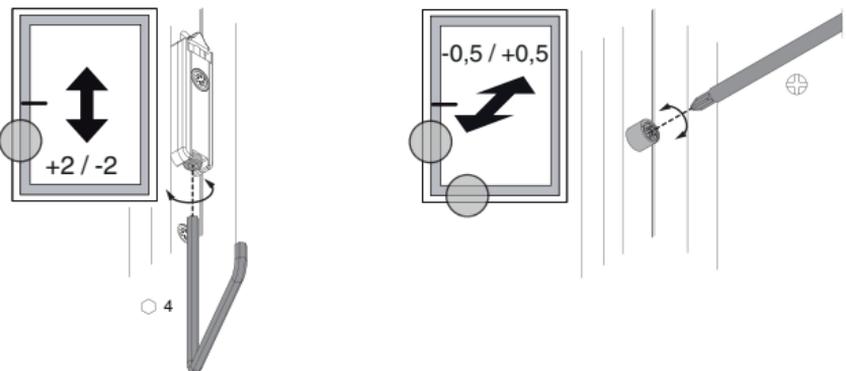
› Adjustment of the locking hook striker plate



› Setting the sash lifter

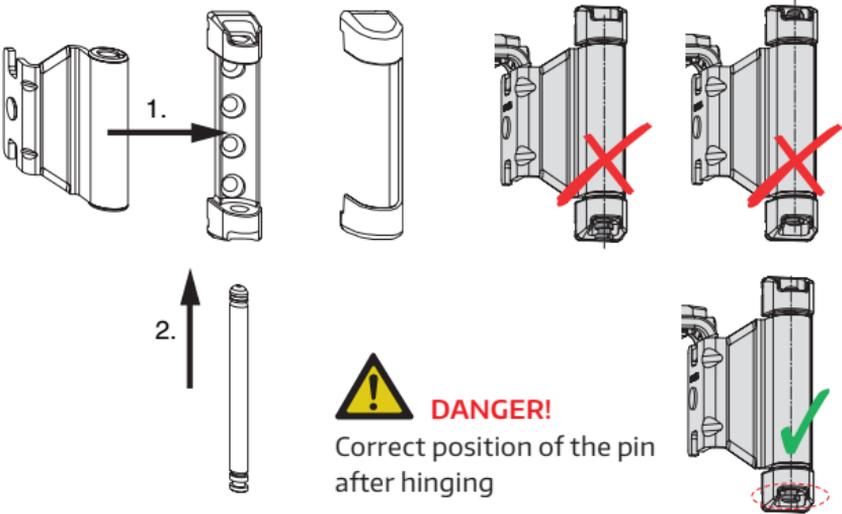


› Setting the door catch and/or the bullet catch roll



Hinging and unhinging the sash

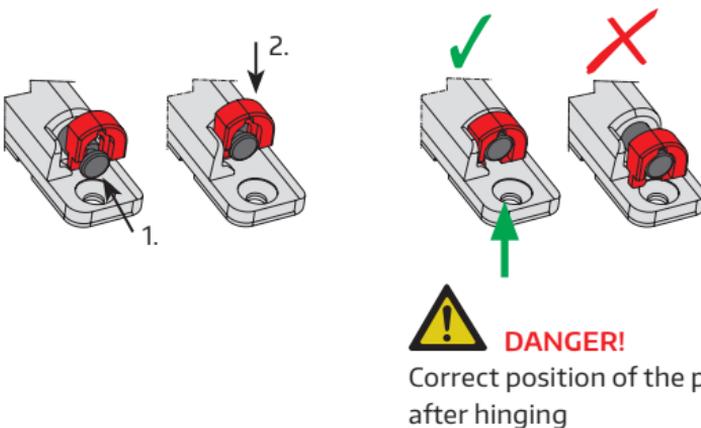
› MULTI-MATIC / MULTI-TREND scissor stay hinge – PVC / DT / AS



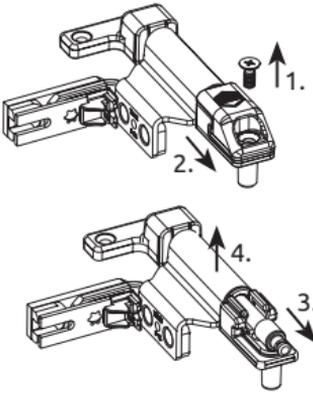
1. Remove the cover, if there is one.
2. Pull the scissor stay-hinge pin downwards with a suitable tool. The scissor stay hinge pin can only be withdrawn when the window is closed.
3. Open the sash 90° (secure against tilting on the espagnolette side), move the rebated scissor stay support arm out of the scissor stay hinge and lift the sash out of the pivot post. For hinging, carry out the above steps in reverse order.

› MULTI-MATIC / MULTI-TREND scissor stay hinge – stay and hinge

As above, with the exception that a catch must be also clipped into the scissor stay hinge pin.



› MULTI MAMMUT scissor stay hinge



1. Remove the locking screw.
 2. Remove the scissor stay hinge pin.
 3. Pull the scissor stay hinge pin downwards and open the sash 90°.
 4. Move the rebated scissor stay support arm out of the scissor stay hinge and lift the sash out of the pivot post.
- For hinging, carry out the above steps in reverse order.

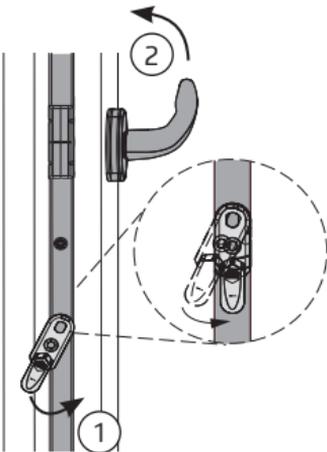


DANGER!

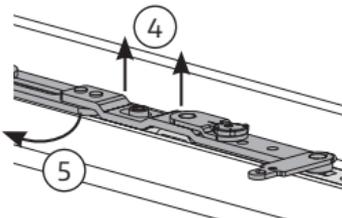
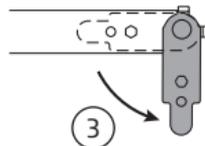
It is essential that the scissor stay hinge pin is installed.

› MULTI POWER

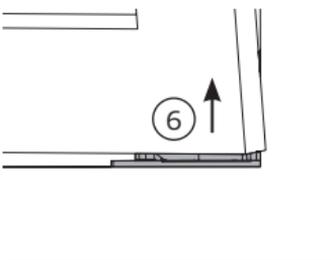
(see also video at www.youtube.com/MACOBeschlaege):



1. Open the sash 90°.
2. Trigger the mishandling device ① (only on turn&tilt windows), turn the handle to the tilt position ②.
3. Open the scissor stay arm safety device/turn-only hinge arm safety device ③.



4. Lift the scissor stay and/or turn-only hinge arm until it is completely free ④, then move it into the frame ⑤.
5. Close the sash.
6. Tilt the sash slightly and lift it up and out ⑥.



For hinging, carry out the above steps in reverse order.



Exchange of window rebate seals

- › When exchanging window rebate seals, it is important to ensure that a suitable seal is used. Installing an unsuitable seal can negatively affect the functionality, performance and operation of the window (driving rain tightness, air flow, operating force when locking...).
- › To make the installation easier, talcum powder or potato starch can be applied. These can be used to increase the sliding properties of the seals.



Disposal of hardware and hinge components must comply with local regulations or laws.

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



Notes

A large rectangular area filled with a fine grid pattern, intended for taking notes.



MACO near you:

www.maco.eu/contact

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Order no. 757070EN

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