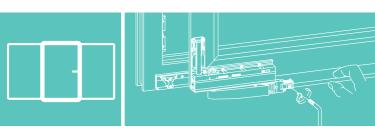




# MACO RAIL-SYSTEMS

SLIDING HARDWARE



Maintenance and adjustment instructions for SKB standard, self-engaging, positive control and PAS

**CERTIFIED SPECIALIST** 



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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.

These instructions can also be downloaded from www.maco.eu. order number 757957.



## Intended purpose and misuse

In the case of vertically installed windows or casement doors with sliding hardware in high building construction, these are shifted horizontally, tilted or parallel stopped by operating a window handle.

When closing a sash and when locking the hardware in place, the resistance of the seal must be overcome as a rule.



#### Risk of injury due to improper maintenance work.

Improper maintenance work 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, the replacement of parts and the hinging and unhinging of the sash must only be carried out by trained, specialist personnel.



#### 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).



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.



When replacing hardware components, you must observe the relevant assembly instructions and the



package leaflet. Once hardware components have been replaced, the assembly fixing must be "torn through" as necessary. You must always check that the repaired sash functions correctly!



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.



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 deposits 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.).

#### 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 sash materials 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 aforementioned contents may be used.
- > The hardware must not be damaged with sharp edged tools.
- > Clean the hardware with a moist cloth only, avoid permanent wetness!

#### Protection against aggressive, acidiferous cleaning agents

- Clean the hardware 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 and damage to other items.



NOTE!

Defective or damaged points must be repaired and restored immediately by skilled personnel.



## **Adjustment options**

## SKB-S, SKB-SE, SKB-Z, and PAS



CAUTION!

Settings and adjustments for the hardware, including hinging and unhinging the window or casement door, must only be carried out by certified specialists.

#### Adjusting the SKB-S sash lifter

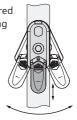
#### MULTI-TREND

Release the screw (② 15) and adjust the height, secure.



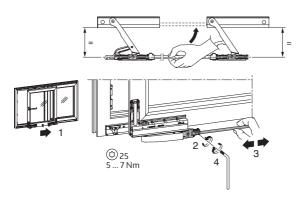
#### **MULTI-MATIC**

Set to the required height by turning the adjusting screw (② 15).



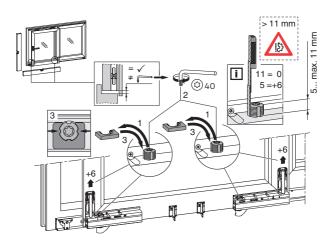
→ Should mishandling occur despite the device being secured: Press the sash lifter; the handle can then be moved to any desired position.

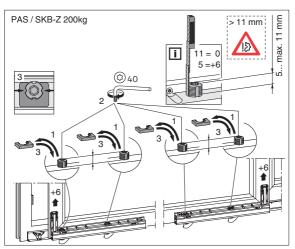
#### Correcting the parallel setting of the roller





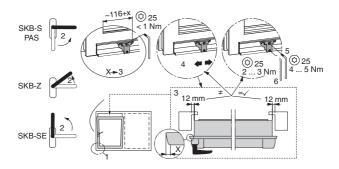
## Regulating the height of the roller



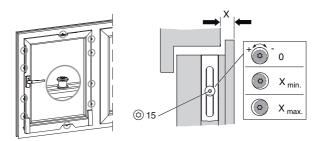




### Correcting the sash run-in



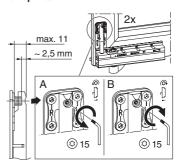
## Adjusting the gasket compression



#### Adjusting the PAS reinforcement parts

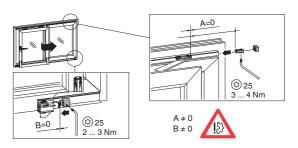
A - Make run-in easier

B - Make run-out easier

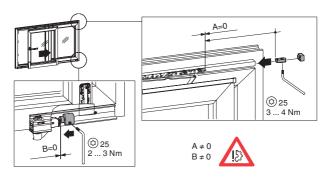




## Adjusting the SKB-S, SKB-SE, SKB-Z stop buffers



### Adjusting the PAS stop buffers

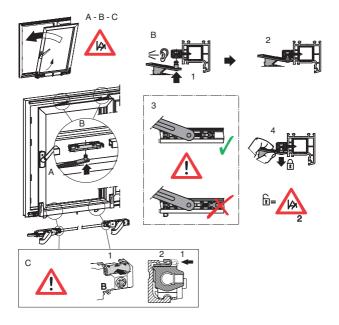




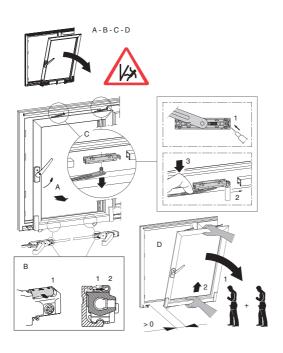
## Hinging and unhinging the sash

Certified specialists must pay particular attention to the following points, since the installation no longer lies within the sphere of influence of the hardware manufacturer.

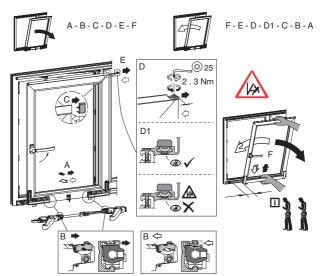
## SKB-S, SKB-SE, SKB-Z



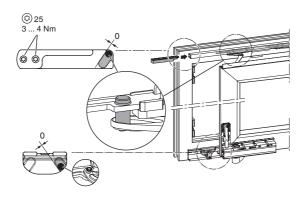














CALITION

If the scissor stay pins do not snap in the sliders securely and properly, the window sash will not be held securely and may fall out. This can result in serious bodily injury or death.



**CAUTION!** 

If the anti-jemmy device is not (or not correctly) latched in place at the marked position, the window sash will not be secured properly. This can result in serious bodily injury or death.



**CAUTION!** 

Settings and adjustments for the hardware, including hinging and unhinging the window or casement door, must only be carried out by certified specialists.



## Spare parts, customer service

Spare parts or customer services can be acquired from window suppliers or window manufacturers. A list of manufacturers and dealers can be found at www.maco.eu.

#### Disposal

Disposal of hardware must comply with local regulations or laws.

### **Applied standards**

ÖN EN 14351: 2010	Windows and doors - product standard
ÖN EN 1191: 2013	Windows and doors - Resistance to repeated

opening and closing

ÖN EN 13126-8: 2006 Building hardware for windows and doors – Part 8 Requirements and test methods

ÖN EN 1670: 2008 Locks and building hardware – corrosion

resistance – Requirements and test methods

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



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