

# PORTAL

**HS**

**PS/PSK**

Window systems

Door systems

Comfort systems

## Inhalt

<b>1</b>	<b>GENERAL NOTES .....</b>	<b>4</b>	<b>4</b>	<b>PS/PSK PARALLEL SLIDING AND SLI- DE-TILT DOORS .....</b>	<b>27</b>
1.1	Intended use .....	4	4.1	Safety notes .....	28
1.2	Information and instruction obligations	4	4.2	Disclaimer of liability .....	30
1.3	Windows or patio doors with sliding or slide-tilt hardware .....	4	4.3	Operating instructions .....	30
1.4	Notes on restriction of use .....	5	4.4	Service notes .....	31
1.5	Improper use .....	5	4.4.1	Lubrication of the hardware components PS/ PSK* .....	31
1.6	Regular operation and use .....	6	4.4.2	Lubrication of the hardware components PSK-Z* .....	32
1.7	Maintenance care and inspection .....	6	4.4.3	Lubrication of the bogie wheels* .....	33
1.8	Safety .....	7	4.4.4	Adjustment of adjustable hardware compo- nents .....	33
1.9	Preservation of the surface quality .....	7	<b>5</b>	<b>ECO PASS THRESHOLD .....</b>	<b>37</b>
1.9.1	Protection against corrosion .....	7	5.1	Cleaning and service .....	38
1.9.2	Protection against contamination .....	8			
1.9.3	Protection against aggressive, acidic cleaning agents .....	8			
1.9.4	Protection against surface treatment materi- als .....	8			
<b>2</b>	<b>FS FOLDING AND SLIDING DOORS ...</b>	<b>9</b>			
2.1	Safety notes .....	10			
2.2	Disclaimer of liability .....	12			
2.3	Operating instructions .....	12			
2.4	Service notes .....	13			
2.4.1	Lubrication of the hardware components ..	13			
2.4.2	Checking the weather protection .....	14			
2.4.3	Adjustment of adjustable hardware compo- nents .....	15			
<b>3</b>	<b>HS LIFT AND SLIDING DOORS .....</b>	<b>19</b>			
3.1	Safety notes .....	20			
3.2	Disclaimer of liability .....	22			
3.3	Operating instructions .....	22			
3.4	Service notes .....	23			
3.4.1	Lubrication of the gear parts .....	23			
3.4.2	Adjustment of adjustable hardware compo- nents .....	24			

## 1 General notes

### 1.1 Intended use

The proper maintenance of the SIEGENIA products

- FS (fold and slide)
- HS (lift-slide)
- PS/PSK (parallel sliding/ tilting hardware)
- ECO PASS threshold

is described below. The adherence to all points of these maintenance instructions is an integral part of the intended use.

Keep these maintenance instructions.

### 1.2 Information and instruction obligations

**Observe your instruction obligations towards your customers, extending to end users! All our product information, which is addressed to building owners and/or end users, e.g. service and maintenance instructions, must be passed on to the end user.**

**Our liability is excluded if defects or damage occur as a result of violation of our product information.**

### 1.3 Windows or patio doors with sliding or slide-tilt hardware

For windows or patio doors with sliding or slide-tilt hardware, windows or patio door sashes can be brought into a sliding position or into a tilt position restricted by the stay version by activating the handle.

In special constructions, the sashes can additionally be folded to a harmonica-like package when sliding.



#### WARNING

**Danger of injury and material damage due to improper opening and closing of sashes.**

Improper opening and closing of sashes can lead to severe injuries and considerable material damage. There is a danger of crushing if you place your hand between the sash and the frame.

- Ensure that the sash will not bump against the frame, the opening restrictor (buffer) or another sash while reaching the completely opened or closed position.
- Ensure that the sash is guided by hand throughout the entire movement until the opening or closing positions are reached and led to the frame, to the opening restrictor (buffer) or another sash at a very low speed.
- When closing the sashes, never place your hand in the opening between the sash and the frame. Always proceed with caution.
- Children and people who are unable to assess the hazards must be kept away from areas of danger.
- Maximum reference speed of the closing edge:  $v \leq 0.2 \text{ m/s}$

#### 1.4 Notes on restriction of use

Opened sashes of windows or patio doors as well as unlocked windows and patio doors when switched into ventilation positions (tilt position, for example) only achieve a shielding function. They do not fulfil the requirements of

- the joint tightness
- the resistance to driving rain
- the sound absorption
- the thermal protection
- the burglar resistance

#### 1.5 Improper use

Any use beyond or other than the intended use of the products is regarded as misuse and can lead to hazardous situations.



#### WARNING

##### Danger of injury and material damage due to improper use

The misuse of the windows and patio doors can lead to hazardous situations.

- The positioning of obstacles in the opening range between frames and windows or patio door sashes.
- The intentional application or negligent allowance of additional load to windows or patio door sashes.
- The deliberate or uncontrolled slamming or pressing of the window or patio door sashes against the window reveal. This can result in the destruction of the hardware, frame materials or single components of the windows or French doors.

## 1.6 Regular operation and use

Make sure to close and lock windows or window sashes if it is windy or if there is a draught. Wind draughts are prevalent when windows and patio doors that are in an opening position open or close independently and uncontrolled due to air pressure or air suction.

### NOTE

A fixed opening position of window and patio sashes can only be achieved with additional fixation hardware.

Windows and patio doors always represent a hazardous zone.

## 1.7 Maintenance care and inspection

### NOTE

The hardware, windows and French doors require specialist and systematic maintenance, care and inspection to guarantee the sustainable value, usability and safety. Hence we recommend the conclusion of corresponding maintenance agreement with a specialist company.

The following maintenance work must be carried out at least once a year (twice a year in school or hotel buildings):

Check that all hardware components are secure and check for wear. If necessary, tighten the fixing screws and replace worn components.

Lubricate all moving parts and locking parts of the hardware and check that they are functioning properly.

## 1.8 Safety



### WARNING

#### **Danger of injury and material damage due to improperly performed maintenance work**

Improper maintenance can lead to severe personal injury and material damage.

- Before commencing work, ensure that there is sufficient space for the installation work.
- Ensure that the assembly site is clean and tidy. Loosely piled components or components and tools lying around are accident sources.
- Have a specialist company carry out and adjustment and replacement work on the hardware - especially in the area of the corner hinge, bogie wheels and top stays.
- Sashes may only be removed and fitted by a specialist company.

## 1.9 Preservation of the surface quality

It is essential to observe the following points in order to preserve the surface quality of the hardware components permanently and prevent impairment:

### 1.9.1 Protection against corrosion



### NOTE

- According to the outside temperature, relative air humidity of the indoor air and the installation location of the sliding element, a temporary condensation formation could occur on the inside aluminium rails. This is particularly encouraged by a restriction to the air circulation due to a deep reveal, curtains or due to an unfavourable arrangement of the radiator or similar objects.
- In a normal indoor environment – this means when no condensation is formed on the hardware components or occasional condensation can quickly dry off – the electrolytically applied zinc coatings of the hardware are not attacked.
- If condensation does not dry, it could lead to corrosion on the surface of the hardware components.
- Ventilate the hardware and folding areas, in particular, during the storage and construction phase in such a way that they are neither exposed to direct moisture nor condensation formation.
- Ensure that permanently humid indoor air is unable to condensate in the bearing and folding areas.

**i NOTE**

- Practise impact ventilation for the prevention of condensation formation, open all windows for approx. 15 minutes several times a day especially during the construction phase.
- Ensure adequate ventilation – even when you are not there.
- In case of complex construction projects, create a ventilation plan.

**1.9.2 Protection against contamination**

Keep the hardware free from deposits and dirt. Remove any contamination with plaster, mortar or similar materials before they become hard with water during the construction phase.

**1.9.3 Protection against aggressive, acidic cleaning agents**

Only clean the hardware with mild, diluted pH-neutral cleaning agents.

**1.9.4 Protection against surface treatment materials**

For surface treatment of the windows and patio doors - e.g. when painting or glazing, remove all hardware components and protect them from any stains which may result from this treatment.

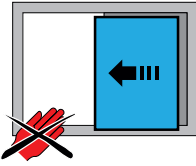
**1.9.5 Cleaning intervals in regions with increased wear and tear due to environmental factors**

In regions exposed to high environmental stresses such as dust, sand and salt, clean the fittings twice a year with grease/corrosion inhibitor.

3 HS Lift and sliding doors

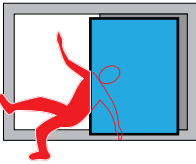


### 3.1 Safety notes



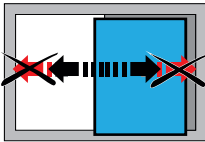
#### **Danger of injury due to parts of the body getting caught in the opening gap between sash and frame**

- When closing windows and patio doors, never place your hand between the sash and the frame and always proceed with caution
- Children and people who are unable to assess the hazards must be kept away from areas of danger



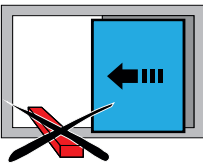
#### **Risk of injury from falling out of open windows and patio doors**

- Proceed with caution in the vicinity of opened windows and patio doors
- Children and people who are unable to assess the hazards must be kept away from areas of danger



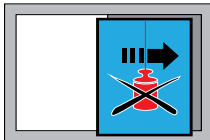
#### **Danger of injury and material damage due to pressing the sash against the edge of the opening (window reveal) and uncontrolled opening and closing of the sash**

- Do not push the sash against the edge of the opening (window reveal)
- Ensure that the sash is slowly guided by hand throughout the entire movement until the opening or closing positions are reached



#### **Placing objects in the opening gap between the sash and the frame may result in injury or material damage**

- Do not place objects in the opening gap between the sash and the frame



#### **Danger of injury and material damage due to additional load on the sash**

- Do not subject the sash to additional loads

**i NOTE**

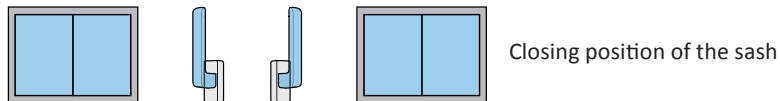
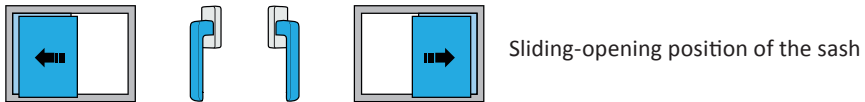
- Check all hardware components within the safety-related areas for faultless condition and faultless functioning. Bearings of the rollers and guiding rolls must always be scrupulously clean and smooth-running.
- If the lift-slide element has not been opened for a longer period, it may be subject to stiffness. Therefore, do not open stiff sashes or hardware elements using jerks or force, instead determine and rectify the cause of the stiffness.
- Lubricate hardware components regularly according to schedule on page 23.
- Check the running and guiding rail for contamination regularly and clean if necessary.
- Close the lift-sliding elements and keep closed if it is windy or raining.
- Spray the outside moving hardware components completely with a multi-purpose oil e.g. WD 40 or an equivalent oil.
- Grease or oil all roll pins using an acid-free and resin-free grease or oil.
- Only clean the lift-slide element with mild, diluted pH-neutral cleaning agents.
- Never use aggressive, acidic or abrasive cleaning agents as they could damage the corrosion protection of the hardware components.
- We explicitly wish to point out that the inside or outside hardware components must be cleaned at regular intervals; in particular, the guiding rail and running rail must be kept clean to ensure trouble-free use.

### 3.2 Disclaimer of liability

We assume no liability for functional disorder or damage to the hardware and or to the fitted lift-side elements if:

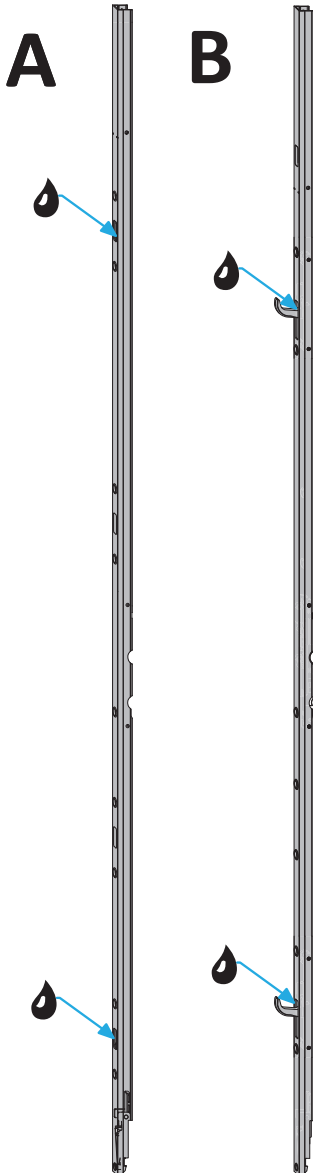
- the assembly is not undertaken in accordance with our assembly instructions and generally recognised technical standards and regulations.
- The hardware is damaged through the application of force, misuse or external influences.
- Unauthorised modifications have been made to the hardware.
- Hardware components originating from other ranges or other manufacturers, which have not been approved, are also used; this also applies to hardware component combinations with different surface finishes that have not been approved.
- The hardware has not been serviced at least once a year in accordance with our maintenance instructions.
- The end customer has not been informed of these maintenance instructions and given appropriate instruction.

### 3.3 Operating instructions



### 3.4 Service notes

#### 3.4.1 Lubrication of the gear parts



Grease or oil all the components shown here.  
Use only acid-free and resin-free grease or oil.



= lubrication point

- Work on these components may only be carried out by a specialist company in the window sector
- Observe the warning notes in case of visible defects

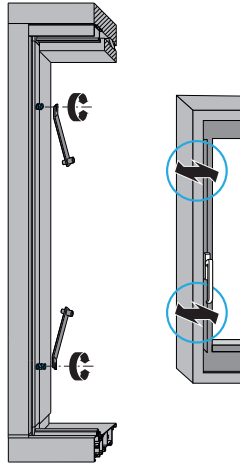
A = latch bolt gear

B = hook bolt gear

3.4.2 Adjustment of adjustable hardware components

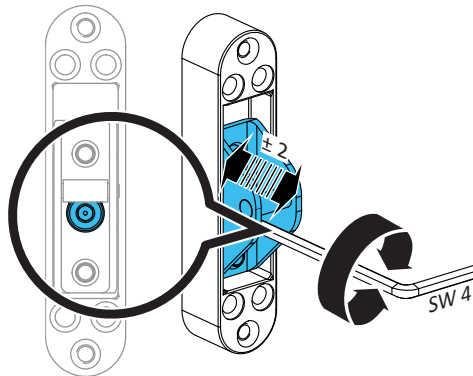
The adjustments may only be carried out by a specialist company in the window sector!

Latch bolt gear: adjust vertical sealing pressure

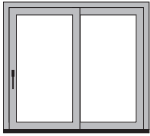


timber profiles only!

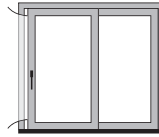
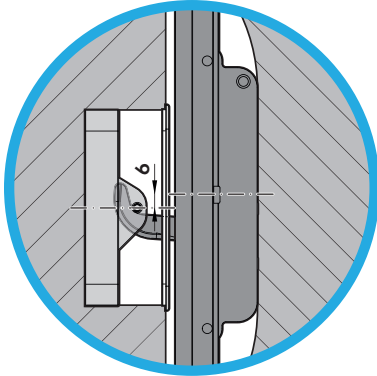
Hook bolt gear: adjust vertical sealing pressure



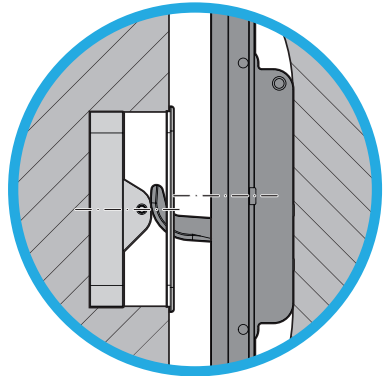
Hook bolt gear: sash adjustments



Locking position



Ventilation gap position

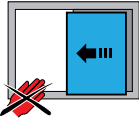




#### 4 PS/PSK parallel sliding and slide-tilt doors

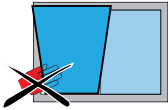


#### 4.1 Safety notes



**Danger of injury due to parts of the body getting caught in the opening gap between sash and frame**

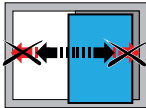
- When closing windows and patio doors, never place your hand between the sash and the frame and always proceed with caution
- Children and people who are unable to assess the hazards must be kept away from areas of danger



**Risk of injury from falling out of open windows and patio doors**

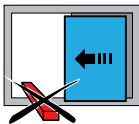


- Proceed with caution in the vicinity of opened windows and patio doors
- Children and people who are unable to assess the hazards must be kept away from areas of danger

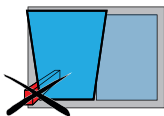


**Danger of injury and material damage due to pressing the sash against the edge of the opening (window reveal) and uncontrolled opening and closing of the sash**

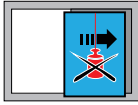
- Do not push the sash against the edge of the opening (window reveal)
- Ensure that the sash is slowly guided by hand throughout the entire movement until the opening or closing positions are reached



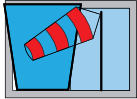
**Placing objects in the opening gap between the sash and the frame may result in injury or material damage**



- Do not place objects in the opening gap between the sash and the frame

**Danger of injury and material damage due to additional load on the sash**

- Do not subject the sash to additional loads

**Risk of injury and material damage due to wind**

- Do not allow open sashes to be blown around by the wind
- Make sure to close and lock windows and patio door sashes if it is windy or if there is a draught

**i NOTE**

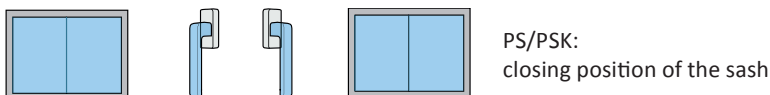
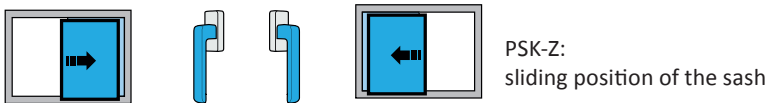
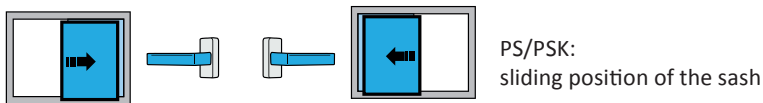
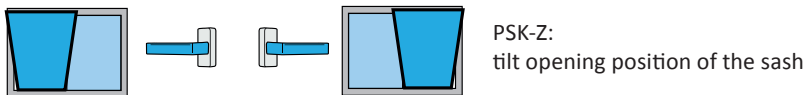
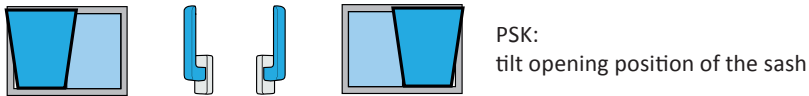
- Check all hardware components within the safety-related areas for faultless condition and faultless functioning. Bearings of the rollers and guiding rolls must always be scrupulously clean and smooth-running.
- If the parallel-sliding element has not been opened for a longer period, it may be subject to stiffness. Therefore, do not open stiff sashes or hardware elements using jerks or force, instead determine and rectify the cause of the stiffness.
- Lubricate hardware components regularly according to schedule on page 31, 32, 33.
- Check the running and guiding rail for contamination regularly and clean if necessary.
- Close the parallel-slide elements and keep closed if it is windy or raining.
- Spray the outside moving hardware components completely with a multi-purpose oil e.g. WD 40 or an equivalent oil.
- Grease or oil all roll pins using an acid-free and resin-free grease or oil.
- Only clean the parallel-slide element with mild, diluted pH-neutral cleaning agents.
- Never use aggressive, acidic or abrasive cleaning agents as they could damage the corrosion protection of the hardware components.
- We explicitly wish to point out that the inside or outside hardware components must be cleaned at regular intervals; in particular, the guiding rail and running rail must be kept clean to ensure trouble-free use.

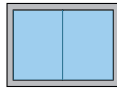
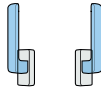
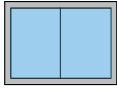
**4.2 Disclaimer of liability**

We assume no liability for functional disorder or damage to the hardware and or to the fitted parallel sliding elements if:

- the assembly is not undertaken in accordance with our assembly instructions and generally recognised technical standards and regulations.
- The hardware is damaged through the application of force, misuse or external influences.
- Unauthorised modifications have been made to the hardware.
- Hardware components originating from other ranges or other manufacturers, which have not been approved, are also used; this also applies to hardware component combinations with different surface finishes that have not been approved.
- The hardware has not been serviced at least once a year in accordance with our maintenance instructions.
- The end customer has not been informed of these maintenance instructions and given appropriate instruction.

**4.3 Operating instructions**

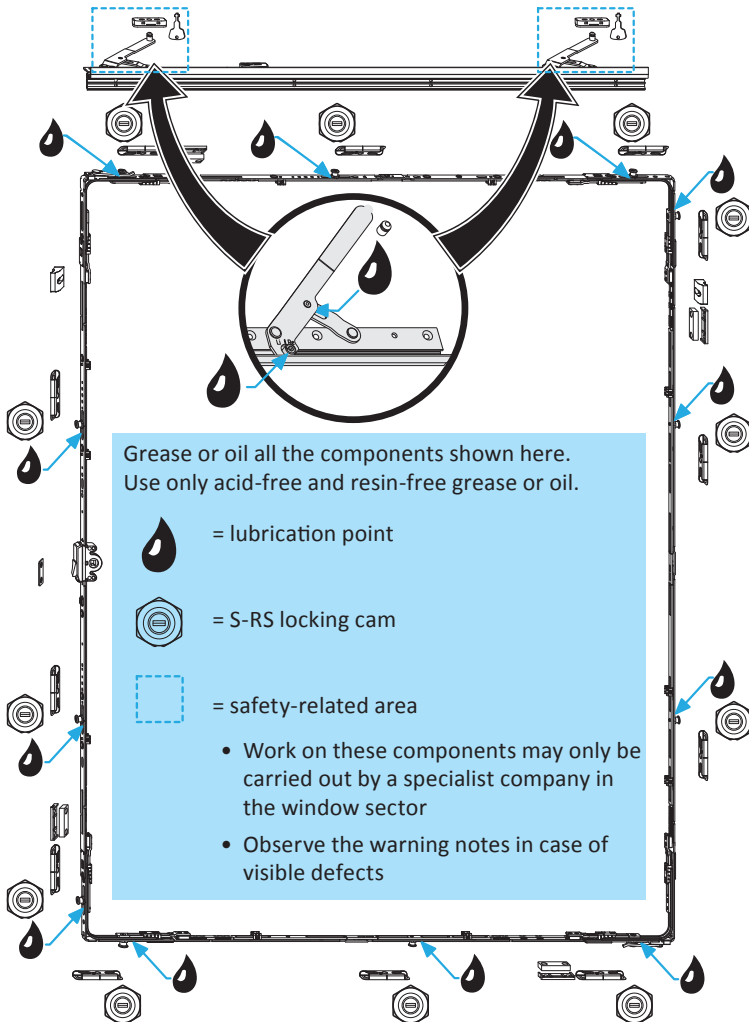




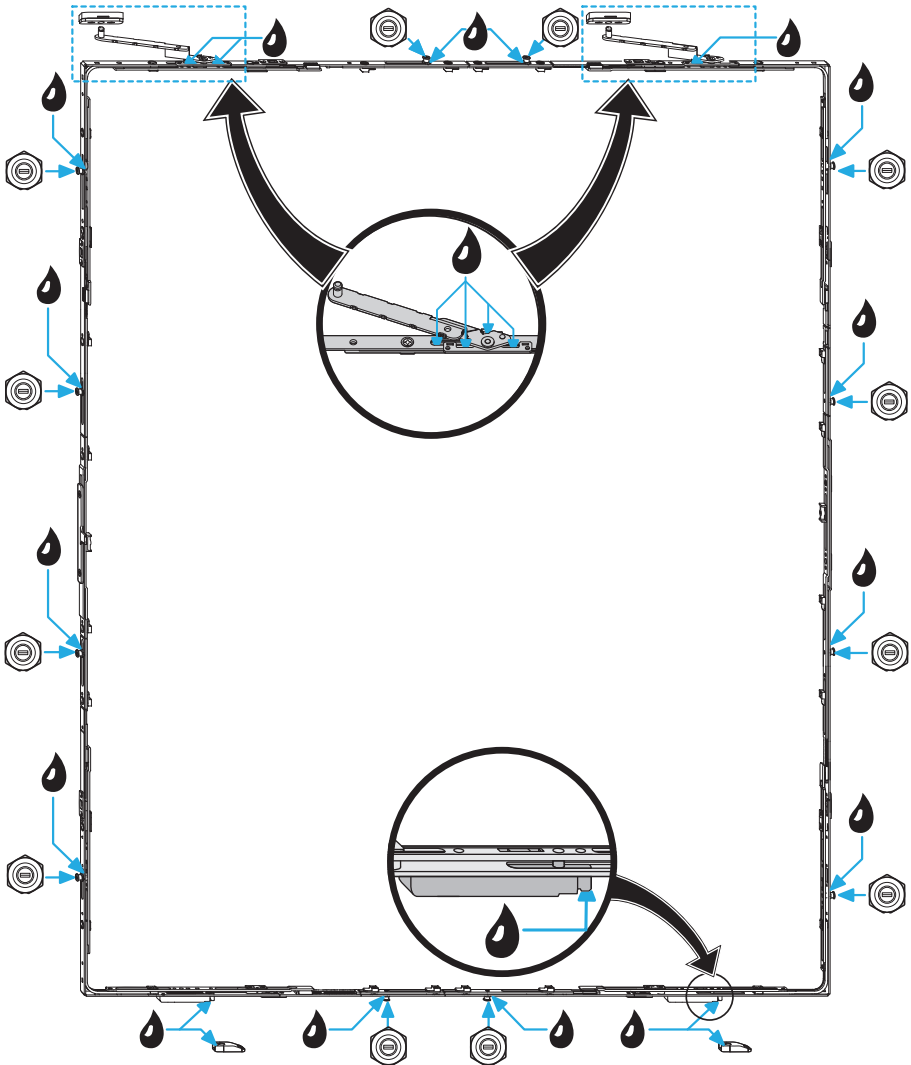
PSK-Z:  
closing position of the sash

## 4.4 Service notes

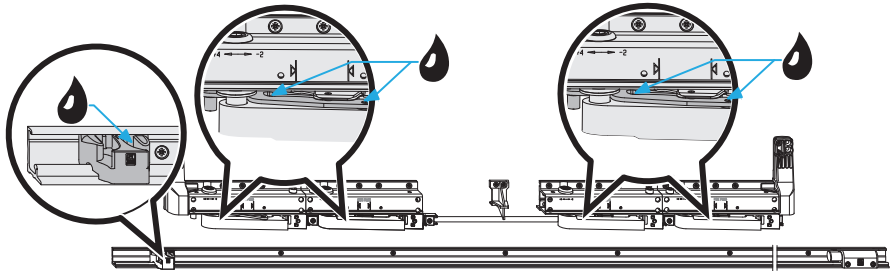
### 4.4.1 Lubrication of the hardware components PS/PSK\*



4.4.2 Lubrication of the hardware components PSK-Z\*



#### 4.4.3 Lubrication of the bogie wheels\*

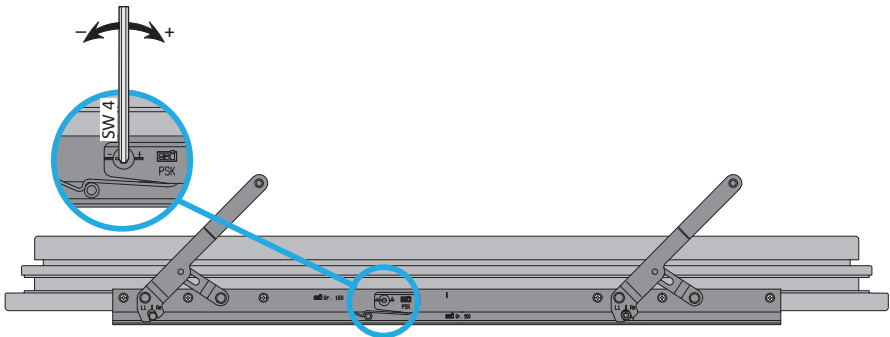


\*The figures are examples. The provided hardware may differ.

#### 4.4.4 Adjustment of adjustable hardware components

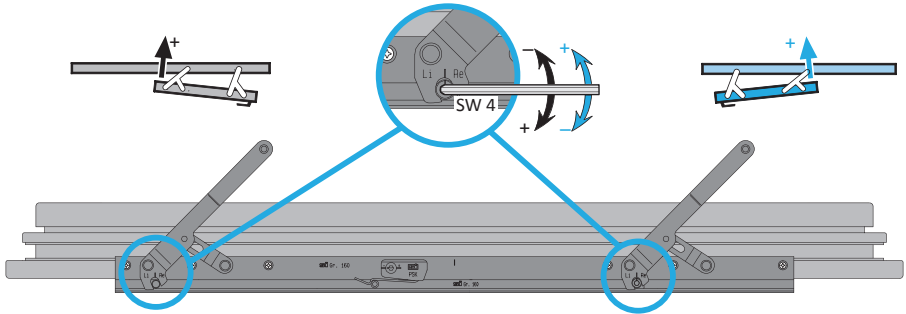
The adjustments may only be carried out by a specialist company in the window sector!

Tilt stay: adjustment of the locking effect



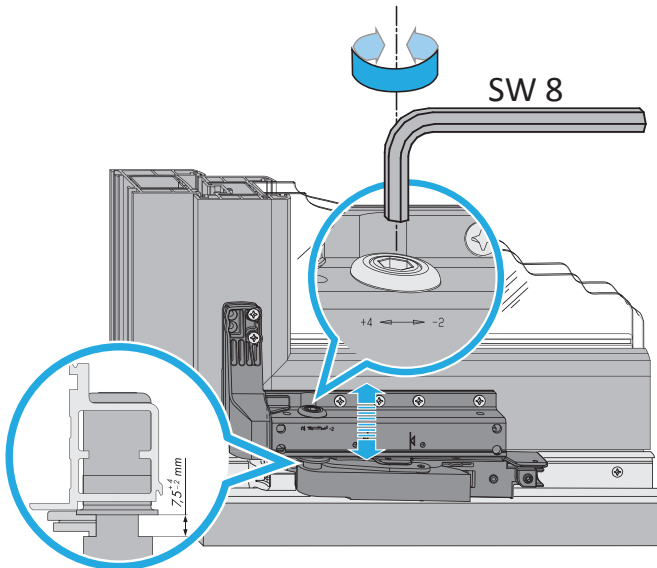
Check the locking effect and readjust if necessary. The maximum adjustment range must not be exceeded.

**Tilt stay: adjustment of the preliminary pressure**

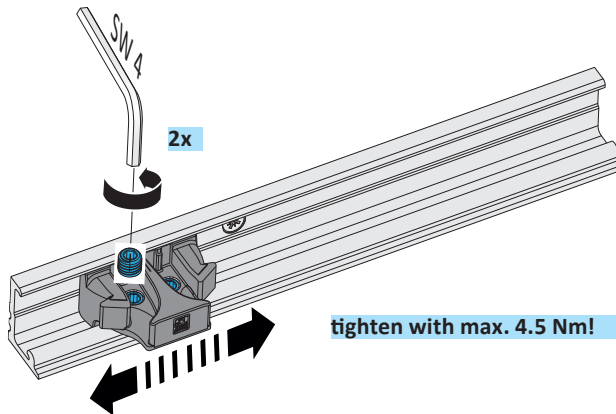


Check the preliminary pressure and readjust if necessary. The maximum adjustment range must not be exceeded.

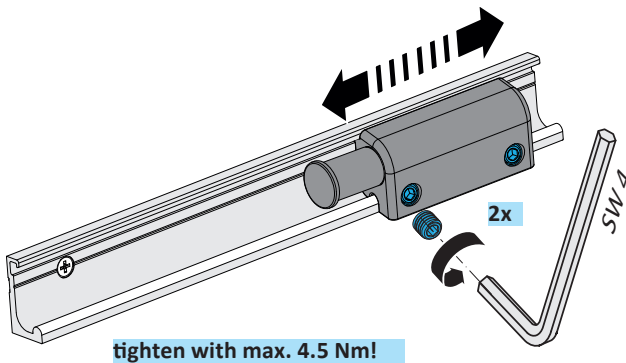
**Bogie wheels: adjust the height of the sash**



The adjustment screw is self-locking.

**Bogie wheels: centering the sash inlet**

Loosen the head cap screws. Slide the locking part sideways. Tighten the head cap screws again (max. 4.5 Nm).

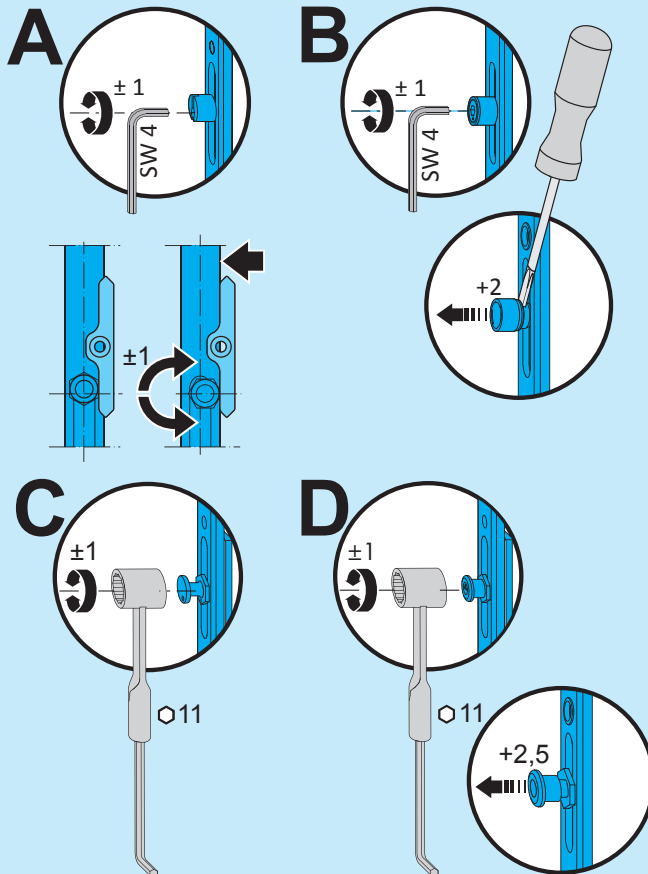
**Bogie wheels: offsetting the stop for the sash**

Loosen the head cap screws. Slide the stop sideways. Tighten the head cap screws again (max. 4.5 Nm).



Adjustment of basic hardware

Adjust locking cam:



- A = Standard locking cam
- B = Comfort roll pin
- C = S-ES locking cam
- D = S-RS locking cam