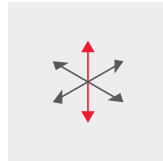
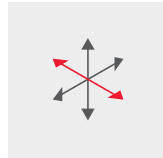


#### Symbols for the sash adjustment when installed

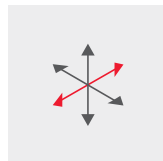
These symbols facilitate the orientation while adjusting the window sashes after installation with the following steps. Use a 4 mm hex key as tool.



**Height adjustment**



**Lateral adjustment**



**Gasket-compression adjustment**



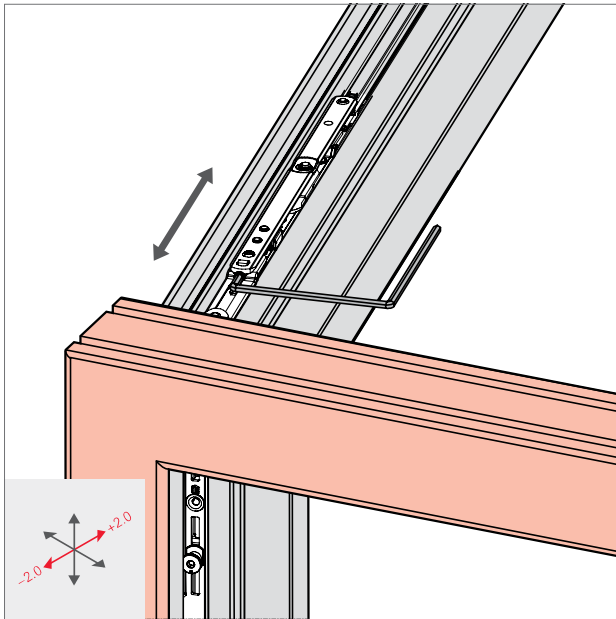
**NOTE!**

Adjusting Roto hardware components may only be carried out by authorised and qualified personnel.

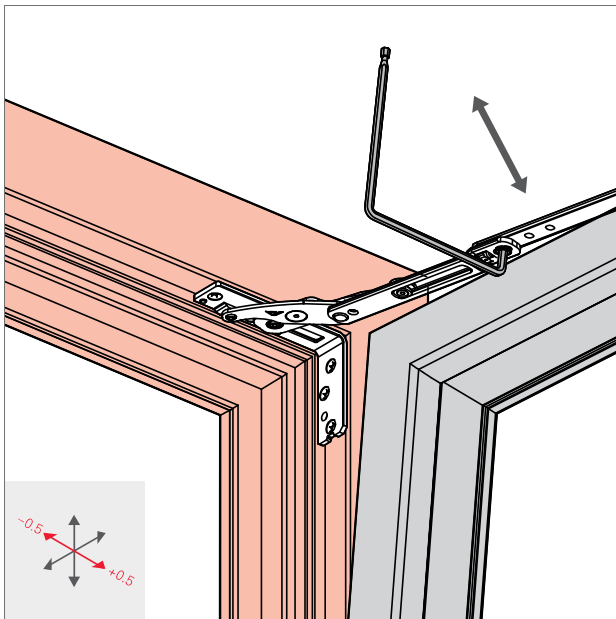


**NOTE!**

The stated values in the adjustment instructions chapter are maximum values. These must be adhered to.



**Lateral adjustment**

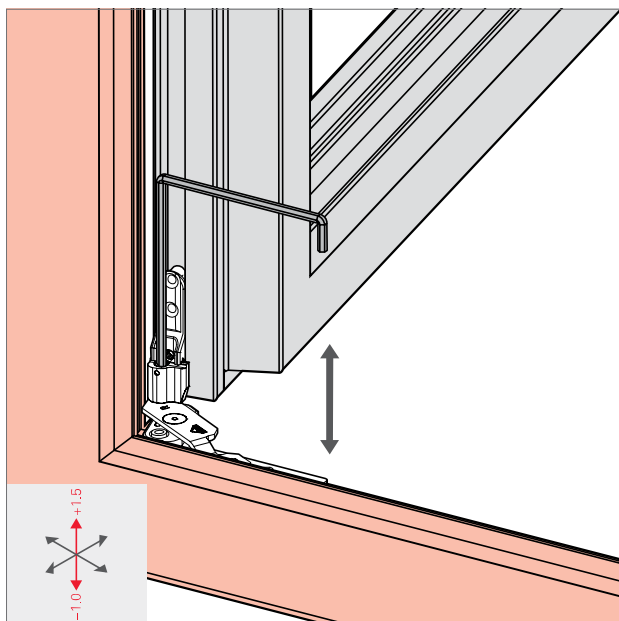


**Gasket-compression adjustment**

## Adjustment

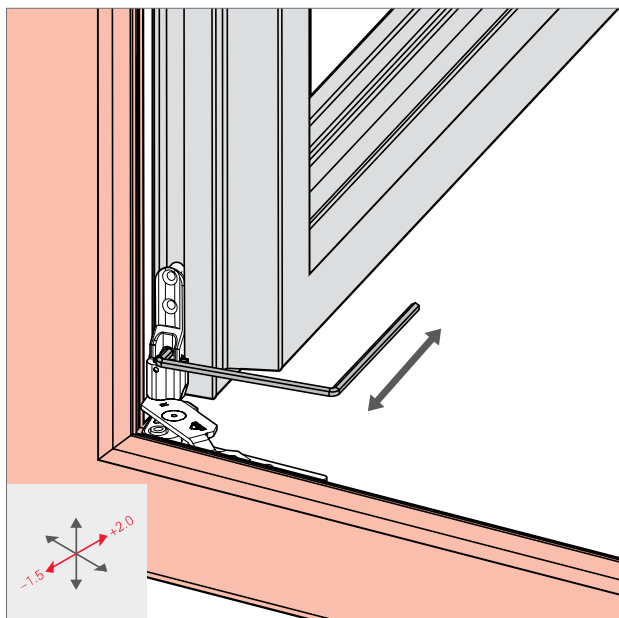
### Adjustment instructions

Pivot rest / corner hinge

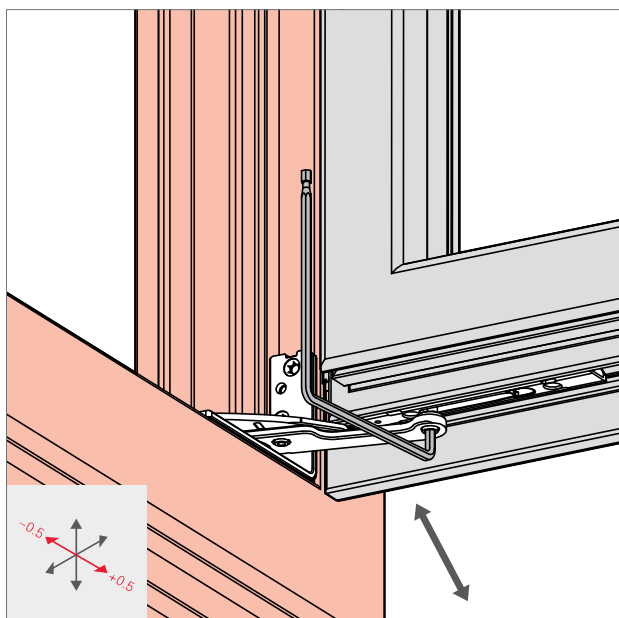


#### Height adjustment

After the height adjustment, the load transfer device has to be readjusted (refer to page 71).



#### Lateral adjustment



#### Gasket-compression adjustment



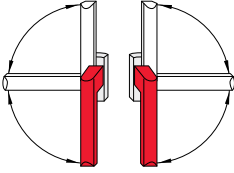


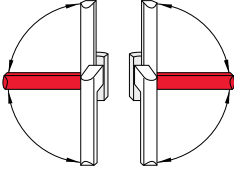


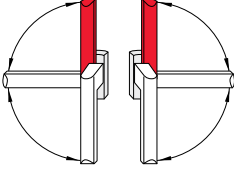


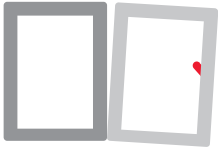

Locking cam adjustment instructions						
Cam type	Adjustment range	Gasket-compression	Height	Side view		Tools
<b>E cam</b>						
	90°	$\pm 0.8 \text{ mm}$				
<b>P cam</b>						
	90°	$\pm 0.8 \text{ mm}$				
<b>V cam</b>						
Cam type	Adjustment range	Gasket-compression adjustment in mm	Height adjustment in mm	Side view / top view		Tools
	90°	$\pm 0.8 \text{ mm}$	$\pm 0.2 \text{ mm}$			
	180°	-	$\pm 0.4 \text{ mm}$			
	270°	$\pm 0.8 \text{ mm}$	$\pm 0.6 \text{ mm}$			
	360°	-	$\pm 0.8 \text{ mm}$			

## Operation

### Operating information

Handle positions of Tilt&Turn hardware


The following symbols show the different handle positions and the resulting sash positions of windows and balcony doors.

Handle position	Sash position	Symbol	Meaning
			Closed position of the sash.
			Opened turn position of the sash.
			Opened tilt position of the sash.
			Malpositioning of the sash.



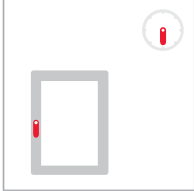
The following symbols and signs can be used on windows and balcony doors to protect the end-user.

Please order stickers separately (OPR\_14\_DE-EN, OPR\_15\_DE-EN).

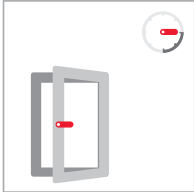


**Drehkipp-Beschlag**  
Tilt&Turn hardware

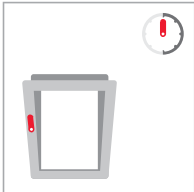
**geschlossen**  
closed



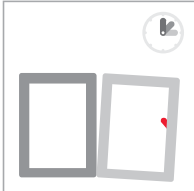
**öffnen**  
open



**kippen**  
tilt



**Fehlschaltungen vermeiden**  
Avoid mishandling mode!



08/2012 OPR\_14\_DE-EN\_v1



**TiltFirst-Beschlag**  
TiltFirst hardware

**geschlossen**  
closed



**kippen**  
tilt



**öffnen**  
open



**Fehlschaltungen vermeiden**  
Avoid mishandling mode!



08/2012 OPR\_15\_DE-EN\_v1

**Troubleshooting**

Problem	Cause	Corrective action	Specialist company	End-users
Handle is difficult to rotate.	– Frame parts are not properly greased.	– Grease frame parts.	<input type="checkbox"/>	<input type="checkbox"/>
	– Faulty handle.	– Replace the handle.	■	–
	– Handle screws are screwed in too strong.	– Slightly loosen the screws.	■	–
	– Oblique screws in the sash parts.	– Straight screw-fixing of the sash parts.	■	–
	– Faulty sash parts.	– Replace the sash parts.	■	–
	– Incorrect strikers.	– Replace strikers.	■	–
	– Sash stay gasket compression too strong (accumulation of gaskets).	– Adjust or reduce the sash stay gasket compression.	■	–
Handle can not rotate 180°.	– Faulty hinging or installation of sash parts.	– Check adjustment in turn position (if necessary, rehing the sash proceeding from T&T espagnolette).	■	–
	– Faulty striker locations.	– Adjust the striker locations.	■	–
In turn mode, the sash falls into tilted position.	– Too much clearance on top.	– Check corner hinge location. – Check pivot rest location. – Raise the corner hinge. (Attention: tilt striker)	■ ■ ■	– – –
In tilt mode, the sash falls into turning position.	– Faulty tilting component.	– Replace tilting component.	■	–
Sash is rubbing in tilt mode.	– Insufficient clearance on top.	– Lower the corner hinge. (Attention: tilt striker!)	■	–
Locking cams rubber at striker.	– Faulty hinging of the sash.	– Rehing the sash.	■	–
	– Faulty striker locations.	– Adjust the striker locations.	■	–

■ = To be carried out **only** by a specialist company.

– = **Not** to be carried out by the end-user; the end-user may not carry out installation work!

□ = To be carried out either by a specialist company or by the end-user