



Tilt&Turn hardware

Operation and maintenance instructions







Tilt&Turn hardware



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1. Safety instructions

1.1 Explanation of warning symbols

A DANGER

DANGER denotes a dangerous situation which, if ignored, could lead to death or serious injury.

MARNING

WARNING denotes a dangerous situation which, if ignored, could lead to death or serious injury.

A CAUTION

CAUTION denotes a dangerous situation which, if ignored, could lead to injuries.

ATTENTION

ATTENTION denotes a situation which could lead to property damage.

NOTE

NOTE denotes a statement which is provided for information only.

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1.2 Safety instructions





Risk of falling out of the window when open! Do not leave the window unattended when it is open!





Risk of crushing and entrapment.

Be sure that all limbs are clear of the area between the sash and frame when closing the window.





Risk of injury from an uncontrolled movement of the sash in Turn-Only position caused by a gust of wind.

Do not leave the window open in windy weather nor wedge the sash in its Turn-Only position.





Damage to the window caused by opening the sash too wide.

Do not push the sash against the reveal.





Damage to the window caused by excessive loading of the sash.

Do not put any additional weight on the sash.





Damage to the window caused by objects.

Do not wedge or prop the sash by placing an object between sash and frame.

Window and balcony door manufacturers must draw the attention of building owners and end-users to the maintenance and care instructions.

We recommend that a service contract be concluded between the window fabricator and the building owner or end user.



2. Putting into operation

Make sure before commissioning that the hardware components are adequately cleaned and greased in accordance with the operating and maintenance instructions.

Contamination from building materials (builder's dust, gypsum plaster, cement, etc.) or similar materials must be removed before setting with water.

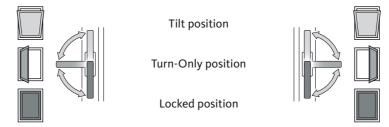
Observe the specifications in Chapter 4 "Maintenance and cleaning".

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3. Operation

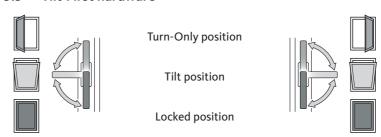
3.1 Tilt&Turn hardware



3.2 Tilt&Turn hardware with night ventilation



3.3 Tilt-First hardware





4. Maintenance and cleaning

4.1 Inspection

Check all safety-relevant hardware components are securely fastened and check for wear.

- Check whether the stay-bearing pin X (see "Greasing/lubricating the safety-relevant lubricating points D" see page 13) has been pushed in to the stop. If not, push this up to the stop by hand.
- Check for loose fixing screws. Have loose fixing screws retightened with a suitable tool.
 - Attention: avoid overtightening the screws when retightening!
- Have worn/defective hardware components or overtightened screws replaced by a specialist company.

It must always be possible to turn windows and balcony-doors into the frame without resistance. Sufficient ground clearance for threshold systems in particular must be ensured.

Have your window and balcony-door adjusted by a specialist company if necessary.

	Specialist company	End user
Check security-relevant hardware components are securely fastened.		
Check security-relevant hardware components for wear.		
Check the function of all moving parts.		
Check the function of all locking points.		
Retighten fixing screws if required.		
Replace damaged screws.		
Replace parts if necessary.		
Grease all moving parts with a non-resinous acid-free grease from a specialist retailer.		
Grease locking parts with a non-resinous acid-free grease from a specialist retailer.		

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We recommend you regularly check the surface of the window and glazing for damage and repair if necessary.

The window and balcony-door gasket must not be coated or painted.



4.2 Maintenance

Tilt&Turn hardware by Gretsch-Unitas Baubeschläge GmbH is fitted to your windows/balcony-doors.

Windows and balcony-doors are subject to normal wear and tear.

Maintenance and care is decisive for smooth running of the window and balcony-door hardware and also the service life of your windows and balcony-doors.

If maintenance work is not carried out correctly this could lead to serious injury and/or property damage.

To ensure maintenance is carried out properly, please observe the following:

- Make sure there is enough room to carry out the assembly before starting work.
- Make sure the area around the window and balcony-doors is clean and tidy.
- Secure the window and the balcony-door to prevent it from opening or slamming shut uncontrollably.
- Do not unhang the sash when carrying out maintenance. The sash must be unhung and rehung by an expert.
- Check all hardware components at regular intervals for damage and warping. Pay particular attention to safety-relevant hardware such as central locking components and the built-in hinge side.
- Grease or oil all moving parts with a non-resinous acid-free lubricant.

The maintenance intervals which must be adhered to are listed in the following table:

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The maintenance intervals which must be adhered to are listed in the following table:

Maintenance interval	Safety-relevant lubricating point D (see hardware overview)	General lubricating point C (see hardware overview)		
Schools or hotels *	every 6 months	every 6-12 months		
Administrative or public buildings	every 6-12 months	annually		
Residential buildings	annually	annually		

^{*} In coastal regions or areas in which wind-borne sand is to be expected, we recommend maintenance be carried out every 3 months

Inspection and maintenance must be carried out according to the specifications and documented accordingly.

NOTE

If it cannot be verified that maintenance has been carried out, no guarantee will be provided.

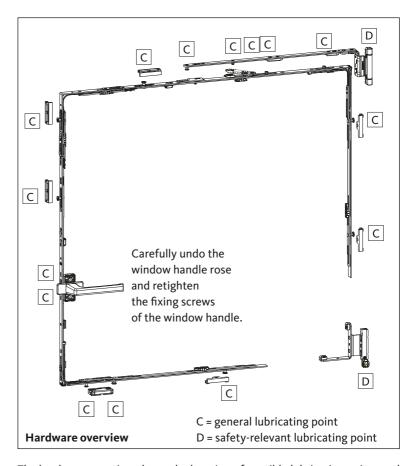
NOTE

Remove any discharged or excess grease at lubricating points and dispose of it in accordance with the applicable local regulations.

We recommend you conclude a service contract.

If the window cannot be operated safely because a fault has occurred, get in touch with an expert without delay.

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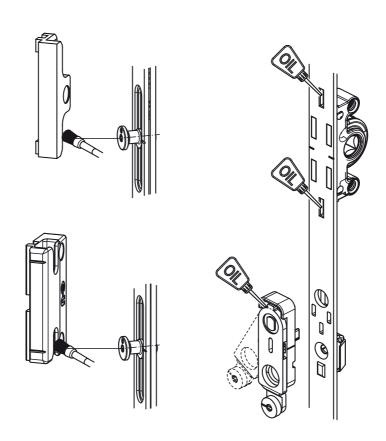


The hardware overview shows the location of possible lubricating points and does not necessarily accurately reflect the actual hardware installation. The number of lubricating points varies depending on the size and format of the window and balcony-door.

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Greasing/lubricating the general lubricating points C





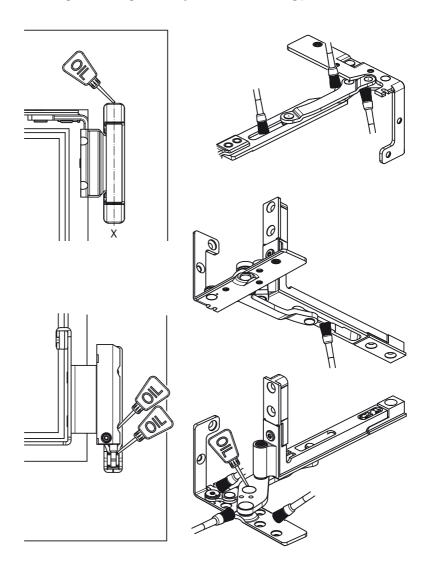
Lubricate (with a non-resinous acid-free oil)



Grease (with a non-resinous acid-free oil)



Greasing/lubricating the safety-relevant lubricating points D



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4.3 Care

Only use mild ph-neutral cleaner in diluted form for cleaning!

Never use sharp objects, scouring agents or aggressive cleaning detergents (e.g. vinegar or cleaners containing acid) as they could adversely affect the corrosion protection of the hardware!

During cleaning make sure that water does not enter the hardware.

Once you have cleaned the hardware, thoroughly dry it and gently oil the surface by wiping it with a soft lint-free cloth soaked in a non-resinous acid-free oil.

It is essential to avoid aggressive vapours, e.g. from acetic acid, ammonia, chlorine, tannic acid, etc, forming in the vicinity of the window and balconydoors.

Do not use vinegar or acid-curing sealants. These sealants and the vapours they produce may corrode the surface of the hardware.

Promptly remove all contamination, making sure no residue is left behind, as otherwise this could affect the function and surface protection of the hardware.

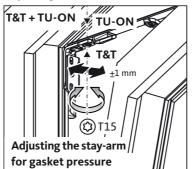
When applying a surface treatment by painting or varnishing the window and balcony-doors, avoid the hardware components and prevent these from contamination by the treatment described above.

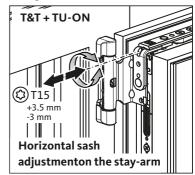


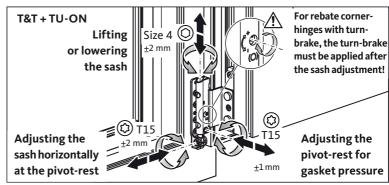
4.4 Settings

Adjusting a sash with surface-mounted hinge-side (UNI-JET D, S and M)

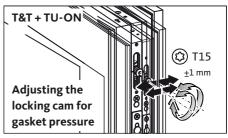
TU-ON =
Turn-Only sash
T&T =
Tilt&Turn sash







We recommend that any later adjustments on the sash be carried out by a specialist.

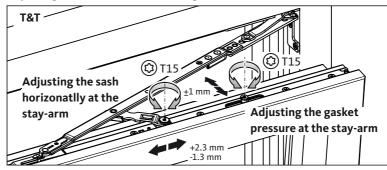


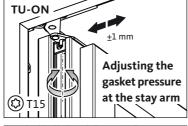
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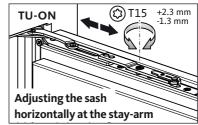


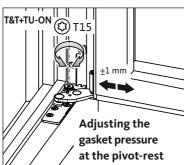
TU-ON =
Turn-Only sash
T&T =
Tilt&Turn sash

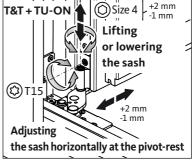
Adjusting a sash with concealed hinge-side (UNI-JET SCF)











We recommend that any later adjustments on the sash be carried out by a specialist.

Adjusting the gasket pressure at the locking cam



4.5 Warranty

Always heed the safety instructions and maintenance and operation requirements.

These requirements and instructions must be strictly observed as otherwise warranty claims may not be recognised.

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5. Taking out of operation and disposal



Observe the safety instructions in the installation drawing!

The procedure is the same as that shown in the installation drawing, but in reverse.

No adjustment work is required.

Dispose of the product according to statutory rules and regulations.





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