ALUTECH
PROFILE SYSTEMS

Operation and Maintenance Manual for Windows and Doors

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This manual includes recommendations and requirements for care and maintenance of windows and doors of systems ALT BF73, ALT C43, ALT C48, ALT SL160, ALT W62 and ALT W72 to be followed for correct operation and serviceability of the product during use.

This manual is an integral part of the product provided by its installer to the user and shall be stored in a safe place for access and acknowledgement up to the disposal of the product.

In case the user fails to comply with the recommendations and requirements included in this manual, the user shall be fully liable for all possible damage and consequences associated.

1.1. Information about the product

Structures of windows and doors made of aluminium profiles are intended for use in residential, public and industrial buildings and premises where a normal temperature and humidity regime is maintained.

Open door leaves and window sashes in the unlocked/tilt position have merely basic functions and do not meet requirements set for tightness of joints, sound insulation, thermal insulation, waterproofing and protection against break-ins.

During closing, resistance of the window gasket is normal. Other forms of resistance are beyond the norm.

To close the windows and doors, use only the hardware installed as follows this manual.

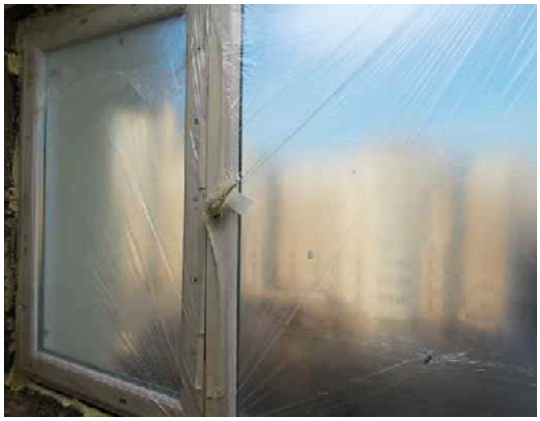
The windows and doors shall be installed vertically. Installation of windows and doors of systems ALT BF73, ALT C43, ALT C48, ALT SL160, ALT W62 and ALT W72 in the tilt position shall be excluded.

1.2. Actions following the installation

Remains of mortar and drilling chips damage the external surfaces of elements of windows and doors and interfere with the correct operation of the window/door. To avoid such situations, upon installation of the unit, immediately remove the associated waste from the surface of the frame and all moving elements. For proper cleaning of the product, follow the instructions provided in Section 4 (Care and maintenance).

Remove the protective film from the external and internal side of the unit within 10 days following the installation. The adhesive agent of the protective film is sensitive to weather and sunlight, so, upon expiration of the above period, removal of the film can be problematic or even impossible.

Within 24 hours following the installation, keep the unit in the closed position—this period is necessary for proper polymerization of compounds of the joint. During finishing of front surfaces of window and door openings (overcoating, painting, etc.), the product shall be CLOSED. Take measures to protect the product from contacts with building materials. Protect the surfaces of the unit with masking tape; cover all joints, hinges, handles and locks with packing film.

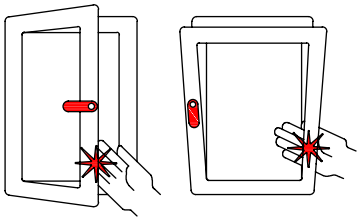


Omission of the above actions following the installation makes the manufacturer's warranty void.

1.3. Warnings about risks to health/property

In the course of use of the windows and doors, dangerous situations entailing material damage and injuries may emerge. The information below is to prevent these situations.

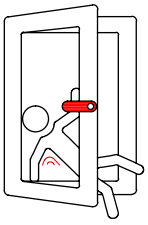
a)



Risk of crush

Crushing of body parts between the frame and the sashes creates risk of injuries.

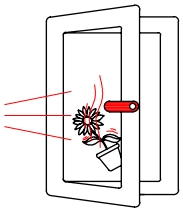
b)



Risk of fall of children and adults

An open sash in the turn position is an area of increased risk of fall. Do not leave open windows unattended. Use protective devices (such as locking window handles) to limit access for children or people with disabilities.

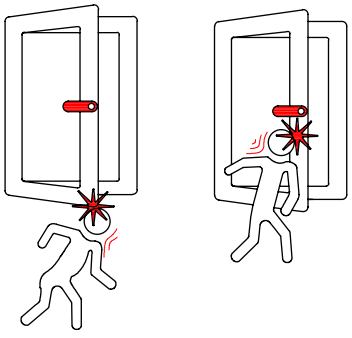
c)



Risk of drop of objects

An open sash can be closed by draft and carry foreign objects. A dropped object can get damaged or injure people.

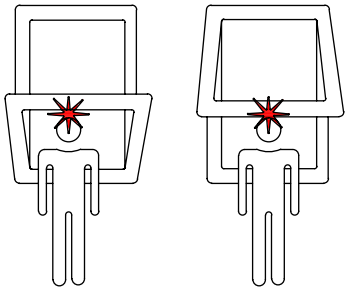
d)



Risk of injury created by open sashes

Open sashes (sharp corners, leaves, handles, etc.) create risk of injury. Close the sashes during any indoor activity near the window. Besides, keep the sashes closed when there are children in the room.

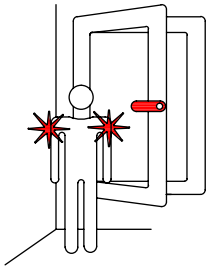
e)



Risk of injury created by sudden opening of sashes elements

By unlocking of the stopping system, tilting elements of the sashes can suddenly open/close.

f)



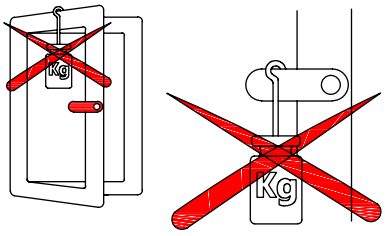
Risk of injury between the side edge of the leaf and the wall

The area between the wall and the edge of the window/door is an area of increased risk of injury. Close the leaf during any indoor activity near the window/door.

1.4. Warnings about risks of damage of the product

In the course of use of the windows and doors, dangerous situations entailing damage of the product and possible injuries may emerge. The information below is to prevent these situations:

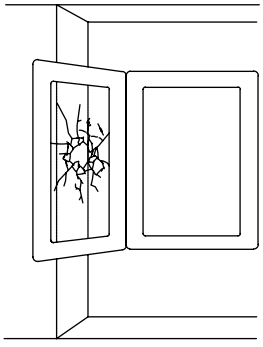
a)



Do not overload the sash or handle.

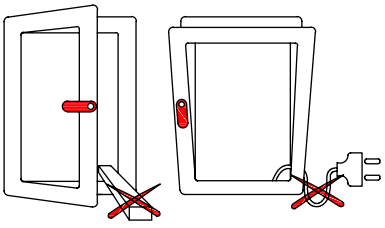
Additional load can cause deformation of elements of the frame or break of the handle.

b)



Avoid big horizontal pressure or collision between the sash and the window jamb.

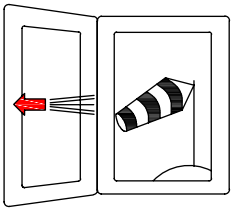
c)



Do not put foreign objects between the window/door leaf and frame.

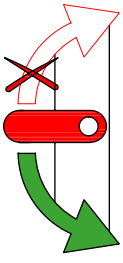
Bars, wires and other foreign objects can damage or deform the profile or fixing elements or cause incorrect operation of the hardware.

d)



Do not leave the sashes open in case of strong wind.

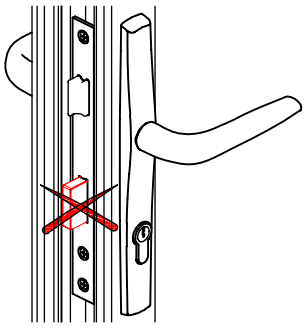
e)



Turn handles in the intended direction only.

Use the handles of elements in the direction indicated in the manual for the actual model of the window/door and until stop only. Otherwise, handles and mechanisms can be damaged.

f)



Do not close the window/door with the lock bolt extended.

It can cause damage of the window/door frame and deformation of the lock elements.

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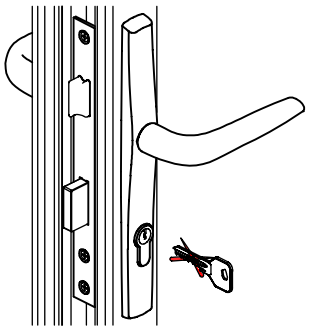
g)



Do not apply efforts when the operation of the lock is poor or hard.

The lock mechanism or the key in the lock can be damaged.

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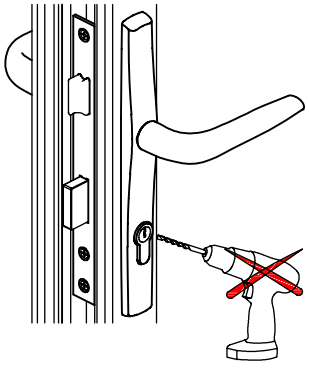
h)



Avoid operations with the lock cylinder installed.

Damage or failure of the latch is possible.

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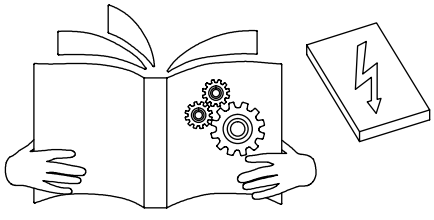
i)



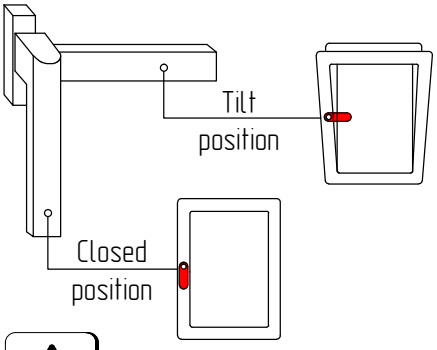
For correct operation and avoidance of risks of injury, study manuals provided by the manufacturers of the mechanical/automatic drives enclosed in the product documentation.

2.1. Window types

Perform any operation with the window handle without extra efforts and with the closed sash only. Limiters (stops) for maintenance of the windows shall be removed by specialists only!

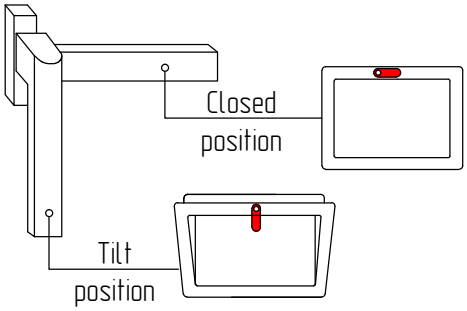
2.1.1. Tilt windows

Variant 1 (Roto)

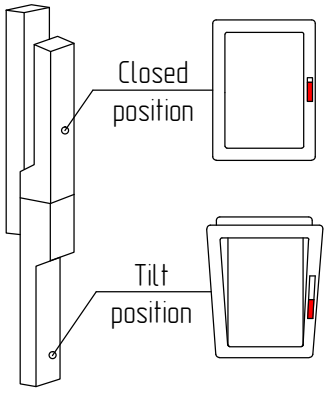


The handle has no upward position.

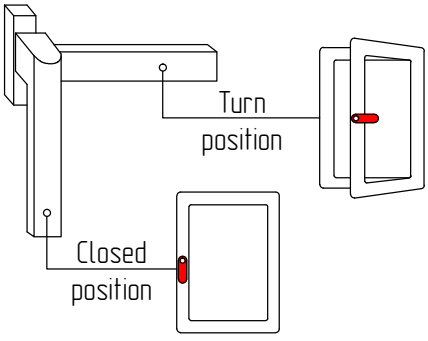
Variant 2



Variant 3 (Stublina)

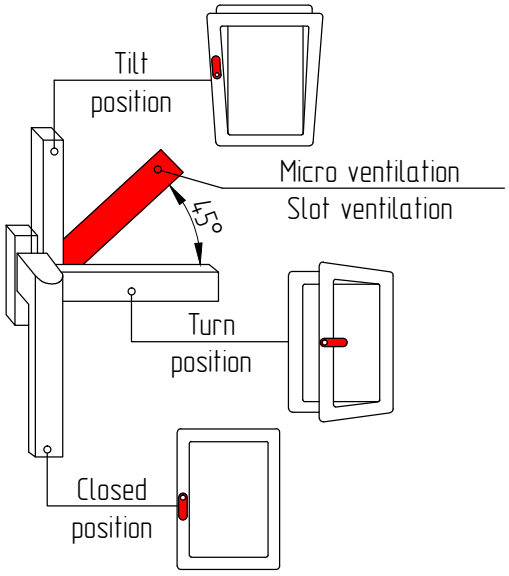


2.1.2. Turn windows



The handle has no upward position.

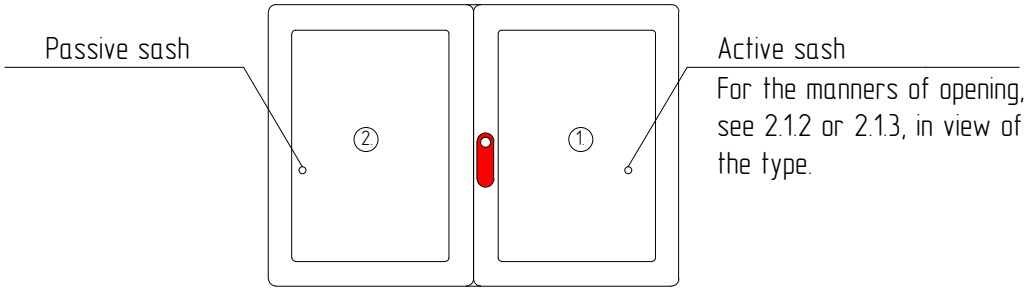
2.1.3. Tilt and turn windows



Avoid incorrect position of the handle by closing of the sash. Release of the upper hinge is possible!

2.1.4. Double-sash window

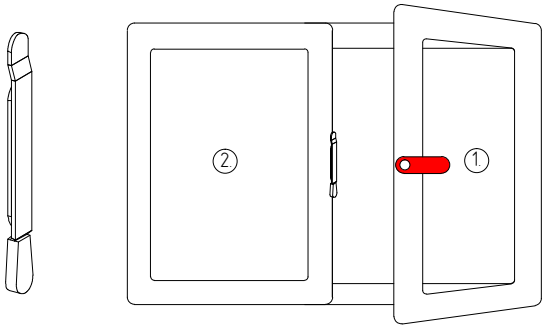
1. Window closed position



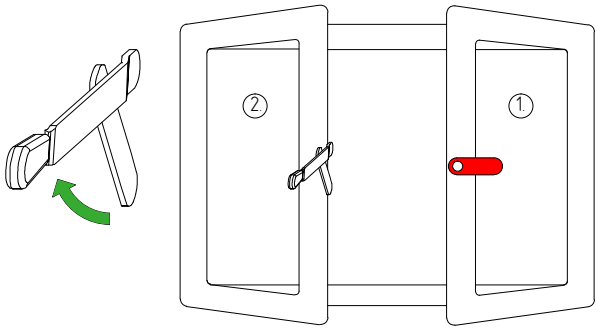
The passive sash (2) opens with the turn position of the active sash (1) only!

Variant 1 (Roto)

2. Closed position of the passive sash (2).
Turn position of the active sash (1).



3. Open position of the passive sash (2).

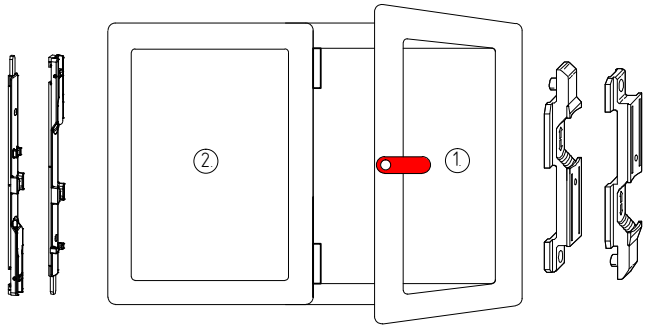


Step 1. Turn the lock 90° upwards.

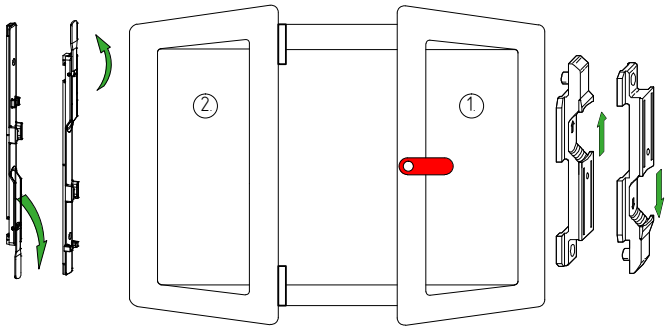
Step 2. Open the passive sash (2).

Variant 2

2. Closed position of the passive sash (2).
Turn position of the active sash (1).



3. Open position of the passive sash (2).



Step 1. Unlock the catches.
Turn the tongues downwards and upwards.

Step 2. Open the passive sash (2).

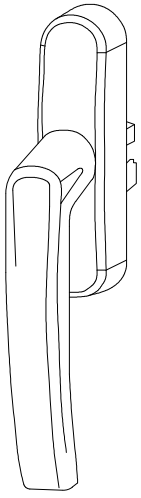
To close the sashes, inverse the procedure.

2.2. Window hardware

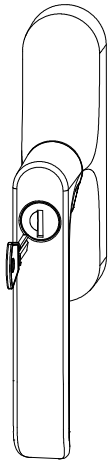
2.2.1. Window handles

Roto Line without rosette
Stublina 1002
Stublina 1112

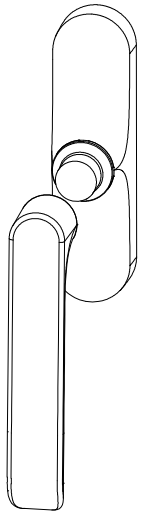
Roto Samba
–
–



Roto Line
Stublina 1001
Stublina 1101

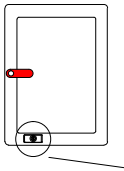


Locking
–
Stublina 1103

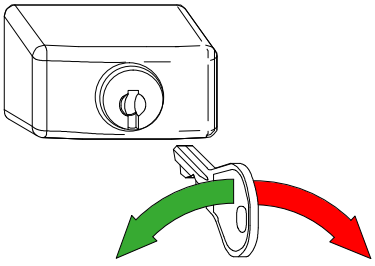


With removable handle
–
Stublina 1105

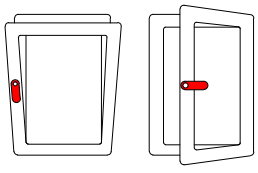
2.2.2. Locking device



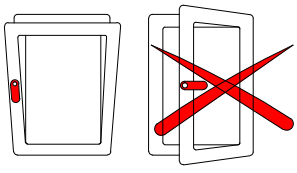
When the locking device is enabled, the turn position of the sash is locked. Only the tilt position of the sash is available.
When the locking device is disabled, all positions of the sash are available.



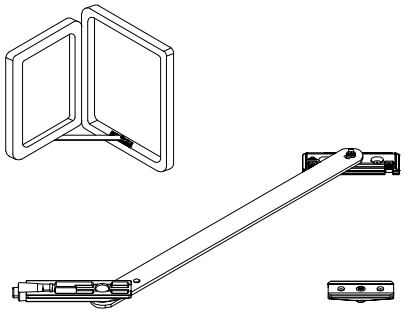
Step 1. The turn position is unlocked.



Step 2. The turn position is locked.



2.2.3. Opening limiter

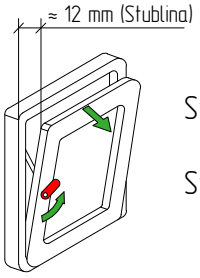


The opening limiter is used to limit the window opening angle in the turn position to 90°. The opening limiter prevents spontaneous moving of the sash from draft. The opening limiter needs no lubrication or service.

The limiter shall be removed by specialists only!

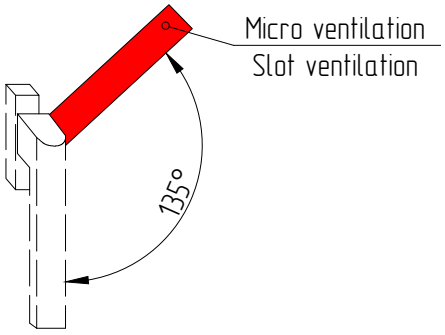
2.2.4. In-built micro ventilation (slot ventilation) device

The micro ventilation device built in the turn and tilt hardware ensures inflow of fresh air into the premises without draft/ penetration of water.
To get the window in the micro ventilation position, follow the below procedure:



Step 2. Pull the sash with the handle.

Step 1. Turn the handle 135° upwards relative to the closed position.

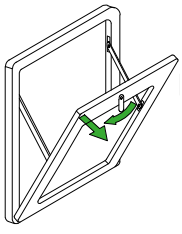


To close the sash, inverse the procedure.

2.3. Compass arm removal for cleaning/maintenance of hopper windows

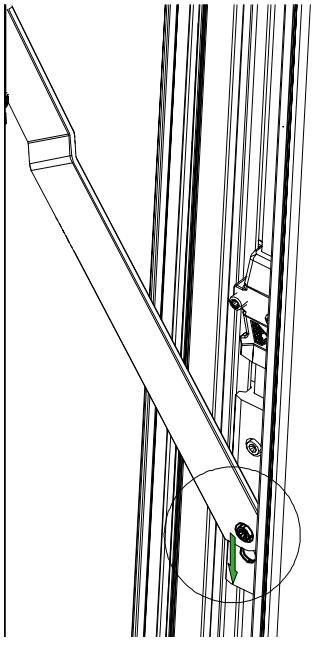
Before removing the compass arm, put a support below the sash!
The support shall be in view of the weight of the sash. This prevents the sash from falling! During operations, there shall be no people or foreign objects under the sash.
At least two persons shall remove the sash!

For removal of the compass arm to clean the window, follow the below procedure:

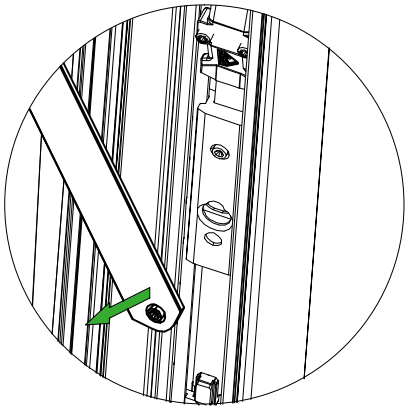


Step 1. Get the handle in the open position. See clause 2.1.1.

Step 2. Get the sash in the tilt position by pulling it with the handle.



Step 3. Lower the stop spring to the slider.



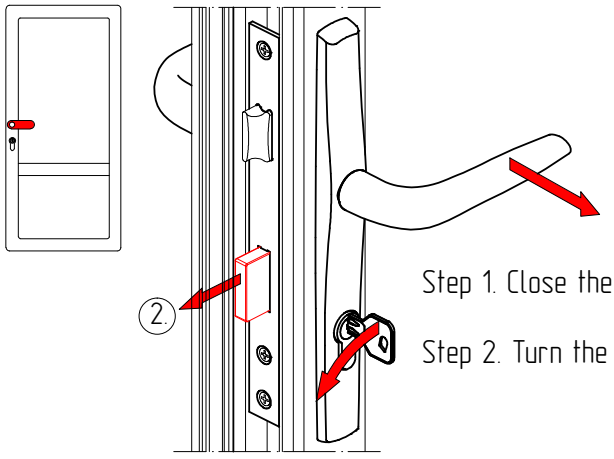
Step 4. Disconnect the compass arm from the slider.

To close the sashes, inverse the procedure.

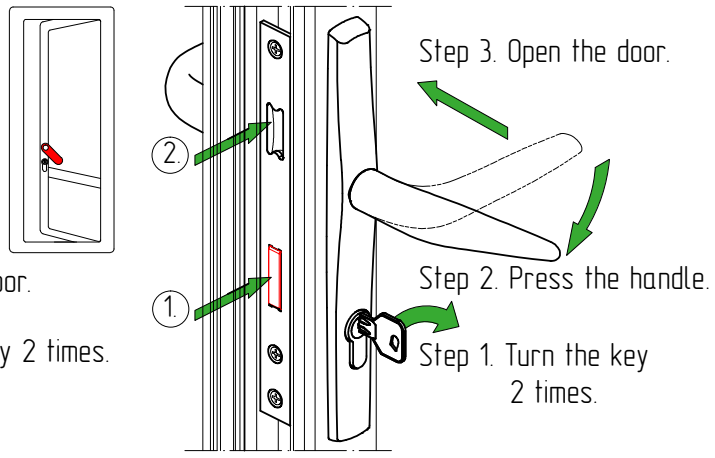
3.1. Door types

3.1.1. Single doors with a door handle

To close the door

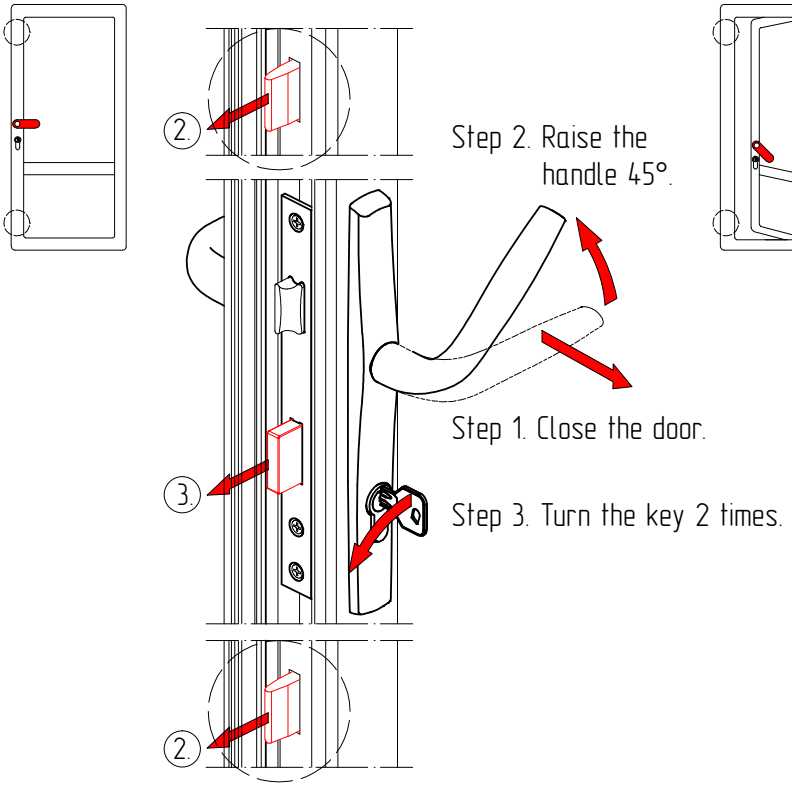


To open the door

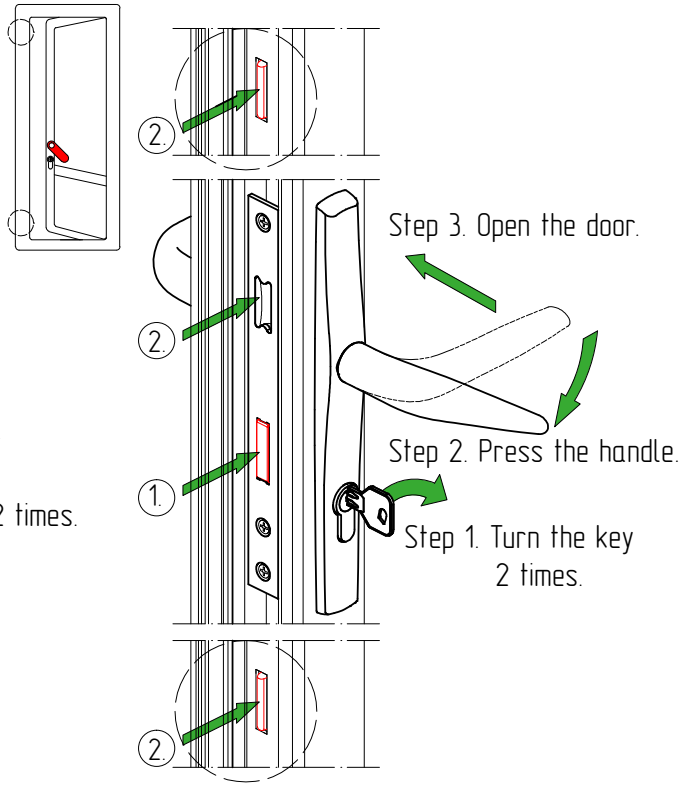


3.1.2. Single doors with multilock mechanisms

To close the door



To open the door

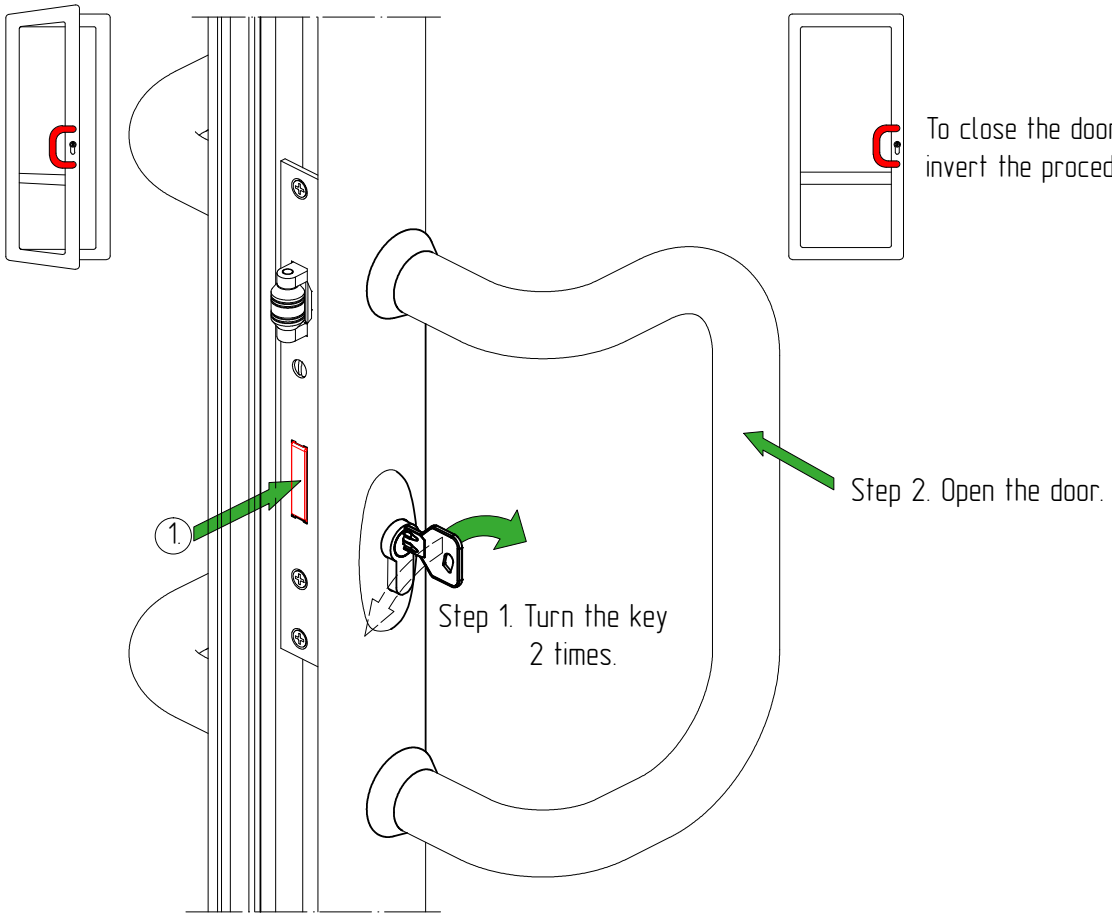


If you fail to take Step 2 (raise the handle 45°) to close the door, the key will not turn in the lock.

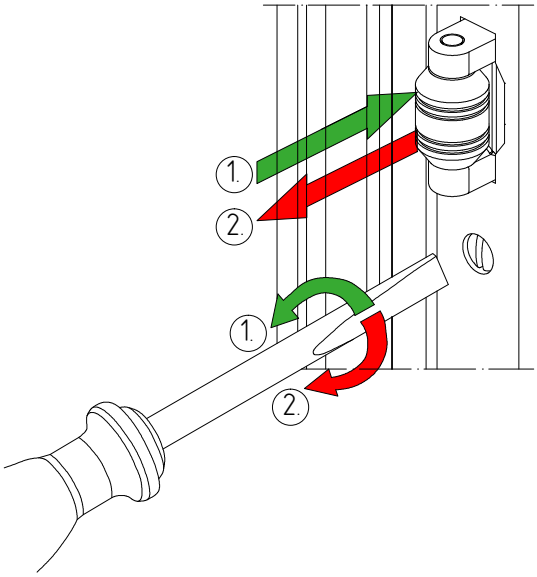
3.1.1. Single doors with a door handle

To open the door

To close the door

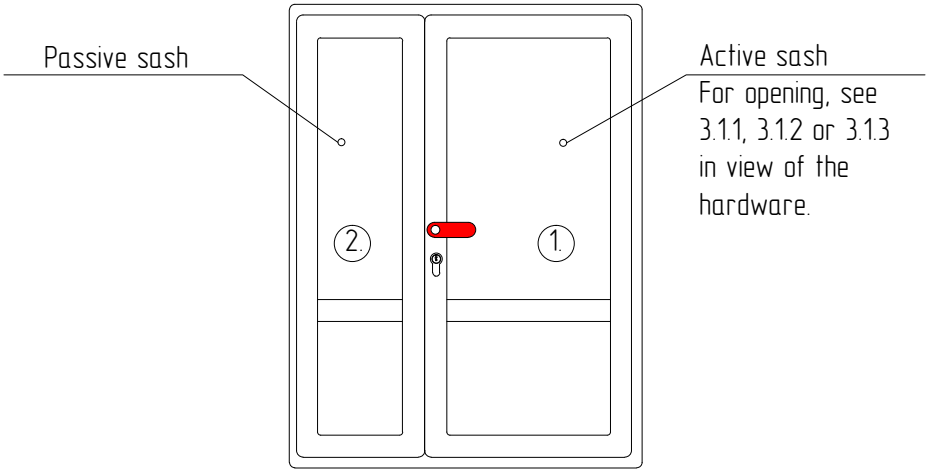


To adjust the roller, follow the below procedure.



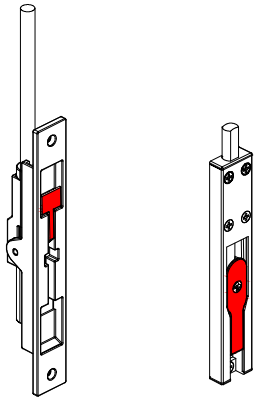
3.1.4. Double doors

1. Door closed position

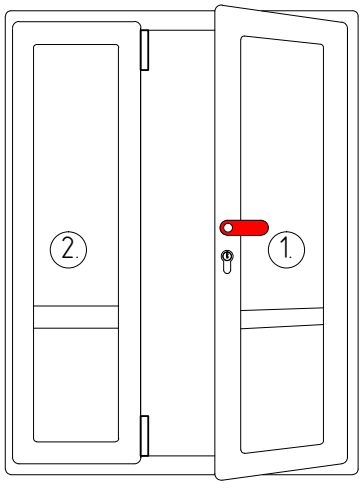


2. Closed position of the passive leaf (2).

Variant 1 Variant 2

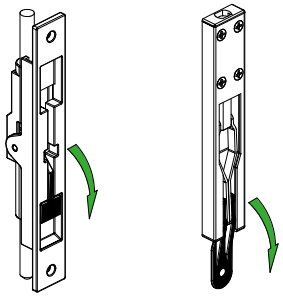


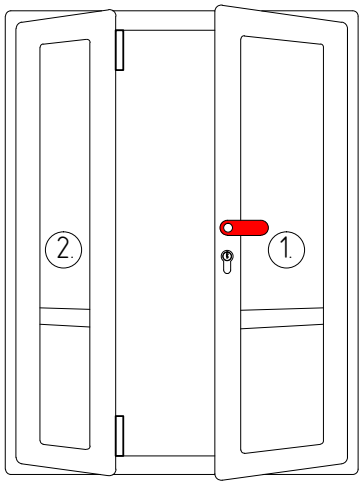
2. Open position of the active leaf (1).



3. Open position of the passive leaf (2).

Variant 1 Variant 2





To close the leaves, invert the procedure.

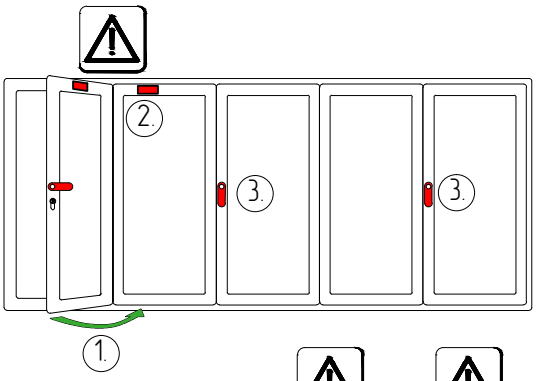
3.1.5. Folding sliding doors with a turn door

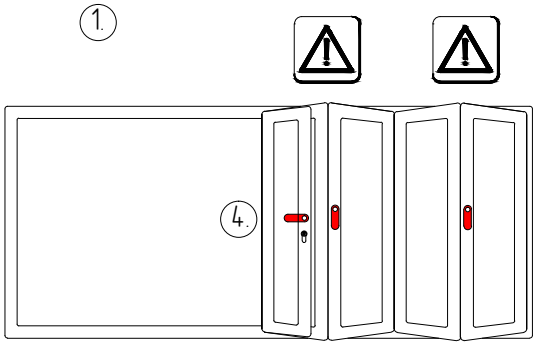
To open the door

1. Open the turn door 180° (see clauses 3.1.1 to 3.1.2) and connect it with the catch (2) installed at the next sash.
2. Lock the door bolts with the handle key, if any.
3. To unlock the door bolts of the other leaves, turn the handle 90°.
4. Slide the folds, starting with the couple next to the turn door.

To close the door

1. To connect with the frame, slide each couple of the leaves.
2. Fix the leaves by locking the door bolts.
3. To lock the door bolts, use the key.
4. Check that all other leaves are closed/locked and finish with the turn door (see clauses 3.1.1 to 3.1.2).





Risk of injury!
Do not touch the folds during opening/closing.

3.1.6. Folding sliding doors without a turn leaf

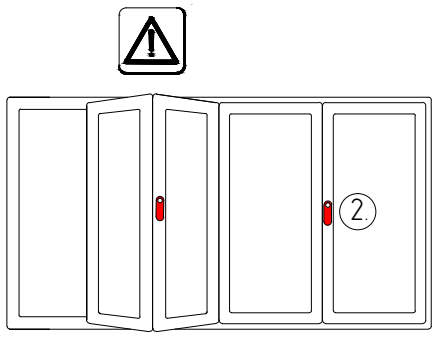
To open the door

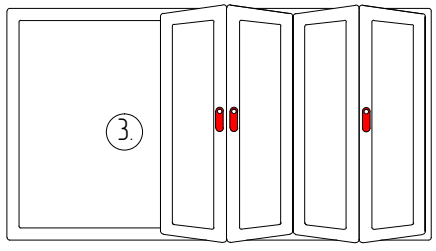
1. Unlock the door bolts with the key, if any.
2. To unlock the door bolts of the other leaves, turn the handles 90°.
3. Slide the leaves.

To close the door

1. To connect with the frame, slide each couple of the leaves backwards.
2. Fix the leaves by locking the door bolts.
3. To fix the door bolts (3), use the key.

Attention! To facilitate the closing procedure, use the pull handle.





Risk of injury!
Do not touch the folds during opening/closing.

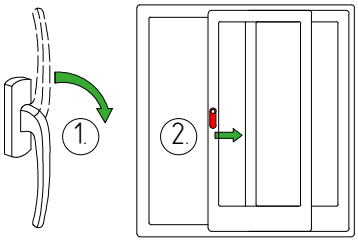
Do not leave the key inside the lock cylinder during opening/closing—this can cause damage of the key/profile.

3.1.7. Lift and slide doors

Variant 1. Manual opening

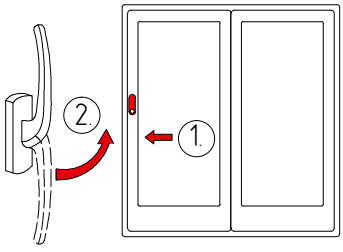
Opening

1. Turn the handle 180° downwards.
2. Open the sash.



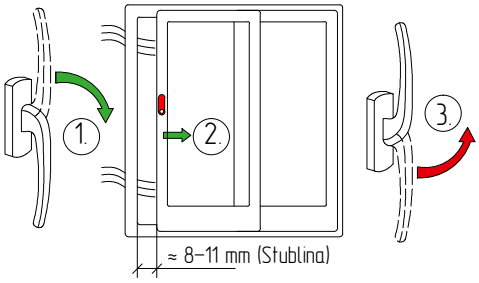
Closing

To close the sashes, invert the procedure.



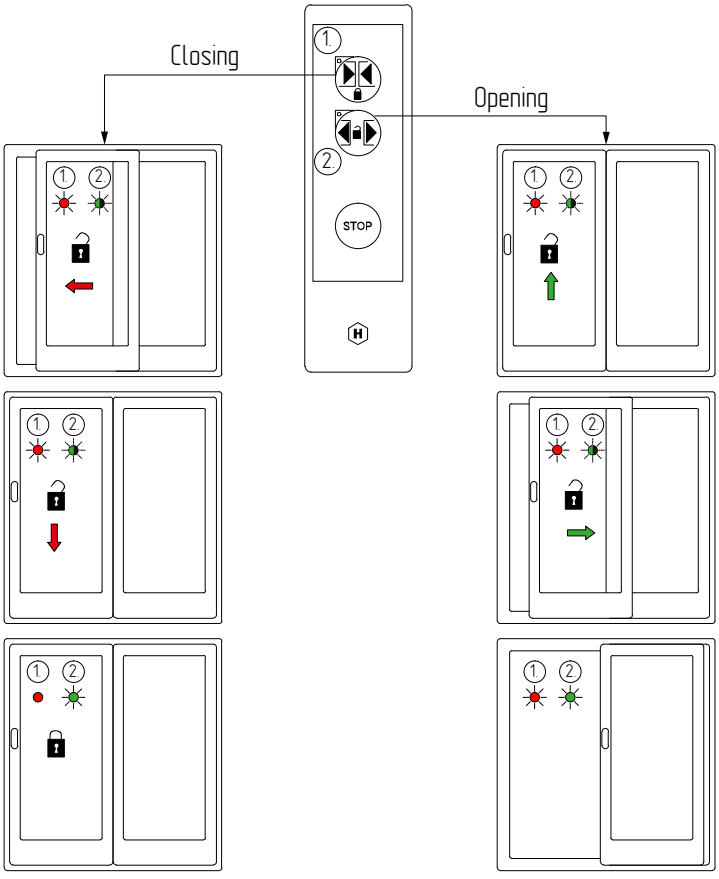
Ventilation

1. Turn the handle 180° downwards.
2. Open the sash with a play between the frame and the sash ≈ 8–11 mm.
3. Turn the handle 180° upwards.



Risk of injury!
Do not touch elements in the area of movement of the sashes during opening/closing.

Variant 2. Automatic opening



Continuous red indicator:
The sash is unlocked or open.

Flashing red indicator:
Failure.

Continuous green indicator (lit in 1 minute):
The equipment is ready for operation.

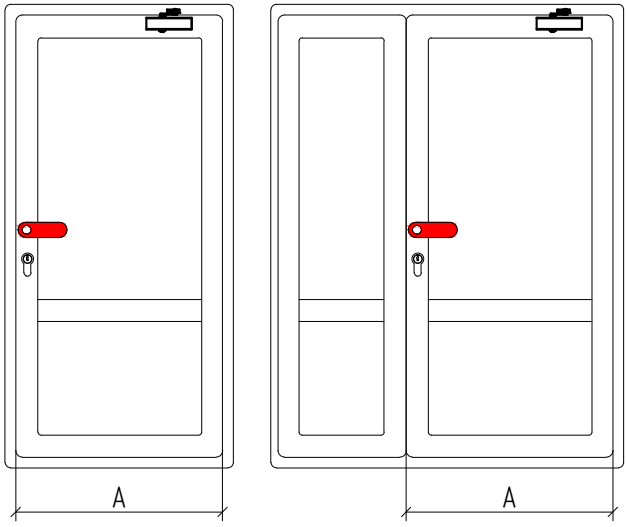
Flashing green indicator:
The equipment is occupied.

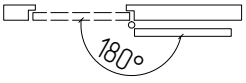
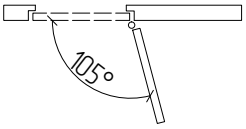
Do not leave the key inside the lock cylinder during opening/closing—this can cause damage of the key/profile!

3.2. Door hardware

3.2.1. Door closers

A door closer automatically gets the door leaf in the closed position.
In case the door closer has no option of keeping the door fixed in the open position, the relevant leaf shall be equipped with the door holder (see clause 3.5.2).

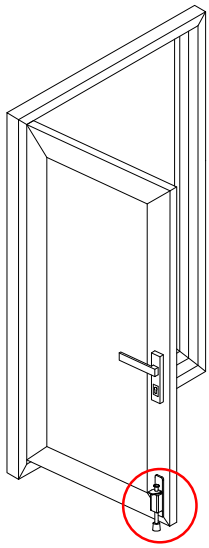


Type of door closer / Maximum opening angle	Dorma TS Compakt	Dorma TS Profil
		
	850≤ A≤ 950	850≤ A≤ 1100
	950≤ A≤ 1100	1100≤ A≤ 1250

Some closers can fix the leaf in the wide-open position. To close the leaf, slightly pull it to the door closing direction, and then the leaf will close on its own.
By installation of closers, follow the operation and maintenance manual of the manufacturers.

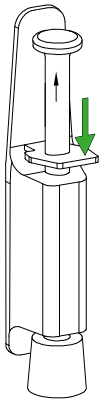
3.2.2. Door holder

A door holder is intended for fixing the door leaf in the open position and preventing the leaf from being closed from draft or by the door closer.



1. Lock

2. Unlock

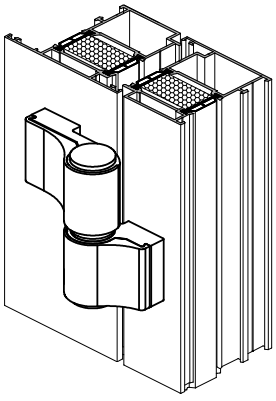


Door holders need no special care or lubrication.

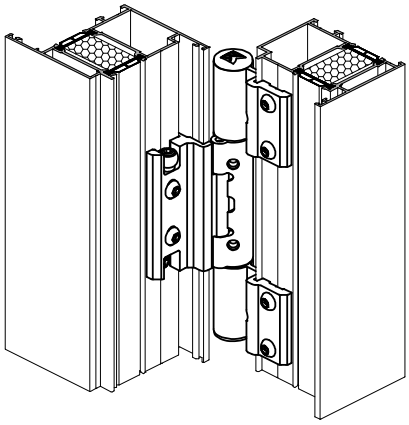
Door holders are not present in the Alutech Group of Companies range of products and scope of supply. For more details, see the operation and maintenance manual for the door holder.

3.2.3. Door hinges

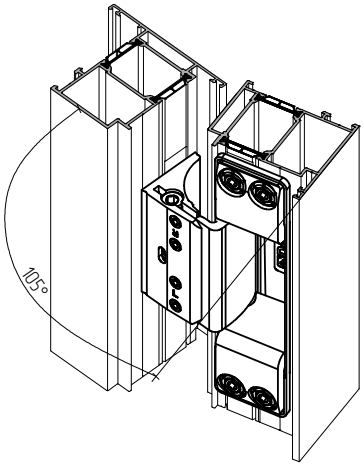
Surface hinges



Roller hinges



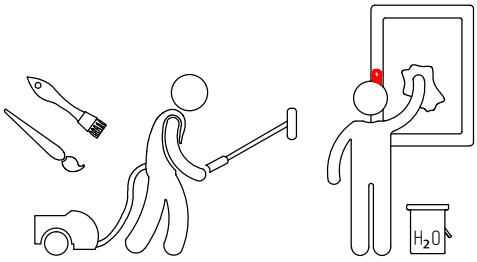
Hidden hinges



- Door hinges need no special care or lubrication.
- Avoid contact of hinges with dust and waste from construction (finishing).
- In case of dirt, clean the hinges with a vacuum-cleaner or a soft brush.
- Adjustment of hinges shall be performed by specialists only.
- Doors with hidden hinges have structural closing limits (max. 105°). These doors shall be equipped with floor-level limiters or door closers with the 105° limit. Otherwise, quick wear or destruction of hinges is possible.

For more details, see the operation and maintenance manual for the door hinges.

4.1. General instructions for cleaning and maintenance



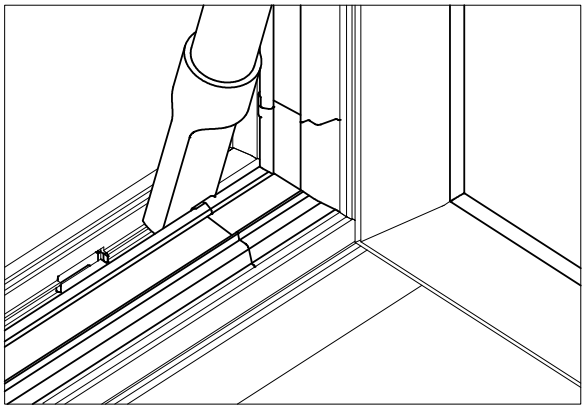
Clean all surfaces of the aluminium structures and all mechanisms of the hardware on a regular basis. In combination with water, dirt accumulated on a component can damage the surface.

Care kit recommended: Cleaning&Care manufactured by Weiss.

To protect the quality of surface of elements of the hardware with time, as well as to prevent wear resulting from corrosion, follow the below recommendations:

- Do not use aggressive agents, solvents or detergents (synthetic solvents, acetone, nitro solvents, etc.). Use neutral soap and water.
- Do not use hard abrasive materials (scrapers, metal brushes, rough sponges, etc.). Use plastic/wooden scrapers, soft rags, brushes or a vacuum cleaner.

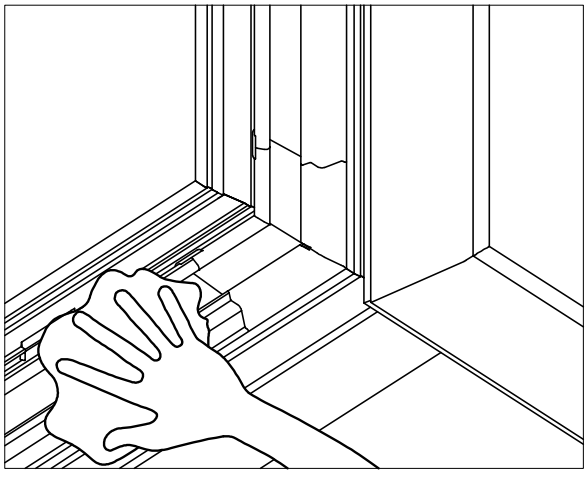
4.1.1. Cleaning of drainage channels



1. With the vacuum cleaner, remove dust/dirt from the area between the sealing and external frame carrier.
2. Clean the drainage channel with a cotton bud.

Perform this procedure at least 1 time in 6 months.

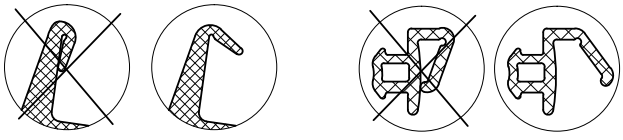
4.1.2. Check and lubrication of the gaskets



As may be required, wipe the gaskets with a soap solution without aggressive detergents.
This will keep the gaskets elastic and prevent sticking.
Perform this procedure at least 1 time a year.

Besides, check all gaskets for absence of damage, sticking or destruction:

- perimeter of the gaskets;
- joints of the gaskets.



To replace damage gaskets, apply to a specialized company.

4.2. Regularity of maintenance

The regularity of maintenance of elements of the aluminium structures is of great importance for their service life, functionality and integrity. The intervals between checks depend on the location and number of working cycles of the window/door. This is to be stated in the contract with the manufacturer. In case of defects revealed during a check, immediately apply to the relevant specialists.

Type of product	Use	Interval of maintenance	Max. number of cycles to the next maintenance
Doors (systems ALT C43, ALT C48, ALT W62 and ALT W72)	Limited use	1 time in 6 months	50,000 cycles
	Normal use		
	Heavy duty (schools, hospitals, public buildings. etc.)	1 time in 3 months	
Doors (systems ALT BF73, ALT SL160)	Limited use	1 time in 6 months	10,000 cycles
	Normal use		
	Heavy duty (schools, hospitals, public buildings. etc.)	1 time in 3 months	
Windows	Normal use	1 time in 12 months	5,000 cycles

The information regarding the regularity of maintenance of profiles and hardware provided in the table is for products installed in non-aggressive environment, provided the aluminium structures are not exposed to rain. In other cases, increase the regularity at least 2 times.

Here is an incomplete list of aggressive environments/ risk factors:
- close proximity to coasts (< 10 km), estuaries or large rivers (< 5 km);
- location above water;
- industrial areas with great emissions of chemicals, fluorides, gases and ore materials;
- transport impact (motorways, railways, airports, etc.);
- aggressive environment (swimming pools, industrial water treatment, laboratories, organic animal pollution, etc.).

Improper maintenance entails the risk of injury!

Improper maintenance can cause serious injuries/damage of property.

Types of works and their performers

Type of work	Specialized company	End user
Tightening of fasteners	✔ Permitted	✘ Prohibited
Replacement of damaged fasteners	✔ Permitted	✘ Prohibited
Replacement of structural elements or hardware	✔ Permitted	✘ Prohibited
Adjustment of hardware	✔ Permitted	✘ Prohibited
Cleaning of dirt	✔ Permitted	✔ Permitted
Lubrication of moving and fixed elements of hardware	✔ Permitted	✔ Permitted

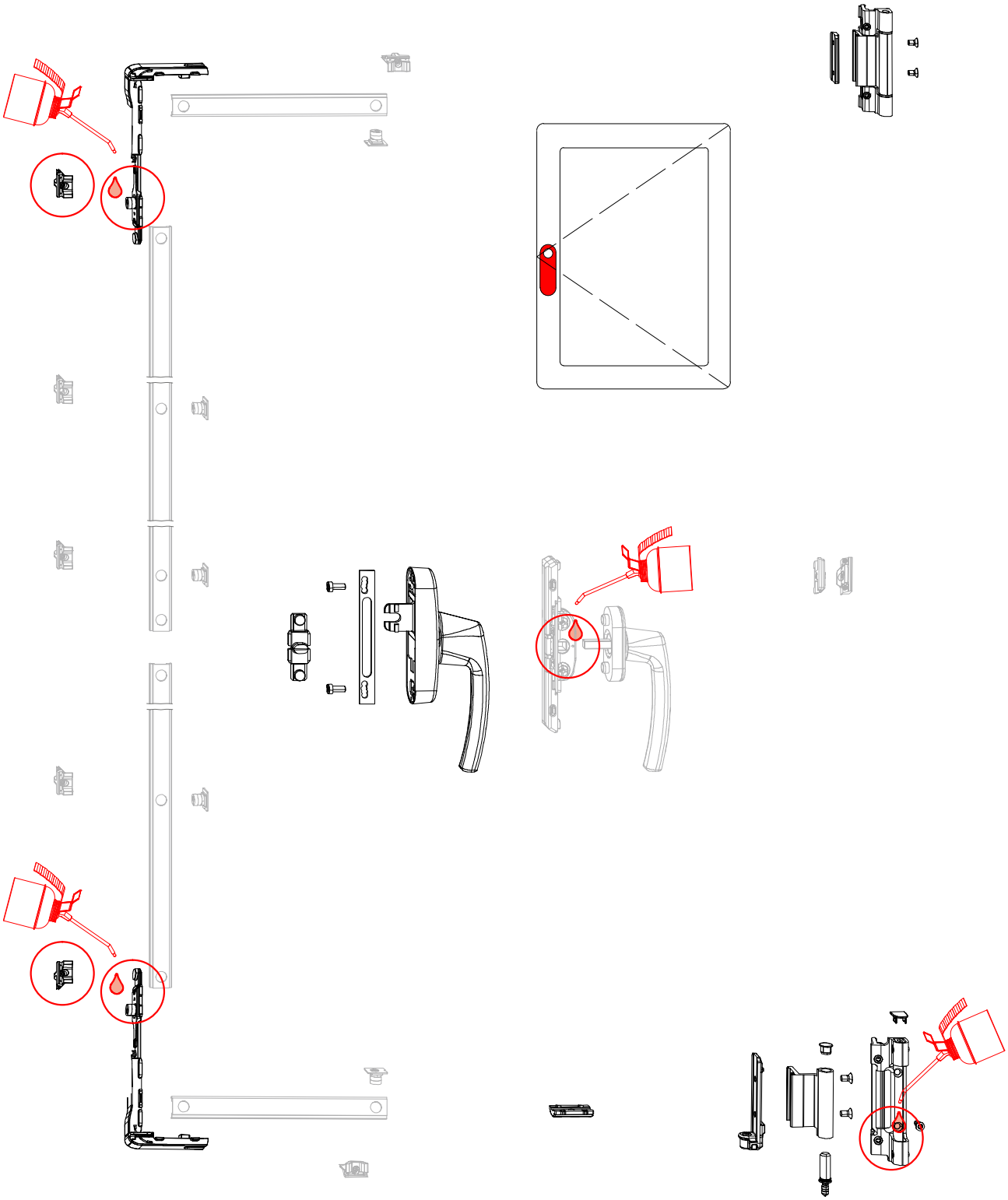
4.3. Cleaning and maintenance of windows

For the regularity of cleaning and service, see section 4.2 of this manual.

Avoid accidental removal of elements of the hardware in operation or during cleaning/maintenance.

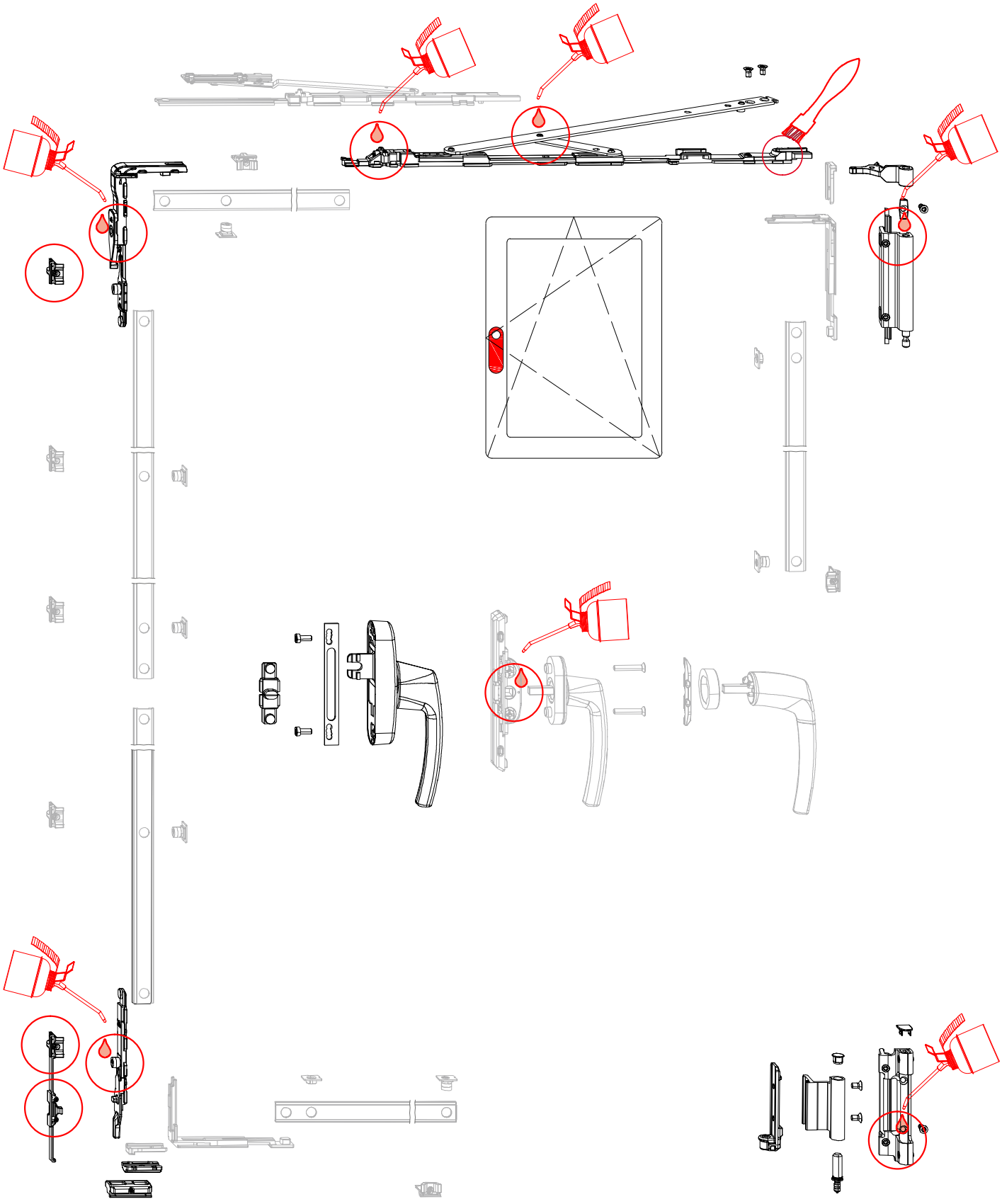
1. Check the efforts applied to turn the handle and close/open the window: they can insignificantly increase relative to the start of operation. To avoid accidental damage of elements of the hardware and product structure, in case of defective opening/closing, never apply extra efforts.
2. Check elements of the window for obstructions or dirt (building materials, dust, etc.). Clean the channels, drainage holes, slots and elements of the hardware with a vacuum cleaner or a soft rag and detergent with neutral pH, dissolved.
3. Check all safety-relevant elements of the window (hinges, opening limiters, etc.). Deformation or damage, as well as loose or missing fasteners shall be excluded. In case of the above defects, apply to the specialized company-installer of the product.
4. Lubricate all contacting metal parts exposed to friction. For the lubricating points and recommended compounds, see clauses 4.3.1 to 4.3.8.

4.3.1. Lubricating points of turn windows (hardware: Roto)



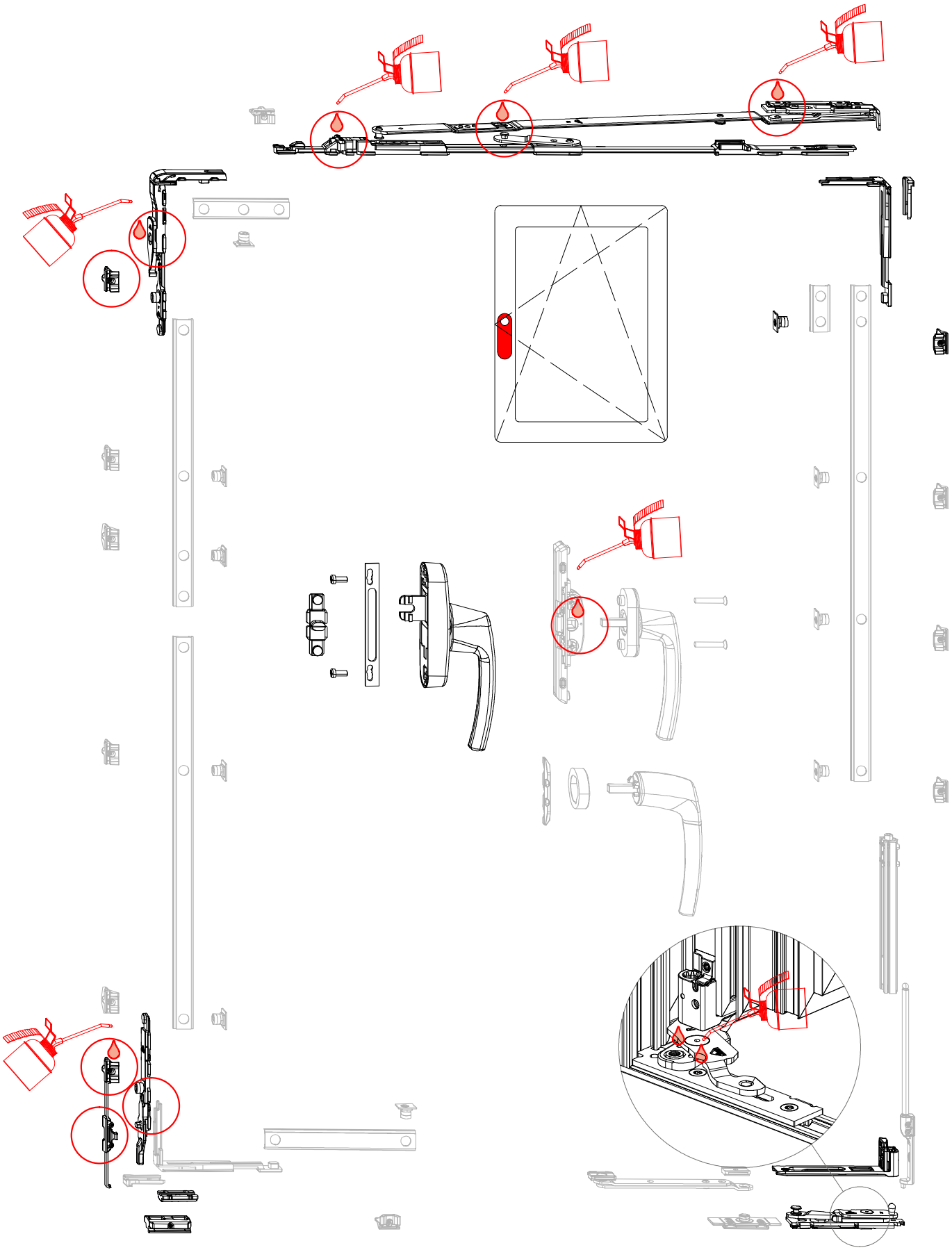
Recommended lubricating compound: brand compound Roto art. 783472.

4.3.2. Lubricating points of tilt and turn windows (hardware: Roto)



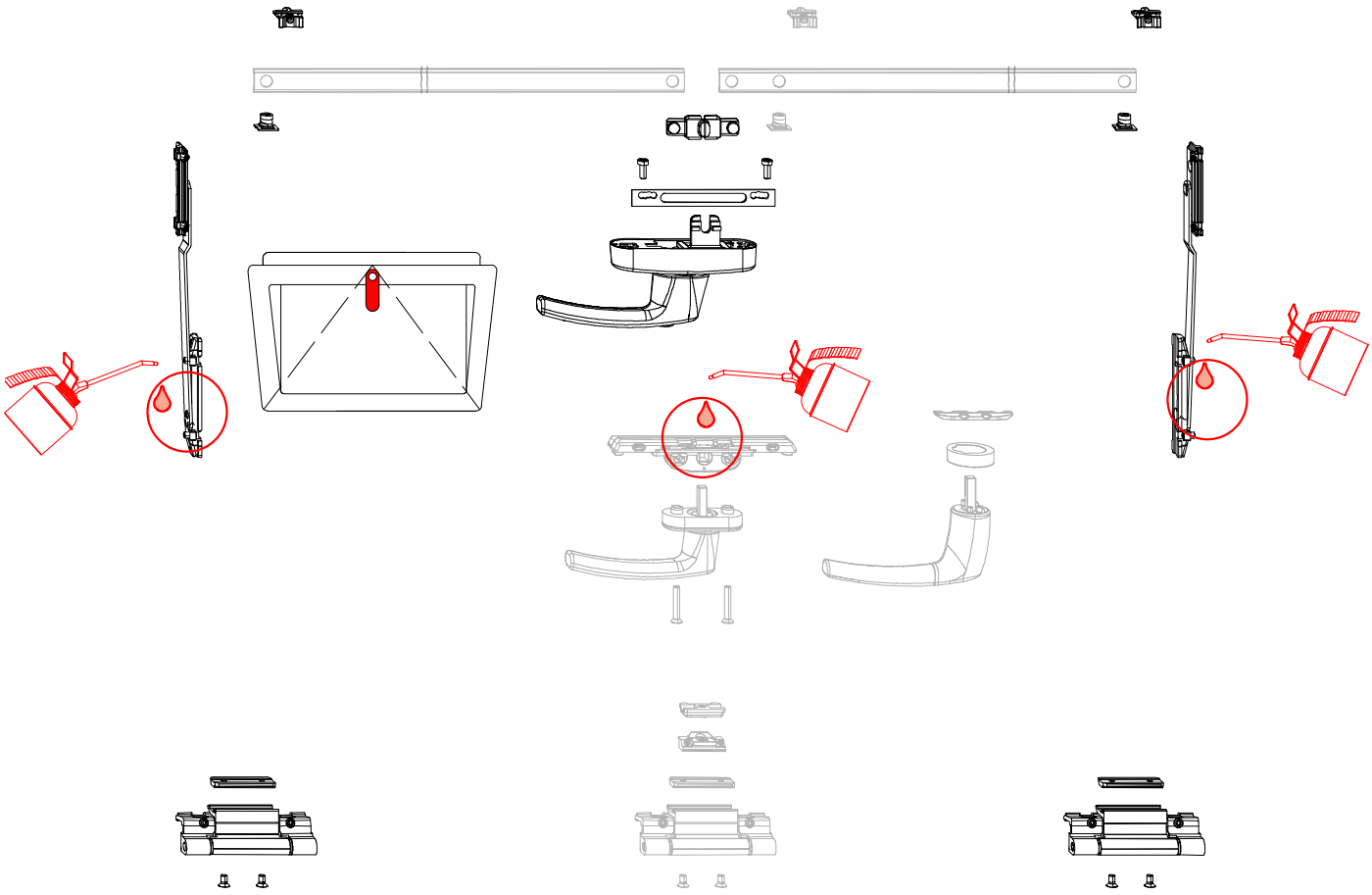
Recommended lubricating compound: brand compound Roto art. 783472.

4.3.3. Lubricating points of tilt and turn windows with hidden hinges (hardware: Roto)



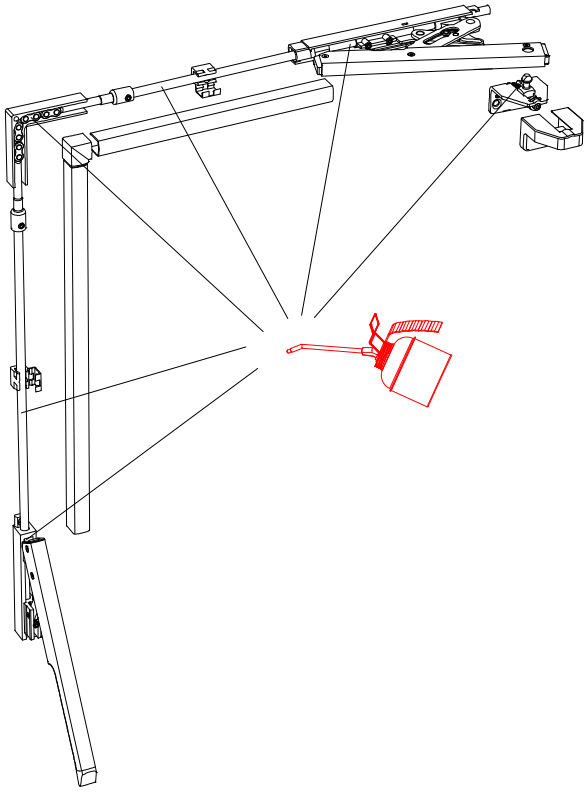
Recommended lubricating compound: brand compound Roto art. 783472.

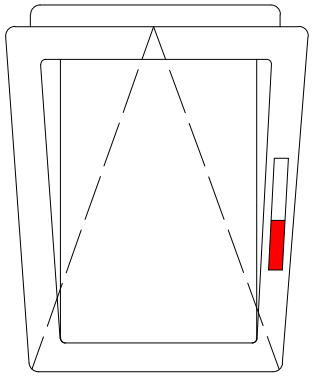
4.3.4. Lubricating points of tilt windows (hardware: Roto)



Recommended lubricating compound: brand compound Roto art. 783472.

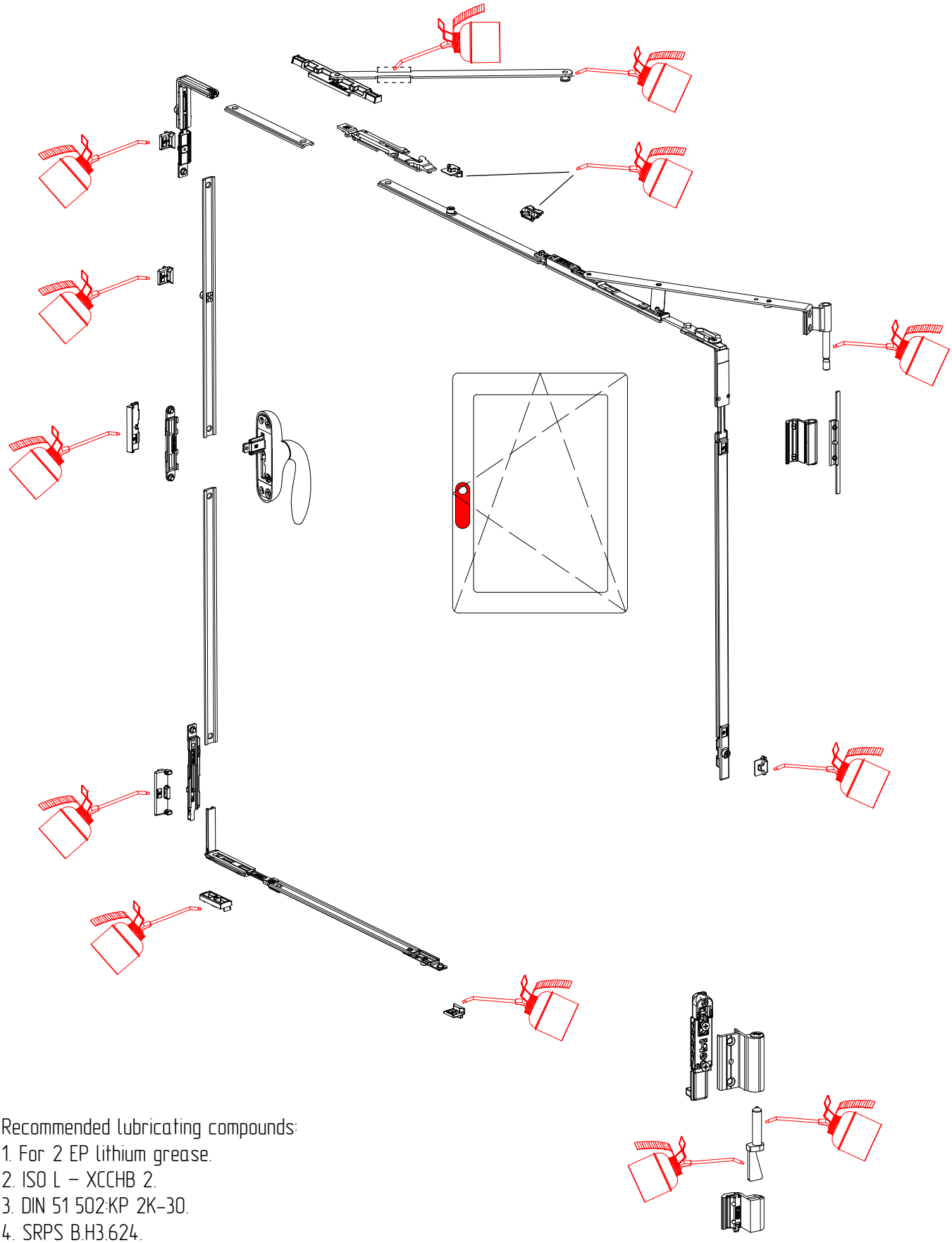
4.3.5. Lubricating points of tilt windows (hardware: Stublina)





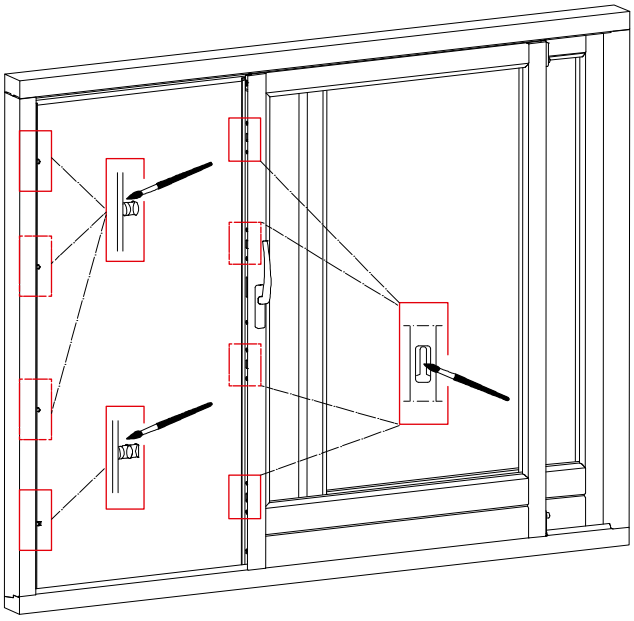
Recommended lubricating compounds:
1. For 2 EP lithium grease.
2. ISO L – XCCHB 2.
3. DIN 51 502:KP 2K–30.
4. SRPS B.H3.624.

4.3.6. Lubricating points of tilt and turn windows (hardware: Stublina)



Recommended lubricating compounds:
1. For 2 EP lithium grease.
2. ISO L – XCCHB 2.
3. DIN 51 502:KP 2K–30.
4. SRPS B.H3.624.

4.3.7. Lubricating points of lift and slide doors (hardware: Hautau)

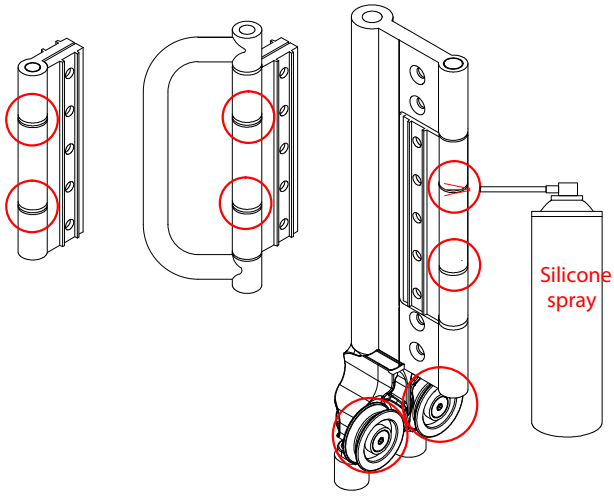


4.3.8. Lubricating points of folding and sliding doors (hardware: Debar)

Lubricate all moving elements of the doors:

- Hinges in the intermediate washer area.
- Roller bearings and the steel guide.
- Locks.

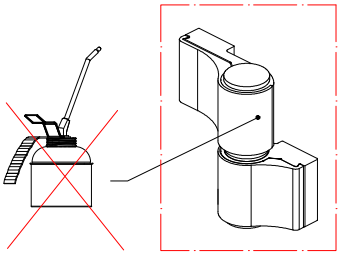
Use silicon spray to lubricate the hardware.



4.4. Cleaning and maintenance of doors

For the regularity of cleaning and maintenance, see section 4.2 of this manual.

4.4.1. Hinges



Check the efforts applied to open/close the lock, turn the handle and close/open the door: they can insignificantly increase relative to the start of operation. To avoid accidental damage of elements of the hardware and product structure, in case of defective opening/closing, never apply extra efforts.

Check the tightness of hinge fasteners on the frame and leaf and tighten them, as may be required. The torque shall be within the limits stated in the installation manual for the hinges.

Check the leaf for skewness. As may be required, adjust the position of the leaf with hinges according to their installation manual.

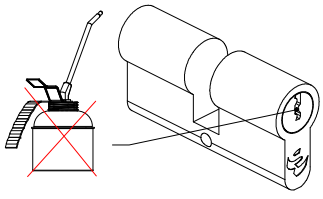
Door hinges need no additional lubrication within the period of use.

4.4.2. Door closers

Regularly check elements of door closers for wear to ensure their function is correct and reliable.

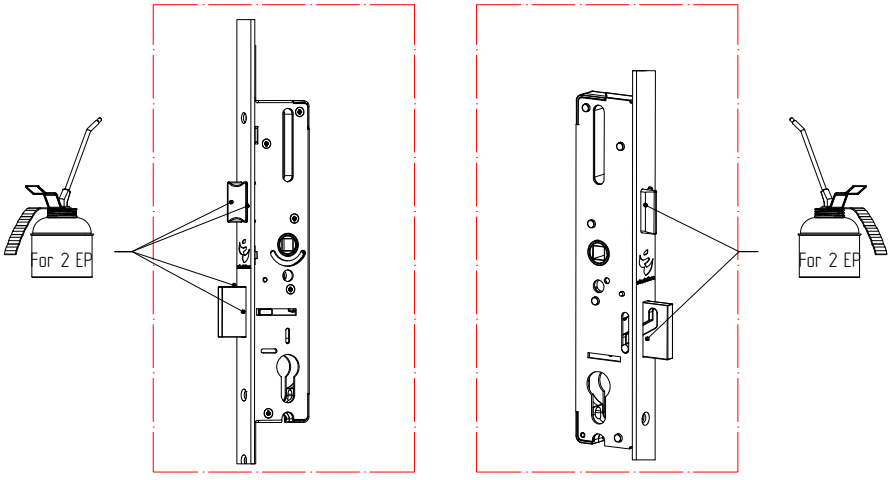
1. Clean all elements of the closer with a vacuum-cleaner, brush or soft rag and a detergent with a neutral pH, dissolved.
2. Inspect elements of the closer for damage. Check the availability and tightness of all fasteners. To eliminate defects, apply to the specialized company-installer of the product.
3. Check the smoothness and speed of operation of the closer by closing of the door. For any adjustment, apply to the specialized company-installer of the product.

4.4.3. Profile cylinder



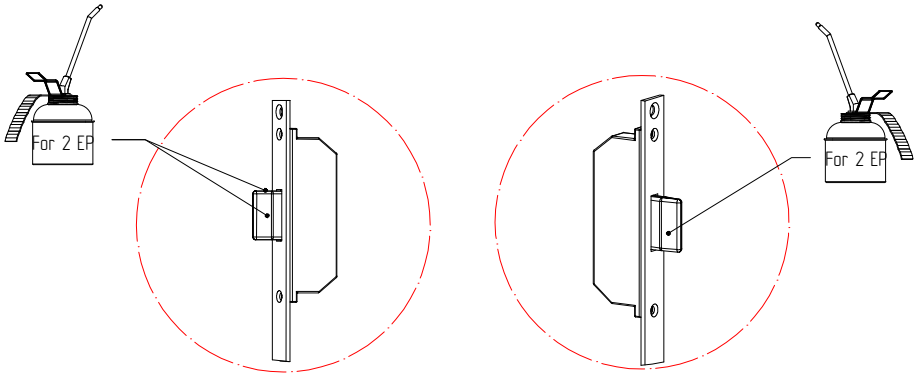
Lubrication using graphite powder is recommended regularly or by first seizure of the key when entered in/removed from the cylinder. Do not use oils for lubrication—this can cause accumulation of dust and damage the internal mechanism of the cylinder in future.

4.4.4. Lock



1. With the door open/closed, try closing/opening of the lock with the profile cylinder and pressing on the set. The operation of the mechanisms shall be smooth, excluding any seizure.
2. Check the fixation of the striking plate on the frame, close the door and check the contact between the leaf and the frame (correct pressing of the gasket). In case of defects, adjust the ledge with the striking plate (provided it is adjustable). See the lock installation manual.
3. Inspect the lock to make sure that the screws fixing it to the profile, as well as the screw fixing the cylinder are tightened until stop.
4. Open and close the door and make sure that all elements of the hardware work smoothly and are in a good condition. As the case may be, to remove the possible play resulting from settling of the door, adjust the position of the striking plate. See the lock installation manual.
5. Lubricate the contact area of the latch/striking plate, as well as the internal mechanism of the lock via the latch holes (in the closed position) and the dead bolt (in the closed position).

In case of multilocking mechanisms, lubricate all additional locking elements.



The premises where the product is used shall meet the following microclimate requirements:
– relative humidity of air in the warm season: 30 % to 60 %;
– relative humidity of air in the cold season: 30 % to 45 %;
– air temperature: 18 °C to 22 °C.

To avoid fogging of the glass and formation of condensate on the glass, beads and windowsills by increased humidity of the indoor air, ventilate the room at least 3 times a day for up to 15 minutes.

Extended ventilation is recommended in the warm season only.

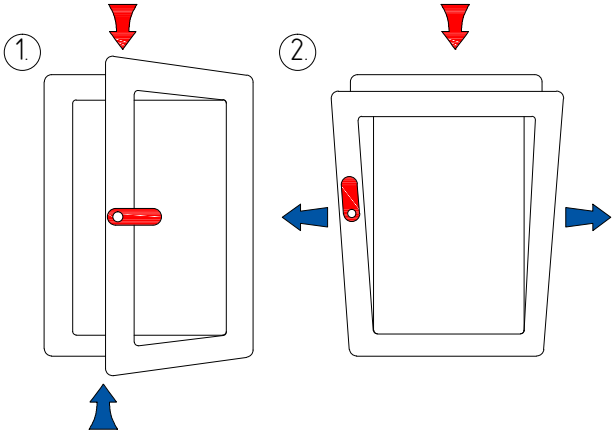
In the cold season (with temperature below 5 °C), the sashes shall be opened wide 3 times a day for 3 to 5 minutes.

The duration of ventilation shall be in view of the purpose of the premises.

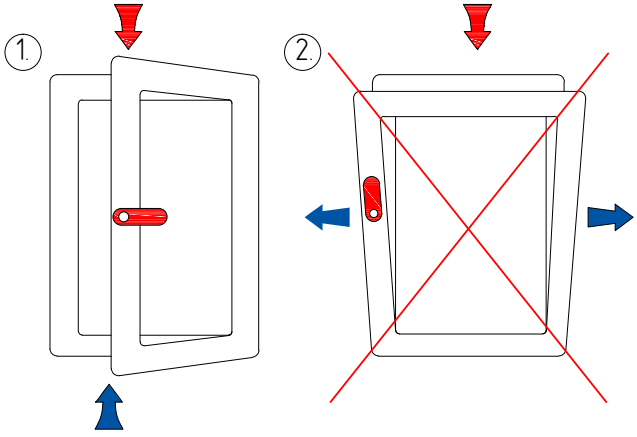
For more details, see the normative documents in effect in the region.

Manners of ventilation in view of the season:

Warm season



Cold season



1. To ensure the validity of the product warranty, for repair/adjustment operations apply to the company-installer of your structures.
2. Replace all elements of the hardware for original spare parts only.