

WICONA®

Aluminium in Architecture



**Operation and maintenance
instructions for aluminium
windows, doors and façade
elements**

Table of contents

	Page
1. Product information and use as per regulations	3
2. Improper use	4
3. Window operation	5
3.1 Turn, turn/tilt, tilt-first and tilt windows	5
3.2 Double casement sash windows	6
3.3 Horizontal pivot sash windows	6
3.4 Vertically pivoted sash windows	7
3.5 Surface-mounted tilt fanlight	8
3.6 Concealed tilt fanlight	9
3.7 Tilt safeguard and detachable tilt retainer arms, tilt rebate retainer arms	10
3.8 Parallel sliding/tilt window elements	11
3.9 Top-hung windows	12
3.10 Sliding doors/windows	13
3.11 Lifting sliding doors/windows	13
3.12 Folding/sliding doors	14
3.13 French windows	18
3.14 Window handles	19
3.15 Turn stop	24
3.16 Turn restrictor	24
4. Operating doors and door elements	25
4.1 Opening and locking single-leaf hinged doors	25
4.2 Opening and locking double-leaf hinged doors	26
4.3 Opening and locking doors using an electric opener	27
4.4 Opening and locking double-leaf escape doors	28
4.5 Door stop	30
4.6 Door closer	30
5. Maintenance recommendations	31
6. Cleaning and care	33
7. Advice and repair	35
Appendix	
Maintenance contract	

Product information and use as per regulations

1. Product information and use as per regulations

Turn/tilt windows and French windows within the meaning of this definition assist in separating the climate between outside and room air conditions and facilitate controlled opening, for example, for different ventilation positions. By operating a hand lever of the one-handed turn/tilt fitting, the window sash can be brought to a pivot position or to a tilting position restricted by the design of the retainer arms.

Aluminium turn-tilt windows and French windows are used in perpendicular installation.

When closing, the counteracting force exerted by a gasket may have to be overcome. Any uses which deviate from this do not constitute use in accordance with regulations.

Burglar-resistant windows and window/door leaves, windows and window/door leaves for damp rooms and for use in surroundings containing aggressive, atmospheric constituents which promote corrosion require special fittings.

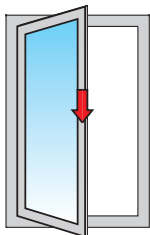
Open windows and window/door leaves only achieve a screening function and do not

satisfy any requirements in terms of joint tightness, tightness against driving rain force, sound insulation, thermal insulation and burglar resistance.

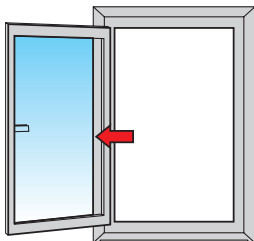
When there is wind or a draught, windows and window/door leaves must be closed and locked. Conditions are said to be windy or draughty within the meaning of this definition if windows open or close when in a turning or tilting position as a result of air pressure or suction.

Windows and window/door leaves can only be fixed in an open position with additional stop fittings.

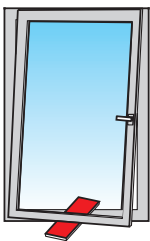
Improper use



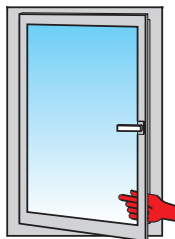
The window casement may not be subjected to additional weight.



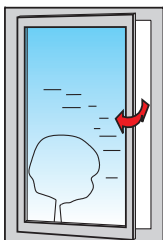
Do not knock or press sashes against the wall soffit.



Do not place any objects between the sash and frame.



Danger! A sash which is banging shut can lead to injury. When pushing it shut, do not place hands or fingers between the sash and the frame.



Where the air movements are stronger, do not leave the window open in a turning position.



If required for personal safety, the sash shall be locked to prevent the turn mode of operation by means of a turn stop or a lockable operating handle, for example.

The improper use of windows and doors, i.e. not using the product in accordance with regulations, is particularly said to exist

- if additional loads are acting on window sashes or door leaves.
- if window sashes or door leaves are pressed against the soffit, e.g. as a result of wind, contrary to regulations or in an uncontrolled manner in such a way that the fittings, frame materials or other component parts of the window sashes or door leaves may become damaged or destroyed or subsequent damage may result.
- if objects are placed in the area of opening, thereby preventing use in accordance with regulations.
- if hands or fingers are put between the frame and sash when closing window sashes or door leaves (risk of injury).
- if, where air movements are stronger, the window sash or door leaf is opened in a turning position.

To preserve your windows and doors in good working order over the long term, and to ensure safety, the instructions in the margin must be observed without fail.

Window operation

3. Window operation

The operating instructions given below apply to all shapes of element



Semi-circular arch windows



Sloped windows

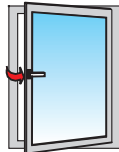


Rectangular windows

3.1.1 Side-hung windows

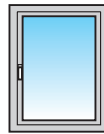


Locked position

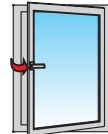


Turning position

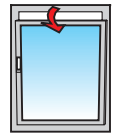
3.1.2 Turn/tilt windows



Locked position

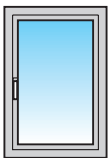


Turning position

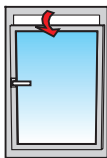


Tilting position

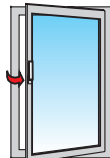
3.1.3 Tilt-first windows



Locked position

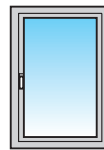


Tilting position

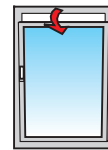


Turning position

3.1.4 Tilt windows, upright and broad format



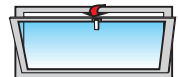
Locked position



Tilting position



Locked position

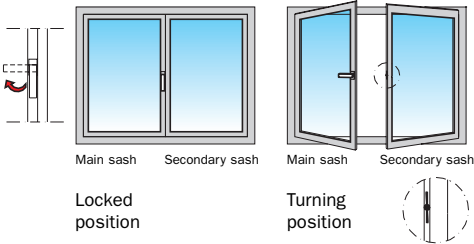


Tilting position

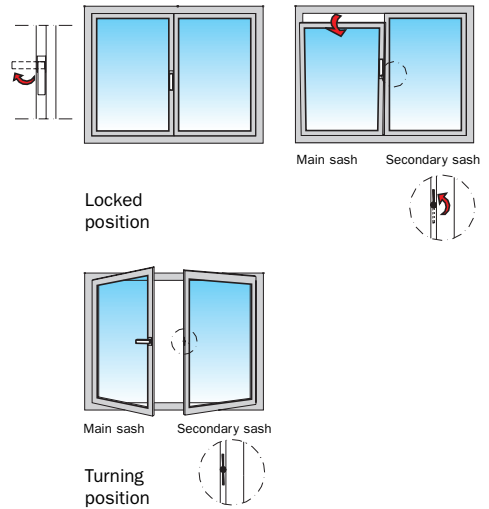
Window operation

3.2 Double casement sash profile

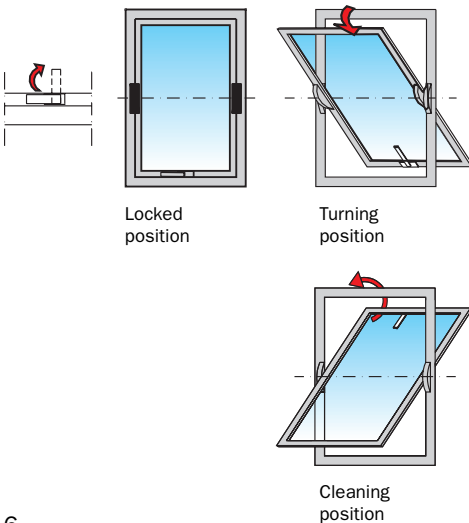
3.2.1 Main sash and secondary sash with turn opening



3.2.2 Main sash with turn/tilt sash and secondary sash with turn opening



3.3 Horizontal pivot sash windows



The pivot bearings of the horizontal pivot sash windows are fitted with brakes/stops which keep the element open.

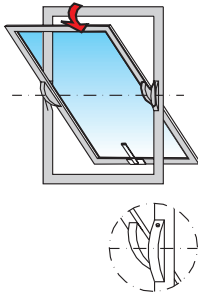
Split pivot bearing with lock for arresting at 15° and detachable lock at 180° or split pivot bearing without lock, but with an opening limiter with brake, up to a maximum opening width of 200 mm and additional detachable lock. With opening limiter, sash height ≥ 1200 mm.

If the sash automatically moves to the locked position, the bearing brake must be readjusted by the specialist company.

Window operation

Split pivot bearing

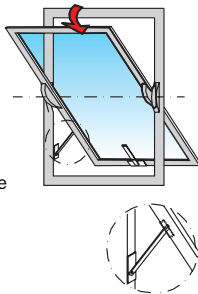
a) with lock



■ Split pivot bearing with lock

The latch limits the opening angle of the horizontal pivot sash in an open position to 15°. After loosening the latch, the sash can be swivelled by approximately 180° and must be snapped into the built-in detachable lock.

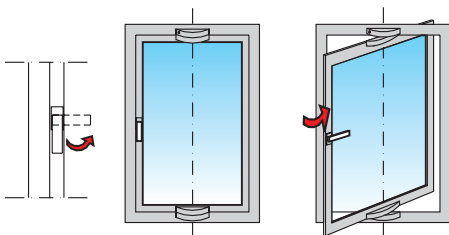
b) with opening limiter with brake



■ Split pivot bearing without lock

The opening limiter prevents the sash turning above an angle of approximately 20°. To clean outside, the opening limiter must be released. Before unhooking the sash, this shall be secured against slamming shut. Turn the sash approximately a further 180° until it snaps into the extra detachable lock that is required. To close, do these steps in reverse.

3.4 Vertically pivoted sash windows



Turn handle,
perpendicular
Locked position

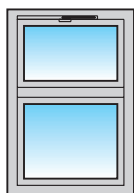
Turn handle,
horizontal
Opening position

Design with split pivot bearing without lock

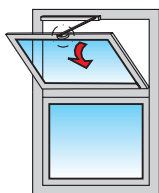
If the window sash can be moved too easily, the bearing brake must be readjusted by the specialist company.

By using an opening limiter, the opening angle can be restricted on a case by case basis.

3.5 Tilt fanlight with surface-mounted fittings



Locked position



Tilting position



Open:

■ using the hand lever

Open the fanlight by turning the hand lever down

■ using the crank handle

Remove the crank handle from the holder and bend it to the turning position. Open the fanlight by turning the crank handle to the left.

■ using an electric opener

Hold down the push-button key of the electric opener until the fanlight has reached the desired opening position.

3.5.1 Cleaning position

To bring the tilt sash to the cleaning position, the retainer arm must be unhinged on the sash block. The retainer arm is unhinged as described below.

- Push in the round catch button on the front side of the retainer arm.
- Hold the button pressed in and raise the retainer arm.
- The spherical head seat of the sash block must be completely clear.
- Now lower the sash slowly into the stop position (cleaning position) of the tilt safeguard and detachable tilt retainer arm or the tilt rebate retainer arm.

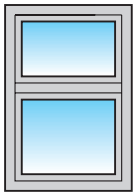
To restore the full functions of the fanlight fittings, the retainer arm must be assembled in the reverse order.



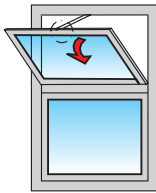
After taking it off its hinges, move the sash into the position for cleaning – do not let it drop!

Adjustment and/or readjustment work carried out on the fitting must only be conducted by a specialist company!

3.6 Tilt fanlight with concealed fittings



Locked position



Tilting position



Open:

■ using the hand lever

Open the fanlight by lifting the hand lever up.

■ using the crank handle

Remove the crank handle from the holder and bend it to the turning position. Open the fanlight by turning the crank handle to the right.

■ using an electric opener

Hold down the push-button key of the electric opener until the fanlight has reached the desired opening position.

3.6.1 Cleaning position

To bring the tilt sash to the cleaning position, the retainer arm must be unhinged on the sash block. The retainer arm is unhinged as described below.

- Turn the lever on the sash block until the stop is in the unlatched position.
- Raise the retainer arm until the mushroom pin is completely removed from the guide rail of the sash block.
- Now lower the sash slowly into the stop position (cleaning position) of the tilt safeguard and detachable tilt retainer arm or the tilt rebate retainer arm.

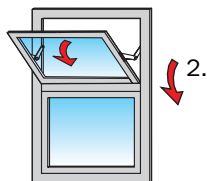
To restore the full functioning of the fanlight fittings, the retainer arm must be assembled in the reverse order.



After taking it off its hinges, move the sash into the position for cleaning – do not let it drop!

Adjustment and/or readjustment work carried out on the fitting must only be conducted by a specialist company!

3.7 Tilt safeguard and detachable tilt retainer arm



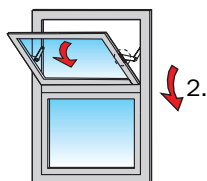
1. Unlock
2. Pivot

Release for cleaning position:

To be able to pivot the tilt sash further (cleaning position), the tilt safeguard and detachable tilt retainer arms must be released. The tilt sash is also held in the position for cleaning by the retainer arm. The sash is prevented from striking the lower element.

- Open the window sash
- Hold the opened sash and release it at the top at the retainer arm
- Slowly pivot the sash
- Sash weights must be taken into account

3.7.1 Tilt rebate retainer arm



1. Unlock
2. Pivot

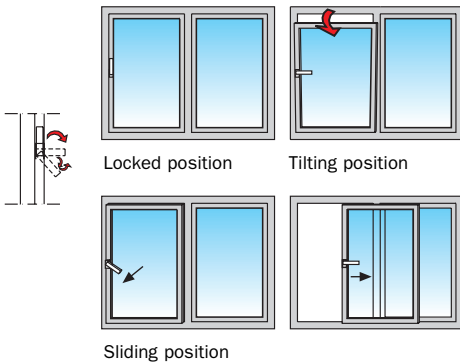


When tilting the fanlight up, make sure that projecting fittings cannot damage the lower element.

- Open the tilt sash
- Press the opened sash so that the retainer arm can be lifted from the guide
- Slowly tilt the sash downwards
- Sash weights must be taken into account

3.8 Parallel sliding/tilt elements

3.8.1 Make of fittings with force control



Locked position:

- with the window handle pointing vertically upwards.

Tilting position:

- Bring the slide sash into a tilting position by swivelling the hand lever through an angle of 90°.

Sliding position:

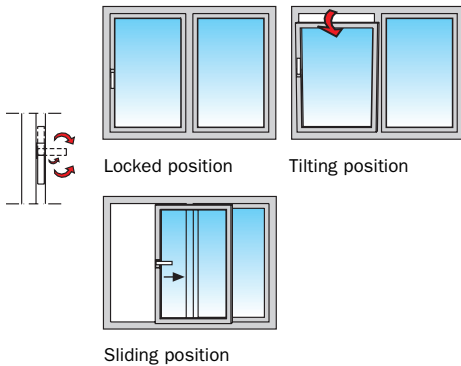
- Move the hand lever on the slide sash down by swivelling it further through an angle of approximately 45°.
- The sash extends down and is therefore in a parallel position.
- Let the hand lever spring back and open the slide sash.

Closing:

- Close the slide sash until the sash automatically moves into the tilting position.
- Close the sash by turning the handle upwards.

Window operation

3.8.2 Make of fittings without force control



Locked position:

- with the window handle pointing vertically downwards.

Tilting position:

- With the sash locked, swivel the handle up by 90° from the locked position and tilt the sash.

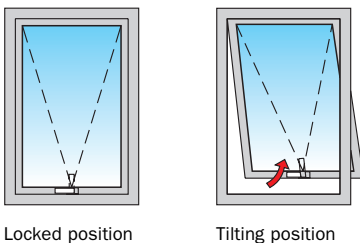
Moving to the sliding position from the tilting position:

- Swivel the horizontally positioned handle on the tilted sash in a downwards direction by approximately 45° and pull the sash down and inwards parallel to it.
- Let the handle spring back and push the slide sash to the side.

Closing from an open position:

- Slide the sash shut and press in a locked position. Turn the handle down.

3.9 Top-hung windows



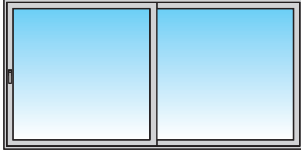
Locked position:

- Handle horizontal

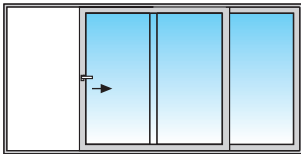
Top-hung position:

- Open windows by turning the handle upwards through an angle of 90° and pressing outwards until the retainer arm stop engages.

3.10 Sliding doors/windows



Locked position



Sliding position

Locked position:

- Handle pointing downwards

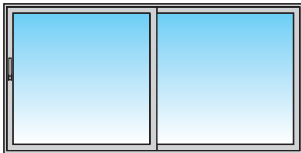
Sliding position:

- Release the slide sash by turning the window handle downwards through 90°. Push the sash to the side.

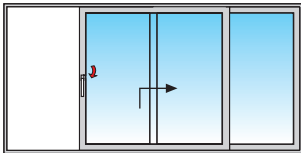
Closing from an open position:

- Slide the sash shut and press in a locked position. Turn the handle down.

3.11 Lifting sliding doors/windows



Locked position



Sliding position

Locked position:

- with the hand lever pointing vertically upwards.

Raising and pushing:

- Release the slide sash downwards by swiveling the hand lever through an angle of 180°.
- This raises the sash and releases it to perform its sliding function.
- Push the sash to the side.

Gap ventilation:

- Position the slide sash in the sliding position at position “Gap ventilation” at the bolt block (tooth catch).
- Swivel the hand lever upwards into the locked position.

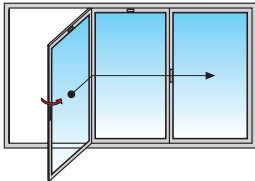
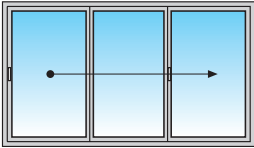
Closing from an open position:

- Slide the sash shut to the stop and press in a locked position.
- Swivel the hand lever upwards through an angle of 180°.

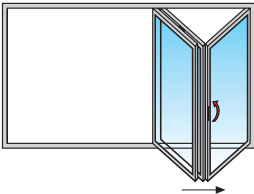
Window operation

3.12 Folding/sliding doors

3.12.1 Odd number of sashes



Locked position



Folding/sliding position

Locked position:

- Position the handle vertically downwards.

Sliding position:

- Release the slide sash which opens first by gently pulling out the handle and turning it upwards through 180°.
- The following sashes are released according to the same model as above.
- The sash which opens first must be fully opened out and snapped into the sash detent of the second sash.
- Now gently pull out the remaining sashes and push them together.

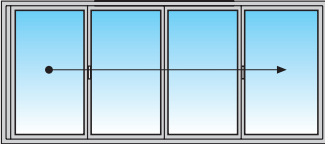
Closing from an open position:

- In reverse order.

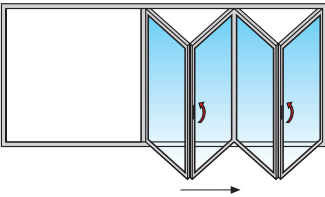
With all applications, the sash which opens first must be unlocked and opened first.

When a guide profile is used, folding is carried out directly.

3.12.2 Even number of sashes



Locked position



Folding/sliding position

Locked position:

- Position the handle vertically downwards.

Sliding position:

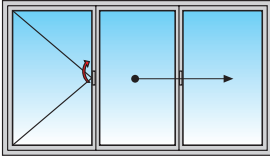
- Release the slide sash which opens first by gently pulling out the handle and turning it upwards through 180°.
- The following sashes are released according to the same model as above.
- Now gently pull out the remaining sashes and push them together.

Closing from an open position:

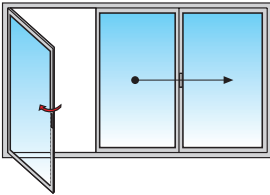
- In reverse order.

With all applications, the sash which opens first must be unlocked and opened first. When a guide profile is used, folding is carried out directly.

3.12.3 Design involving a turn sash



Locked position



Opening position

Locked position:

- Position the handle vertically downwards.

Opening position:

- Release and open the turn sash by gently pulling out the handle and turning it upwards through 180°.

Sliding position:

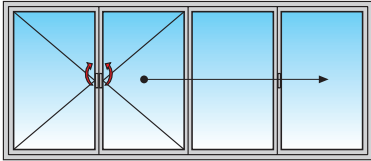
- Release the slide sash which opens first by gently pulling out the handle and turning it upwards through 180°.
- The following sashes are released according to the same model as above.
- Now gently pull out the remaining sashes and push them together.

Closing from an open position:

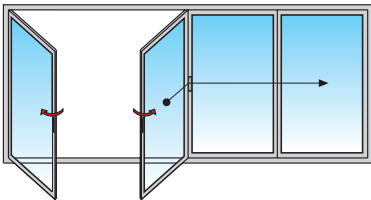
- In reverse order.

With all applications, the sash which opens first must be unlocked and opened first. When a guide profile is used, folding is carried out directly.

3.12.4 Design involving a double-leaf revolving door



Locked position



Opening position

Locked position:

- Position the handle vertically downwards.

Opening position:

- Release and open the turn sash by gently pulling out the handle and turning it upwards through 180°.

Sliding position:

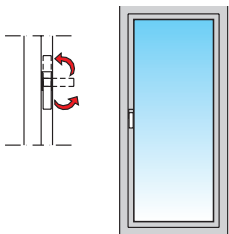
- Release the slide sash which opens first by gently pulling out the handle and turning it upwards through 180°.
- The following sashes are released according to the same model as above.
- The sash which opens first must be fully opened out and snapped into the sash detent of the second sash.
- Now gently pull out the remaining sashes and push them together.

Closing from an open position:

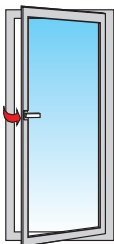
- In reverse order.

With all applications, the sash which opens first must be unlocked and opened first. When a guide profile is used, folding is carried out directly.

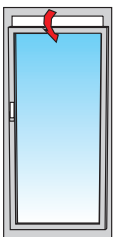
3.13 Lockable French windows



Locked position



Turning position



Tilting position

Locking:

- Close the door.
- Position the window handle so that it points vertically downwards.
- Bolt the lock by two complete turns of the key towards the frame.

Open:

- Release the lock by two complete turns of the key towards the sash.
- Turn the window handle upwards through 90° for turning position
- or upwards through 180° for tilting position

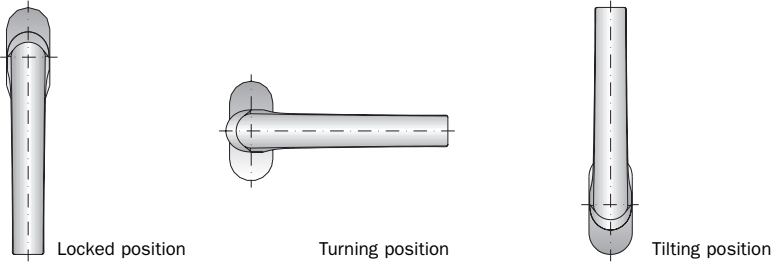
The French window mechanism can be locked in 3 positions (locking, turning and tilting positions).

An additional faulty operation stop prevents any improper operation and destruction of the fittings.

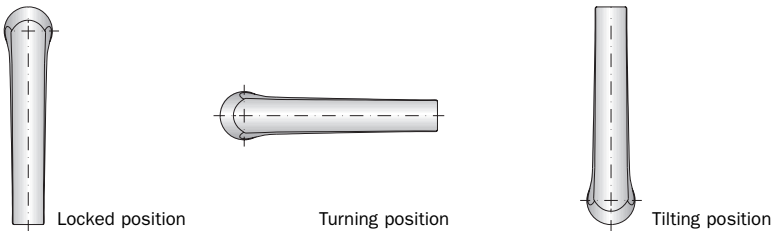
Window operation

3.14 Window handles

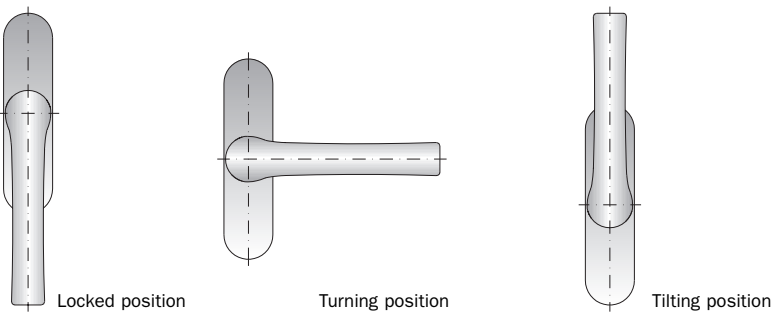
3.14.1 Window handles for turn, turn/tilt and tilt windows



Window handle for mortise gear and rebate gear



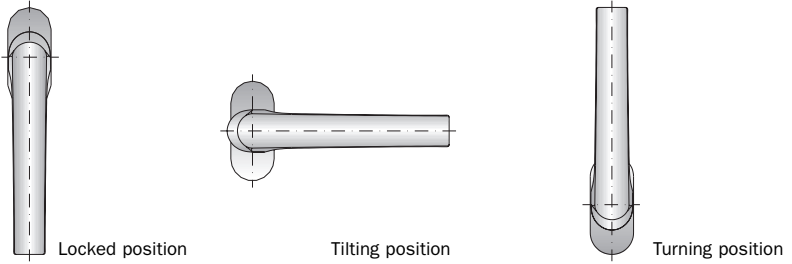
Window handle for rebate gear (without rosette)



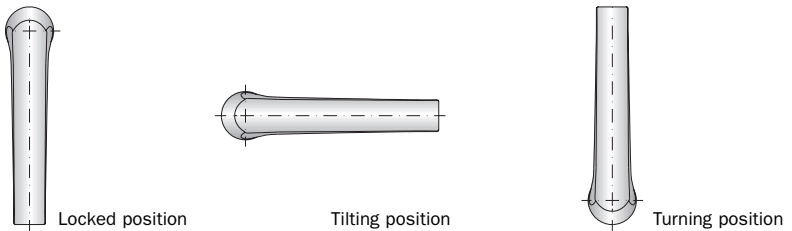
Top-mounted gear

Window operation

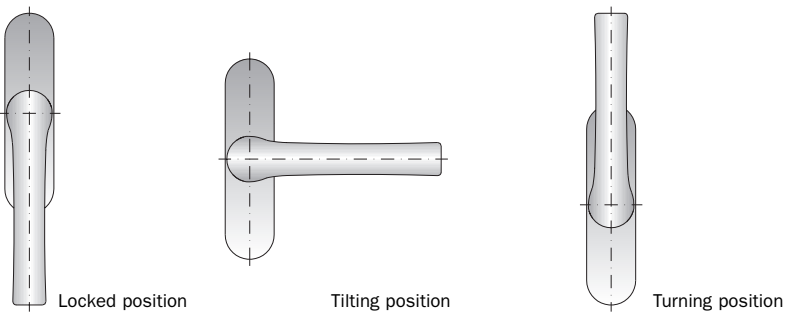
3.14.2 Window handles for tilt-first windows



Window handle for mortise gear and rebate gear

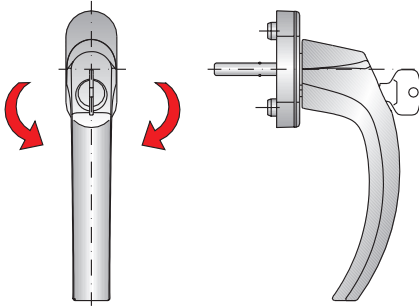


Window handle for rebate gear (without rosette)

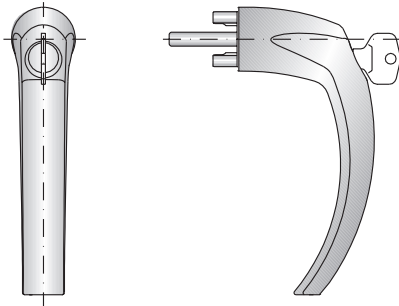


Top-mounted gear

3.14.3 Lockable window handles for turn/tilt windows



Window handle for mortise gear and rebate gear



Window handle for rebate gear (without rosette)

Locking:

- Close the element sash.
- Position the window handle so that it points vertically downwards.
- Press in the pressure cylinder as far as the stop. The handle is locked.

Unlocking:

- Release the lock by turning the key through 45° to the right. Bring the handle to the desired opening position (turn or tilt).

The lockable handle enables the window to be bolted in the locking or tilting positions.

General note:

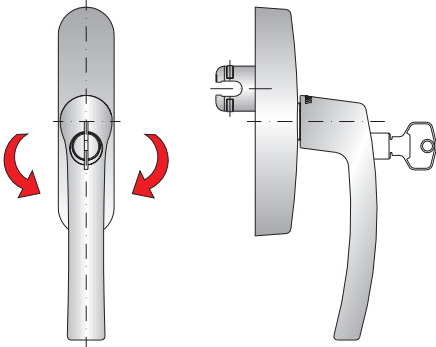
Burglar resistance can only be assured when the window is closed and the cylinder locked.



Lockable handles in themselves are not burglar-resistant. The appropriate burglar-resistant fittings are also required.

Window operation

Top mounted gear handle for turn/tilt windows



The lockable top mounted gear handle enables the window to be bolted in the locking or tilting positions.

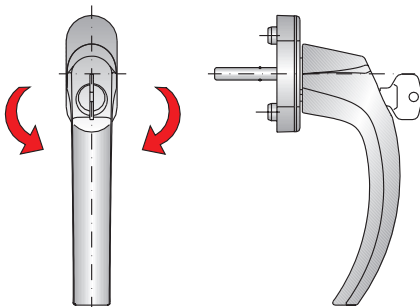
Locking:

- Close the element sash.
- Position the window handle so that it points vertically downwards.
- Turn the key through 180° to the left.
- The window is fully locked.

Unlocking:

- Release the lock by turning the key through 180° to the right.
- Bring the handle to the desired opening position (tilt or turn).

3.14.4 Lockable window handles for tilt-first windows



Window handle for mortise gear and rebate gear

The lockable handle enables the window to be bolted in the locking or turning positions.

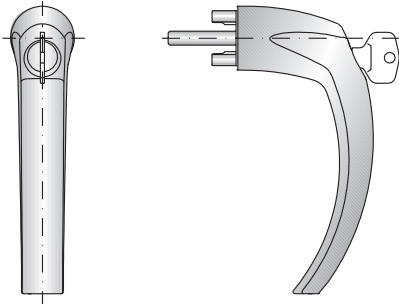
Locking:

- Close the element sash.
- Position the window handle so that it points vertically downwards.
- Release the cylinder by turning the key through 180° to the left. The handle is locked.

Unlocking:

- Release the lock by turning the key through 180° to the right. Bring the handle to the desired opening position (turn or tilt).

Window operation



Window handle for rebate gear (without rosette)

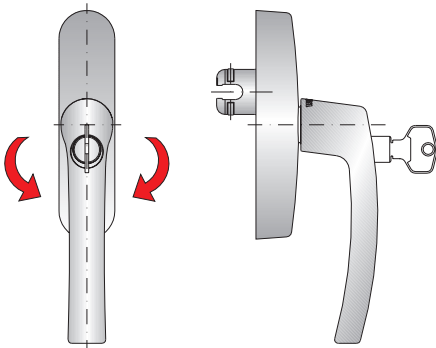
General note:

Burglar resistance can only be assured when the window is closed and the cylinder locked.



Lockable handles in themselves are not burglar-resistant. The appropriate burglar-resistant fittings are also required.

Top mounted gear handle for tilt-first windows



Locking:

- Close the element sash.
- Position the window handle so that it points vertically downwards.
- Turn the key through 45° to the right.
- Press in the lock containing the turned key as far as the stop.
- Now turn the key again through an angle of 45° to the left; the window is fully locked,

or

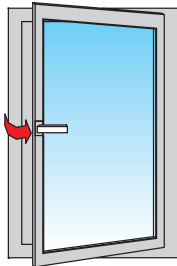
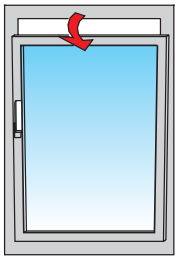
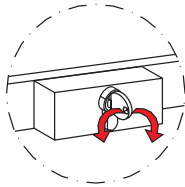
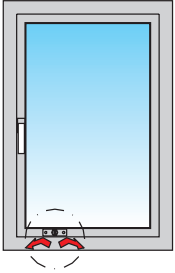
- Close the element sash.
- Press in the lock as far as the stop.
- Turn the window handle through 90°; the window can be tilted, the turning position is locked.

Unlocking:

- Release the lock by turning the key through 45° to the right. Bring the handle to the desired opening position (tilt or turn).

Window operation

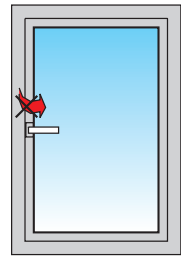
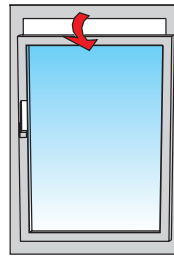
3.15 Turn stop



Turn stop open

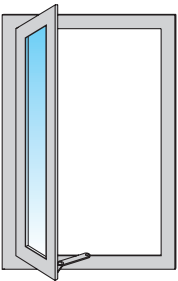
The turn stop blocks the turning position of the turn sash and turn/tilt window sash.

With a turn/tilt sash, the tilting position can also be selected and opened even when the turn stop is closed.



Turn stop locked

3.16 Turn restrictor



The turn restrictor limits the opening angle of the turn sash to a maximum of 90°.

It reduces uncontrolled movement in the element sash in the case of a draught.

The turn restrictor is maintenance free. Grease or oil should not be applied.

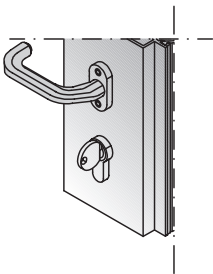
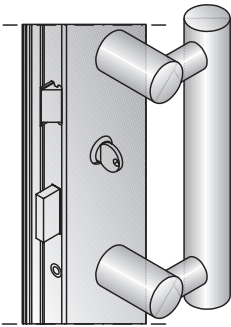
In the case of a turn restrictor with brake, the braking effect must be adjusted individually.

4.0 Operating doors and door elements

When opening doors with a key, it should be ensured that the door is pulled or pushed using a handle. Otherwise, there is the danger that fingers become caught between the frame and the sash if the key is used for this purpose.

Door locks should only be secured with two turns of the key, thereby ensuring that the lock's full capability is utilised.

4.1 Opening and locking single-leaf hinged doors



Opening from the outside:

- Turn the key against the spring pressure towards the hinge side and hold it for a brief period.
- Open the door slightly.
- Open the door fully using the push bar or lever handle.

Locking from the outside:

- Close the door.
- Lock the door by two complete turns of the key towards the frame.

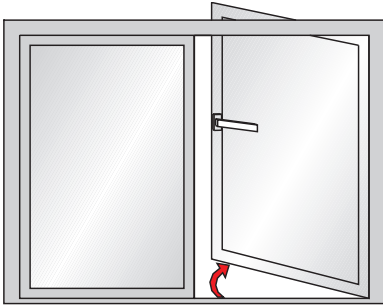
Opening from the inside:

- Press down the lever door handle.
- Open the door.

Locking from the inside:

- Close the door.
- Lock the door by two complete turns of the key towards the frame.

4.2 Opening and locking double-leaf hinged doors



Open the active leaf:

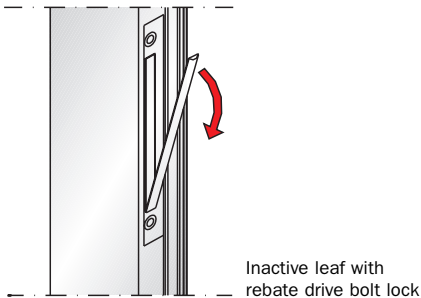
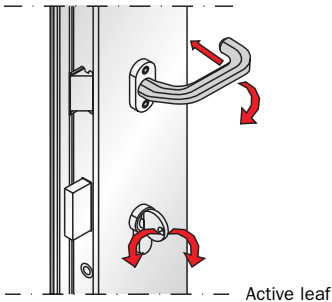
- Release the sash by two complete turns of the key towards the hinge side.
- Operate the lever door handle.
- Open the doors.

To close = the above order in reverse.

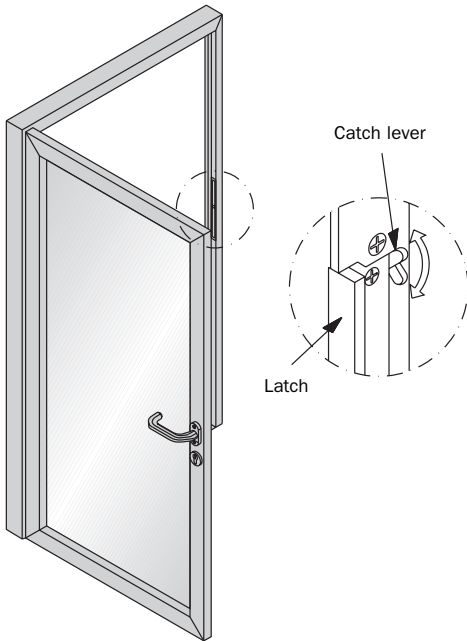
Open the inactive leaf:

- Open the active leaf.
- Release the rebate drive bolt lock.
- Open the inactive leaf.

To close = the above order in reverse.



4.3 Opening and locking doors using an electric opener



The closed door is released for opening by a separately attached switch. The released door can only be opened as long as the switch is operated.

Day setting:

As regards day setting, the electric opener latch can be released permanently.

Where latches are released, the door may be opened at any time.

Unlocking:

- Release the latch by adjusting the catch lever downwards.

Locking:

- Lock the electric opener by adjusting the catch lever upwards.

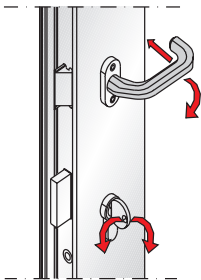
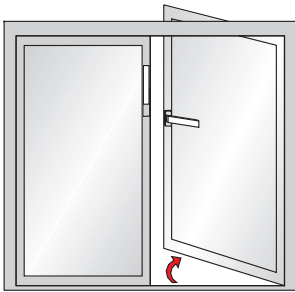
General note:

The electric opener does not release the door if the latter has been locked using a key.

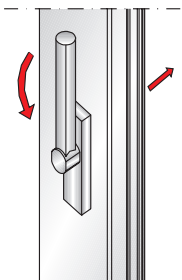
Operating doors and door elements

4.4 Opening and locking double-leaf escape doors

4.4.1 Inactive leaf locking using swivel action bolts and active leaf locking using lever door handles (emergency exit lock)



Active leaf



Inactive leaf with
swivel action bolt

In the event of danger, both door leaves of the door system can be opened from the inside via the swivel action bolt on the inactive leaf.

Opening the active leaf from the outside:

- Release the active leaf by one complete turn of the key towards the hinge side.
- Press down the lever door handle.
- Open the active leaf.

To close = the above order in reverse.

Opening the inactive leaf from the outside:

- Open the active leaf as described above.
- Operate the swivel action bolt.
- Open the inactive leaf.

To close = the above order in reverse.

Escape door operation from the inside

Open the active leaf:

- Press down the lever door handle.
- The active leaf opens even if the door is locked.

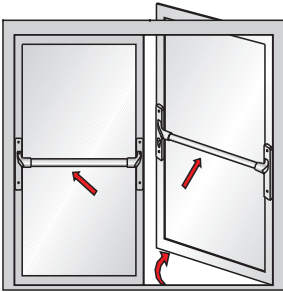
Open the inactive leaf:

- Operate the swivel action bolt.
- The active and inactive leaves open even if the door is locked.

Operating doors and door elements

4.4.2 Active and inactive leaf locking using the panic rod handle (panic door lock)

Locked doors can be opened in the event of danger using panic rod handles.



Opening the active leaf from the outside:

- Release the active leaf by turning the key to the hinge side as far as the limit stop.
- Open using a lever door handle or push bar.

To close = the above order in reverse.

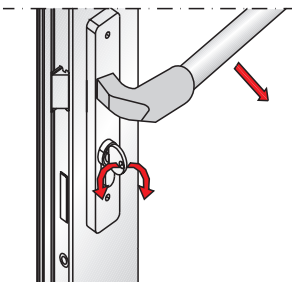
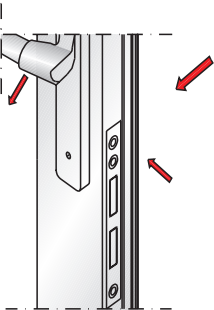
Escape door operation from the inside

Open the active leaf:

- Press down the panic rod handle.
- The active leaf opens even if the door is locked.

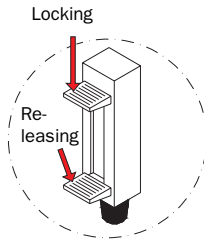
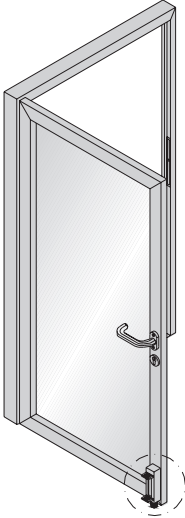
Open the inactive leaf:

- Press down the panic rod handle.
- The active and inactive leaves open even if the door is locked.



Operating doors and door elements

4.5 Door stop



With the door stop, the door leaf can be fixed in an open position.

Locking:

- Lock the door stop by operating the kick down stop.

Releasing:

- Release the door stop by stepping on the release plate.

The door closer automatically returns the door leaf to its closed position. Several types of door closer such as locking mechanisms in the case of fire-resistant doors keep the door leaf in a fully open position.

4.6 Door closer



To close the door, it must be pulled once in the direction of closure, after which it again closes automatically.

5. Maintenance recommendations



The ready-made and installed aluminium elements are equipped with high quality WICSTAR fittings which means a high degree of operating comfort, proper functioning and a long service life. A requirement for the functioning and smooth movement of the fittings without obstructions is the observance of our regulations regarding sash size and weight as well as our product liability guidelines. There are special maintenance recommendations for fire-resistant and smoke control doors.

The fittings shall be inspected according to the following criteria in terms of their function and condition:

- Torque settings
- How the fittings are attached
- Wear and tear on the fittings
- Damage to the fittings

Torque settings

The torque setting of the fittings can be inspected on the window handle. The locking and release torque of the window handle is stipulated in accordance with DIN 18055. The torque setting can be improved by the addition of grease/oils or by readjusting the fittings.

With WICSTAR fittings, provision is made for locking options (see the respective

installation instructions for details).

The incorrect or improper readjustment of the fittings may result in the windows no longer fulfilling their function.

How the fittings are attached

The proper functioning of the window and its safety in terms of use depend on the reliable attachment of the fittings. The tightness of the individual aluminium screws and the way they fit shall be checked. If there are indications that screws have come loose, for example, or that the heads of the screws have worn away, these shall be tightened or replaced immediately.

Wear and tear on the fittings

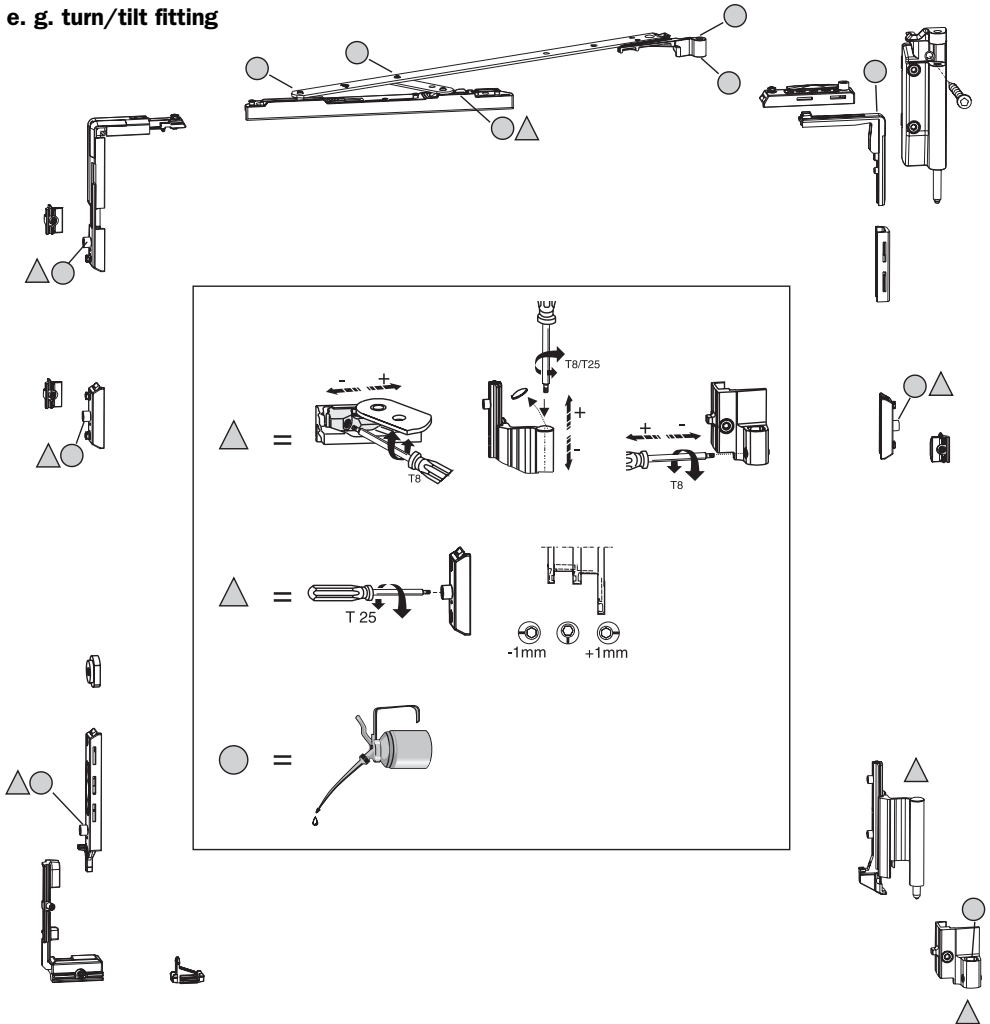
All fitting components that are relevant from the point of view of safety and functioning shall be lubricated or oiled in accordance with our specifications in order to avoid wear and tear.

Damage to the fittings

Damaged fitting components shall be replaced, especially if the parts in question are load-bearing fittings. No legal claims can be deduced from these recommendations whose application can be adjusted to the specific case in question. We recommend that the window manufacturer enters into a maintenance contract with his end customers.

Maintenance instructions

e. g. turn/tilt fitting



Your windows/French windows have been equipped with high quality WICSTAR system fittings. In order to ensure proper functioning of the fittings over the long term, the following maintenance work and/or inspections should be carried out:

- Clear all fitting parts of any splashed lime, cement or grout particles in order to prevent malfunctions as a result of the fittings becoming obstructed.
- Oil or lubricate all moveable parts and locking points once a year. Only use non-corrosive oil or grease!
- By turning the locking pins, the contact pressure can be altered as required (+/- 1 mm).
- Inspect the fastening and attachment screws of the fitting to make sure that they are seated properly.
- When closing the sash, make sure that it runs smoothly in the frame. If necessary, readjust the sash.

6. Cleaning and care

Regular cleaning and care are basic requirements for observing the service life and efficiency of high quality aluminium products. Both the outside and inside must be cleaned (with windows, the rebate area as well). Only items recommended by the system house may be used as cleaning and preservative agents. These include

Glass cleaner

92-537691 (Esco)

Cleaner for anodised surfaces

92-222518 (Esco)

Gasket maintenance

92-244236 (Esco)

Aluminium cleaning cloth

92-244490 (Esco)

Protection spray for fittings

5070025 (WICONA)

Only in this way can it be ensured that the cleaning agents are suitable for the corresponding material. The corrosion protection of the parts may not be corroded. In cases of doubt, the manufacturer of the cleaning agent must be consulted regarding its suitability. For cleaning coated material surfaces, the quality and test provisions of the quality association governing the cleaning of metal façades e.V. (RAL-GZ 623) must be observed.

The following maintenance checklists have been conceived for the owner/user of the building in order to make it easier for them to prepare a maintenance plan. The aim is to ensure the long-term functioning and quality of the materials used through regular maintenance.

6.1 Servicing

All building components must be inspected for damage and deformities at regular intervals. This also concerns the structural connecting joints and special building components (e.g. solar shading devices). Building components that are relevant from the point of view of safety require special inspection. Above all, building components that are relevant from the point of view of safety shall be tested to make sure that they are seated properly and checked for wear and tear at regular intervals. As required, the fastening screws shall be retightened or the parts replaced. Moveable parts must be lubricated using suitable agents (Article no. 5070025 WICONA). The recommendations of the Fensterinstitut i.f.t. Rosenheim (Windows Technology Institute) are given on the next page.

Cleaning and care

The Fensterinstitut i.f.t. Rosenheim

recommends as follows:

	Safety inspection	General inspection
Office structures	every 6 months	every 12 months
As follows for individual components in the aluminium façade:		
	Period	Activity
Anodised profiles	every 6 months every 12 months	Cleaning with fabric cloth Basic cleaning
Glass surfaces	every 6 months	Wet cleaning
Silicone joints	every 6 months	Inspecting the joints for cracks Correcting defects Cleaning the silicone joints (pH neutral water)
Silicone gaskets	every 6 months	Cleaning and inspecting for cracks
Fittings	every 6 months	Adjusting the fittings Lubricating the fittings Inspecting for smooth movement without obstructions

7. Advice and repair

Access to the façade maintenance area should be prohibited to all persons except a specialist company.

All maintenance tools must be secured.

During maintenance work on the façade, consideration must be given to its physical properties, in particular, where the glass, gaskets, silicone and façade profiles come into contact with each other.

Service personnel who move over the glass or silicone joints must wear shoes with clean rubber soles.

In the event of dirt which can only be removed in part, or not all, in spite of the methods indicated, the party supplying the façade must be consulted.

It is critical that repair work or redevelopment work is carried out by the party supplying the façade so that the general warranty and guarantee are not affected.

Specialist firms shall be entrusted with the respective work, especially with regard to the fittings. As far as servicing work is concerned, it is recommended entrusting this to the company which has supplied and erected the structure. This company shall possess both the appropriate planning knowledge and detailed building project documentation and shall generally have the necessary consumables in stock.

As a special service, specialist WICONA firms can offer maintenance contracts. Through this maintenance contract, the specialist WICONA firm will undertake all servicing and repair work. Without undertaking any manual work of his own, the customer benefits from an optimum level of functional safety and retained value with regard to his aluminium elements.

A specimen maintenance contract (“VFF Mitgliederinfo WP.03”) can be obtained from the Association of window and façade manufacturers at www.window.de.

Hydro Building Systems

Hydro Building Systems GmbH

Söflinger Straße 70

D-89077 Ulm/Donau

Phone +49 731 39 84 - 0

Fax +49 731 39 84 - 241

<http://www.wicona.de>