



**WARRANTY CARD
AND WARRANTY CONDITIONS
FOR GABIT PRODUCTS**



WARRANTY CARD AND WARRANTY CONDITIONS FOR GABIT PRODUCTS

The **Gabit Sp. z o.o. company** with offices at Leśna 5, 77-100 Bytów, further called as “Producer”, ensures high quality of the products it manufactures, taking into account that the long-term and efficient functioning, depends on their proper installation, regular maintenance and proper use.

I. General provisions

1.1. Producer, provides a time limited warranty for his products:

a) in the case of self-assembly of the joinery by the Customer or by an unauthorized installation company:

- **3 years** for PVC windows and balcony doors made of the GEALAN, KÖMMERLING, SCHÜCO system, as well as ALU made of SCHÜCO, ALIPLAST, REYNAERS systems (applies to fixed, side-hung, tilt-and-tilt or tilt windows).
- all adjustments and services can be performed by GABIT for a fee according to an individually agreed rate.

b) in the case of installation of joinery done by the Producer, or companies authorized by the Producer:

- **5 years** for PVC windows and balcony doors made of the GEALAN, KÖMMERLING, SCHÜCO system, as well as ALU made of SCHÜCO, ALIPLAST, REYNAERS systems (applies to fixed, side-hung, turn-tilt or tilt windows).

During the warranty period, the Producer undertakes, at the Customer's request, to perform one free, comprehensive adjustment of the joinery, but not later than within 2 years from the date of sale. After this period, the Ordering Party performs the regulations on its own or for a fee through the GABIT service.

- **5 years** for the tightness of glazing units. Windows with sandblasted and ornamental glass are excluded from the warranty.
- **5 years** for window fittings.
- **5 years** for seals.
- **2 years** for entrance doors, all sliding, lift-and-slide, tilt-and-slide systems on GEALAN, KÖMMERLING, SCHÜCO, ALIPLAST, REYNAERS profiles (including PSK, Smoovio, HST, Move, Slide), balcony doors with low thresholds, joinery with glued mullions.
- **2 years** for non-standard joinery such as arches, trapezoids, circles, triangles.
- **2 years** for glazing packages, in accordance with the EN 1279 Standard and the Technical Criteria of the Institute of Glass and Ceramics of the Republic of Poland.
- **2 years** for external and top-mounted roller blinds, façade blinds, motors and other accessories and components for the production of roller blinds.
- **2 years** for additional equipment, including: door closers, air vents, handrails, door handles, locks, electric strikes, inserts, window sills, screens, mosquito nets etc.
- **2 years** for decorative fillings for entrance doors.

In all cases, the warranty period is counted from the date of sale.

The Producer does not take the responsibility for wrongly defined dimensions of the joinery, provided by the Customer or unauthorized service providers.

- 1.2. All electrically powered elements, being part of the products provided by the Producer, shall be checked for efficiency and safe functioning immediately after the installation or no later than before plastering works begin.
- 1.3. All electrical elements must be connected in accordance with the Producer's guidelines, applicable standards, guidelines and national regulations of the Country where the installation takes place, and should be performed by an authorized electrician.
- 1.4. Programming of motors and remote controls (controllers) is the responsibility of the Customer. At the Customer's request, the guarantor can provide the operating/programming manual.
- 1.5. If the roller shutter elements are built-in and there is no easy access to, for example, the inspection flap or roller shutter's guides, the Customer is obliged to provide GABIT employee with access to premises in order to repair the roller shutter at his own expense.
- 1.6. The Customer is obliged to indicate the position of elements such as: heating pipes, water and sewage pipes or electric cables that are hidden in the walls. If these places are not indicated, the Customer is responsible for any damage.
- 1.7. PVC and ALUMINUM joinery can only be transported in a vertical position. It must be carefully protected against possible movement and direct contact with elements that may damage it. In the case of joinery with increased dimensions and weight, to protect the parts against damages, the sashes and glazing inserts can be dismantled for transportation and delivered separately. During transportation, the fittings may become misaligned. After installing the joinery, it is necessary to check the correct setting and functioning of the fittings and, if necessary, adjust them.
- 1.8. Defects discovered during warranty period will be removed free of charge. The guarantor decides about repairing or replacing the product with a defect-free one.
- 1.9. The condition for using the warranty rights is to submit the Warranty Card provided with the product, together with the proof of purchase and settle all obligations of the Buyer towards the Seller for the purchased goods.
- 1.10. The warranty repair does not cover any of the activities described in the User's manual, as to be performed by the owner and at his own cost.
- 1.11. The Purchaser is obliged to carry out periodic inspections and maintenance cleaning at his own cost in accordance with the User's manual.
- 1.12. The Producer shall not be liable for any costs beyond the costs of repairing the fault.
- 1.13. Defects recognized by the Producer during the warranty period will be removed free of charge on time:
 - up to **30 days** from the date of written notification if the repair does not require repair of the structural elements of the products.
 - up to **60 days** from the date of written notification when the repair requires replacement of structural elements of the products.
- 1.14. Complaints should be submitted in person to the sales entity where the product was purchased or in electronic form using complaint form with a description of the defect and contact details. Such reports should be sent to: **service@gabit.eu / tel. 59 822 15 19**. Complaints provided with valid Warranty Card, copy of paid invoice and a description of the defect will only be considered.
- 1.15. In the event of an unjustified complaint, any costs related to: removing the defect, additional operations such as adjustments, lubrication, and any accommodation and subsistence costs of employees will be charged on complain issuer.

1.16. The scope of warranty services does not include product maintenance and current adjustments. The ordering party is obliged to perform regular maintenance and adjustments.

II. The warranty does not include:

2.1. Mechanical, chemical and heat damage and damage to PVC joinery caused by the User due to improper installation or operation.

2.2. Defects that remain invisible after installation and do not affect the utility value of the product (e.g. scratches).

2.3. Damage and defects resulting from:

- inappropriate use and maintenance of PVC joinery or use not according to the User's Manual and maintenance instructions,
- improper installation of PVC joinery,
- improper transportation and handling,
- repairs, modifications or design changes not agreed with the Producer.

2.4. Windows structure, in case of:

- cracks, including thermal cracks of glass, caused by uneven heating of the glass surface. In the case when window coverings are used (e.g. blinds, roller blinds, vertical blinds), the glass must be either covered completely or not at all. Partial shading leads to uneven heating of the glass surface, which may lead to thermal cracks..
- breakings,
- scratches on external surfaces,
- stains caused by chemicals or thermal factors, e.g. sparks,
- misting of windows on the inside or outside, caused by insufficient room ventilation or atmospheric factors,
- optical phenomena called "Newton's Ring" (rainbow effect), which is a domain of FLOAT insulating glass units,
- shocks and vibration induced manually or by wind pressure leading to random knocking of the mullions placed in the space between the panes of insulating glass,
- slight shape variations due to changing temperatures,
- expansion gaps of up to 0.5 mm are allowed for glued mullions due to the vertical expansion of the mullion. The mullions cannot touch the glazing seals,
- thermal stress crack caused by temperature differences in the glass. This phenomenon may be caused by uneven heating, shading or covering of the glass,

2.5. Fittings in the case of:

- damages caused by dirt (e.g. residues of plastering or dust),
- damages caused by improper operation,
- damages caused by misaligned fittings (the fittings are adjusted by the Buyer),
- lack of periodic lubrication in accordance with the User's manual.

2.6. Protective foils from PVC joinery should be removed preferably after finishing all construction works such as painting, plastering, but no later than 20 days after purchase.

III. There is no delay in settling the complaint if the representative of the Guarantor reports to the Buyer within the agreed time to settle the complaint and is unable to process the complaint for reasons attributable to the User. The deadline for settling the complaint is then extended by the duration of the delay. If the Buyer prevents the repair twice, it is considered that he has waived his warranty claims.

IV. The warranty shall expire upon the lapse of the periods specified in point. 1.1.

Attachments:

- Fittings adjustment - Annex 1
- Window maintenance – Annex 2
- Maintenance of fittings – Annex 3
- Glass maintenance - Annex 4
- Complaint notification - Annex 5
- Visual assessment of glass – Annex 6
- Glass defects – Annex 7
- Condensation effect on windows - Annex 8
- Window operation – Annex 9

WARRANTY START DATE: _____

PRODUCER'S ORDER NO.: _____

INSTALLATION DATE: _____

STAMP AND LEGIBLE SIGNATURE OF THE SELLER: _____

BUYER'S LEGIBLE SIGNATURE: _____ *

BDO: 000225037

Annex 1.

Safety tips

- When working on windows, pay attention to your own safety!
- Children and people who cannot assess the danger should not be nearby!
 - Be careful of oil dripping on the floor and do not leave tools in places where this may pose a risk!



Danger of falling out of an open window

- Only stable particles should be used.
- You should properly protect yourself against falling out of the window. Do not lean on the open window sash.



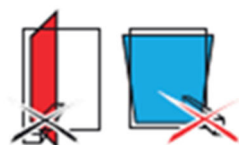
Risk of injury due to pinching

- When closing the window/balcony door, do not hold anything within the frame.



Risk of injury and material damage due to the sash pressing against the wall

- Do not press the sash against the wall.



Risk of injury and material damage by introducing obstacles between the sashes and the frame

- Obstructions must not be placed between the wings and the frame



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

- Do not add additional load to the sash



Risk of injury due to wind

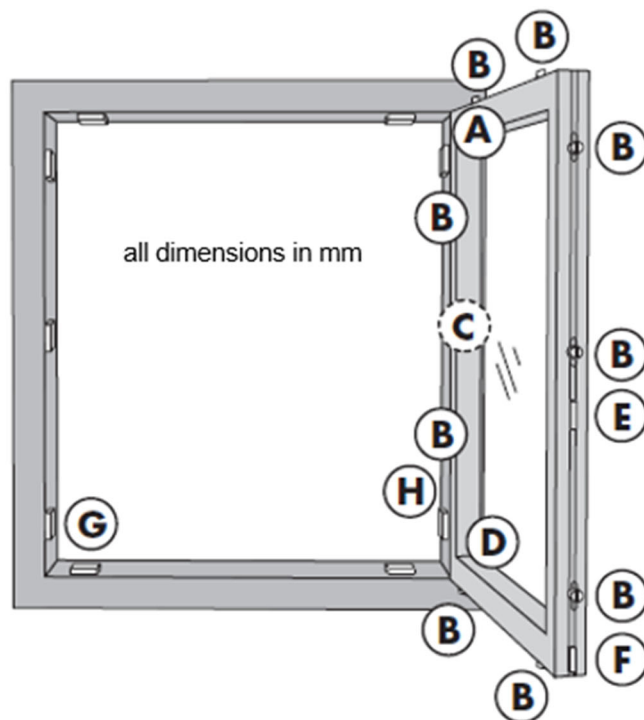
- The possibility of wind acting on open wings must be prevented
- In case of wind/draft, close and lock the window.

⚠ ATTENTION

Risk of injury in case of window failure!

- ▶ In the event of a failure, you should stop operating the window
- ▶ The window should be secured and the service center should be contacted immediately.

Adjustment method



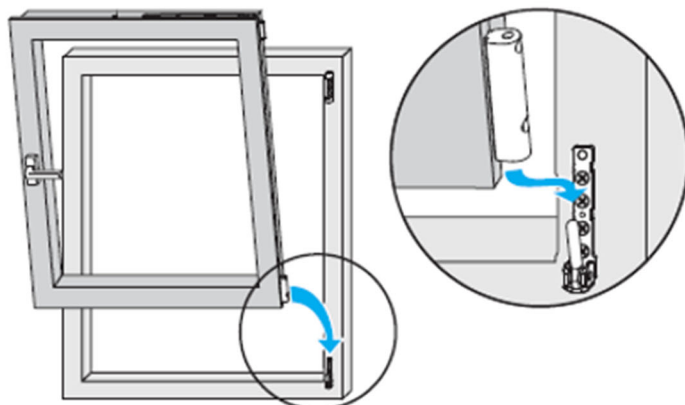
- (A)** stay and stay hinge
- (B)** locking points
- (C)** tilt hinge (only in tilt windows)
- (D)** window sash hinge - frame hinge
- (E)** balcony latches
- (F)** wing lift
- (G)** overrun – tilt catch
- (H)** additional element for heavy window sashes

Installing and removing the window sash

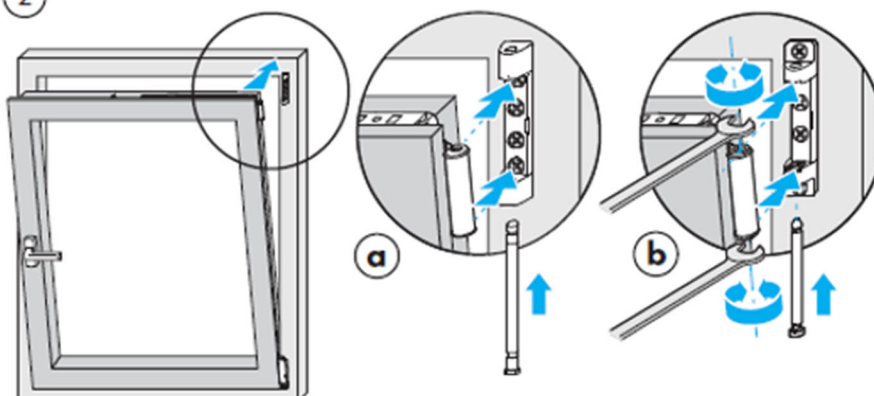
Installing the window sash



①



②



- (a) = **TITAN hinge side**
The stay hinge pin should be installed from the bottom, with the window sash position at 0 degrees or open at an angle of 60 degrees.
- (b) = **Si-line hinge side**
Pay attention to the correct positioning in relation to the stay hinge - both elements must be parallel!

Removing the window sash

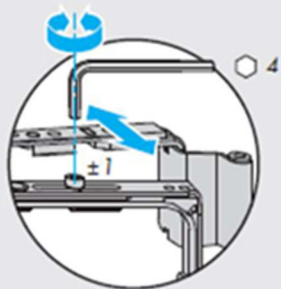
They should be removed in the reverse order.

Adjustment method

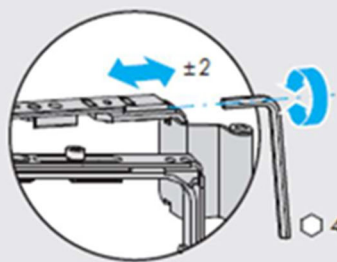
(A) Spreader

TITAN iP, AF

Pressure adjustment

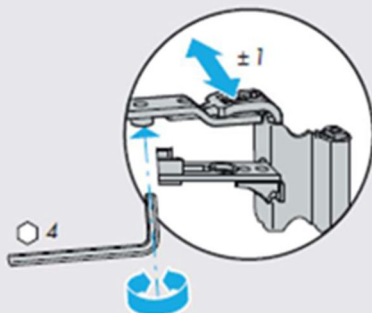


Side adjustment

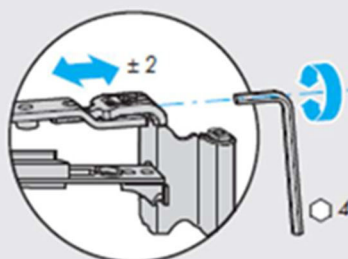


FAVORIT

Pressure adjustment



Side adjustment



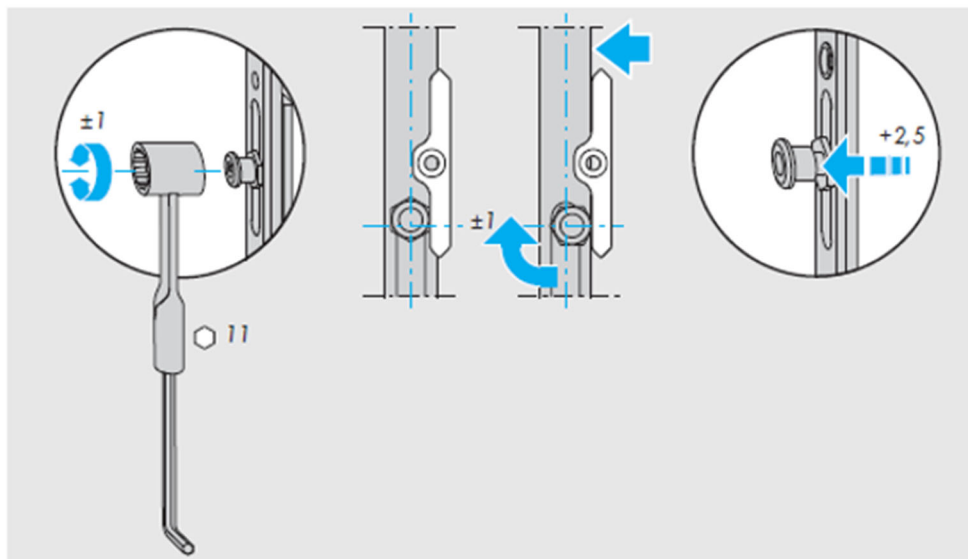
Adjustment method

(B) Locking points

TITAN iP, AF - rotation pin

Pressure adjustment

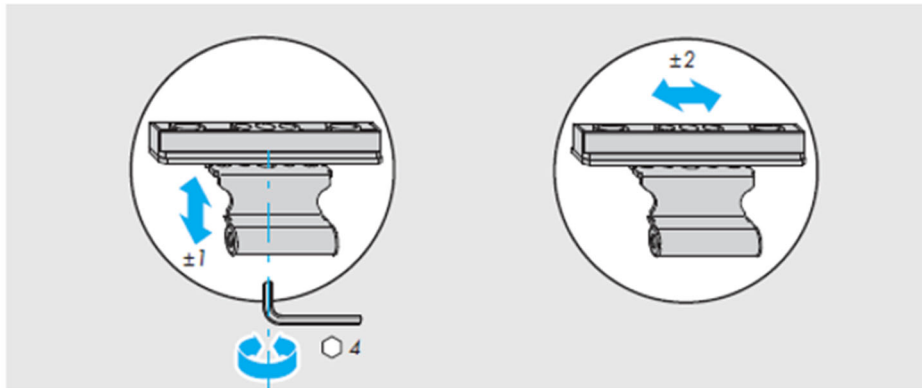
Adjustment



(C) Tilt hinge

Height adjustment

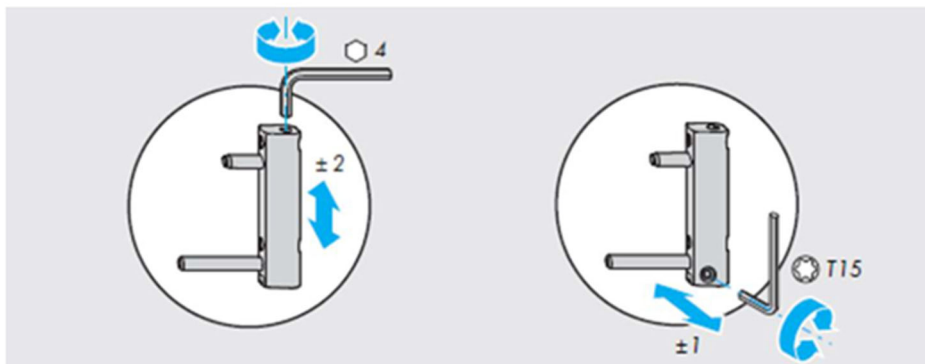
Side adjustment



(D) Tilt hinge

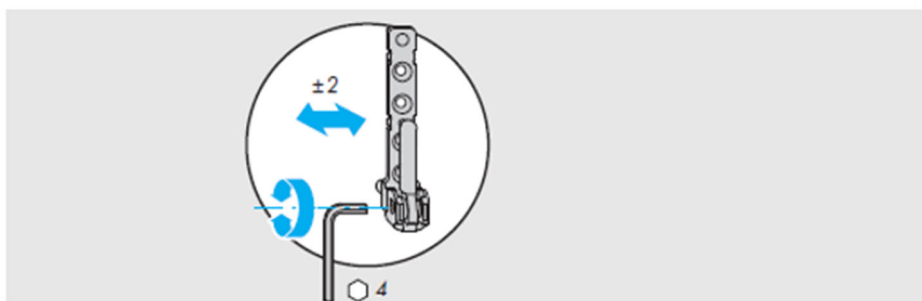
Height adjustment

Side adjustment



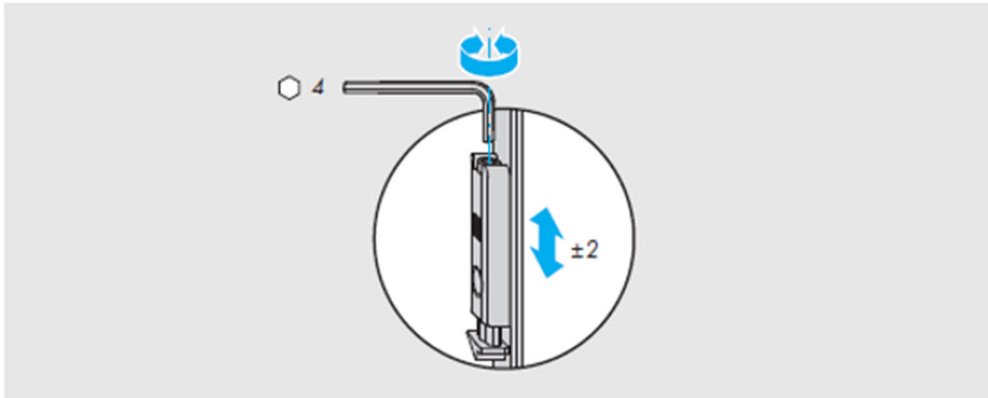
(D) Frame hinge

Side adjustment



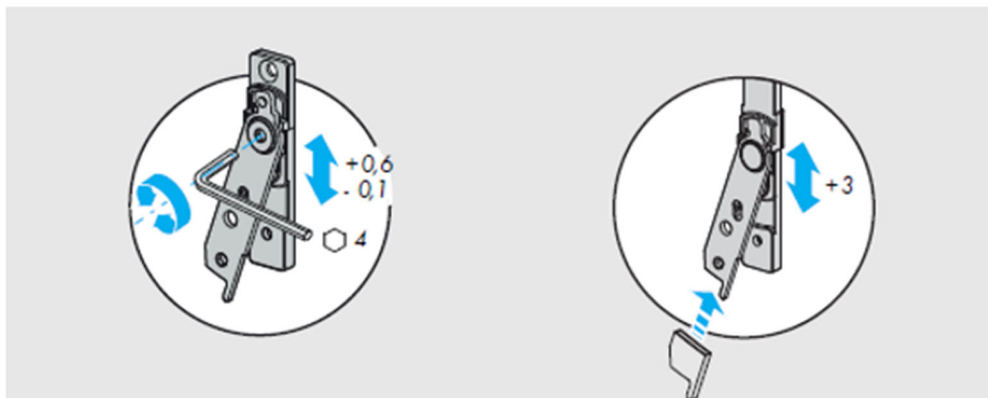
(E) Spreader

Height adjustment



(F) Sash lifter with/without lock

Height adjustment



Annex 2.

WINDOW MAINTENANCE

Proper cleaning

Protective foils from PVC joinery should be removed only after completing all painting, plastering, etc. works, but no later than 20 days after purchase.

Dirt caused by dust or rain can be easily removed with a soft cloth and using commercially available cleaning products. It is best to clean window glass with warm water and a special cloth (microfiber, etc.) for cleaning the glass.

Please pay attention to:

- not to use aggressive, solvent-based cleaning and polishing agents and other cleaning agents, organic solvents e.g. acetone, etc.
- not to use scouring agents,
- not to use hard objects, such as wire brushes, rough sponges, etc.

Maintenance and proper care

All moving parts of the fittings should be oiled at least once a year to ensure their proper, smooth functioning.

Gaskets should be washed with water and preserved with silicone for gaskets or other preparations based on silicone resins.

Regularly check whether the moving parts of the fittings are fastened sufficiently well and whether they function properly. Regular maintenance by a professional company is recommended.

Proper ventilation

Modern windows are very tight, thus enabling energy savings.

For this reason, it is very important to properly and regularly ventilate rooms, which:

- regulates air humidity and temperature inside,
- replaces stale air with fresh air,
- removes excess moisture, preventing mold.

HARDWARE MAINTENANCE

Window maintenance and cleaning

Your windows and balcony doors are equipped with high-quality SIEGENIA-AUBI fittings. To ensure long-term reliable operation of these fittings, we recommend that the fittings be maintained and inspected at regular intervals (at least once a year, or more often, in the case of hotels and schools, once every six months).

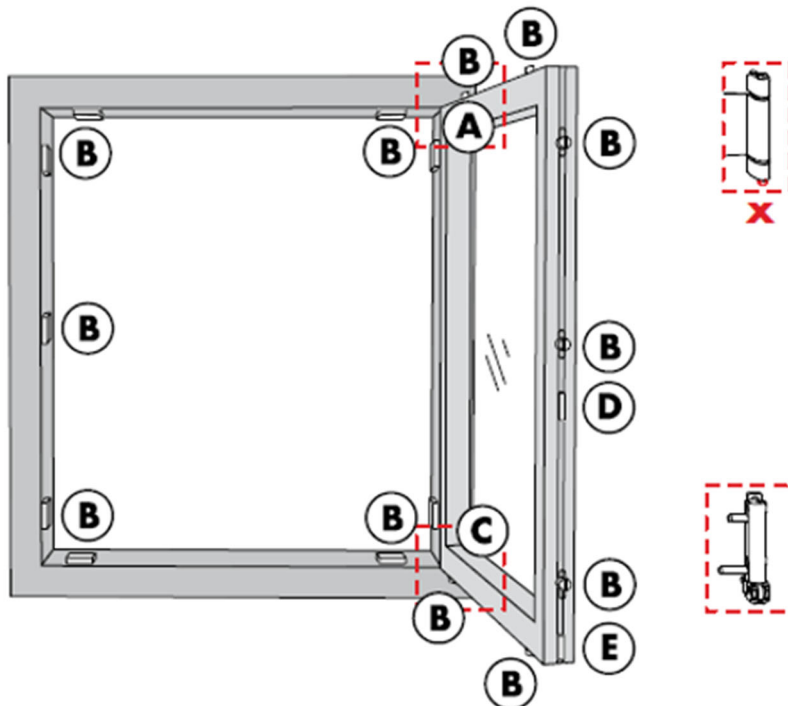
Cleaning and maintenance of fittings surfaces

- Protect the fittings during all types of surface treatments, e.g. when painting windows/balcony doors, and protect them against all types of dirt during work!
- Remove all dirt immediately and very thoroughly as it may have a negative impact on the anti-corrosion protection and functioning of the fittings!
- For washing, use only mild cleaning agents with a neutral pH. Never use sharp objects, scouring agents or aggressive cleaning agents (e.g. cleaning agents containing vinegar or acidic pH), as they may negatively affect the anti-corrosion protection of the fittings!
- When washing, be careful not to let water get into the fittings.
- After washing, dry the fittings thoroughly and lightly grease the surface with oil that does not contain resins and acids, using a cloth soaked in oil.

Maintenance – assessment and lubrication

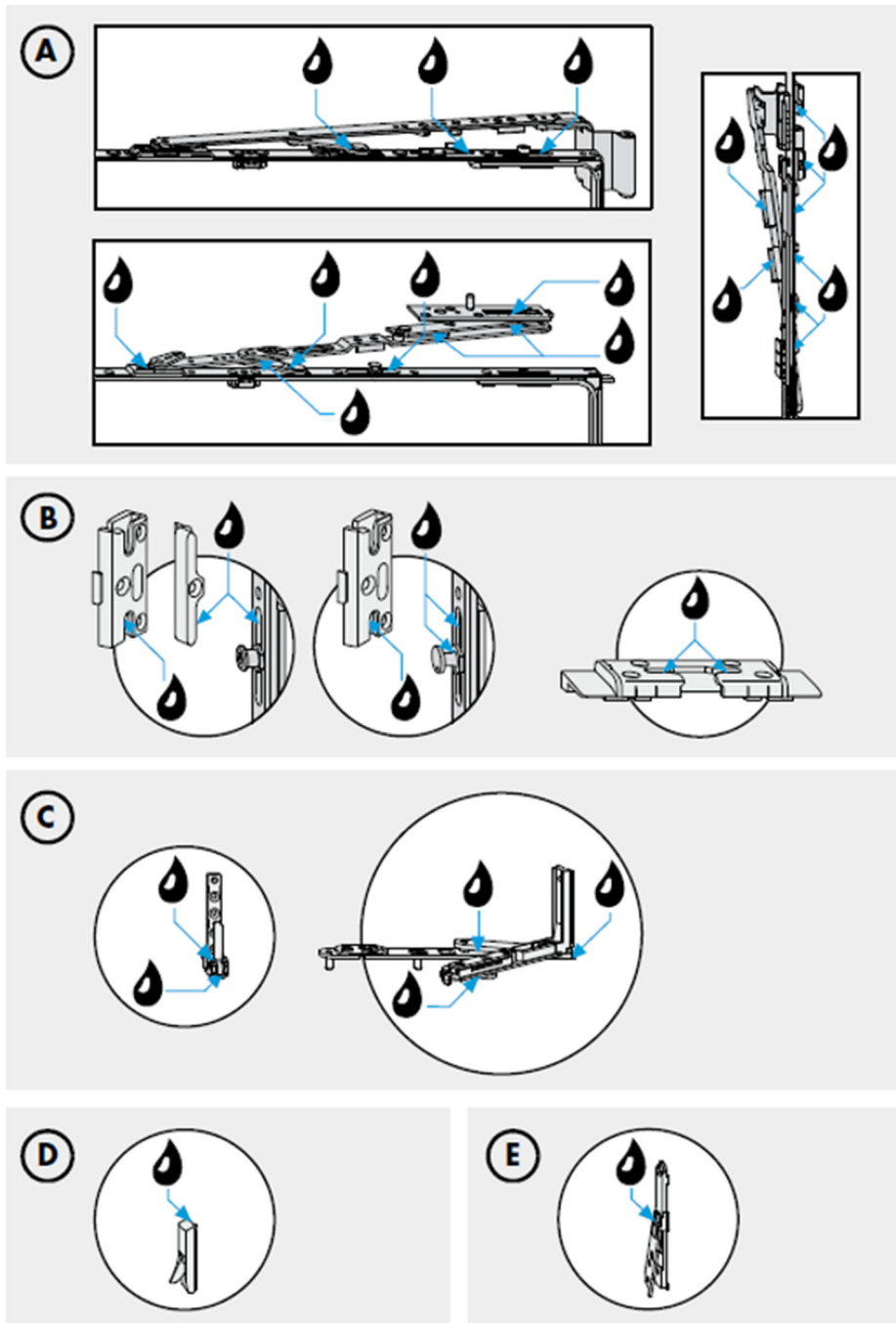
Check all elements responsible for the safety of the fitting (ⓧ) for fastening and possible friction.

- Check that the main frame hinge pin (ⓧ) is fully depressed. If not, fully depress the hinge pin.
- Pay attention to loose mounting screws and solid mounting of the handle.
- Tighten loose screws using an appropriate tool.
- Note: Do not overtighten the screws when tightening!
- Replace damaged parts of the fittings or twisted screws using the services of an appropriate service.
- Use only greases/oils that do not contain acids and resins.
- To lubricate moving parts of the fittings, use spray lubricants, which should be inserted into each opening of the fittings. After lubrication, open/tilt the window several times until the grease is distributed and wipe off the excess. Grease the hooks on the frame where the fitting bolt enters with solid grease (class 2 according to DIN 51818). SIEGENIA-AUBI grease number ZXSX0120-093010 is perfect for this purpose.



Annex 4.

Maintenance - lubrication points



GLASS MAINTENANCE

Washing and cleaning glass

- the glass surface should be washed regularly depending on the degree of dirt,
- solid dirt, such as cement mortar, cannot be removed dry; in such a case, the surface of the glass should be moistened abundantly with clean water to soak, and then gently wash away any hard and sharp residues,
- grease and remains of sealing compounds should be removed, e.g. with spirit or isopropanol, and then rinsed thoroughly with water,
- to clean reflective coatings in position 1, do not use any caustic or alkaline substances (fluorine, chlorine) or cleaning powders, as they may damage the coating..

Washing should be done with ordinary detergents, and to remove dirt in the form of greasy stains, you can use e.g. acetone, observing the rules for using these agents. Suppliers of reflective glass recommend using a suspension containing cerium oxide (50÷160 g/l of water) to clean the reflective coating. When using glasses with self-cleaning coatings etc. for special applications, the recommendations of the suppliers of these glasses should be followed. To obtain detailed information, please contact our Sales Department..

The glass supplier is not liable for glass defects resulting from improper washing or use of inappropriate cleaning agents, the influence of external pollution (atmospheric and other) and the use of tools/objects that may damage the glass, e.g. a steel scraper.

Annex 5.

| | |
|----------------------|--|
| <i>Customer Name</i> | |
| <i>Order Number</i> | |
| <i>Item Number</i> | |

| | | |
|-------------------------|------------------|-----------|
| | Customer Service | Complaint |
| PLACE OF SERVICE | | |
| <i>Name</i> | | |
| <i>Street</i> | | |
| <i>City / Town</i> | | |
| <i>Phone</i> | | |

| DESCRIPTION |
|---------------------|
| |
| Attachments: |

.....
Signature

.....
Date

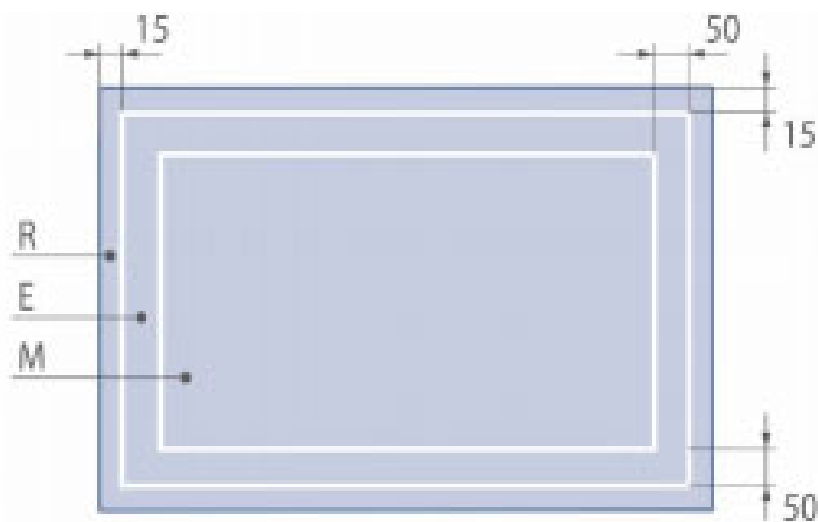
Annex 6.

VISUAL ASSESSMENT OF GLASS QUALITY

The assessment of insulating glass units should be carried out in transmitted light conditions, not in reflected light (look "through the glass", not "at the glass"), from a minimum distance of 3 meters from the plane of the glass, from the inside to the outside. The viewing angle should be as close as possible to the right angle to the glass surface. Defects should not be marked on the glass. The assessment should be carried out in diffused daylight conditions (e.g. cloudy sky), without direct sunlight or artificial lighting. The observation time should not exceed one minute per m². Insulating glass units assessed from the outside should be assessed under installation conditions, taking into account a standard viewing distance of minimum 3 meters. The observation angle should be as perpendicular to the glass surface as possible..

Assessment area

- **R zone** – a 15 mm zone usually covered by a frame or corresponding to the edge seal in the case of an unframed edge.
- **E zone** – a zone at the edge of the visible area, 50 mm wide.
- **Zone M** – main zone.



* Assessment area

Annex 7.

Spot defects allowed:

Applies to a single-chamber insulating glass unit made of two panes of monolithic glass.

| Assessment area | Defect size [Ø in mm] (excluding "halo") | Glass area S[m ²] | | | |
|-----------------|--|--|---|----------------|--------------------------------|
| | | $S \leq 1$ | $1 < S \leq 2$ | $2 < S \leq 3$ | $S > 3$ |
| R | Every dimension | Unlimited | | | |
| E | $\varnothing \leq 1$ | 1 piece for each linear meter of glass circumference | | | |
| | $1 < \varnothing \leq 3$ | 4 szt. | Allowed if less than 3 pieces per area Ø200mm | | |
| | $\varnothing > 3$ | Unacceptable | | | |
| M | $\varnothing \leq 1$ | Allowed if less than 3 pieces per area Ø200mm | | | |
| | $1 < \varnothing \leq 2$ | 2 szt. | 3 szt. | 5 szt. | 5 szt. + 2 pcs./m ² |
| | $\varnothing > 2$ | Unacceptable | | | |

"Halo" - a locally distorted area, usually around a point defect when the defect is located in the glass panel

Acceptable dirt:

Applies to a single-chamber insulating glass unit made of two panels of monolithic glass.

| Assessment area | Dimension [Ø in mm] and defect type | Glass area S[m ²] | |
|-----------------|-------------------------------------|---|--|
| | | S ≤ 1 | S > 1 |
| R | Every dimension | Unlimited | |
| E | Dots Ø ≤ 1 | Unlimited | |
| | Dots 1 < Ø ≤ 3 | 4 pcs. | 1 piece for each linear meter of glass circumference |
| | Stain ≤ 17 | 1 pc. | |
| | Dots Ø > 3 and stain > 17 | Maximum 1 pc. | |
| M | Ø ≤ 1 | Maximum 3 pieces for each area Ø 200 mm | |
| | Dots 1 < Ø ≤ 3 | Maximum 2 pieces for each area Ø 200 mm | |
| | Dots Ø > 3 and stain > 17 | Unacceptable | |

Linear defects allowed:

Applies to single-chamber, insulating glass unit made of two panes of monolithic glass

| Assessment area | Individual lengths [mm] | Sum of lengths [mm] |
|-----------------|-------------------------|---------------------|
| R | | |
| E | ≤ 30 | ≤ 90 |
| M | ≤ 15 | ≤ 45 |

Permissible number of defects:

The permissible number of defects specified for a single-glazed insulating glass unit made of two monolithic glass panes is increased by 25% for each additional glass component (in the case of a multi-glazing unit or laminated glass component). The number of permissible defects is always rounded up. Example 1. To determine the number of permissible defects for a double-chamber insulating glass unit made of three monolithic glass panes, the values of permissible defects contained in the above-mentioned tables should be multiplied by 1.25.

Example 2. To determine the number of permissible defects for a single-chamber insulating glass unit made of two sheets of laminated glass, each consisting of two components, the values of permissible defects included in the above-mentioned tables should be multiplied by 1.5.

Definition of defects:

Spot defects - Spherical or semi-spherical distortions of visual transparency when viewed through glass. It may be a solid or gaseous inclusion or a point defect in the coating or laminated glass.

Dirt - Material remaining on the glass surface, which may appear as a dot or stain.

Linear Defects - Defects that may be present on or in the glass, in the form of deposits, stains or scratches that occupy a greater length or oblong area.

Physical traits excluded from evaluation:

Color Integrity - Variations in color impression are possible due to: the iron oxide content of the glass, the coating application process, the coating itself, changes in glass thickness and assembly design, and cannot be avoided.

Difference in the color of insulating glass units – glazing made of insulating glass units containing coated glass may have different shades of the same color; a phenomenon that can be magnified when viewed from an angle. Possible causes for color differences include slight differences in the color of the substrate to which the coating is applied and slight differences in the thickness of the coating itself. An objective assessment of color differences can be performed in accordance with ISO 11479-2.

Interference effect – in the case of insulating glass units made of float glass, the phenomenon of interference may cause the appearance of spectral colors. Optical interference is caused by the overlap of two or more light waves at one point. The phenomenon is perceived as variability in the intensity of color zones, which change when pressure is applied to the glass. This physical phenomenon is enhanced by the parallelism of the glass surface. The interference phenomenon occurs randomly and cannot be avoided.

Specific effect due to barometric conditions - insulating glass units contain a closed volume of air or other gas, hermetically sealed by sealing the edge. The amount (volume) of gas is generally determined by the altitude, barometric pressure and air temperature at the time and place of production. If insulating glass is installed at a different height or if the temperature or barometric pressure changes, it will be subject to deflections that cause optical distortions.

Multiple reflections – multiple reflections of varying intensity may occur on the surface of insulating glass units. These reflections are particularly noticeable if the background viewed through the anastomosis is dark. This phenomenon is a physical property of all insulating glass units.

Condensation on the external surface of insulating glass units - Condensation can occur on external glass surfaces when the surface of the glass is colder than the adjacent air. The intensity of condensation on the outer surfaces of the glass depends on the U value, air humidity, air movement and internal and external temperature. When the ambient relative humidity is high and the glass surface temperature drops below the ambient temperature, condensation occurs on the glass surface.

Wettability of glass surfaces - the appearance of glass surfaces may vary due to the influence of rollers, fingerprints, labels, suction cups, sealant residues, silicone compounds, smoothing agents, lubricants, environmental influences, etc. This may be visible when glass surfaces are wet with condensation, rain or water for cleaning.

Glass cracking – glass is an amorphous (amorphous) body, homogeneous, solid, brittle and hard. It has negligible internal stresses, which makes it easy to cut and machine. It cracks as a result of external thermal or mechanical factors. This type of glass cracks occurring after the glass is delivered to the recipient cannot be the basis for a complaint about the glass. In order to increase the resistance of glass to cracks caused by thermal or mechanical loads, the glass should be subjected to a toughening or thermal strengthening process. This especially applies to glasses with increased energy absorption.

EXAMPLES OF MECHANICAL AND THERMAL CRACKS



Fig. 53 Impact on the glass surface (e.g. throwing a stone)



Fig. 54 Torsional crack

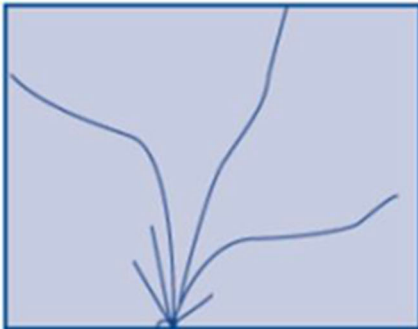


Fig. 55 Hitting the edge



Fig. 56 Hitting a corner



Fig. 57 Pressure on the edge



Fig. 58 Deadlock



Fig. 59 Shot from a gun

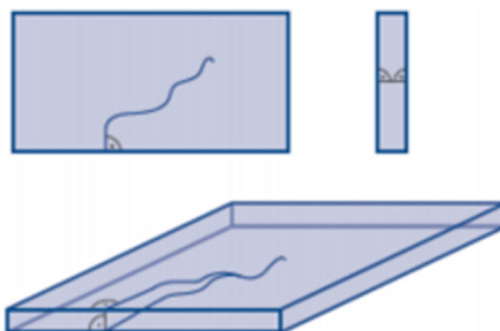


Fig. 60 Thermal crack



Fig. 61 Thermal crack*

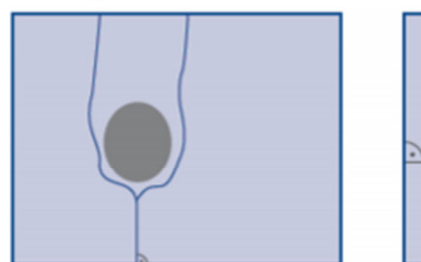


Fig. 62 Thermal crack*

* Fig. 61, 62 – examples of thermal cracks caused by placing decorations, stickers or partial shading on the glass, e.g. with a blind, a tree, a fragment of a roof, etc.

Załącznik 8.

CONDENSATION EFFECT ON WINDOWS

The condensation effect on the external surfaces of insulating glass panes is a phenomenon determined by the physical properties of the glass itself and the existing atmospheric conditions (low temperature and high air humidity).

It is not possible to completely eliminate this phenomenon because the outer glass is exposed to changing weather conditions. To sum up, the condensation effect in no way indicates a defect, but rather confirms the high quality of the insulating glass. This phenomenon is natural and is not subject to complaint.

Condensation of water vapor on the outer surface of the glass but on the inside of the room occurs most often in rooms with high humidity and insufficient ventilation.

The occurrence of fogging on the glass is not a defect, but only a physical phenomenon.

To eliminate the above-described phenomenon, rooms should be ventilated regularly.

The best way is to perform short, intensive ventilation by completely opening all the leaves in the room to ensure complete air exchange. Simply opening the wings may not be a sufficient solution in this case.

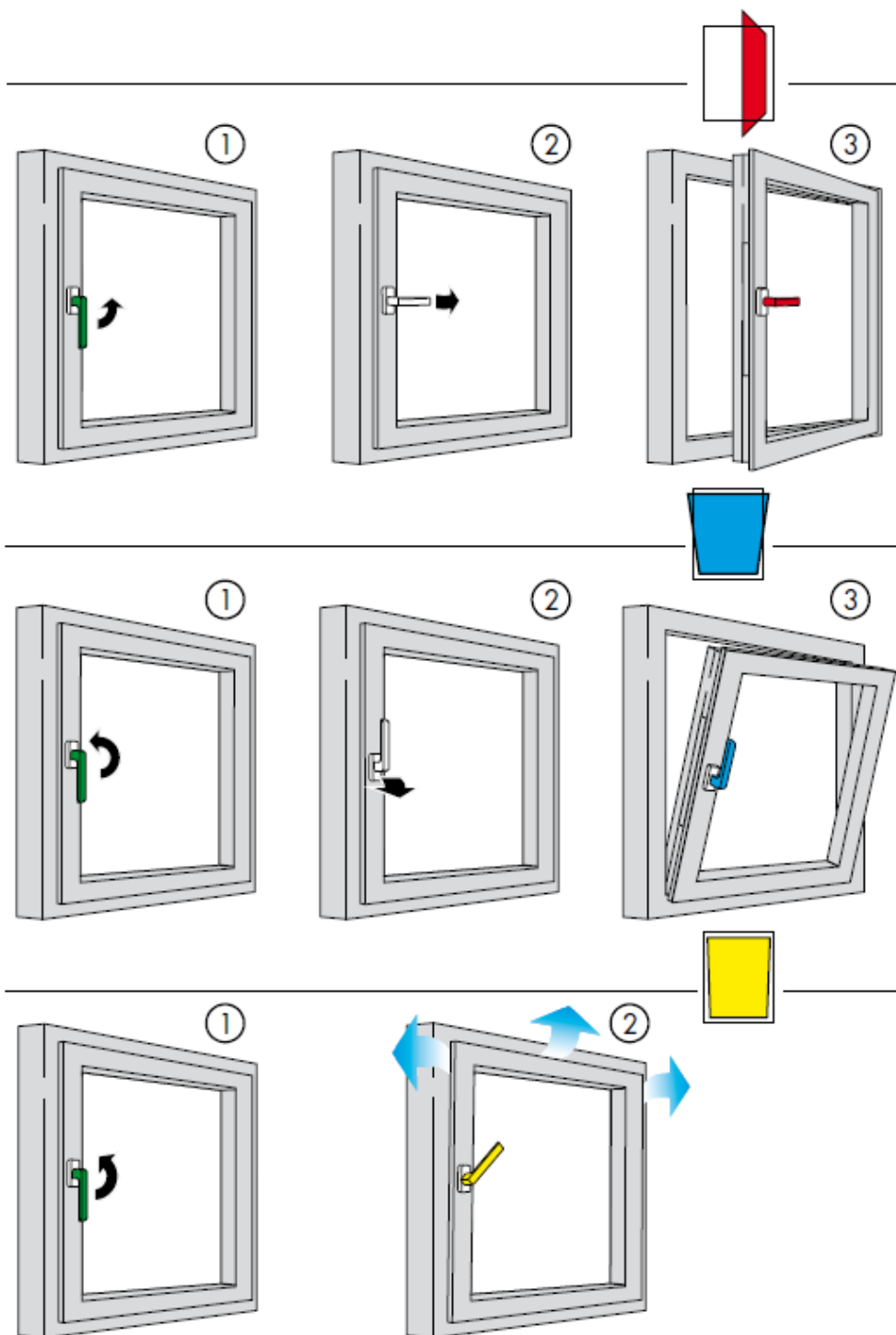


It is recommended to ventilate the room with the sash fully open

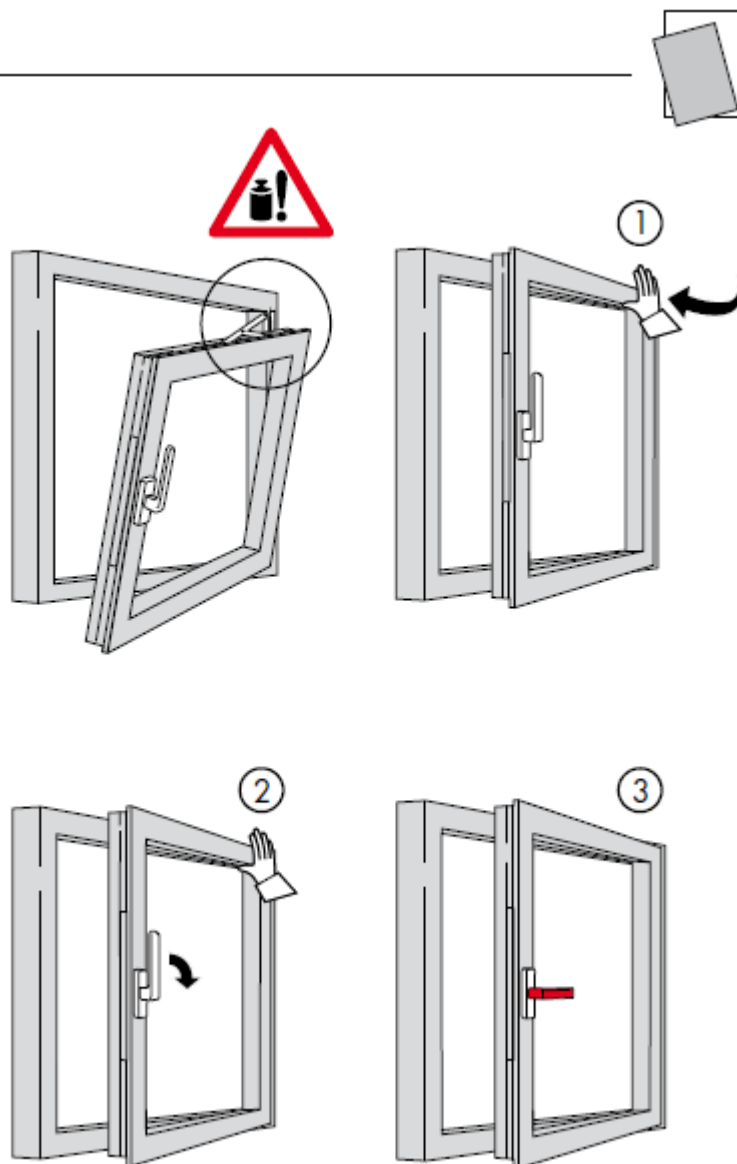


Just tilting the wing may not be a sufficient solution

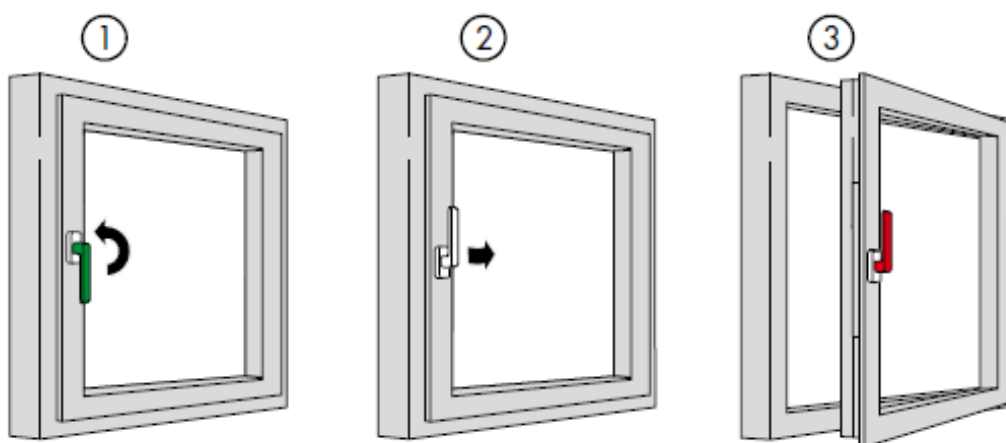
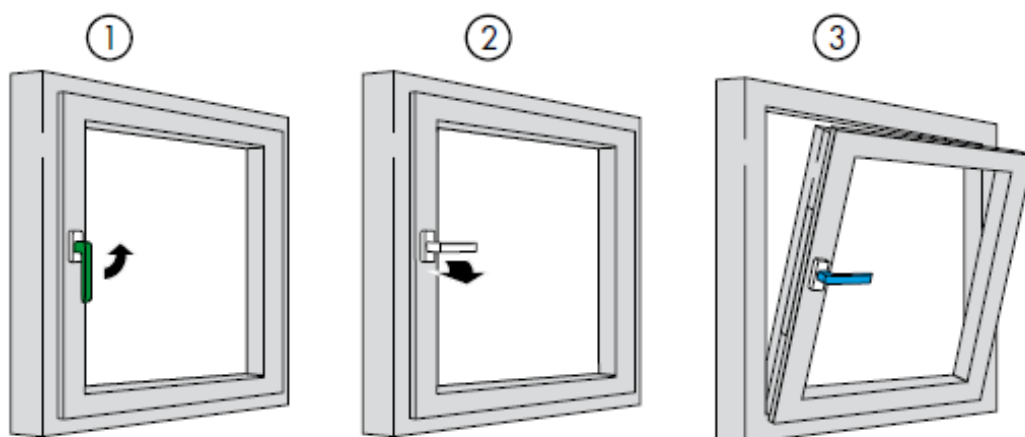
Operation of tilt-and-turn windows



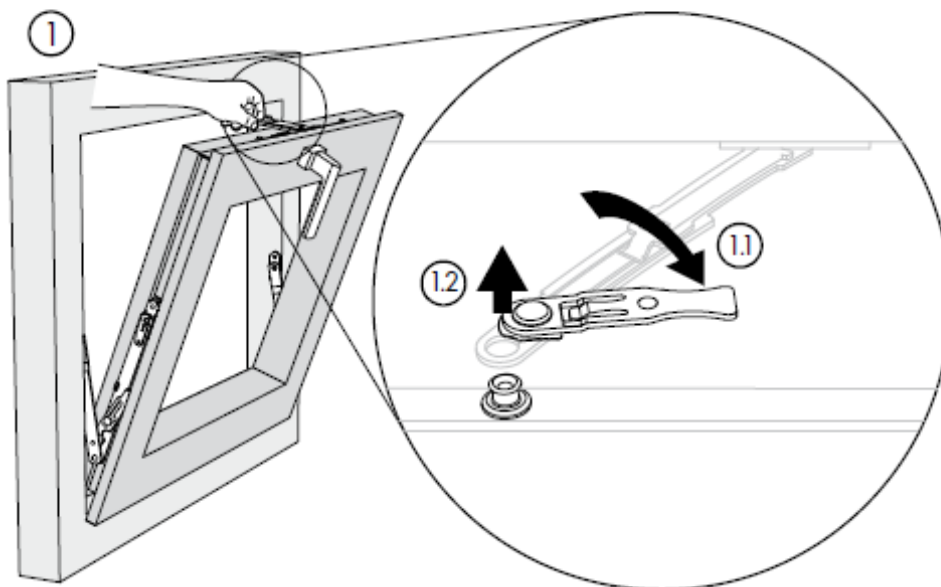
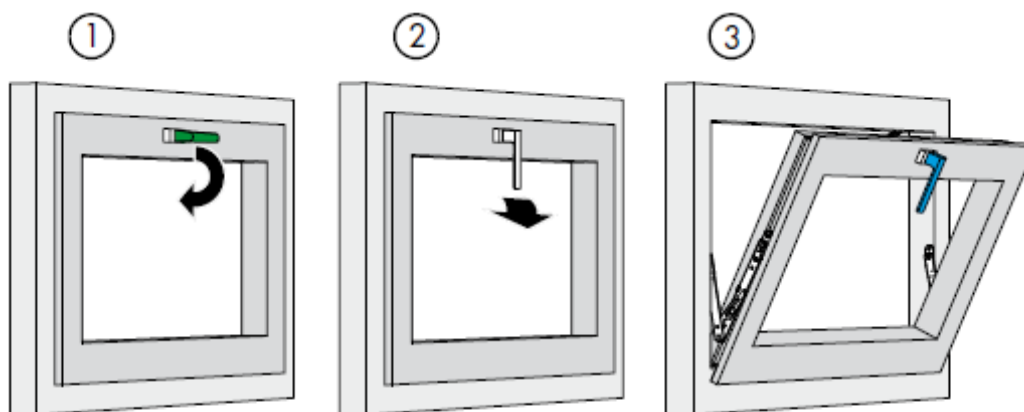
Incorrect handling – proper sash positioning



Operation of tilt and turn windows (TBT)



Operation of tilting windows



Operation of tilting windows

