


# Operating and safety manual

for windows and doors

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### Note

 The figures in this document are simplified and may vary from the original.

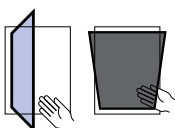
## 1. Safety instructions for doors, windows and French windows

- When working on and operating doors, windows and French windows, always pay attention to your safety.
- Keep children and persons who are unaware of the risks away from hazard zones.
- Do not allow any lubricant to fall on the floor and leave no tools lying in the work area.
- The risk of injury is very high when working under open sashes and door leaves.
- When opening doors with a key, make sure that the door can only be pulled or pushed by hand. Otherwise there is a danger of trapping fingers between the frame of doors and sashes when the key is used.
- Door locks may only be locked using the maximum number of turns of the key in order to make full use of the lock's capability.
- There is a high risk of injury if there is a malfunction in the window element.  
Do not operate the window if there is a malfunction.  
Secure the window and immediately contact a specialist company to repair it.
- Take special note of the symbols below and their meaning to prevent accidents, personal injury and material damage.



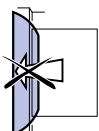
### Risk of injury by falling out of open windows

- Only use stable stepladders.
- Take safety measures to prevent yourself falling out of the window.
- Do not hold onto an open window sash.



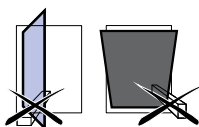
### Risk of injury from trapping body extremities

- When closing doors, windows and French windows, never reach into the opening between the door leaf or window sash and the frame.



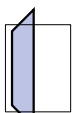
### Risk of personal injury and damage to assets by pressing the door leaf or window sash against the opening edge

- Do not press the door leaf or window sash against the opening edge (wall reveal).



### Risk of personal injury and damage to assets by placing obstacles between the door leaf or window sash and frame

- Do not place any obstacles in the opening between the door leaf or window sash and the frame.



### Risk of injury and material damage by placing additional weight on the leaf/sash

- Do not place any additional weight on the door leaf/window sash.



### Risk of personal injury and damage to assets by the effects of wind or uncontrolled opening or closing of the leaf or sash

- Avoid the effects of wind on open door leaves or window sashes.
- If there is a wind or draught, close and lock doors, windows and French windows.
- Open windows may shut by the effects of wind and drag objects with them.
- Avoid uncontrolled closing or opening of leaves or sashes.

## 1.1 Inappropriate use

### Misuse or inappropriate use of the lock may occur if:



- foreign objects are inserted in the lock or its fittings or frame parts (keep or strike plate);



- modifications are made to the lock or its fittings or frame parts and these modifications entail a change to the action, design or function of the lock;
- the bolt in its extended position is engaged inappropriately to hold the door open;



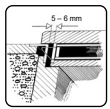
- moving or adjustable locking parts (e.g. bolt, latch) or fitting and frame parts are subsequently treated (e.g. painted over) in such a way as to impede their function;



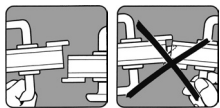
- loads exceeding normal manual force (max. 15 kg) is applied to the handle or actuation lever;
- the actuation lever is loaded in the wrong direction or rotation;



- unsuitable locking mechanisms are used, e.g. which have incorrect measurements or incorrect adjustments;



- the door gap is reduced or increased when the lock is adjusted or the door is lowered;



- objects are inserted between the door leaf and door frame when the door is closed;

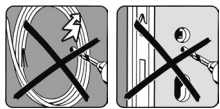


- an unsuitable 2-leaf door is opened by force over the second leaf ("fixed leaf");

- the door is transported by its handle or fitting;



- force is exerted on the lock or its fitting and frame parts (lock must be replaced);



- the door leaf is drilled in the region of the lock when the door lock is fitted;



- the lever pin is struck forcefully by the lock follower;

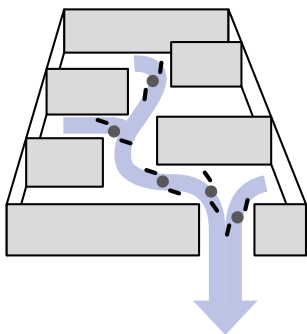


- the lock is not lubricated once a year (resin-free oil);



- the door is opened simultaneously by the handle and the key.

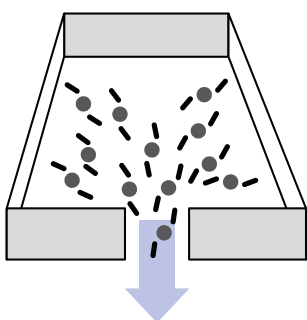
## 1.2 Emergency exit and panic situations



### Locks for emergency exit situations in accordance with DIN EN 179: 2008-04

An emergency exit situation occurs when a small group of persons is threatened but panic can be avoided since the persons are familiar with the local surroundings.

Example: office building with no public traffic



### Locks for panic situations in accordance with DIN EN 1125: 2008-04

A panic situation occurs when a large group of persons is threatened and/or in all probability the group is overcome with panic because of the situation inside the building/room (e.g. darkness or thick smoke).

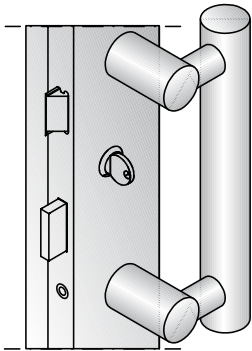
Example: theatre or cinema halls

### Intended use

- The lock forms a unit with the handle and fitting. Only locks and fittings tested and certified together may be fitted. No change is permitted to this combination (even partial) or to the lock itself.
- The use of additional mechanisms to keep the door closed (with the exception of door closers) is not permitted. If a door closer is installed, it may not prevent children or elderly and invalid persons from operating the door.
- It is not permitted to repair the lock. If it is damaged, the lock must be repaired by the fitting manufacturer or by a customer service authorised by the fitting manufacturer.
- When the specified service life is reached (number of operations of the actuation lever), the entire lock must be replaced.
- Locking cylinder and key must be replaced as soon as faults occur when inserting or removing the key – despite regular maintenance.
- To ensure proper use of a fitting, it is important to consider the respective installation instructions. The guidelines provided therein for assembly, commissioning, operation, and maintenance must be strictly observed.

## 2. Operating instructions: doors

### 2.1 Opening and locking single-leaf doors

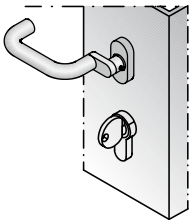


#### Opening from outside:

- Turn key towards hinge against spring pressure and hold briefly.
- While holding, open door slightly.
- Open door wide using push handle or handle.

#### Locking from outside:

- Close doors.
- Lock doors by turning key by full revolutions towards frame.



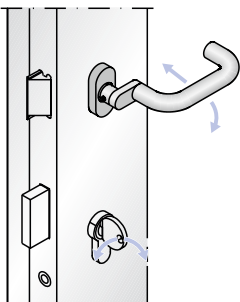
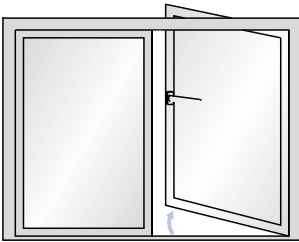
#### Opening from inside:

- Press down door handle.
- Open door.

#### Locking from inside:

- Close door.
- Lock door by turning key by full revolutions towards frame.

### 2.2 Opening and locking double-leaf doors

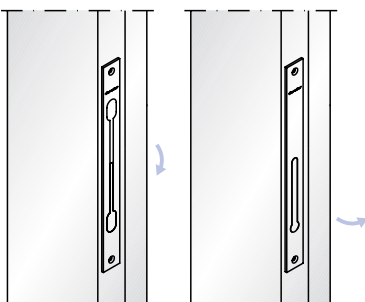


Active leaf

#### Opening active leaf:

- Unlock leaf by turning key by full revolutions towards hinge side.
- Operate door handle (push handle / knob).
- Open doors.

Close = reverse order of operations.



Fixed leaf with rebate drive dead bolt

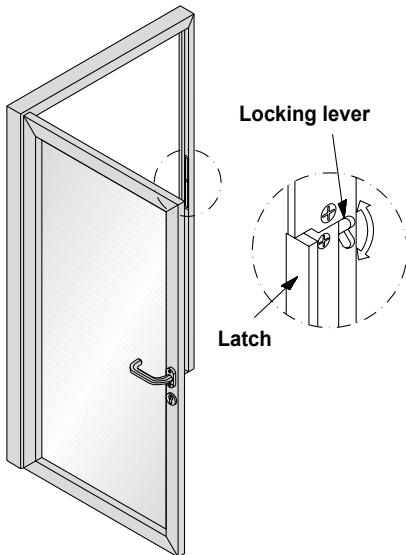
#### Opening fixed leaf:

- Open active leaf.
- Unlock rebate drive dead bolt.
- Open fixed leaf.

Close = reverse order of operations.

## 2.3 Opening and locking doors with electric opener

The closed door is released for opening by a separately fitted switch. A released door can only be opened when the switch is pressed.



### Day setting:

The electric opener latch can be permanently unlocked for the day setting. When the latch is unlocked, the door can be opened at any time.

### Unlocking:

- Unlock latch by sliding the locking lever downwards.

### Locking:

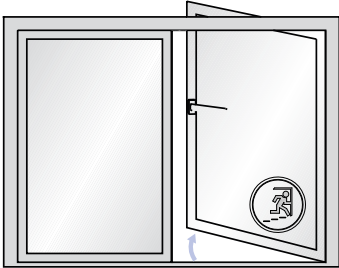
- Lock the electric opener by sliding the locking lever upwards.

### General note

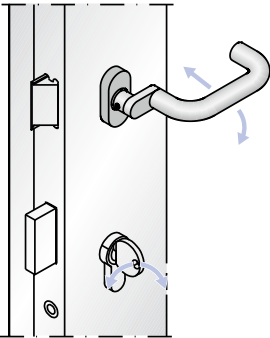
- The electric opener does not release the door if the door is locked by key.

## 2.4 Opening and locking double-leaf emergency doors

### Double-leaf door with bolt lock or bar knob and anti-panic function and manually or self-locking fixed leaf



In case of emergency, the locked door (active leaf) can be opened by the bolt lock or the anti-panic push bar.



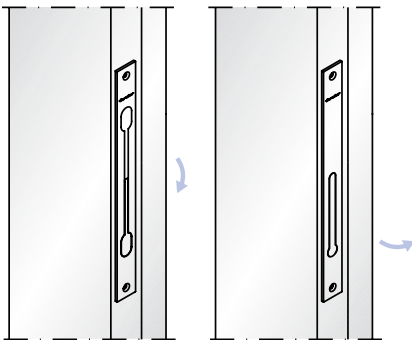
Active leaf

#### Opening active leaf from outside:

- Unlock active leaf by turning key by full revolution towards hinge side.
  - Operate handle (push handle / knob).
  - Open active leaf.
- Close = reverse order of operations.

#### Opening from outside:

- Open active leaf.
  - Unlock drive bolt lock.
  - Open fixed leaf.
- Close = reverse order of operations.



Fixed leaf with rebate drive dead bolt (manual or self-locking)

#### Opening active leaf from inside (emergency door function):

- Operate handle or anti-panic push bar.
- Active leaf even opens when door is locked.

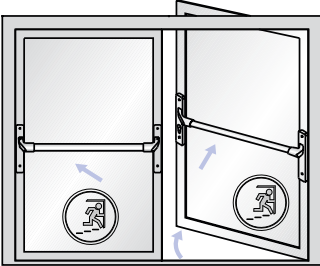
#### Opening fixed leaf from inside:

- Open active leaf.
  - Unlock drive bolt lock.
  - Open fixed leaf.
- Close = reverse order of operations.

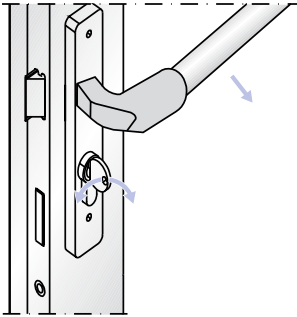


## 2.4 Opening and locking double-leaf emergency doors

### Locking active and fixed leaves via anti-panic push bar (anti-panic door lock)



Locked doors can be opened in case of emergency by the bolt locks or anti-panic push bars.



#### Opening active leaf from outside:

- Unlock active leaf by turning key to end stop towards hinge side.
- Open handle or push handle.

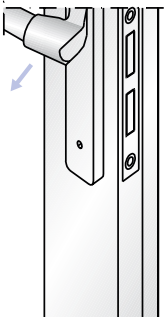
Close = reverse order of operations.

#### Opening emergency door function from inside active leaf:

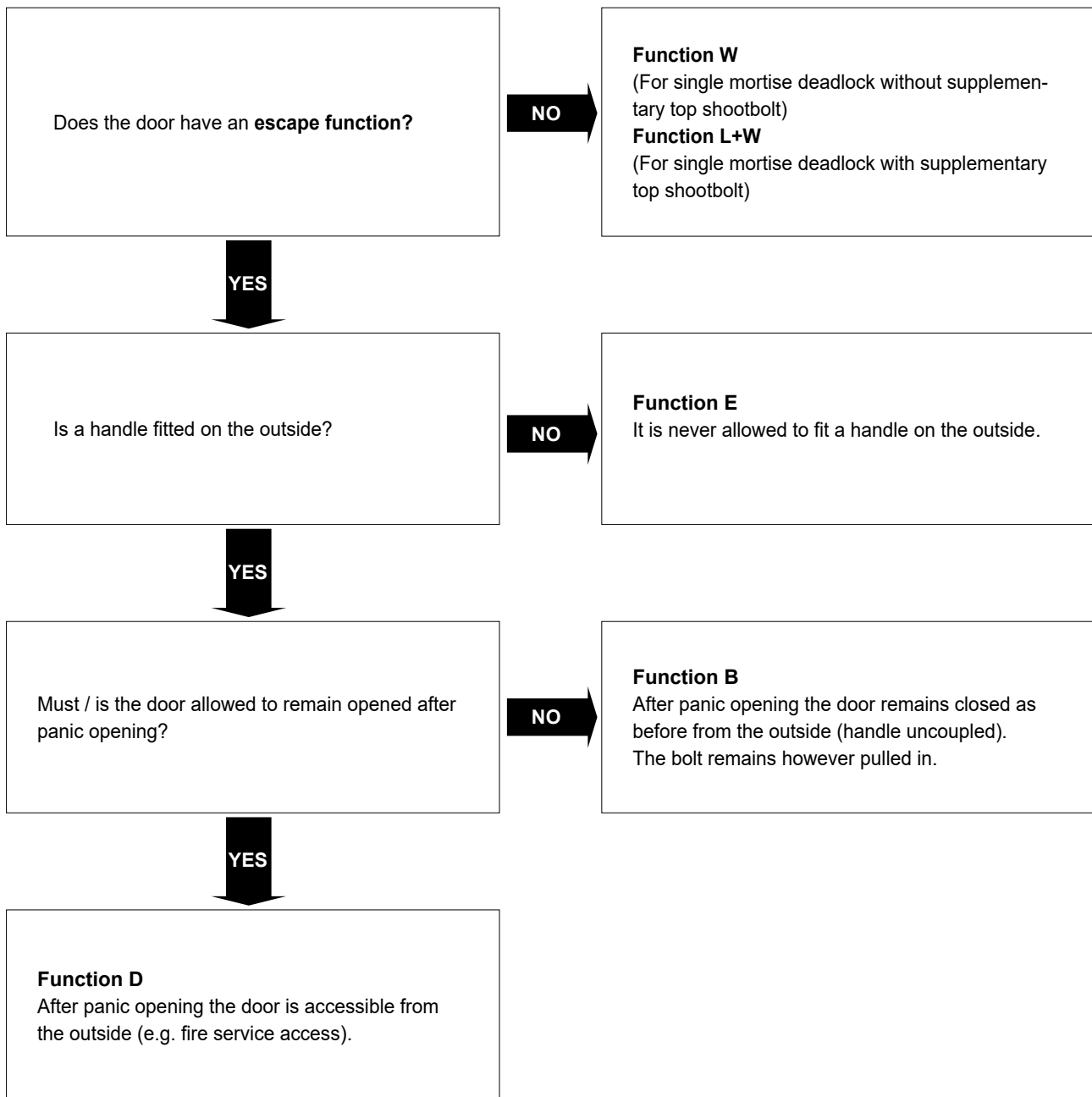
- Press down anti-panic push bar.
- Active leaf even opens when door is locked.

#### Opening fixed leaf:

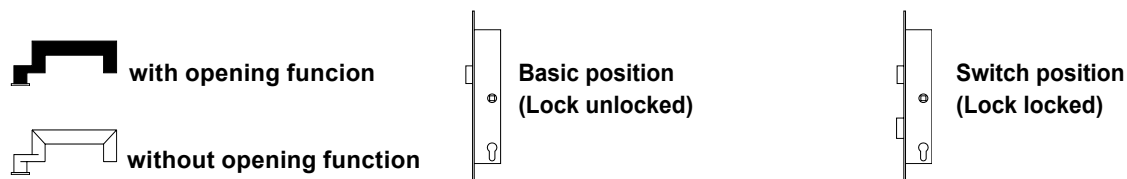
- Press down anti-panic push bar.
- Active and fixed leaves even open when the door is locked.



## 2.4 Locking functions



## 2.4 Locking functions for 1- and 2-leaf doors (Forster presto, Forster fuego light, Forster unico)



The anti-panic function is meant for doors opening outwards. In case of doors opening inwards, the locking function has to be on opposite side (special order)

### Lever handle set without anti-panic version (W)

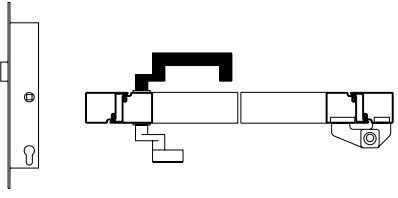
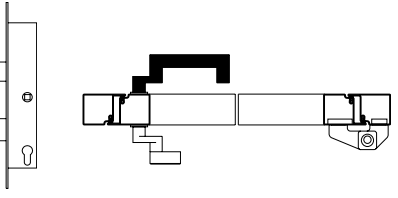
<p><b>Basic position</b> On the hinge side the door can only be opened with the key.</p>	<p><b>Switch position</b> The door cannot be opened on the hinge side or the side opposite the hinge without the key.</p>

### Idling function with lever without anti-panic version (L+W)

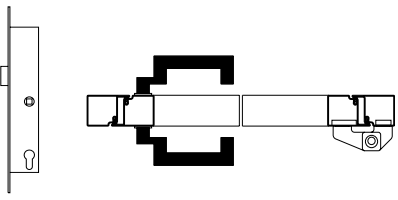
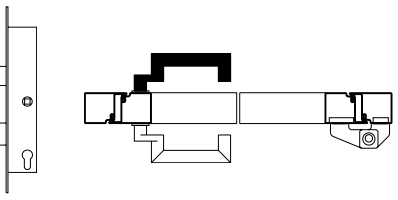
<p><b>Basic position</b> Both door handles, or handle with knob (key) are connected. The door can be opened.</p>	<p><b>Switch position</b> Both door handles are disconnected. The door cannot be opened on the hinge side or the side opposite the hinge without the key.</p>

## 2.4 Locking functions for 1- and 2-leaf doors (Forster presto, Forster fuego light, Forster unico)

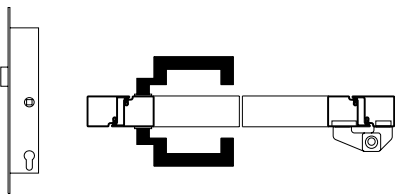
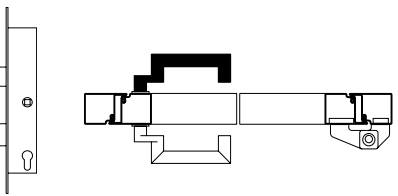
### Lever handle set with anti-panic version (E)

<p><b>Basic position</b> On the hinge side the door can only be opened with the key.</p>	<p><b>Switch position</b> The door can always be opened on the side opposite the hinge by using the handle, even if the bolt is shot.</p>
	
<p><b>On the outside it is NEVER allowed to fit a handle!</b></p>	

### Transit function with anti-panic version (D)

<p><b>Basic position</b> Door handle or panic 'pushbar' or both are on activate the latch. The door is accessible.</p>	<p><b>Switch position</b> The door is kept shut though the dead bolt by turning the key. After activity of the panic function the door is continuing accessible from both sides.</p>
	
<p><b>After activity of the panic function, the bolt remains however pulled in and the door is continuing accessible from outside (fire service access).</b></p>	

### Switch function with anti-panic version (B)

<p><b>Basic position</b> Both door handles are connected. The door can be opened. Attention: To couple the exterior handle, the key must be over-turned by 1/4 of a turn when unlocking. If the key is only turned to the vertical position (as usual), the exterior handle remains uncoupled.</p>	<p><b>Switch position</b> The handle on the hinge side is disconnected by turning the key. After actuating the panic version the handle remains disconnected on the hinge side.</p>
	

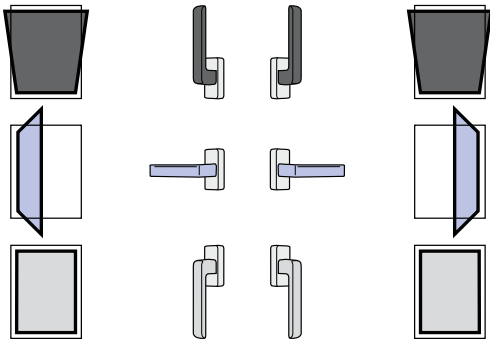
### 3. Operating instructions: windows

The following symbols illustrate various handle positions and the resulting sash positions of windows French windows.

#### Handle/sash position

#### Meaning

##### Turn/turn and tilt window

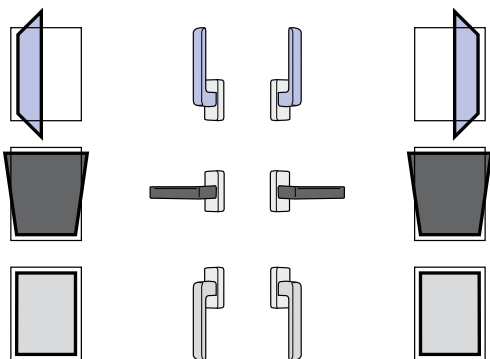


Tilt opening position of sash

Turn opening position of sash

Closed position of sash

##### Tilt before turn window

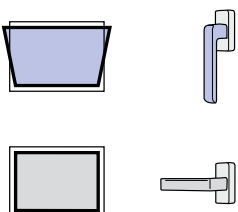


Turn opening position of sash

Tilt opening position of sash

Closed position of sash

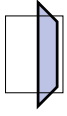
##### Tilt window



Tilt opening position of sash

Closed position of sash

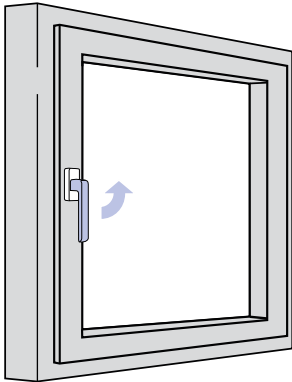
### 3.1 Operating turning sash and remedying incorrect engagement



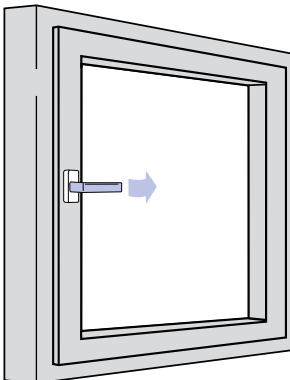
#### Opening turning sash

- 1 Handle downwards, window is closed.
- 2 Turn handle to horizontal.
- 3 Open window sash.

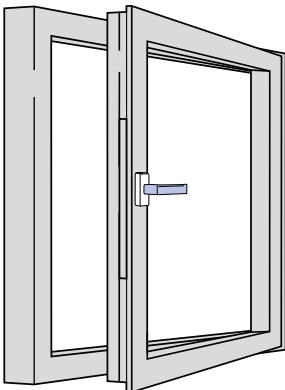
1



2



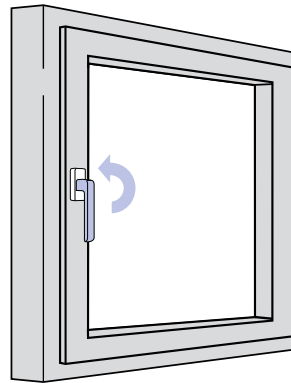
3



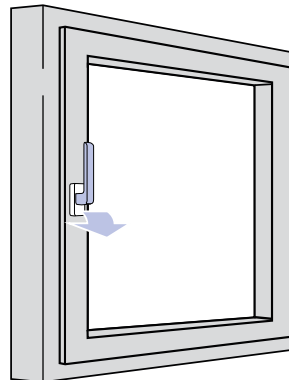
#### Opening tilting sash

- 1 Handle downwards, window is closed.
- 2 Turn handle upwards.
- 3 Tilt sash window.

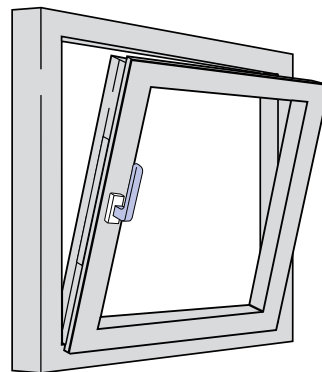
1



2



3

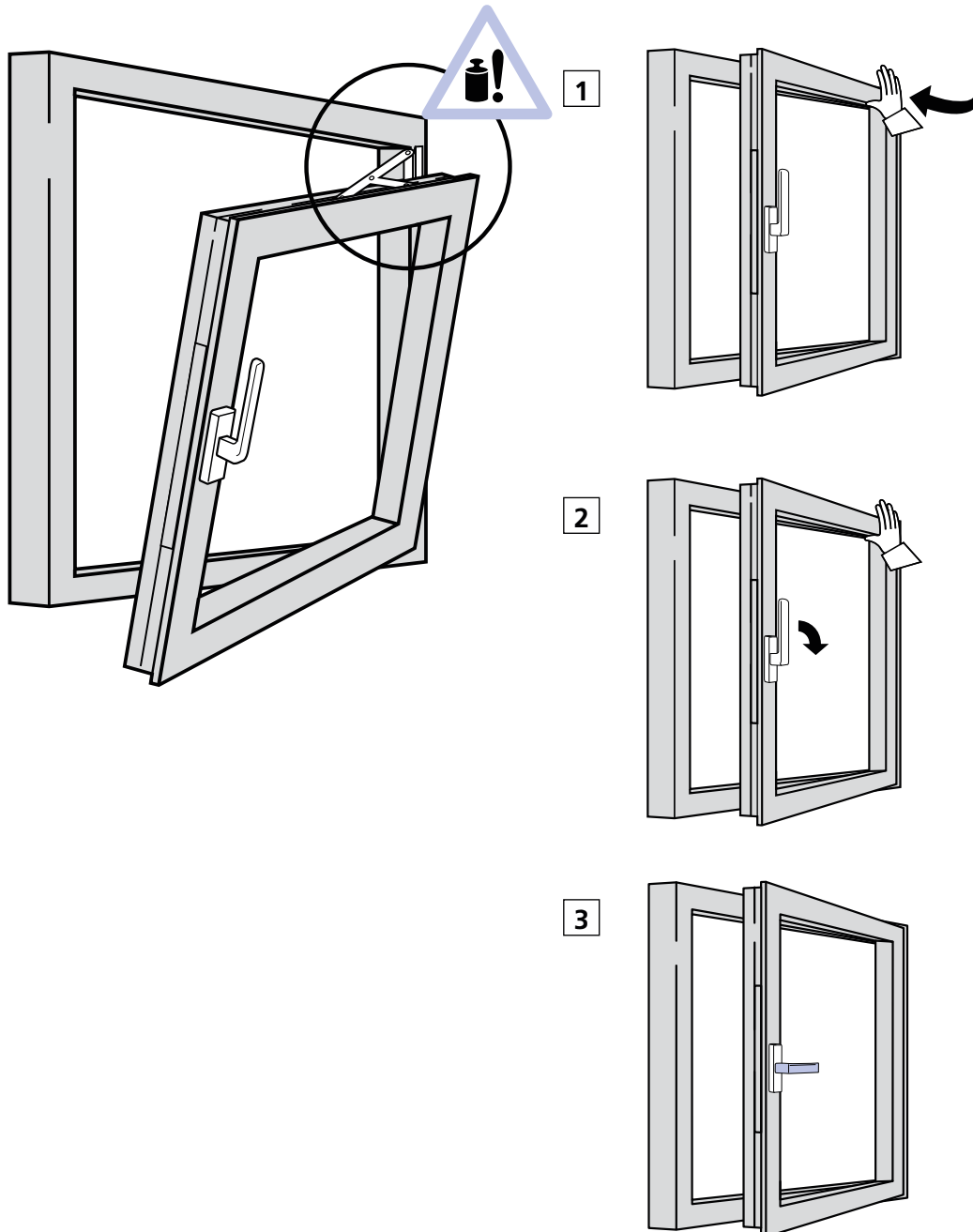


### 3.1 Operating turning sash and remedying incorrect engagement



#### Remedying incorrect engagement

- 1 Press top of sash to frame, place handle in tilt position.
- 2 Turn handle to the right.
- 3 Turn handle upwards again then close window normally.

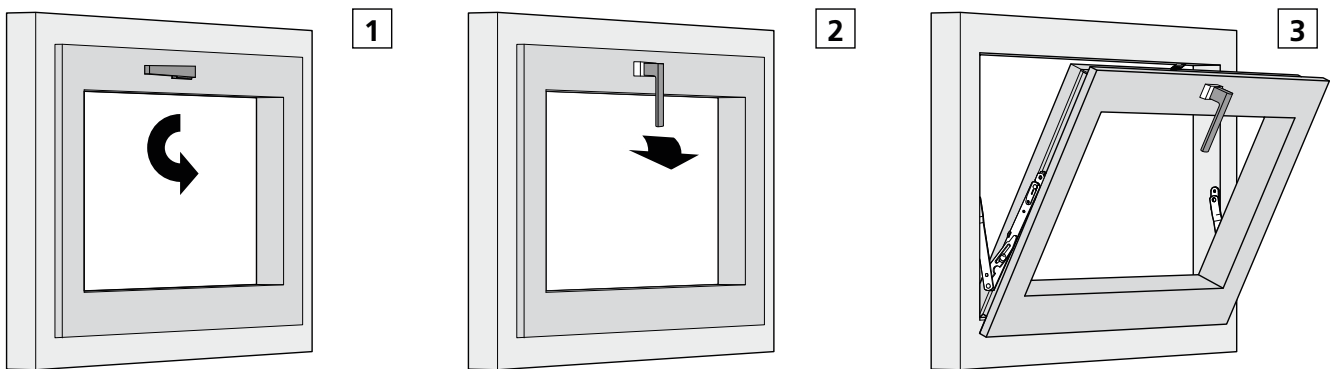


## 3.2 Operating tilting sash



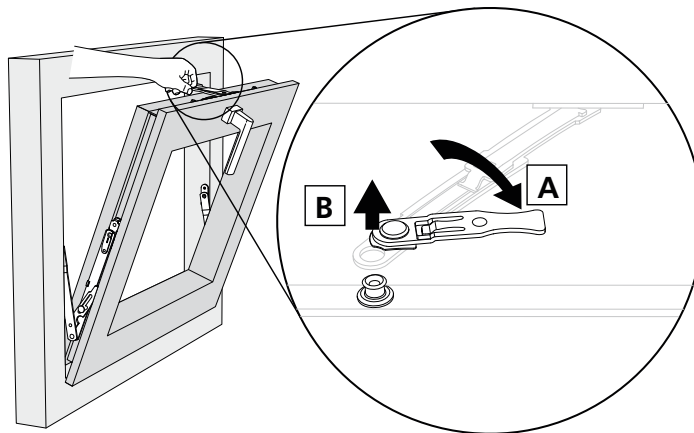
### Opening tilting sash

- 1 Handle to the left, window is closed.
- 2 Turn handle downward to open sash.
- 3 Tilting sash can then be opened until the tilt stay are fully extended at the top of the sash and block the sash.



### Unhooking the tilt stay

To make it easier to clean the sash, unhook the tilt stays. Please note that the weight of the sash increases, the greater the opening angle. Forster therefore recommends using additional arresting and cleaning shears.



Twist out the lock [ **A** ] so that you can unhook the tilt stays [ **B** ].

Then the sash can be guided to the arrest position of the arresting and cleaning shears attached to the sides.

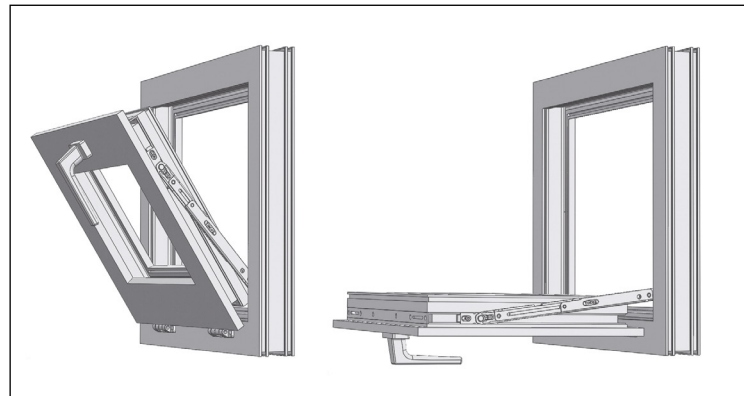
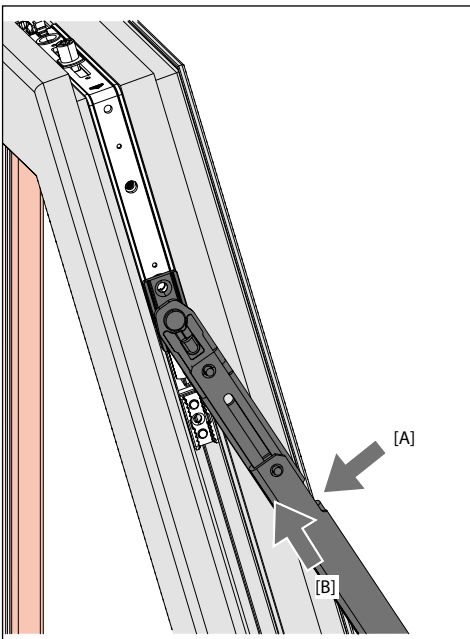
**Warning:** When you close the sash, make absolutely sure you hook the tilt stays [ **B** ] back into the lock [ **A** ].



## 3.2 Operating tilting sash

### Operating arresting and cleaning shears

Once the restrictors have been removed, the window is held in the arrest position. The leaf can be placed into cleaning position [B] by pressing the detent [A] on the arresting and cleaning shears.



Restrictor position

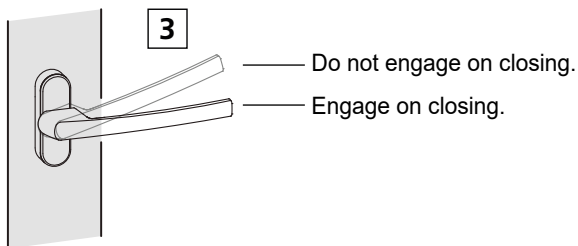
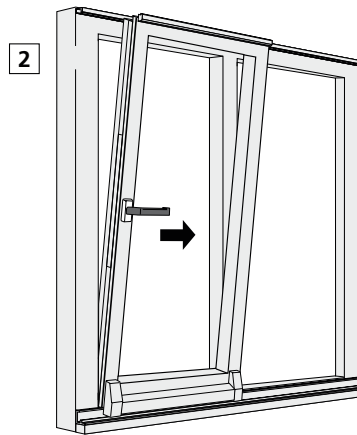
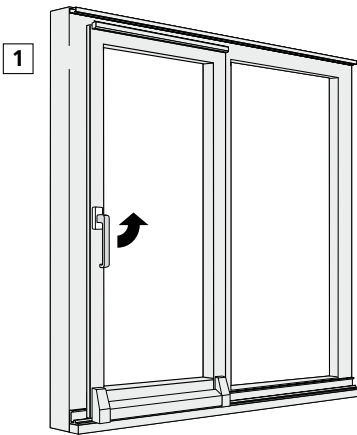
Cleaning position

### 3.3 Operating parallel sliding/tilting window



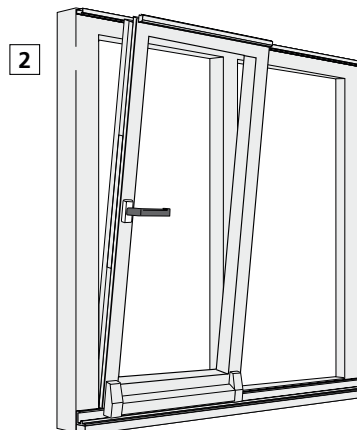
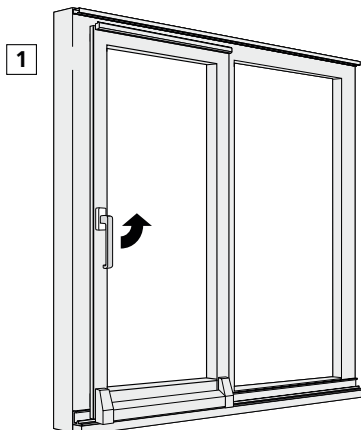
#### Opening window sash

- 1 Handle downwards, window sash is closed.
- 2 Turn handle to right in order to tilt window sash and then slide it.
- 3 Slide position variants.



#### Placing window in open tilt position

- 1 Handle downwards, window sash is closed.
- 2 Turn handle to right in order to tilt window sash.



## 4. Operating instructions for French windows

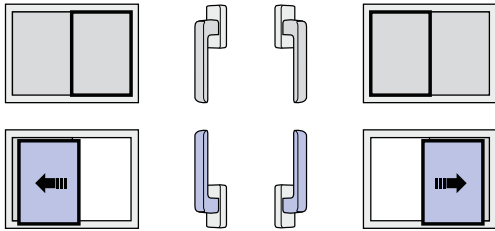
### 4.2 Operating lift-up sliding doors

The following symbols illustrate various handle positions and the resulting sash positions of windows and French windows.

#### Handle/sash position

#### Meaning

#### Lift-up sliding door



Closed position of sash

Slide opening position of sash

## 5. Consulting, functionality and maintenance

Fittings, windows and French windows require professional, systematic maintenance, care and inspection to ensure value retention, usability and safety. Therefore we advise you to conclude a service contract with a specialist company. In addition you should also entrust the specialist company with all repair and adjustment work.

Please contact your specialist company to obtain replies to all further questions you may have.

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**!** **Note**

■ For installation and maintenance, please refer to the valid "Installation and maintenance instructions for doors and windows" of Forster Profile Systems Ltd.

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## 6. Annex

### 6.1 Cleaning and servicing

You will retain the quality and function of your window and door elements for many years if you observe the following points:

#### Fittings

Your windows and doors are equipped with high-quality fittings. To ensure they retain their ease of operation, perfect functioning and safety, the following maintenance work must be carried out at least once a year:

- Grease or oil all moving parts and locking points.
- Only use acid- and resin-free grease or oil.
- Check all load-bearing fitting parts for tight fit and wear.
- Tighten fastening screws and replace defective parts as required.
- Only use cleaning and care products which do not attack the corrosion protection of the fittings.

#### Caution: Risk of injury in case of malfunction.

You will notice malfunctions and defective fittings by abnormal noises or stiffer movement on operating. The following work may only be carried out by a specialist company:

- Replacing fittings
- Removing and refitting window sashes and door leaves
- All adjustment work on fittings

#### Seals

Check all seals at least once a year. Damaged seals on windows and doors impair their function. Defective seals must always be replaced. If a seal comes out of its retaining groove, press it back into the groove using your thumb, starting from the point where the seal is still in its correct seating position.

The seals of windows and doors are easy to clean with water.

#### Draining slots

Water drainage holes must be kept free.

#### Door and window surfaces

- Wipe off slight soiling with a soft moist cloth.
- Wipe off stronger soiling with warm water with added mild household cleaner. In order to remove any residual moisture, wipe with a dry soft cloth. Never use sharp edged tools otherwise you will damage the surfaces.
- Do not use cleaners which contain abrasive components. Avoid aggressive cleaning agents or solvents. Do not use scouring sponges, emery cloth, steel wool etc. Adhere to the application instructions for each of the care products.

## 6.2 Airing

The best and fastest way to air is cross ventilation. This exchanges the air in the room almost completely within a few minutes. This type of airing wastes the least amount of energy since in such a short time, the walls, ceiling, furniture etc. hardly change their temperature at all and dry air heats up very quickly.

Airing using tilted window sashes is not advisable since it takes much longer for air exchange. The energy loss is also much higher and there is even the risk that components adjacent to the window cool down to such an extent that condensation could form on these surfaces.

The best method to exchange air and achieve low energy loss is of course to install an automatically controlled ventilation system with heat recovery. In some cases it is even possible to reduce the formation of condensation by ensuring that hot air from a radiator can circulate along the window pane unhindered by window sills or heavy curtains.

Condensation can also be avoided by reducing strong temperature drops at night and in unused adjacent rooms.

### **Airing tips**

Thoroughly air the room twice or three times a day. This means leaving two opposite windows fully open for about five minutes. After bathing or showering, make sure that humidity quickly leaves the room to the outside. The best way to do this is by cross ventilation by opening the bathroom window and a window in an adjacent room. If the bathroom has no window, switch the extraction system on and open a window in an adjoining room to allow fresh air to enter.

When cooking, make sure you use the extractor hood and open a window to allow fresh air to enter.

If there is already an acute condensation problem in a house or flat, it should be thoroughly aired daily five or six times for at least two to three weeks so that humidity in walls, ceiling, furniture etc. can dry out.

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### 6.3 General advice

Forster's series of profiled steel sections and the corresponding accessories have been developed for a wide range of applications in the manufacture of metal structures and façades. These series are designed for processing by specialist firms in the metal-working industry, window construction and similar, who are familiar with the appropriate technical standards, particularly in the field of metal working, door, window and façade construction and where an adequate knowledge of all relevant standards, directives and suppliers' processing instructions can safely be assumed.

All the documentation published by us concerning the combination, erection, arrangement, processing, refinement and assembly of the articles on offer are voluntary services intended as suggestions and ideas for the expert, or else represent a report on combinations and installations already assembled. In all cases when using this documentation, the expert must always critically study whether the suggestions and ideas are suitable and appropriate for the case in point, since loads and stresses vary so greatly that it is impossible in this kind of documentation to cover every eventuality occurring in practice.

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#### Warranty

Unless a written agreement on the contrary has been concluded, the warranty granted by Forster Profile Systems Ltd. applies solely to the extent of the "General Conditions of Sale and Delivery of Forster Profile Systems Ltd." with which the customer is already familiar.

In all cases the warranty only applies provided that original construction parts (profiles, accessories, fittings) are used from the currently valid Forster range. All liability is declined for any damage arising from the use of articles other than Forster original articles. If articles other than Forster original articles are used, test certificates and attestations granted to Foster for constructions built using such articles are deemed to be invalid.

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#### Note

The up-to-dateness, completeness or quality of the contents are not guaranteed. We reserve the right to make technical alterations in the content wholly or partially with no prior notice. We are not liable for damages of any kind, which arise from the use of the information in this document or on the basis of its incompleteness.

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# Steel is our nature.

For us, steel is a matter of the heart. We develop long-lasting systems for attractive and energy-efficient architecture.

Forster Profile Systems develops and manufactures safe, energy-efficient solutions in steel and stainless steel for doors, windows and facades in Switzerland. Forster works with its own branches in over 20 countries – and exclusive sales partners in around 10 more. In-house consultants are on hand to assist our customers at sites ranging from Europe and the Middle East to Asia and North America. Forster systems are used for building shells and interiors. This includes market-leading solutions that meet

the strictest requirements and standards in terms of thermal insulation, plus safety applications such as fire protection, burglar resistance and bullet resistance. The product range is rounded off by matching accessories. Our customers and business partners in architecture, planning and construction can also count on comprehensive services for their respective industry.