# OPERATING, CARE AND MAINTENANCE INSTRUCTIONS





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## 0 Preface

We are glad that you have decided to purchase a high-quality product manufactured by Hueck!

This brochure contains hints and information on the operation, care and maintenance to help you maintain the value of your Hueck products for a long time.

A specialised company ensures that your windows and doors are assembled professionally. Furthermore, this company provides you with qualified consulting service and assistance with adjustments, maintenance and repairs.

➔ An online version of this catalogue can also be found on the Internet at www.hueck.com

# 1 Avoidance of risks

Please observe the warning notices listed below:



Risk of injury through getting pinched in the opening gap between window sash or door leaf and frame

Danger of falling if sashes are open

Danger of falling or risk of injury, e.g. caused by draughts

Risk of injury if sashes are open





Risk of injury through sash impact





## 2 Avoidance of misuse

Avoid damage to your window, window door or door elements by making sure that they are only used as intended:



1 Active leaf 2 Inactive leaf Load on the sashes or leaves can cause deformation to or destruction of the individual elements.

Operate the element handles only in the direction of rotation and only up to the rotation stop as they will be destroyed otherwise.

Sashes or leaves banging open or shut in an uncontrolled manner (e.g. caused by wind) against wall recesses can damage the frame, fi ttings or the recess. Recommendation: use opening limiter (regulates the opening) or door stop.

Obstacles (e.g. cables, fl ower pots) in the opening area between sash/leave and frame cause deformation and damage to frames and fi ttings.

Do not push the door closed when the bolt is pre-locked: this will protect the lock and the door frame.

In case of double-leaf elements, the active leaf must always be opened fi rst (exception: escape doors) to avoid damage to the lock or frame.

## 3 Operation

The following operating instructions apply to all types of elements.

In case of new rebate gaskets, increased eff ort may be required for the necessary closing pressure.

#### 3.1 Turn-tilt element





#### 3.2 Tilt-before-turn element

This opening type is preferred in schools and hospitals, due to the fact that a lockable handle prevents the window from being opened completely by unauthorised persons. The window is only tilted for ventilation purposes.



#### 3.3 Safety device to deter incorrect operation

A safety device to deter incorrect operation prevents the activation of the bottom-hung position as long as the sash is in sidehung position. It is located in the handle area or at the corner linkage gear. If the safety device to deter incorrect operation does not work, a specialist company must be contacted.



#### 3.4 Rotary handle turn-tilt element

The red indicator shows the current position of the fitting.



<u>Opening in side-hung position</u> Turn the rotary handle to the right until the red indicator shows the side-hung position, then open the sash. <u>Closing from side-hung position</u> Press the sash and turn the rotary handle to the left until locking is indicated.







#### 3.5 Side-hung element

The window sash can only be turned. A handle position with the handle pointing upwards is not possible.





#### 3.6 Side-hung element, opening out

The window sash can only be turned to the outside. A handle position with the handle pointing upwards is not possible.

An opening limiter (regulates the opening) is recommended.



#### 3.7 Second sash element

3.7.1 Active sash with turn-tilt and second sash with side-hung function





#### 3.7.2 Active and second sash with side-hung function



## 3.8 Bottom-hung element

As a basic principle, bottom-hung sashes are secured against uncontrolled slamming open by means of KSP stay-arms (tilt safety cleaning stay-arms). These are unhinged for cleaning the windows. ATTENTION! There is an increased risk of accident. The opened sash must be supported. For unhinging, move the sash into the bottom-hung position, open the locking device and unhinge the stay-arm.

Two variants of bottom-hung windows are possible:

#### 3.8.1 Bottom-hung window at parapet height

Window handle located at the top





Window handle located on the side





Bottom-hung position





Locked position

#### 3.8.2 Bottom-hung fanlight element

There are three common operating types:

- 1. Lever
- 2. Rotary handle
- 3. Electric drive





Opened position









## 3.9 Top-hung element (opening out)

A handle position with the handle pointing upwards is not possible. The opened sash must be arrested.





#### 3.10 Top-hung projecting out element

This opening type is predominantly used for façades.



#### 3.11 Top-hung roof element

Stepless opening by means of spindle or chain drives.

Please observe the operating and maintenance information provided by the drive manufacturer.





3.12 Pivoting sash window

Brakes located in the pivot bearings keep the sash open in every position. By means of the window handle, the sash can also be arrested in the gap position. An opening limiter can be used to limit the opening angle of the pivoting sash.

ATTENTION: If the sash can be moved too easily, the brakes must be re-adjusted by a specialist company. Pivot bearings must not be greased or lubricated.



Arresting the pivoting sash

Open the pivoting sash, turn the handle to the horizontal position and turn the handle tenon into the locking pocket of the frame.

## 3.13 Parallel sliding and tilting element (PSK)

The PSK fitting for sash weights of up to 180 kg is equipped with an assisted opening function (if slid closed, the sliding function automatically locks), the fitting for sash weights of up to 100 kg has no assisted opening function.

with assisted opening function



Bottom-hung position

#### Schieben



Sliding unlocking device: The sash can be opened with the handle in this position (from tilting to sliding position).



Sliding position: The sash can be slid with the handle in horizontal position. Furthermore, the sash returns to the tilting position with the handle in this position if the sash is slid back into its original position.



Locking position: Sash is closed by turning the handle. Sash may not be pressed on with additional force as this can cause damage!

#### without assisted opening function



Bottom-hung position



Schieben

Sliding unlocking device: The sash can be opened with the handle in this position (from tilting to sliding position).



Sliding position: The sash can be slid with the handle in horizontal position. Furthermore, the sash returns to the tilting position with the handle in this position if the sash is slid back into its original position.



Locking position: Press on sash and bring it in locking position.





As a general rule: The end stops serve as opening limit and may not be used for stopping the sliding sash abruptly. Otherwise there is the risk of damaging the material!



#### 3.14 Sliding element

Sliding elements are equipped with a handle or a recessed grip with which the sash is operated.





#### 3.15 Lifting-sliding element

If the window handle is turned by 180° from upward to downward position into the sliding position, the sash is raised by several millimetres. In order to close the sash, slide it into the closed position and lower it again by turning the handle by 180° from the downward to the upward position.

Operation by means of handle set:



### 3.16 Opening limiter

Opening limiters are force-absorbing (retarded opening movement) and restrict the sash's opening angle in various installation sizes to a maximum of 90°. They are maintenance-free and must not be lubricated.





#### 3.17 Window handles, lockable

Lockable window handles off er no adequate protection in accordance with the standards relating to burglar protection. They can be locked in every fi nal position (tilt-before-turn handle can only be locked in side-hung position!). The keys are always of the same cylinder system.



If exchanging Hueck window handles (also called turning handles or handle gears) please observe the typical features:



#### 3.18 Partial ventilation

The exposed partial ventilation device arrests the window sash for permanent ventilation with a gap of approx. 4 mm by tilting the fi sh plate.





#### 3.19 Balcony door latch

Keeps a balcony door closed by slight latching.



## 3.20 Security lock

Locks the side-hung opening position of the element sash, but not the bottom-hung position.





#### 3.21 Door locks

3.21.1 with latch locking unit

As an alternative to electric openers with manual daytime unlocking, the latch can be retracted and locked in these door locks.

3.21.1.1 Wilka – "controlled latch locking""



The latch bolt is retracted with the key via the transmission (1).

In this position, the latch retainer can be pushed up (2).

Now the latch bolt is held inside the lock case, permitting uninterrupted passage.

The retracted latch is released by projecting the dead bolt (3). 3.21.1.2 BKS – "secured latch locking""



Note: Not admissible for fi re and smoke protection doors.

- (1) The latch is retracted by means of the handle (push bar).
- (2) In this position, the locking function must be set by means of the suitable key.
- (3) Now the latch is locked in the retracted position.
- (4) The secured latch locking can only be released by activating the transmission once again.



#### 3.21.2 Door locks with escape door function

		Direction of escape	outside	→ Direction of escape	Fixed knob or handle outside
			Opening possib	oilities for doors	
Closing status of		Change-ove	er function B	Change-ove	er function E
the door		from inside	from outside	from inside	from outside
simply closed (only the latch has snapped)	F	handle opens	handle opens	handle opens	only key opens
locked (lock bolt is pre-locked)		panic: handle opens	handle idle (nur Schlüssel öffnet)	Panikfunktion:	only key opens
Opening possibility following panic operation		handle opens	handle idle (only key opens) After the use of the anti-panic function, the lock has to be returned to the neutral position: Insert key, make ¼4 turn into the direction of the arrow and back, remove key (transmission).	handle opens	only key opens

	→ Direction of escape	outside	
	Ope possibilitie	ning es for doors	
Closing status of	Through-function D		
the door	from inside	from outside	
simply closed (only the latch has snapped)	handle opens	handle opens	
locked (lock bolt is pre-locked)	panic:: handle opens	Neutral position of the handle (opens only key)	
Opening possibility following panic operation from the inside	handle opens	handle opens i.e. access to the endangered room is still possible. People still inside can be rescued.	



## 4 Upkeep of aluminium components

Regular cleaning is a fundamental requirement for the longevity and appearance of high-grade profile surfaces and the functionality of components.

Information on maintenance can be found in chapter 5.

#### 4.1 Cleaning - Definitions and terms

The required cleaning measures are defined depending on the degree of pollution of the aluminium components or the result of a test cleaning:

- Initial cleaning carried out following the completion of construction prior to fi nal acceptance in order to remove pollution caused by the construction process or atmospheric infl uences.
- Basic cleaning is an abrasive cleaning process which might be required if a façade has not been cleaned for several years.
- Intermittent cleaning is a periodic cleaning following initial cleaning or basic cleaning. It is off ered by specialist companies working in line with state-of-the-art knowledge and methods.

#### 4.2 Cleaning prescriptions

Minor soiling on anodized or plastic-coated surfaces can be removed with a sponge, soft cloth and water.

A neutral surfactant (washing-up liquid) will be a suffi cient detergent. It is rinsed thoroughly with water after cleaning. Suds must not be used as their alkalinity is too high.

#### 4.2.1 Anodized surfaces

The detergent must not chemically attack artificial oxide surfaces. It must have a neutral pH value between 5 and 8.

Strongly abrasive or scouring devices or devices causing scratches (sandpaper, sandblasting, wire brush, etc.) will damage the

oxide surface as well and thus must not be used. Special detergents developed by the chemical industry help to prevent these risks if used properly:

Degree of pollution	light	medium	heavy	oily
Neutral surfactant (washing-up liquid) and water	Х			
Abrasive detergent, type Ia, Ib (1)		Х	Х	
Detergent, non-abrasive, with preserving agent	Х	(X)	(X)	Х
Special detergent, non-abrasive, type II (2)			Х	Х

(1) Type Ia: Abrasive detergent or non-woven fabric, e.g. Scotch-Brite, type A, dirt eraser

Type Ib: Abrasive detergent with preservation

(2) Type II: Special detergent (including solvent for oils and fat)



High-pressure cleaners may be used depending on the window or façade construction. In this case, no water must enter into the façade; observe the natural drainage direction of the façade construction and the applicable working and protective provisions.

Direct sunlight should be avoided during cleaning.

4.2.2 Plastic-coated surfaces

Similar to anodized surfaces, heavily soiled painted surfaces require more extensive basic cleaning. Paint often tends to chalk in the course of years. Such chalking can be removed by slightly abrasive detergents comparable to car polish. The detergents must be adjusted to the paint system.

#### 4.3 Supplementary care instructions

Specialist firms off er appropriate, environmentally friendly façade cleaning.

The following items must <u>not</u> be used for cleaning:

- Hard objects such as metal scrapers, blades, wire brushes, scouring pads, steel wool etc. These will cause irreversible damage to the element surface.
- Aggressive detergents and solvents, e.g. paint thinner or benzene, acids or brine (with pH values outside the range of 5-8), rough detergents such as scouring milk may cause irreversible damage to the surface.

Further technical information on cleaning and maintaining aluminium construction profi les can be found in our "Technical Information" at www.hueck.de (under the heading "Metalwork Shops" -> "Care and maintenance") or in the leafl ets issued by the VFF (Verband der Fenster- und Fassadenhersteller e.V. [Association of window and façade manufacturers]) at www.window.de



## 5 Maintenance

Windows and doors should undergo regular maintenance in order to prolong their service life and to ensure the functionality and the conservation of value.

The window institute ift Rosenheim issued a recommendation concerning inspection intervals:

Maintenance intervals	Security-relevant inspection	General inspection
School or hotel buildings	1 x per half-year	1-2 x per year
Offi ce or public buildings	1-2 x per year	1 x per year
Residential buildings	every 1-2 years	upon request

Special maintenance recommendations apply to fi re and smoke protection doors. These can be found at www.hueck.de in the installation, planning and maintenance instructions in the fi re protection catalogue.

Depending on environmental influences, annual maintenance is recommended for parallel sliding and tilting elements. Regular professional maintenance should be carried out especially in coastal areas up to approx. 30 km upcountry with and without aggressive industrial atmosphere, in a polluted industrial environment but also in swimming baths and/or in baths with thermal salt water.

## 5.1 Functional check and maintenance of fittings

On the occasion of the functional check, the fitting parts and their load-bearing functions must be checked regularly for soiling, wear and tear and tightness. Heavy soiling is to be removed promptly (information on this topic can be found in the chapter "Cleaning").

The building components are checked for damage and deformation. In this context, surfaces, gaskets, door hinges and fi tting components must be considered. They are relevant with regard to security and must be checked with particular care. If metal shavings are visible, a specialist company must be contacted immediately. If required, the fi xing screws of the fi ttings must be tightened and secured against automatic loosening, e.g. by safety paint. Defective building components must be replaced immediately by a specialist company.

Fittings mounted in plastic bushes must not be lubricated or oiled. As a basic principle, fi tting adjustments should only be carried out by specialist companies. Movable components should be lubricated once or twice a year.





An optical check should be carried out to examine the recess joints, among other things. Thus it can be easily seen if a sash is "crooked".

The glazing is checked for condensation, moisture in between the panes and cracks. In case of such problems, the glazing must be replaced by a specialist company.

#### 5.2 Cleaning of the drainage slots



Dust and dirt should be removed from between the gaskets and the outsides of the frame with a cloth or vacuum cleaner.

Clogged drainage slots / drill holes can be cleaned with a thin wooden or plastic stick.

5.3 Care and maintenance of gaskets



The gaskets of windows and doors can be easily cleaned with water. Apart from normal cleaning, a silicone stick or a polymer lubricant – depending on the gasket variant – should be applied regularly to the gaskets to maintain their elasticity and to prevent premature embrittlement of the gaskets. On this occasion, you should check the gaskets for damage and have damaged gaskets replaced by a specialist company.



5.4 Cleaning the roller guides of lifting-sliding and sliding elements



A vacuum cleaner can be used to remove dust and dirt from the roller guides.

- P 1 1 ALC |
- 5.5 Lubrication points on parallel sliding and tilting elements (PSK)



#### 5.6 Door locks and cylinder locks



Bolt and latch of the door lock must be lubricated regularly.



Use only graphite powder for lubricating the cylinder lock.

#### 5.7 Door hinges

All repair and adjustment works at barrel, screw-on or concealed door hinges should be carried out by a specialist company.

## 6 Room climate

#### 6.1 Healthy living

Regular correct ventilation and heating improves the quality of air in your rooms and thus significantly contributes to a comfortable, healthy room climate.

Today, modern windows and doors are "tighter" than in the past and enable less exchange of air between the outside and inside. This means that regular ventilation has become more important as on account of the great tightness of the windows, no joint ventilation takes place anymore. A regular exchange of air can avoid damage caused by too high humidity, such as

- formation of mildew with long-term consequences for humans,
- moisture penetration through the brickwork,
- damage to the basic structure of the building,
- deterioration of the room climate.

There are many sources of humidity in living and working rooms that constantly produce considerable amounts of water vapour.

In the course of one day, for example, a 4-person household releases up to 10 litres of water to the ambient air.

	Humidity released per day	
Human being	1.0 – 2.0 litres	
Cooking	0.5 – 1.5 litres	
Shower/bath (per person)	0.5 – 1.0 litres	
Drying laundry	1.0 – 2.5 litres	
Ornamental and potted plants	0.5 – 1.0 litres	



The humidity condenses in rooms on surfaces with a low surface temperature. This condensation may lead to moist walls, formation of mildew, mould stains or deterioration of plaster.

In order to discharge the arising humidity, it is crucial to ventilate the rooms several times a day. This can avoid damage caused by the formation of condensate.

#### 6.2 Correct ventilation

In order to avoid damage caused by dampness and the formation of mildew at building elements, all rooms, in particular rooms with a high degree of humidity such as kitchens and bathrooms, should be ventilated thoroughly. For example, ventilation should be ensured during cooking at the time when water vapour is created.

The exchange of air should take place quickly to avoid the loss of too much thermal energy and a cooling down of walls and furnishing. Thus the objective of ventilation is a complete exchange of the air inside the room with the outside air. The duration varies according to the type of ventilation and the season.

This means that by cross ventilation, a quick, complete exchange of air with a relatively low consumption of heating energy can be achieved in only 5 minutes while 60 minutes of partial ventilation are required to achieve the same effect. Permanent ventilation (tilted window) should be avoided during the heating period.

Further ventilation guidelines should be observed:

- Renew the ambient air at regular intervals.
- Ensure thorough ventilation in the morning with the heating turned off depending on the season.
- The colder it is outside, the shorter the period of cross ventilation should be.
- Quick cross ventilation does not cool down walls and furniture.
- Do not block the radiation of heat from radiators by furniture or curtains.
- Immediately ventilate off water vapour set free in kitchen and bathroom.



Eff ect of natural ventilation	Type of ventilation	Duration of ven- tilation required to achieve an exchange of air
	Cross ventilation Window and opposing door/ window opened completely. Advantage: Ambient air is renewed within a short period of time while the room does not cool down. Energy loss is minimised, heating costs are saved.	1 to 5 minutes
	Shock ventilation Window opened completely and opposing door/window closed Advantage: The ambient air is renewed within a short period of time while the room does not cool down. Energy loss is minimised, heating costs are saved.	5 to 10 minutes
	Cross ventilation Window tilted and opposing door/ window opened completely Disadvantage: The room cools down and energy losses are high, high heating costs.	10 to 30 minutes
	Partial ventilation Window tilted and opposing door/ window closed Disadvantage: The room cools down and energy losses are high, high heating costs.	30 to 60 minutes

## 7 Maintenance and repair by specialist companies

The conclusion of a maintenance contract with a specialist company ensures that all maintenance and repair work of your window and door elements is carried out at regular intervals.

7.1 Maintenance c	neck book			
Address of property				
Name				
Street				
Postal code/City				
System installed	□ Lambda □ Volato M □ Lava □ Trigon □ Volato S			
Detailed description				

#### Maintenance works carried out

Date,	Company,	Signature



## 8 Information and advice

If you have further questions concerning Hueck products, please contact your domestic specialist supplier or refer directly to:

Hueck GmbH & Co. KG Loher Straße 9 58511 Lüdenscheid Tel. +49 2351 151-0 Fax +49 2351 151-283 www.hueck.com E-Mail: info@hueck.com

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