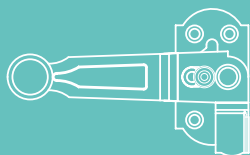




TECHNOLOGY IN MOTION

MACO RUSTICO

SHUTTER HARDWARE



Operating and service manual
for shutter hardware
END USERS



Table of Contents

Intended use and warnings	3 - 4
Safety and warning information	5 - 6
Notes for strong winds and storms	7
Operating instructions	8 - 12
Cleaning information	13
Care in coastal areas	13 - 15
Maintenance instructions	16 - 19
Spare parts, customer service and disposal	20



WARNING!

These operating and maintenance instructions are intended for the user (end user) and must be kept for future reference. For safety reasons, all users must be informed of their content.

This manual is also available for download at www.maco.eu - Order Number 757772.

Intended use and warnings

Intended use:

Window shutters and door shutters fitted with MACO RUSTICO hardware can be opened or closed as a turning shutter or a folding shutter by hand or by crank operation.

In the closed position, the shutters serve as a sun protection, partial protection against unauthorised intrusion and as partial rain and wind protection. At both endpoints, the shutter must be fixed in position. When the shutter is open, it is fixed with the shutter catch, and when closed it is fixed with the shutter lock.



DANGER!

Risk of injury and property damage due to improper use of shutters!

Therefore:

- Make sure that the shutter is guided by hand and at low speed through the entire range of movement up to both end positions.
- Ensure that the shutter never hits or swings in an uncontrolled way (e.g. with wind)!
- Ensure sure that the shutter is always fixed in its end positions!

Misuse

Any use or operation of the hardware component that goes beyond or deviates from the intended use shall be deemed to be misuse. This can lead to personal injury or property damage!



DANGER!

Danger when misused!

Therefore:

- Never open or close shutters with momentum or force. The speed and weight of the shutter creates enormous power!
- Never put obstacles in the area between the shutter and the reveal, the frame or the wall. This would result in undue forces being exerted on the hinges and pins!
- Never, intentionally or negligently, allow additional loads to act on the shutter, either horizontally or vertically. The extra weight overloads hinges and pins and can lead to damage!
- Opening and closing the shutters must never be done with high effort!



DANGER!

Window shutters must not be further operated if there is visible damage (for everyone) or if any malfunction is noticed, and must be repaired immediately by a certified specialist before any further use!



IMPORTANT!

Claims of any kind due to damage caused by improper use or misuse are excluded!



IMPORTANT!

FIXING the sash prevents the shutter from moving in the wind.
SECURING the sash prevents the shutter from moving during a storm.

SECURING the window shutter can only be achieved in a **closed state** and only **with shutter locks**!

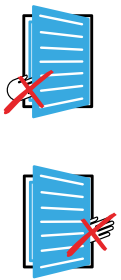
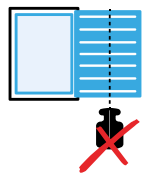
The highest wind resistance level is achieved using multi-point locking rods.



Safety and warning information

Safety-related information

The following symbols illustrate the existing dangers on window shutters:

Symbol	Meaning
	Risk of injury by jamming body parts in the opening edge between the sash and the wall → Always be careful when opening or closing shutters, and never put hands between the shutter and the wall or the window-ledge, and never between the shutter and the window frame. → Children and people who cannot estimate the danger must be kept away from the danger point.
	Risk of injury and property damage due to wind conditions → Wind effects on open and unfixed shutters is to be avoided (swinging and slamming of the shutter due to wind influence). → All shutter are to be closed and secured upon notification of winds or storm! → Shutters with snap-holders or interior openers must be closed and secured in the case of announced wind peaks of 60 km/h!
	Risk of injury and property damage due to overloading of shutters → Avoid additional loads on the shutter (e.g. clothesline).



Symbol	Meaning
	Risk of injury and property damage by putting obstacles in the opening gap between the shutter and the wall → Avoid putting obstacles in the opening gap between the shutter and the wall.



DANGER!

Window shutters must not be further operated if there is visible damage (for everyone) or if any malfunction is noticed, and must be serviced immediately by a specialist before any further use!



DANGER!

Contamination or icing of hardware components may cause malfunction of the shutter! Do not use force!

Notes for strong winds and storms



DANGER!

High Winds, stormy winds or storms will sooner or later result in damage to an open window shutter.

This can only be reliably prevented by closing and securing the window shutter!

Therefore, take note of weather forecasts and close and secure all window shutters at the latest when there are expected wind speeds of 60 km/h!

Detecting and mapping wind speeds

Fresh breeze: 5 Beaufort 30 - 38 km/h	Larger branches and trees move, wind clearly audible.
Strong breeze: 6 Beaufort 39 - 49 km/h	Thick branches move, audible whistling on wire ropes and phone lines.
High wind: 7 Beaufort 50 - 61 km/h	Trees sway, resistance when walking into the wind.
Gale: 8 Beaufort 62 - 74 km/h	Large trees move, branches break from trees.
Storm: 9 - 11 Beaufort 75 - 117 km/h	Branches or trees break, damage to houses, garden furniture is knocked over and blown away.
Hurricane: 12 Beaufort ≥ 118 km/h	Severe storm damage and devastation.



Operating instructions

Illustrating symbols

The following symbols show the proper function

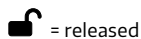
Open shutter / Close shutter



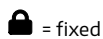
Unlocking / Releasing



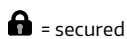
Locking / fixing



= released



= fixed



= secured



WARNING!

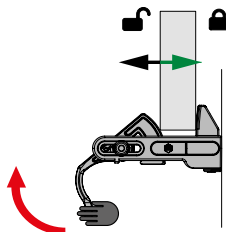
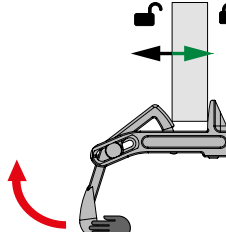
When opening the shutter, attention must be paid to securing with the shutter catch. When closing the shutter, the lock must securely activate in all locking parts!

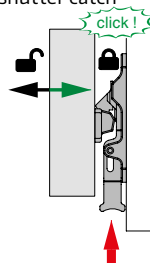
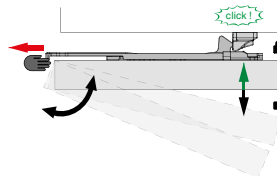
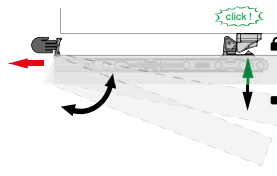
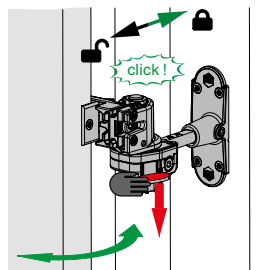


DANGER!

Notes for strong winds and storms!

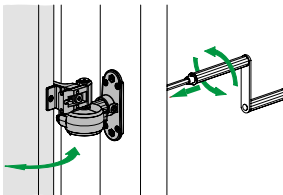
Shutter catch

„Classic“ 	Fix shutter in open position. Swing the shutter back until it contacts the shutter catch. Shutter is thereby fixed. It is important to pay attention to the engaging of the shutter catch!
„Pine cones“ 	Release fixed shutters. The shutter is released by pulling up the lever.

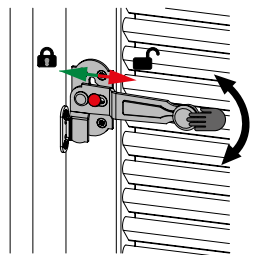
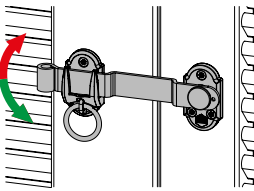
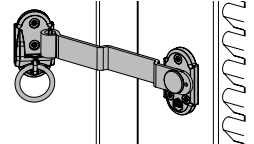
Door shutter catch 	Fix shutter in open position. Swing the shutter backwards until it audibly snaps in. Shutter is thereby fixed.
Comfort shutter catch for balcony doors 	Fix shutter in open position. Swing the shutter backwards until it audibly snaps in. Shutter is thereby fixed. It is important to pay attention to the engaging of the shutter catch!
Comfort shutter catch for windows 	Release fixed shutters. Unlocking is done by pulling the unlocking handle. ATTENTION: The comfort shutter handle can only be used for releasing the shutter, and not for the swing movement!
Snap holder 	Fix shutter in open position. Swing the shutter backwards until it audibly snaps in. Shutter is thereby fixed. It is important to pay attention to the engaging of the shutter catch! Release fixed shutters. Releasing the shutter is done by pressing on the pressure plate. The shutter is released and can be swung forward to close it.



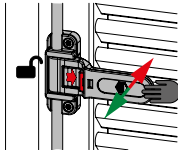
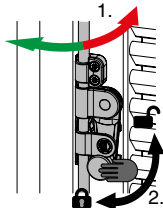
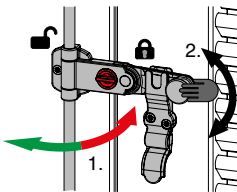
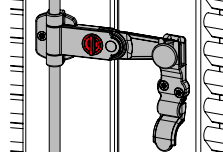
Crank opener

	Open and fix the shutter - insert the crank and rotate to open the shutter. The shutter must press firmly against the wall (guideline 3 kg)! Close and fix the shutter - insert the crank and rotate to close the shutter. The shutter must press firmly against the frame (guideline 3 kg)!
--	--

Shutter locks

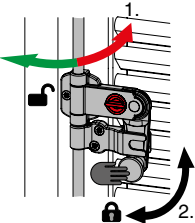
Middle lock 1-sash 	Lock the shutter in its closed position. Close the shutter and swing the locking lever down in the end-position. Locking lever can be locked using sliding knob. Unlock shutter. Unlock with sliding knob. Then, swing the locking latch upwards.
Middle lock 2-sash 	Lock the shutter in its closed position. Close the shutter and swing the locking level in the end-position until it grips completely in the locking plate. Unlock shutters. Unlocking is done by swinging the locking lever out of the locking plate.
	Ventilation. Open both shutters slightly. Hang the locking lever roll in the locking plate.



Snap lock 	Lock the shutter in its closed position. Close the shutter with the lever open and rotate it until it snaps in. Unlock shutter. Unlocking of the locking lever is done by pressing the grey resting piece in the arrow direction. Thereafter, the closing lever can be rotated forward.
Bolt lock 1F 	Lock closed shutters. Close the shutter and at the end position turn the turn-tab (1.) completely to the shutter. Then, swivel the locking lever into the locking plate (2.). Release shutter. Swivel the locking lever upwards, turn the turn-tab to the front and then open the shutter.
Bolt lock 2F variant 1 	Lock closed shutters. Close the shutter and at the end position turn the turn-tab (1.) completely to the shutter. Then, swivel the locking lever into the locking plate (2.). This position can be locked using a knob. Release shutter. Unlocking is done using a knob. Then, swivel the locking lever upwards and turn the turn-tab to the front. The shutter can then be opened.
	Ventilation: Slightly open the shutter. Hang the locking lever roll in the locking plate.



Shutter locks

Bolt lock 2F variant 2 	Lock closed shutters. Close the shutter and at the end position turn the turn-tab (1.) completely to the shutter. Then, swivel the locking lever into the locking plate (2.). Position can be locked using a knob.
	Release shutter. Unlocking is done using a knob. Then, swivel the locking lever upwards and turn the turn-tab to the front. The shutter can then be opened.

General cleaning instructions

Cleaning instructions for shutter hardware

The RUSTICO PREMIUM-PLUS surface provides excellent corrosion protection. In order to maintain this quality on a permanent basis, the following notes must be observed:

- Regular cleaning is the basic requirement to ensure the functionality and safety of the shutter are maintained.
- Clean the window shutter hardware only with a soft, lint-free cloth and a mild, ph-neutral detergent in diluted form. Never use aggressive, acidic cleaners, scrubbers or solvents. These can lead to damage of the hardware!
- Avoid dirt and deposits. These cause damage to the surface when operating the shutter.
- Avoid damage to the surface! If, however, the surface is damaged, the affected area must be cleared with a coating.

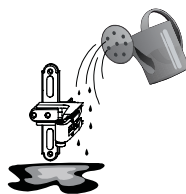


Damaged areas must be immediately repaired.

Care in coastal areas

Within the radius of approx. 10 km to the sea, the environmental conditions are very challenging for materials. Therefore, in addition to the above-mentioned points, the following applies:

- Depending on the requirement, but at least once a year, remove salt deposits and dirt with fresh water and a soft brush.
- Allow the hardware to dry completely.
- After drying, spray the hardware with a suitable corrosion protection spray (e.g. Brunox Turbo Spray or equivalent).





Cleaning instructions for shutters:

■ PVC surface:

Generally, plastic surfaces must always be wet cleaned. Dry wiping leads to a dull, blunt surface due to dust and dirt. Use only soft cleaning towels for cleaning. Cleaning products that are specially designed for the maintenance of plastic surfaces have been developed and their application is proven.

Soap containing cleaning agents are generally suitable. Abrasive and solvent-containing cleaning agents can scratch or damage the surface and therefore must not be used. In case of heavier contamination, simply allow the cleaning product to have a longer effect. The use of gloss seals can prolong the cleaning intervals and simplify the cleaning. The surface temperature must not exceed 25°C. Cleaning agents are available in retail or from the door manufacturers.

■ Timber surface:

The cleaning of the wooden surfaces in the interior is best done with mild detergents such as diluted detergents or soap alkalis. Abrasive, corrosive and solvent-containing cleaners destroy the lacquer surface. For cleaning, use only soft, lint-free cleaning cloths that do not scratch the lacquer surface. Window cleaners contain small traces of alcohol and ammonia. These cleaners are suitable for cleaning the glass panes as well as cleaning wood surfaces. After cleaning, dry the wooden profiles with a dry, soft rag, because if left on too long the alcohol can soften the surface of the lacquer.

Outdoor surfaces are to be cleaned in the same way as indoor surfaces. Outdoors, the surface is more exposed to the weather – sun, rain, humidity and temperature. Over time and depending on the intensity, this can affect the surface and possibly cause small cracks and the like. These small damages must be repaired immediately (re-painting) in order to avoid more expensive repairs later on.

Repairs and re-painting of window elements may only be carried out by specialist companies!

■ Aluminium Surface:

With aluminium surfaces, light dirt can be removed with a sponge and water, to which a neutral cleaning agent (e.g. washing-up liquid) has been added.

Do not use acidic or highly alkaline detergents that attack the surface. Never use abrasive cleaning agents or scrubbing sponges! Solvents (e.g. Acetone, petrol, nitro-thinners etc.) also damage the surface.

The cleaning of the surfaces must not be carried out in direct sunlight. The surface temperature must not exceed 25°C.

Cleaning agents are available in retail or from the window shutter manufacturers.



ATTENTION!

Abrasive and solvent-containing cleaning agents can damage the surface and therefore must not be used. Only use soft, lint-free cleaning cloths for care!

Additionally, test the cleaning agent and cloth on a non-visible area first (e.g. the shutter inner edge).

Cleaning instructions for gaskets:

Use only mild detergents to clean the gaskets. Never use solvent cleaning agents such as acetone, nitro-thinners, alcohols, acids, bases or the like! These dissolve the upper surface structure of gaskets.

Special care products for gaskets (e.g. Vaseline, talcum powder, liquid silicones) can be used to extend the elasticity of the gasket and thus the service life. The application should be done about once a year.

Intervals for maintenance and cleaning of surfaces:

The location, weather and external environmental influences are crucial for the frequency of cleaning and care. Fixed intervals cannot therefore be specified and must be set individually.

Generally, it can be noted that precise care and quick repair of minor damage can significantly prolong the service life.

Particular attention should be paid to the point of „care in coastal areas“!



Maintenance Information

Your window shutter is equipped with a high-quality and durable MACO hardware. To ensure that it remains functional and safe for years to come, the following maintenance instructions and mandatory intervals must be adhered to.

Poor maintenance can lead to damage to the shutter hardware and thus to the falling off of shutter parts or entire shutters!



NOTE!

In addition to regular cleaning, the window shutter hardware also requires an expert, systematic inspection and maintenance to ensure usability and safety.

We therefore recommend that you take out an appropriate maintenance contract with the manufacturer of your window shutters.

Inspection and checking intervals

Verifiable initial check **1 year** after installation and thereafter **every year**

	 End Users	 Specialist
Check the free movement of the shutter (no rubbing on other parts) and, if necessary, have shutters readjusted by a specialist.	✓	✓
Check the functionality of and lubricate all movable hardware. It is especially important where metal parts rub against each other!	✓	✓
Check all hardware and closing parts for visible damage and correct locking (abrasion) and, if necessary, have them serviced by a specialist.	✓	✓
Visual check of the surface for damage and if required correct by painting.	✓	✓

Inspection and checking intervals

Verifiable initial check **1 year** after installation and thereafter **every year**

	 End Users	 Specialist
Check the fixing screws and, if necessary, tighten or replace.	✗	✓
Check whether the shutter contacts with the buffer stop instead of with the wall and, if necessary, have it readjusted by a specialist.	✗	✓
The shutter crank opener drive must be re-greased (only with MACO fat syringe Art. No. 362833) to ensure permanent function. Move the drive motor using the operating handle to achieve an even distribution.	✗	✓
Check the anti-jemmy device on shutter crank opener drives and the snap holder and, if necessary, supplement.	✗	✓



ATTENTION!

✗ = may only be carried out by a specialist company, not by the end user!

Hinging the window shutter in and out, as well as any adjustment of the hardware must only be carried out by a specialist!

The hardware of your shutter must be operated at least once a month in order to prevent so-called „dormant wear and tear.“



Lubricating positions

Snap holder	
Shutter lock 2F	
Shutter catch for doors	
Comfort shutter catch	



Lubricating positions

Snap lock	
Double-sash shutter lock	
Shutter hinges and shutter crank opener drives	
Shutter catch	



Spare parts, customer service and disposal

Spare parts or customer service can be provided by shutter suppliers or shutter manufacturers. A list of service partners and dealers can be found at www.maco.eu.



The disposal of the hardware must be done in accordance with local regulations and laws.

Applied standards

ÖN EN 1991-1-4-2007	Impacts on structures – wind loads
ÖN EN 14648-2007	Hardware for window shutters
ÖN EN 1932-2013	Resistance to wind loads
ÖN EN 13659-2015	Exterior profiles – performance and safety requirements
ÖN EN 14201-2004	Profiles and Shutters – resistance to repeated operations – testing procedures

Notes

Please send suggestions and ideas for improvements on our instructions by email to: feedback@maco.eu.



Notes

A large rectangular area filled with a light gray grid pattern, intended for handwritten notes.



Notes

A large rectangular area filled with a light gray grid pattern, intended for handwritten notes.



TECHNOLOGY IN MOTION

MACO near you:

www.maco.eu/contact

Created: 01/2019 - Changed: 15.04.2020

Order No. 757772

All rights reserved and subject to change.

This print document is revised regularly.

The latest version is available at

<http://www.maco.eu/assets/757772>

or scan the QR code.

