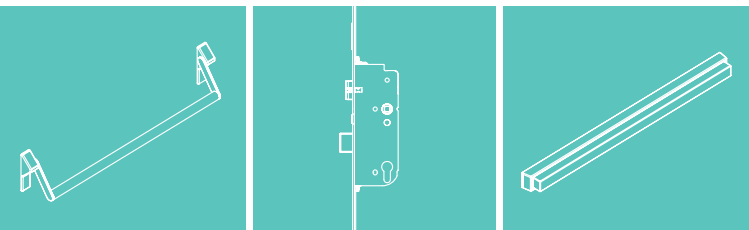




TECHNOLOGY IN MOTION

# MACO PROTECT

DOOR LOCKS



Operating and maintenance  
instructions for emergency exit doors  
according to EN 179 and panic  
doors according to EN 1125 1-sash with  
E changeover function with door lock  
A-TS

**END USER**



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## **WARNING!**

These operating and maintenance instructions are intended for the user (end user) and must be retained.

All users must be informed about the contents for safety reasons.

These instructions are also available to download from [www.maco.eu](http://www.maco.eu), order number 760364.



## Intended use and misuse

### Intended use

**For vertically installed main and side entrance doors in high-rise buildings, door sashes with MACO door locks are brought into a turning position inwards or outwards or into a closed or locked position in the door frame by operating a handle or a cylinder.**

When closing a sash and locking the fitting, the opposing force of a seal must usually be overcome.



### WARNING!

#### **Risk of injury and material damage due to improper opening and closing of sashes!**

Improper opening and closing of the sashes can lead to serious personal injury and considerable material damage!

Therefore:

- › It is essential to ensure that the sash is guided by hand over the entire range of movement up to the absolute closed position, controlled at a very low speed and moved towards the frame without resistance!
- › Make absolutely sure that the sash never slams shut or swings open uncontrollably (wind or draught)!

**Any use or processing of the products that goes beyond or deviates from the intended use is considered misuse. This can result in injury to people and damage to other objects!**



### WARNING!

#### **DANGER DUE TO MISUSE!**

Misuse of main or side entrance doors can lead to dangerous situations, such as injury to people and damage to other objects.

The following uses in particular must be avoided (see also safety instructions):

- › The deliberate or uncontrolled slamming or pressing of the sash against the jamb. This can damage or destroy the fittings, frame materials or other individual parts of the doors.
- › The insertion of obstacles in the opening area between the frame and sash!
- › The deliberate attachment or negligent allowance of additional loads acting on door sashes.
- › Closing the sash with force. The sash must always be able to run freely into the frame without any force.



### **CAUTION!**

**In the event of damage that is obvious or visible to everyone or if the door is not functioning properly, it may not be operated and must be repaired immediately by a specialist company before any further use!**



### **IMPORTANT!**

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

#### **Note on the usage restrictions:**

Closed, unlocked door sashes only serve a shielding function. They do not fulfil the requirements for:


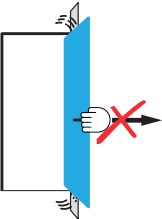

- › the joint impermeability
- › the sound insulation
- › the burglary resistance
- › the impermeability to driving rain
- › the heat protection

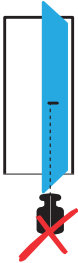
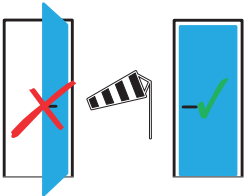
The above properties can only be achieved with locked sashes.

## Safety and warning notices

### Safety-relevant instructions

The following symbols illustrate the dangers present around doors:

Symbol	Meaning
	<p><b>Risk of injury due to body parts becoming trapped in the opening gap between the door and frame</b></p> <ul style="list-style-type: none"> <li>→ Never reach between the door and frame when closing doors and always proceed with caution.</li> <li>→ Keep children and persons who are unable to assess the dangers out of the danger zone at all times.</li> </ul>
	<p><b>Risk of injury and material damage due to the door pressing against the opening edge (wall jamb)</b></p> <ul style="list-style-type: none"> <li>→ Always refrain from pressing the door against the edge of the opening (wall jamb).</li> </ul>
	<p><b>Risk of injury and material damage due to the introduction of obstacles into the opening gap between the door and frame</b></p> <ul style="list-style-type: none"> <li>→ Avoid placing obstacles in the opening gap between the door and frame.</li> </ul>

Symbol	Meaning
	<p><b>Risk of injury and material damage due to additional load on the door</b></p> <p>→ Avoid additional load on the door.</p>
	<p><b>Risk of injury and material damage due to the effects of wind</b></p> <p>→ Avoid the effects of wind on the open door.</p> <p>→ In the event of wind and draughts, close and lock the door immediately.</p> <p>→ Close and lock all doors when wind and storms are forecast.</p>



**CAUTION!**

**If the door is visibly damaged or does not function properly, it may not be operated and must be repaired immediately by a specialist company before any further use!**

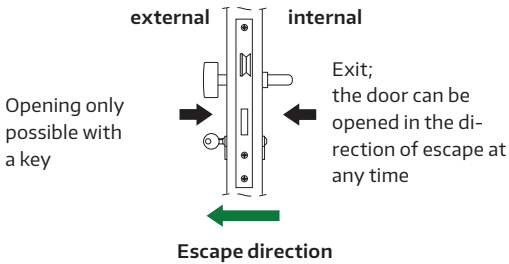
# Operating instructions

## Functional principle of E changeover function

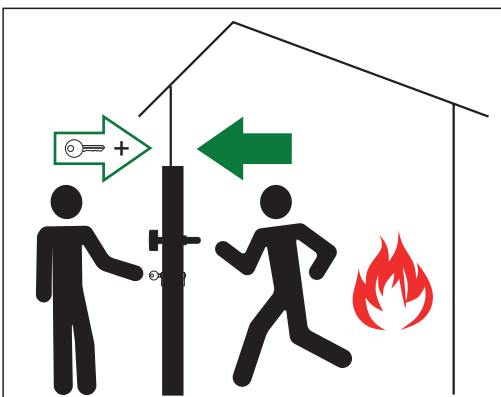
The changeover function is for doors where unauthorised opening from the outside must be strictly prevented.

The door can only be opened against the direction of escape after unlocking and only with the key.

After using the escape function, access against the direction of escape is blocked again after the door closes and it is therefore NOT possible to go back.



## Pictogram



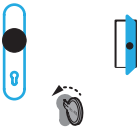
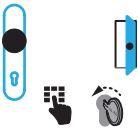


### Illustrative symbols



The following symbols show the various possible handle and cylinder functions and the resulting door positions.

### A-TS automatic lock with E changeover function: use in emergency exit doors in accordance with EN 179


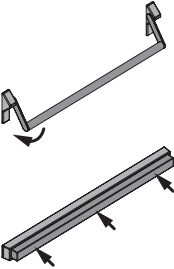
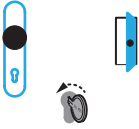
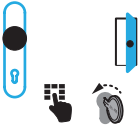
A-TS without motorised opening

Operation	Meaning
	<p>When the door is closed, all locking elements are triggered automatically.</p>
	<p><b>Operation from inside:</b> the door can be opened from the inside at any time with the handle.</p>
	<p><b>Operation from outside:</b> <b>(manual automatic lock)</b> Opening from the outside is via the cylinder.</p>
	<p><b>Operation from the outside (automatic lock with motorised unlocking)</b> Opening is from the outside via the cylinder or by means of electronic access control systems.</p>

**Special version: A-TS with day release feature; only in combination with daytime opener with permanent opening (design only permitted for emergency exit doors in accordance with EN 179; not approved for panic doors in accordance with EN 1125)**

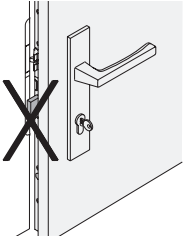
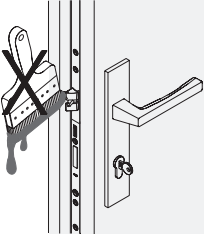
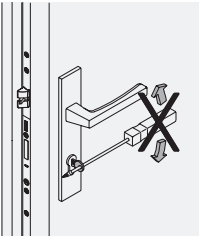
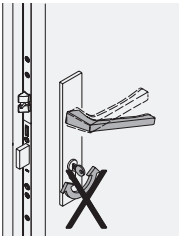
Operation	Meaning
	<p>The day release feature can be activated by simultaneously pressing the handle downwards and pushing the day release slider on the lock upwards.</p> <p><b>CAUTION:</b> during this operating mode, the door is not locked or blocked and can be accessed by anyone at any time!</p>
	<p>The day release feature can be deactivated again by simultaneously pressing the handle downwards and pressing the day release slider on the lock downwards.</p> <p>This restores the door lock's basic function.</p>

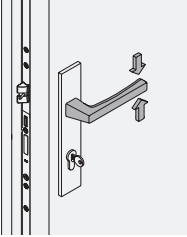
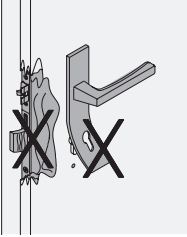
**A-TS automatic lock with E changeover function: use in panic doors in accordance with EN 1125**

Operation	Meaning
	<p>When the door is closed, all locking elements are triggered automatically.</p>
	<p><b>Operation from inside:</b> To open, the operating element must be pressed against the door leaf.</p>
	<p><b>Operation from outside:</b> <b>(manual automatic lock)</b> Opening from the outside is via the cylinder.</p>
	<p><b>Operation from the outside (automatic lock with motorised unlocking)</b> Opening is from the outside via the cylinder or by means of electronic access control systems.</p>

## Misuse

The following illustrations show various operating errors that must be avoided!

Operating error	Meaning
	<p>Never close the door with the bolt extended!</p> <p>This will damage the bolt and the door can no longer be locked!</p>
	<p>Never paint fittings and fitting parts!</p> <p>Paints and varnishes penetrate moving fitting parts and prevent them from working properly!</p>
	<p>Keys may only be operated by hand. Never use tools or aids!</p> <p>Bent or broken keys mean that doors can no longer be locked or unlocked!</p>
	<p>Never operate the door handle and cylinder lock at the same time!</p> <p>This damages the mechanism of the lock and the door can no longer be locked or unlocked!</p>

Operating error	Meaning
	<p>Never exert excessive force on the handle!</p> <p>Forces in excess of 15 kg on the handle will damage the handle or the lock mechanism!</p>
	<p>As soon as traces of force are visible, the lock or handle must be replaced!</p>

# Usage and cleaning instructions

## General usage instructions:

**Open doors are always a source of danger to people's health and damage to other objects!**



### **WARNING!**

Injury risk when closing doors! If you reach between the sash and frame with your hand or other parts of your body when closing the door, there is a risk of crushing and therefore a risk of injury!

Therefore:



- › When closing doors, never reach between the sash and frame and always proceed with caution.
- › Keep children and persons who are unable to assess the dangers out of the danger zone at all times.
- › In the event of wind and draughts, close the door sash immediately! Otherwise, the draught or air suction can cause the door to slam shut or open automatically and uncontrollably!  
If the sash is not closed and locked, the door itself, and other objects may be damaged or people injured.
- › Small parts under the opening area of doors can cause damage to the floor covering!



### **CAUTION!**

**Risk of damage from small objects in the opening area of doors. The opening movements cause these parts to be trapped between the sash and the floor, resulting in damage.**

## General cleaning instructions:

Regular cleaning is a prerequisite for maintaining the functionality of the door. When cleaning the glass surfaces, seals and surfaces, also check the fitting parts for dirt and, if necessary, clean with a damp, lint-free cleaning cloth and pH-neutral cleaning agent. The lubrication at the lubrication points must then be restored as shown on page 20. Only then may the door be closed again.

### › **Cleaning instructions for glass surfaces:**

Commercially available, ammonia-free glass cleaners can be used to clean glass surfaces. Do not use detergents, acids, fluoride-containing cleaning agents or abrasive cleaners! Stubborn stains such as paint splashes and the like can be removed with ethyl alcohol, white spirit or the like.



Only clean glass surfaces with a soft, lint-free cloth. Never use microfibre cloths, cleaning sponges, scouring pads, steel wool, metallic and abrasive objects or any similar items - these will scratch the glass surface!

› **Cleaning instructions for seals:**

Only use mild cleaning agents to clean the seals. Do not use solvents such as acetone, nitro thinner, alcohols, acids, bases or similar cleaning agents! These dissolve the surface structure of seals. Special care products for seals (e.g. Vaseline, talcum powder, liquid silicones) can be used to extend the suppleness of the seal and thus its service life. It should be applied about once a year.



**CAUTION!**

**Microfibre cloths contain substances and fibres that can destroy the surface of glass and seals! Microfibre cloths are therefore unsuitable for cleaning doors!**

**Cleaning instructions for door frames and door sashes:**

› **Plastic surface:**

In general, plastic surfaces should always be cleaned wet. Dry wiping leads to a matt, dull surface due to dust and dirt. Only use soft, lint-free cleaning cloths for cleaning. Cleaning products are available that have been specially developed for the care of plastic surfaces or decorative surfaces and whose compatibility has been proven. Soap-based detergents are generally suitable. Abrasive and solvent-based cleaning agents can scratch or dissolve the surface and must therefore not be used. For heavier soiling, simply leave the cleaning agent on for longer. The use of gloss sealants can extend cleaning intervals and simplify cleaning. The surface temperature may not exceed 25 °C during cleaning. Cleaning agents are available from specialised dealers or from the door manufacturer.

› **Timber surface:**

Cleaning timber surfaces indoors is best done with mild cleaning agents such as diluted washing-up liquid or soap suds. Abrasive, corrosive and solvent-based cleaning agents destroy the paint surface.



Only use soft, lint-free cleaning cloths that do not scratch the paint surface. Window cleaning agents contain small traces of alcohol and ammonia. These substances are well suited for cleaning both glass panes and timber surfaces. After cleaning, dry the timber profiles with a dry, soft cloth, as prolonged exposure to alcohol can soften the varnished surface.

Exterior surfaces must be cleaned in the same way as interior surfaces. In outdoor areas, the surface is increasingly exposed to weathering such as sun, rain, humidity and temperature. Depending on the intensity, this can lead to surface damage such as tiny cracks and the like after a long period of time. This minor damage must be repaired immediately (repainting) to avoid more costly repairs later on. Repairs and repainting of door elements may only be carried out by specialist companies!

› **Aluminium surface:**

On aluminium surfaces, slightly adhering dirt can be removed with a sponge and water to which a neutral cleaning agent - e.g. dish-washing liquid - has been added. Do not use acidic or strongly alkaline cleaning agents that attack the surface. Never use abrasive cleaning agents or scouring pads! Solvents (e.g. acetone, benzene, nitro thinner, etc.) also damage the surface.

The surfaces may not be cleaned in direct sunlight. The surface temperature may not exceed 25 °C. Cleaning agents are available from specialised dealers or from the door manufacturer.



**CAUTION!**

**Abrasive and solvent-based cleaning agents damage the surfaces and must not be used!**

**Only use soft, lint-free cleaning cloths for care!**

**If necessary, test the cleaning agent and cloth on an invisible area (internal rebate area or similar).**

**Intervals for care and cleaning of surfaces:**

The location, weather and external environmental influences are decisive for the frequency of cleaning and care. Fixed intervals can therefore not be specified and must be determined individually.

In general, it can be said that attentive care and the rapid repair of minor damage can considerably extend the service life.



### Care instructions for fitting parts:

In order to maintain the surface quality of the fitting parts for the intended use in the long term and to avoid damage, it is essential to observe the following points:

#### › Protection against corrosion:

- › Ventilate the fittings and the rebate spaces so that they are not exposed to direct moisture or condensation (important during the construction phase!).
- › Only clean fitting parts with a damp cloth, avoid permanent moisture!
- › Do not expose fitting parts to aggressive atmospheres (direct proximity to the coast, aggressive air contents, e.g. damp rooms, swimming pools, cattle sheds and rooms in which acids are stored).
- › Do not install fitting parts in Accoya timber doors.

#### › Protection against dirt:

- › Generally keep the fittings free of deposits (e.g. salt near the coast) and dirt. During the construction phase, immediately remove any dirt from plaster, mortar or similar with water.
- › Protect fittings and striker plates from soiling (dust, dirt, paint, etc.).



**CAUTION!**

**Removed lubrication can lead to functional failure!**

#### › Protection against functional failure:

- › To ensure that the fittings function permanently, they must be properly lubricated again after cleaning.
- › During cleaning, grease used to lubricate the fittings can be wiped off or smudged to such an extent that it becomes ineffective. This is why the lubrication applied at the factory must be restored (see page 20).



**CAUTION!**

**Defective or damaged areas must be improved and repaired immediately by specialist personnel.**

› **Protection against aggressive, acidic cleaning agents:**

- › Only clean the fittings with a soft, lint-free cloth and a mild, pH-neutral cleaning agent in diluted form. Never use aggressive, acidic or solvent-based cleaners or scouring agents (scouring pads, steel wool, etc.). These can lead to damage on the fittings!
- › Fittings damaged in this way can lead to functional impairment and a reduction in their safety-relevant properties. This can result in injuries to people and damage to other objects.

# Maintenance instructions



## NOTE!

Maintenance requires special care and may therefore only be carried out by expert, trained personnel in accordance with the specifications in the maintenance instructions and the maintenance log. MACO accepts no liability or warranty for damage caused by incorrect maintenance. We therefore recommend concluding a corresponding maintenance contract with the manufacturer of your doors or a qualified specialist company. To support and document regular maintenance, MACO provides a maintenance logbook under order number 760372.



<https://www.maco.eu/assets/760372>

## Inspection and testing intervals

### Verifiable, **annual** testing (**documentation obligation**)

Check rebate clearance: evenly all round;  
**timber:** rebate clearance 4 mm: 4 mm ( $\pm 1$  mm), rebate clearance 12 mm: 12 mm ( $\pm 1$  mm); **PVC:** 12 mm ( $\pm 1$  mm); **aluminium:** according to the specifications of the profile manufacturer ( $\pm 1$  mm)

Check that the door sash enters the frame freely and that it moves easily (locking and unlocking) and have it readjusted by a specialist company if necessary.

Check all moving fitting and striker plates for proper function and lubricate, also grease the latch inserts on the striker plates.

Check fastening screws and tighten or replace if necessary.

Check the setting or contact pressure of the locking points and readjust if necessary.

### Verifiable testing every **3 - 4 weeks** (**documentation obligation**)

Check all fittings and striker plates for obvious damage or wear (abrasion) and, if necessary, have them repaired by a specialist company.

The door fitting must be operated at least once a month to prevent so-called "dormant wear".

Verifiable testing every **3 - 4 weeks**  
(documentation obligation according to EN 179 or 1125)

Inspect and operate the emergency exit/panic door lock to ensure that all components of the lock are in satisfactory working condition. The operating forces for releasing the escape door lock must be measured and recorded using a force gauge.

Check blocking objects such as floor recesses, striker plates and single piece door strikers for dirt, blockages and obstructions and remove or clean if necessary.

Check lubrication and lubricate if necessary.

Check that no additional locking devices have been fitted.

Check that no changes have been made to the components and that the components correspond to the originals, i.e. are of the same type.

Check that the operating element is properly tightened and use a force gauge to measure the operating force required to release the escape door lock.

Check that the operating forces have not changed significantly compared to the operating forces recorded during the initial installation.

The presence and intactness of the escape route labelling should also be checked during the regular inspections!



**WARNING!**

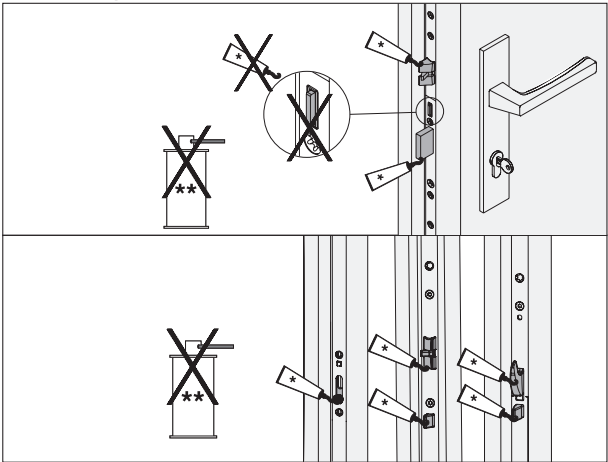
Failure to follow these instructions can lead to fatal or serious injuries!



**CAUTION!**

Removal and installation of the sash, and all adjustment work on the fitting may only be carried out by a specialist company! The repair of safety-relevant parts (door hinges) may also only be carried out by a specialist company!

## Lubrication points



- › This illustration is only symbolic. The position and number of lubrication points depends on the actual size and design of the door!
- › Lubricating greases for fittings:  
Spray grease item no. 455341 or equivalent
- › Amount of lubricant:  
approx. 3 mm<sup>3</sup> (≈ size of a pinhead)
- › After lubrication, the fitting must be operated several times to distribute the lubricant.



## Spare parts, customer service and disposal

Spare parts and customer services can be obtained from door suppliers and door manufacturers. You can find a list of fabricators or dealers at [www.maco.eu](http://www.maco.eu).



The disposal of fitting parts must be carried out in accordance with local regulations and laws.

Please send any suggestions or ideas for improving our instructions by email to: [feedback@maco.eu](mailto:feedback@maco.eu)

SKG-IKOB



<https://www.skgikob.nl/sterrenwijzer/>



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Created: 04/2026 - Changed: 04/2026

Order no. 760364

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