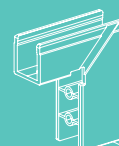
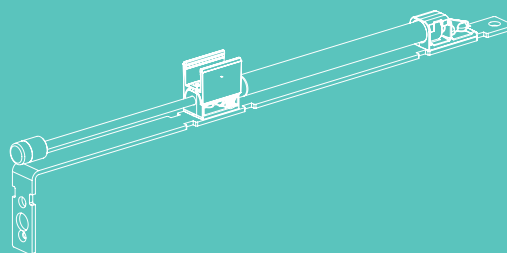




TECHNOLOGY IN MOTION

MACO RAIL-SYSTEMS

LIFT-AND-SLIDE HARDWARE



ASSEMBLY INSTRUCTIONS

Stop Absorber Motion 82

Use exclusively for specialist companies!

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Important Information

General Information

The current version of our General Terms & Conditions can be found on the MACO website (www.maco.eu/en-INT/Terms-and-conditions). Retain these assembly instructions for later use and maintenance.

Failure to comply with these assembly instructions releases MACO from any liability. Please note your obligation to inform your customer regarding the operation and maintenance of the system as well as all safety related information.

MACO as a customer-oriented and service-oriented company offers you the "Operating and maintenance instructions for lift&slide hardware - END USER" (Order number 757951) and "Maintenance and adjustment instructions for lift&slide hardware - CERTIFIED SPECIALIST" (Order number 757954) for passing on to end customers.

You can find the documents in the download area on www.maco.eu.

Please hand over the user manual to the end user and ensure they are briefed.

Target Group

This documentation is intended exclusively for specialist companies and certified specialists.

The work-steps described herein may only be carried out by certified specialists.

Certification

The MACO hardware mentioned in the assembly instructions are tested and regularly monitored in standardised tests in accordance with EN 13126. The achieved Class H3 standard does not refer to your individual element system. Due to a wide range of influencing factors, individual element systems may experience minor deviations from standardised testing, such as:

- › the influence of processing tolerances
- › the effect of assembly tolerances after installation of the element in the building envelope
- › the use of accessories (e.g. weather seals, seal rails, handles, etc.)
- › the use of attachments (e.g. Aluminium shells, sun protection on the sash, insect protection)
- › environmental influences (e.g. humidity, sunlight, high or low temperatures, temperature fluctuations, etc.)
- › room-side influences (moisture, aggressive cleaning agents, etc.)

Important Information

General Safety Information

It is important to follow these instructions to ensure people's safety!

When reading this document and the safety instructions, please note the following signs and colours:



This indication indicates a situation that may arise if the instructions are not followed and which can lead to fatal injuries.



This indication indicates a situation that may arise if the instructions are not followed and which can lead to fatal and/or serious injuries.



This indicates a situation that may arise if the instructions are not followed and which can lead to minor injuries.



This note indicates important additional information that is relevant to the error-free assembly / function of the product.

Please pay attention to the VHBE guideline (hardware for windows and balcony doors) of the Gütegemeinschaft Schlösser und Beschläge e.V. (quality assurance association for locks and hardware). This guideline describes all safety-relevant topics for end users for window and balcony door hardware.



Important Information

General Safety Information



WARNING!

In order to ensure the long-term functionality and thus the operating safety of windows and balcony doors over their expected service life, the fastening of safety-relevant hardware parts is of particular importance.

MACO indicates explicitly that large sash weights are moved and accelerated during opening and closing. This applies particularly to sliding elements. It is at the discretion and the responsibility of the respective manufacturer (window builder), installers and dealers of windows and balcony doors, in particular of lift&slide doors, to offer corresponding movement restrictors or similar.

Incorrect assembly can lead to serious injuries. The installation must be carried out by personnel who have been instructed according to the state of the art and recognised rules of technology.

Due to overuse or improper operation of the slide and tilt hardware, the sash may jump out of its guide rails, fall out and thereby cause serious injuries.

Due to the high weight of the element, always pay attention to the correct securing of the element during manufacture, transport and assembly on the construction site.



ATTENTION!

If under special circumstances (use in schools, kindergartens, etc.), it is to be expected that the sliding element could be overstressed, this must be prevented by appropriate measures such as moving the stop buffers to reduce the opening width.

Improper handling may lead to crushing. Ensure users are aware of the risk in case of improper handling. This applies particularly to customers with small children.

Injuries may occur in the event of improper handling, in particular if persons or parts of the body are between the frame and the sash when closing or between the sash and the reveal or adjacent components.

Important Information

Note

These instructions describe all assembly steps required to set up standard version hardware. The hardware must be greased/oiled before commissioning (see operating and maintenance instructions).

The lift and slide hardware (LS) are only intended for use in stationary buildings. They are used for horizontally opening and closing windows and balcony doors. The lift and slide elements must be installed perpendicular and never in an inclined position.

Intended use

The areas of application mentioned on page 10 apply to the MACO LS hardware. Screw-in torque settings are binding and must be followed.

Mount all hardware parts professionally as described in this manual and observe all safety instructions.

To fasten the hardware, use the specified screw sizes! These must reach into the steel reinforcement when using PVC profiles.

Be sure to follow the profile manufacturer's processing policy.

The hardware may not be used for timber with aggressive content / surface treatments.

The hardware parts described in these assembly instructions are made of colourless passivated steel and sealed in accordance with DIN EN 12329. They must not be used in environments with aggressive, corrosive air content. If you are not sure, please ask your MACO contact person for advice.

The hardware manufacturer shall not be liable for any malfunctions or damage to the hardware or to the windows or balcony doors equipped with them, if they are subject to use of third-party hardware, inadequate tendering, failure to comply with the installation rules or application diagrams.

The fabricator is responsible for compliance with the functional dimensions specified in these assembly instructions as well as for flawless hardware assembly and secure fastening of all components.

In order not to affect the lightness of the hardware, turn the screws straight (unless otherwise indicated) and do not over-tighten!

Fix the screws of the supporting components (e.g. rollers, roller rail and guide rail) in the reinforcement profile.

With the spacer-block setting, observe the technical guideline No. 3 of the glazier trade "Blocking of glazing units".



Keep the roller track and all latches free from deposits and dirt to avoid damage to the hardware and ensure optimal functionality. In particular, protect the hardware from cement or plaster residues.

Do not make any constructive changes to the hardware parts.

Always close and lock the window and balcony door sash when windy or drafty. For the purposes of this definition, wind and draught are present if the window or window door sashes located in one of the opening positions are caused to move by air pressure or air suction of their own accord and uncontrollably open or close.

The resistance to wind loads in the closed and locked state depends on the respective construction of the windows and balcony doors. If wind loads in accordance with DIN EN 12210 (in particular test pressure p₃) are to be expected, suitable hardware are to be selected and agreed on separately in conjunction with the respective window construction and the frame material.

The defined maximum sash weights for the individual hardware designs must not be exceeded.

The component with the lowest permissible load capacity determines the maximum sash weight. Application diagrams and component mappings must be observed.

The hardware and the rebate spaces must be sufficiently ventilated, especially during the construction phase, so that they are not exposed to direct moisture or condensation.

The hardware are to be kept free of deposits and contamination by building materials (construction dust, gypsum plaster, cement etc.), therefore windows must be covered accordingly.

The hardware must only be cleaned or polished with mild, pH-neutral detergents in diluted form.

Attach the operating label in a clearly visible manner to the built-in lift and slide sash. The operating label is located in the basic box or in the "corner deflection" package.

Important Information

Improper use

The respective hardware system may only be assembled with hardware components from the MACO slide hardware range. In the event of improper installation of the hardware and/or the use of non-original or non-factory approved system accessories, no liability will be accepted.

Do not use vinegar-based or acid-curing sealants, as these can lead to corrosion of the hardware parts. Further information on MACO surfaces can be found on our website www.maco.eu or in brochure Order No. 49510 (in the download area).

The lift and slide elements may only be surface treated before the hardware is installed. Any subsequent surface treatment may restrict the functionality of the hardware. In this case, no warranty claims against the hardware manufacturer shall be accepted.

Protect the hardware from damage by angular or sharp tools.

If you are not sure, please ask your MACO contact person for advice.



Important Information

Storage and Handling

Check the following immediately after delivery:

- › Completeness of delivery (as per the delivery note)
- › Any damage to the packaging
- › Any damage to the materials
- › Improper storage or transport of hardware parts can affect the surface quality. To prevent this, the following points must be observed:
 - › It must be ensured that the room air is permanently dry
 - › Major temperature fluctuations leading to condensation must be prevented. Condensation on hardware causes the galvanised surfaces to be attacked
 - › Avoid aggressive vapours from cleaning agents or assembly aids such as silicone and the like, even for a short time. Vapours from such substances can very quickly lead to corrosion of hardware
 - › Salty air polluted by trade and industry also leads to corrosion on galvanised surfaces and is also not suitable for storage areas.

Transport

Finished elements must be stored and transported as follows:

- › Upright
- › Slip and tilt secured on suitable surfaces (e.g. G. transport frames)
- › Protected from dirt and damage
- › Avoid loads on mechanical connections!
- › Use special transport devices!

For intermediate storage outdoors:

- › ensure elements and hardware are covered or packaged

Area of application

For the MACO stop absorber, the mentioned areas of application apply according to the table.

For the processing of the profiles, the maximum areas of application and weights from the specifications of the profile manufacturer must be adhered to.

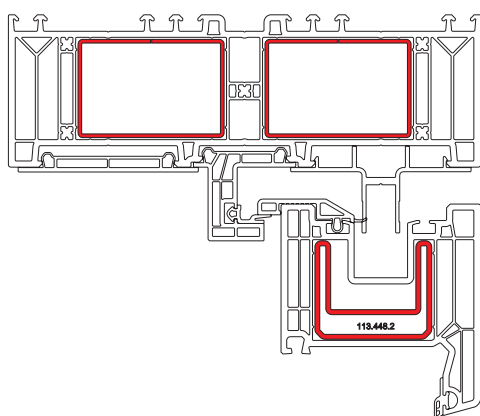
Minimum sash width when using the stop absorber	
top horizontally one-sided	> 900 mm
top horizontally on both sides	> 1200 mm

The use of the stop absorber is recommended from a sash weight of > 200 kg.

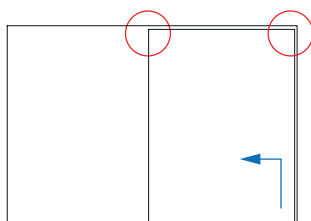
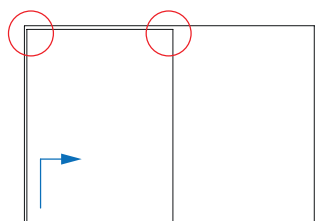
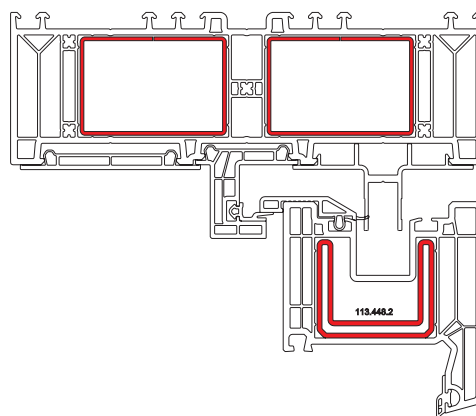
Working on the sash

Milling

Motion 82 reinforcement version OLD

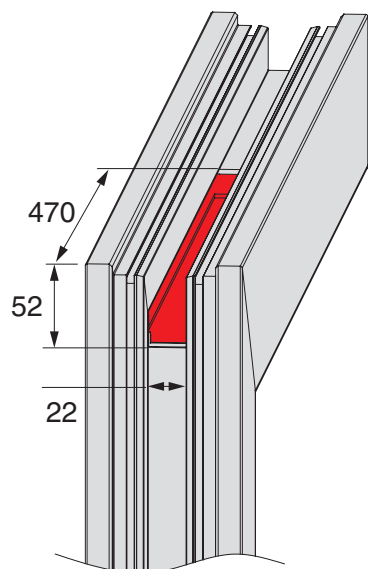


Motion 82 reinforcement version NEW

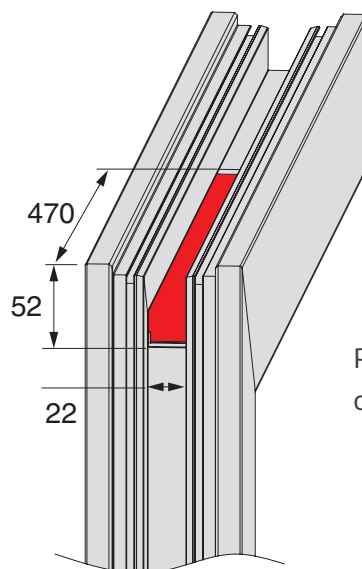


For the use of the stop absorber, the roller reinforcement must be positioned horizontally at the top of the sliding sash.

Motion 82 reinforcement version OLD



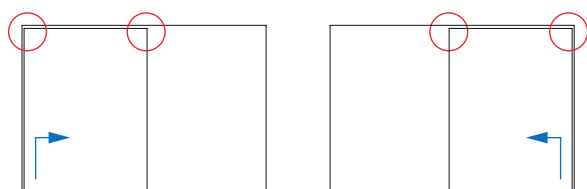
Motion 82 reinforcement version NEW



Remove the plastic bar in the area of the stop absorber.

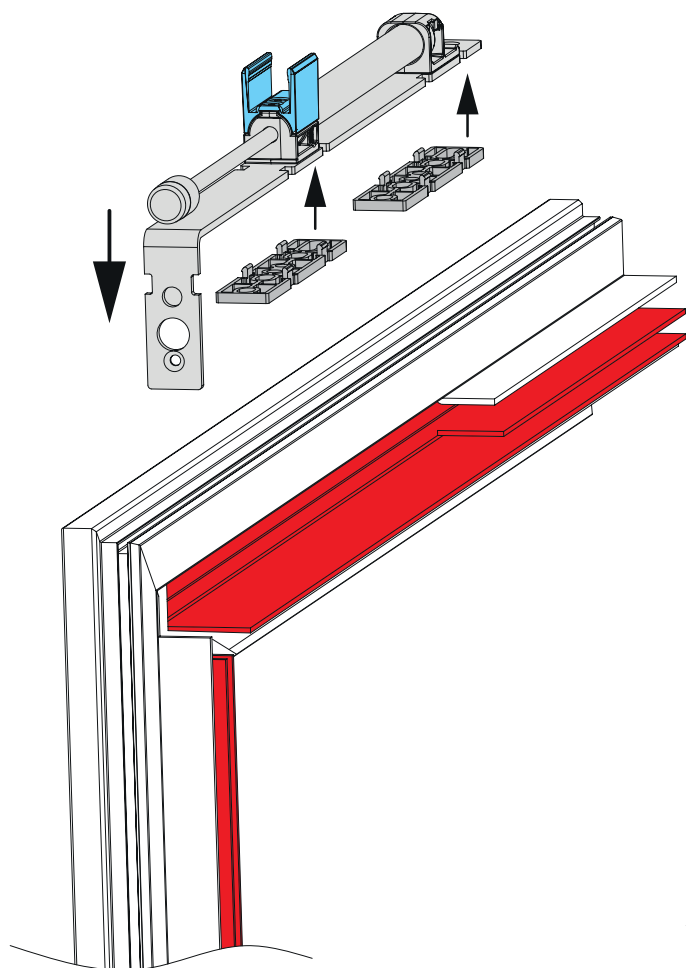
Working on the sash

Stop absorber assembly

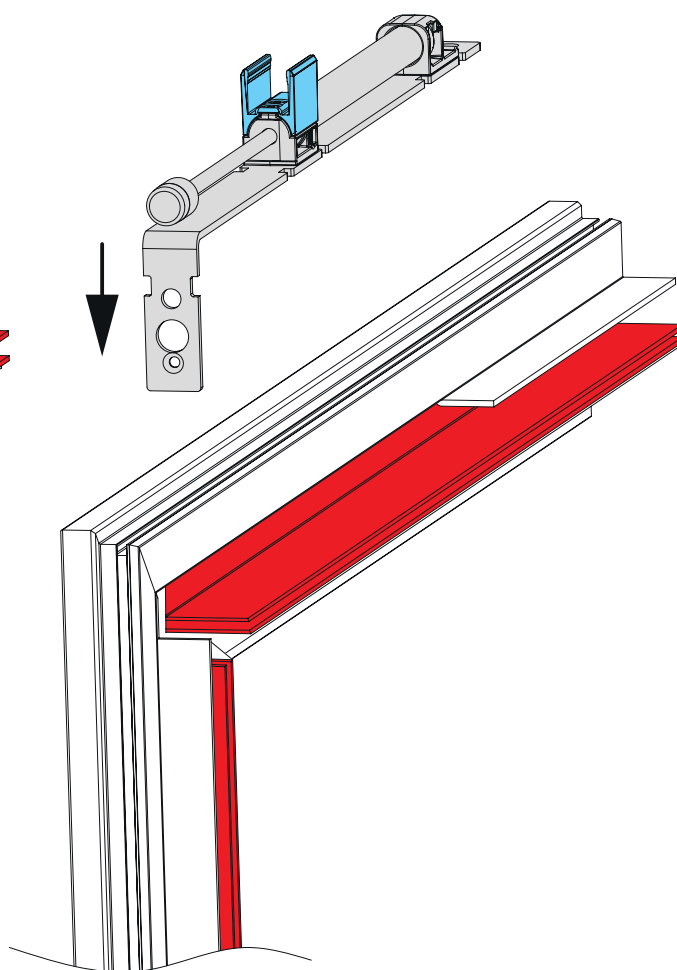


Fixing must be done in the reinforcement of the sliding sash.

Motion 82 reinforcement version OLD

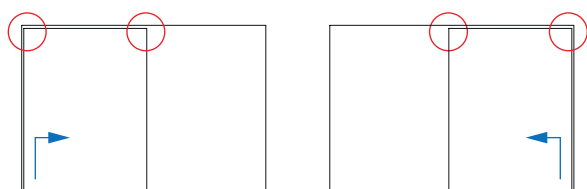


Motion 82 reinforcement version NEW



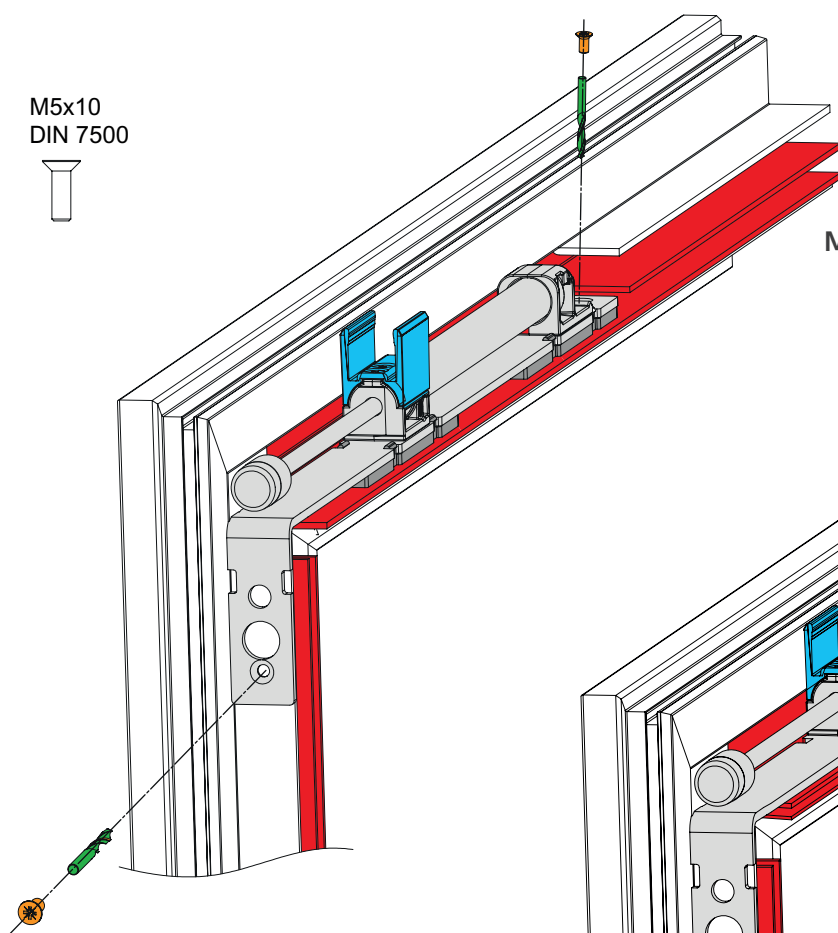
Working on the sash

Stop absorber assembly

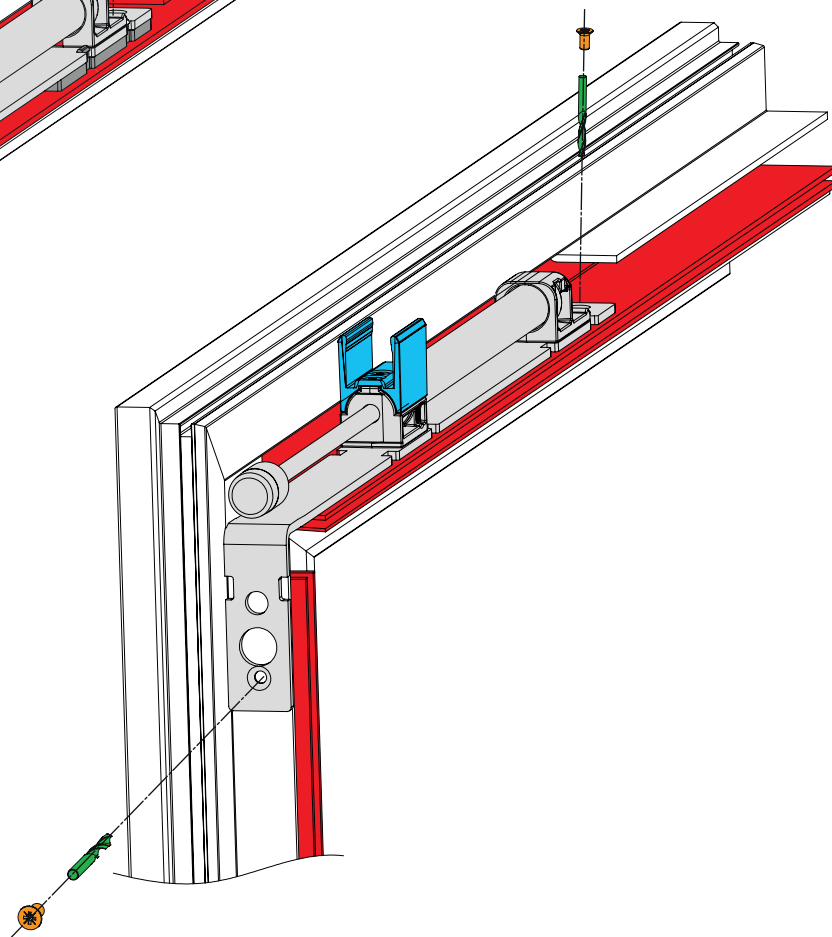


Motion 82 reinforcement version OLD

Ø 4 M5x10
DIN 7500

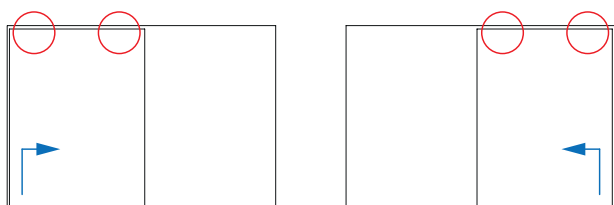


Motion 82 reinforcement version NEW

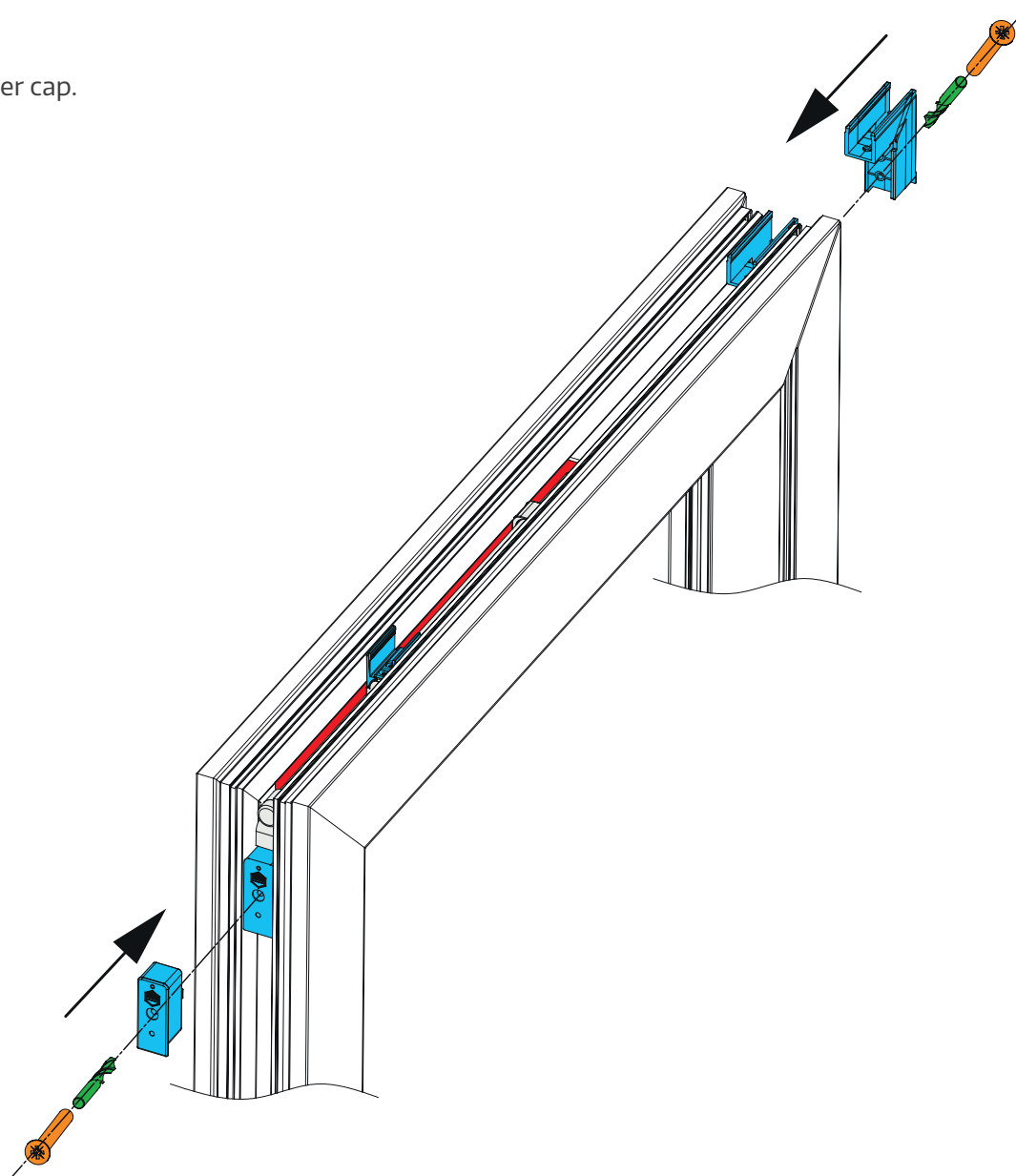
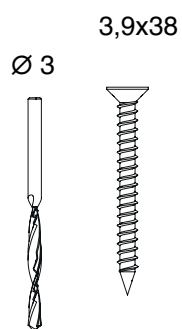


Working on the sash

Stop absorber assembly

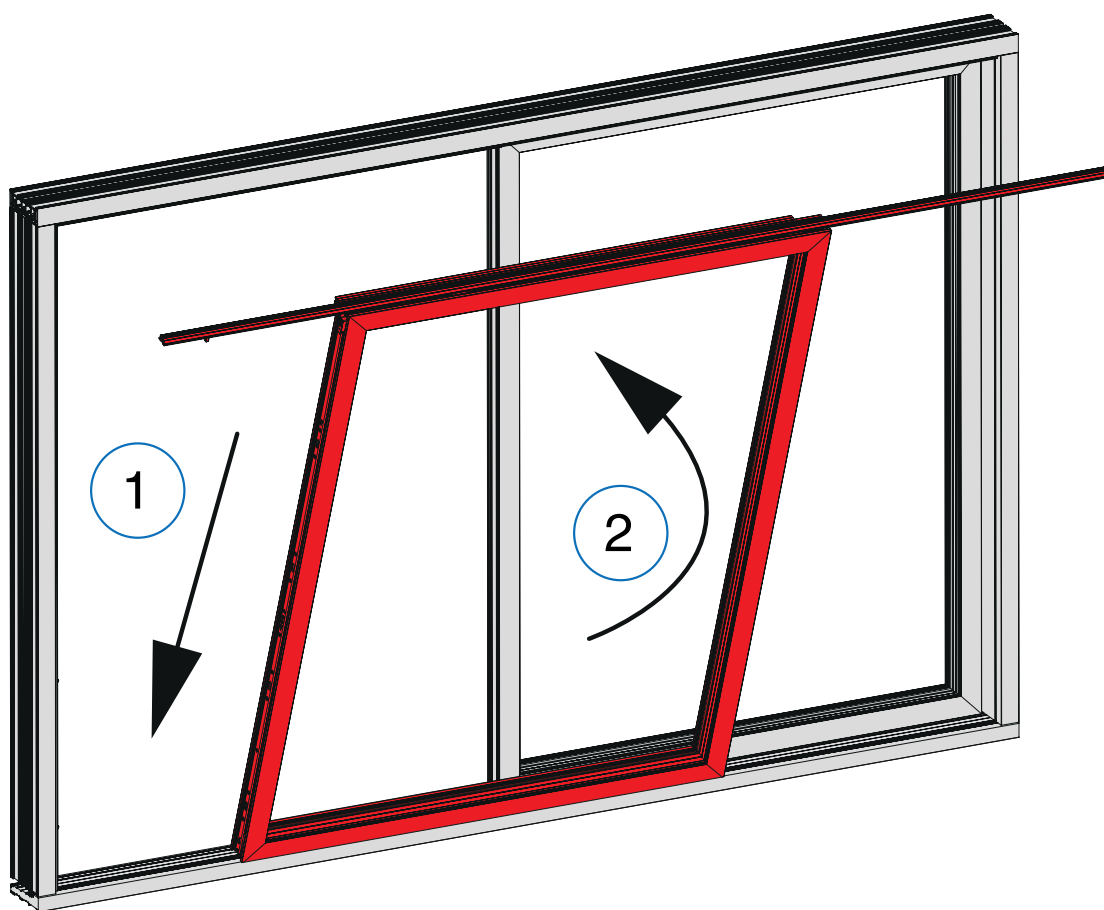
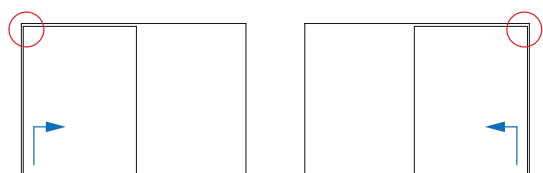


Install the cover cap.



Working on the sash

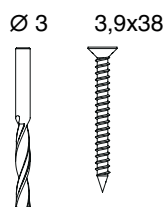
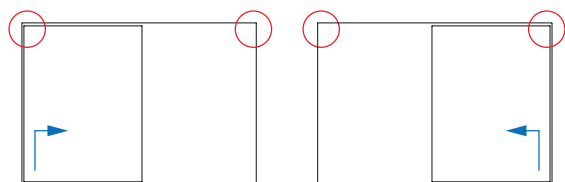
Hinging the sash



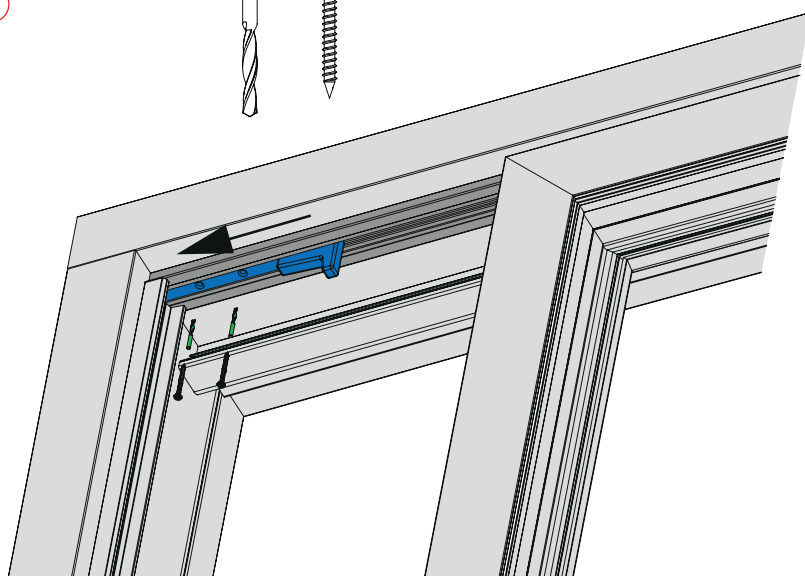
Working on the frame

Position the stop absorber

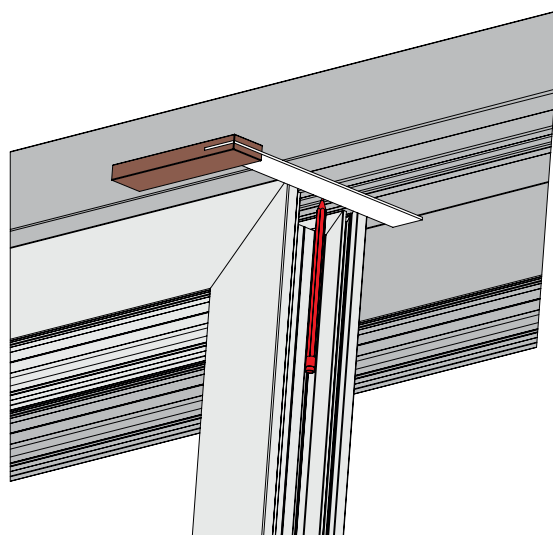
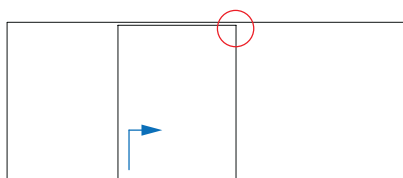
symmetrical



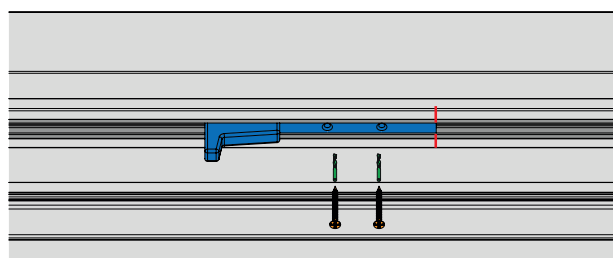
Press the stop absorber against the profile on the frame side and mount in place.



asymmetrical

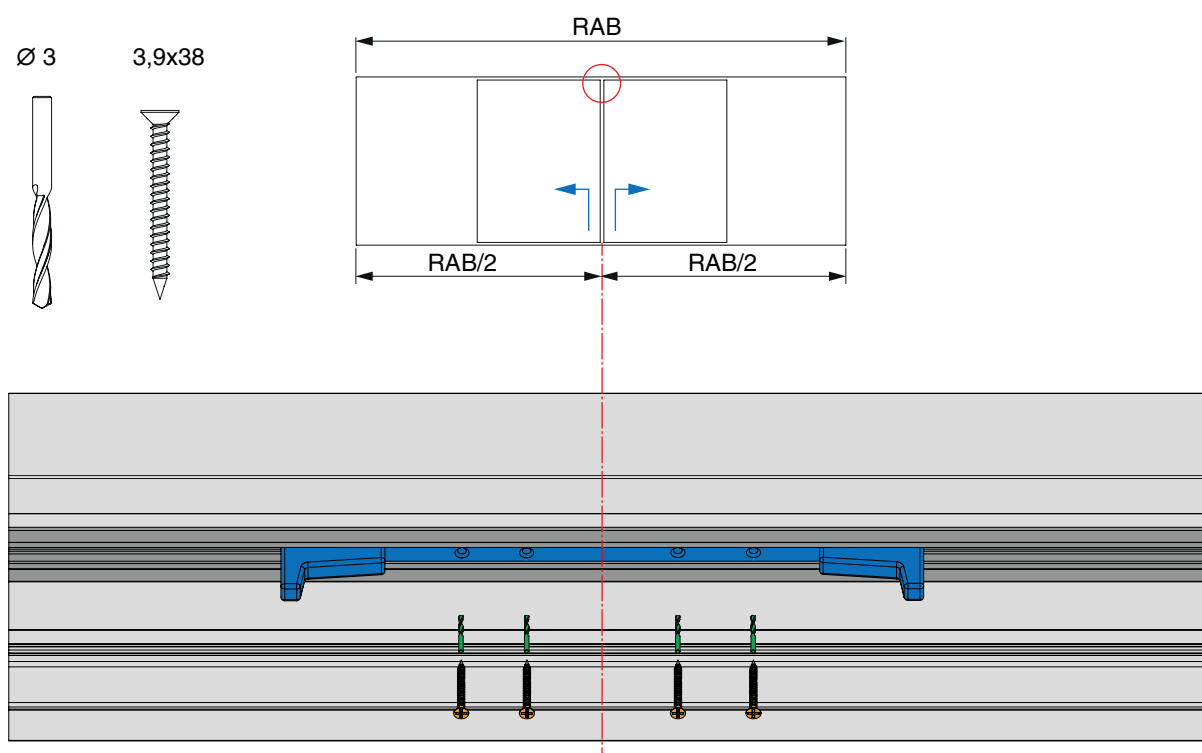


1. Put the sliding sash in the end position.
2. Mark the edge of the sash on the guide rail with the help of a narrow strip or angle.
3. Slide the end of the stop absorber onto the mark and mount in place.



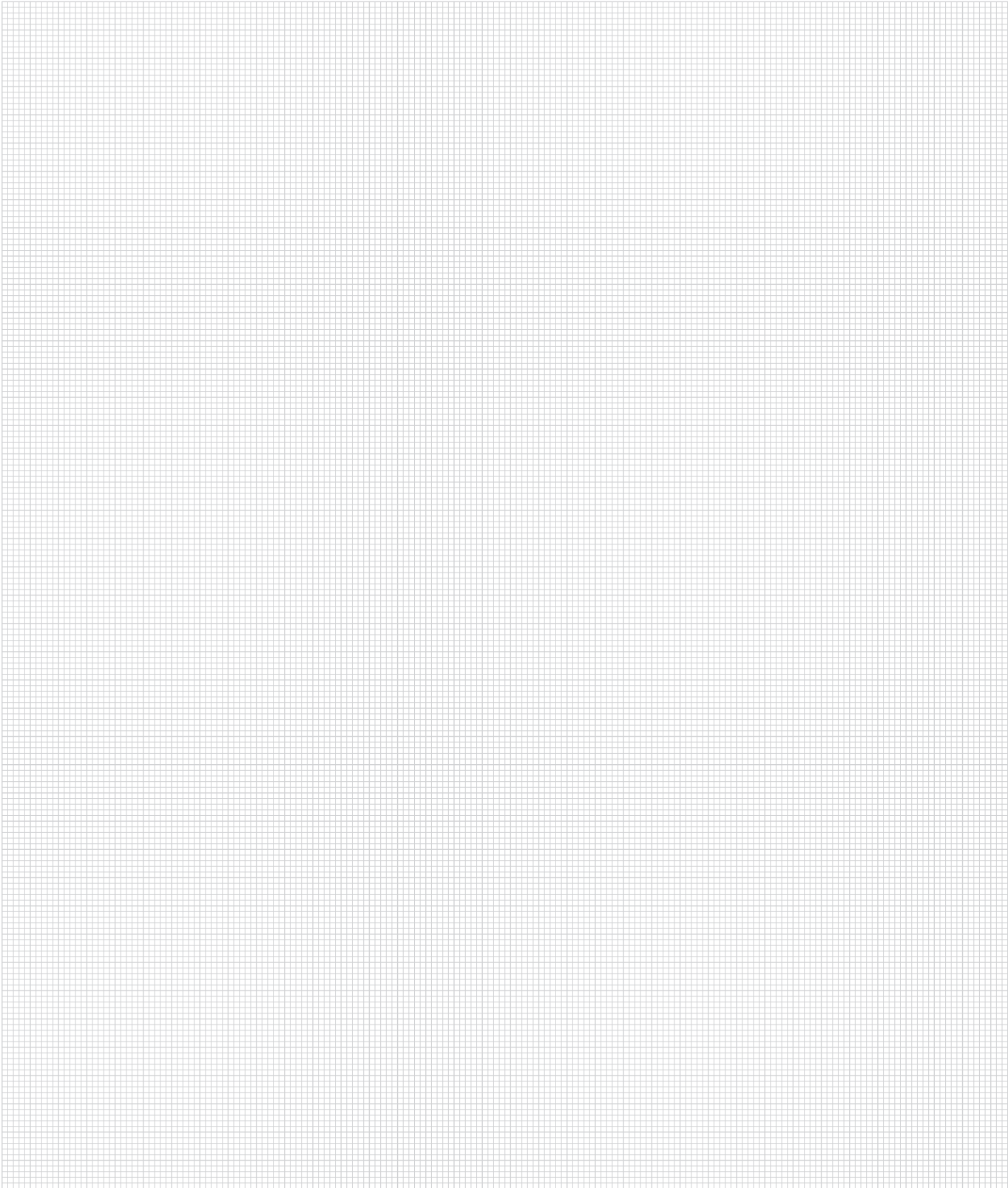
Working on the frame

Position on Scheme C



1. Mark the half of the frame on the guide rail.
2. Slide the end of the stop absorber onto the mark and mount in place.

Notes

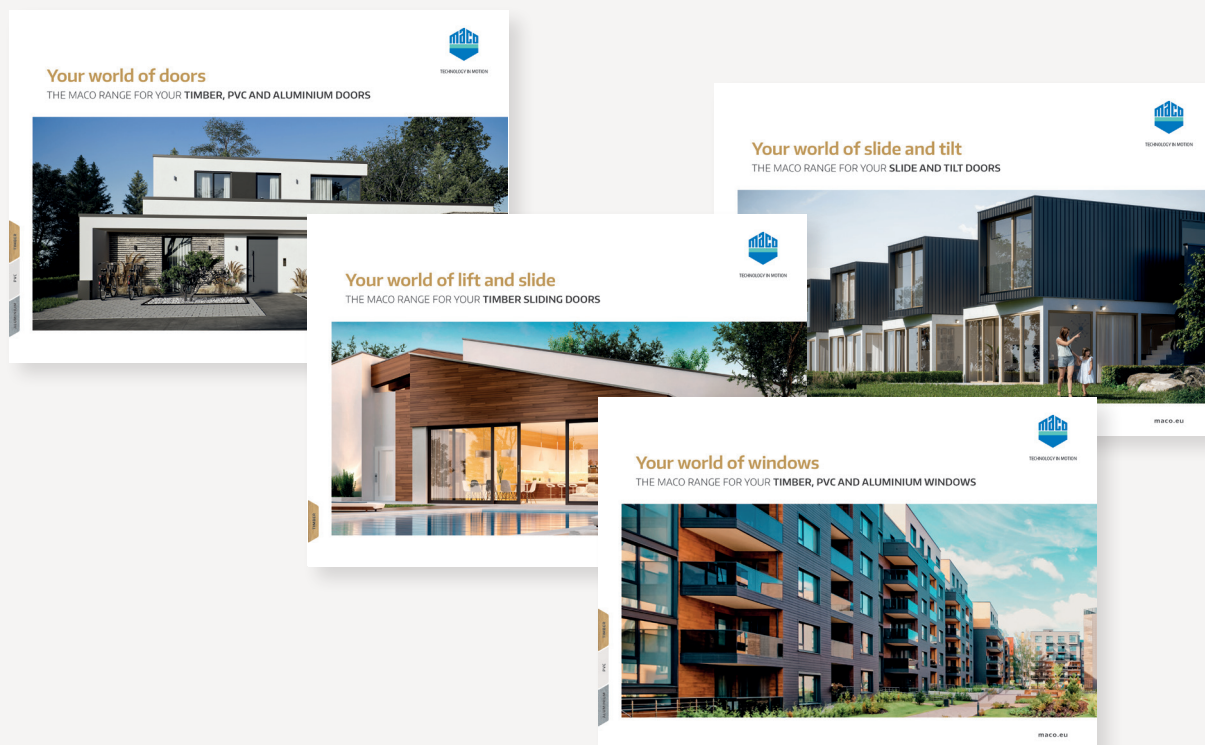




Notes

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We provide you with complete solutions for sliding doors, windows and doors – for timber, PVC and aluminium. Experience our versatile system offer, comprehensive service included. Discover more of this on our website **www.maco.eu** or contact your MACO representative.



MACO near you:
www.maco.eu/contact



TECHNOLOGY IN MOTION



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