

Mounting instruction
for roller garage doors

English

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1. MOUNTING PREPARATIONS


We ask our partners to pay attention that the essential precondition of the cost-efficient mounting is a high-quality treatment of the opening framing to install roller garage doors. It's very important to do the opening measurement at the initial stage and indicate the wall thickness and a material for it.

Treated openings must meet the following requirements:


- openings must be of rectangular or any other form, agreed between customer and supplier;
- surface of framing planes must be even and smooth, without beadings of plaster and cracks;
- vertical and horizontal deviations of working surfaces must not exceed 1.5 mm/m, but not more than 5 mm. If the openings are treated with deviation from the stated requirements, the customer must eliminate deviations or arrange an additional agreement with the sub-contractor for such work.

2. STANDARD (STEP-BY-STEP) PROCEDURE OF ROLLER GARAGE DOORS MOUNTING


1. On arrival to the mounting location, unpack the product and check the package contents. Every kit must include: assembled shutter box—1 piece; roller doors' curtain—1 piece; guide rails—2 pcs., components—1 kit.
2. Check the quality of the opening framing treatment.
3. Mark and drill $\varnothing 8$ mm holes in the guide rails through two walls. The lower and the upper holes must be made at the distance of 100...150 mm from the rail edges. Other holes must be placed evenly along the length of the guide rail with 450...500 mm step (*fig. 2.1, 2.2*)—front mounting, (*fig. 2.3, 2.4*)—built-in mounting.

 **NOTE:** if the roller garage doors are mounted on metal structures, the diameter of holes drilled in the guide rails is chosen depending on the tapping screws or bolts size.

4. For the front mounting, drill the holes on the front face of the guide rail for $\varnothing 11.8$ mm plugs (*fig. 2.5*). For the built-in mounting, drill the $\varnothing 11.8$ mm hole in the internal guide rail's wall (*fig. 2.6*).
5. Mark and drill jointly $\varnothing 4.2$ mm holes in front raised edges of the end caps and shutter box cover (two holes from each side of shutter box) for further installation of rivets (*fig. 2.7*).
6. Mark and drill jointly $\varnothing 8$ mm holes in raised edges of the end caps and the back panel of shutter box to attach the shutter box to the opening framing:
 - for the front mounting—drill two holes in the back raised edge of each end cap (*fig. 2.8*). If there are mounting holes in the back panel, it's preferable to use them for fastening (*fig. 2.9*);
 - for the built-in mounting—drill two holes in the top raised edge of each end cap (*fig. 2.10*);
 - for the combined mounting—drill two holes in the back and top raised edges of each end cap.

 **NOTE:** if the roller garage doors are mounted on metal structures, the diameter of holes drilled in the end caps is chosen depending on the tapping screws or bolts size.


7. Mark and drill jointly a hole of required size in the back raised edge of cap and in the shutter box to draw motor elements (*fig. 2.11*).

 **NOTE:** this operation is performed for the outside mounting to draw a motor cable, cardan or cord through the wall, in case the hole has not been made during the assembly of roller doors' shutter box.

8. Cut a raised edge of the back panel of shutter box in places of guide rails adjunction (*fig. 2.12*).

 **NOTE:** this operation is performed for the front mounting.

9. If necessary to draw the electric motor cable in the guide rail cavity, insert the cable in the end cap leg (*fig. 2.13*). If there's no a raised beaded edge on the guide rails and guide rollers in the shutter box, install entry guides in the end caps (*fig. 2.14, 2.15*).


 **NOTE:** mounting of quick-detachable entry guides can be carried out after the frame assembly.

10. Assemble the frame of roller garage doors (shutter box assembled with end caps and guide rails) (*fig. 2.16*).

11. Install the frame of roller garage doors on the mounting site:

- for the front mounting—adjoin the frame to the opening framing (*fig. 2.17*);
- for the built-in and combined mounting—install the frame in the opening (*fig. 2.18*);
- the guide rails must be mounted strictly vertically, the shutter box—horizontally, the hole structure must be mounted symmetrically to the opening (*fig. 2.19*).

12. Mark the hole position in the wall to draw motor elements (*fig. 2.20, 2.21*).


 **NOTE:** this operation is performed for the outside mounting.

13. Remove the frame of roller garage doors from the mounting site (*fig. 2.22, 2.23*).


14. Drill a hole in the wall to draw control elements (*fig. 2.24*):
 - $\varnothing 12$ mm hole—to draw the electric motor cable;
 - $\varnothing 14$ mm hole—to draw the cardan, cord. Drill the $\varnothing 20$ mm hole to the required depth for the cardan plain spigot.

 **NOTE:** these operations are performed for the outside mounting.

15. Install a safety spring or a tube in the cord outlet (*fig. 2.25*).
16. If roller garage doors have the lower framing, make grooves in the guide rails to install locking elements of locking devices (*fig. 2.26–2.28*). In other cases, grooves are made locally after the mounting of roller garage doors' curtain.


 **NOTE:** this operation is carried out in roller garage doors with the cord motor or the assist and push-up spring to prevent unauthorized lifting of the curtain.

17. Install the frame of roller garage doors on the mounting site; before that, remove the protective film from the back panel of shutter box (*fig. 2.29–2.31*).
18. Drill holes to install $\varnothing 8$ mm dowels in the opening framing according to the ready-made holes in guide rails and in the shutter box. To avoid damaging elements of roller garage doors with a drill chuck, extended drills or concrete bores must be used (*fig. 2.32, 2.33*). If the roller garage doors are mounted on metal structures, drill the holes of required diameter for tapping screws or bolts.
19. Attach the frame of the roller garage doors with fasteners; use the building level to control periodically its trueness (*fig. 2.31, 2.34*).
20. Connect the motor cable to switch terminals in accordance with the motor mounting instruction (the motor manufacturer's manual. If necessary, the electric motor cable can be extended by soldering cable cores and extension cable. Soldering points must be electrically isolated in a reliable manner.
21. For the outside mounting the electric motor cable must be inserted into the hole in the wall. Insert the cord into protecting elements, pass it through the wall and preliminary fasten.
 - mark and drill $\varnothing 6$ mm holes for dowels to attach a clamp for the crank rod;
 - mark and drill $\varnothing 8$ mm holes for dowels to attach the cord coiler, crank rod cardan, cord guide rail;
 - mark and drill $\varnothing 6$ mm holes for dowels to attach the electrical switch, automatic control unit;
 - mount and fasten the motor controls (*fig. 2.35–2.50*).


 **NOTE:** if the roller garage doors are mounted on metal structures, drill the holes of required diameter for tapping screws or bolts.

For inside mounting:

- mark and drill $\varnothing 8$ mm holes for dowels to attach the cord coiler;
- mark and drill $\varnothing 6$ mm holes for dowels to attach the electrical switch, automatic control unit, clamp for the crank rod;
- mount and fasten the motor controls.

 **NOTE:** cord guide rail, crank rod cardan must be installed in advance, during the assembly of roller garage doors' shutter box.


22. For the built-in mounting of roller garage doors the controls must be attached to the guide rail by rivets or tapping screws.
23. Mount the curtain in grooves of guide rails. Put the curtain under the motor tube from back panel's side. To avoid damaging the curtain coating, it's necessary to wrap the motor tube in the soft gasket material (*fig. 2.51, 2.52*).
24. For mounting of roller garage doors with electric motor and curtain weight more than 80 kg, the next mounting plan to install the curtain in guide rails is recommended:
 - assemble the mounting cable to install the curtain of roller garage doors in guide rails;
 - connect the electric motor to electric network. These operations must be performed following the motor manufacturer's manual;
 - install the unpacked curtain of roller garage doors along the opening. Drill two holes in the top lath at the distance of 400...500 mm from the ends. The diameter of hole must be not less than the diameter of mounting cable (*fig. 2.53*);
 - mounting cable folded in half must be fixed by a loop to the central part of tube;
 - fix free ends of cable in holes of the top curtain lath drilled in advance (*fig. 2.54*).

 **NOTE:** tensile strength of the mounting cable must be not less than the triple curtain weight.


- mount the curtain in guide rails;
 - wind the curtain of roller garage doors on the tube using the electric motor and leave 600...700 mm of the curtain freely suspended (*fig. 2.55*);
 - put the free end of curtain with the end slat in guide rails. Put the curtain over the motor tube from the back panel of shutter box;
 - unwind the curtain in guide rails and demount the mounting cable (*fig. 2.56*).
25. Fix permanently the cord on motor pulley (*fig. 2.57*).
 26. Wind the retainer element on the pulley, rotating the tube. The winding length must ensure the entire curtain lifting.
 27. Assemble the curtain with retainer elements (retainer springs, retainer profile or security locks) (*fig. 2.58, 2.63, 2.68*).

28. Fix retainer elements to the motor tube:


- insert retainer springs in linear perforated holes of the tube (*fig. 2.61*);

 **NOTE:** installation of retainer springs and selection of laths' number are carried out in such a way that the curtain is thrown to the back panel of shutter box under their action. In case of unauthorized lifting, the curtain will rest against the upper part of the shutter box.

- fix the retainer profile to the motor tube with tapping screws (*fig. 2.64*);
- install security lock axis in indexing holes of security lock rings, bring firmly the rings. Fix the position of rings by screws. Don't drill the tube! Turn a tapping screw in the cross-hole of security lock ring till it touches the tube wall (*fig. 2.66, 2.67*).
- install wind locks of security lock of quick mounting in linear perforated holes of the tube. Fix the security lock position by fixing plate. Install protective plates (*fig. 2.69, 2.70*).

 **NOTE:** if the crank motor is used, retainer elements must be fixed after setting the maximum end position of the gear stopper when the curtain is moved down.

29. Install stoppers, which limit the height of curtain lifting, and previously drill through holes in the end slat. Holes are drilled at the distance of 50–100 mm from the guide rails (*fig. 2.73, 2.74*).

 **NOTE:** this operation isn't carried out for roller garage doors with electric motor without NHK.

30. If the roller garage doors are equipped with the assist and push-up spring, perform the following operations after mounting the curtain in the guide rails:

- install retainer springs (*fig. 2.58*);
- tighten previously the assist and push-up spring, rotating the motor tube in the spring twist-ing direction (clockwise, view from the right end cap). Number of tube revolutions according to the technical catalogue (*fig. 2.59*);
- fix the spring using a clamp (*fig. 2.60*);
- insert retainer springs in linear perforated holes of the tube (*fig. 2.61*);
- remove the clamp fixing the assist and push-up spring (*fig. 2.62*). Check the operability of the assist and push-up spring, holding the curtain by hand (*fig. 2.71*). The curtain must be completely rolled, the curtain running must be smooth. If necessary, adjust the tension of the assist and push-up spring;
- install stoppers, which limit the height of curtain lifting.

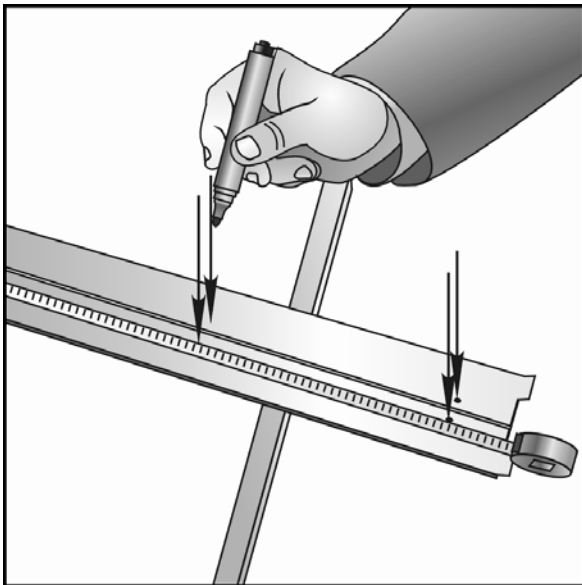


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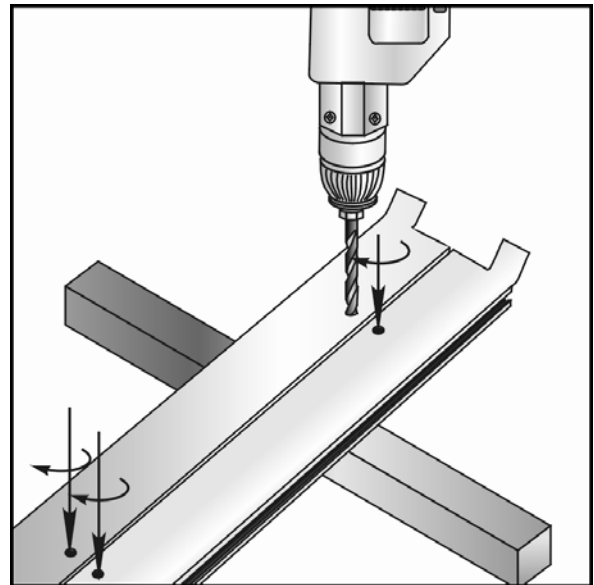


Fig. 2.2

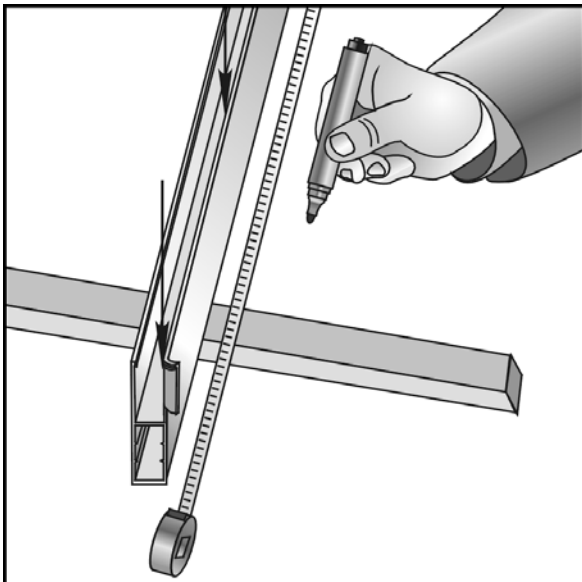


Fig. 2.3

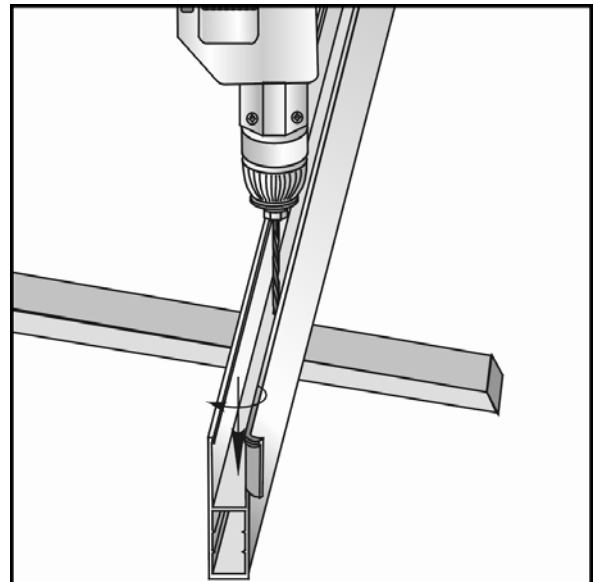


Fig. 2.4

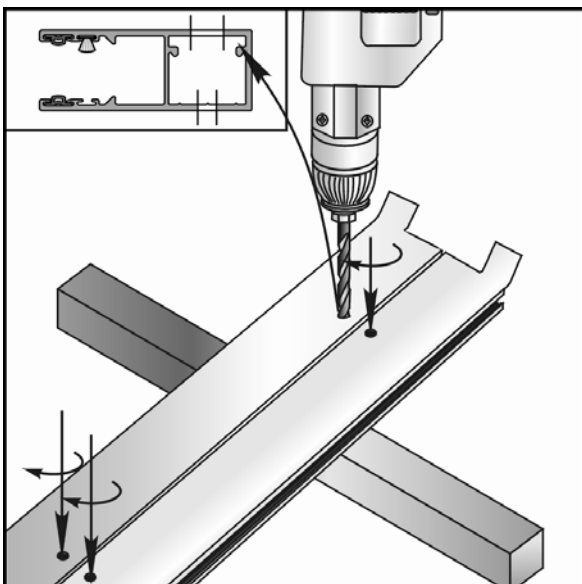


Fig. 2.5

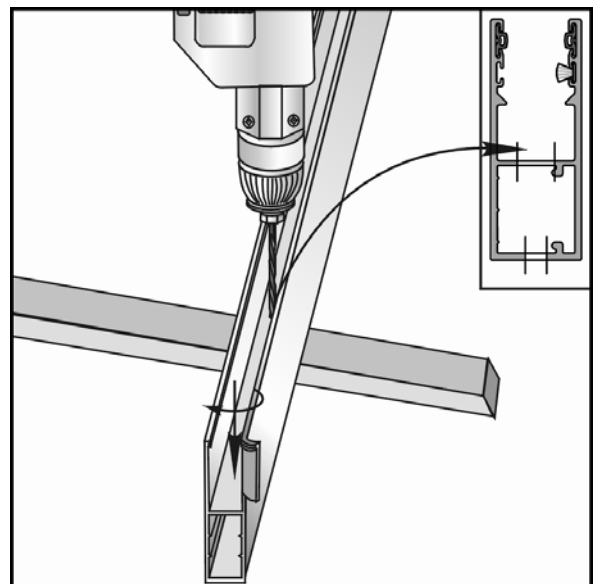


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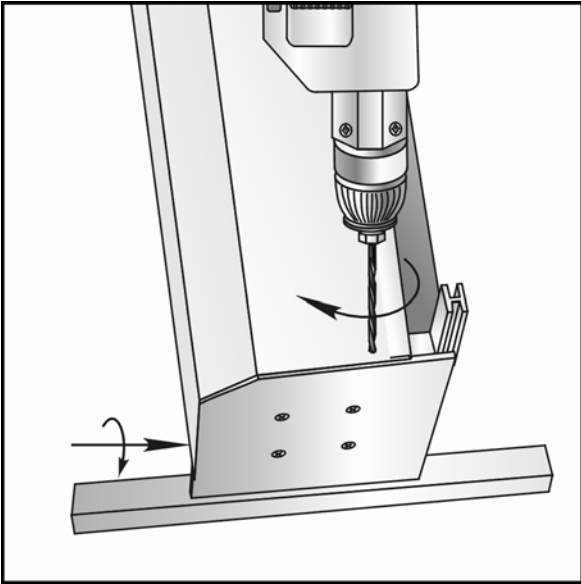


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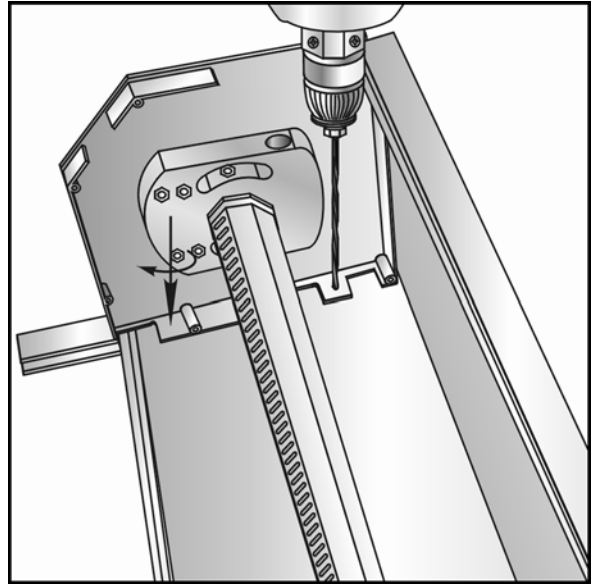


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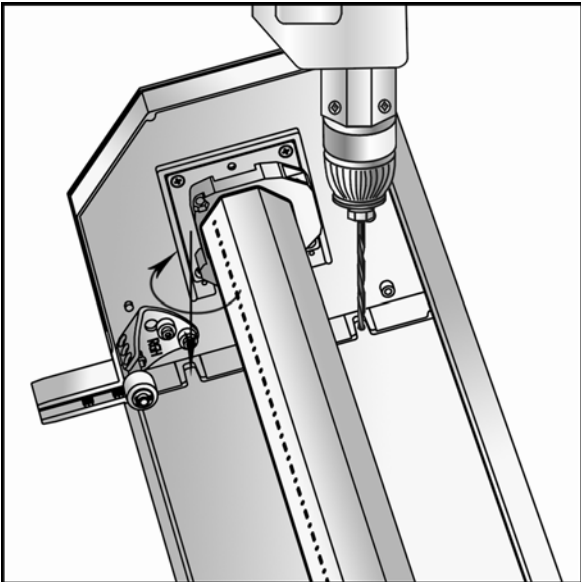


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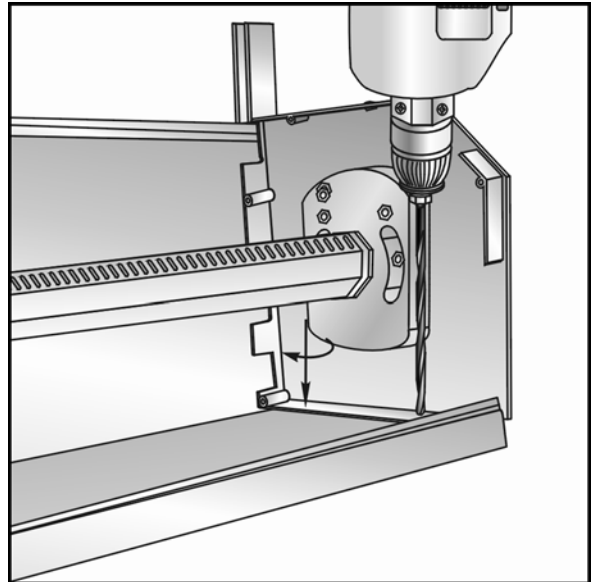


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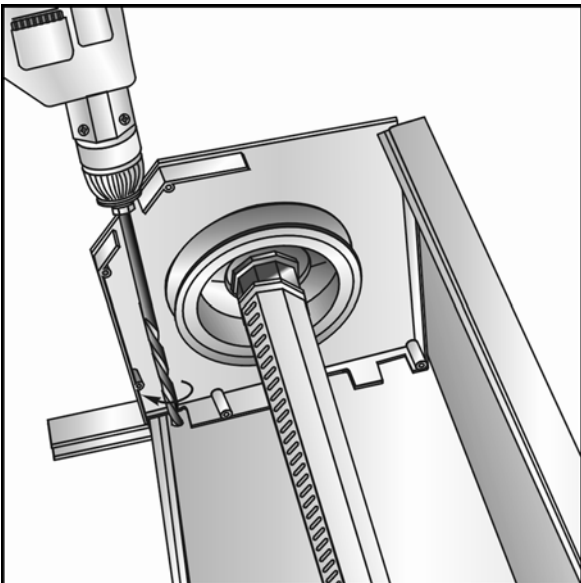


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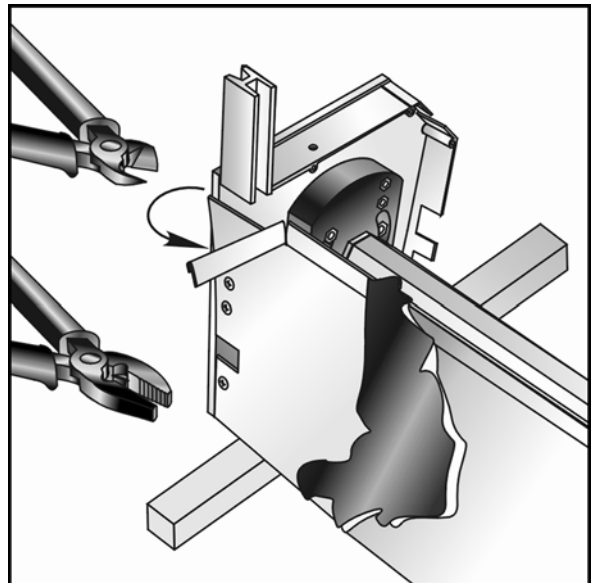


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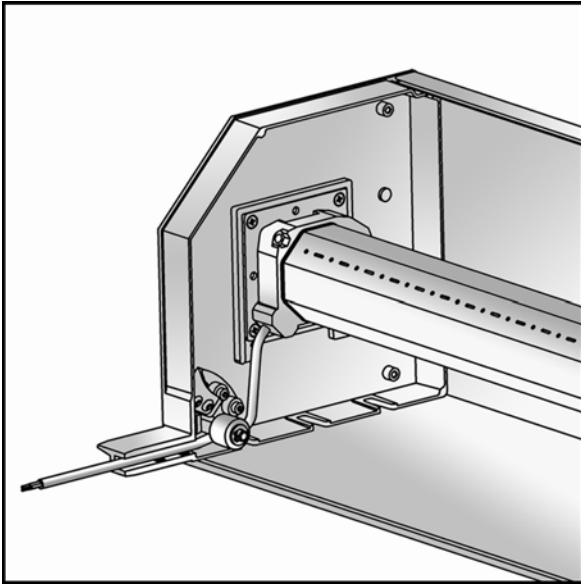


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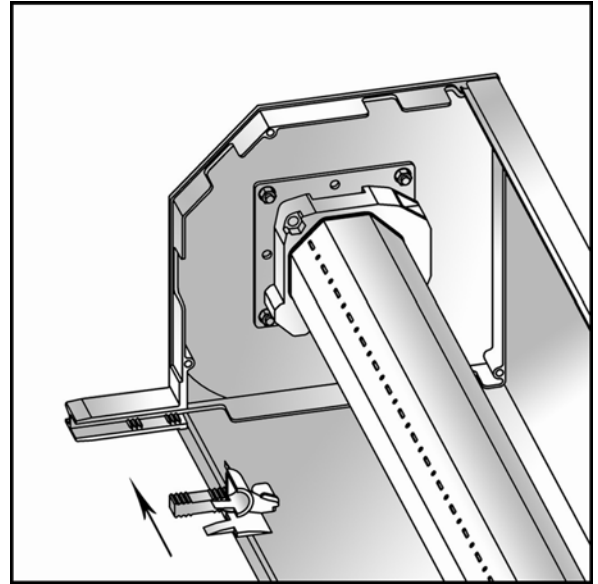


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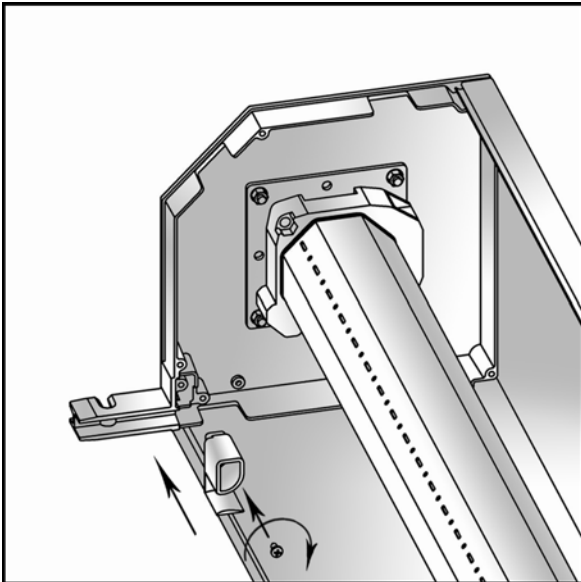


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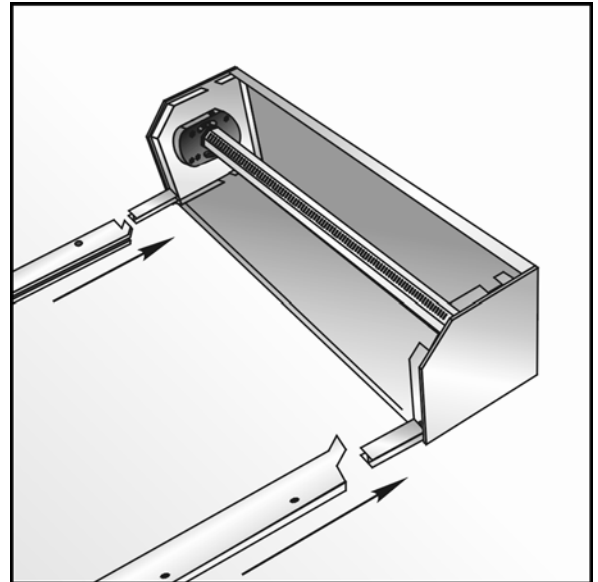


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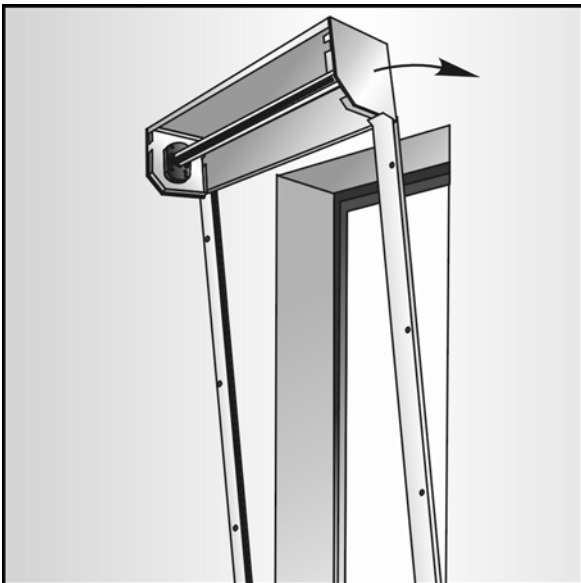


Fig. 2.17



Fig. 2.18

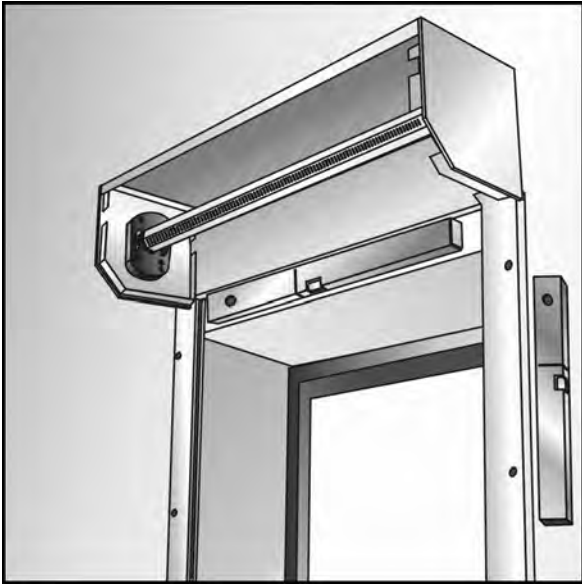


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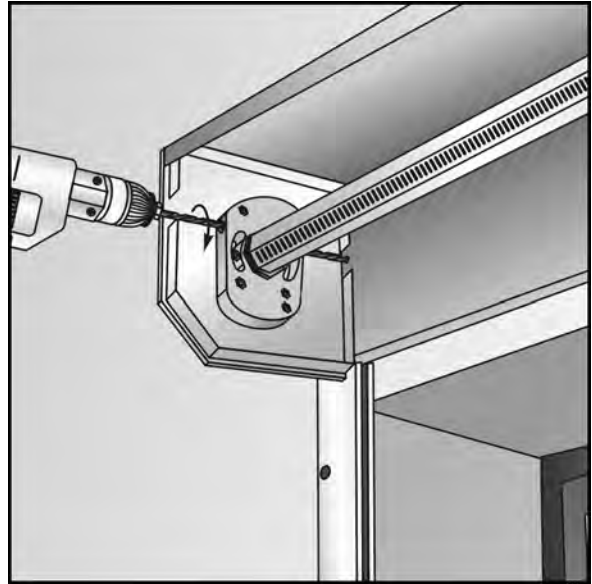


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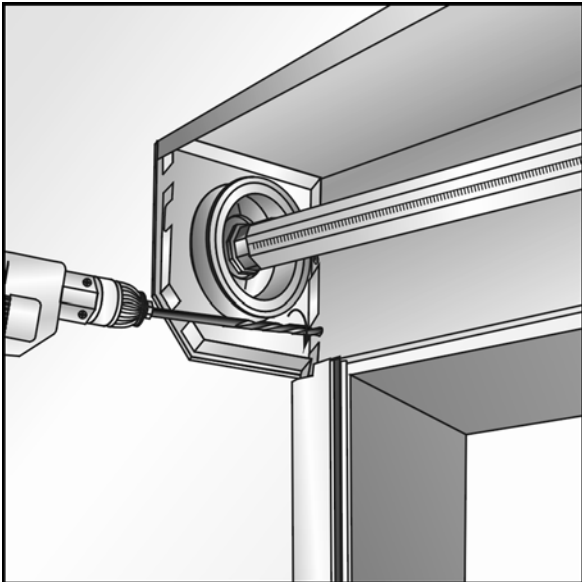


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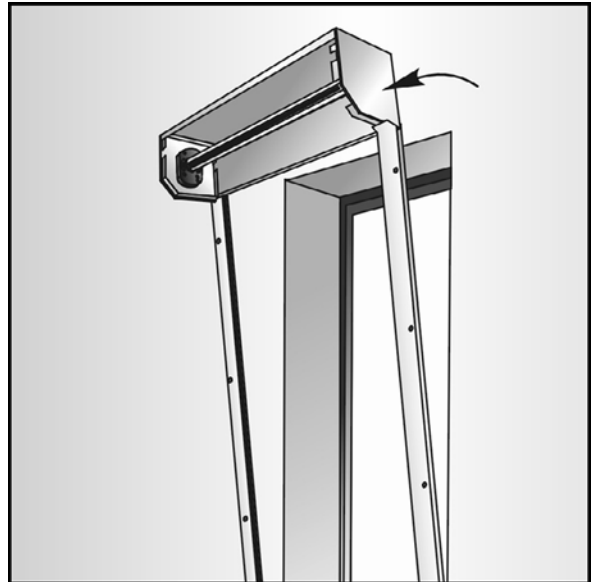


Fig. 2.22



Fig. 2.23

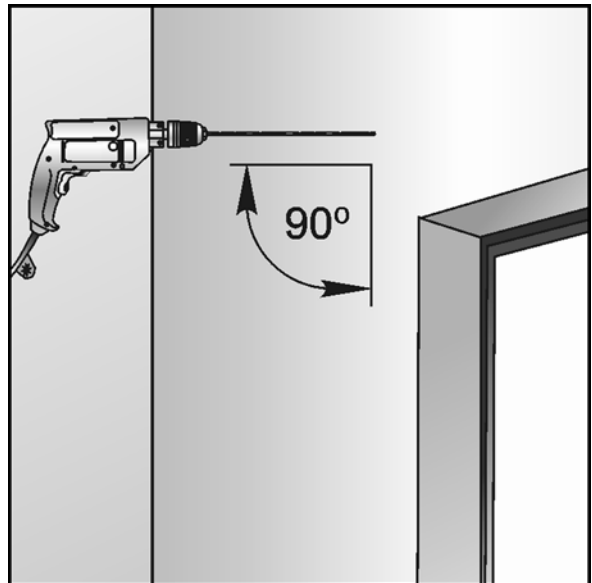


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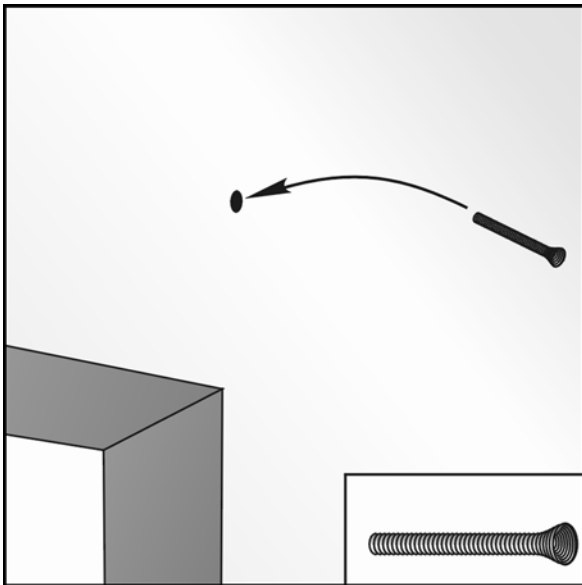


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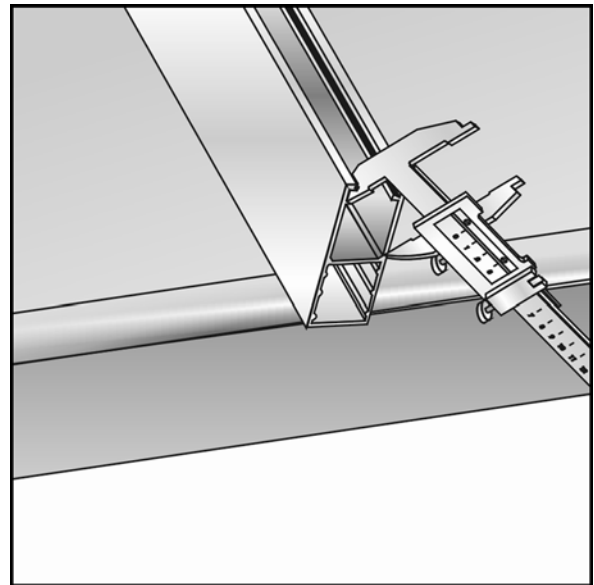


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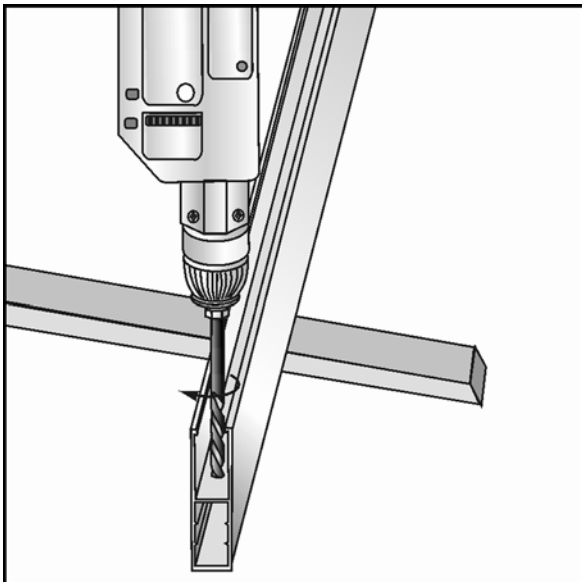


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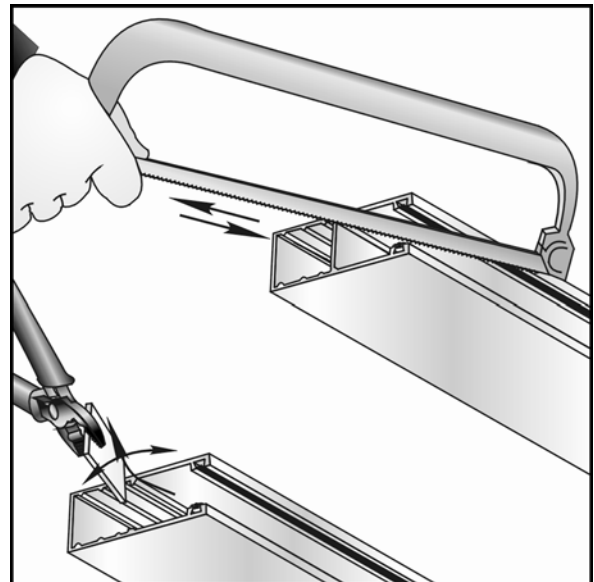


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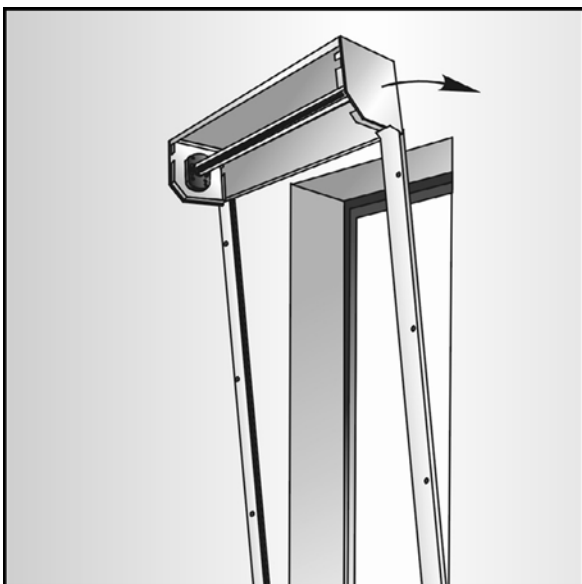


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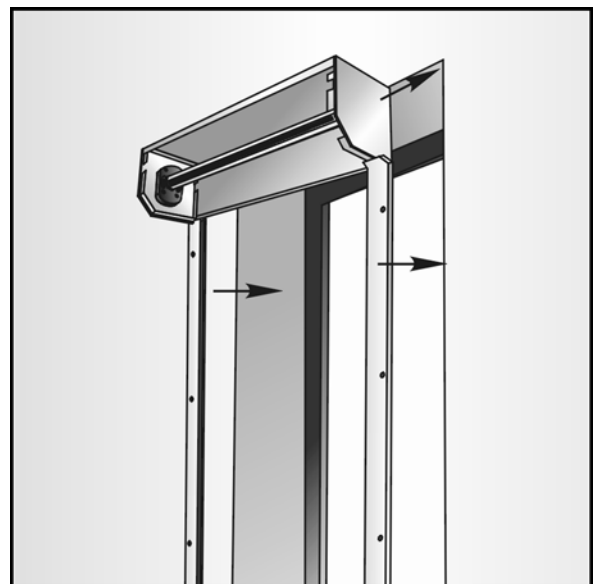


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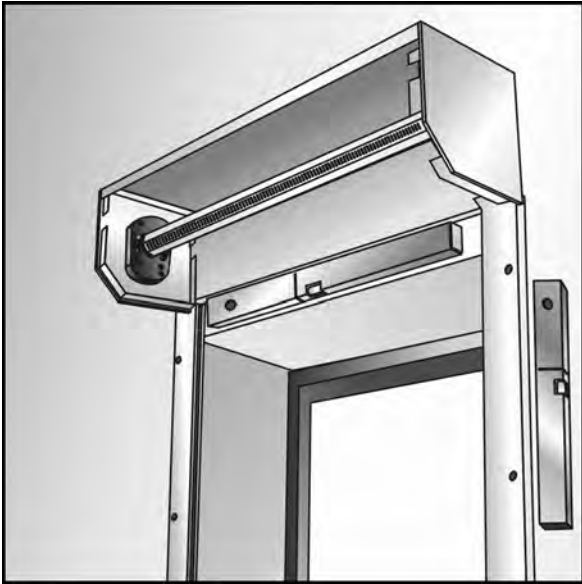


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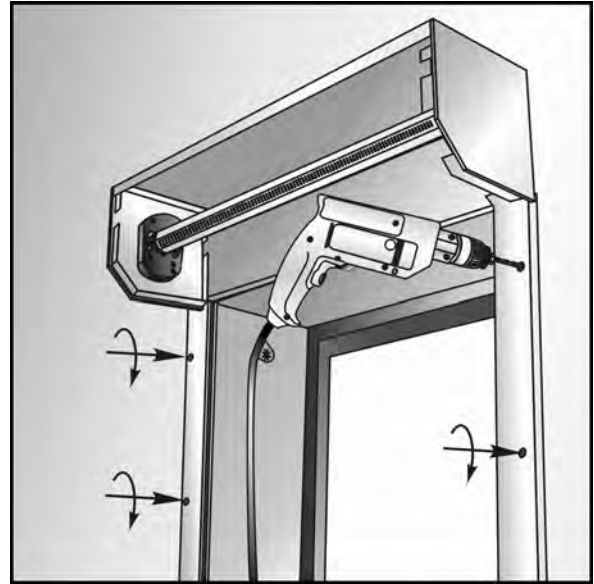


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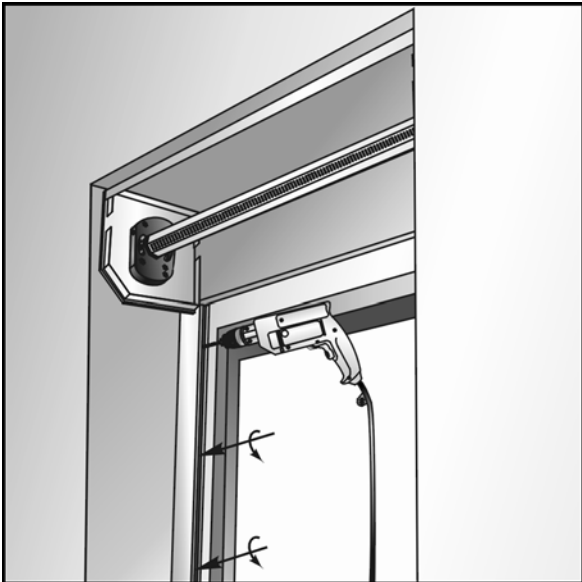


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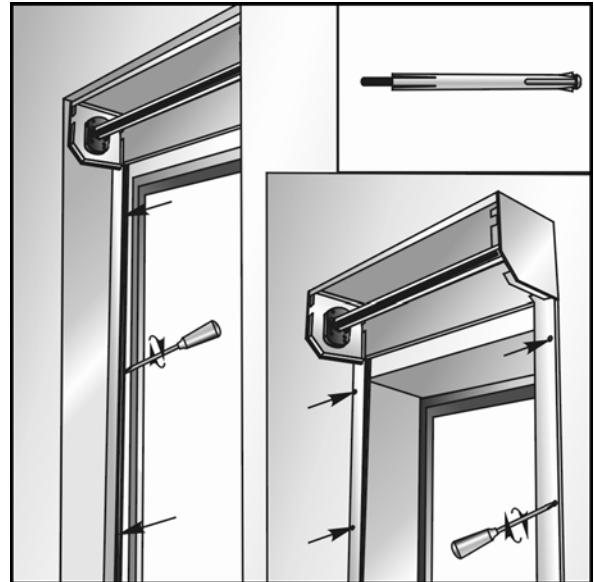


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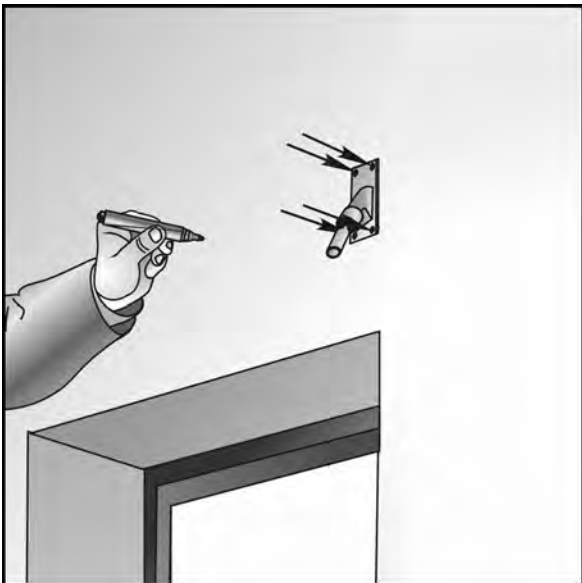


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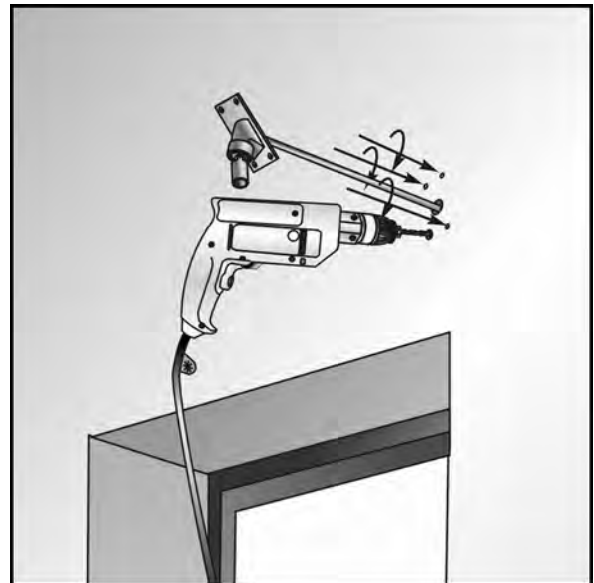


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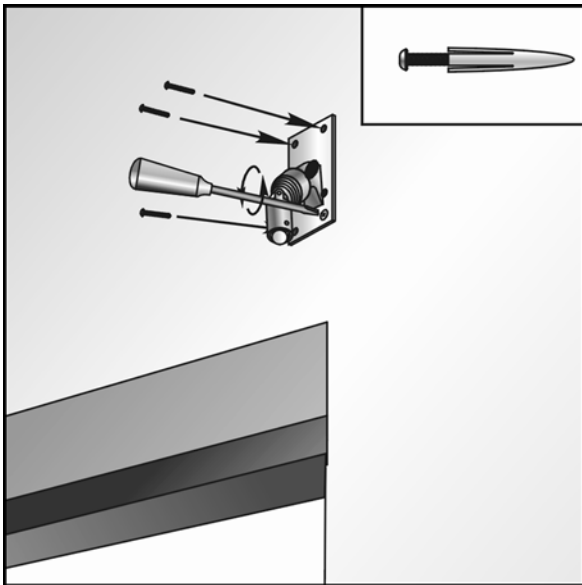


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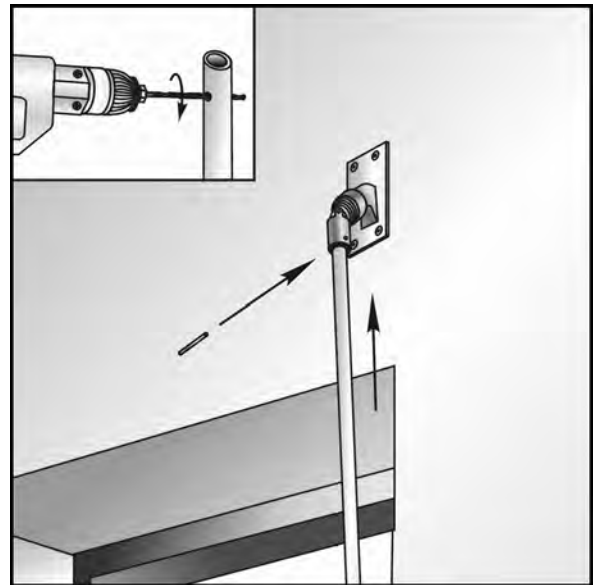


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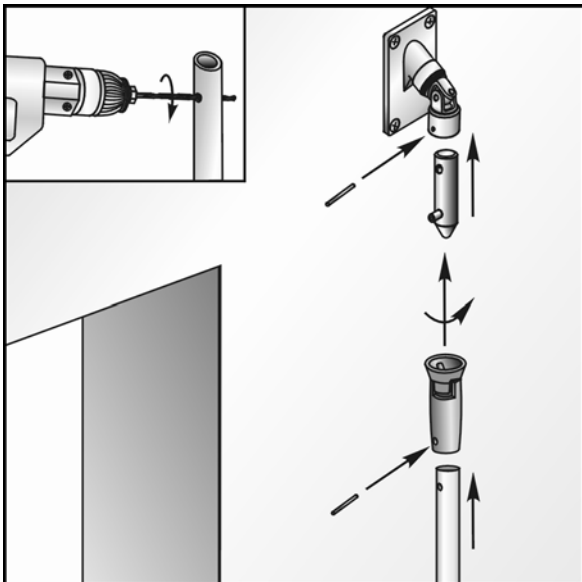


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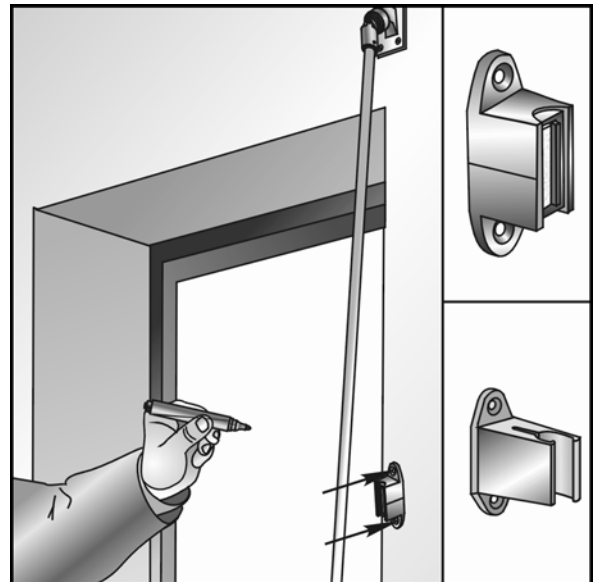


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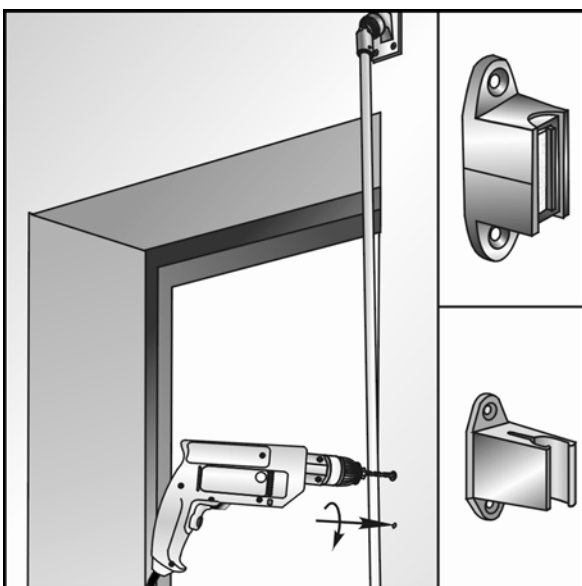


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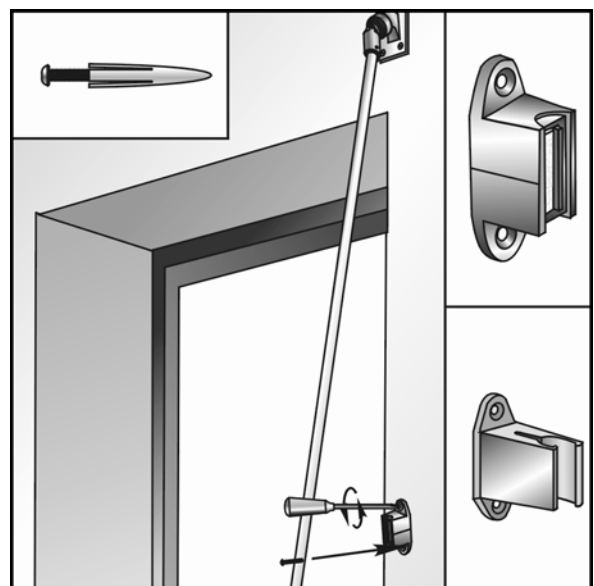


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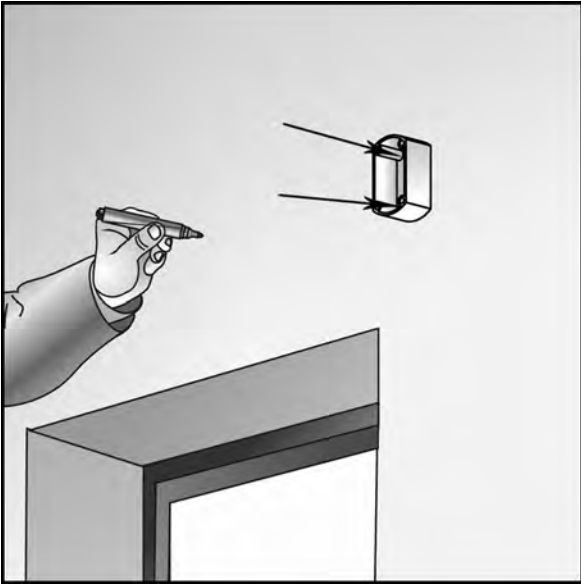


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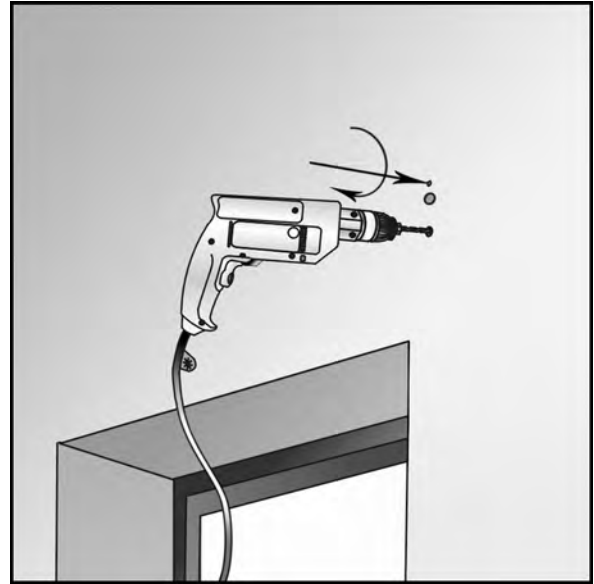


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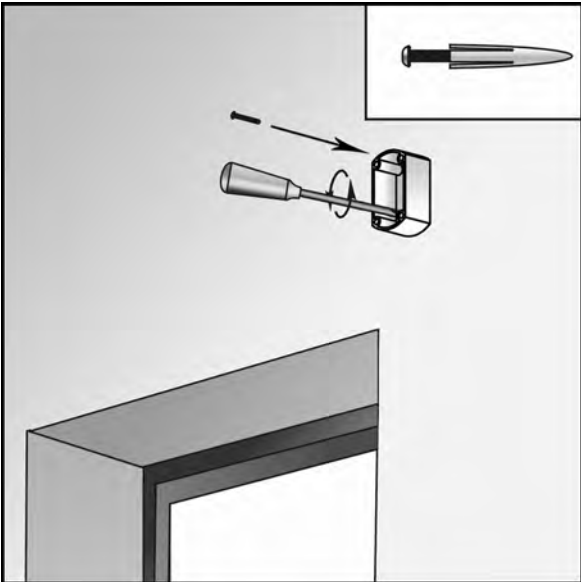


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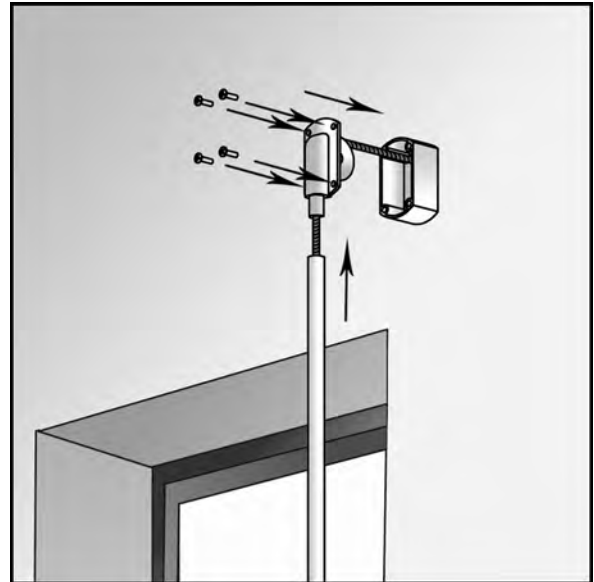


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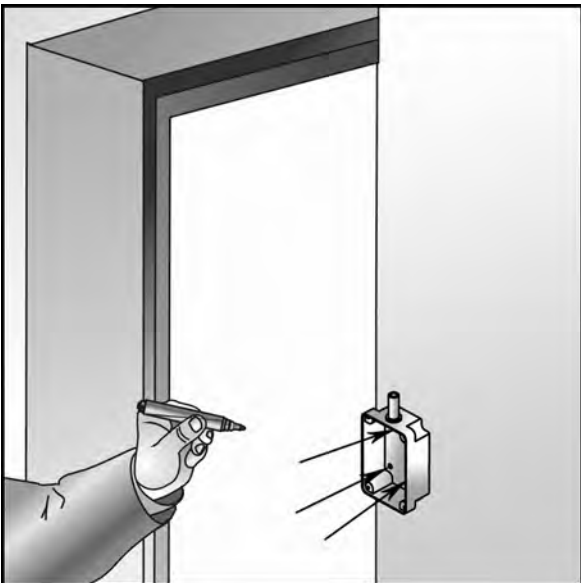


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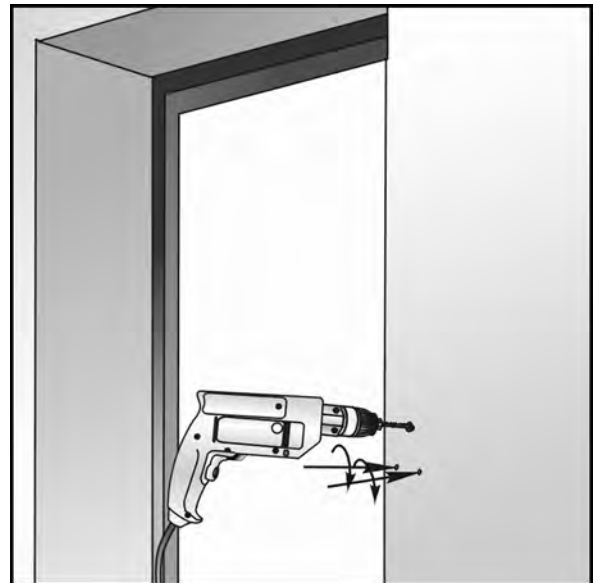


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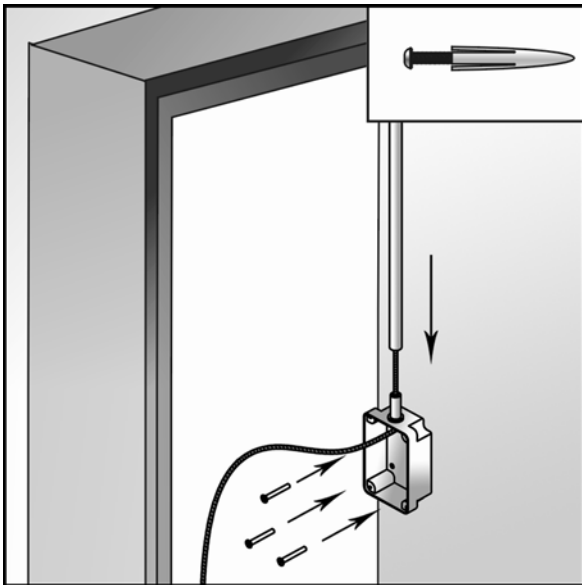


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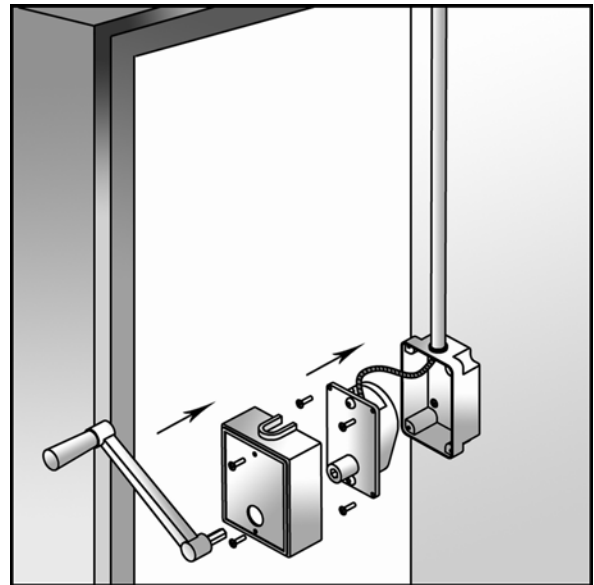


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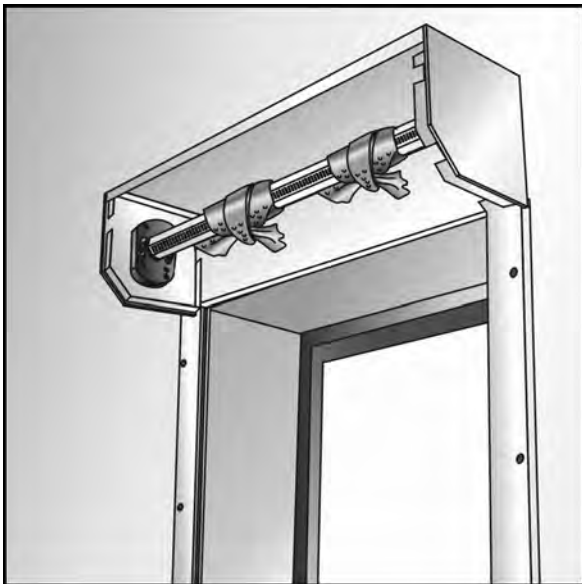


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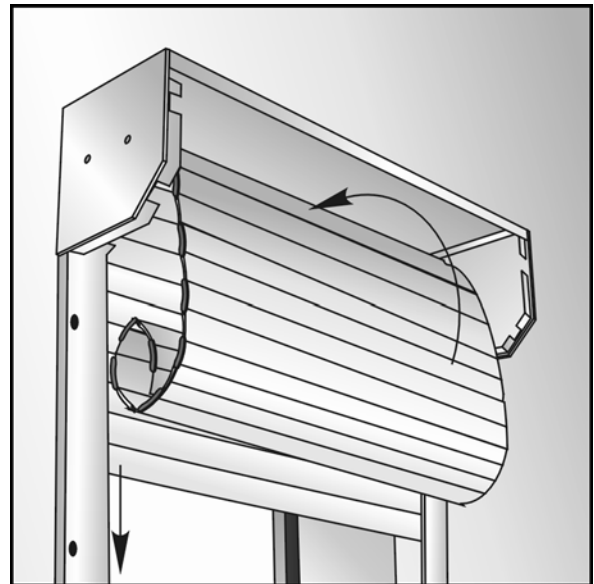


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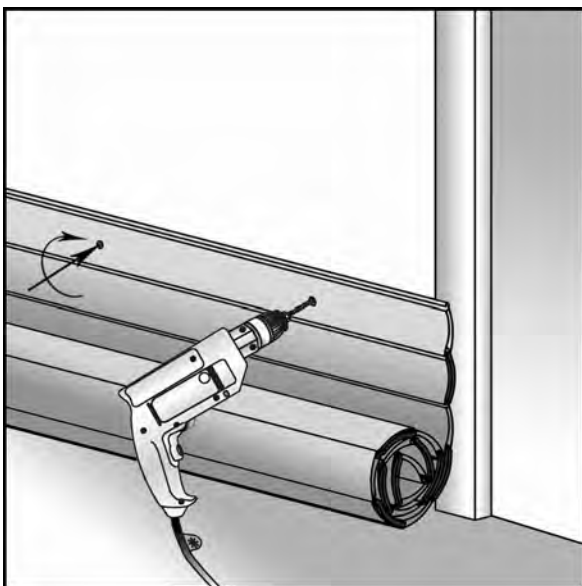


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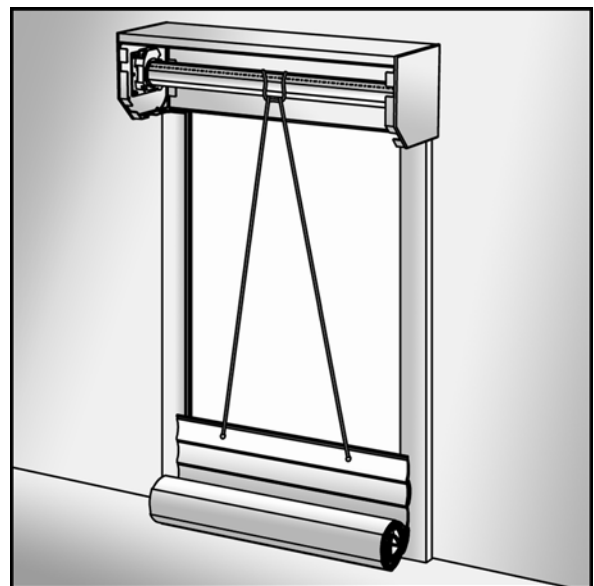


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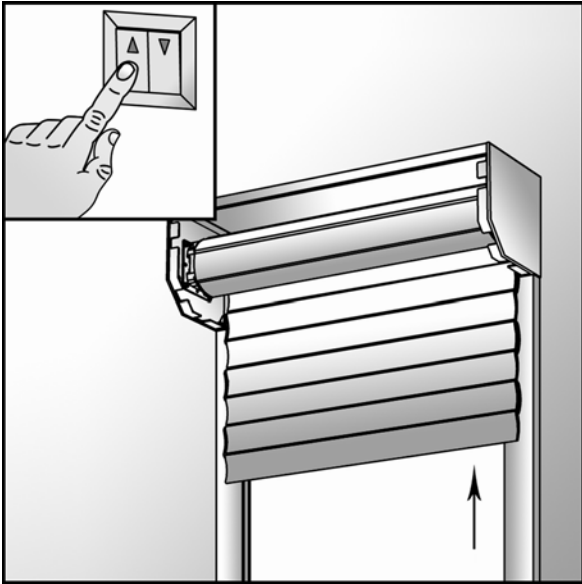


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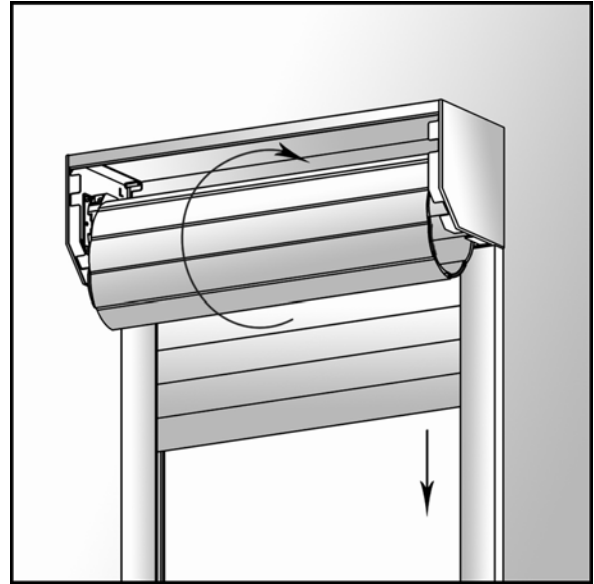


Fig. 2.56

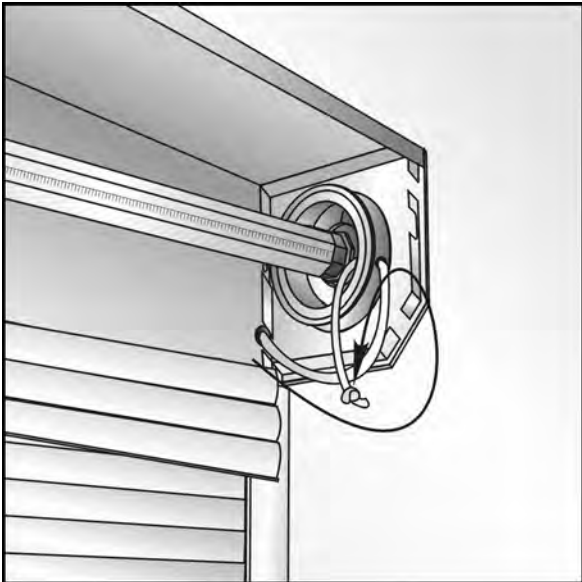


Fig. 2.57

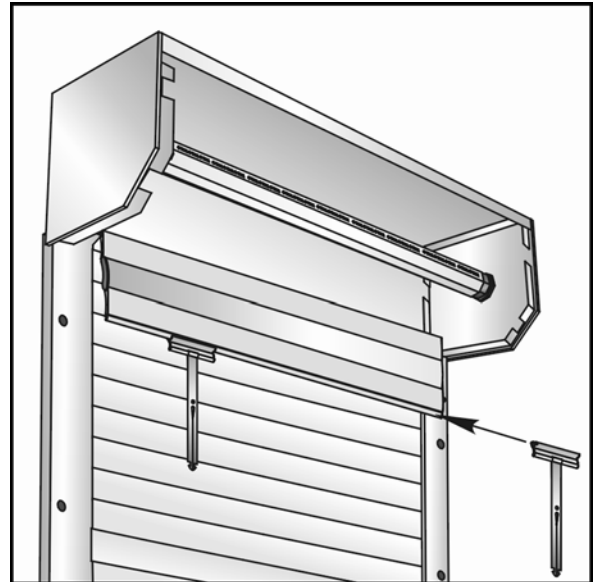


Fig. 2.58

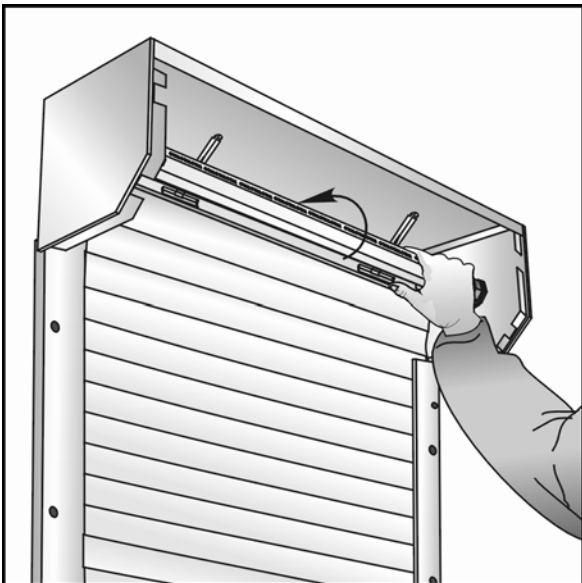


Fig. 2.59

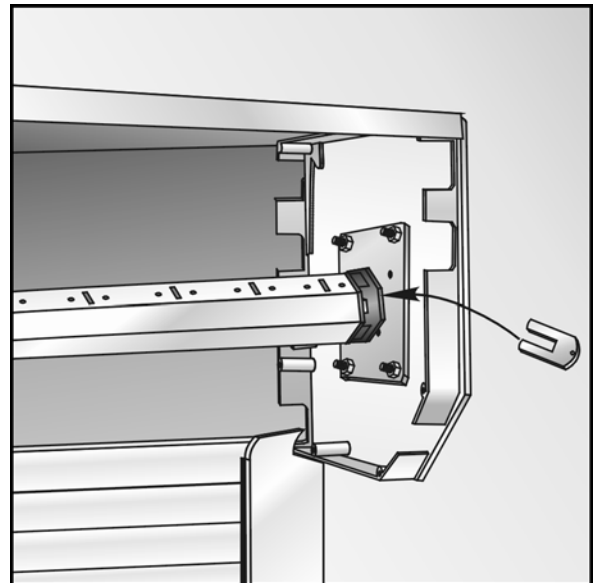


Fig. 2.60

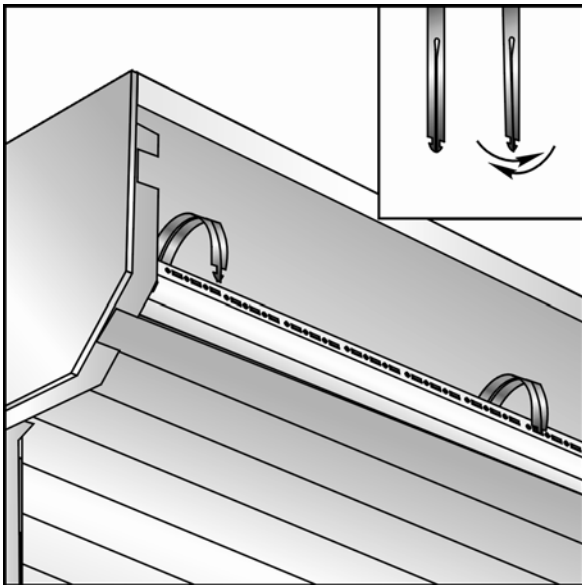


Fig. 2.61

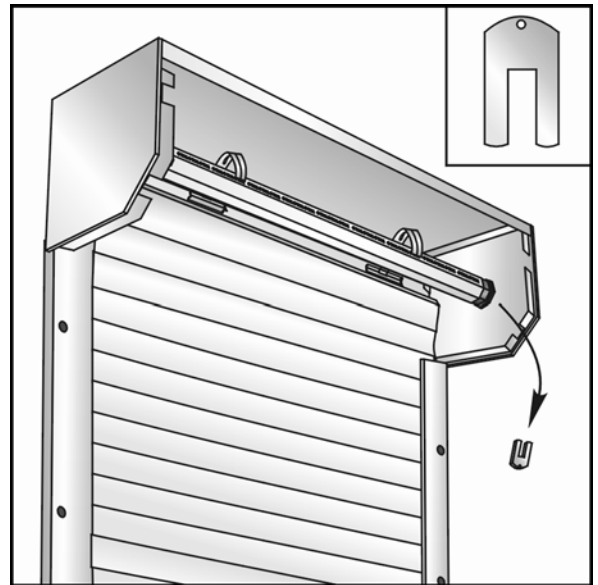


Fig. 2.62

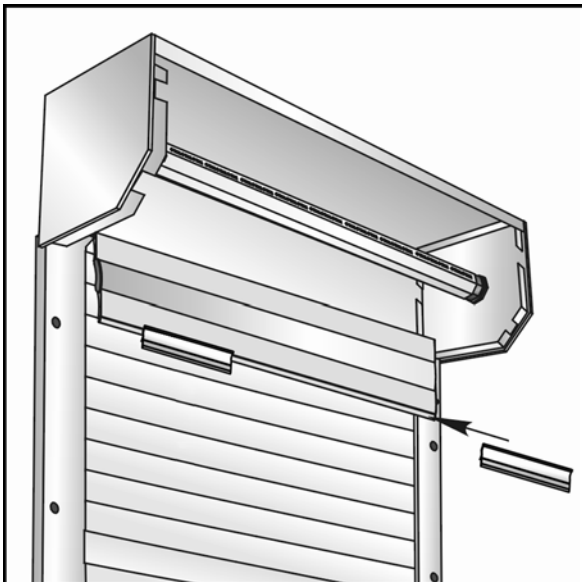


Fig. 2.63

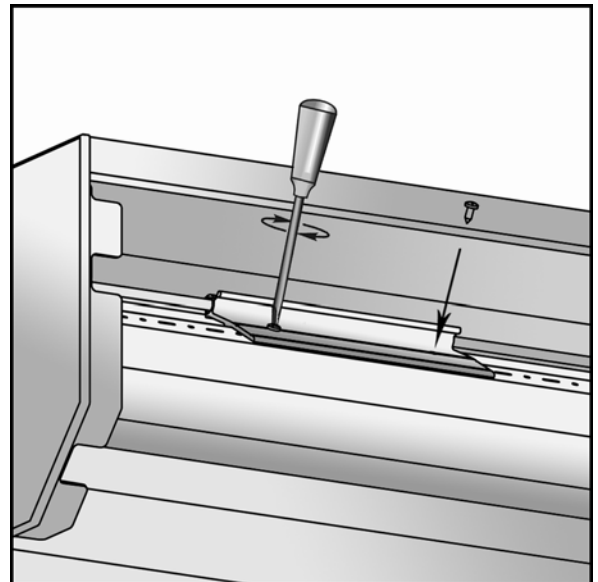


Fig. 2.64

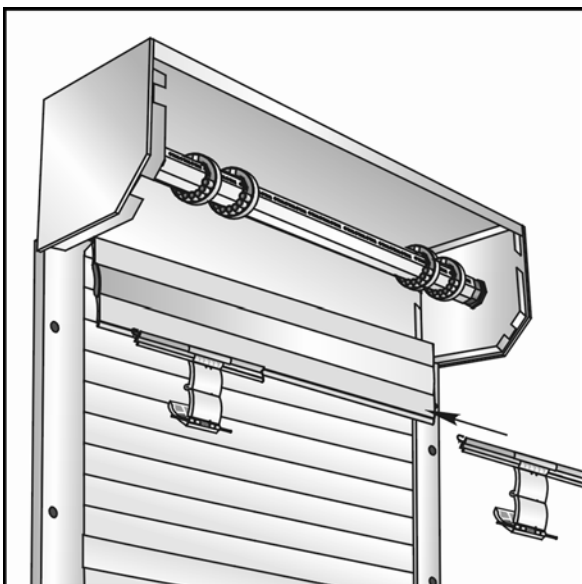


Fig. 2.65

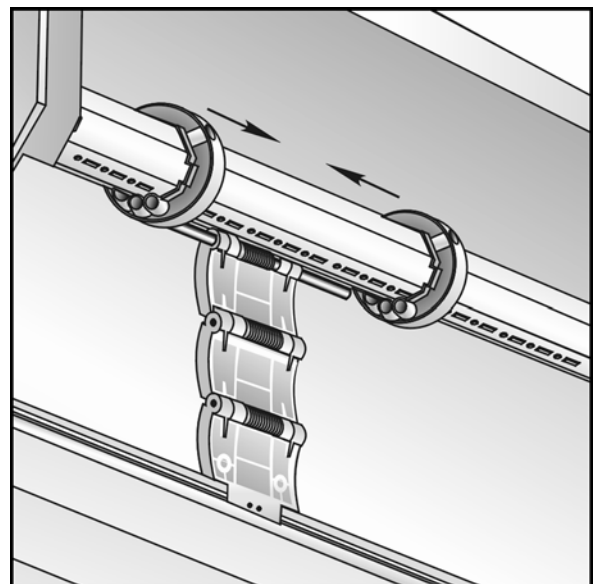


Fig. 2.66

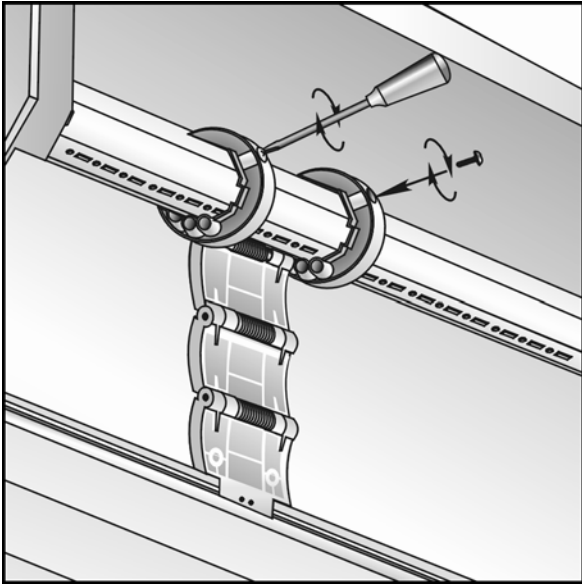


Fig. 2.67

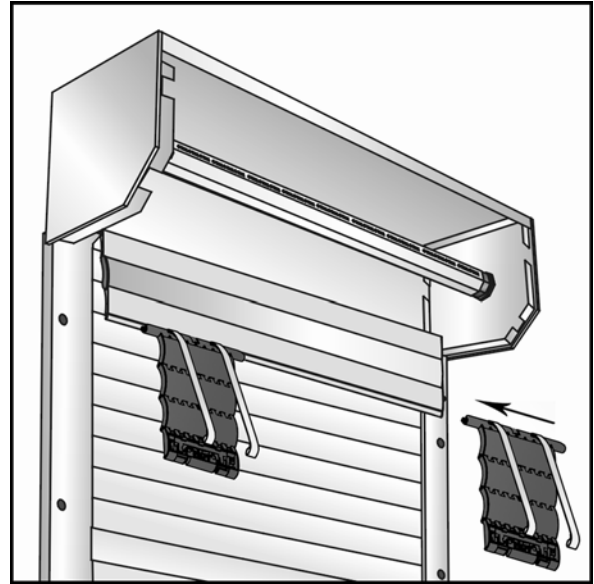


Fig. 2.68

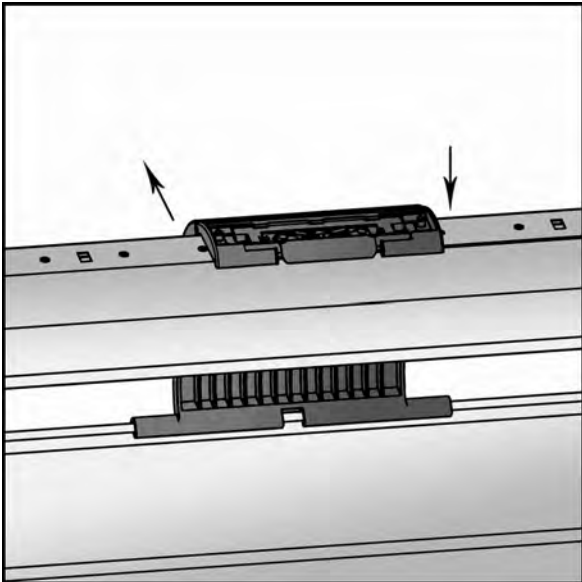


Fig. 2.69

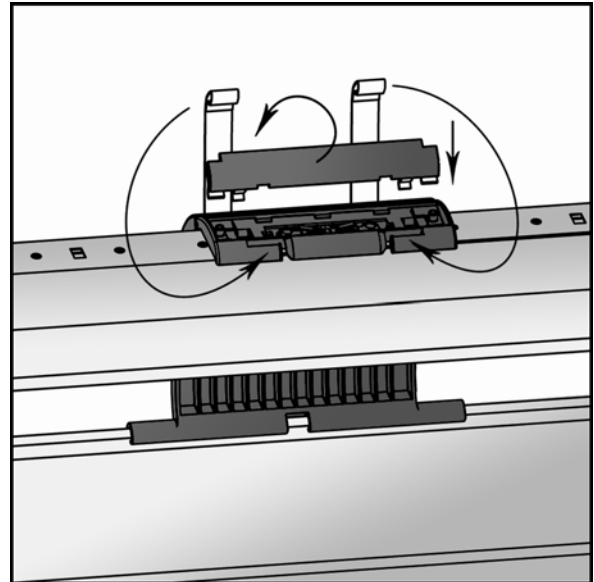


Fig. 2.70

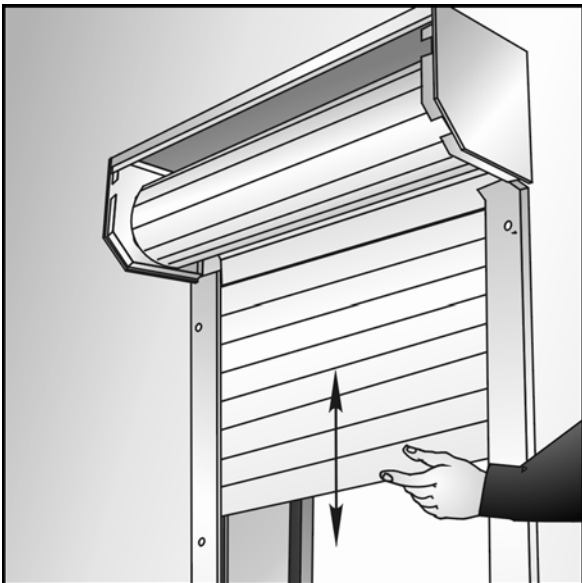


Fig. 2.71

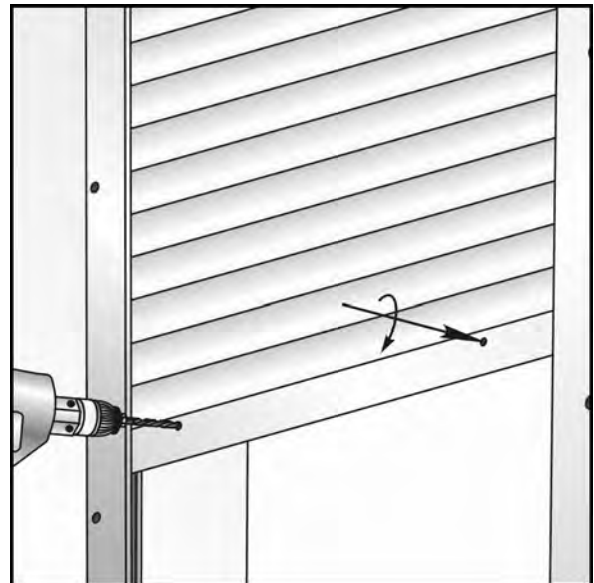


Fig. 2.72

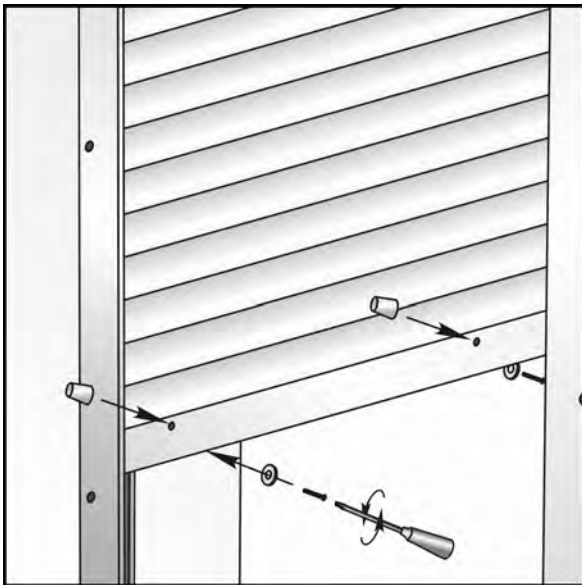


Fig. 2.73

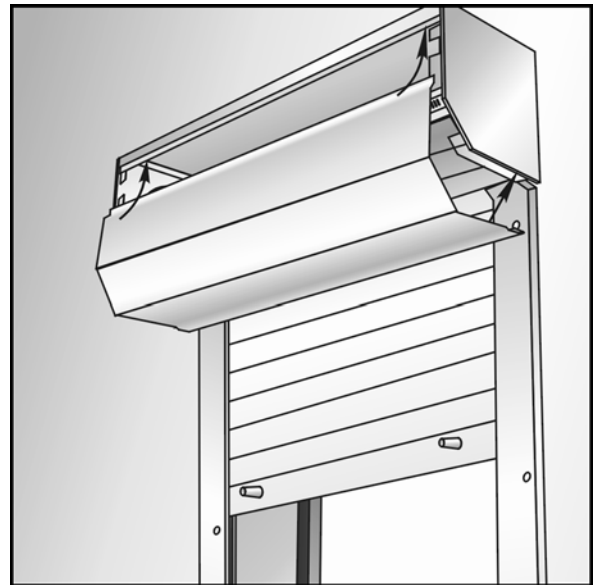


Fig. 2.74

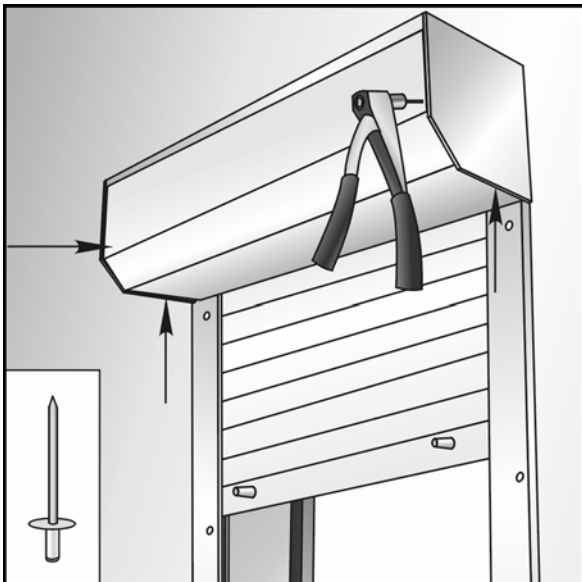


Fig. 2.75

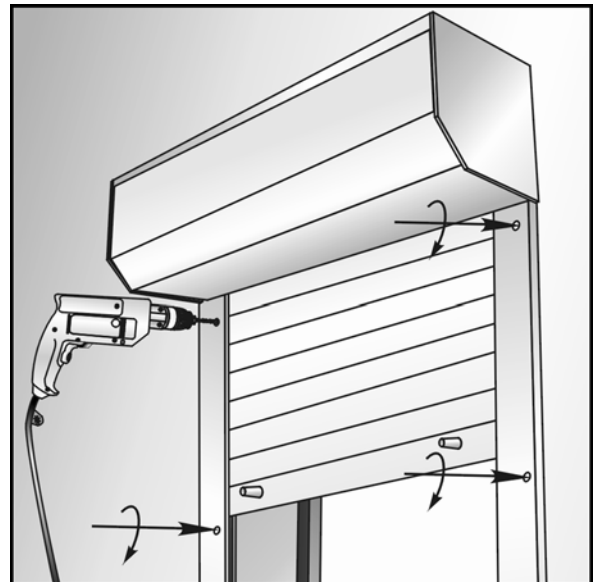


Fig. 2.76

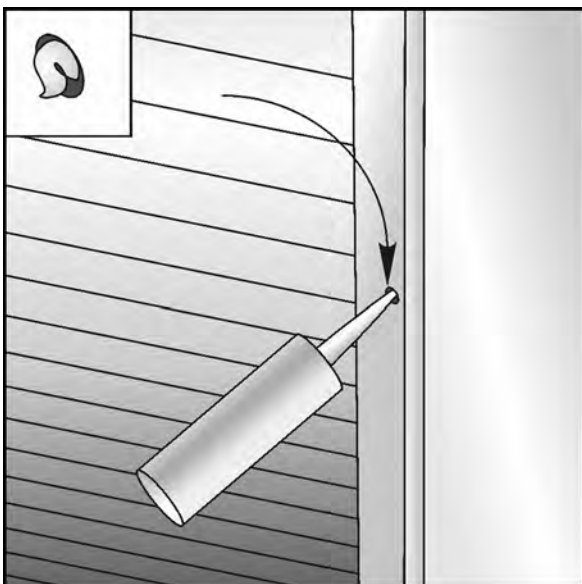


Fig. 2.77

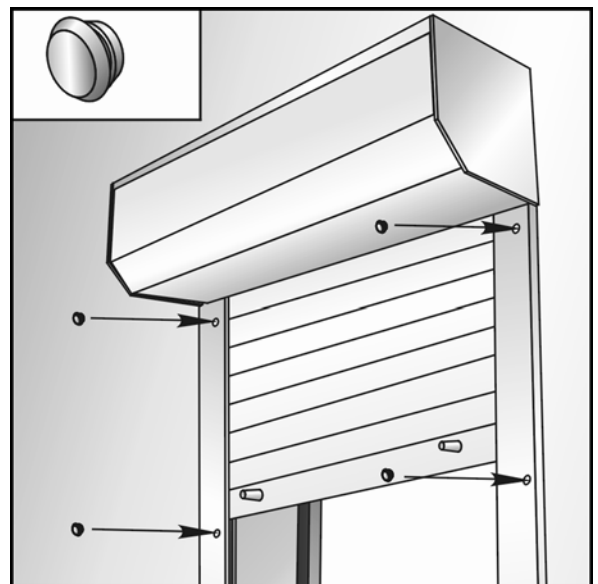


Fig. 2.78

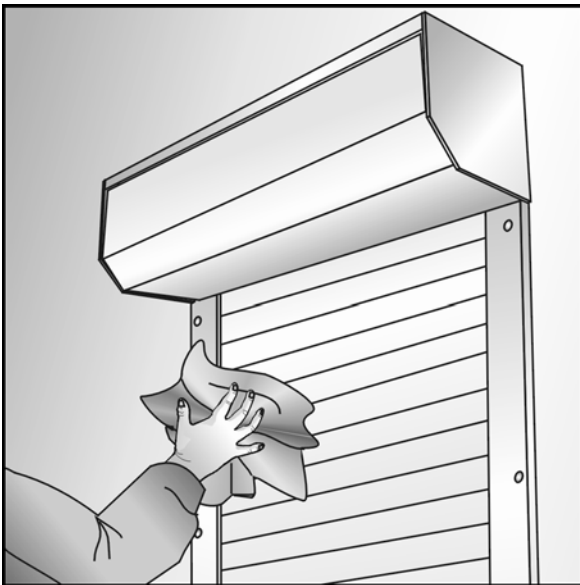


Fig. 2.79



Fig. 2.80

3. FEATURES OF MOVABLE CARRIAGE MOUNTING

3.1. ELECTRIC MOTOR CABLING

If you install the electric motor on movable carriages, it's necessary to do a loop of wire (reserve of wire to provide the mobility). The loop is fixed by clamp at the wire exit point (fig. 3.1).

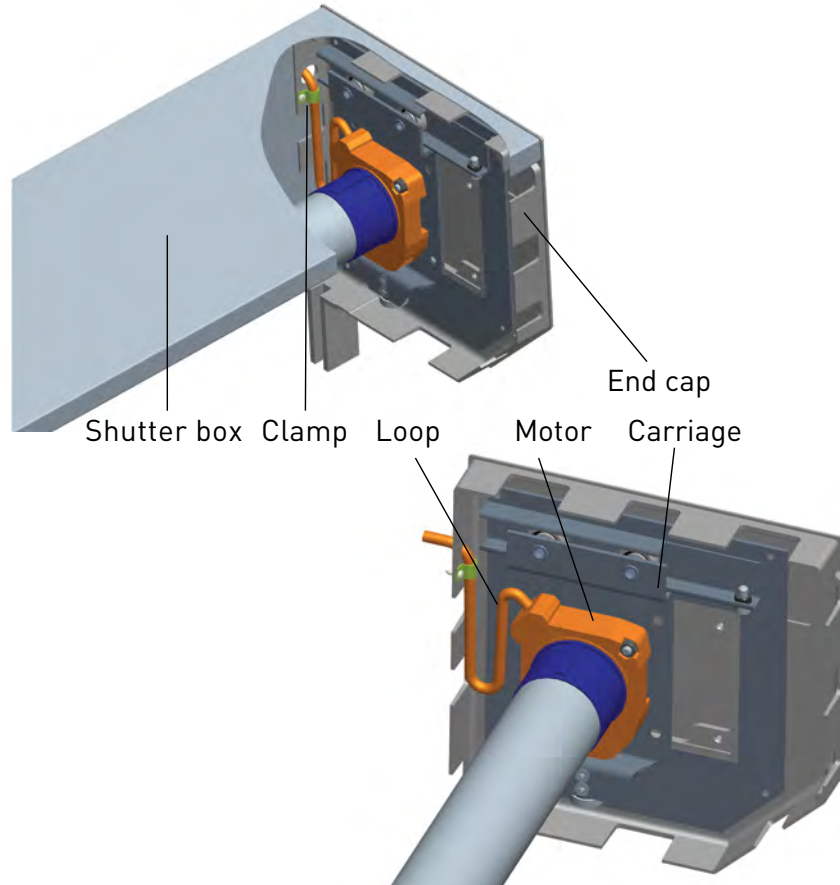


Fig. 3.1

In cases, when the wire is too long, it's advisable to use two clamps: one fixes the wire at the point of exit from the end cap, the other attaches the wire to a movable carriage (fig. 3.2).

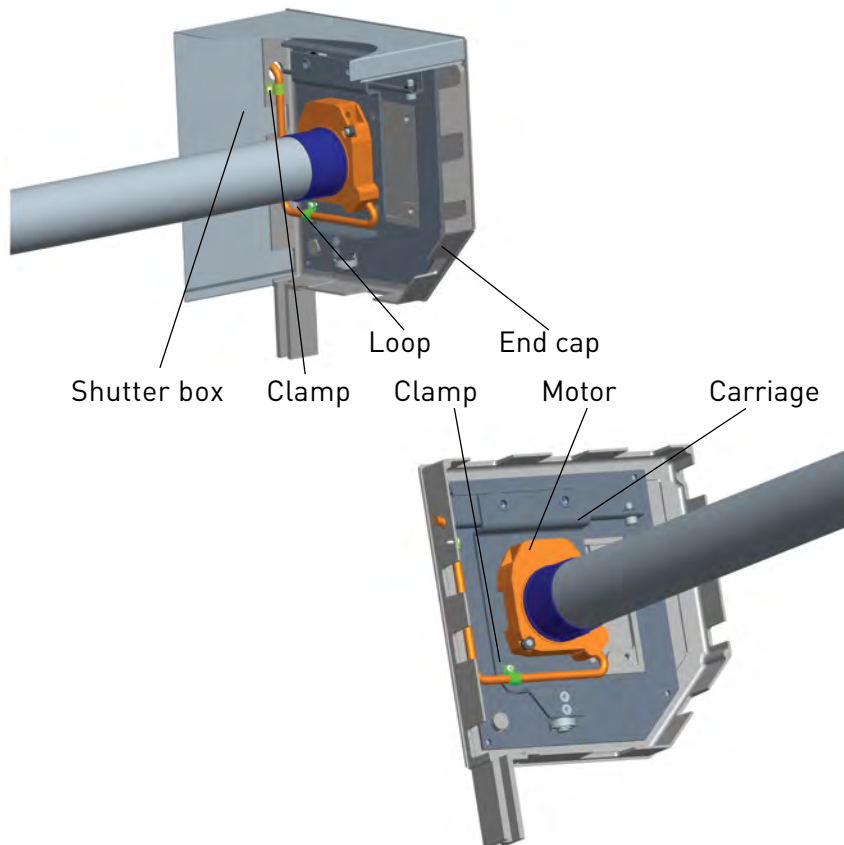


Fig. 3.2

Fastening of the clamp, fixing the wire to the movable part of carriage, is easier to carry out in advance, before the mounting on the site. Protruding end of the tapping screw, fixing this clamp, must be removed. Otherwise, it may prevent the free running of movable carriage in the guide rails.

3.2. MOUNTING OF SAFETY PLATES WHEN MOVABLE CARRIAGES ARE APPLIED

Safety plate is mounted and attached to the back panel of the end cap. It prevents the curtain friction against the shutter box panels (wall) (fig. 3.3).

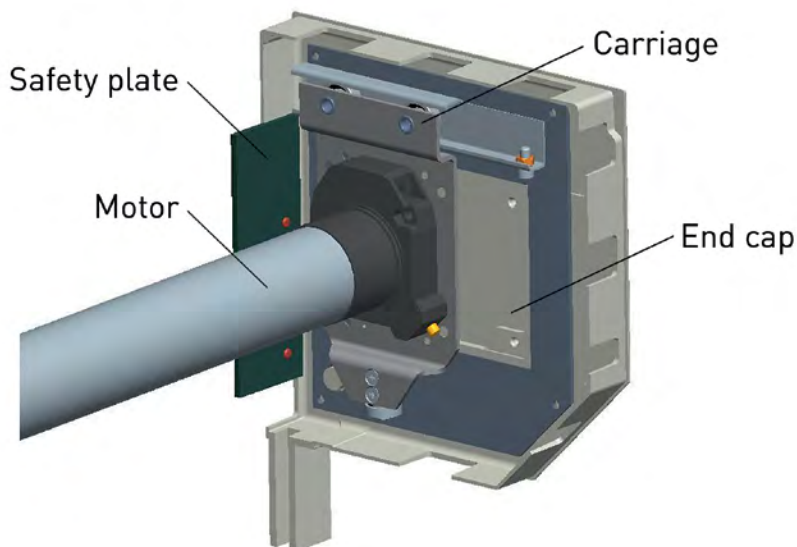


Fig. 3.3

Safety plates are mounted and attached to the back panels of the end caps, meeting the following requirements:

- safety plates, bundled with **RC205** and **RC250/S** movable carriages, are applied with **SF205** and **SF250/S** end caps. Safety plates, bundled with RC movable carriages, are applied with **SF250**, **SF300** end caps. Other application types are not allowed.
- lower edge of safety plate must not overlap the lower window on the back panel of the end cap (for **SF250**, **SF250/S**, **SF300** end caps) (fig. 3.4).
- lower edge of safety plate must not be placed on the boss on the back panel of **SF205** end cap (fig. 3.5).
- to ensure reliable fixture by rivets the safety plate must adjoin closely the back panel of the end cap with an overlap of at least 15 mm (fig. 3.6).

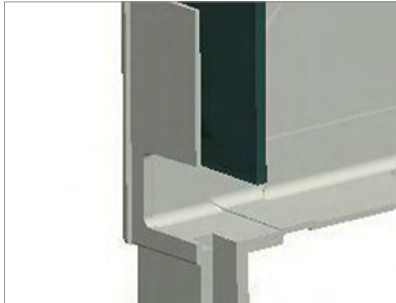


Fig. 3.4

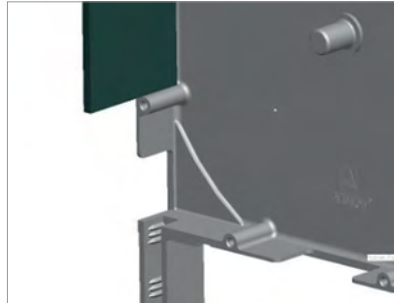


Fig. 3.5

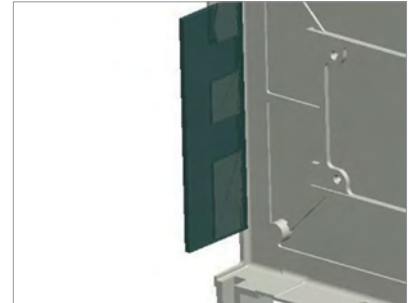


Fig. 3.6

Order of safety plate installation:

- holes with 4.2 mm diameter are drilled in the end cap and safety plate at the distance of at least 5 mm from the hole edge to the nearest edge. The interval between holes—not less than 80 mm (fig. 3.7);
- safety plate is attached to the end cap by two rivets with 4 mm diameter and 10 mm length (fig. 3.8, 3.9);
- further assembly of roller garage doors with mounted safety plates is carried out similarly to the standard assembly without these plates.



Fig. 3.7



Fig. 3.8

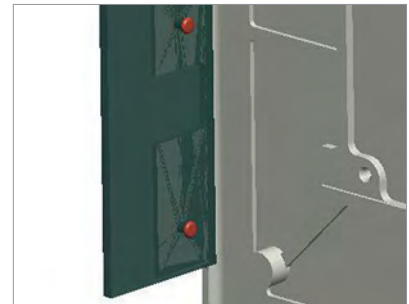


Fig. 3.9

4. MOUNTING OF SAFETY EDGE SYSTEM COMPONENTS FOR AG/77 ROLLER GARAGE DOORS

⚠ ATTENTION! Application of ESU/77 end slat is obligatory, if the safety edge system for AG/77 roller garage doors is used.

4.1. MOUNTING OF SAFETY EDGE SYSTEM

1. Cut the **IS15** insert with length $L=L1-40$ mm, where $L1$ —the length of the end slat, mm.
2. Install the **IS15** insert in the end slat groove. The sealing edge of the insert must be directed to the outside (fig. 4.1).
3. Install the signal transmitter on the end slat from the motor side, keeping the distance of 100–150 mm from the guide rail edge to the transmitter. Connectors for connecting cables must be directed to the curtain centre (fig. 6.1).

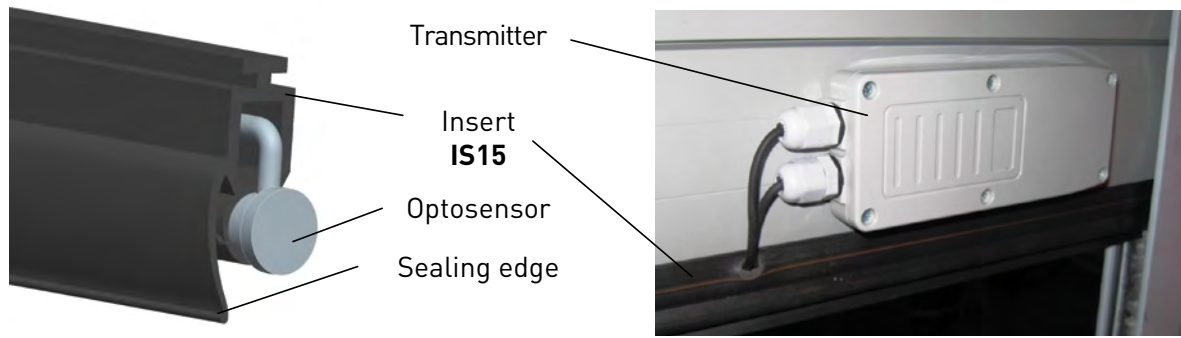


Fig. 4.1 Installation of optosensors and transmitter

4. Install the receiver (**Rx**) and transmitter (**Tx**) from the kit of optosensors **SIGNAL12** in round holes of the **IS15** insert (fig. 4.1). Install the transmitter (**Tx**) from the electric motor side. Draw outside the connecting cables of optosensors at the motor installation point according to fig. 4.1.
5. Install stoppers from the **OS/P** kit according to fig. 4.2. Before clamping the stoppers, make sure they are adjoined closely to the end slat face.

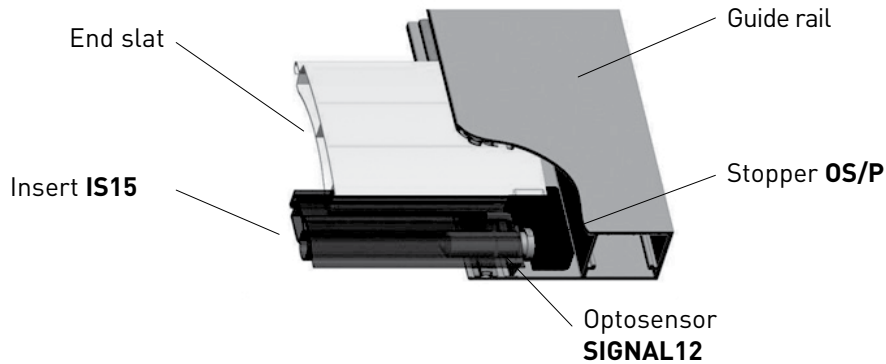


Fig. 4.2 Installation of the **OS/P** stopper for **AG/77** roller garage doors

4.2. MOUNTING OF 'JCM TECHNOLOGIES' PRODUCTS

Typical scheme of the wireless safety edge system using 'JCM Technologies' products is shown on fig. 4.3.

⚠ ATTENTION! Mounting, connection, programming and setup of 'JCM Technologies' products, included in the safety edge system, must be accomplished according to the manufacturer instructions and recommendations.

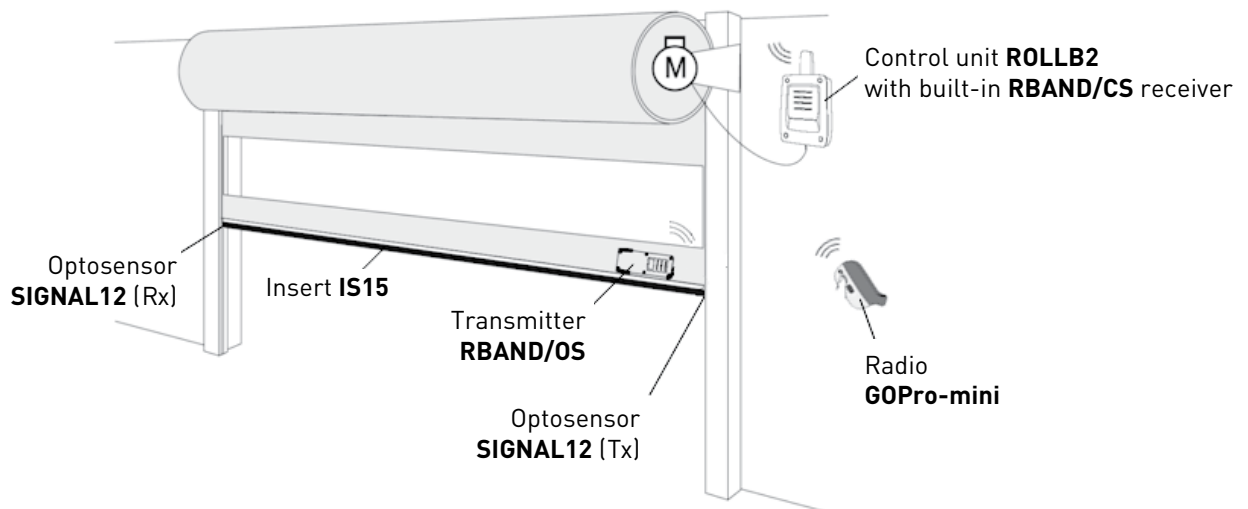


Fig. 4.3 Typical scheme of the wireless safety edge system using 'JCM Technologies' products

4.3. ELECTRIC CONNECTIONS OF THE SAFETY EDGE SYSTEM COMPONENTS OF 'JCM TECHNOLOGIES' PRODUCTS

The safety edge system using 'JCM Technologies' products is wireless, that's why the connection of the safety edge system components to the **ROLLB2** control unit is not required. It's enough to connect (fig. 4.4) the **SIGNAL12** optosensors to **RBAND/OS** transmitter.

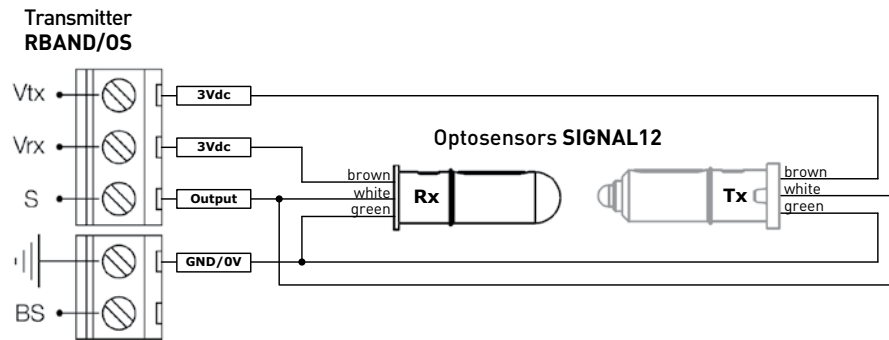


Fig. 4.4 Connection of **SIGNAL12** optosensors to **RBAND/OS** transmitter

ATTENTION! To make work the safety edge system with optosensors in **RBAND/OS** transmitter it's necessary to put the jumper in 'O' position.

4.4. INSTALLATION OF AXROLL CONTROL UNIT AND SC1 COMMUNICATION SET

Typical scheme of the safety edge system using Axroll control unit by Somfy is presented on fig. 4.5.

ATTENTION! Mounting, connection, programming and setup of Axroll products by Somfy, included in the safety edge system, must be accomplished according to the manufacturer instructions and recommendations.

A spiral cable from the **SC1** communication set, connecting the control unit and switching box, is used to provide the connection of **SIGNAL12** optosensors kit to Radio 8113-IP control unit. A bracket from the **SC1** communication set is used to ensure the safe fixation.

The height of bracket mounting must be equal to the half of curtain running, but not less than 1.4 m. After mounting the bracket, the spiral cable must be taut (without loops, for which it's possible to catch on) while the roller garage doors are closed or opened. If necessary, shorten the spiral cable.

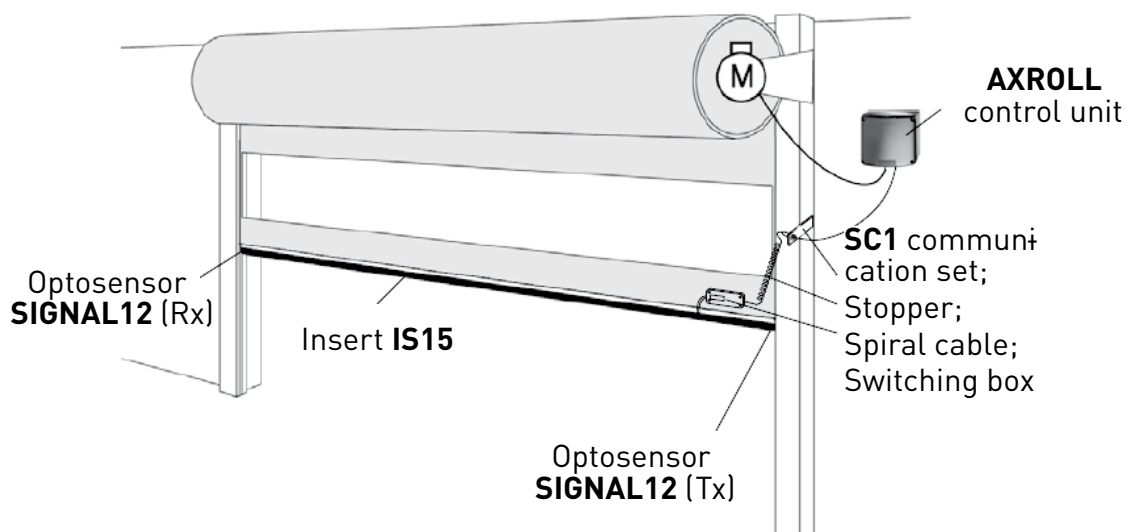


Fig. 4.5 Typical scheme of the wireless safety edge system using 'Somfy' products

4.5. ELECTRIC CONNECTIONS OF THE SAFETY EDGE SYSTEM COMPONENTS AXROLL PRODUCTS BY SOMFY

Connections of the safety edge system components to Axroll control unit by Somfy are presented on *fig. 4.6*.

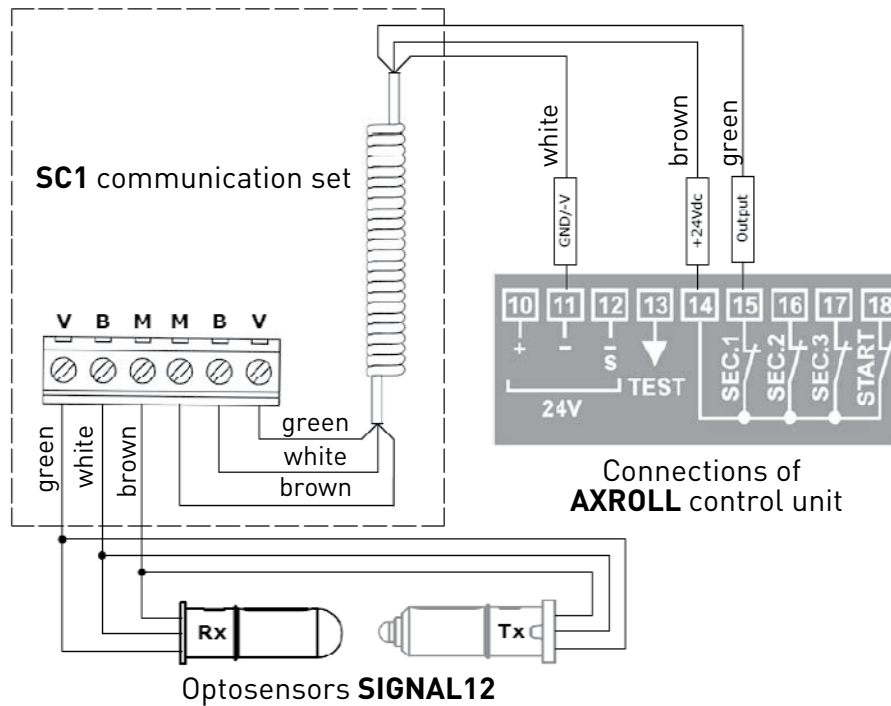


Fig. 4.6 Connection of the safety edge system to Axroll control unit by Somfy

⚠ ATTENTION! To make work optosensors of the safety edge system with Axroll control unit, it's necessary to carry out the required settings according to the control unit instruction.

5. PRODUCT TUNING, RUN-UP AND TESTING

1. If you use the electric motor, connect it to the network and adjust the position of electric motor's limit switches. These operations must be performed following the motor manufacturer's manual. If you use the electric motor with additional manual control (manual override system—NHK), manually perform two cycles 'up and down' of the curtain before connecting motor to the network.
2. Check the operability of roller garage doors. The operability must be checked by performing three cycles 'up and down' with fixed stop of the curtain in each of the following positions: the top position, the intermediate position (roller garage doors are opened halfway), and the bottom position.
3. Check the operation of roller garage doors' locking devices.
4. After checking, mount the shutter box cover in a groove of the shutter box and attach it by rivets (*fig. 2.74, 2.75*).
5. To enhance protective properties of the roller garage doors, screw slits of screws or bolts, applied to attach the guide rails, must be reamed after mounting to prevent unauthorized unscrewing (*fig. 2.76*). If tapping screws featuring high hardness are applied, screw slits must be filled in with silicone sealant (*fig. 2.77*). Working holes are closed with decorative plugs (*fig. 2.78*).
6. After the mounting operations are completed, fill in mounting clearances. Clean contaminated product sections with a soft cleaning rag. If necessary, use neutral detergents (*fig. 2.79*).
7. Make the final check of the roller garage doors' operability performing three cycles 'up and down' of the curtain before delivery to the customer.

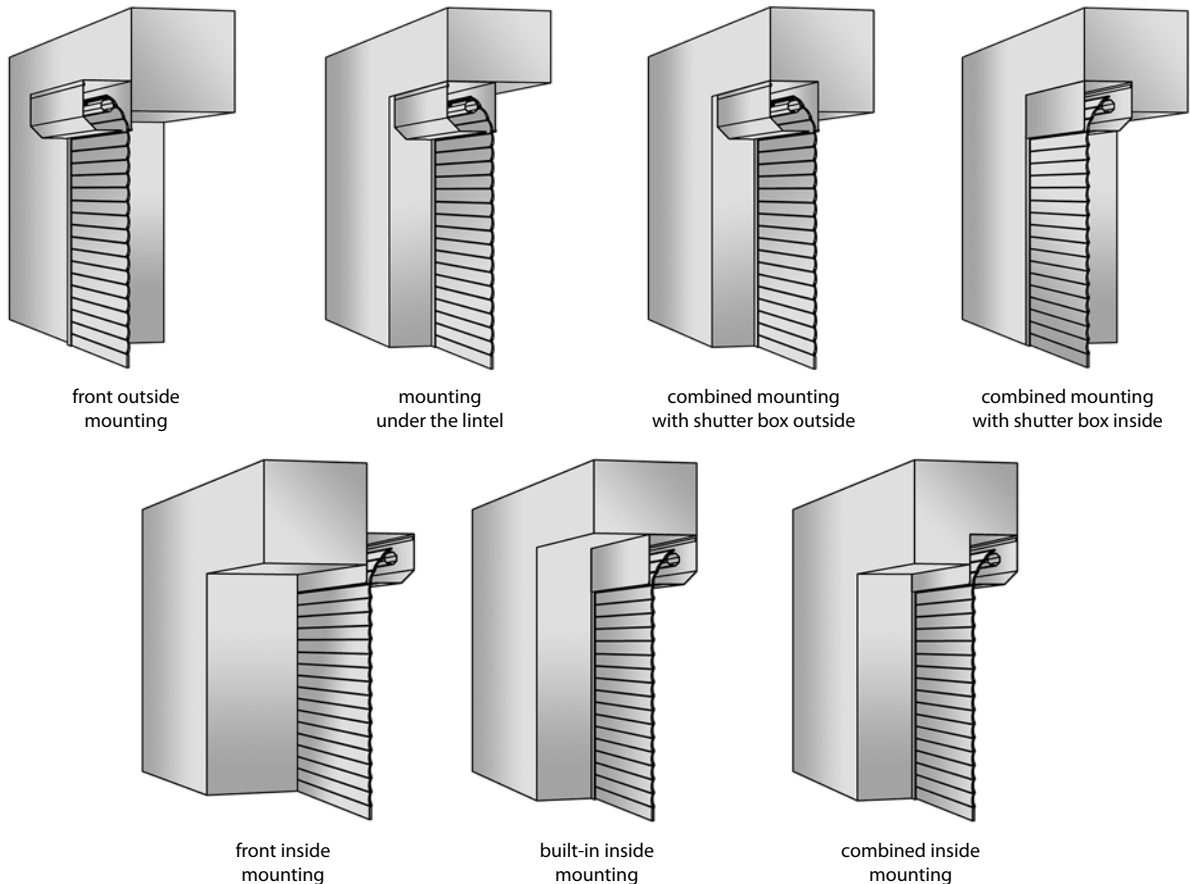
6. ACCEPTANCE OF THE MOUNTED PRODUCT

The mounted product is accepted by the Customer in the following order:

1. representative of the Company, that has mounted the product, demonstrates the functional operability of roller garage doors;

2. 'Acceptance protocol' is completed, including:
 - commissioning date and operating site;
 - signature (with print full name) of a person in charge of the product mounting;
 - details (name, address, phone number) of the company that has performed the product mounting;
 - stamp of the Company that has performed the product mounting.
3. Acceptance protocol is signed not only by representatives of the mounting company, but by the Customer too.

Main types of roller garage doors mounting are shown below:



During the mounting it's necessary to adjust the vertical level of roller garage doors' guide rails and the horizontal level of the shutter box.

The roller garage doors must be installed symmetrically relative to the opening.

The shutter box and guide rails must adjoin the opening framing along the entire length. Local clearances not exceeding 5 mm are allowed. The difference of diagonal lengths, measured at guide rails' extreme points, must not exceed 2 mm.

Before fixing, product components can be installed and adjusted using metal gaskets, set up in the fixing point area. After product mounting, joints and clearances must be filled in with sealing materials.

The accuracy of product installation during the mounting is controlled by building level and tape measure.

Roller garage doors must be securely fixed to exclude potential threat to life and people's health. Product fixing points must ensure the equal distribution of forces impacting the product, and their reliable flow to the building structure components.

During the mounting, it's necessary to pay attention to the correct and equal tightening of fixture elements to avoid product misalignments and ensure its operability.

When fixing the guide rails of roller garage doors, maximum allowable distance of 500 mm between fixture elements must not be exceeded, while the distance from the guide rail edge to the fixing point must not exceed 150 mm.

Fasteners are chosen depending on the load distribution, and strength of adjacent building units (brickwork, concrete, gas-silicate units, etc.). If expansion dowels are used, building units must withstand pressure of the spread dowel.

It's forbidden to use wooden plugs, sealing foam and silicone as fasteners.

If products are fixed with dowels, it's necessary to use long drills to avoid damaging the surface of roller garage doors' elements by a drill chuck. The drilled hole must be of the same size or slightly smaller than the dowel diameter.

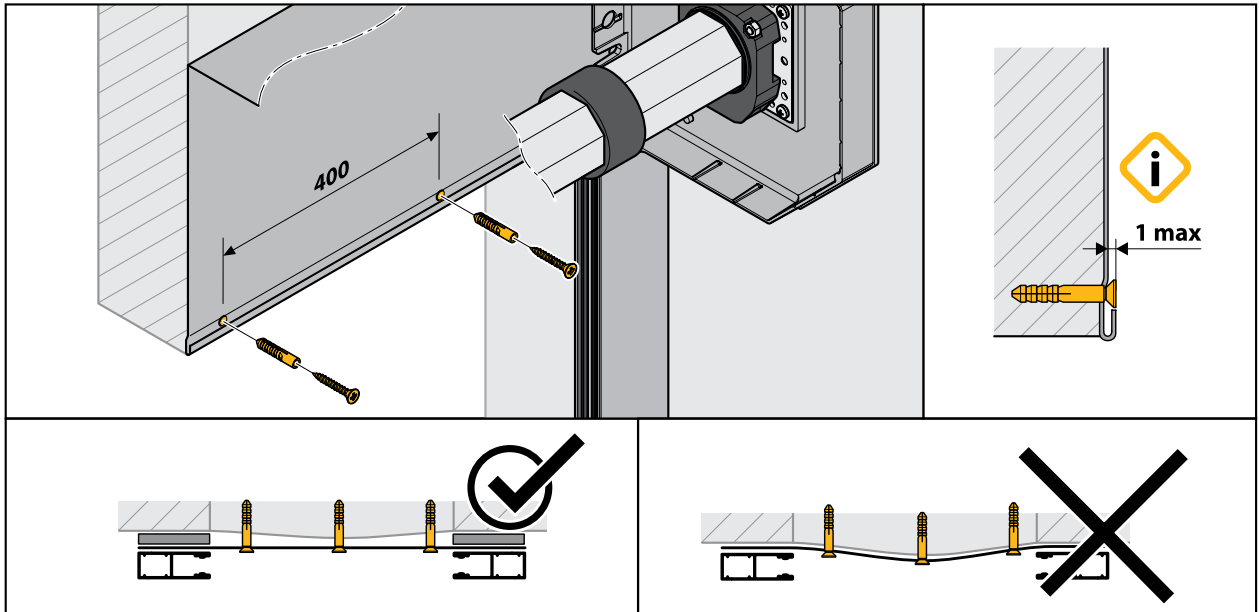
When filling in mounting joints and clearances, sealants in tubes (silicone, polyurethane foam, acrylic) must be used. When filling in certain joints and clearances larger than 3 mm, plasters (except the mounting of mill-finished aluminium guide rails) must be used. These plasters must be compatible with the material the opening is made of and approved by the customer.

After solidification, sealing materials, extending above the plane of guide rails and the shutter box, must be removed, and if necessary, the final sealing of joints must be carried out. If the polyurethane foam is used, make sure the deformation of shutter box elements has not occurred.

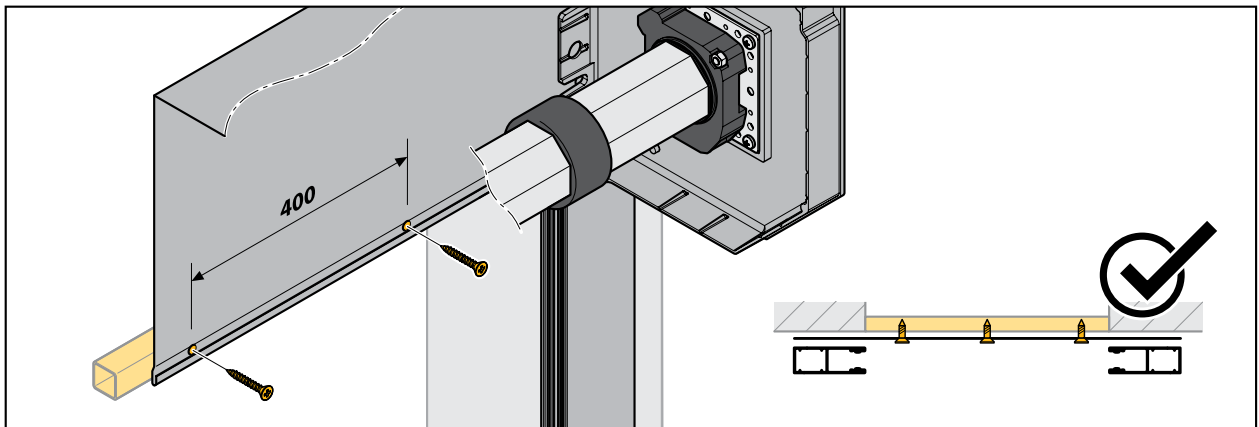
After mounting operations and facade finishing are completed, protective film must be removed from the shutter box of roller garage doors. Contaminated areas must be cleaned and wiped.

ADDENDUM 1

To reduce the possibility of damage to the door components from temperature deformations, it is necessary: in case of face installation, fix the box wall onto the opening in the drip area.

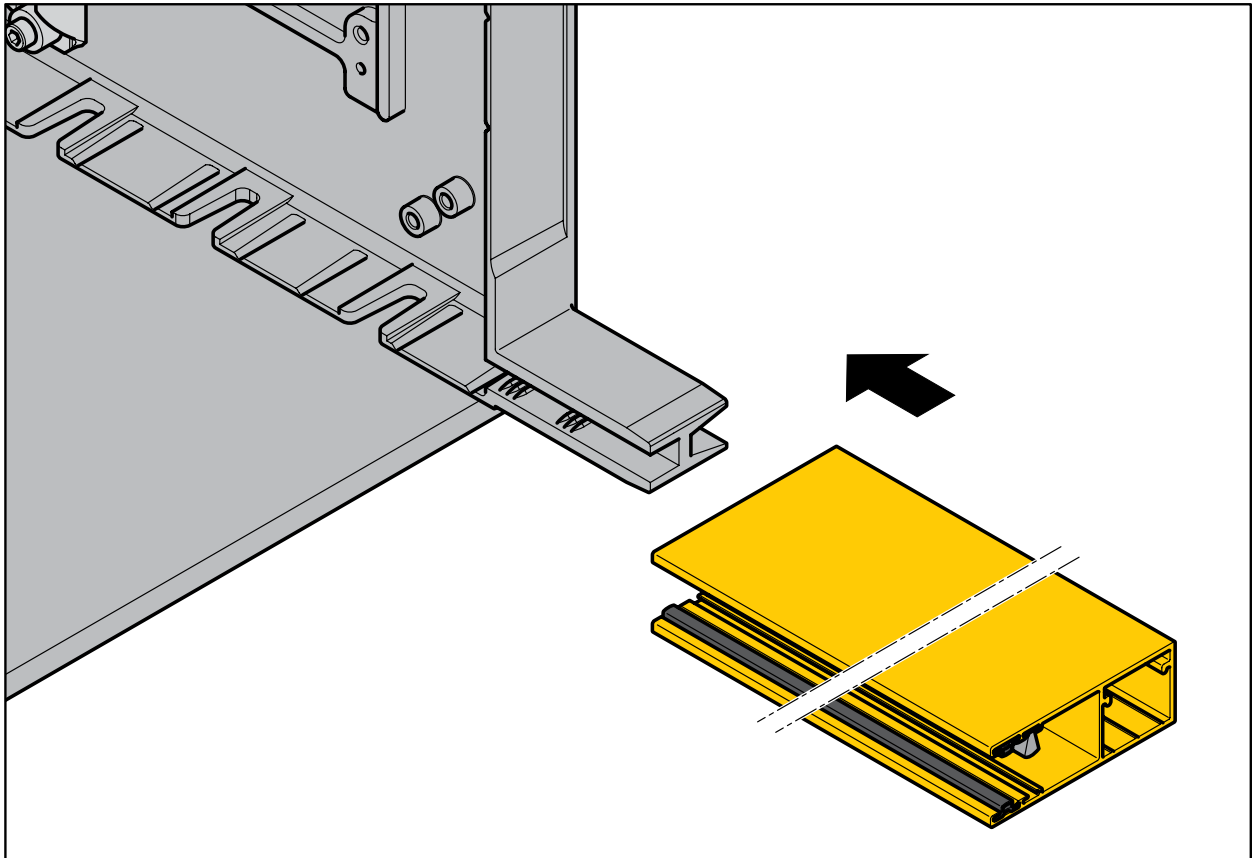


In case of in-between type of installation, as well as when installing as an entrance group for doors with a width of more than 1.2 m, it is necessary to arrange a strengthener and fix the box wall to it. The strengthener can be made of a steel profile bar, angle, etc. ALUTECH does not supply a strengthener as a separate product.

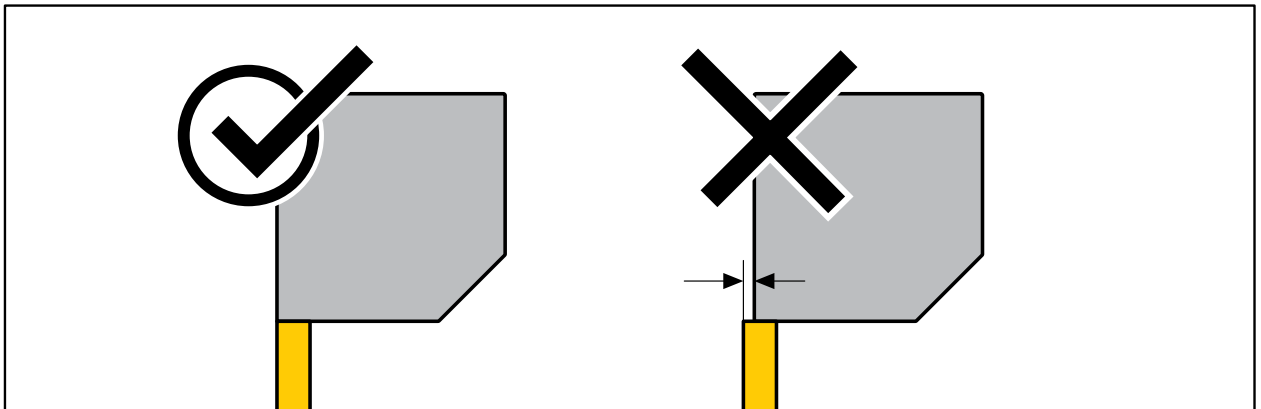


ADDENDUM 2

Pay attention to the correct installation of asymmetric guide rails.



The guide rail should not protrude beyond the rear wall of the box.





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