

### 1. General warning

This fire resistant product is intended for industrial use, to be used by trained personnel, specifically skilled in fire compartmentation.

Installer and customer shall read all instructions in the present manual very carefully, before installing and using the fire resistant Fire Fixing® doors.

Lack of compliance to the instructions in this manual, could cause harm or injury.

On delivery make sure that the materials have not been damaged in transport and check that all components listed in the packing list are present. All packing lists are checked (and shot) before shipment.

Complaints will only be considered if made in writing within 8 days from the date of delivery.

It is advisable that Meverin Fire Fixing® products work together with fire detecting systems, designed and installed by experts; these latter systems are not produced by MEVERIN.

MEVERIN Fire Fixing® doors have been designed to be installed in internal rooms, not to withstand wind or draught pressure.

Hereinafter the MEVERIN Fire Fixing® Wing Doors are quoted as Big Rotation (MEVERIN Fire Fixing®) Doors

### 2. Packing and transport

The Big Rotation MEVERIN Fire Fixing® Doors components are individually controlled and shot before shipment, packed in adequately protected metal containers, specifically designed for the particular door or set of doors. To lift, use an adequate fork lift, capable of lifting the entire weight of the elements to move.

### 3. Environmental conditions

To avoid the door's deterioration in the case it cannot be installed immediately, or is dismantled, or in the case it is necessary to store components of the system, the following should be taken into consideration:

- use the provided transport and storage cages and the spacers to avoid contact between both the door's components and the ground;
- the storage area should not be too damp, and free from condensation;
- if condensation forms, packaging should be opened, all components dried and kept in an aired environment, but protected (formation of condensation in badly ventilated conditions can cause mould or mildew which could cause marking of the paint and its deterioration);
- do not expose to the elements or to the sun's rays not even if the original packaging is intact; always keep under cover.

### 4. General information for installation

When installing a Big Rotation Door use trained and qualified installers / technicians, and be sure that the wall where rawlplugs must be secured :

- has the static stability suitable for the mass of the door and for the actions by the door exerted ;
- has the suitable consistency and homogeneity, and that repairs or fillings with unsuitable materials which could weaken the power of the rawlplugs have not been made.

The proper workmanship of the fixings is essential for the safety: when the wing is open and standing, the forces exerted by the wing -which are directly proportional to the wing mass and to the distance of the wing center of gravity from the hinges vertical axis-try to tear away the anchorages from the wall. This means that wider and heavier is the wing, higher is the stress on the anchorages.

When the wing turns, dynamic forces join to the static ones, in this way increasing the total stress on the fixings.

### 5. On site verification of installation

It is extremely important that :

- the surfaces of the walls to which the door jambs and the frame horizontal top member are to be fixed, are flat and plumb-line (horizontally and vertically);
- the architrave surface (supporting surface of the frame horizontal top member) and side walls surfaces (supporting surfaces of the door jambs) lie on the same vertical plane (coplanar surfaces);
- the length of the opening diagonals is checked;
- the floor is as well as possible horizontal and level.

### 6. Installation steps

The steps to be carried out to correctly fix the door, and their description, are on the sheet "Installation step by step" which you will find enclosed.

The manual and the enclosed installation sheet are integral parts and can not be substituted one for the other.

### 7. Handing over of the product

At the end of installation, the installer should complete and sign the form stating that the door has been mounted conforming to the installing instructions supplied by the Manufacturer, recording the reliability of the product and hand it over to a capable person assigned by the Purchaser or whoever will use the product.

This act sanctions the acceptance of responsibility by the Purchaser (or whoever uses the product) relative to the use and maintenance of the product to rigorously follow the outline provided by the Manufacturer in the "Instructions for Use and Maintenance".

## 8. Description of the door, its components, and spare parts

### 8.1. Technical characteristics

The Big Rotation Fire Fixing® Doors are fire compartmentation doors.

The fire compartmentation doors shall be usually held closed. Sometime, on user demand, they could be designed to be held usually open. In these cases the doors shall be equipped with a self-closing system suitable to close, in case of fire, the compartmentation element without the aid of a human command.

The intervention of the fire detection system (neither designed nor supplied by MEVERIN) releases the hold open system and permits that the held open door closes.

The Big Rotation Fire Fixing® Doors are equipped, for their self closing movement, with a potential energy system.

### 8.2. Safety devices

Safety devices are applied to fire resistant sliding Fire Fixing® doors to guarantee the user's safety.

- DOOR CLOSER : closing speed control device
- BOOSTER : ancillary door closer device
- DOOR COORDINATOR DEVICE : telescopic, mechanical device (only for double wing doors) to permit the proper wing closing sequence. The device is placed at the top corner of the wings meeting edges.

### 8.3. Control and operating devices

When a fire door shall be kept "usually open" (i.e. held open), it must be guaranteed that in the case of fire the door closes automatically by itself, without the aid of a human command.

This is guaranteed by an "electromagnetic-operated" system.

## 9. Superficial finishing and appearance

### 9.1. Paint

Fire Fixing® fire resistant doors are made of galvanized steel sheets and finished with an ecological base, industrial, high quality, epoxy resin to guarantee protection against corrosion from a vast range of aggressive agents, acid and non-acid, in environments not directly exposed to natural outside elements.

At additional cost, the doors can be supplied in the most of the RAL range paints.

Even using high quality products, which guarantee high level protective properties and attractive finishes, the chromatic appearance is that of an industrial product, with its typical tolerance, and is influenced by numerous factors (variability of atmospheric conditions and mixture, characteristic to the painting process, different geometric sizes of the components to paint, etc.).

Reproduction of a colour already obtained on another part or on a different support cannot ignore a certain tolerance margin, inherent in physical and chemical processes, never identically repeatable.

Fire Fixing® fire resistant doors are finished with a semi opaque paint which subdue the effects described in the following point 9.2, which are instead emphasised with a shiny superficial finish; if the Customer requests such a finish, it is understood that the final results will be unconditionally accepted in respect of the higher perception of the lack of flatness of the surface.

### 9.2. Appearance

To attain the characteristics of fire resistance, the modular elements which make up the door wings of the Big Rotation Fire Fixing® Doors are built with specific artifices, one of which is a predefined deformability of the panel to heat.

For this reason it is not possible to make reinforcing ribs to keep the steel sheet completely taut and flat, which can show signs of waving and other surface defects, which should be considered inborn with the construction.

## 10. Marking and identification of the door

A metallic label on the Big Rotation Fire Fixing® Doors shows the references for its recognition according to the law (Producer name, door type and relevant classification, door serial number and year of manufacture, test report number and issuing Body name, Italian homologation number).

A plastic card overlays the metallic label, repeating all said data and, moreover, a polychromatic, high definition, logo and all registered addresses of the Producer, and a bar code for the door traceability and the maintenance purposes.

## 11. Instructions for the use of the door

- Installation, maintenance, eventual repairs, must be carried out exclusively by qualified personnel.
- Do not use the door differently from that indicated in this manual.
- Do not use the door before having installed all safety devices.
- Do not remove the safety devices: these can only be removed by authorised and expert personnel, after having cordoned off the area around the door, to avoid inexperienced personnel nearing the area.
- Do not carry out maintenance or adjustments when the door is in movement.
- Do not move the door to another site without the assistance of a qualified installation technician.

## 12. Routine and extra-routine maintenance

Without the minimum foreseen maintenance, the guarantee is annulled.

Maintenance of fire resistant doors is an extremely IMPORTANT point for human safety and for the buildings they are intended to protect.

For any other maintenance operation not described here, it is advisable to contact the supplier directly, who will be able to give advice on the problem in hand.

### 12.1. Minimum routine maintenance foreseen

Routine maintenance consists of the operations which serve to maintain the Big Rotation Fire Fixing® Door efficient and in good condition.

Generally, when used correctly, a yearly check-up should be sufficient. However:

- For the first year, a three monthly check-up is advised to verify the effect of the actual conditions of use.
- Increase to six monthly intervals only after you are sure that more frequent controls are redundant.
- If the doors are installed where there is dust, damp, polluting agents or, in general, dirt, it is advisable to increase the number of controls.

In any case to determine the most appropriate maintenance programme, it is necessary to proceed with a correct analysis and evaluation of environmental conditions and wear on the door.

Operations to carry out during every check-up on the door, or every time the Security Manager retains the conditions necessary

for a maintenance check-up:

- clean the hinges and the lock, to avoid accumulation of dust and dirt. Use a cloth without threads and a bland detergent;
- lubricate the hinge pivots using specific lubricant;
- lubricate the cylinder and the bolt head of the lock using specific lubricant, and let a bit of lubricant drip inside the lock, through the bolt head opening of the lock
- verify the proper functioning of the bolt head when matching the keeper (without turning the handle, push the wing openwise to test its holding)
- verify that the hinges are not damaged (no cracks or distortions)
- verify the tightening of all mechanical couplings;
- verify the condition of the thermal-expansible seals;
- verify the intervention of the release devices and how the door closes;
- pay attention to the cleanliness of the electromagnetic-operated system components and check that the system works

### 12.2. Extra-routine maintenance

Extra-routine maintenance consists of a series of operations which must be carried out following an event which has damaged the integrity of the door or one of its parts, or lowered the efficiency of the self-closing system.

- Substitute the wings of the door if the wings have been damaged by unexpected blows by objects or persons. To carry out this operation correctly qualified technical personnel must be called in, and follow the instructions to install the door.
- If the door has closed due to the fire detection system intervention, this must be checked in all its components, exclusively by personnel competent on the subject.
- Substitute those components which do not work correctly due to the fair wear and tear.

## 13. Guarantee

The guarantee covers, by law, breakage of mechanical parts, due to construction defects, and will substitute only the defective parts, excluding labour, travelling expenses and transport.

Electrical components and parts subject to wear due to incorrect use and/or installation and/or maintenance, as well as all eventual inflicted damage are excluded from the guarantee.

When the guarantee has run out, MEVERIN® can reproduce spare parts while the regulations under which the original door has been manufactured remain applicable.

Without the foreseen minimum routine maintenance, the guarantee is forfeited.

The maintenance must be carried out by trained, skilled, not cow-boy personnel, otherwise the guarantee is forfeited.

## 14. Call-out, technical assistance, spare parts

For eventual call-outs, technical assistance, orders for spare parts, apply directly to the Retailer and the network of qualified installers.

Use only original spares or those approved by MEVERIN®.

## 15. Door and its components disposal

In disposing the Fire Fixing® fire resistant doors, the leaves and the components have to be treated in different ways.

The door leaves shall be disassembled; the insulating core is an industrial waste which could contain mineral wool, silicates, plasterboard, ceramic fibres; the steel elements shall be treated as metal scrap.

The door components shall be treated following the instructions of their producer, or accordingly the rules for disposing the specific material which they are made from.

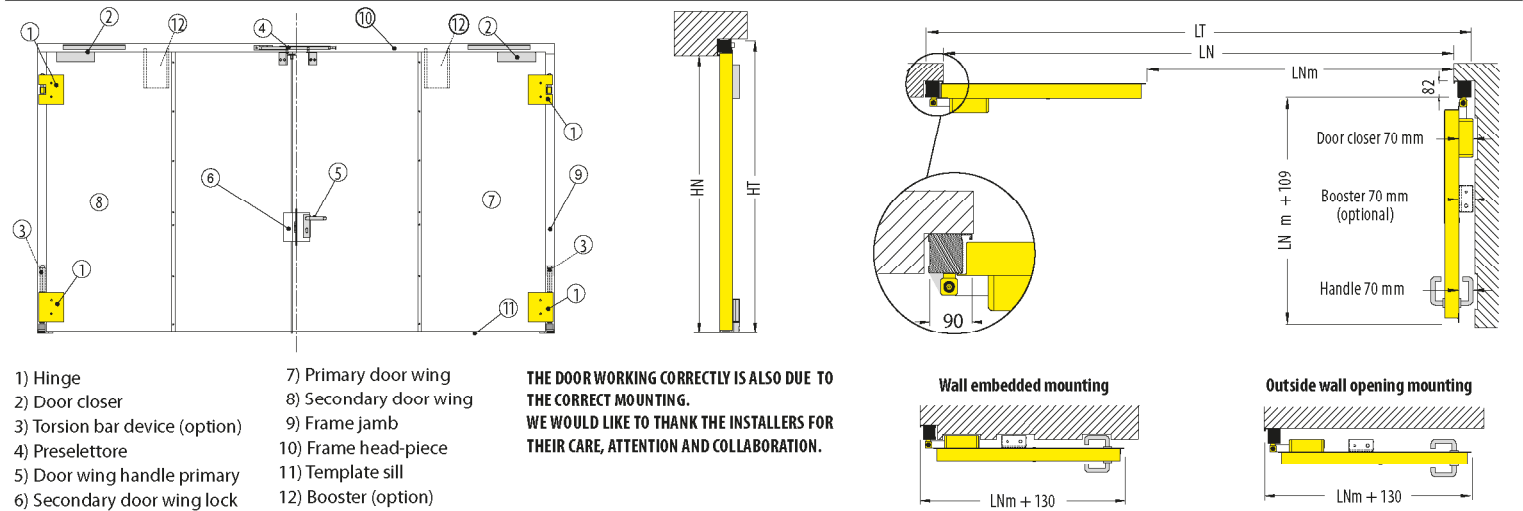
## 16. Protection of intellectual property rights

Laws regarding the protection of intellectual property rights are applied to the present manual.

It is forbidden, therefore, without the Author's explicit authorisation, to copy, either entirely or in part.

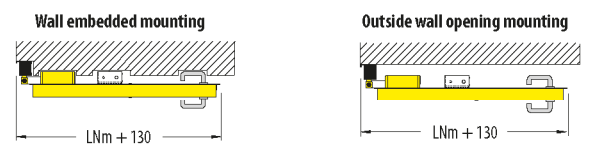
## 17. Validity

MEVERIN® reserves the right to make all the modifications retained necessary to this manual, at any time.



- 1) Hinge
- 2) Door closer
- 3) Torsion bar device (option)
- 4) Preselettore
- 5) Door wing handle primary
- 6) Secondary door wing lock
- 7) Primary door wing
- 8) Secondary door wing
- 9) Frame jamb
- 10) Frame head-piece
- 11) Template sill
- 12) Booster (option)

**THE DOOR WORKING CORRECTLY IS ALSO DUE TO THE CORRECT MOUNTING. WE WOULD LIKE TO THANK THE INSTALLERS FOR THEIR CARE, ATTENTION AND COLLABORATION.**



<p>Handle with adequate fork-lifts.</p>	<p>Handle with care.</p>	<p>Don't step on the panels and accessories.</p>	<p>Attach straps only where protected by special metal corners.</p>	<p>Don't expose to sun light or adverse weather conditions.</p>	<p>Keep covered. The truck must be covered.</p>	<p>Installation to be carried out by qualified and experienced staff.</p>	<p>Packing and mix of accessories checked before delivery.</p>
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**N.B. Verify that the wall, where rawplugs must be secured, has the suitable consistency and homogeneity, and that repairs or fillings with unsuitable materials which could weaken the power of the rawplugs have not been made. The plugs are not included in the delivery. Use only metal plugs with lined screws: 65 mm minimum length, Ø 10 mm minimum. The diameter of the plug and the load it can support are chosen according to the weight of the door. The type of plug should always be chosen according to the support on which the fire resistant Fire Fixing® door will be hung.**

**FIG. 2.1 FRAME / WING ASSEMBLING**

The frame is prearranged to be fixed to the wall with rawplugs.

Usually, the hinge-side frame jamb is delivered already joined to the wing.

Join the frame jamb (9) to the frame head-piece (10) with the fixing screws placed in the jamb itself (9).

Join the template sill (11) to the frame jamb (9).

**Note:**  
 The template sill is an ancillary device for assembling the frame into shape correctly. Remove it only after having checked that the frame diagonals are equal and the frame has been fixed firmly.

**FIG. 2.2 INSTALLATION INSTRUCTIONS**

The correct installation is obtained by having the plane of the frame off its plumb-line, in the sense of the wing closing, of 2 mm / meter.

**FIG. 2.3 OUTSIDE WALL OPENING MOUNTING**

Optional extra-piece

**FIG. 2.5 WALL EMBEDDED MOUNTING WITH RAWPLUGS**

Fix with rawplugs

Reveal to be built by the customer

Fill with mortar of cement

**FIG. 2.4 INSIDE WALL OPENING MOUNTING**

Fix with rawplugs

Fill with mortar of cement

**FIG. 3.1 VERIFICATION AND SEAL DIAGONALS**

Check the diagonals are equal and the requirements of figure 2.2 are satisfied, then fix to the wall definitely.

8 x 10 mm

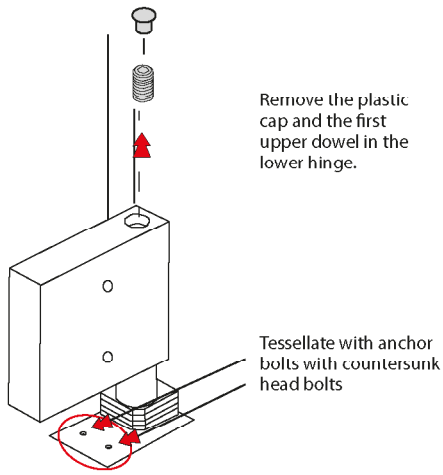
7 mm

The bottom edge, side zippers, anti quota must be 1 mm less than that of the edge opposite lower

**FIG. 3.2 HANDLE ASSEMBLY AND CHECK CORRECT OPERATION OF PRIMARY DOOR LOCKS**

The building hardware box contains the handle; the lock is pre-wing-mounted.

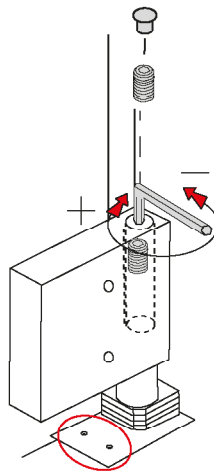
FIG. 4.1



Remove the plastic cap and the first upper dowel in the lower hinge.

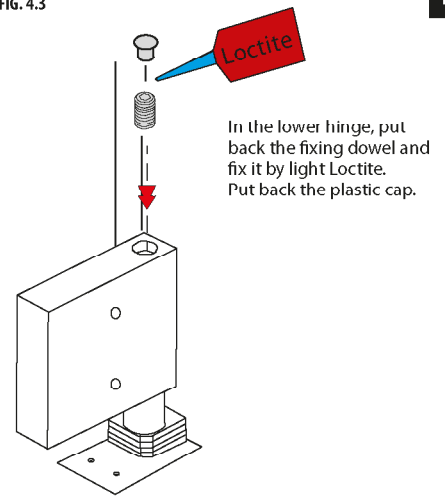
Tessellate with anchor bolts with countersunk head bolts

FIG. 4.2



Turn the second dowel in the lower hinge. Turn clockwise the dowel to have the wing raised.

FIG. 4.3



In the lower hinge, put back the fixing dowel and fix it by light Loctite. Put back the plastic cap.

FIG. 4

FIG. 5.1

The system is already preinstalled on the door.

To verify the proper operation of the lock self-stop must be operated with lever must be placed inside the lock On the secondary door wing and make sure that the door itself opens correctly.

Then once the door is closed secondary check that the tab is properly integrated into the seat of the upper crosshead so that to lock the door itself.

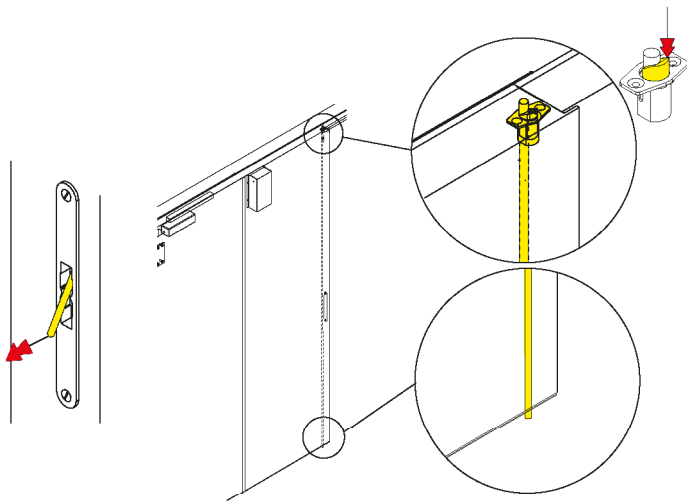
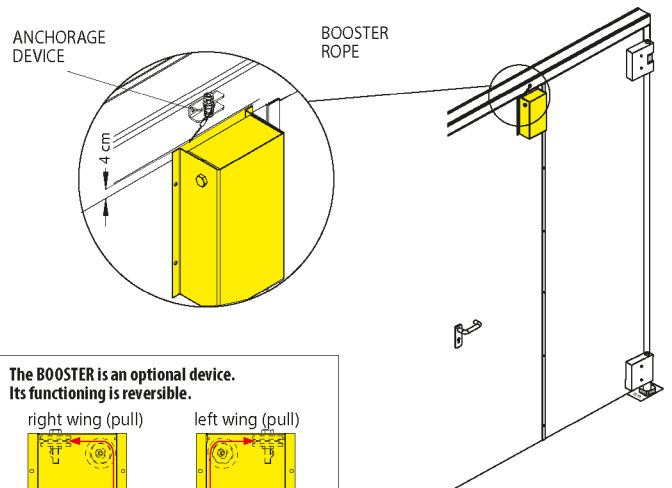


FIG. 5.2 BOOSTER (opzionale)

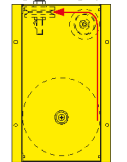
Load the spring-drum when installing the door.

Install the booster with its rope emerging side towards the lock side of the wing. Secure the rope to the frame head-piece (10) by means of the delivered screw.

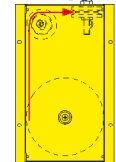


The BOOSTER is an optional device. Its functioning is reversible.

right wing (pull)



left wing (pull)

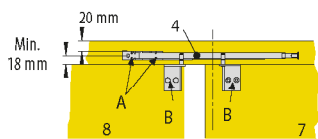


Note : When the BOOSTER is installed, the maximum allowed wing opening is 120°

FIG. 5

FIG. 6.1

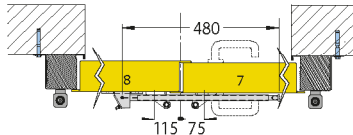
Front view with door closed preselector



Tighten the clamps on behind closed doors following the preparation so that the upper edge of the brackets and the top edge of the door are flush (fig.6.1)

FIG. 6.2

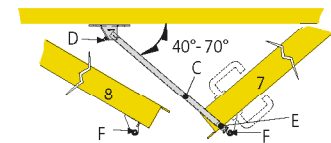
Section of a door closed



Arrange nylon bushings and lock (fig.6.3)

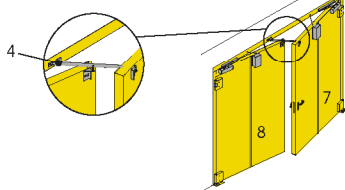
FIG. 6.3

Section of a door open



Screw the regulator on the top crossbar following the preparation ( fig. 6.2 /6.4)

FIG. 6.4



Position the arm of the regulator (c) with the screw (D) between 40° and 70° so that the bushing NYLON (F) goes to meet the bumper (e) (fig. 6.3)

(See also the instructions that come with PRESELECTOR)

FIG. 6.5 INSTALLING and ADJUSTING the DOOR CLOSER

**POSITIONING the DOOR CLOSER**

Note: As it regards the maximum wing opening, read the door closer instructions.

**ADJUSTING the DOOR CLOSER**

- Acting on the screw (A) to adjust the initial force of door closers with door opening from 0° to 70°.
  - Acting on the screw (B) adjusts the position of closed from 7° to 0°.
  - Acting on the screw (C) to adjust the strength of open from 70° to max. initiation.
  - Acting on the screw (D) acting on the strength of closure max opening at 70°.
- Adjust the door closer power size (in proportion to the wing size) by turning the screw (E).

**INSTALLING the COVER**

Install the door closer covers after having adjusted the door closer correctly

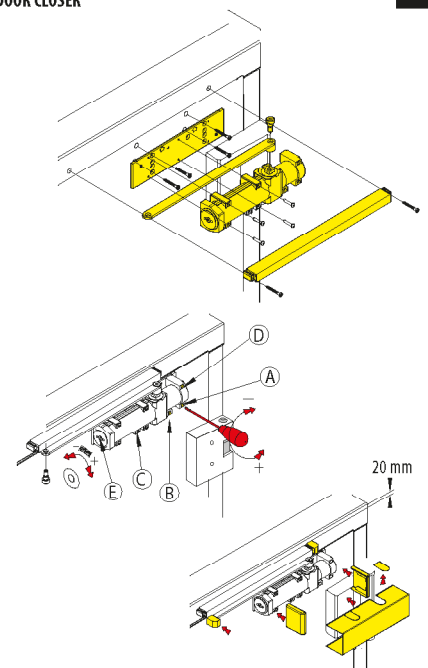


FIG. 6