



**ENTRE//MATIC**

CE

**DOR**

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**Installation and  
maintenance manual for  
folding doors.**

(Original instructions)



ISO 9001  
Cert. n° 0957

**DITEC S.p.A.**

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## CAPTION



This symbol indicates instructions or notes regarding safety issues which require particular attention.



This symbol indicates informations which are useful for correct product function.

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All data and specifications have been drawn up and checked with the greatest care. The manufacturer cannot however take any responsibility for eventual errors, omissions or incomplete data due to technical or illustrative purposes.

## 1. GENERAL SAFETY PRECAUTIONS



This installation manual is intended for professionally competent personnel only.

Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with applicable regulations.

Before installing the product, carefully read the instructions.

Bad installation could be hazardous.

The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of hazard.

Before installing the product, make sure it is in perfect condition.

Do not install the product in an explosive environment and atmosphere: gas or inflammable fumes are a serious hazard risk.

Before installing the motors, make all structural changes relating to safety clearances and protection or segregation of all areas where there is risk of being crushed, cut or dragged, and danger areas in general.

Make sure the existing structure is up to standard in terms of strength and stability.

The motor manufacturer is not responsible for failure to use Good Working Methods in building the frames to be motorized or for any deformation occurring during use.

The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the motorized gate.

The safety devices must protect any areas where the risk exists of being crushed, cut or dragged, or where there are any other risks generated by the motorized gate.

Apply hazard area notices required by applicable regulations.

Each installation must clearly show the identification details of the motorized gate.



Before making power connections, make sure the plate details correspond to those of the power mains.

Fit an omnipolar disconnection switch with a contact opening gap of at least 3 mm.

Make sure an adequate residual current circuit breaker and overcurrent cutout are fitted upstream of the electrical system.

When necessary, connect the motorized gate to a reliable earth system made in accordance with applicable safety regulations.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts.



To handle electronic parts, wear earthed antistatic conductive bracelets.

The motor manufacturer declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation.

For repairs or replacements of products only original spare parts must be used.

The installer shall provide all information relating to automatic, manual and emergency operation of the motorized gate, and provide the user with operating instructions.

## 2 DECLARATION OF INCORPORATION OF PARTLY COMPLETED MACHINERY

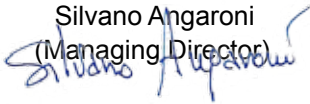
(Directive 2006/42/EC, Annex II-B)

The manufacturer DITEC S.p.A. with headquarters in Via Mons. Banfi, 3 - 21042 Caronno Pertusella (VA) - ITALY declares that the automation system for DOR folding doors:

- has been constructed to be installed on a manual door to construct a machine pursuant to the Directive 2006/42/EC. The manufacturer of the motorized door shall declare conformity pursuant to the Directive 2006/42/EC (annex II-A), prior to the machine being put into service;
- conforms to applicable essential safety requirements indicated in annex I, chapter 1 of the Directive 2006/42/EC;
- conforms to the Low Voltage Directive 2006/95/EC;
- conforms to the Electromagnetic Compatibility Directive 2004/108/EC;
- technical documentation conforms to Annex VII-B to the Directive 2006/42/EC;
- technical documentation is managed by Renato Calza with offices in Via Mons. Banfi, 3 - 21042 Caronno Pertusella (VA) - ITALY.;
- a copy of technical documentation will be provided to national competent authorities, following a suitably justified request.

Caronno Pertusella,  
13-10-2010

Silvano Angaroni  
(Managing Director)



### 2.1 Machinery Directive

Pursuant to Machinery Directive (2006/42/EC) the installer who motorizes a door or gate has the same obligations as the manufacturer of machinery and as such must:

- prepare the technical file which must contain the documents indicated in Annex V of the Machinery Directive; (The technical file must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorized door);
- draw up the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive and deliver it to the customer;
- affix the EC marking on the motorized door in accordance with point 1.7.3 of Annex I of the Machinery Directive.

### 3. TECHNICAL DATA

	DOR1BH	DOR1BHS
<b>Power supply</b>	24 V $\overline{=}$	24 V $\overline{=}$
<b>Absorption</b>	12 A	12 A
<b>Torque</b>	300 Nm	300 Nm
<b>Max. door weight</b>	500 kg	500 kg
<b>Max. door width</b>	1,5 m + 1,5 m	1,5 m + 1,5 m
<b>Revolution transmission shaft</b>	2,5 RPM	2,5 RPM
<b>Service class</b>	4 - INTENSIVE	4 - INTENSIVE
<b>Intermittence</b>	S2 = 30 min S3 = 50%	S2 = 30 min S3 = 50%
<b>Temperature</b>	min -20° C max 55° C min -35° C max 55° C with NIO enabled	min -20° C max 55° C min -35° C max 55° C with NIO enabled
<b>Degree of protection</b>	IP44 IPX4 with limit switch	IP55 IPX5 with limit switch
<b>Control panel</b>	VIVAH	VIVAH

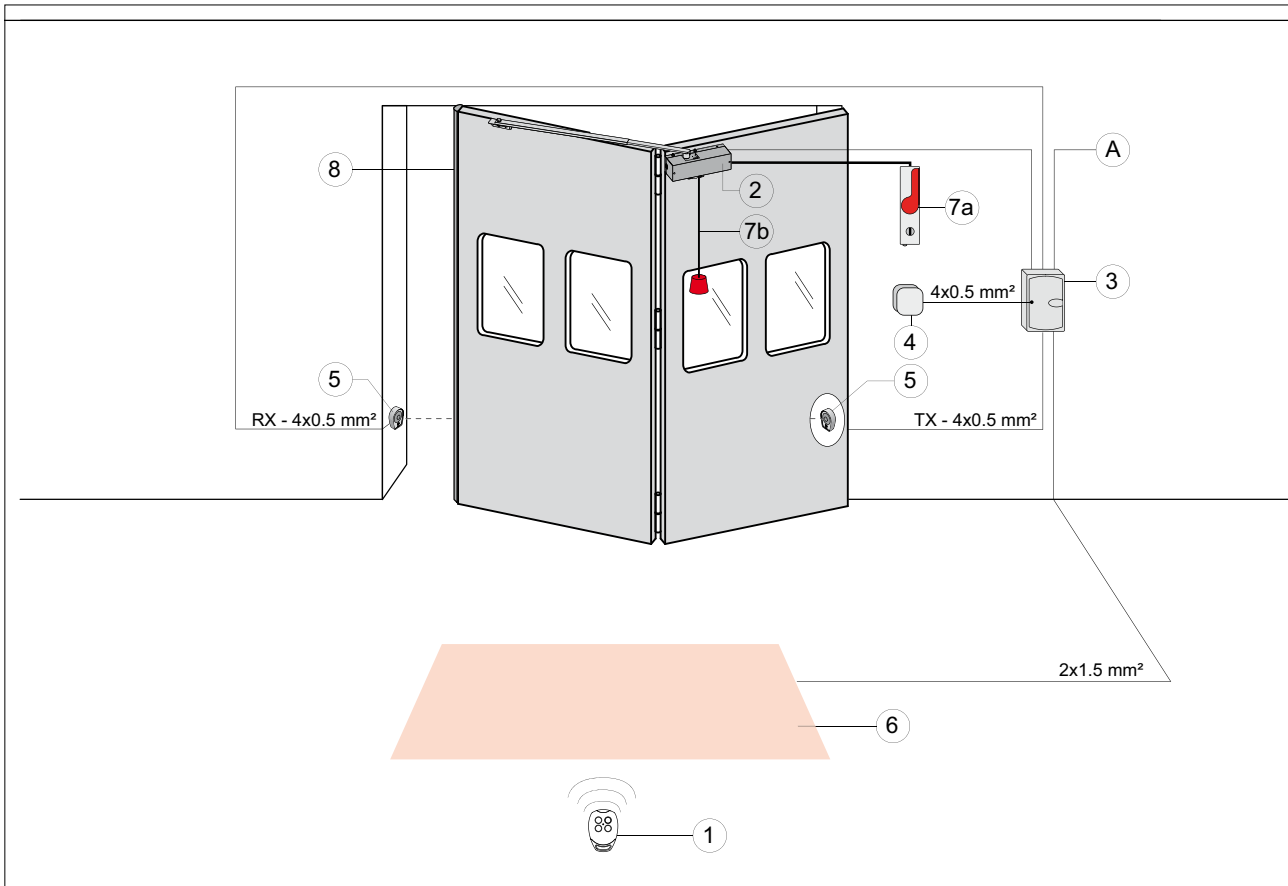
#### 3.1 Operating instructions


**Service class: 4** (minimum 100 cycles a day for 10 years or 200 cycles a day for 5 years)

**Use: INTENSIVE** (For all special applications with ongoing use such as toll gates and so on).

- Performance characteristics are to be understood as referring to the recommended weight (approx. 2/3 of maximum permissible weight). When used with the maximum permissible weight a reduction in the above mentioned performance can be expected.
- Service class, running times, and the number of consecutive cycles are to be taken as merely indicative Having been statistically determined under average operating conditions, and are therefore not necessarily applicable to specific conditions of use.
- Each automatic entrance has variable elements such as: friction, balancing and environmental factors, all of which may substantially alter the performance characteristics of the automatic entrance or curtail its working life or parts thereof (including the automatic devices themselves). The installer should adopt suitable safety conditions for each particular installation.

## 4. STANDARD INSTALLATION

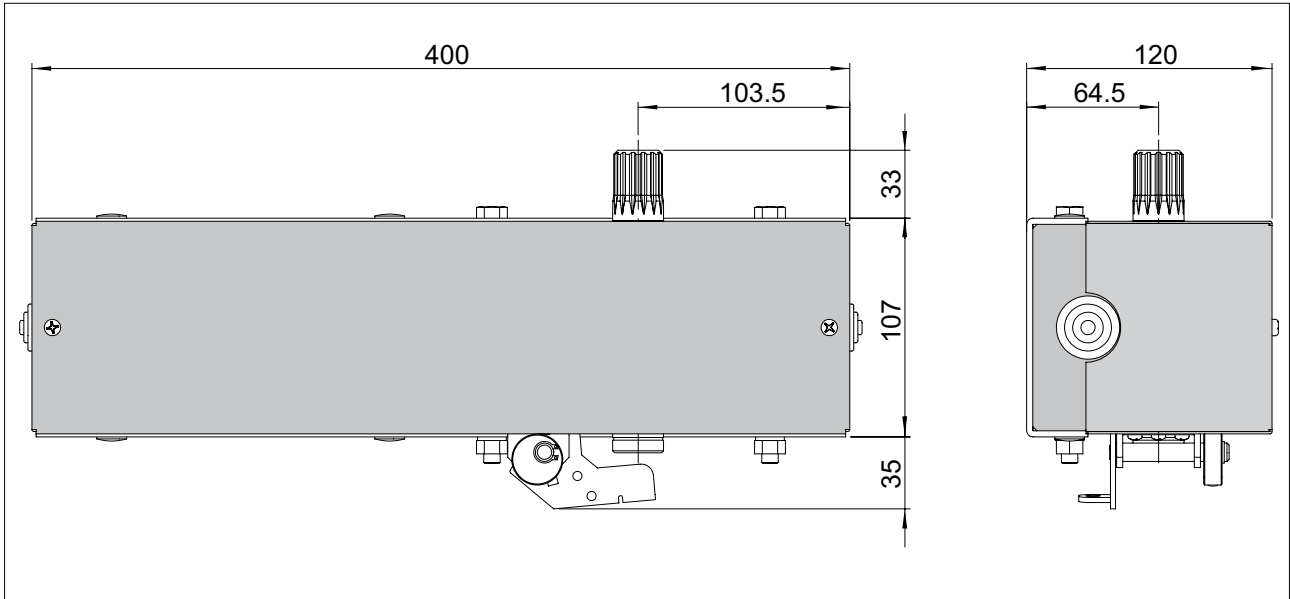


Ref.	Code	Description
1	GOL4	Transmitter
2	DOR1BH	Gearmotor
	DOR1BHS	Gearmotor water and dustproof
3	VIVAH	Control panel
4	XEL5	Key selector
	GOL4M	Codified via radio control keyboard
5	XEL2	Photocells
	LAB4	Photocells IP55
6	LAB9	Magnetic loop detection device for traffic monitoring
7A	DEB04	Key release handle
7B		Release cord
8	SOFA-SOFB	Safety edge
	GOPAV	Radio system for safety edges
A		Connect the power supply to an approved omnipolar switch with an opening distance of the contacts of at least 3mm (not supplied). The connection to the mains must be made via an independent channel, separated from the connections to command and safety devices.



**NOTE:** the given operating and performance features can only be guaranteed with the use of DITEC accessories and safety devices.

## 4.1 Dimensions

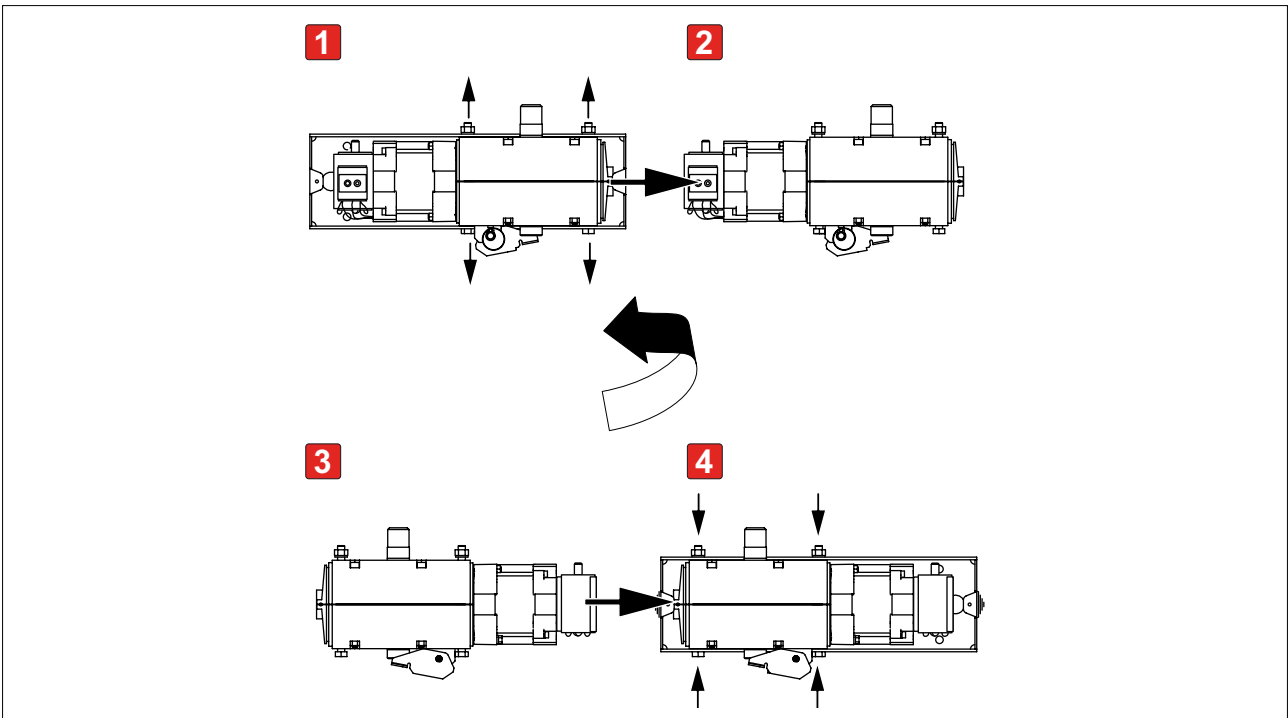




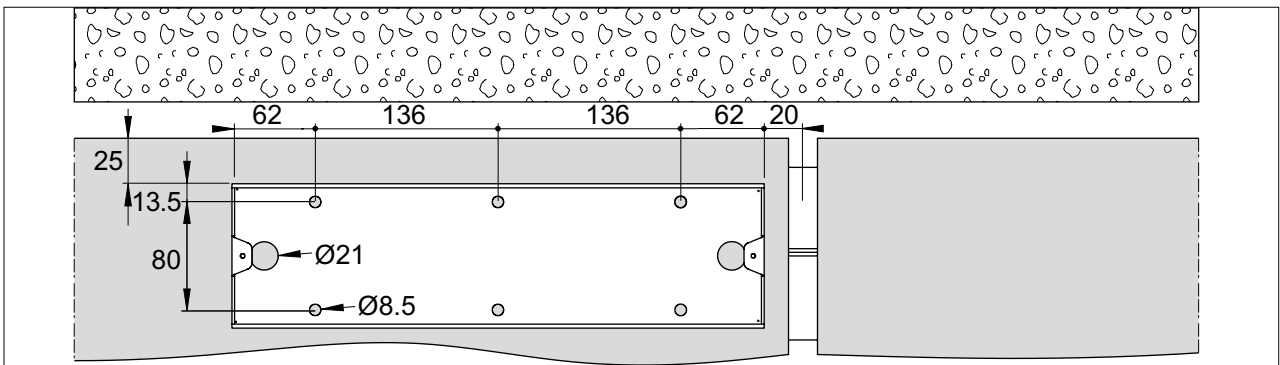


## 5.2 Geared motor installation

- To reverse installation of the Dor from left to right, proceed as shown in figure.

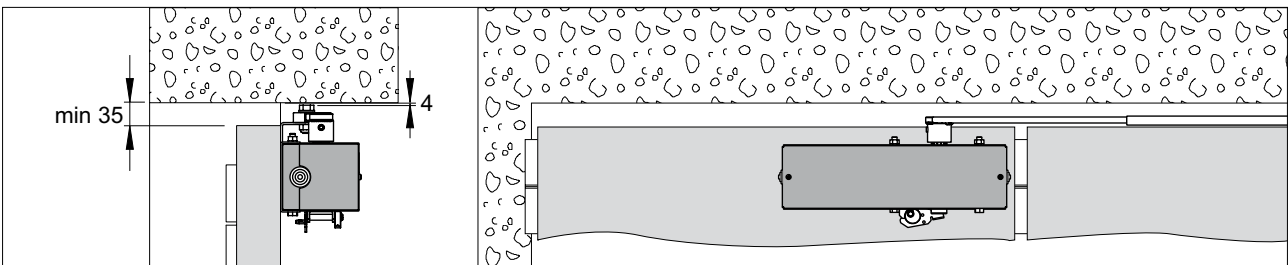


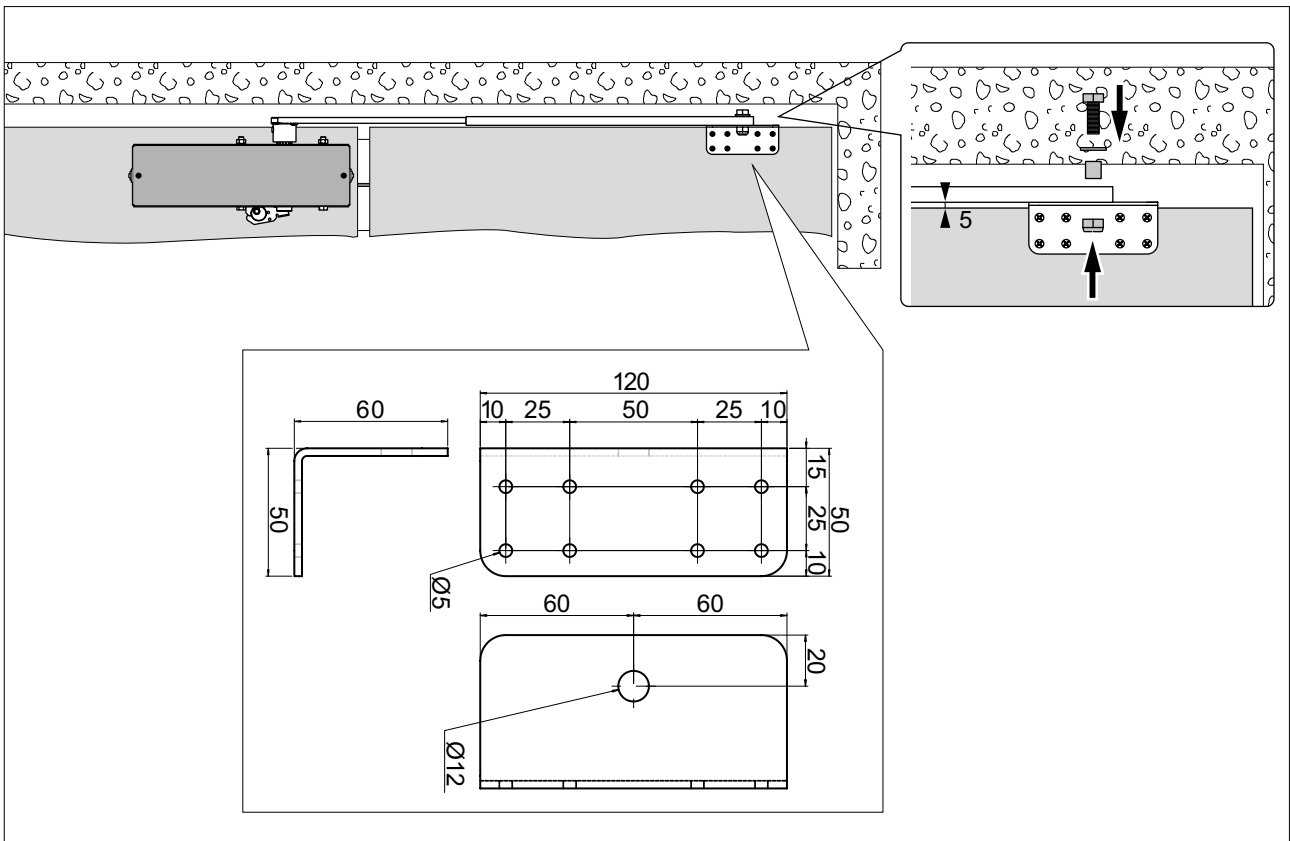
- Secure the mounting plate to the wing as shown in figure.



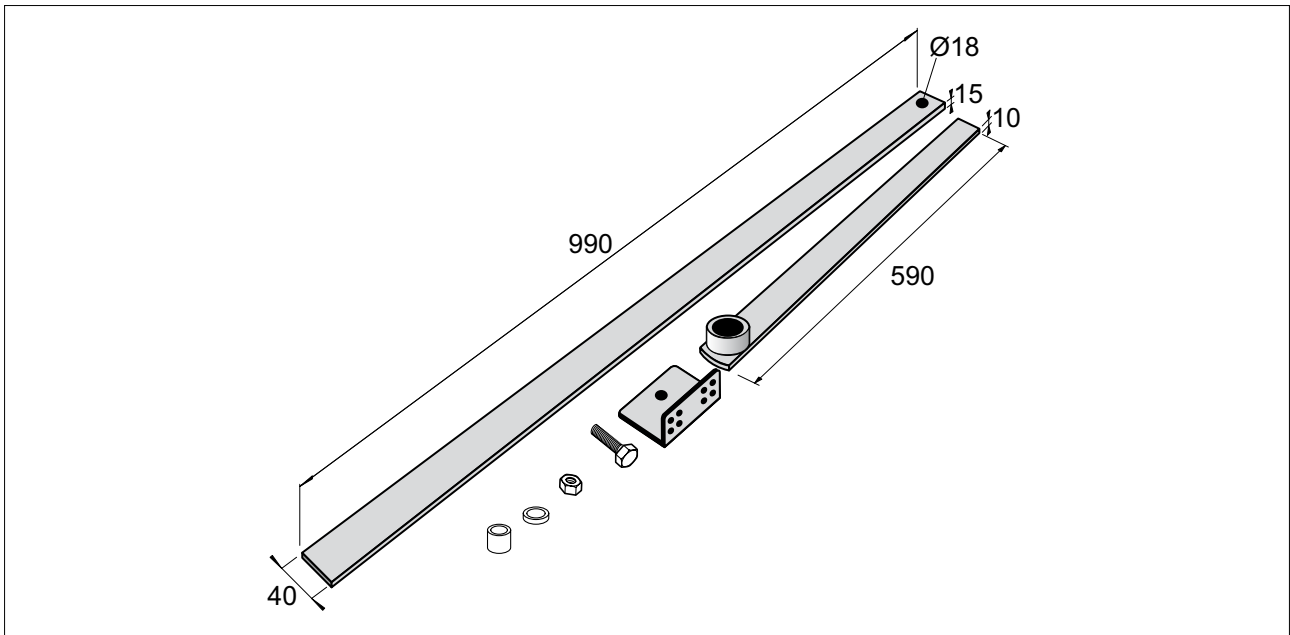
- Install the geared motor on to the mounting plate.

**ATTENTION:** The geared motor shaft must always be turned upwards, facing the hinge between the two wings.





- With the door open determine the mounting position of the arm on the wing, see figure on page 8.
- Shorten the tube and if necessary the rod depending on the previously determined mounting positions (geared motor shaft [E] and wing [C]).  
**WARNING:** after the tube has been fit in all the way, ensure that it does not knock against the rod's bush or that the rod's head does not knock against the screw that secures it to the wing (min. 5 mm).
- Mount the arm DORBD and lubricate the rod.



- Release the geared motor by pulling the cord and securing it in the release position (see RELEASE INSTRUCTION).
- Perform a manual maneuver to ensure that the movement is devoid of obstacles or friction and that the arm stays horizontal.
- Re-lock the geared motor.

### 5.3 Limit switch installation and adjustment (optional)

- Connect the limit switch wire fastons to the microswitches. Arrange the limit switch wires neatly inside the microswitch box [1] and route the wire out through the appropriate opening.
- Fit the two cams [3] on to the cam ring without tightening the screws.
- Install the cam ring on the driving shaft and screw down screw [4] without tightening.
- Secure the microswitch box [1] to the geared motor.
- (Fig. 2-3) With gate closed, manually rotate the cam ring [2] so as to have the closing microswitch pressed down and the opening microswitch released.

**WARNING:** check that between the geared motor and the limit switch cams there is a gap of at least 1 mm.

- (Fig. 2-3) With gate open, check that the opening microswitch is pressed down.

**NOTE:** if the opening microswitch is not pressed down, move the cam on to hole [A].

- Upon setting being completed, tighten the cam screws.
- Connect limit switches as shown in fig. 2 (for motors opening clockwise) or in fig. 3 (for motors opening anticlockwise).

**NOTE:** follow VIVAH control panel instructions manual to connect.

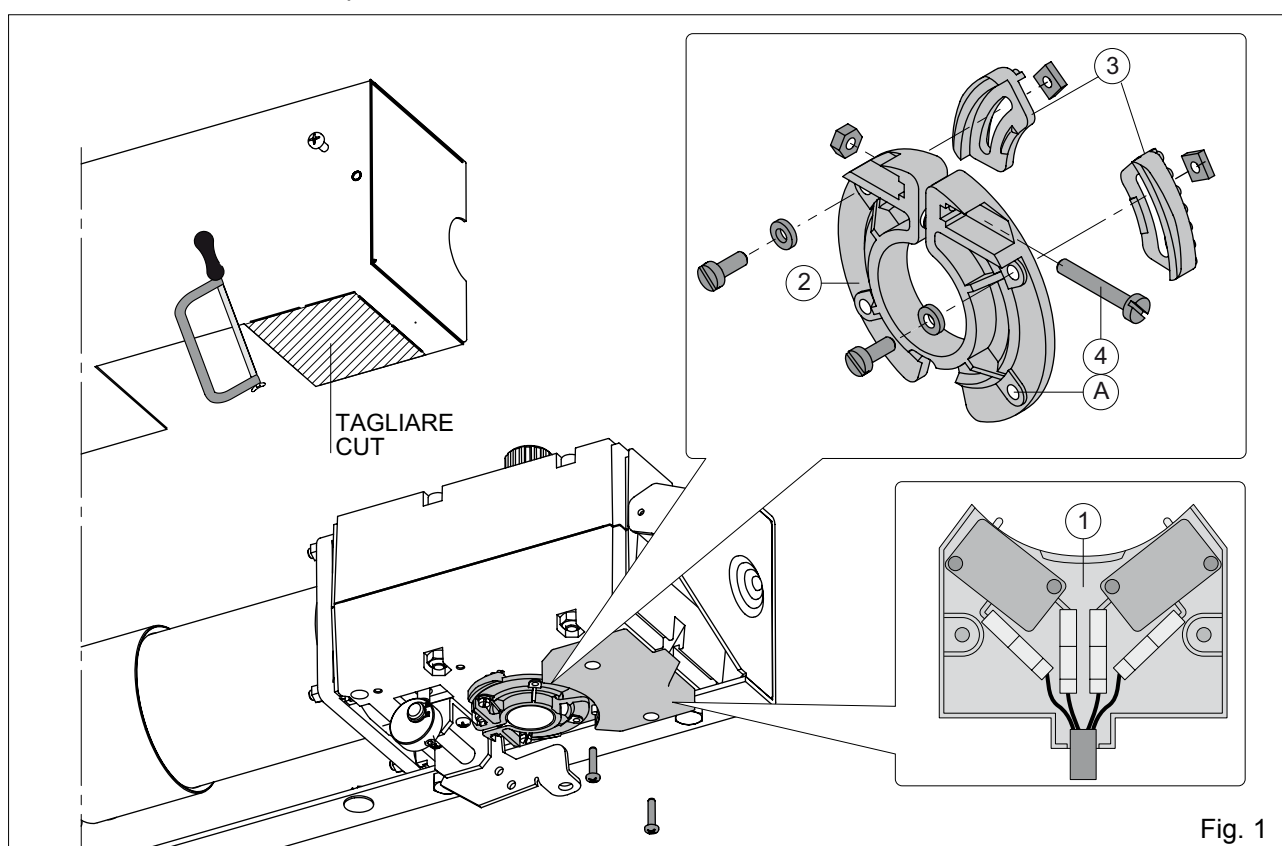


Fig. 1

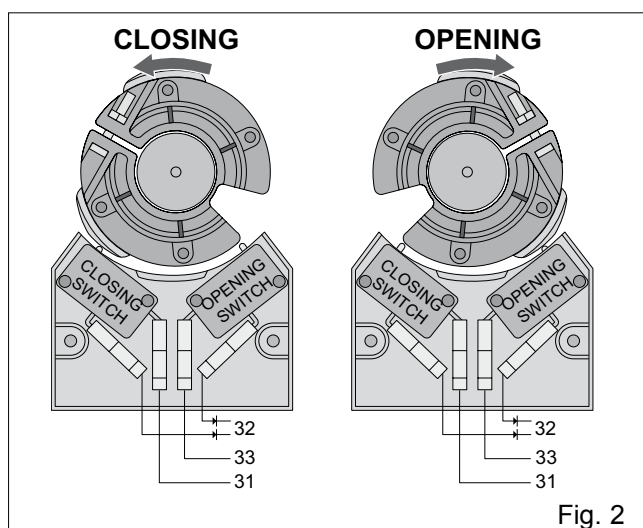


Fig. 2

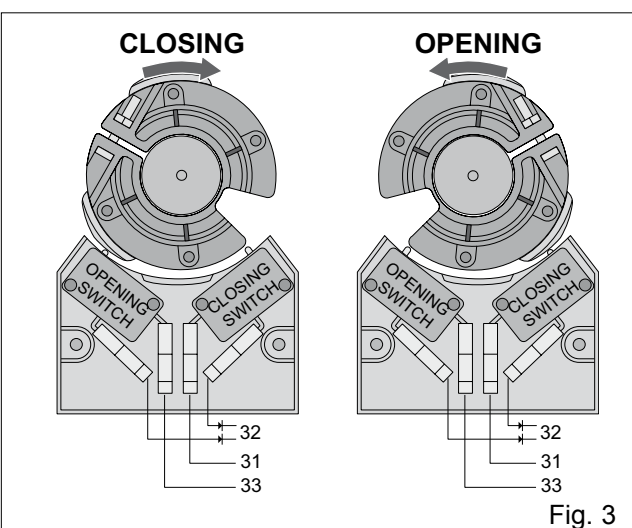


Fig. 3

## 6. ELECTRICAL CONNECTIONS

Before connecting the power supply, make sure the plate data correspond to that of the mains power supply. An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply. Check that upstream of the electrical installation there is an adequate residual current circuit breaker and a suitable overcurrent cutout.

The electrical connections and starting of the DOR gearmotor are illustrated in the VIVAH control panel installation manual.

## 7. ROUTINE MAINTENANCE PLAN

Perform the following operations and checks every 6 months according to intensity of use of the automation.

Without 230 V~ power supply and batteries if present:

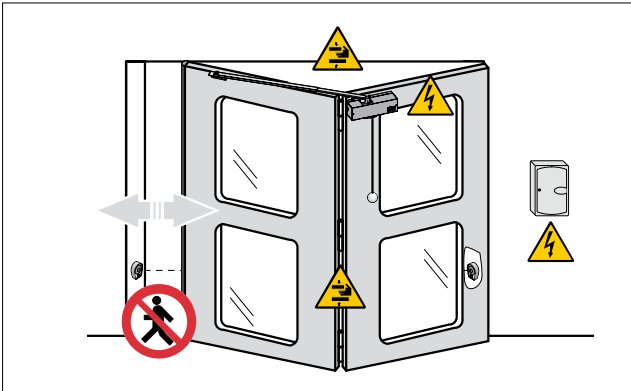
- Clean and lubricate the gate's rotation pins and hinges with neutral grease.
- Check the resistance of the fixing points.
- Check the good conditions of the electric connection.
- Check the value of the capacity of the motor capacitor.

Reconnect the 230 V~ power supply and batteries if present:

- Check the power adjustment.
- Check that all commands and safety functions are operating correctly (photocells).
- Check that the release system is working correctly.
- Check that the batteries are working correctly (in continuity) if the VIVAH control panel with battery kit is present, by switching off the power supply and performing several manoeuvres.



**WARNING:** For spare parts, see the spares price list.



### 8.1 General safety precautions

The following precautions are an integral and essential part of the product and must be supplied to the user. Read them carefully since they contain important information on safe installation, use and maintenance.

These instructions must be kept and forwarded to all possible future users of the system.

This product must only be used for the specific purpose for which it was designed.

Any other use is to be considered improper and therefore dangerous.

The manufacturer cannot be held responsible for any damage caused by improper, incorrect or unreasonable use.

Avoid operating in the proximity of the hinges or moving mechanical parts.

Do not enter within the operating range of the motorized door while it is moving.

Do not block the movement of the motorized door since this may be dangerous.

Do not allow children to play or stay within the operating range of the motorized door.

Keep remote controls and/or any other control devices out of the reach of children in order to avoid possible involuntary activation of the motorized door.

In the event of fault or malfunctioning of the product, turn off the power supply switch, do not attempt to repair or intervene directly and contact only professionally competent personnel.


Failure to comply with the above may cause a dangerous situation.

All cleaning, maintenance or repair work must be carried out by professionally competent personnel.

To ensure that the system works efficiently and correctly, the manufacturer's indications must be complied with and routine maintenance of the motorized door must be performed by professionally competent personnel.

In particular, regular checks are recommended in order to verify that the safety devices are operating correctly.

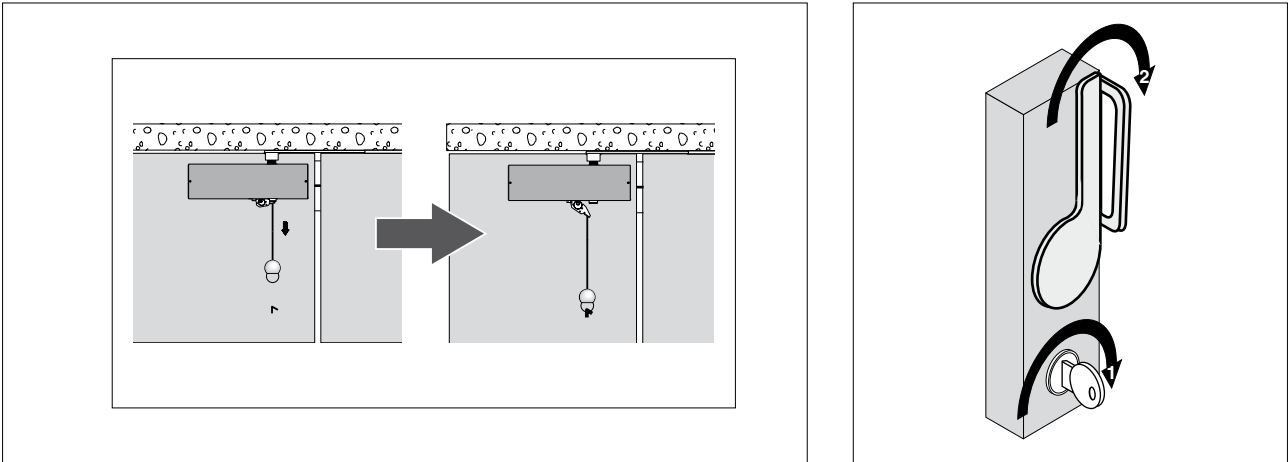
All installation, maintenance and repair work must be documented and made available to the user.

 For the correct disposal of electric and electronic equipment, waste batteries and accumulators, the user must take such products to the designated municipal collection facilities.



## 8.2 Manual release instructions

In case of faulty operation or power failure, pull the release cord downwards and secure it by means of the appropriate ring (when the DEB04 handle is present work on it). To return to normal operation, release the ring and leave the cord free. The release pin will automatically return to the lock position.



**WARNING:** the door wing block and release operations must be performed with the motor idle.

DETACH AND DELIVER TO THE CUSTOMER



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