

EC MACHINE DIRECTIVE COMPLIANCE DECLARATION

(DIRECTIVE 89/392 EEC, APPENDIX II, PART B)

Manufacturer: FAAC S.p.A.

Address: Via Benini, 1 - 40069 Zola Predosa BOLOGNA - ITALY

Hereby declares that: the 550 automation system

- is intended to be incorporated into machinery, or to be assembled with other machinery to constitute machinery in compliance with the requirements of Directive 89/392 EEC, and subsequent amendments 91/368 EEC, 93/44 EEC and 93/68 EEC;
- complies with the essential safety requirements in the following EEC Directives:

73/23 EEC and subsequent amendment 93/68 EEC.
89/336 EEC and subsequent amendments 92/31 EEC and 93/68 EEC.

and furthermore declares that unit must not be put into service until the machinery into which it is incorporated or of which it is a component has been identified and declared to be in conformity with the provisions of Directive 89/392 EEC and subsequent amendments enacted by the national implementing legislation.

Bologna, 1 January 2001

Managing Director
A. Bassi



IMPORTANT NOTICE FOR THE INSTALLER

GENERAL SAFETY REGULATIONS

- IMPORTANT! FAAC strongly recommends to follow these instructions carefully for the safety of persons. Improper installation or misuse of the product will cause very serious damages to persons.**
- Read the instructions carefully before installing the product.
- Packaging materials (plastic, polystyrene etc.) are a potential hazard and must be kept out of reach of children.
- Keep these instructions for future reference.
- This product has been designed and manufactured only for the use stated in this manual. Any other use not expressly set forth will affect the reliability of the product and/or could be source of hazard.
- FAAC S.p.A. cannot be held responsible for any damage caused by improper use or different from the use for which the automation system is destined to.
- Do not use this device in areas subject to explosion: the presence of flammable gas or fumes is a serious hazard.
- Mechanical constructive elements must comply with UNI 8612, EN 12604 and EN 12605 standards.
Countries outside the EC shall follow the regulations above besides their national normative references in order to offer the utmost safety.
- Faac cannot be held responsible for failure to observe technical standards in the construction of gates and doors, or for any deformation of the gates which may occur during use.
- Installation must comply with UNI 8612, EN 12453 and EN 12445.
- Before carrying out any operations, turn off the system's main switch.
- An omnipower switch shall be provided for the installation with an opening distance of the contacts of 3 mm or more. Alternatively, use a 6A thermomagnetic breaker with multi-pole switching.
- Ensure that there is a differential switch up-line of the electrical system, with a trip threshold of 0.03 A.
- Check that the earthing plant is in perfect condition and connect it to the metallic parts. Also earth the yellow/green wire of the operator.
- The automation is fitted with an anti-crush safety system that is a torque control device. In any case, further safety devices shall be installed.
- The safety devices (EN 12978 standard) protect areas where there is a **mechanical movement hazard**, e.g. crushing, entrapment and cutting.
- Each installation must be fitted with at least one flashing light (e.g. FAAC LAMP, MINILAMP, etc.) as well as a warning plate suitably fixed to the gate, besides the safety devices as per point 16 above.
- Faac cannot be held responsible regarding safety and correct functioning of the automation in the event that parts other than Faac original parts are used.
- Use only Faac original spare parts for maintenance operations.
- Do not carry out any modifications to automation components.
- The installer must supply all information regarding manual operation of the system in the event of an emergency and provide the end-user with the "End-user Guide" attached to the product.
- Do not allow children or adults to stand near the product during operation.
- Keep out of reach of children the remote radio controls and any control devices. The automation could be operated unintentionally.
- The end-user must avoid any attempt to repair or adjust the automation personally. These operations must be carried out exclusively by qualified personnel.
- 25) What is not explicitly stated in these instructions is not permitted.**

AUTOMATION SYSTEM 550 & 550 MPD

These instructions apply to the following models:

550 I - 550 Slave

The FAAC 550 automation system is designed to operate residential counterbalanced up-and-over garage doors.

It consists of an electromechanical operator, a control unit with courtesy light and a protective cover integrated into a single unit to be mounted on the garage door panel using the relevant accessories.

The irreversible system locks the door mechanically when the motor is not running, so a lock is not required. A manual release device allows the door to be operated in the case of a power failure or malfunction.

Anti-crushing safety is assured by an adjustable electronic device.

The 550 automation system allows two operators (550 I + 550 Slave) to be installed on the same door.

The 550 automation system has been designed and constructed for vehicle access control. Do not use for any other purpose.

1. DESCRIPTION AND TECHNICAL SPECIFICATIONS

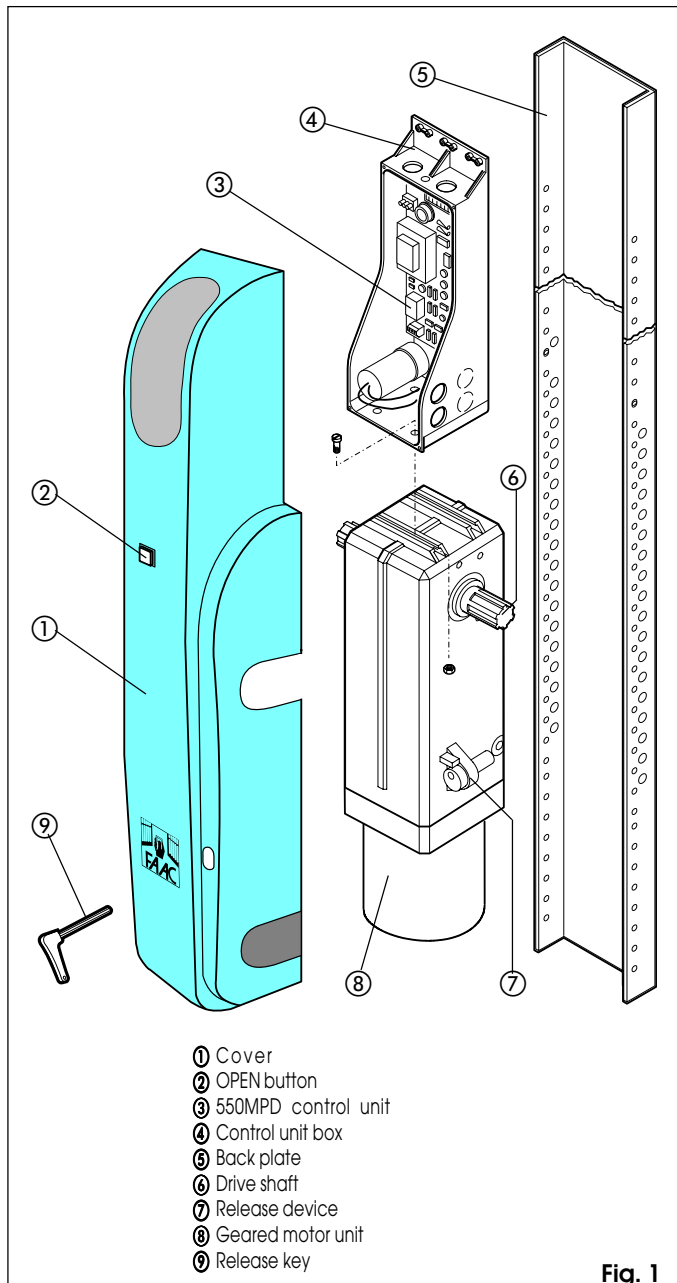


Fig. 1

TABLE 1 550 OPERATOR TECHNICAL SPECIFICATIONS

MODEL	550
Power supply	230VAC - 50Hz
Power consumption (W)	360
Max. torque (Nm)	300
Angular velocity (°/sec)	12
Duty cycle (cycles/hour)	15 (without limit switch) 25 (with limit switch)
Temperature range	-20 ÷ +55°C
Geared motor weight (kg)	13
Housing protection	IP 31 IP 44 (with Kit)
Max. door width (m)	3 (1 operator) 4 (2 operators)
Max. door height (m)	2.7 (1 operator) 3 (2 operators)
Max. door weight (kg/m ²)	10
Clutch	electronic
Control unit	550MPD
Geared motor dimensions LxHxD(mm)	see fig.2
Technical characteristics of electric motor	
Speed (rpm)	1400
Reduction ratio	1 :700
Thermal cutout on winding	135 °C
Power (W)	350
Current draw (A)	1.5
Surge capacitor	8µF
Power supply	230VAC - 50Hz

2. DIMENSIONS

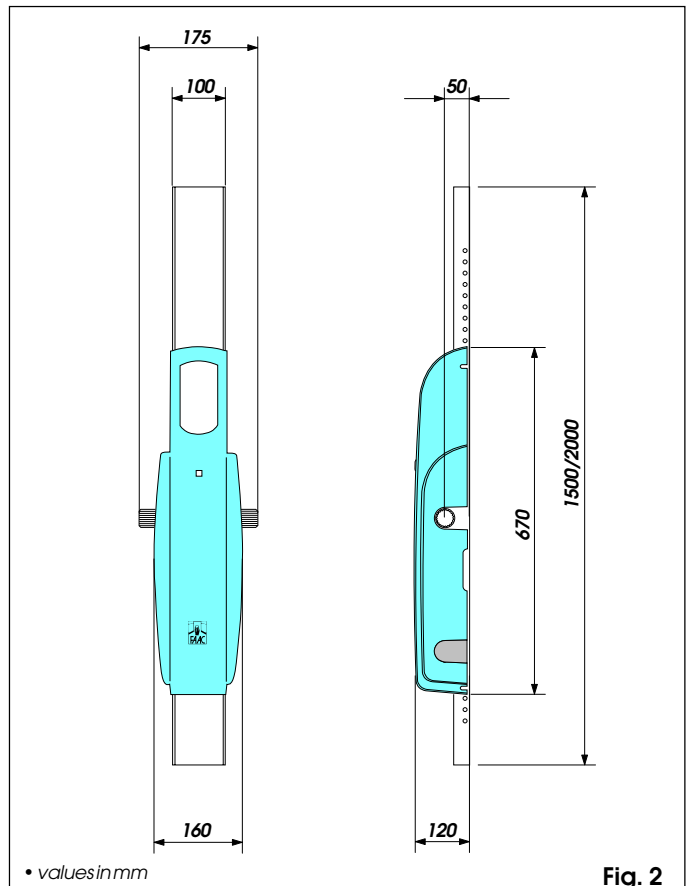
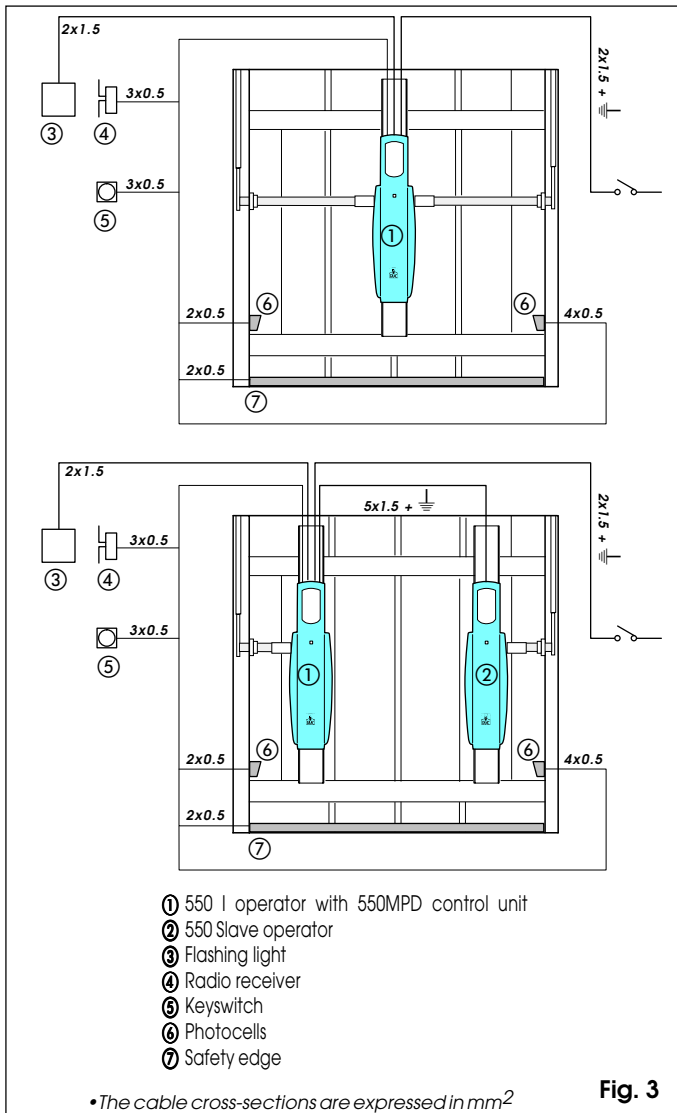


Fig. 2

3. ELECTRICAL INSTALLATION LAYOUT (standard system)



4. INSTALLING THE AUTOMATION SYSTEM

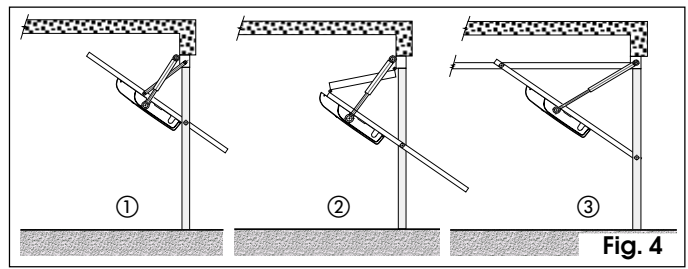
4.1. PRELIMINARY CHECKS

To ensure safe, proper operation of the automation system, check the following:

- The door's structure must be suitable for automation. Make particularly sure that dimensions of the door meet the requirements given in the technical specifications and that the door is sufficiently robust.
- Check the condition of the door bearings and joints.
- Check that the door moves smoothly. If necessary clean the tracks and lubricate them with a silicone based lubricant. Do not use grease.
- Check that the door is correctly balanced.
- Remove the mechanical door locks so that when the door is closed it is locked only by the automation system.
- Check that there is an effective earth connection for the geared motor.

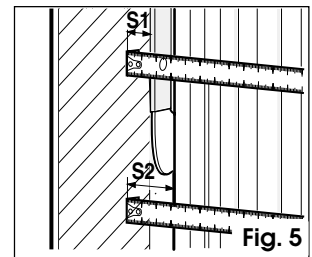
The 550 automation system is designed to operate various types of counterbalanced up-and-over garage doors. Fig. 4 shows the most common types:

- ① single section outward swinging
- ② double section outward swinging
- ③ single section inward swinging with horizontal tracks



4.2. POSITIONING TELESCOPIC ARMS

The gap between the existing balancing arm and the frame (distance "S1" in Fig. 5) must be at least 15 mm to allow the straight telescopic arms to rotate correctly. If not, it is possible to use curved telescopic arms which can be installed over the top of existing balancing arms. Check that the gap between the door panel and the frame is at least 20 mm (distance "S2" in Fig. 5).

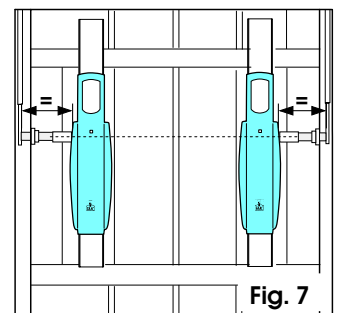
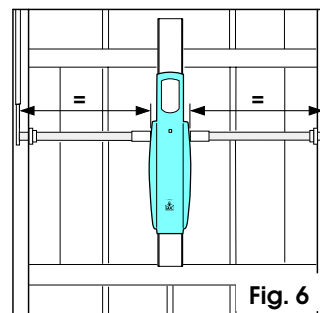


4.3. POSITIONING OPERATOR/BACK PLATE

In accordance with the measurements given in Table 1, install either a single operator (550 I) at the centre of the door as shown in Fig. 6 or two operators (one 550 I and one 550 Slave) at the sides of the door as shown in Fig. 7.

The operator 550 is designed so that the geared motor unit can be installed with the drive shaft at two different heights (see section 6).

The following instructions apply to both assembly options, although they refer specifically to installation of the operator with the geared motor unit as it is delivered from the factory.

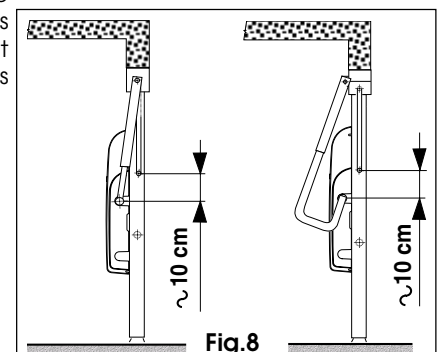


4.4. ASSEMBLY SEQUENCE

Begin installation with the garage door closed and the operator released (see chapter 7).

1) Determine the position of the operator shaft as follows:

- **single section outward swinging garage door (Fig. 8)**
 When the door is closed, the axis of rotation of the drive shaft must be about 10 cm lower than the axis of rotation of the door. The telescopic arms must be attached as close as possible to the point where the door arm is fixed.



• **double section garage door (Fig. 9)**

When the door is closed, the axis of rotation of the drive shaft must be about 10 cm below the axis of rotation of the door hinge (A).

The telescopic arms must be attached as close as possible to the point where the hinges are fixed to the door (B).

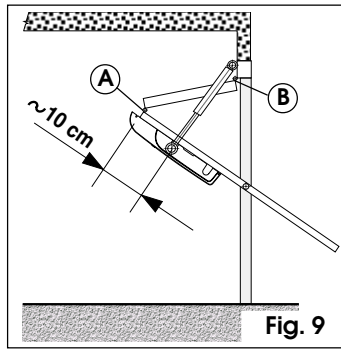


Fig. 9

• **garage door with horizontal guides (Fig. 10)**

The axis of rotation of the drive shaft must be halfway between the two bearings. The telescopic arms must be attached as close as possible to the point where the upper and vertical guides meet.

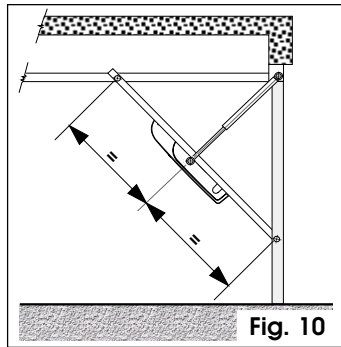


Fig. 10

2) Fix the back plate to the reinforcement ribbing of the door panel using suitable screws for the door's structure. It is advisable to use nuts and bolts.

➤ Position the back plate in such a way that the last section without Ø 4mm holes (approximately 20 cm) is facing upwards.

➤ The back plate has a series of Ø 8mm holes which, when it is fixed, allow the operator to be installed at various heights.

Check that the fixing position of the back plate allows the operator to be installed in accordance with the previously determined shaft position.

In double operator installations, both shafts must be aligned at the same height.

3) Fix the operator to the back plate using the nuts and bolts provided, as shown in Fig. 11.

4) Weld the upper telescopic arm fixing brackets in the position described in the instructions for the specific type of garage door.

In the case of curved arm installation, the brackets can be welded directly to the existing door arms.

Fix the outer profiles of the telescopic arms to the brackets using the pins and the nuts and bolts provided, as shown in Fig. 11.

5) Fit the transmission shafts firmly onto the drive shaft and cut them to size as shown in Figs. 6 and 7.

➤ If limit switches are used (optional), first fit the cams as shown in Fig. 11.

6) Mount the brackets on the transmission shafts and fasten them to the door panel using screws, taking care to maintain perfect alignment.

7) Tighten the grub screws on the transmission shaft bushings.

8) Open the garage door and adjust the length of the telescopic arms as follows:

• **straight arms (Fig. 12)**

Place the telescopic arm in position as shown in figure 12.

Cut the outer profile of the telescopic arm at point A.

Cut the inner profile at point B.

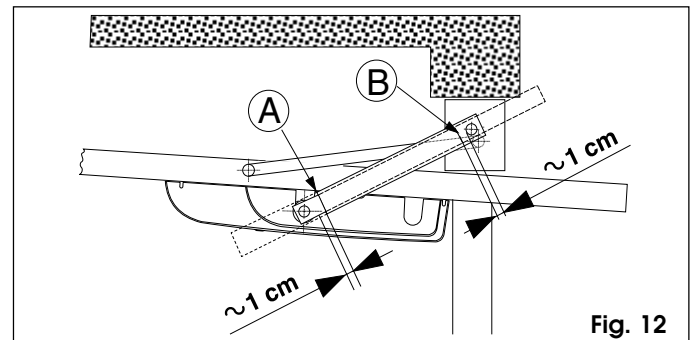


Fig. 12

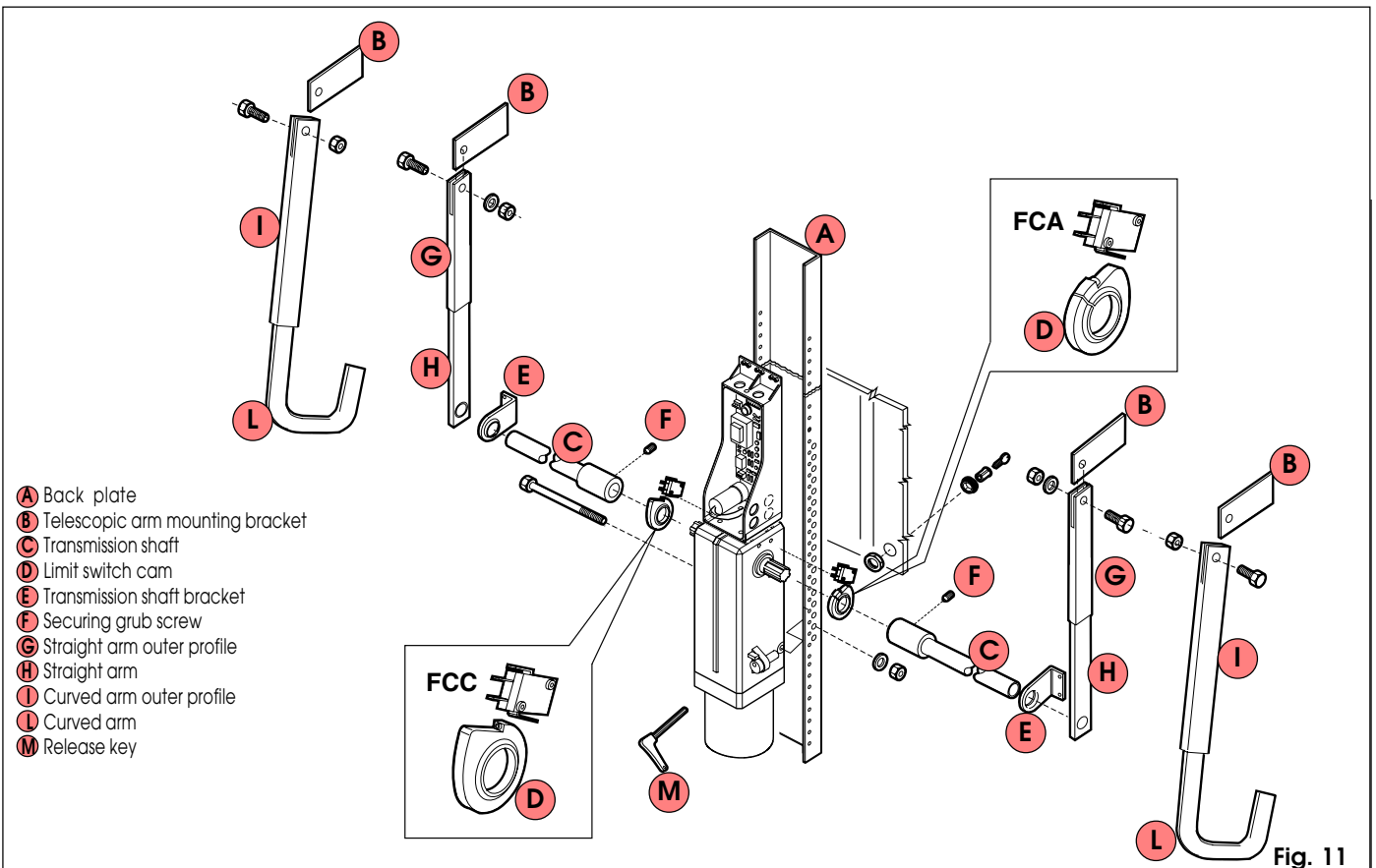
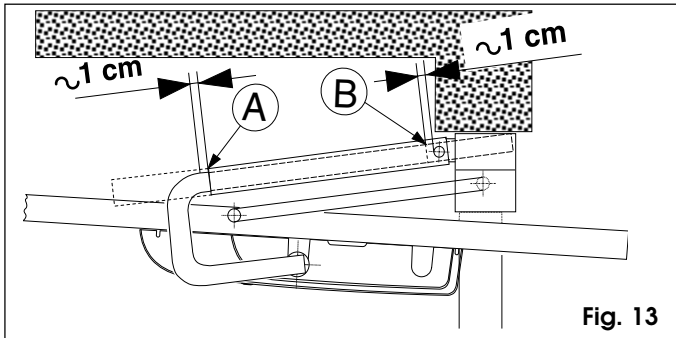


Fig. 11

• **curved arms (Fig. 13)**

Place the telescopic arm in position as shown in figure 13.
Cut the outer profile of the telescopic arm at point A.
Cut the inner profile at point B.
➤ Leave a gap of about 1 cm at the ends of both profiles.



9) Fit the inner profile of the telescopic arm to the transmission shaft and weld securely.

4.5. ADJUSTING THE COUNTERWEIGHTS

On completing mechanical installation, check whether the door has become unbalanced by the weight of the operator and accessories.

If necessary, change the counterweights.

For optimum balancing, the door should remain in equilibrium in an intermediate position (45°) with the operator released.

Also check that the door opens and closes smoothly without jerky or irregular movements.

5. START-UP

5.1. CONTROL BOARD CONNECTION

➤ Before attempting any work on the control board (connections, programming, maintenance), always turn off power.

Important: High voltage could be present when disconnecting the J2 terminal board.

Observe points 10, 11, 12, 13 and 14 of the GENERAL SAFETY OBLIGATIONS.

Observing the indications in Fig.3, install the raceways and make the electric connections from the 550 MPD control board to the selected accessories.

Always separate power cables from control and safety cables (push-button, receiver, photocells, etc.). To prevent any electric noise whatever, use separate sheaths.

5.1.1. 550MPD CONTROL BOARD

The 550MPD control board (supplied with the 550 I package) is able to command both operators in case of double application. Instead of the control board, the 550 Slave has an interface electronic card on which the courtesy lamp is fitted.

TABLE 2 550 MPD OPERATING PARAMETERS

Logic	automatic/semi-automatic
Pause time	programmable from 0 to 4 min. (default 2 min.)
Operating time	programmable from 0 to 59 sec. (default 20 sec.)
Max torque at thrust	Yes/No
Fail safe	Yes/No
Pre-flashing	programmable from 0 to 10 sec. (default 0 sec.)
Electronic clutch	programmable on 8 levels
Limit-switch tripping modes	4 types of operation
Courtesy timer	programmable from 0 to 4 min. (default 30 sec.)
Safety devices tripping modes	3 types of operation

TABLE 3 HARDWARE CHARACTERISTICS 550MPD

Power supply	230VAC - 50Hz
Max. absorbed power	12VA
Motors max. load	800W
Power supply for accessories	24Vdc
Accessories max. load	300mA
Operating ambient temperature	- 20°C + 55°C
Protection fuses	mains circuit / accessories
Rapid connector	- for decoding cards or RP receivers -
Terminal boards	pull-out
Terminal board inputs	Open / Stop / Closing safety devices
	Opening safety devices / Opening limit-switch / Closing limit-switch
Terminal board outputs	flashing lamp 230VAC - 60W
	motor
	outside courtesy lamp 230 VAC 24 Vdc accessories power supply
Max. load of built-in courtesy lamp	25W
Max. load of outside courtesy lamp	250W

5.1.2. LAY OUT OF 550MPD CONTROL BOARD

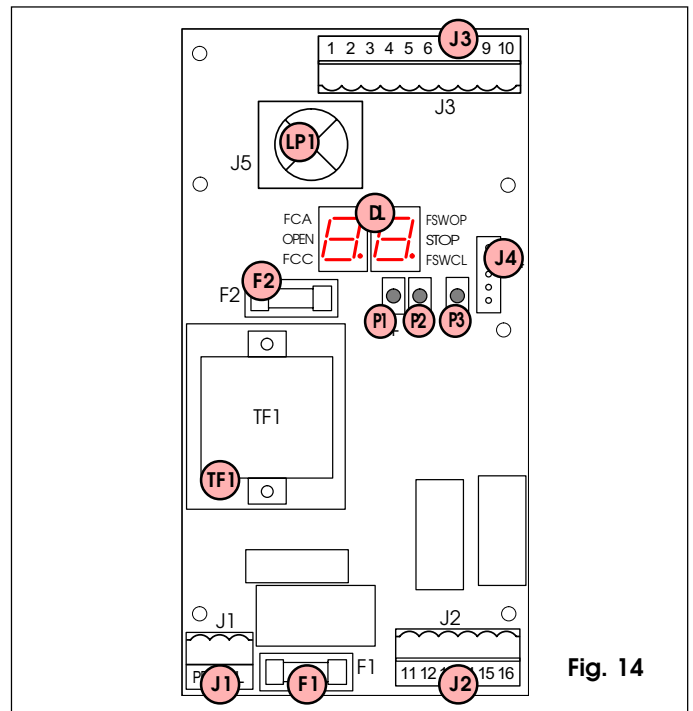


TABLE 4 550 MP CONTROL BOARD COMPONENTS

F1	Fuse F1 5x20 5A/250V (mains circuit)
F2	Fuse F2 5x20 500mA/250V (accessories)
TF1	Transformer
LP1	Courtesy lamp 25W 220VE14
DL	Display
J1	230VAC power supply input terminal board
J2	Motor output terminal board, flashing lamp and outside courtesy lamp
J3	Low voltage input/accessories terminal board
J4	Rapid connector for decoding cards/RP receivers
P1	"+" programming key
P2	"-" programming key
P3	"F" programming key

5.1.3. ELECTRIC CONNECTIONS

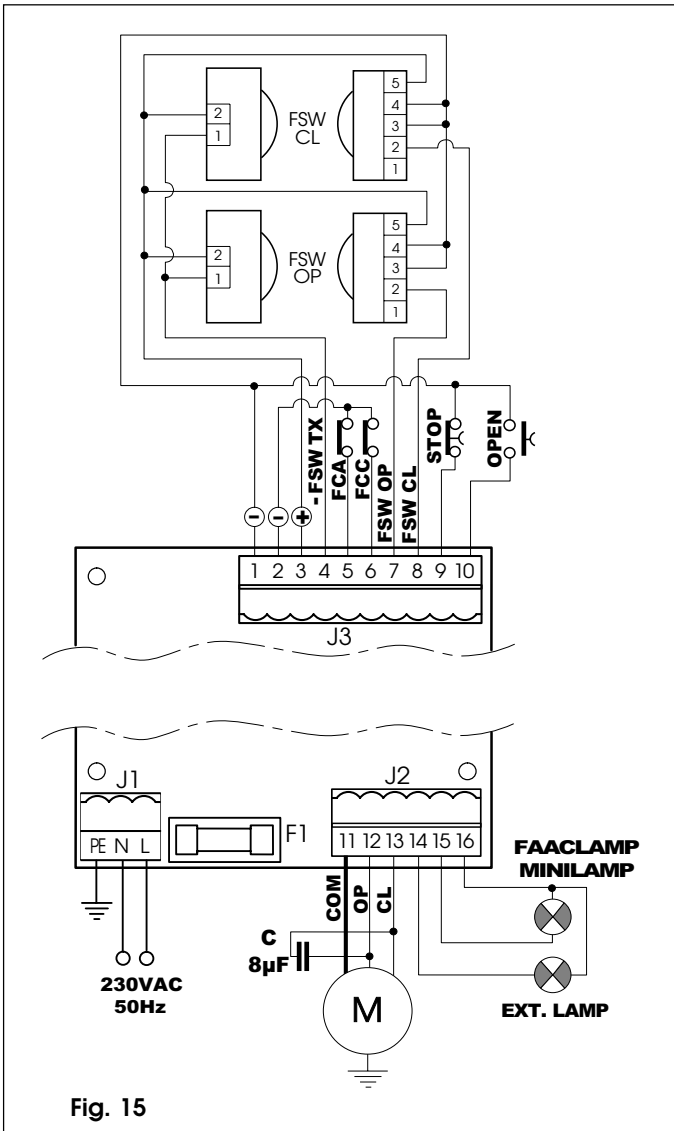


Fig. 15

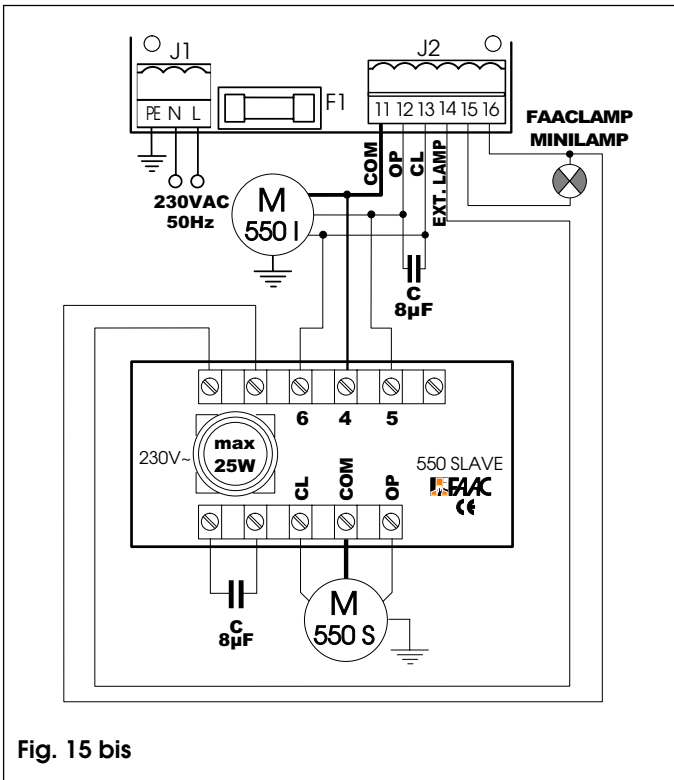


Fig. 15 bis

5.2. DESCRIPTION

5.2.1. TERMINAL BOARD J1 (high voltage)

Terminal board for power supply 230V ~ 50Hz (L=Phase N=Neutral). Connect the earth wire of the electric system and the earth wire of the operator to the "PE" terminal.

5.2.2. TERMINAL BOARD J2 (high voltage)

230V ~ terminal board for connection of:

Motor: connect motor phases (Black and Brown wires) to the OP and CL terminals, connect the common (Blue wire) to the COM terminal. Connect the thrust capacitor in parallel to the phases.

Flashing lamp: connect a flashing lamp with max. power of 60W between terminals 15 and 16.

Courtesy lamp: connect the courtesy lamp of the 550 Slave or the outside courtesy lamp with max. power of 250W between terminals 14 and 16.

5.2.3. TERMINAL BOARD J3 (low voltage)

1 = ⊖ Accessories supply input/Negative common.

2 = ⊖ Accessories supply input/Negative common.

3 = ⊕ Positive for powering 24 Vdc (+) accessories

Max. load of accessories: 300 mA.

To calculate absorption values, refer to the instructions for individual accessories.

4 = -FSW TX = Negative for power supply to photocell transmitters.

Separate connection of the transmitters negative enables use of Failsafe control on the photocells, thus increasing the system's safety level.

5 = FCA = Opening limit-switch contact (N.C.)

The opening limit-switch (optional) consists of a microswitch which, when activated by the cam as the door reaches open position, stops movement according to programming.

6 = FCC = Closing limit-switch contact (N.C.)

The closing limit-switch (optional) consists of a microswitch which, when activated by the cam as the door reaches closed position, stops movement according to programming.

⊕ If safety devices are not connected, jumper connect "FCC" and "FCA" to the inputs Common.

7 = FSW OP = Opening safety devices contact (N.C.)

Safety devices are all devices (photocells, sensitive edges,...) with N.C. contact, which, if there is an obstacle in the area they protect, operate to stop or reverse door opening movement (see chapter 5.3.2. - Advanced programming).

They have no effect during closing.

If the opening safety devices are engaged with the door closed, they inhibit any Open pulse.

To install several safety devices, connect the N.C. contacts in series.

⊕ If opening safety devices are not connected, jumper connect "FSW OP" to "-FSW TX".

8 = FSW CL = Closing safety devices contact (N.C.)

Safety devices are all devices (photocells, sensitive edges,...) with N.C. contact, which, if there is an obstacle in the area they protect, operate to reverse door closing movement. They have no effect at opening, with the exception of the Ad function (see chapter 5.3.2. - Advanced programming).

If the closing safety devices are engaged with the door open they inhibit any Open pulse.

To install several safety devices, connect the N.C. contacts in series.

⊕ If closing safety devices are not connected, jumper connect "FSW CL" to "-FSW TX".

9 = STOP = STOP Command (N.C.)

This is any device (e.g. a push-button) which, by opening a contact, stops door movement.

To install several stop devices, connect the N.C. contacts in series.

➔ If stop devices are not connected, jumper connect "STOP" to the inputs Common.

10 = OPEN = OPEN Command (N.O.)

This is any device (a push-button, a detector,...) which, by closing a contact, supplies an opening (or closing) pulse to the door.

To install several Open devices, connect N.O. contacts in parallel.

5.2.4. CONNECTOR J4 (low voltage)

Connector J4 is used for rapid connection of MINIDEC, DECODER cards and RP RECEIVERS.

Install by fitting the auxiliary cards so that their components side faces the inside of the 550MPD control board.

Insert and remove the cards after cutting power.

5.2.5. SIGNALLING LEDs

The control board has a two-digit display. If out of the "PROGRAMMING" mode, this display is used to indicate status of inputs. Fig. 16 shows how the horizontal segments (we'll call these LEDs from now on) of the display exactly correspond to the inputs.

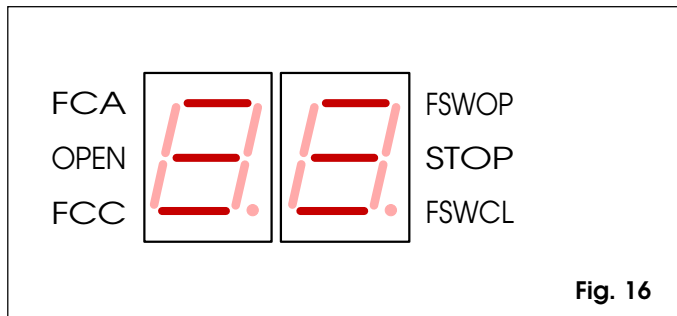


Fig. 16

The table below shows the status of LEDs related to the status of the inputs.

Note the following: **LED LIGHTED** = contact closed
LED OFF = contact open

TABLE 3 STATUS OF LEDS

LED	LIGHTED	OFF
OPEN	opening command active	opening command inactive
STOP	stop command inactive	stop command active
FSWOP	opening safety devices disengaged	opening safety devices engaged
FSWCL	closing safety devices disengaged	closing safety devices engaged
FCA	opening limit-switch free	opening limit-switch engaged
FCC	closing limit-switch free	closing limit-switch engaged

5.3. PROGRAMMING

To program operation of the automated system, you have to access the "PROGRAMMING" mode.

Programming is split into two parts: BASIC and ADVANCED.

5.3.1. BASIC PROGRAMMING

To access BASIC PROGRAMMING, press key **F**:

- if you press it (and hold it down), the display shows the name of the first function.
- if you release the key, the display shows the value of the function that can be modified with keys + and -.
- if you press **F** again (and hold it down), the display shows the name of the next function, etc.
- when you reach the last function, press **F** to exit the program, and the display resumes showing the status of the inputs.

The following table shows the sequence of functions accessible in BASIC PROGRAMMING:

BASIC PROGRAMMING		
Display	Function	Default
LO	FUNCTION LOGICS: H = Automatic (see tab. 5 and 6) E = Semiautomatic	E
t	OPERATING TIME: Adjustable from 0 to 59 sec.	20
PA	PAUSE TIME: This has effect only if the automatic logic was selected. Adjustable from 0 to 59 sec. in one-second steps. Subsequently, display changes to minutes and tens of seconds (separated by a point) and time is adjusted in 10-second steps, up to the maximum value of 4, 1 minutes. E.g. if the display shows 2.5, pause time is 2 min. and 50 sec.	2.0
FO	ELECTRONIC CLUTCH: This limits the maximum thrust of the operator. Adjustable from 1 (minimum force) to 8 (maximum force)	4
ln	Exit from programming and return to display of inputs status.	

5.3.2. ADVANCED PROGRAMMING

To access ADVANCED PROGRAMMING, press key **F** and, as you hold it down, press key + :

- if you release key +, the display indicates the name of the first function.
- if you release key **F** too, the display shows the value of the function that can be modified with keys + and -.
- if you press key **F** (and hold it down), the display shows the name of the next function, and if you release it, the value that can be modified with keys + and - is shown.
- when you reach the last function, press **F** to exit the program, and the display resumes showing the status of the inputs.

The following table shows the sequence of functions accessible in ADVANCED PROGRAMMING:

ADVANCED PROGRAMMING +		
Display	Function	Default
LP	COURTESY LIGHT: Sets ON (lighted) time of the courtesy lamp. Adjustable from 0 to 59 sec. in one-second steps. Subsequently, display changes to minutes and tens of seconds (separated by a point) and time is adjusted in 10-second steps, up to the maximum value of 4, 1 minutes. E.g. if the display shows 2.5, ON (lighted) time is 2 min. and 50 sec.	30
bo	MAXIMUM TORQUE AT THRUST: 4 = Active no = Disabled	4

Display	Function	Default
FS	FAILSAFE (safety devices operation check): y = Active no = Disabled	no
PF	PRE-FLASHING of flashing lamp: Adjustable from 0 to 10 sec. in one-second steps.	0
FC	LIMIT-SWITCH TRIPPING MODE: Sets operation of the motor when the limit-switches are reached (optional): nd = FCA/FCC : Stops immediately S = FCA/FCC : Stops after a 3-sec. deceleration F = FCA : Stops immediately FCC : Stops after 3. sec at full speed SF = FCA : Stops after a 3-sec. deceleration FCC : Stops after a 2-sec. deceleration + 1-sec. closing stroke	nd
PH	SAFETY DEVICES TRIPPING MODE: Sets operation of motor when safety devices are engaged: St = FSWOP stops the opening movement which, after disengagement, resumes opening. FSWCL reverse the closing movement. Ad = when the up-and-over door is closed, open or locked and FSWCL is engaged, the Open pulse activates the flashing lamp and movement begins only when FSWCL ⁽¹⁾ is disengaged. During movement, FSWOP reverses and FSWCL locks and reverses at disengagement ⁽¹⁾ . CL = FSWOP reverses opening movement, FSWCL reverses closing movement. <small>(1) when pre-flashing is selected, movement begins after pre-flashing time has elapsed.</small>	CL
In	Exit from programming and return to display of inputs status.	

TABLE 5 LOGIC A (Automatic)

DOOR STATUS	PULSES			
	OPEN	STOP	CLOSING SAFETY DEVICES	OPENING SAFETY DEVICES
CLOSED	opens and closes after pause time (1)	no effect (disables opening)	no effect (excluding Ad function)	no effect (disables opening)
OPEN ON PAUSE	re-counts pause time	stops pause time count	no effect (disables closing)	no effect
CLOSING	reverses movement	locks	reverses movement	no effect
OPENING	no effect	locks	no effect	see Programming
LOCKED	closes (1)	no effect (disables closing)	no effect (disables closing)	no effect

TABLE 6 LOGIC E (Semi-automatic)

DOOR STATUS	PULSES			
	OPEN	STOP	CLOSING SAFETY DEVICES	OPENING SAFETY DEVICES
CLOSED	opens (1)	no effect (disables opening)	no effect (excluding Ad function)	no effect (disables opening)
OPEN	closes (1)	no effect (disables closing)	no effect (excluding Ad function)	no effect
CLOSING	reverses movement	locks	reverses movement	no effect
OPENING	locks	locks	no effect	see Programming
LOCKED	closes (1)	no effect (disables closing)	no effect (disables closing)	no effect

(1) when pre-flashing is selected, movement begins after pre-flashing time has elapsed.

5.4. AUTOMATED SYSTEM TEST

Notes on operation :

- The 550MPD control board effects an electronic control (motor must be connected) before every start. If you try to make the control board operate without any motor load or insufficient load, no power is supplied at motor output.
- The courtesy light is activated when the motor starts and stays lighted for the programmed time as soon as movement finishes.

5.4.1. ROTATION DIRECTION CHECK

- 1) Cut power to the system.
- 2) Move the door by hand to mid-open position.
- 3) Lock the operator (see chapter 8)
- 4) Power up.
- 5) Send an opening pulse (OPEN) and check if the motor opens the door.

If the door closes, reverse the phases of the electric motor (brown and black wires) on the control board terminal board. For the two-operator application, assign the same wiring colour code to the "COM, OP, CL" terminals of the 550MPD control board and the 550 Slave card, and if you have to reverse phases, reverse them for both motors.

5.4.2. SETTING OPERATING TIME

In "Basic Programming", set an operating time enabling the electric motor to receive power for a few seconds after the door reaches the mechanical stops. This setting is also the maximum time for reaching the limit-switches (optional).

5.4.3. SETTING PAUSE TIME

If using the Automatic logic, pause time can be adjusted by accessing "Basic Programming".

5.4.4. ADJUSTING THE ELECTRONIC CLUTCH (ANTI-CRUSHING)

The 550MPD control board is supplied with an electronic system for adjusting motor torque, which (according to adjustment) limits door thrust in the event of any obstacles. After the obstacle is removed, the door resumes moving either until it reaches the limit-switch or when operating time has elapsed. To adjust, access "Basic Programming". Adjust the electronic clutch in compliance with current standards.

5.4.5. ADJUSTMENT OF LIMIT SWITCHES (OPTIONAL)

Open the door as far as required, then turn the cam until it just trips microswitch FCA (Fig.11). Close the door, then turn the cam until it just trips microswitch FCC (Fig.11). Tighten the screws on the cams.

5.4.6. MOUNTING COVER

Connect the OPEN cable to the button on the operator cover. Fasten the cover in place by tightening the four screws at the sides. Push the 2 plastic caps onto the side slots on the cover not used by the operator shaft. Push the plastic cap onto the unused front slot on the cover for gaining access to the release system.

6. MOUNTING GEARED MOTOR UNIT

Depending on requirements, the geared motor unit can be mounted in two different ways:

- With the drive shaft at the top (Fig. 17)
The card support is fixed to the geared motor by means of 4 bolts which engage with nuts inserted in the guides.
- With the drive shaft at the bottom (Fig. 18)
The card support is fixed to the electric motor cap by means of 4 screws.

The cover is designed for both applications (note that in the two cases the release device is located in different positions). There are also two tabs for fixing the power cable to the clear light fixture (Fig. 19).

Figs.17-18 also show the recommended layout for routing and fixing the cables in the card support.

7. MANUAL OPERATION

The operator 550 is equipped with an emergency release device that can be operated from inside the garage. On request, a lock can be fitted to the door panel which allows the release device

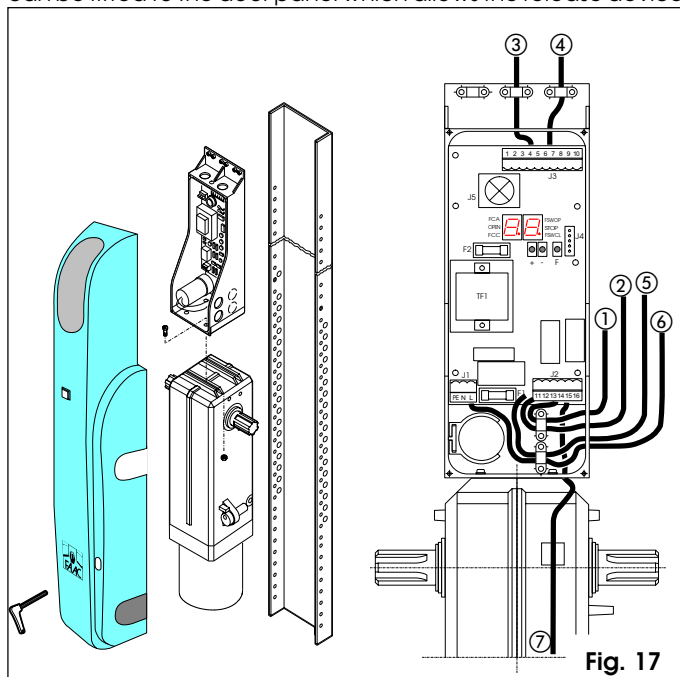


Fig. 17

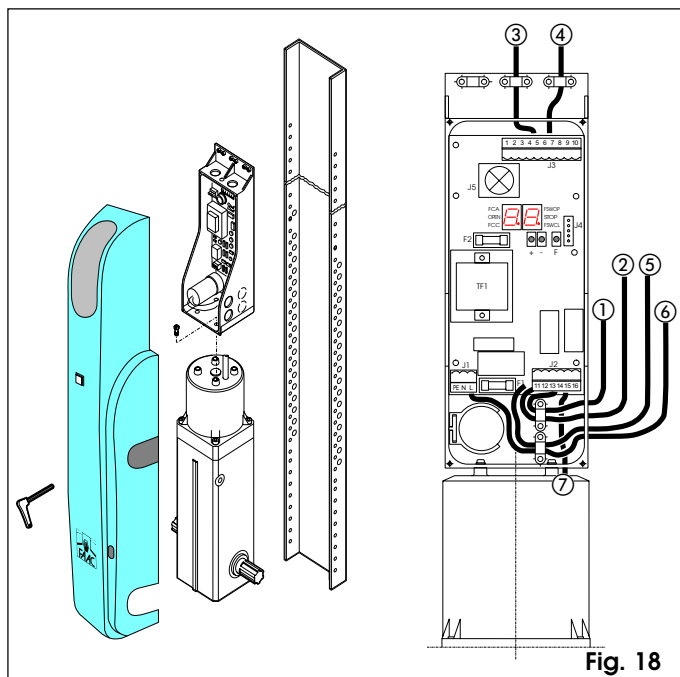


Fig. 18

KEY TO CABLES

- ① Flashing light
- ② External courtesy light
- ③ OPEN button on cover
- ④ Low-voltage connections
- ⑤ 550 Slave motor
- ⑥ 230V - power supply
- ⑦ 550 I motor

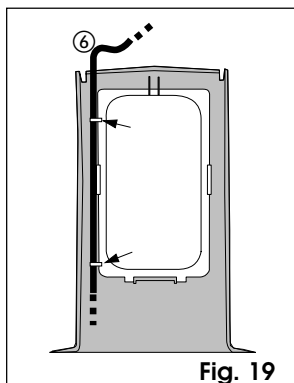


Fig. 19

to be operated also from outside the garage. If the door has to be operated manually due to a power failure or a malfunction of the automation system, operate the release device as follows:

- From inside (Fig. 20)

Insert the hex wrench provided and turn clockwise about half a turn until the stop is reached.

Warning: depending on the type of installation, the release device may be on the right (A) or left (B).

- From outside (Fig.21)

- 1) Open the safety door and insert the wrench.
- 2) Turn anticlockwise as far as possible and remove the lock unit.
- 3) Insert the hex wrench provided and turn anticlockwise about

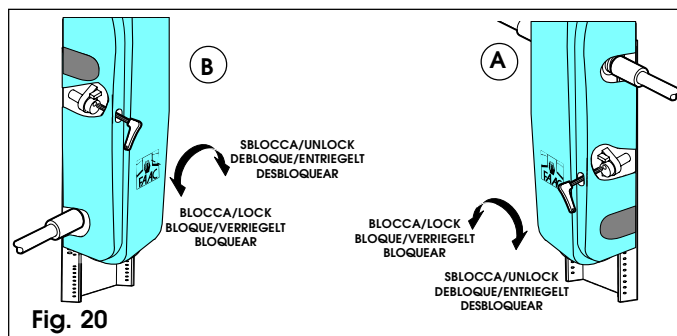


Fig. 20

half a turn until the stop is reached.

8. RETURNING TO NORMAL OPERATION

To prevent an accidental movement from activating the door during the operation, disconnect the power supply from the system before locking the operator again.

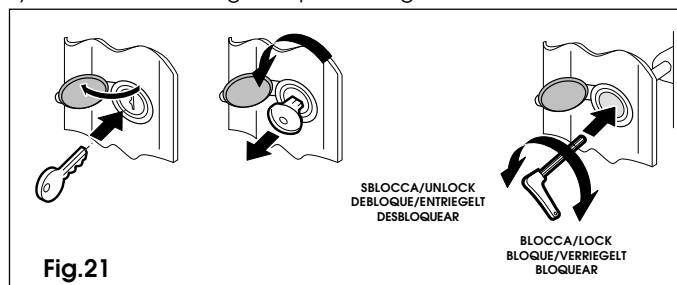


Fig. 21

- From inside (Fig.20)

Insert the hex wrench provided and turn anticlockwise about half a turn until the stop is reached.

Note: depending on the type of installation, the release device may be on the right (A) or the left (B).

- From outside (Fig.21)

- 1) Insert the hex wrench provided and turn clockwise about half a turn until the stop is reached.
- 2) Remove the hex wrench and insert the lock unit.
- 3) Turn the wrench clockwise so that it can be removed; close the safety door again.

9. MAINTENANCE

Carry out the following operations at least every six months:

- Check that the motor torque is set correctly.
- Check the door's rollers and sliding guides; clean and lubricate if necessary.
- Check the efficiency of the release system.
- Check the efficiency of the safety devices.

10.REPAIRS

For repairs contact authorised FAAC Service Centres.

User's guide

550 AUTOMATION SYSTEM

Read the instructions carefully before using the product and keep for future reference.

GENERAL SAFETY RULES

If correctly installed and operated, the 550 automation systems ensure a high level of safety.

However, some simple rules should be followed to avoid accidents:

- Do not stand underneath the garage door.
- Do not stand in the vicinity of the automation or allow anyone else, especially children, to do so and do not place objects in the vicinity of the automation. This is particularly important during operation.
- Keep remote controls and other control devices out of the reach of children to prevent them from accidentally operating the door.
- Do not allow children to play with the automation.
- Do not deliberately obstruct the movement of the door.
- Make sure that branches or bushes do not interfere with the movement of the door.
- Keep the luminous signalling systems efficient and clearly visible.
- Do not attempt to operate the door manually without first releasing it.
- In the event of a malfunction, release the gate to allow access and call a qualified technician for service.
- After setting manual operation, disconnect the electricity supply from the system before returning to normal operation.
- Do not make any modifications to components belonging to the automation system.
- Do not attempt to perform any repair work or tamper with the automation. Call FAAC qualified personnel for repairs.
- At least once every six months have the automation, the safety devices and the earth connection checked by a qualified technician.

DESCRIPTION

The 550 automation system is ideal for operating residential counterweighted up-and-over garage doors.

It consists of an electromechanical operator, a control unit with courtesy light and a protective cover integrated into a single unit to be mounted on the garage door panel using the relevant accessories.

The irreversible system locks the door mechanically when the motor is not running, so a lock is not required. A manual release device allows the door to be operated in the event of a power failure or malfunction.

Anti-crushing safety is assured by an adjustable electronic device. The 550 automation system allows two operators (550 I + 550 Slave) to be installed on the same door.

The door is normally closed. When the control unit receives an opening signal via the radio control or another control device, it activates the electric motor which rotates the door to the open position to allow access.

If automatic operation has been set, the door closes again after the selected pause time.

If semiautomatic operation has been set, a second signal must be given to close the door again.

Giving an opening signal while the door is opening always causes the door to stop moving.

Giving an opening signal while the door is closing causes the door to reverse its direction of movement.

A stop signal (if available) always stops the door.

Ask the installation engineer if you need further information on operation of the door in the various operating logics.

The automation systems may include safety devices (photocells) which prevent the door from closing when an obstacle lies within the area they are protecting.

The 550 automation systems are provided as standard with an anti-crushing safety device which limits the torque transmitted to the door.

The door can be opened manually by using the release system. The light flashes to indicate that the gate is moving.

The courtesy light comes on when the motor starts and remains on for about 30 seconds after it has stopped.

MANUAL OPERATION

The 550 operator is equipped with an emergency release device that can be operated from inside the garage. On request, a lock can be fitted to the door panel to allow the release device to be operated from outside.

If the door has to be operated manually due to an electric power failure or malfunction of the automation, use the release device as follows:

- From inside (Fig. 1)

Insert the hex wrench provided and turn it about half a turn clockwise until it stops.

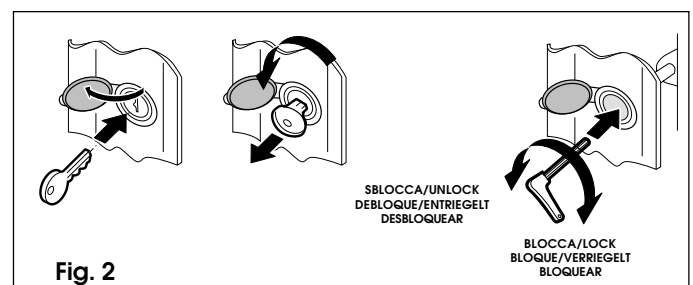
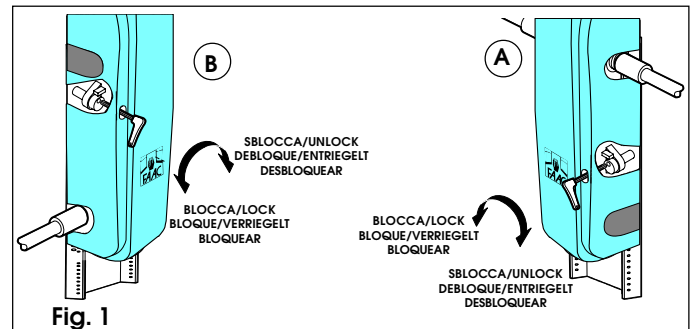
Note: depending on the type of installation, the release device may be on the right (A) or left (B).

- From outside (Fig. 2)

1) Open the safety door and insert the wrench.

2) Turn anticlockwise as far as possible and remove the lock unit.

3) Insert the hex wrench provided and turn anticlockwise about half a turn until the stop is reached.



RETURNING TO NORMAL OPERATION

To prevent an accidental movement from activating the door during this operation, disconnect the power supply from the system before locking the operator again.

- From inside (Fig. 1)

Insert the hex wrench provided and turn anticlockwise about half a turn until the stop is reached.

Note: depending on the type of installation, the release device may be on the right (A) or the left (B).

- From outside (Fig. 2)

1) Insert the hex wrench provided and turn clockwise about half a turn until the stop is reached.

2) Remove the hex wrench and insert the lock unit.

3) Turn the wrench clockwise so that it can be removed; close the safety door again.