

EC MACHINE DIRECTIVE COMPLIANCE DECLARATION

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

Manufacturer: FAAC S.p.A.

Address: Via Benini, 1
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BOLOGNA - ITALY

Hereby declares that: the 620 SR 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:

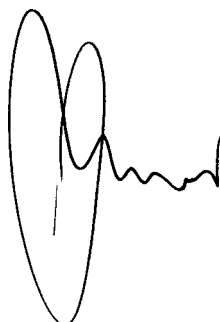
73/23 EEC and subsequent amendment 93/68 EEC.
89/336 EEC and subsequent amendments 92/31 EEC and 93/68 EEC.

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 1997

Managing
Director

A. Bassi

A handwritten signature in black ink, consisting of a large, stylized loop followed by a series of smaller, connected strokes.

IMPORTANT NOTICE FOR THE INSTALLER

GENERAL SAFETY REGULATIONS

- 1) **WARNING! FAAC strongly recommends to follow these instructions literally for the safety of persons. Improper installation or misuse of the product will cause very serious damages to persons.**
- 2) Packaging material (plastic, polystyrene etc.) is a potential hazard and must be kept out of reach of children.
- 3) Read the instructions carefully before installing the product.
- 4) Keep these instructions for future reference.
- 5) 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.
- 6) 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.
- 7) Do not use this device in areas subject to explosion: the presence of flammable gas or fumes is a serious hazard.
- 8) Mechanical constructive elements must comply with UNI8612, CEN pr EN 12604 and CEN pr EN 12605 standards.
Countries outside the EC shall follow the regulations above besides their national normative references in order to offer the utmost safety.
- 9) 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.
- 10) Installation must comply with UNI8612, CEN pr 12453 and CEN pr EN 12635.
The degree of safety of the automation must be C + D.
- 11) Before carrying out any operations, turn off the system's main switch.
- 12) 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.
- 13) Ensure that there is a differential switch up-line of the electrical system, with a trip threshold of 0.03A.
- 14) 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.
- 15) 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.
- 16) The safety devices (e.g. photocells, safety edges, etc.) protect areas wherethere is a **mechanical movement hazard**, e.g. crushing, entrapment and cutting.
- 17) 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.
- 18) 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.
- 19) Use only FAAC original spare parts for maintenance operations.
- 20) Do not carry out any modifications to automation components.
- 21) 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 leaflet attached to the product.
- 22) Keep out of persons when the product is in operation.
- 23) Keep out of reach of children the remote radio controls and any control devices. The automation could be operated unintentionally.
- 24) 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 SYSTEMS 620 SR & 625 MPS

The automation system consists of a white aluminium beam with red reflectors and a cathaphoresis treated steel housing with polyester or AISI 304 stainless steel finish. The housing contains the operator, which consists of a hydraulic power unit and two pistons which actuate the rotation of the beam by means of a rocker arm. A spring mounted on one of the pistons balances the beam. The housing also contains the electronic control unit, which is fitted in a watertight container. The system has an adjustable anti-crushing safety system and a convenient manual release device to be used in the event of a power failure or malfunction.

Automation systems 620 SR & 625 MPS have been designed and manufactured to control the access of vehicles.

No other use is allowed.

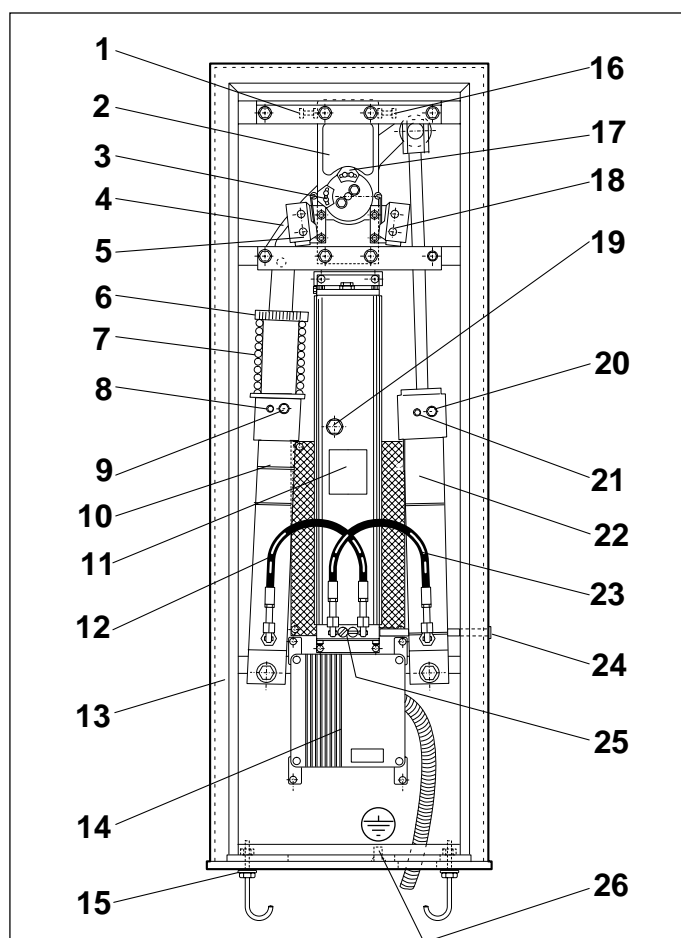


Fig. 1

- | | |
|-------------------------------------------|---------------------------------------------|
| 1 Left-hand stroke mechanical stop | 14 625 MPS electronic control unit |
| 2 Drive transmission group | 15 Base plate |
| 3 Left-hand stroke limit adjustable cam | 16 Right-hand stroke mechanical stop |
| 4 Rocker arm | 17 Right-hand stroke limit adjustable cam |
| 5 Left-hand limit switch | 18 Right-hand limit switch |
| 6 Balance adjuster nut | 19 Thermal probe |
| 7 Balance spring | 20 Right-hand deceleration regulating screw |
| 8 Left-hand piston bleeder screw | 21 Right-hand piston bleed screw |
| 9 Left-hand deceleration adjustment screw | 22 Right-hand piston |
| 10 Left-hand piston | 23 Right-hand connecting pipe |
| 11 Hydraulic power unit | 24 Unlocking lever |
| 12 Left-hand connecting pipe | 25 Torque regulating bypass screws |
| 13 Housing | 26 EARTH connection screw |

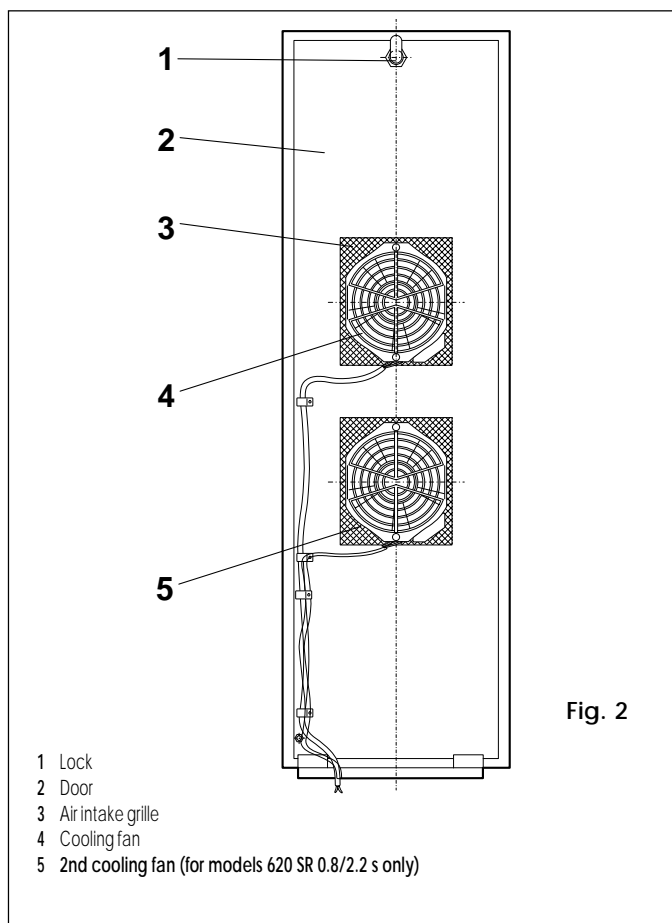


Fig. 2

- | |
|------------------------------------------------------|
| 1 Lock |
| 2 Door |
| 3 Air intake grille |
| 4 Cooling fan |
| 5 2nd cooling fan (for models 620 SR 0.8/2.2 s only) |

1. DESCRIPTION AND TECHNICAL CHARACTERISTICS

Table 1 Technical characteristics of barrier

BARRIER MODEL	620 SR 0.8/0.8s	620 SR 0.8/2.2 s
Max. beam length (m)	3	3
Max. opening time (s)	0.8	0.8
Max. closing time (s)	0.8	2.2
Pump flow rate (l/min.)	3	3
Max. torque (Nm)	75	
Types of beams	Rectangular - Round - Round pivoting	
Duty cycle	100%	
Power supply	230V- (+6 -10 %) 50Hz	
Absorbed power (W)	220	
Oil type	FAAC OIL XD 220	
Oil quantity (l)	2.5	
Motor winding thermal cutout	120° C	
Anti-crushing system	bypass valves as standard	
Temperature range	-20 ÷ +55 °C	
Casing protective treatment	cataphoresis	
Casing finish	RAL 2004 polyester/stainless steel	
Housing protection	IP 44	
Weight (kg)	80	
Housing dimensions WxHxD (mm)	see figure 4	
Technical characteristics of electric motor		
Speed (rpm)	2800	
Power (W)	200	
Current drawn (A)	1	
Power supply	230V- (+6 -10 %) 50Hz	

2. STANDARD INSTALLATION LAYOUT

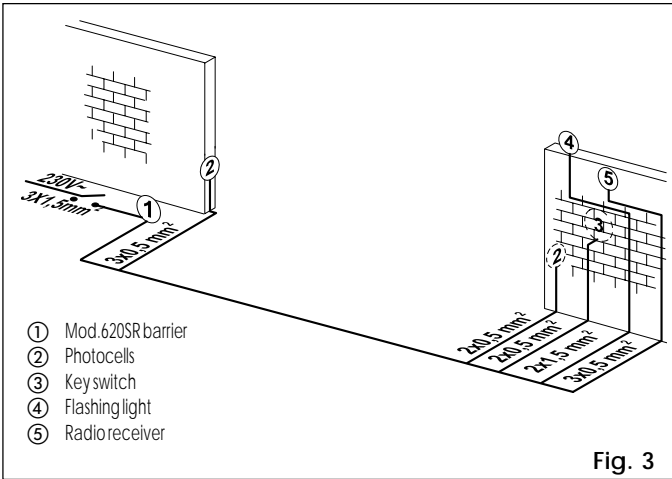


Fig. 3

Notes:

- 1) Use suitable rigid and/or flexible conduits for installation of the electrical cables.
- 2) Always route the low voltage accessory connection cables separately from the 230 V~ power supply cables. Use separate sheaths to avoid any interference.

3. DIMENSIONS

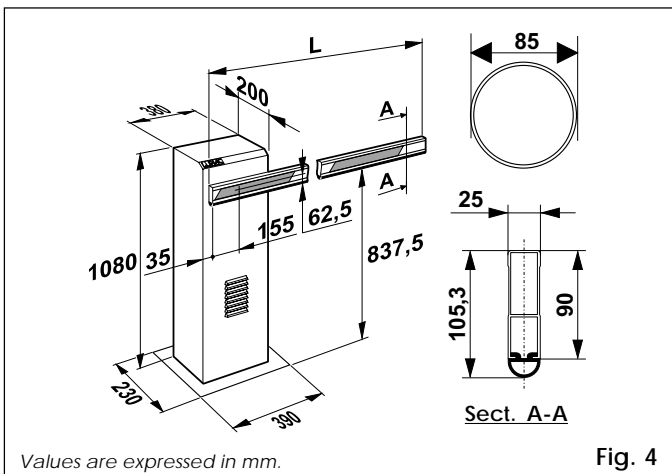


Fig. 4

4. INSTALLING THE SYSTEM

4.1. PRELIMINARY CHECKS

For safe, correct operation of the automation system, make sure that the following requirements are met:

- During its movement the beam does not strike against obstacles or overhead power cables.
- The characteristics of the ground must ensure sufficient support for the foundation plinth.
- There must be no pipes or electrical cables in the area to be dug for installing the foundation plinth.
- If the housing is located in a vehicle transit area, it is a good idea to provide protection against accidental collisions.
- Check that the housing is provided with an efficient earth connection.

4.2. INSTALLING THE BASE PLATE

- 1) Assemble the base plate as shown in Figure. 5.
- 2) Prepare a foundation plinth as shown in Fig. 6 (for soft ground).
- 3) Install the base plate as shown in Figure 6, providing one or more conduits for electrical cables. Use a level to check that the plate is perfectly horizontal and wait for the cement to set.

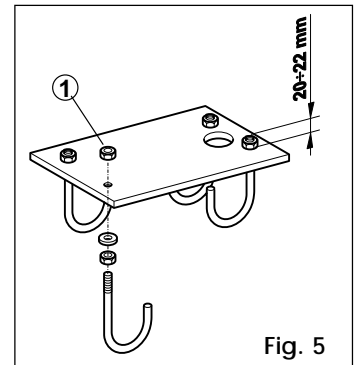


Fig. 5

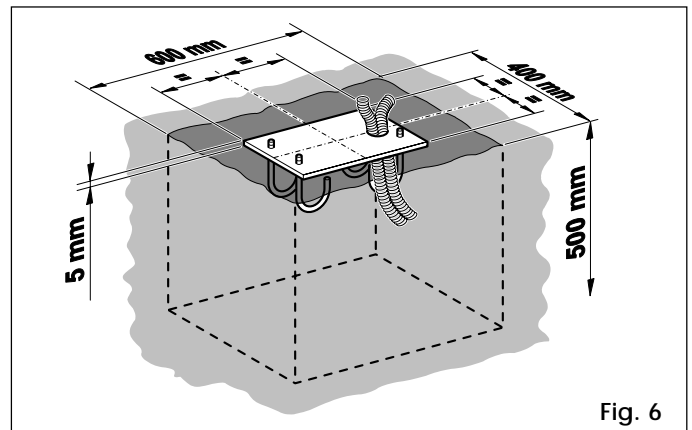


Fig. 6

4.3. MECHANICAL INSTALLATION

- 1) Undo the 4 nuts (1, fig 5) and fasten the housing to the base plate as shown in fig.7. The housing should normally be installed with the door on the premises side.
- 2) Set up the operator for manual operation as described in section 6.
- 3) **Remove the breather screw as shown in Figure 8 and keep it in a safe place.**
- 4) Assemble the beam using the screws supplied, as shown in Figures 9, 10 and 11.

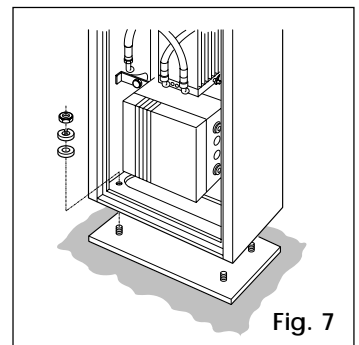


Fig. 7

- The pivoting beam must be levelled as shown in fig. 12. To mount the sensor (electrical barrier lock), refer to fig. 13. The rubber strip on the rectangular beam must be oriented towards the closing direction.
- 5) Adjust the mechanical stops for opening and closing strokes as shown in Figure 14 (1 and 2). Check beam balancing as described in paragraph 4.4.

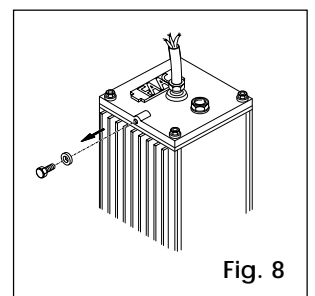


Fig. 8

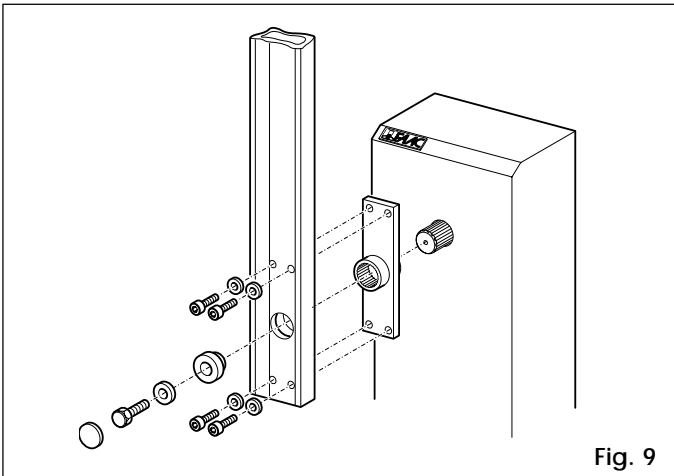


Fig. 9

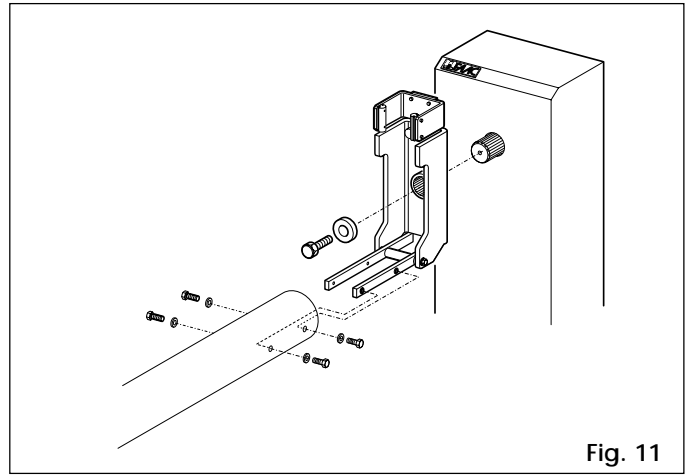


Fig. 11

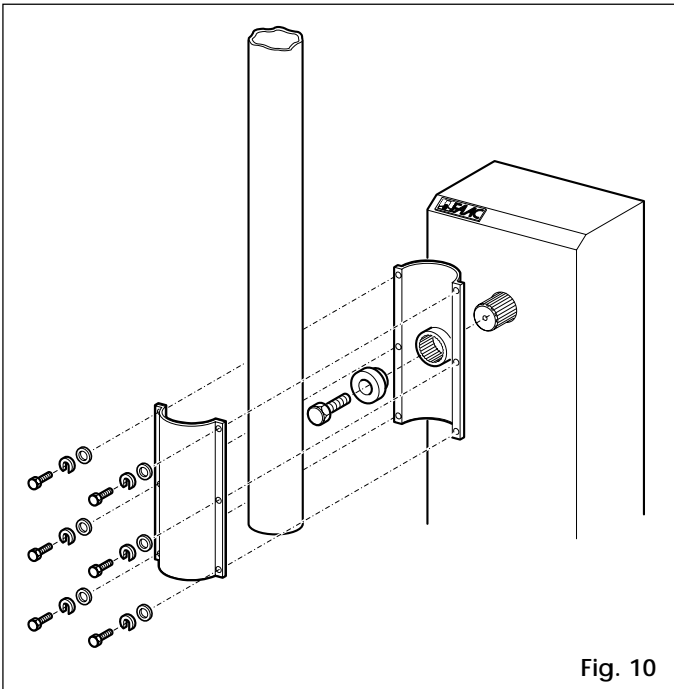


Fig. 10

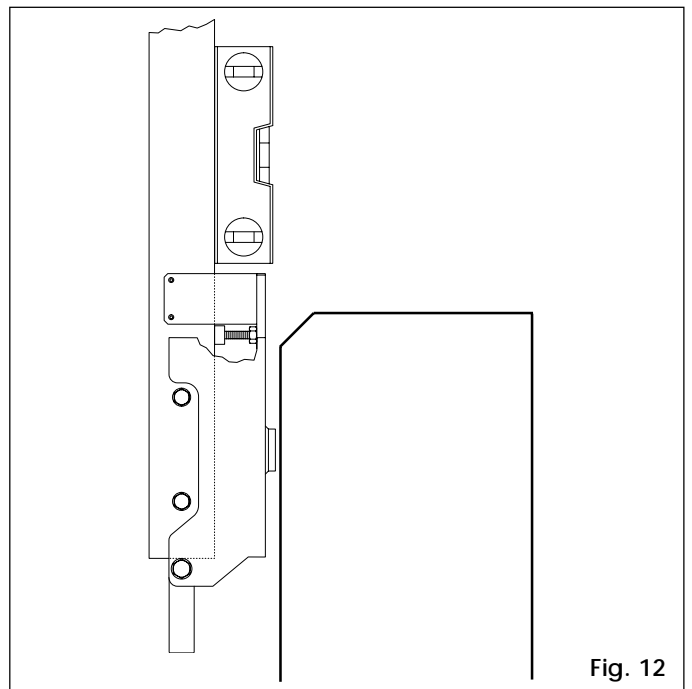


Fig. 12

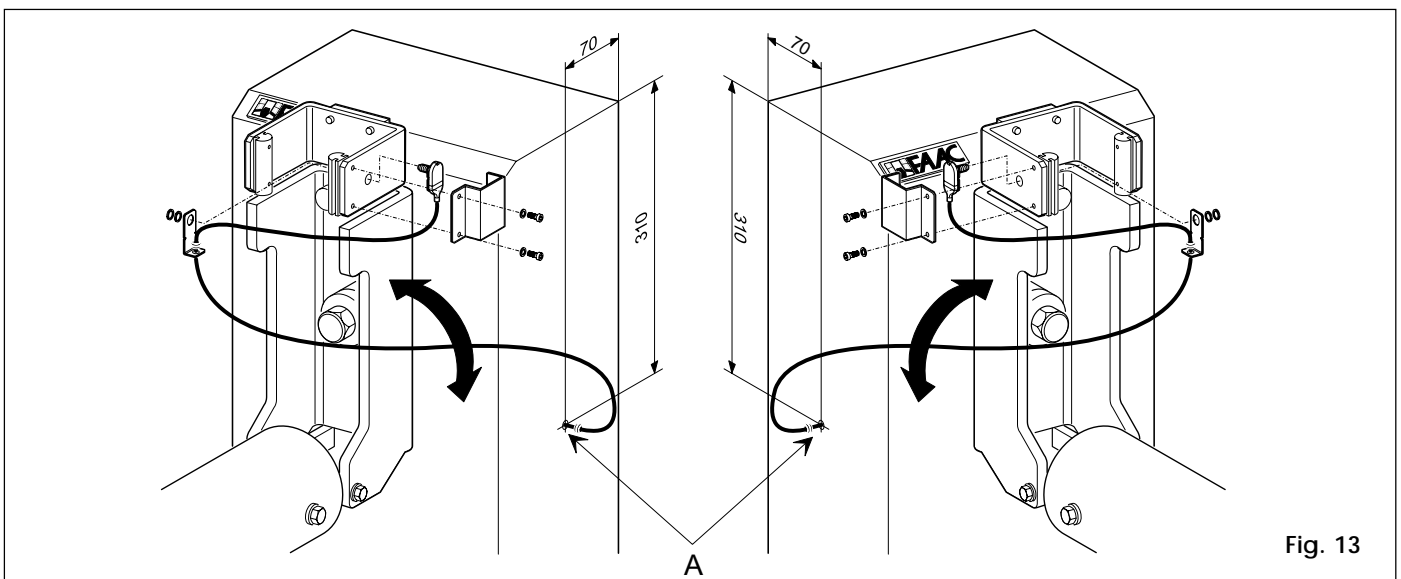


Fig. 13

MOUNTING THE SENSOR: DRILL A 10 mm HOLE IN POSITION **A** AND ASSEMBLE THE SENSOR AS SHOWN IN FIG. 13. CONNECT THE MICROSWITCH'S N.O. CONTACT (BLACK AND BLUE WIRES) IN SERIES WITH THE STOP CONTACT ON THE 625 MPS CONTROL UNIT.

4.4. ADJUSTING THE BALANCE SPRING

IMPORTANT!: The barrier is supplied already balanced for the exact beam length specified in the order. See "ORDER CODE TABLE" on price list.

Should a fine adjustment of the beam balance be needed, proceed as follows:

- 1) Unlock the operator as described in paragraph 6.
- 2) Adjust the pre-loading ring nut (3, Fig. 14) .
The beam is correctly balanced when it remains steady in the 0° and 90° positions.
If the beam tends to close, turn the ring nut clockwise.
If it tends to open, turn the ring nut counterclockwise.

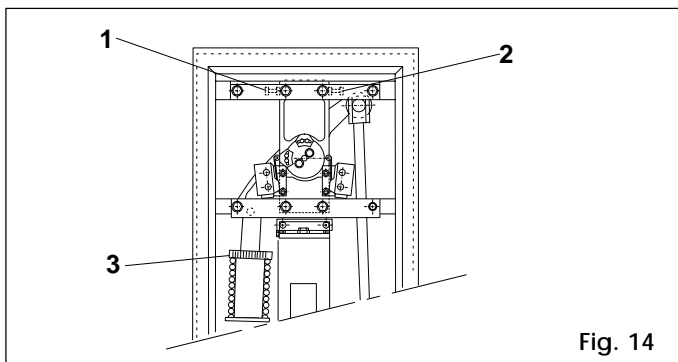


Fig. 14

Table 2

BALANCE SPRING FOR RIGID BEAMS				
BEAM PROFILE	BEAM LENGTH (m)	DIAMETER OF SPRING WIRE (mm)	SPRING LENGTH (mm)	SPRING CODE
620 SR RECTANGULAR	2.25 - 2.50	4,5	300	721099
	2.50 - 3.00	5	300	721098
620 SR ROUND	2.50 - 3.00	4,5	300	721099
620 SR ROUND PIVOTING	2.25 - 2.50	4,5	300	721099
	2.50 - 3.00	5	300	721098

5. START-UP

5.1. CONNECTING THE ELECTRONIC UNIT

Important! Disconnect the power supply before you perform any type of operation (connections, programming or maintenance) on the electronic unit.

Warning: When terminal strip J2 is disconnected, the power supply outputs of the motor, fan and flashing lamp are still connected to the electric power supply.

Follow points 10, 11, 12, 13 and 14 of the GENERAL SAFETY REGULATIONS.

Position the pipes as shown in Figure 3.

Keep the power supply cables separate from the control and safety signal cables (photocells, receiver, pushbutton, etc.). Use separate sheaths to avoid any interference. Make the electrical connections between the 625 MPS control unit and the chosen accessories, referring to fig. 16 for automatic logic A or semiautomatic logic E, and fig. 17 for parking logic P.

Table 3 Technical characteristics of 625MPS

POWER SUPPLY	230 V (+6 -10 %) 50 Hz
MAX. MOTOR LOAD	300 W
MAX. ACCESSORY LOAD	500 mA
MAX. WARNING LIGHT POWER	5 W (24 Vac)
TEMPERATURE RANGE	- 20°C to 55°C

Table 4 Operation of Status LEDs

LED	ON (contact closed)	OFF (contact open)
FCC	closing limit switch not engaged	closing limit switch engaged
FCA	opening limit switch not engaged	opening limit switch engaged
OPEN	activated	deactivated
CLOSED/FSW	activated (*)/saf. disengaged (**)	deactivated (*)/saf. engaged (**)
STOP	deactivated	activated
ALARM	panic contact deactivated	panic contact activated

(*) P logic operation
(**) A / E logic operation

625 MPS CONTROL UNIT

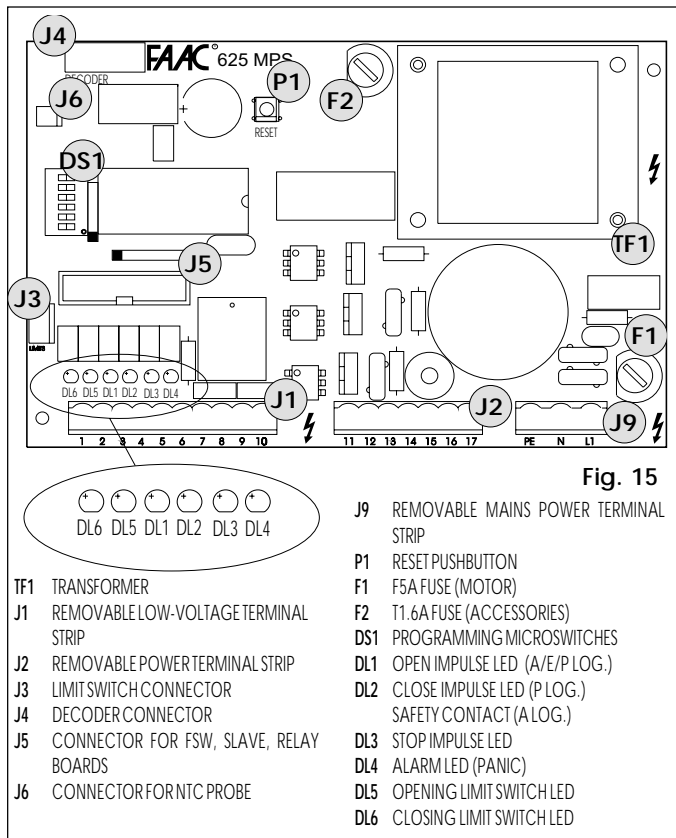
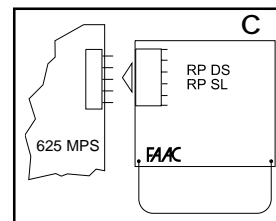
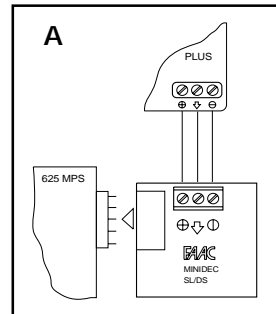
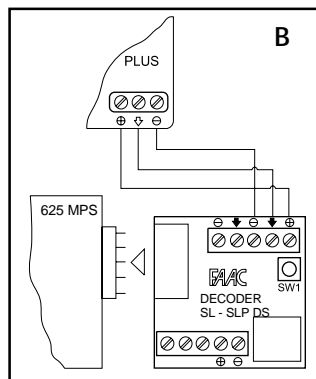


Fig. 15

- J9 REMOVABLE MAINS POWER TERMINAL STRIP
- P1 RESET PUSHBUTTON
- F1 F5A FUSE (MOTOR)
- F2 T1.6A FUSE (ACCESSORIES)
- DS1 PROGRAMMING MICROSWITCHES
- DL1 OPEN IMPULSE LED (A/E/P LOG.)
- DL2 CLOSE IMPULSE LED (P LOG.)
- DL3 SAFETY CONTACT (A LOG.)
- DL3 STOP IMPULSE LED
- DL4 ALARM LED (PANIC)
- DL5 OPENING LIMIT SWITCH LED
- DL6 CLOSING LIMIT SWITCH LED

5.2. CONNECTING RADIO RECEIVERS

Use quick connector J4 to insert one of the decoder or receiver cards RP shown in boxes A - B - C. Fit it with the components oriented towards the centre of the 625 MPS card.



A / E LOGICS CONNECTIONS

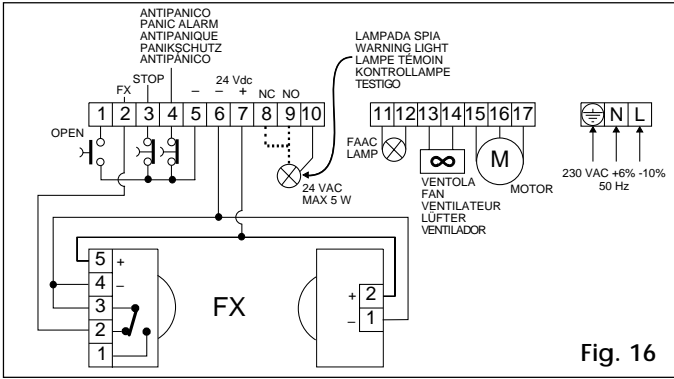


Fig. 16

P LOGIC CONNECTIONS

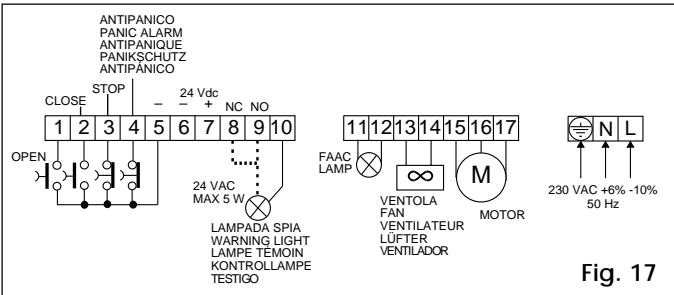


Fig. 17

5.3. DESCRIPTION OF TERMINAL STRIP

OPEN

This means any activating device with normally open contact, whose activation causes the beam to perform an opening movement. In automatic and semi-automatic logics, it controls both opening and closing movements.

CLOSE

This means any activating device with normally open contact, whose activation causes the beam to perform a closing movement. (Present only in P logic).

STOP

This means all devices with normally closed contact, which when activated stop movement of the barrier until a subsequent Open pulse is sent.

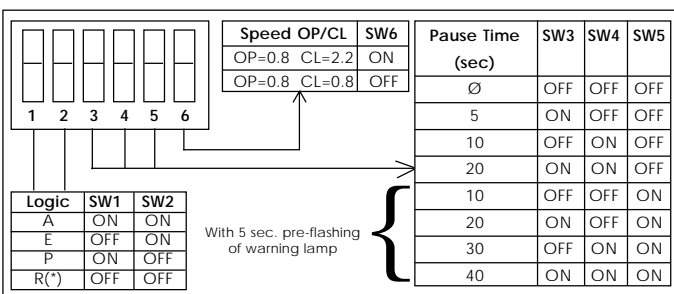
SAFETY

This means all devices (photocells, sensitive pneumatic safety edges, magnetic coils) with normally closed contact, which interrupt the movement of the beam whenever there is an obstacle within their range.

PANIC

This means an activating device with normally closed contact, which is activated in an emergency and causes the beam to open, suspending its current status until the RESET pushbutton is pressed.

5.4. PROGRAMMING THE MICROSWITCHES



NOTE: To obtain a duty cycle of 100%, dip switch no. 6 must be positioned as shown in Table 5.

Table 5

BARRIER MODEL	SW6
620 SR 0.8 - 2.2	ON
620 SR 0.8 - 0.8	OFF

NOTE: WHENEVER YOU CHANGE THE MICROSWITCH PROGRAMMING, PRESS THE RESET PUSHBUTTON AFTERWARDS.

(*) **IMPORTANT!** The R logic (remote) must be selected only if there are two opposing barriers working simultaneously. (See paragraph "624 SLAVE CARD", below.)

OPERATION OF SAFETY DEVICES

In the A or E logics, it is possible to obtain two different types of safety device operation, depending on the pause times that are selected:

- PAUSE TIMES WITH LAMP PRE-FLASHING (10-20-30-40 sec): the closing movement is stopped, then reversed on disengagement.
- PAUSE TIMES WITHOUT LAMP PRE-FLASHING: (0-5-10-20 sec): the closing movement is reversed at once.

ALARM CONDITION

It occurs in the following cases:

- 1) Enabling of panic input.
 - 2) Activation of safety TIME-OUT device, which interrupts the operation of the system when operating time exceeds 30 sec.
 - 3) Simultaneous triggering of the two limit switches.
 - 4) Microprocessor reading anomaly (syncro).
- The alarm condition is indicated by the quick flashing (0.25 sec) of the warning light (if connected). In this condition, all the functions of the system are disabled. Normal operation is restored only after the cause of the alarm has been eliminated and the RESET pushbutton has been pressed.

OPERATION WITH THE DIFFERENT CONTROL LOGICS

Table 6 A Logic (AUTOMATIC)

impulse / beam status	OPEN	STOP	SAFETY	PANIC
closed	opens, recloses after pause time	no effect	no effect	Beam opens and/or remains open. Alarm condition is activated (see relevant paragraph)
open in pause	recloses at once (*)	stops counting	freezes pause time up to disengagement	
closing	reverses movement	stops	see relevant paragraph	
opening	no effect	stops	no effect	
stopped	recloses at once (*)	no effect	no effect	

Table 7 E Logic (SEMI-AUTOMATIC)

impulse / beam status	OPEN	STOP	SAFETY	PANIC
closed	opens	no effect	no effect	Beam opens and/or remains open. Alarm condition is activated (see relevant paragraph)
open	recloses (*)	stops	no effect	
closing	reverses movement	stops	see relevant paragraph	
opening	stops	stops	no effect	
stopped	recloses (*)	no effect	no effect	

(*) If pre-flashing has been selected, the barrier closes after 5 sec.

Table 8 P Logic (PARKING)

(this logic does not allow pre-flashing)

impulse beam status	OPEN	CLOSED	STOP	PANIC
closed	opens	no effect	no effect	Beam opens and/ or remains open. Alarm condition is activated (see relevant paragraph)
open	no effect	recloses	no effect	
closing	reverses movement	no effect	stops movement	
opening	no effect	opens, recloses at once	stops movement	
stopped	opens	recloses	no effect	

Table 9 Operation of Warning Light

BEAM STATUS	N.O. CONTACT (*)	N.C. CONTACT (**)
closed	off	on
opening or open	on	off
pre-flashing (if selected) and/or closing	flashing	

(*) Warning light connected between terminals 8 and 10

(**) Warning light connected between terminals 9 and 10

5.5. ADJUSTMENT OF TRANSMITTED TORQUE

Use the two by-pass screws (fig. 18) to regulate the hydraulic transmitted torque adjustment system. The red screw adjusts torque during closure. The green screw adjusts torque during opening. Turn the screws clockwise to increase torque. Turn the screws anticlockwise to reduce torque.

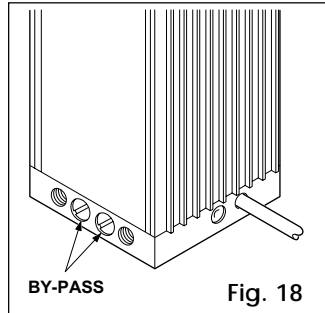


Fig. 18

5.6. ADJUSTING DECELERATION

- The deceleration of barrier 620 SR is factory-set. However, if small adjustments are required, turn the adjusting screws 1 and 2 in fig. 19. Turn clockwise to increase deceleration, anticlockwise to reduce deceleration. IMPORTANT: A 1/2 turn of the screw is sufficient for the adjustment.
- The ideal setting of the limit switch cams (3 and 4, fig. 19) is when the microswitch is tripped at the same time the mechanical travel limit is reached.

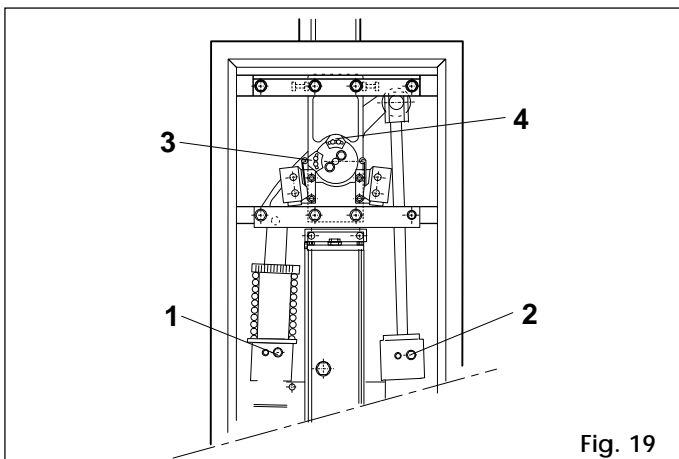


Fig. 19

5.7. TESTING THE AUTOMATION SYSTEM

Once installation is complete, affix the danger warning decal on the top of the housing (Fig. 20). Carry out a thorough functional check of the barrier unit and all accessories connected to it. Give the page entitled "End-user guide" to the customer and demonstrate how to operate the barrier correctly, drawing the customer's attention to the points of potential danger.

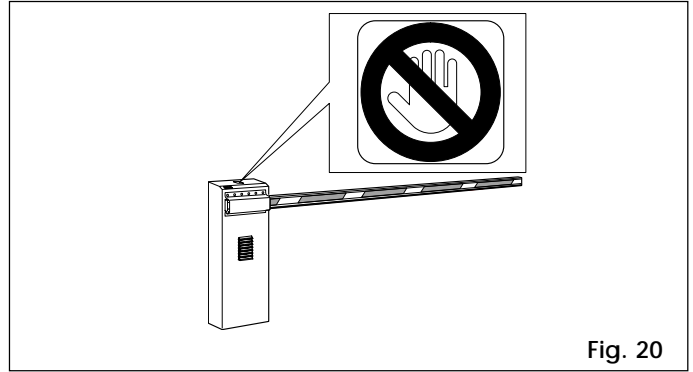


Fig. 20

6. MANUAL OPERATION

If the barrier needs to be operated manually as a result of a power failure or malfunction, use the unlock device as follows.

The key provided may be triangular (A, fig. 21 - standard), or personalised (B, fig. 21 - optional). Insert it in the lock and turn it 1 revolution anticlockwise (Fig. 21).
- Open or close the barrier manually.

7. RETURNING TO NORMAL OPERATION

To prevent an accidental impulse from activating the barrier, turn off the system's electrical power supply before engaging the lock system.

A) triangular key (standard):

- turn the key clockwise until it stops, then remove it (A, Fig. 21).

B) customized key (optional):

- turn the key clockwise until it stops.
- turn the key anticlockwise very slowly to the point where it can be removed (B, Fig. 21).

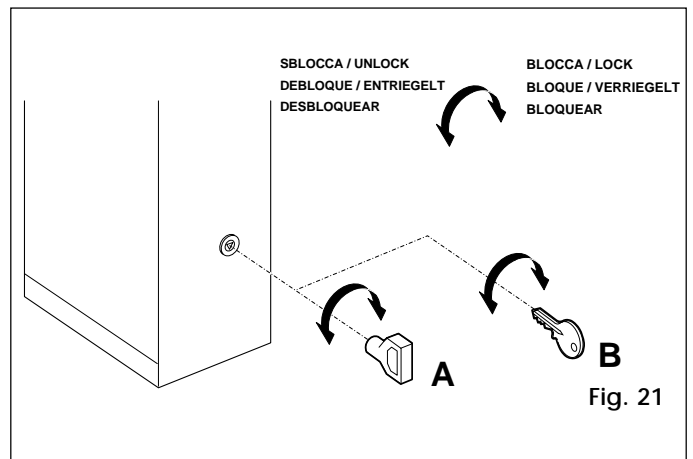


Fig. 21

8. MAINTENANCE

When performing maintenance always check that the by-pass screws are set correctly, that the system is balanced and that the safety devices operate correctly.

8.1. TOPPING UP WITH OIL

Check periodically the quantity of oil inside the tank. For medium/low duty cycles a yearly check is sufficient; for more severe operation it is advisable to check every 6 months.

The level must not fall below the level mark on the inspection window (Fig. 22). To top up, unscrew the filler cap (Fig. 22) and pour in oil up to the correct level. Use exclusively FAAC XD 220 oil.

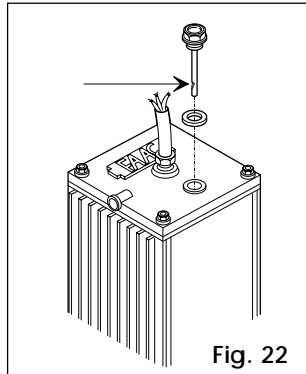


Fig. 22

8.2. BLEEDING AIR FROM THE HYDRAULIC CIRCUIT

If the beam moves in an irregular manner, this may be due to the presence of air in the hydraulic circuit:

- 1) Remove the breather screw (Fig. 8).
- 2) Actuate the beam electrically:
 - while the beam is opening, slightly loosen the bleed screw on the piston with the balance spring, then retighten it (8, Fig. 1);
 - while the beam is closing, slightly loosen the bleed screw on the piston without the balance spring, then retighten it (21, Fig. 1).

If necessary, repeat this operation until you obtain a smooth beam movement.

9. REPAIRS

For repairs, contact an authorised FAAC Service Centre.

10. ACCESSORIES

OPTIONAL ELECTRONIC BOARDS

The three boards - SLAVE, FSW and RELAY - provide supplementary functions for the 625MPS unit, and may be used simultaneously on the same unit.

Carefully read the instructions supplied with each product.

624 FSW board (Fig. 23)

The 624 FSW board manages the operation of photocells in P logic (Parking).

To prevent intrusion, the closing safety device causes the beam to stop, then to close again on disengagement.

624 SLAVE BOARD (Fig. 23)

The SLAVE card can manage simultaneous operation of two opposing barriers.

One of the two barriers is identified as MASTER, the other as SLAVE.

All signals sent (open control devices, safety devices) are handled by the MASTER barrier, while the SLAVE performs the same movements.

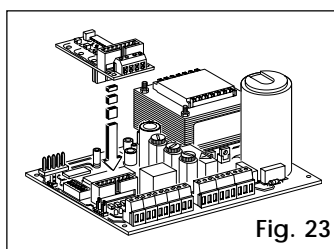


Fig. 23

RELAY BOARD (Fig. 24)

The RELAY board provides the possibility to control auxiliary services through contacts that are available on the terminal strip and are relevant to the various barrier statuses.

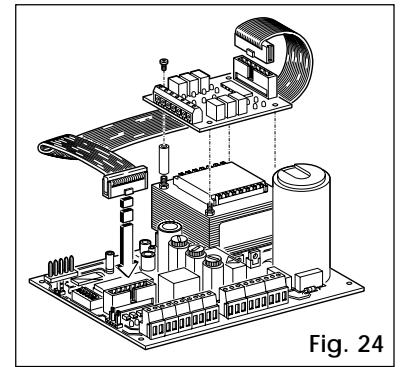


Fig. 24

AUTOMATIC EMERGENCY RELEASE (Fig. 25)

This device makes it possible, in case of a power failure, to raise the beam manually without having to gain access to the unlocking lever of the hydraulic power unit. A hydraulic system ensures that the beam remains locked in the open position.

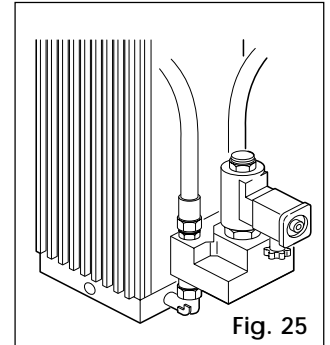


Fig. 25

ANTI-VANDALISM VALVE (Fig. 26)

This device safeguards the integrity of the hydraulic system if the beam is broken open.

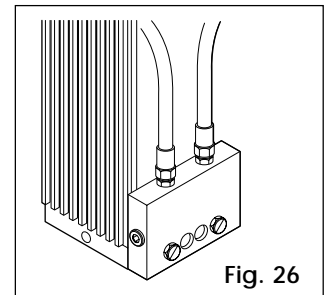


Fig. 26

SUPPORT FORK (Fig. 27)

The support fork has two functions:

- it prevents the beam from bending or breaking if force is applied to its end;
- it acts as a rest for the closed beam and prevents it from bending downwards.

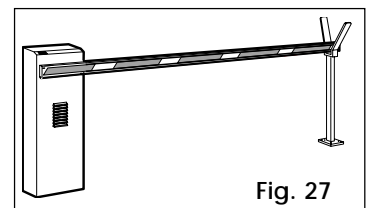
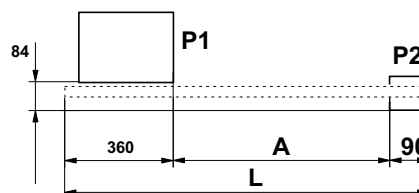


Fig. 27

POSITIONING THE BASE PLATE FOR THE SUPPORT FORK

For positioning, refer to Fig.28 where:

- P1 = base plate for barrier
- P2 = base plate for support fork
- L = beam length (in mm)
- A = L - 450 mm



Note: Dimensions are expressed in mm.

Fig. 28

END-USER GUIDE

620 SR Automation Systems

Read the end user guide carefully before using the product and keep it in a safe place for future reference.

GENERAL SAFETY REGULATIONS

When correctly installed and used, the 620 SR automation systems ensure a high degree of safety.

A few simple rules should be followed to prevent accidental problems.

- Do not linger under the beam.
- Do not linger near the automation system; do not allow children or adults to linger near it, above all when it's moving.
- Keep radio controls, or other control devices that might actuate the beam, out of the reach of children.
- Do not allow children to play with the automation system.
- Do not impede the movement of the beam.
- Do not allow branches or bushes to interfere with the movement of the beam.
- Ensure that the warning lamps are always in working order and visible.
- Do not attempt to actuate the beam manually without having first unlocked it.
- In case of a malfunction, unlock the beam to allow vehicles to pass, and call a qualified technician.
- If you have set the manual mode, before restoring normal operation, disconnect the power supply.
- Do not modify the components of the automation system.
- Do not attempt to repair the automation system or to perform any operation on it. Call qualified FAAC technicians only.
- At least once every 6 months, have qualified personnel check that the automation system, safety devices and earth connection are in working order.

DESCRIPTION

The 620 SR automation systems are ideal barriers for controlling the access of vehicles to a passageway that is up to 3 m wide and has a medium-to-high frequency of transit.

The housing contains the operator, that consists of a hydraulic power unit and two pistons. The latter actuate the rotation of the beam by means of a rocker arm. A spring mounted on one of the pistons balances the beam.

The beam consists of a white painted aluminium bar with red reflectors to ensure good visibility even in the dark.

Barrier operation is controlled by an electronic control unit mounted in an enclosure which assures adequate protection against atmospheric agents and can be fitted inside the housing.

The normal position of the beam is closed in a horizontal position. When the electronic control unit receives an opening command from the remote radio control or any other control device, it activates the hydraulic system and causes the beam to rotate upwards by 90° to the vertical position and thereby allow access. If automatic operation has been selected, the beam closes automatically after the selected pause time.

If semiautomatic operation has been selected, a second impulse must be sent to close the beam.

An open command given while the beam is closing causes the beam to reverse direction of movement.

A stop command (if available) stops movement at any time.

For detailed information on barrier operation in the various operating modes, contact the installation technician.

The barrier units have safety devices (photocells) that prevent the beam from closing when they are darkened by an obstacle. The 620 SR barrier unit is fitted as standard with an anti-crushing safety device that limits the torque transmitted to the beam.

The hydraulic system ensures that the beam can be locked in any position.

The beam can then be opened manually only by using the unlocking device.

The light flashes while the beam is moving.

MANUAL OPERATION

If the barrier has to be operated manually due to a power failure or malfunction, use the unlocking device as follows. The key provided can be triangular (standard) or customized (optional).

- Insert the standard key (fig. 1) or the customized key (fig. 2) in the lock and turn anticlockwise by one revolution.
- Open or close the barrier manually.

RETURNING TO NORMAL OPERATION

To prevent an accidental impulse from activating the barrier, turn off the system's electrical power supply before returning to normal operation.

triangular key (standard):

- turn the key clockwise until it stops, then remove it.

customized key (optional):

- turn the key clockwise until it stops.
- turn the key anticlockwise very slowly to the point where it can be removed.

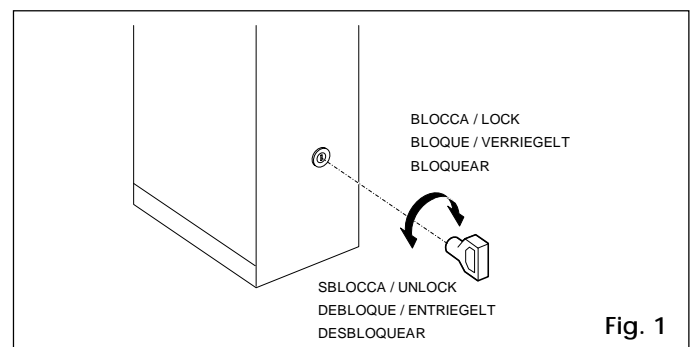


Fig. 1

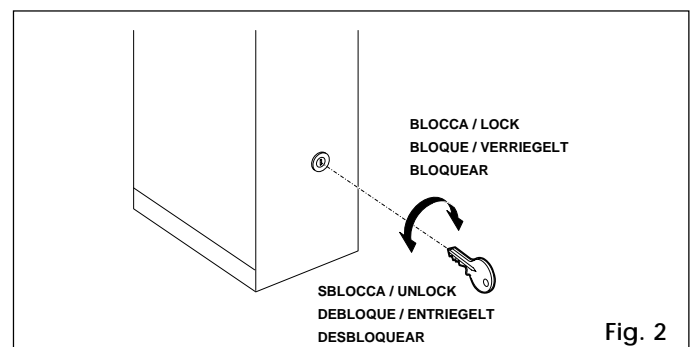


Fig. 2