FAAC ENGLISH

# INDEX



ENGLISH

**Notes on reading the instruction**

Read this installation manual to the full before you begin installing the product.

The symbol ⚠ indicates notes that are important for the safety of persons and for the good condition of the automated system.

The symbol ☞ draws your attention to the notes on the characteristics and operation of the product.

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# CE DECLARATION OF CONFORMITY FOR MACHINES

**(DIRECTIVE 98/37/EC)**

**Manufacturer:** FAAC S.p.A.

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

**Declares that:** Barrier mod. 615BPR,

- is built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive 98/37/EC;
- conforms to the essential safety requirements of the other following EEC directives:

  2006/95/EC Low Voltage Directive
  2004/108/EEC Electromagnetic Compatibility Directive

  Furthermore, the manufacturer declares that the machinery must not be put into service until the machine into which it will be integrated or of which it will become a component has been identified and its conformity to the conditions of Directive 89/392/EEC and subsequent modifications assimilated in Italian National legislation under Presidential Decree No. 459 of 24 July 1996 has been declared..

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Bologna, 1st September 2008

The Managing Director
A. Marcellan



# WARNINGS FOR THE INSTALLER

## GENERAL SAFETY OBLIGATIONS

1) **ATTENTION! To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people.**
2) Carefully read the instructions before beginning to install the product.
3) Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
4) Store these instructions for future reference.
5) This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.
6) FAAC declines all liability caused by improper use or use other than that for which the automated system was intended.
7) Do not install the equipment in an explosive atmosphere: the presence of inflammable gas or fumes is a serious danger to safety.
8) The system must be built as specified in Standards: EN12604, EN12605, EN12453,EN12445 with the exception of strictly vehicular use systems, for which it is however necessary to supply identification signs of the strictly vehicular use type. For non-EU countries, the above mentioned standards must be observed in addition to the national standard references.
9) FAAC is not responsible for failure to observe Good Technique in the construction of the closing elements to be motorised, or for any deformation that may occur during use.
10) Before attempting any job on the system, cut out electrical power.
11) The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a 6A thermal breaker with all-pole circuit break is recommended.
12) Make sure that a differential switch with threshold of 0.03 A is fitted upstream of the system.
13) Make sure that the earthing system is perfectly constructed, and connect metal parts of the means of the closure to it. Also earth connect the Yellow/Green wire of the automated system.
14) The automated system also has an intrinsic anti-crushing safety device, which consists of a torque control, which however must be accompanied by other safety devices.
15) The safety devices (e.g. photocells, sensitive edges, etc.) protect any danger areas against **mechanical movement Risks,** such as crushing, dragging, and shearing.
16) Use of at least one indicator-light (e.g. FAAC LAMP MINILAMP etc.) is recommended for every system, as well as a warning sign adequately secured to the frame structure, in addition to the devices mentioned at point "15".
17) FAAC declines all liability as concerns safety and efficient operation of the automated system, if system components not produced by FAAC are used.
18) For maintenance, strictly use original parts by FAAC.
19) Do not in any way modify the components of the automated system.
20) The installer shall supply all information concerning manual operation of the system in case of an emergency, and shall hand over to the user the warnings handbook supplied with the product.
21) Do not allow children or adults to stay near the product while it is operating.
22) Keep radiocontrols or other pulse generators away from children, to prevent the automated system from being activated involuntarily.
23) The User must not attempt any kind of repair or direct action whatever and contact qualified personnel only.
24) **Anything not expressly specified in these instructions is not permitted**

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# AUTOMATED SYSTEM 615BPR

The 615BPR automated system consists of an aluminium beam with reflex reflectors, and a steel upright subjected to cataphoresis treatment and painted with polyester paint. The upright houses the hydraulic operator and the electronic control unit.

The operator, which moves the beam, consists of a hydraulic power pack and a double-acting cylinder.

The system is supplied with an adjustable torque limitation system. It also includes a device stopping the beam in any position, and a handy manual release command for use in case of power cuts or faults.

The beam and the relevant balancing spring must be ordered by referring to the sales price list.

**The 615BPR automated system was designed and built for controlling vehicle access. Do not use for any other purpose.**



## 1 DESCRIPTION AND TECHNICAL SPECIFICATIONS

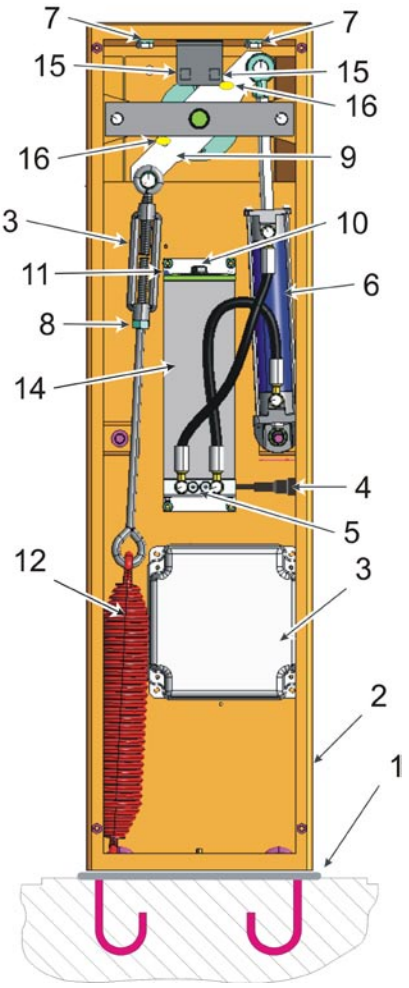



fig.1

① foundation plate
② barrier upright
③ control board
④ emergency release
⑤ torque adjustment screws
⑥ double acting piston
⑦ travel limit screw
⑧ M12 nut blocking the tie rod
⑨ rocker
⑩ oil filling plug
⑪ breather screw
⑫ balancing spring
⑬ spring adjustment tie-rod
⑭ hydraulic power pack
⑮ travel limit sensors
⑯ travel limit magnets

**Tab. 1 - Technical specifications "Barrier 615BPR"**

| BARRIER MODEL | 615BPR STD | 615BPR RAP |
|---|---|---|
| Beam max. length (m) | 5 | 2,5 |
| Max. opening time (sec) | 5,7 | 2,9 |
| Angular speed (rad/sec) | 0.28 | 0,54 |
| Pump flow-rate (l/min) | 1.5 | 3 |
| Max. torque (Nm) | 400 | 300 |
| Types of beam | Rectangular / Rectangular skirt articulated / Round | |
| Use frequency (at 20°C) | 50% | 40% |
| Max. consecutive cycles (at 20°C) | 220 | 340 |
| Power supply | 230V~ (+6 -10 %) 50Hz | |
| Absorbed power (W) | 220 | |
| Type of oil | FAAC HP OIL | |
| Oil quantity (Kg) | 0,9 | |
| Thermal protection for winding | 120° C | |
| Torque adjustment system | standard by-pass valves | |
| Operating ambient temperature | -40 ÷ +55 °C | |
| Hood protective treatment | cataphoresis | |
| Hood paint | Polyester RAL 2004 | |
| Protection class | IP 44 | |
| Weight (Kg) | 34 | |
| Upright dimensions LxHxP(mm) | 270 x 1015 x 140 | |
| Electric motor technical specifications | | |
| RPM | 1400 | 2800 |
| Power (W) | 220 | |
| Absorbed current (A) | 1 | |
| Power supply | 230V~ (+6 -10 %) 50Hz | |

### 1.1 MAXIMUM USE CURVE

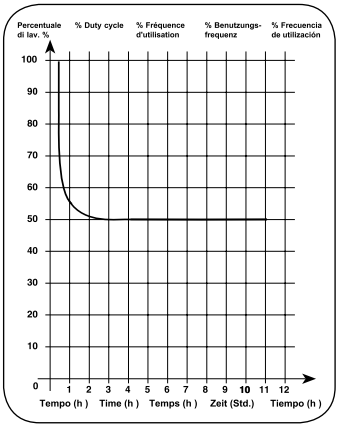
The curve makes it possible to establish maximum work time (T) according to use frequency (F).
E.g. The 615 BPR automated system can operate non-stop at a use frequency of 50%.
To ensure efficient operation, operate in the work range under the curve.
**Important:** The curve is obtained at a temperature of 20°C. Exposure to the direct sun rays can reduce use frequency down to 20%.

**Calculation of use frequency**

The percentage of effective work time (opening + closing) compared to total time of cycle (opening + closing + pause times).
Calculation formula:

$$\%F = \frac{Ta + Tc}{Ta + Tc + Tp + Ti} X\ 100$$

where:
**Ta** = opening time
**Tc** = closing time
**Tp** = pause time
**Ti** = interval time between one complete cycle and another.



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## 2. ELECTRIC PREPARATIONS (standard system)

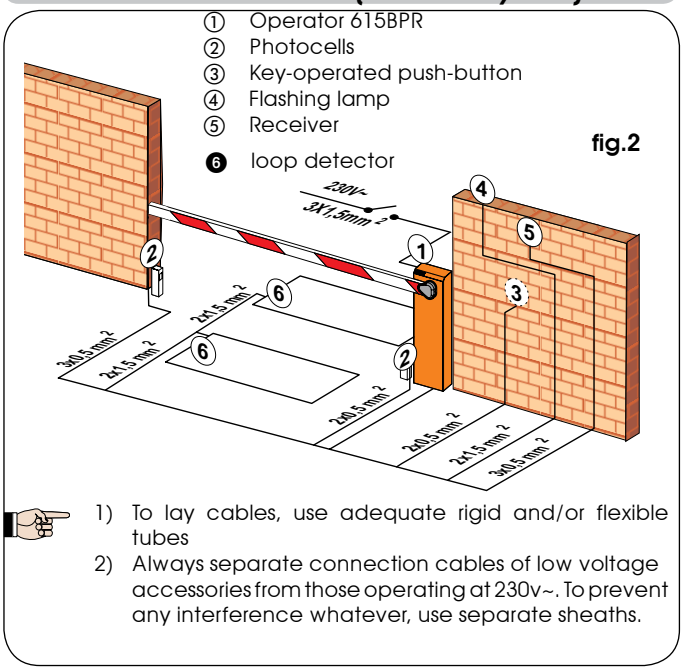


fig.2

1) To lay cables, use adequate rigid and/or flexible tubes
2) Always separate connection cables of low voltage accessories from those operating at 230v~. To prevent any interference whatever, use separate sheaths.

## 3 DIMENSIONS

Dimensions are in mm.

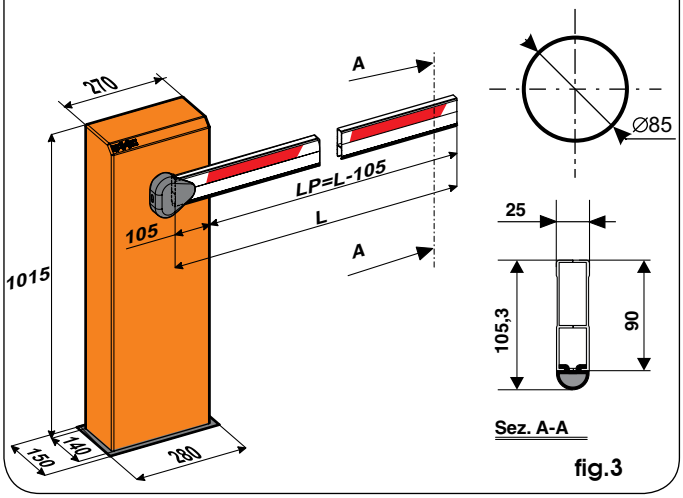


fig.3

## 4 INSTALLING THE AUTOMATED SYSTEM

### 4.1 PRELIMINARY CHECKS

To ensure safety and an efficiently operating automated system, make sure the following conditions are observed:

- When moving, the beam must not, on any account, meet any obstacles or overhead power cables.
- The soil must permit sufficient stability for the foundation plinth.
- There must be no pipes or electrical cables in the plinth excavation area.
- If the barrier body is exposed to passing vehicles, install, if possible, adequate means of protection against accidental impact.

### 4.2 MASONRY FOR FOUNDATION PLATE

1) Make a foundation plate as shown in fig.4 (referred to clayey soil)
2) Wall the foundation plate as shown in fig.4, supplying one or more sheaths for routing electrical cables. Using a spirit level, check if the plate is perfectly level. Wait for the cement to set.

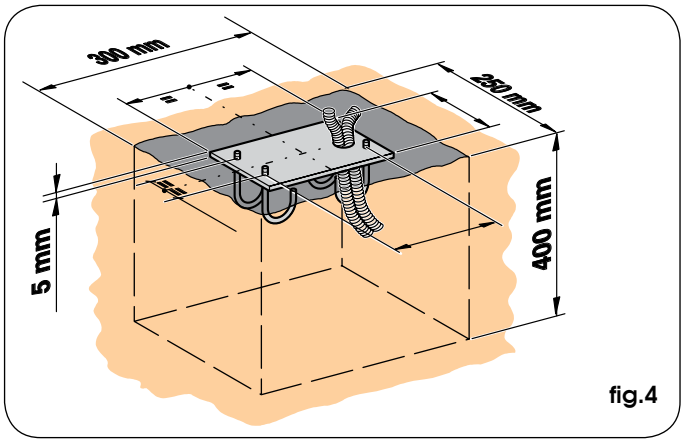


fig.4

### 4.3 INSTALLING THE UPRIGHT

1) Remove the cover, unscrewing the screws securing it to the upright.
2) Using the four nuts and washers supplied, secure the upright on the foundation plate as shown in fig.5 Remember that the hatch of the upright should normally face the building.

### 4.4 INSTALLING THE BEAM

⚠ **The 615BPR automated system is always supplied in the right-hand version – for left-hand installation, see chapter 5.5.**

1) Make sure that the rod of the piston secured to the rocker is completely extended (corresponding to the beam's vertical position).
2) Remove and store the breather screw as shown in fig.6
3) Assemble the bar as in fig.7a for the rectangular version, or as in fig.7b for the round version.

### 4.5 INSTALLING AND ADJUSTING THE BALANCING SPRING

1) Check if the balancing spring matches the type of beam installed: see chapter 5.
2) While keeping the beam in vertical position, assemble the tie rod and spring as shown in fig.8
3) Release the operator (see chapter 7) and position the beam at 45°, then adjust the tie-rod and set the spring until the weight of the beam is balanced in that position.
4) Restore normal operation as described in chapter 7.