

# 593

## hydraulic operator for counterbalanced up-and-over doors



### IDEAL FOR RESIDENTIAL AND LIGHT COMMERCIAL GARAGES

The FAAC 593 hydraulic system is designed to lift counterbalanced up-and-over doors of residential and light commercial garages. It is capable of lifting doors with width of up to 3.5 metres in the single operator application and up to 5 metres in the 2-operators version.

### MECHANICALLY ASSEMBLED ACCESSORIES ARE USED

The supplied installation accessories allows you to install the operator without doing any welding. The sturdy securing longitudinal member (optional) makes it possible to install the operator in the ideal position for any type of door, without any modification to existing structures.

### MAXIMUM SAFETY THRESHOLD

Safety is guaranteed by the exclusive hydraulic device with anti-crushing protection double by-pass valve. The anti break-in facility is provided by the opening and closing hydraulic lock, which stops the door in any position without using electric locks or bolts. In case of a power cut, a release facility from inside the garage is supplied, and another from the outside (optional), with customised key.

### THE HYDRAULIC SYSTEM ENSURES EFFICIENCY

Safety, long-life, power, and silent operation are superior and constant advantages of the hydraulic system: that's why hydraulics are central to FAAC technology and to many systems ensuring a high degree of operational and service reliability. The oil re-circulation system enables smoother long-term performances, also prolonging operator life.

### SPECIFICATIONS

Hydraulic operator for counterbalanced up-and-over doors with locking at opening and closing • Door max width 3.5 m • Door max height 2.7 m • Door max weight 15 Kg/sqm • Two-motor application for doors with max width 5 m and max height 3 m • Installation on door panel by securing longitudinal member (optional) • Application with transmission tubes and straight or curved telescopic arms • Max torque 400 Nm • Max use frequency 50 cycles/hour • Angular velocity 9°15'/s • Electric motor power supply 230 V (+6% -10%) - 50(60) Hz • Electric motor power 220 W • Thermal protection at 120°C built into motor winding • Overall dimensions (Length x Width x Height) 500x148x93 mm • Protection class IP55 • Operating ambient temperature -20°C +55°C • Single-phase motor with two rotation directions (1,400 rpm) • Hydraulic gerotor pump (max low noise) • Die-cast distribution flange • Activated by rack and piston, and transmission shaft • Piston bores in NIPLOY treated steel • Oil re-circulation tube • Separate control of opening and closing force by by-pass valves with tamper-proof plate - Anti-crushing safety to UNI 8612 standard • Built-in manual release device • External release device with customised key (optional) • Tank in anodised aluminium • Mineral hydraulic oil with additives • Designed to install limit switch kit (optional)

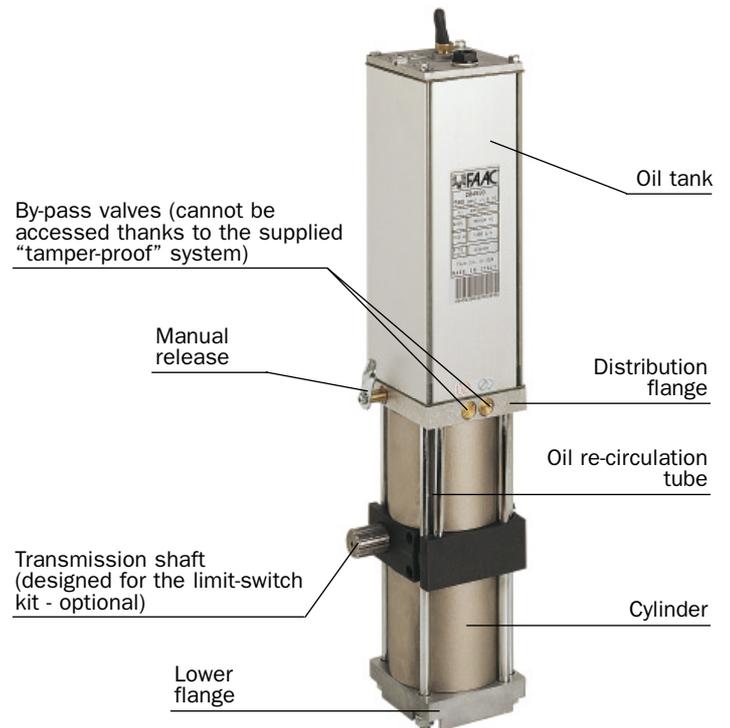
### 596 MPS control board

SMT technology control board • Power supply 230 V (+6% -10%) - 50(60) Hz • Absorbed power 10 W • Motors maximum load 800 W • 24 Vdc - 360 mA max output for accessories • Operating ambient temperature -20°C +55°C • SMT technology • Microprocessor control • Mains filter • 2 protection fuses (power supply- accessories -motors) • Connector for card receiver/decoding cards • Separate high and low voltage terminal boards • Automatic (A) and semi-automatic (E) function logics • Programming Dip Switches • Fail-safe on photocell (can be disabled) • Two logics for safety devices • Selection range for opening/closing times: 25s-30s-35s-40s • Selectable pause times 30s/60s • Inputs: closing safety devices, stop push-button, opening push-button • Outputs: power supply for accessories, motor, courtesy lamp • Max lamp load 40W

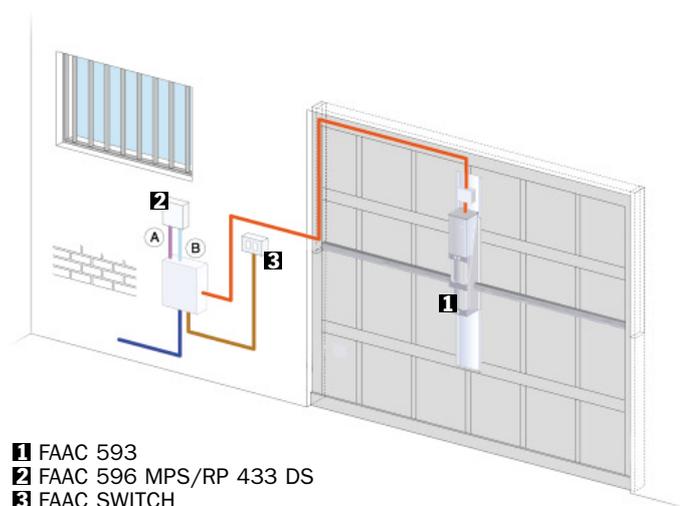
**Enclosure for control board** • Protection class IP55 • Wall- or flush-mounting • Designed for securing to DIN guide • Designed for installation of door locking switch • Fuse-holder • Seats for capacitor supports • Cover closing by 4 self-tapping screws • Dimensions (lxhxd): 204 x 265 x 85 mm



Model	Use		
	Door max dimensions W x H (m)	Door max weight (kg/sqm)	Use frequency (cycles/hour)
593	3,50 x 2,70 5,00 x 3,00 (with two operators)	15	50



### INSTALLATION DIAGRAM SPECIMEN



Low voltage cabling		Power cabling (230V)	
A	1 cable 3x0.5	B	1 cable 3x1.5+T
			1 cable 2x1.5+T

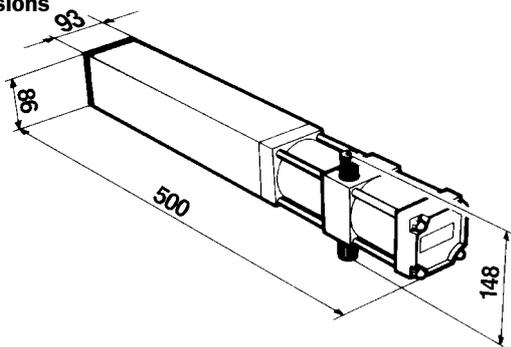
N.B: Cable diameters in mm<sup>2</sup>

Technical specifications	593
Power supply	230 V ~ (+6% -10%) 50 (60) Hz
Electric motor	single-phase bi-directional
Motor rotation speed	1.400 rpm
Absorbed power	220 W
Absorbed current	1 A
Rated torque	0÷400 Nm
Angular velocity	9°15'/s
Thermal protection on motor winding	120°C
Operating ambient temperature	-20°C + 55°C
Weight with oil	10 kg
Type of oil	FAAC OIL XD 220
Protection class	IP 55
Pump flow rate	0,75 l/min.

Specifications of 596 MPS control board	
Power supply	230 V ~ (+6% -10%) 50 (60) Hz
Maximum load of motors	500 W
Accessories output	24 Vdc 360 mA max
Operating ambient temperature	-20°C + 55°C
Two protection fuses	5 A electric motor 0,5 A accessories
Enclosure dimensions mod. E	204 x 265 x 85 mm (LxHxD)
Protection class	IP 55

- **Programmable functions**
  - Function logics: automatic and semi-automatic
  - Pause times
  - Work times
  - "Closing photocell" function logic
  - Photocells fail safe
- **Terminal board outputs**
  - Motor, power supply for accessories, timed courtesy lamp
- **Terminal board inputs**
  - Open, stop, safety device, opening and closing limit-switch
- **SMT technology**

### Dimensions



Values in mm

**N.B.:** The operator 593 can be controlled also by 410 MPS, 450 MPS and 460 P boards, thus enabling the timed electronic deceleration (See pages 88-89)