# 541 3PH

### with remote control board



#### The solution for industrial applications

The 541 3PH gearmotors were specifically designed to satisfy all closing requirements in industrial and commercial environments, and are able to automate sectional doors, large ones included.

**7**4 A

#### Sturdy and safe

The operation of the oil bath gearbox is guaranteed by a steel worm-screw coupled to a bronze ring-gear, enclosed in a solid die-cast aluminium body.

The gearmotor is non-reversing. In the event of a power cut, the door can be moved manually by using the "rapid" release cord device (standard supply for all models) or, in the 541 V 3PH versions, by manually activating the chain winch. If one of the two manual activation systems is activated, a safety microswitch prevents electrical operation.

#### The importance of versatility

The gearmotors were conceived for lateral fitting with "direct" transmission on the spring shaft, or with "indirect" transmission by chain.

The latter application make it possible to increase the automated system's versatility, enabling use even if lateral space is insufficient, or for particularly heavy doors.

The gearmotor is highly compact, in particular its width of only 92 mm makes it easy to install even where space is tight.

The use frequency of the gearmotors (almost intensive) means that they can be used also for particularly heavy duty cycles.



Wall mounting <mark>bracke</mark>t Release device by cords (Mod. 541 3PH-541 3PH V)

#### SPECIFICATIONS

Power supply 400 Vac (+6% -10%) 50-60Hz · Single-phase electric induction motor 1450 rpm · Max absorbed power 420 W · Absorbed current 1,1 A · Rotation speed 23 rpm · Winding thermal protection to 140 °C · Use frequency (S3) 60% · Through Shaft diam 25.4 mm (1") drive · Shaft rated torque 70 Nm · Drive max. revs 24 · Protection class IP 54 · Operating ambient temperature -20°C ÷ + 55°C · Gearmotor maximum weight 14 kg · Oil type FAAC OIL XD 220 · Oil quantity 0.75 I · Transmission by steel worm-screw and bronze ring-gear in oil bath · Die-cast aluminium body · Travel-limit unit with micrometric screw · Rapid release device for manual activation with cord · Chain winch (models 541/541 V) for manual activation

#### 884 T control board

Motor maximum load: 1300 W • Motor maximum load: 24 Vdc - 500 mA max • Operating ambient temperature:  $-20^{\circ}C \div + 55^{\circ}C \cdot$  Power supply to indicator-light: 24 Vac (5 W max) • 4 protection fuses • Safety timer: 255 s • Motor braking fixed • Inputs: Open, partially open, stop, closing safety devices, limit-switch • Outputs: indicator-light, flashing lamp, motor, 24 Vdc power supply for accessories • Programming: Pause time (5710/15730/60/120/180 sec), Logics A1/A2/S1/S2/E1/E2/B/C, pre-flashing.

# 541 3PH

# I FAAC 541V 3PH 2 844 T/MINIDEC DS control board 3 FAAC LAMP 4 PLUS 1 433 5 PHOTOBEAM Low voltage cabling Over cabling (230V) C 2 cables 3x1,5+L

 $\begin{tabular}{|c|c|c|c|c|} \hline Low voltage cabling & Power cabling (230V) \\ \hline \hline \hline \hline A & $\left\{ \begin{array}{c} \frac{3 \ cables \ 3x0,5}{1 \ cable \ 2x0,5} & $\left( \begin{array}{c} \hline B \\ \end{array} \right) & $\left\{ \begin{array}{c} \frac{2 \ cables \ 3x1,5+T}{1 \ cable \ 2x1,5+T} \\ \hline 1 \ cable \ 2x1,5 \\ \end{array} \right. \\ \hline \hline \hline N.B: Cable \ diameters \ in \ mm^2 \\ \hline \end{tabular}$ 

#### (\*) GRAPH- APPLICATION RULES

Graph 1 shows with wich type of application the 541 3PH can be installed, considering the maximum force required to manually move the door F, in daN (1 daN = force required to lift 1,02 kg), and the diameter of the rope-winding drum Dt in millimeters. For example, if a door can be moved with a force of 108 daN and the drum diameter is 180 mm, a 541 3PH with chain transmission of 1:1.5 must be installed.

N.B.: Force F can be measured with a dynamometer. It is not directly related to the weight of the door, but its balance.



#### LEGENDA:

F= Maximum strength needed to manually move the door Dt= Rope-winding drum diameter

Three-dimensional	adjustment plate
(optional)	

- 2 Limit switch assembly
- 3 Chain winch
- (Mod. 541V 3PH 541X 3PH)





## Specification of 844 T control board (for 541 3PH models- installation in "remote")

Power supply	230 V 3ph (+6% -10%) 60 Hz 400 V 3ph+N (+6% -10%) 60 Hz	
Motor maximum load	1300 W	
Accessories output	24 Vdc 500 mA max	
Operating ambient temperature	-20°C ÷ +55°C	
Power supply to indicator-light	24 V~ (5W max)	
Four protection fuses	6.3 A transformer	
	1.6 A accessories	
Safety timer	255 seconds	
Motor braking	fixed	

**Inputs** - Open, partially open, stop, closing safety devices, limit-switch **Outputs** - Indicator-light, flashing lamp, motor, 24 Vdc power supply for accessories

Programming - Pause time (5/10/15/30/60/120/180 sec.), Logics A1/A2/S1/S2/E1/E2/B/C, pre-flashing

Technical specifications of gearmotors 541 3PH		
Power supply	400 Vac (+6 -10%) 50 (60Hz)	
Electric motor	1450 rpm	
Max absorbed power	420 W	
Absorbed current	1,1 A	
Winding thermal protection	140 °C	
Use frequency	60% (S3)	
Power take-off	Through shaft diam. 25.4 mm (1'')	
Power take-off rotation speed	23 rpm	
Rated torque of power take-off	70 Nm	
Power take-off max revs	24	
Protection class	IP 54	
Operating ambient temperature	-20 ÷ +55 °C	
Gearmotor max weight	14 Kg	
Type of oil	FAAC OIL XD 220	
Oil quantity	0,91	

Model	Applications	Use frequency (cycles/hour)	Control board
541 3PH	See graphic (*)	60% (S3)	Not included
541 X 3PH	See graphic (*)	60% (S3)	Not included
541 V 3PH	See graphic (*)	60% (S3)	Not included

DIMENSIONS



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