

● ECH 90-25 TYPE



Protection rate: **IP40**
 Insulation class: **B (130°C)**
 Reference cycle: **5 minutes**
 Standard stroke (s): **25 mm**
 Temperature rise " ΔV_{31} ": **70°C**
 Working temperature: **-10 to 45°C**
 Work: **Push / Pull**

With spring:
● ECH90-25/RS



Optional spring force:
 $F_s(s=0\text{mm}) = 48.5\text{N}$
 $F_s(s=15\text{mm}) = 18\text{N}$

Release spring NOT
 incorporated in standard
 product.

(ED) Duty-cycle ED(%)	100	40	25	15	5
(P20) Power at 20°C (W)	55	125	190	300	900
(Fm) Solenoid force (N) 1)	72	110	150	190	300
Max time under voltage(s)	Inf	120	75	45	15
Opening time (ms) 2)	651	488	417	332	307
Release time (ms) 3)	399	301	259	208	193
Plunger weight (Kg)	0.650				
Solenoid weight (Kg)	5.2				

1) Fm Solenoid force is given according to VDE0580 without deducting the spring force or the plunger weight if vertical mounting.

2) Time is given on these conditions: Coil supplied under nominal voltage ; Stabilized in it's working temperature ; Load 70% of the solenoid force ; Horizontal assembly ; Standard stroke initial position; 20°C ambient temperature.

3) Time is given on these conditions: without load on shaft ; Horizontal assembly ; Standard stroke initial position.

Duty-cycle ED%	Standard voltages										Under demand			
	VDC								VAC		VDC		VAC	
	6	12	24	48	100	125	205	110	230		Min	Max	Min	Max
100	x	o	o	o	o	o	o	o	o		12	250	28	230
40	x	x	o	o	o	o	o	o	o		18	250	60	230
25	x	x	o	o	o	o	o	o	o		22	250	95	230
15	x	x	o	o	o	o	o	x	o		24	250	150	230
5	x	x	o	o	o	o	o	x	x		24	250	x	x

Layout: o = Available ; x = Unavailable

- Voltage under demand:
 They can be manufactured at voltages between the maximum and minimum voltage values shown in the chart.

- To feed in alternating current the solenoid will have a rectifier incorporated in the connector.

- The duty cycles described in the chart are standard, they can be manufactured in any intermediate value.

- If any customization from the original is needed, please ask us.

- Earthing is recommended if the metallic parts are accessible.

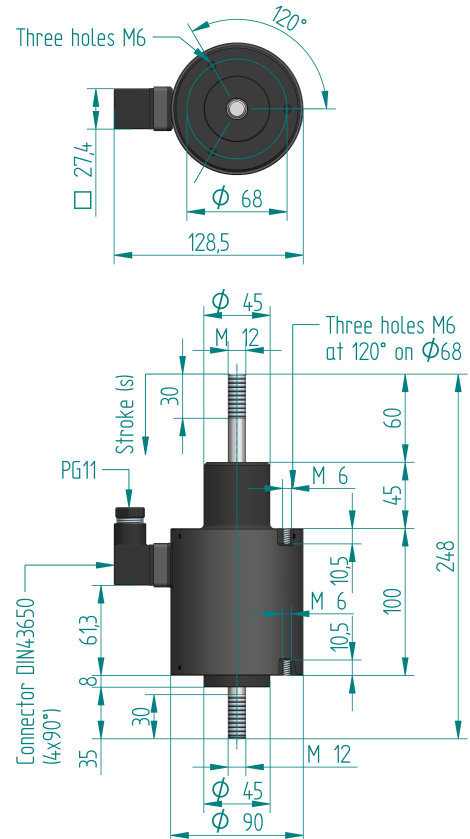
Ordering code: ECH90-25 --V ED---% - Spring

Voltage: 24Vdc; Duty cycle: ED100%; With spring:
 ECH90-25 24Vdc ED100% RS

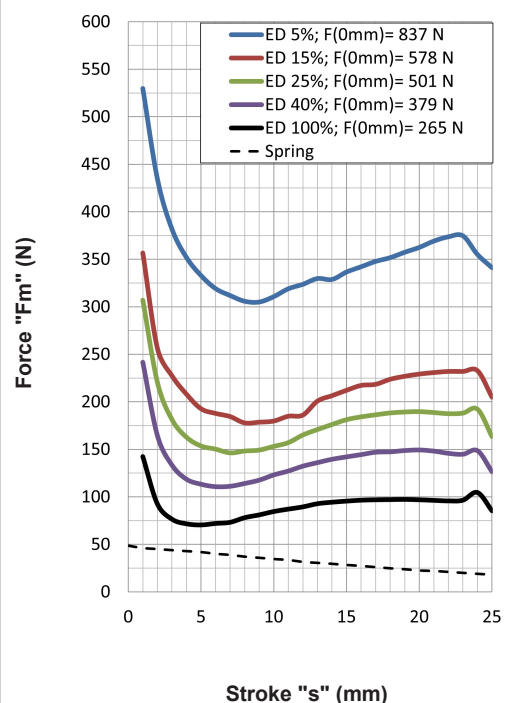
Voltage: 48Vdc; Duty cycle: ED15%; Without spring:
 ECH90-25 48Vdc ED15% RN

Spring yes: RS ; Spring no: RN

Solenoid without voltage
 (s=25mm position)



Force-stroke curve



Calculation of the effective force:
 see pages 1 and 42

For fixation and mounting positions: see page 42