



FM 522775



EMS 595200



OHS 595201

CE RoHS REACH



# SPRING RETURN

ELECTRIC ACTUATOR

## Application area

The spring return electric actuator can apply to situation such as safe position returning in the case of power failure. It is particularly suitable for 90° rotation butterfly valves, ball valves and plug valves. It is the best choice for emergency operation after power failure.



# FLOWINN

The Spring Return series is a type of quarter turn actuator which fits with a fail-safe mechanical spring module. The spring module that stores kinetic energy when power is provided in normal situation. When power shuts off under emergency situation, the spring releases the stored energy to drive the actuator and return valve to preset safe position (full open or full close). The process is safe and stable. The return speed under control to prevent the pipe and conduit explosion.

The compact structural design allows minimum space occupancy.

The Spring Return series comes with optional manual handle feature, which allows its operator to manually turn the actuator and return valve to locked position. When power is provided there is no need to manually unlock.



## Product advantage

### Product mix

- Compact design and minimal space occupancy.

### Safety maintenance

- No need for routine maintenance, it can run without failure for a long time.
- High efficiency spring drive 90° motion.
- Emergency shut/open valve in moderate motion, no impact on the pipeline.

### Position Detection

- The limit switch position setting is simple and reliable.
- The 3D indicator allows multi angle observation.
- Optional on/off and modulating control

### Operation safety

- Offers highest machine kinetic safety solution when opening /closing valve under emergency situation.
- The spring mechanical module stores kinetic energy and transform into torque needed for returning valve to the preset position.

### Safety standard

- The spring return electric actuator is in line with the SIL 2/SIL 3 safety standard. It is maintenance free and explosion-proof(optional).

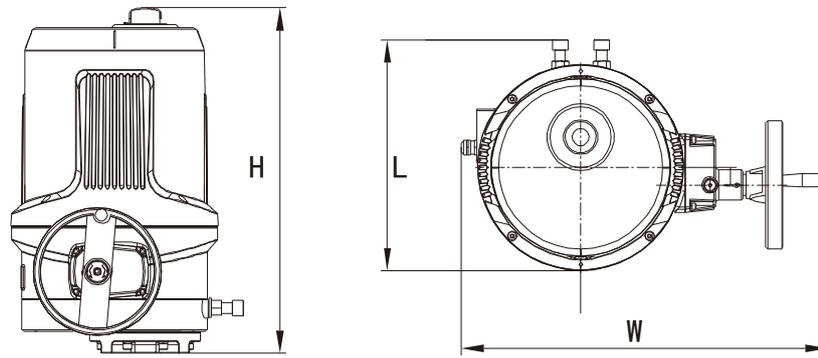
### Adjustable return speed

- The spring return speed is adjustable, to drive the valve to the preset terminal position, avoiding pressure increase and protecting the pipe and valve.

### Replaceable connecting parts

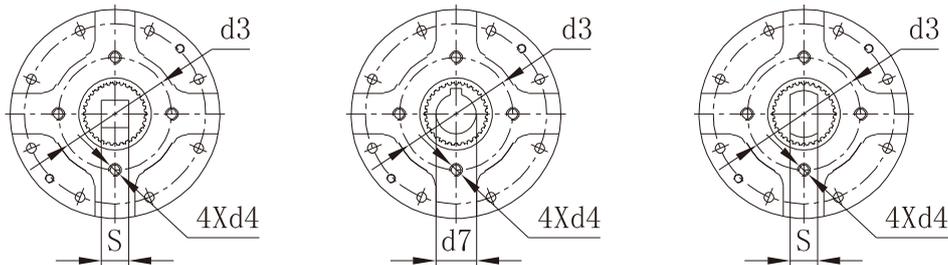
- The connecting flange and parts are in line with the ISO5211 standard. With replaceable options to suit different connecting needs.

## Dimension



Model	Torque Max Nm	H mm	L mm	W mm	Weight Kg
ETM050	50	485	335	548	35
ETM150	150	485	335	548	38
ETM300	300	532	355	563	55
ETM600	600	564	403	631	80

## Installation Interface



unit: mm

Model	ISO5211 Output flange	d3	d4	S	d7	S	Shaft extension
ETM050	F07	70	M8	11/14/	15/18/	11/14/	15
	F10	102	M10	17/22	22/25	17/22	40
ETM150	F07	70	M8	14/17/	18/22/	17/22	40
	F10	102	M10	22	25		
ETM300	F10	102	M10	19/22/	25/30/	19/22/	40
	F12	125	M12	27	40	27	
ETM600	F10	102	M10				
	F12	125	M12	27/36	30/40	27/36	55
	F14	140	M16				

# Spring Return

## TECHNICAL SPECIFICATION



Model	ETM050	ETM150	ETM300	ETM600
Maximum Torque	50	150	300	600
Power (W)	30	30	40	120
Voltage (DC/AC)	110 / 220 V			
Frequency (Hz)	50/60			
Working System	S2-15			
Motor operation time(s)	54	54	59	51
Spring operation time(s)	≤30	≤30	≤30	≤30
Spring life cycles	20000	20000	10000	10000
Output flange (ISO5211)	F07/F10	F07/F10	F10/F14	F10/F12/F14
Ambient temperature	-25~65°C			
Ambient humidity (25°C)	95%			
Ingress Protection	IP67 (IP68 Optional) /NEMX4/4X			
Manual	have (open)			
Manual operation	CCW (when loss power, and CW optional)			
Power loss preset	CW (CCW optional)			
Halt	Electromagnetic brake control			
Cable interface	2* NPT3/4			
Lubrication	Grease			
Limit switch	2 open /2 close limit switch			
On-off signal	2 or 3 wire system			
Mechanical limit switch	CW (CCW optional)			
Explosion-proof grade	Ex d IIB (C) T4(6)			
Colour	Default black (Color choices can be customized.)			

## Order code

ETM 300 - 0 - a - 0 - H - B - M - F10

Flange interface--F07, F10, F12, F14

Control unit--I: Intelligence Type Y: Integration  
M: Integral Type

Colour--A-Blue/RAL5015 B-Black Y-DarkOrange/RAL2011 G-Hoar  
R-Red A1-Traffic Blue/RAL5017 P-Pearl Dragon Blue/RAL5025

Manual operation-- Blank-NO manual operation H-With manual operation

Return direction of spring--No-CW 0- CCW

Voltage-- c:110VAC d:220VAC j:230VAC k:240VAC

Control Mode--I: Regulating type 0: On-off-type ...

Maximum Torque--  
050 (50Nm), 150 (150Nm), 300 (300Nm), 600 (600Nm)

The type of spring return electric actuator

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