

Actuator Type 3, 180° - Technical Data, Summary



WireMatic actuators are pneumatic quarter turn actuators based on double rack and pinion design. The Type 1 actuator is also available in half turn execution (180°).

The Type 1 180° actuator is generally recommended for use with three way valves.

Data for Type 1 actuators with movement 0 - 180°

This type of actuator is only available as Double Acting (DA) and according to Metric standard

Material, standard (outside)

- Anodized Aluminum, Silver

Movement

- 0° to 180°

End Stop Adjustment

Single End Stop Adjustment, Open position, located in the End Cap

Over travel

- Open: 3°
- Closed: 0° to 0.5°

Sizes

- 4, 8, 12, 20 and 35

Torque

Linear torque, the same rack power over the entire movement

Torque Output at 5.5 bar/80 psi

- 41 to 375Nm
- 363 to 3319in.lbs

Operating Pressure

- 2-10 bar / 29-145 psi

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Drive Medium

- Standard: Air (Dry or Lubricated) or inert gases (non-dangerous fluids)
- Options (require rebuilding): Hydraulic Oil or Water

Temperature Range, Standard execution (Buna Nitrile, NBR O-seals)

- - 30° to + 80°C
- - 22° to + 175°F

Temperature Range, High temperature (Viton O-seals)

- - 20° to + 140°C
- - 4° to + 284°F

Temperature Range, Low temperature

- -45° to +60°C
- -49° to +140°F

Temperature Range, Arctic temperature

- -50° to +60°C
- -58° to +140°F

Stroke

Looking at the front of the Actuator, Port A is on the left side and Port B is on the right

Port A: Air to Open (Anti-clockwise)

Port B: Air to Close (Clockwise)

Drive shaft

Stardrive shaft tailored to international standard for square-section shafts

Standard Connections

Solenoid valves – Namur

Fitting accessories – ISO 5211, DIN 3337, Namur

Stardrive shaft – ISO 5211 (90°), DIN 79 (45°), Namur

Lubricants, recommended

Springs and piston rack segments: Statoil Molyway LI 712 or similar

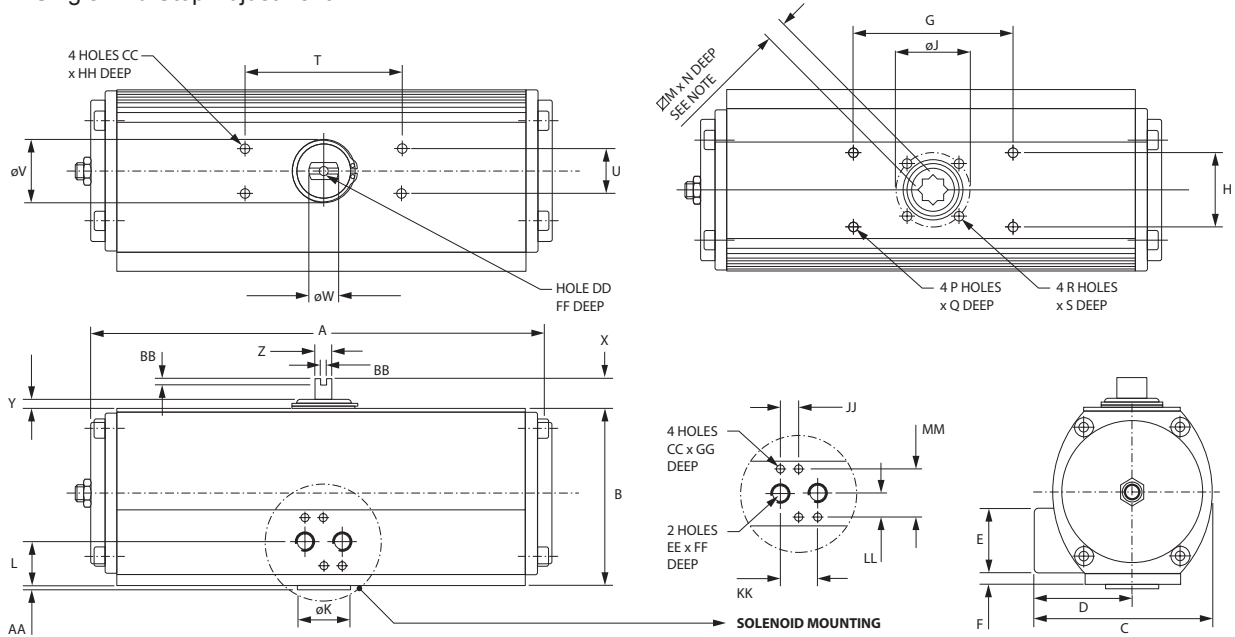
O-rings and plastic parts: Statoil Uniway LIX 42PA or similar

Standards and Certificates

The Actuators are designed to and in compliance with several different standards. They also have different types of certificates, see separate information.

Pneumatic Actuator Type 3 - 180° Metric Size 4, 8, 12, 20 and 35

- Double acting (DA)
- Single End Stop Adjustment



DIMENSIONS, METRIC (mm)

Actuator size	ISO	A	B	C	D	E	F	G	H	ØJ	ØK	L	M	N	P	Q	R	S	T
WM4	F04	215.0	90.5	87.5	47.5	41.0	---	73.0	32.0	42.0	30.0	20.5	11.0	12.0	M5	8.0	M5	8.0	80.0
WM8	F07	245.0	109.0	105.0	57.0	42.0	7.5	73.0	32.0	50.0	35.0	28.5	14.0	16.0	M6	10.0	M8	13.0	80.0
WM12	F07	295.0	118.5	121.0	67.0	43.0	8.0	107.0	49.0	50.0	55.0	29.5	17.0	16.0	M6	10.0	M8	13.0	80.0
WM20	F07	337.0	140.5	136.5	72.0	43.0	8.0	107.0	49.0	70.0	55.0	29.5	17.0	19.0	M6	10.0	M8	13.0	80.0
WM35	F10	402.0	166.5	156.0	78.0	43.0	8.5	161.0	73.0	102.0	70.0	30.0	22.0	24.0	M6	12.0	M10	16.0	80.0

Actuator size	ISO	U	ØV	ØW	X	Y	Z	AA	BB	CC	DD	EE	FF	GG	HH	JJ	KK	LL	MM
WM4	F04	30.0	31.0	20.0	20.0	4.5	11.5	2.0	4.0	M5	M6	G1/8"	12.0	8.0	5.0	12.0	24.0	16.0	32.0
WM8	F07	30.0	35.0	20.0	20.0	5.0	11.5	3.0	4.0	M5	M6	G1/8"	12.0	8.0	5.0	12.0	24.0	16.0	32.0
WM12	F07	30.0	45.0	20.0	20.0	5.5	11.5	3.0	4.0	M5	M6	G1/4"	12.0	8.0	5.0	12.0	24.0	16.0	32.0
WM20	F07	30.0	50.0	32.0	20.0	6.5	19.0	3.0	4.0	M5	M6	G1/4"	12.0	8.0	5.0	12.0	24.0	16.0	32.0
WM35	F10	30.0	61.0	32.0	20.0	7.0	19.0	3.0	4.0	M5	M6	G1/4"	12.0	8.0	5.0	12.0	24.0	16.0	32.0

TORQUE AND OPERATING DETAILS

Actuator Size	Air Supply	DA Torque	Operating time (sec) *		Air consumption (litre)		Weight (kg)
	BAR	Nm	DA Open	DA Close	Open	Close	DA
WM4	5.5	41	<1	<1	0.09	0.12	2.8
WM8	5.5	75	<1	<1	0.18	0.24	3.1
WM12	5.5	122	1.5	1.5	0.34	0.41	6.4
WM20	5.5	206	2.0	2.0	0.49	0.64	9.7
WM35	5.5	375	2.5	2.5	0.90	1.00	17.5

* Note! May be affected by air pipe diameter and type of solenoid valve