

Actuator type 2, 90° - SS 316 Series - Summary



WireMatic TruTorq actuators are pneumatic quarter turn actuators based on double rack and pinion design. The Type 2 actuator with double end adjustment is a great option for butterfly valves.

Material, standard (outside)

- Stainless Steel 316L
- Made from solid material (not casted)

Movement

- 0° to 90°

End Stop Adjustment

Double End Stop Adjustments, Open and Closed position, located outside the pressurized zone at the BAK (Body Adaptor Kit)

Over travel

- Open: 3°
- Closed, size 8 and 12: 2°
- Closed, size 20 to 70: 3°

Sizes

- 8, 12, 20, 35, 55 and 70

Torque

Linear torque, ie a Double Acting (DA) Actuator has the same torque over the entire movement

Torque Output, Double Acting (DA) at 6 bar/80 psi *

- 90 to 825 Nm
- 796 to 7299 in.lbs

Torque Output, Spring Return (SR) at 6 bar/80 psi *

- 31 to 292 Nm
- 274 to 2581 in.lbs

Operating Pressure

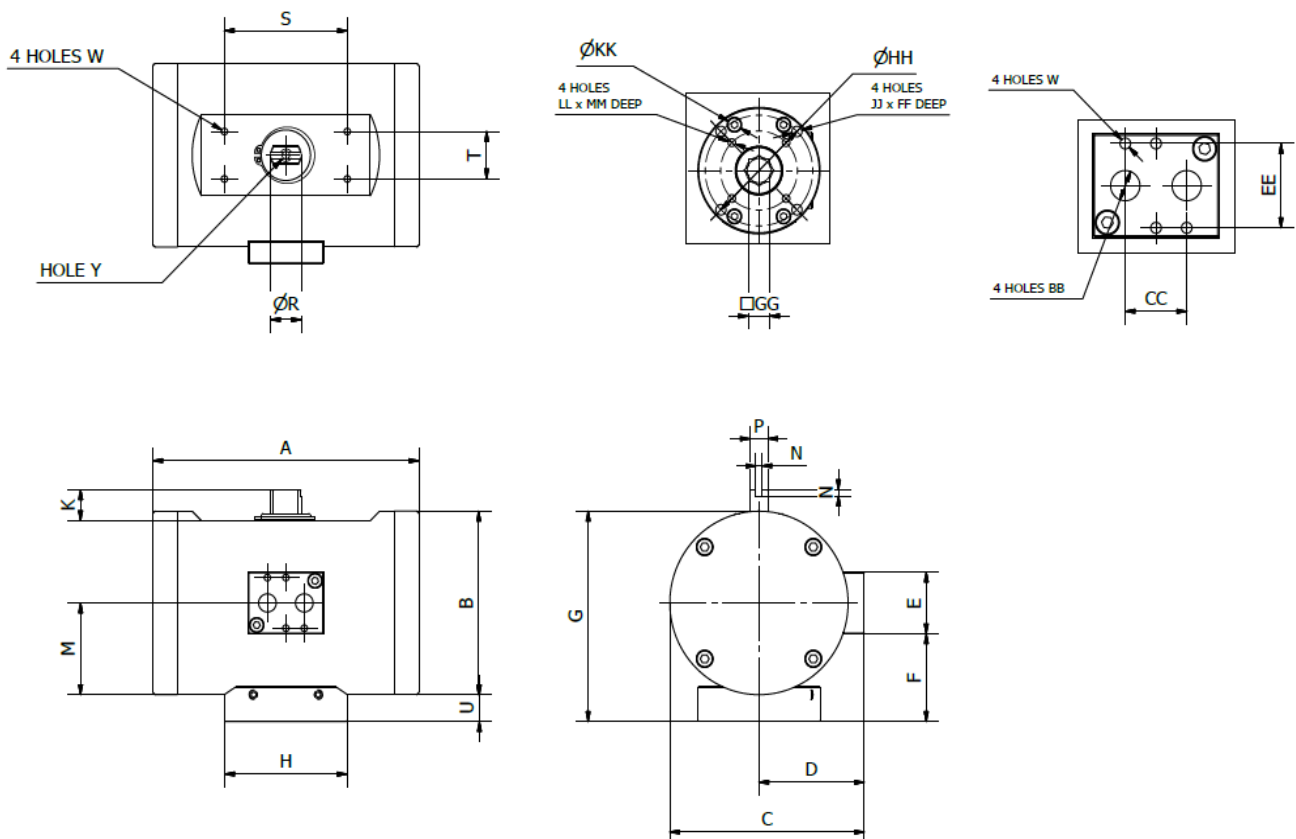
- DA: 2-10 bar / 30-145 psi
- SR: 2-10 bar / 30-145 psi. When the Actuators will be used at Operating pressures below 5.5 bar / 79.8 psi, we recommend that you contact your WMTT distributor.

Stainless Steel 316 Series - Dimensions

DIMENSIONS (mm)

SIZE	ISO	A	B	C	D	E	F	G	H	K	M	N	P	R
8	F05-F07	173,0	116,0	126,5	68,5	39,0	55,5	146,6	79,5	19,6	58,0	4,0	11,5	20,0
20	F07	220,0	148,0	159,3	85,3	39,0	77,5	184,5	99,0	20,0	74,0	4,0	19,0	32,0
35	F10	266,0	168,0	179,6	95,6	39,0	97,2	236,7	119,0	23,0	84,0	4,0	19,0	32,0
55	F10	312,0	235,0	240,7	123,2	39,0	124,5	272,5	138,0	30,0	117,0	4,0	25,4	40,0
70	F10	358,0	235,0	240,7	123,2	39,0	125,5	277,0	138,0	30,0	117,0	4,0	25,4	40,0

SIZE	S	T	U	W	Y	BB	CC	EE	FF	GG	JJ	KK	LL	MM
8	80,0	30,0	17,0	M5	M6	1/4"	24,0	32,0	10,0	14,0	M8	9,0	M6	12,0 0
20	80,0	30,0	23,0	M5	M6	1/4"	24,0	32,0	13,0	17,0	M8	10,5	—	—
35	80,0	30,0	32,7	M5	M6	1/4"	24,0	32,0	16,0	22,0	M10	10,5	—	—
55	80,0	30,0	27,0	M5	M6	1/4"	24,0	32,0	16,0	27,0	M10	13,5	—	—
70	80,0	30,0	28,0	M5	M6	1/4"	24,0	32,0	16,0	27,0	M10	13,5	—	—



Stainless Steel 316 Series - Torque

DOUBLE ACTING TORQUE TABLE

SIZE	AIR SUPPLY (Bar)						
	2	3	4	5	5,5	6	7
8	30,0	45,0	60,0	75,0	82,5	90,0	105,0
20	67,3	101,0	134,6	168,3	185,1	201,9	235,6
35	124,7	187,0	249,3	311,7	342,8	374,0	436,3
55	199,0	298,5	398,0	497,5	547,3	597,0	696,5
70	275,0	412,5	550,0	687,5	756,3	825,0	962,5

SPRING RETURN TORQUE TABLE (Nm)

SIZE	N°	SPRING TORQUE		AIR SUPPLY (Bar)							
				4		5		5,5		6	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
8	4/0	21,1	38,4	38,9	21,6	53,9	36,6	61,4	44,1	68,9	51,6
	4/2	23,8	43,2	33,6	12,0	48,6	27,0	56,1	34,5	63,6	42,0
	4/3	29,0	52,8			46,0	22,2	53,5	29,7	61,0	37,2
	4/4	31,7	57,6					50,8	24,9	58,3	32,4
20	4/0	47,7	86,8	86,9	47,8	120,6	81,5	137,4	98,3	154,2	115,1
	4/2	53,7	108,5	75,0	26,1	108,6	59,8	125,4	76,6	142,3	93,4
	4/3	65,5	119,4			102,6	48,9	119,5	65,8	136,3	82,6
	4/4	71,6	130,2					113,5	54,9	130,3	71,7
35	4/0	88,4	160,8	161,0	88,7	223,4	151,0	254,6	182,2	285,7	213,4
	4/2	110,5	201,0	138,9	48,5	201,3	110,8	232,5	142,0	263,6	173,2
	4/3	121,6	221,1			190,2	90,7	221,4	121,9	252,6	153,1
	4/4	132,6	241,2					210,4	101,8	241,5	133,0
55	4/0	141,0	256,4	256,8	141,4	356,3	240,9	406,0	290,6	455,7	340,3
	4/2	176,3	320,5	221,5	77,3	321,0	176,8	370,7	226,5	420,5	279,2
	4/3	193,9	352,6			303,4	144,7	353,1	194,5	402,8	244,2
	4/4	211,5	384,6					335,5	162,4	385,2	212,1
70	4/0	195,0	354,0	355,0	196,0	493,0	333,0	561,0	402,0	630,0	471,0
	4/2	243,0	443,0	303,0	107,0	444,0	245,0	513,0	314,0	581,0	382,0
	4/3	268,0	487,0			420,0	201,0	488,0	269,0	557,0	338,0
	4/4	292,0	531,0					464,0	225,0	533,0	294,0

Stainless Steel 316 Series - Operating details

OVERALL WEIGHT (kg)

SIZE	Double Acting "DA"	Spring Return "SR"
8	9,6	10,0
20	19,2	19,6
35	27,9	28,5
55	40,3	41,5
70	42,4	44,0

OPERATING TIME (sec)

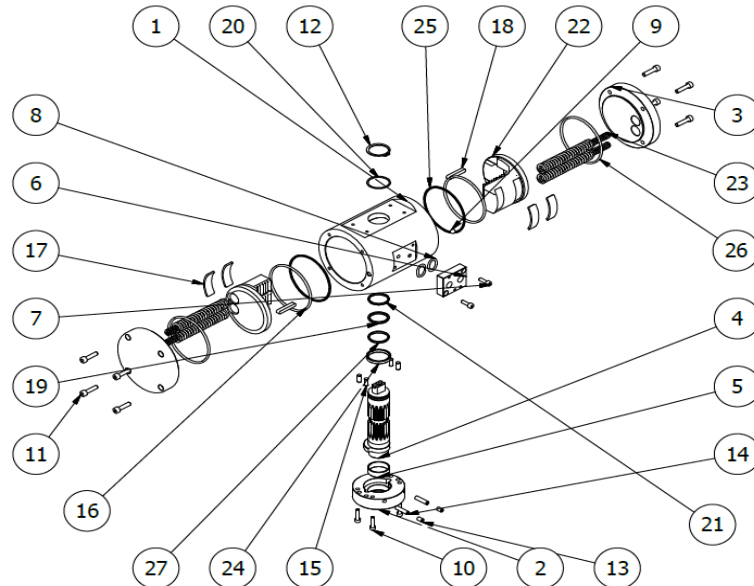
SIZE	"DA" OPEN	"DA" CLOSE	"SE" OPEN	"SR" CLOSE
8	<1	<1	<1	<1
20	2,0	2,0	2,0	1,5
35	2,5	2,5	2,5	2,0
55	3,5	3,5	3,5	3,0
70	4,0	4,0	4,0	3,0

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

AIR CONSUMPTION (90°)

SIZE	OPEN (litre)	CLOSE (litre)
8	0,34	0,41
20	0,90	1,00
35	1,69	1,90
55	2,80	3,40
70	3,05	3,70

Stainless Steel 316 Series - Part list



Ref.No	Description	Quantity	Material
1	Body	1	Stainless steel
2	Body adaptor	1	Stainless steel
3	Endcap	2	Stainless steel
4	Driveshaft	1	Stainless steel
5	Body Adaptor Bearing	1	POM
6	Namur Adaptor	1	Stainless steel
7	Namur Adaptor Bolts	2	Stainless steel
8	Namur Adaptor O-Ring	2	NBR
9	Ball seal	2	NBR
10	Body Adaptor Bolts	4	Stainless steel
11	Endcap bolts	8	Stainless steel
12	Driveshaft Circlip	1	Stainless steel
13	Lock Screws	2	Stainless steel
14	Stop Adjustment Screws	2	Stainless steel
15	Cylindrical pins	4	Stainless steel
16	Piston O-ring	2	NBR
17	Wearpad	4	POM
18	Guide Bar	2	Steel
19	Driveshaft Upper Bearing	1	POM
20	Washer	1	POM
21	Driveshaft Upper O-ring	1	NBR
22	Piston	2	Aluminum
23	Spring (outer/inner)	Max 4/4	SiCR
24	Driveshaft Lower Bearing	1	POM
25	Piston backup Bearing	2	POM
26	Endcap O-ring	2	NBR
27	Driveshaft Lower Bearing	1	POM