

SERIES 700076



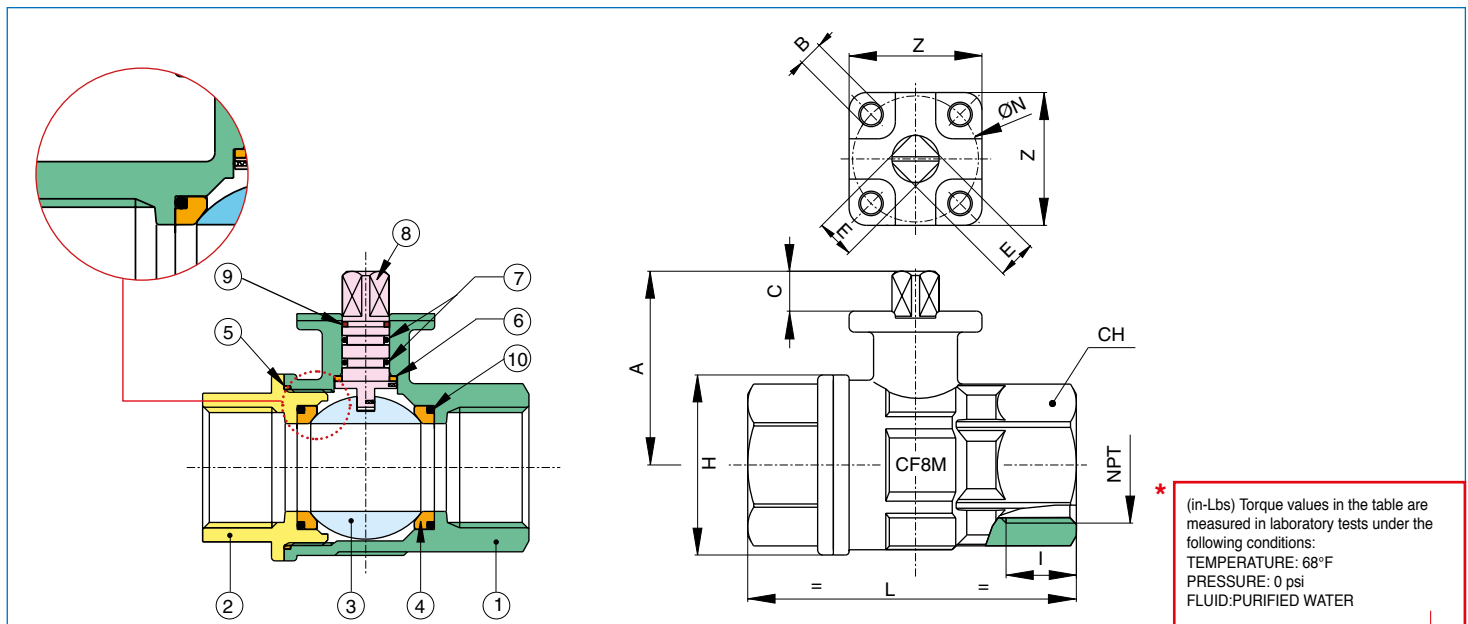
STAINLESS STEEL DIRECT MOUNT BALL VALVE



2 pc stainless steel ASTM A351 - CF8M ball valve, with ISO 5211 pad.

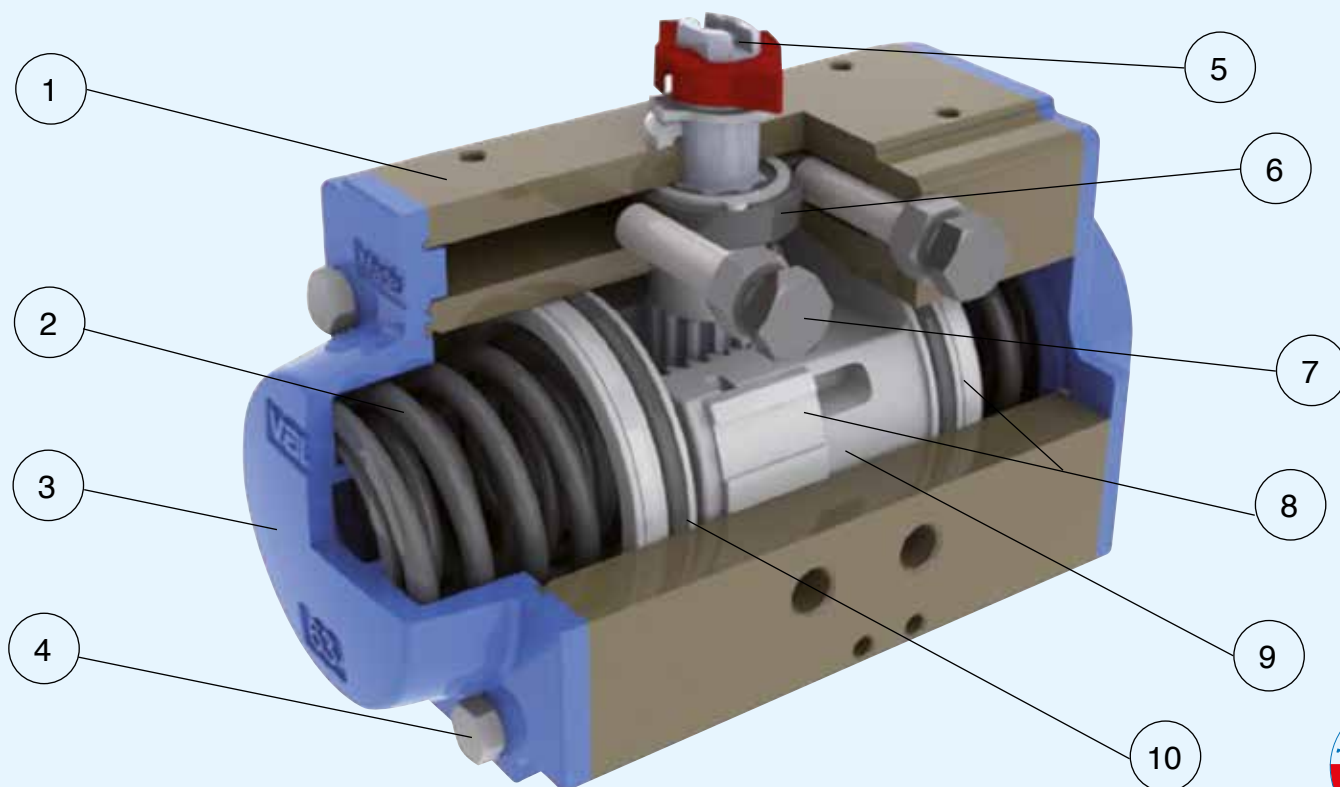
- Full port sizes 1/4" to 3".
- Pressure rating 1000 psi - 150 psi steam.
- Temperature -4° F to +366° F.
- Blow out proof stem.
- P.T.F.E. seats with O-ring backing for low operating torque.
- P.T.F.E. seals and double O-ring stem packing.
- 100% electronically tested in the open and closed position at 80 psi.

COMPLIES WITH NACE MR 0175/ISO 15156 AND NACE MR 0103.



	PART NAME	MATERIAL	N PCS
1	BODY	CF8M	1
2	END CONNECTION	CF8M	1
3	BALL	AISI316-CF8M	1
4	BALL SEAT	P.T.F.E.	2
5	SEAL	P.T.F.E.	1
6	STEM SEAL	P.T.F.E.	1
7	O-RING	FKM (Viton®)	2
8	STEM	AISI 316	1
9	STEM SEAL	P.T.F.E.	1
10	O-RING	FKM (Viton®)	2

SIZE	I	L	H	CH	A	C	E	ØN	B	Z	CV	psi	Lbs	* in-Lbs
1/4"	0.59	2.56	1.44	1.02	1.78	0.26	0.35	F03/F04 1.42-1.65	0.24	1.65	7.91	1000	0.95	60
3/8"	0.59	2.56	1.44	1.02	1.78	0.26	0.35	F03/F04 1.42-1.65	0.24	1.65	10.22	1000	0.89	60
1/2"	0.59	2.63	1.35	1.06	1.63	0.35	0.35	1.42 (ISO F03)	0.23	1.49	18.90	1000	0.68	53.10
3/4"	0.64	3.07	1.65	1.25	1.71	0.35	0.35	1.42 (ISO F03)	0.23	1.49	34.22	1000	0.91	53.10
1"	0.75	3.54	2.02	1.61	2.10	0.35	0.35	1.42 (ISO F03)	0.23	1.49	49.88	1000	1.35	53.10
1 1/4"	0.84	3.93	2.53	1.96	2.24	0.35	0.35	1.42 (ISO F03)	0.23	1.49	103.24	1000	2.22	53.10
1 1/2"	0.84	4.40	3.03	2.16	2.91	0.43	0.43	1.97 (ISO F05)	0.27	1.96	266.80	1000	3.69	150.46
2"	1.01	5.31	3.81	2.75	3.27	0.43	0.43	1.97 (ISO F05)	0.27	1.96	307.40	1000	6.49	150.46
2 1/2"	1.22	6.32	4.64	3.39	4.94	0.66	0.67	F07/F10 2.76-4.02	0.39 0.47	4.02	322.20	800	16.38	484
3"	1.34	7.01	5.48	4.09	5.34	0.71	0.67	F07/F10 2.76-4.02	0.39 0.47	4.02	584.44	800	22.82	772



1 BODY MANUFACTURED FROM EXTRUDED ALUMINIUM UNI 6060:

- Hard-coat anodized as standard finish 45-50 (micron).
- Good wear resistance.
- High corrosion resistance.
- Special finishes nickel-plating or P.T.F.E coated upon request.
- Bore finished to high standard to ensure low friction and long life.

2 CONCENTRIC SPRING SETS

- Standard coating painted.
- High resistance and reliability.
- Spring sets to suit different air pressure/torque requirements.
- Long securing screws to allow safe dismantling for maintenance.
- Same body dimensions for DA/SR versions.

3 DIE CAST ALUMINIUM END CAPS:

- Standard polyester powder coated
- Upon request nickel - plated and or P.T.F.E coated for corrosive environments.

4 ASSEMBLING SCREW:

- Stainless steel as standard.

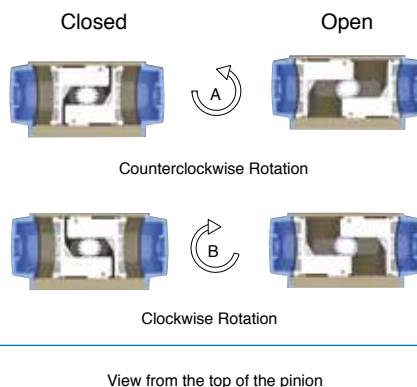
EXTERNAL CONNECTION:

- Top of pinion according to Namur norm.
- Solenoid valve connection according to Namur norm.
- Bottom of pinion according to ISO 5211-DIN 3337.

NOMINAL VALUES:

- Pressure rating max 8 bar.
- Temperature range:
standard (-4°F;+185°F), high (-4°F;+302°F), low (-40°F;+185°F).
- Pre lubricated for life of actuator on assembly.
- Fully tested on manufacture 100%.

MOUNTING VARIATIONS



5 PINION MADE IN STEEL:

- Nickel-plated for standard version against internal and external corrosion.
- Stainless steel for corrosive environments upon request.
- Anti-blowout design.

6 CAM FOR LIMIT POSITION ADJUSTMENT 0°-90°:

- Stainless steel.
- Adjustment for open and close position $\pm 5^\circ$.

7 0-90° ADJUSTMENT SCREWS:

- Stainless steel.

8 PISTON GUIDES IN POM:

- Large contact area.
- Low friction for self lubricating material.
- Long life.

9 PISTONS MADE FROM DIE CAST ALUMINIUM:

- Chemical nickel plating upon request.

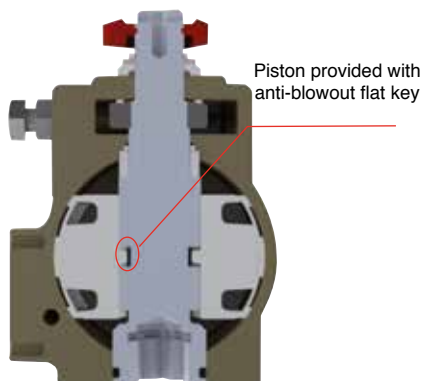
10 SEALS:

- NBR standard version.
- Viton high temperature version.
- Silicon low temperature version.

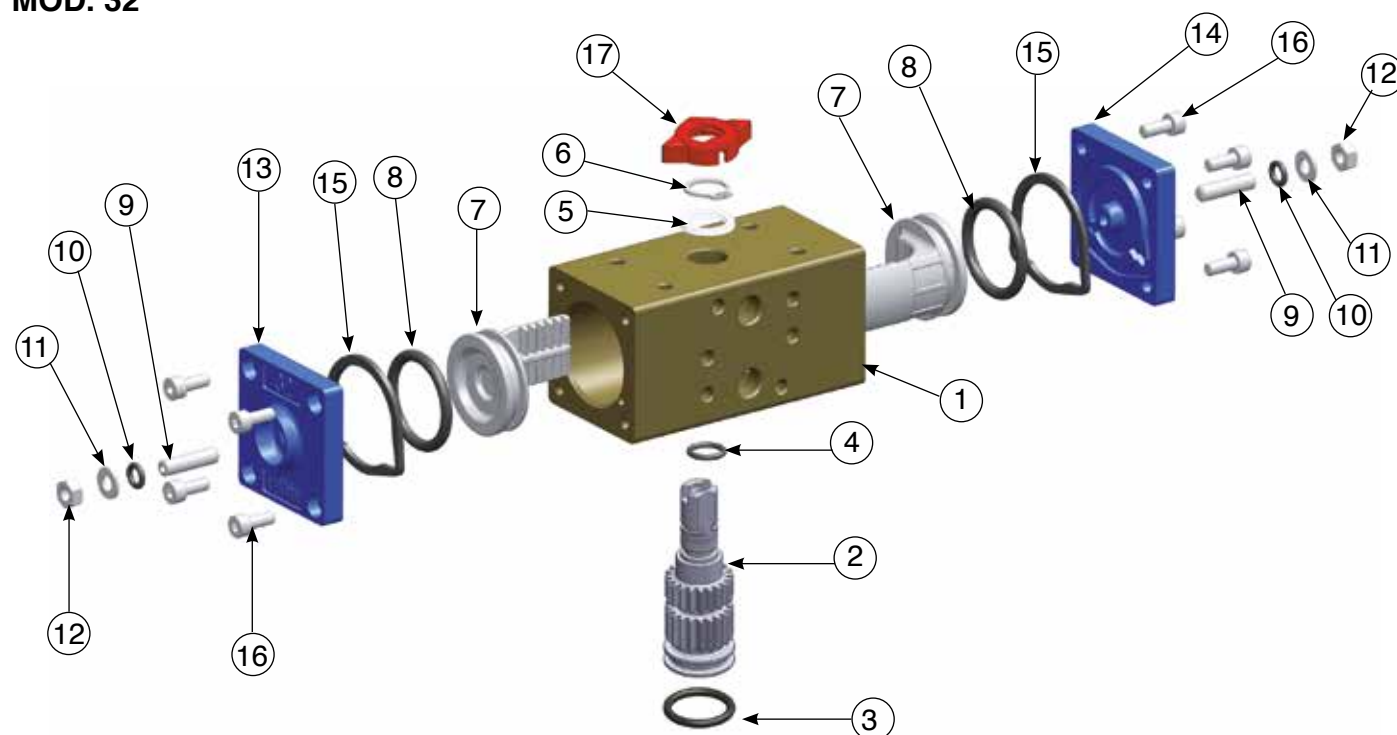
TWIN RACK AND PINION DESIGN:

- Constant torque output.
- Compact design.
- Balanced internal forces.
- Robust design to ensure long life.

ANTI-BLOWOUT SYSTEM



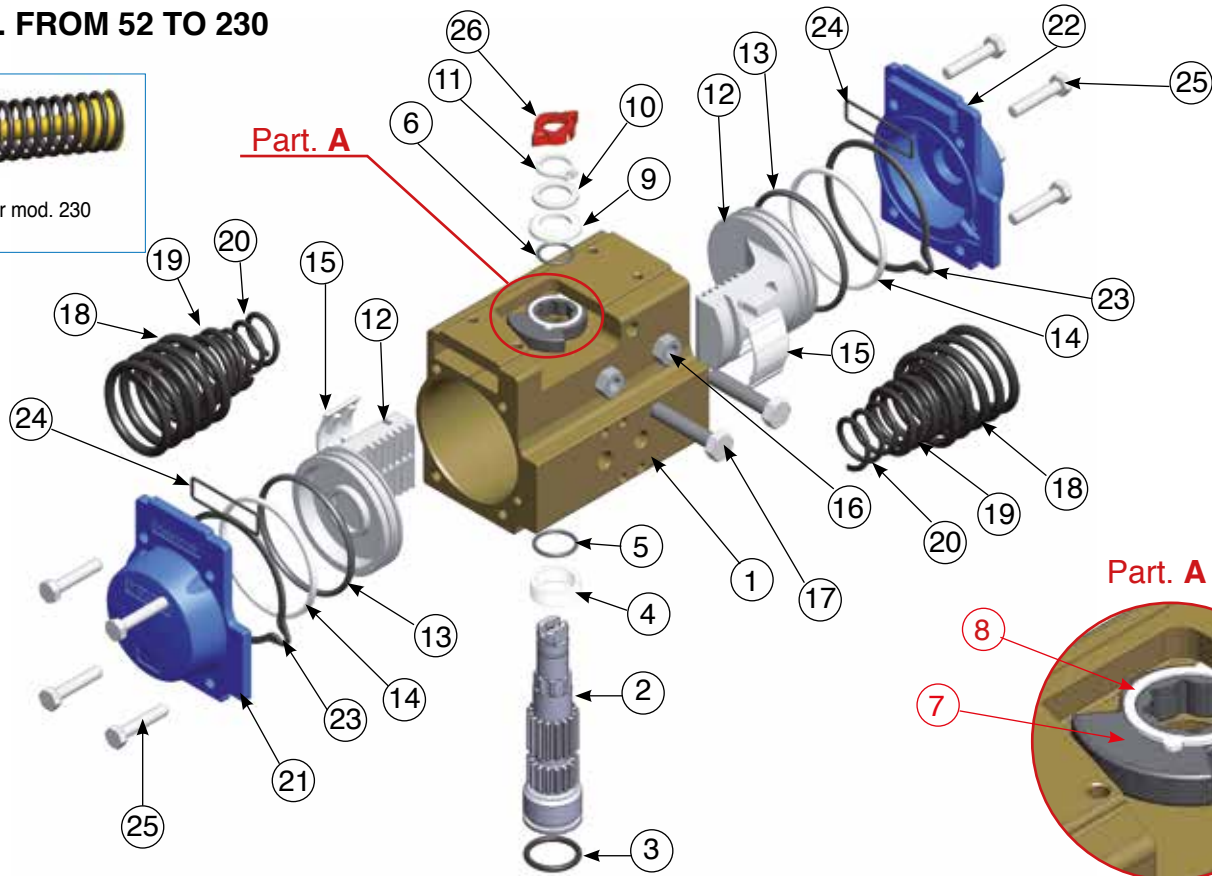
MOD. 32



ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TY
1	Body	Extruded aluminium	Hard anodized	1
2	Anti-blowout pinion	Steel	Nickel plated	1
• 3	O-ring	NBR		1
• 4	O-ring	NBR		1
• 5	Spacer ring	POM		1
6	Snap ring	Steel	Nickel plated	1
7	Piston	Die cast aluminium		2
• 8	O-ring	NBR		2
9	Stop bolt	Stainless steel		2
• 10	O-ring	NBR		2
11	Washer	Stainless steel		2
12	Stop bolt retaining nut	Stainless steel		2
13	Left end cap	Die cast aluminium	Painted	1
14	Right end cap	Die cast aluminium	Painted	1
15	End cap seats	NBR		2
16	End cap fixing screw	Stainless steel		8
17	Position indicator	Thermoplastic rubber TPE		1

• Parts subject to wear

MOD. FROM 52 TO 230



ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Extruded aluminium	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	NBR		1	1
• 4	Spacer ring	POM		1	1
• 5	O-ring	NBR		1	1
• 6	O-ring	NBR		1	1
7	Cam	Stainless steel		1	1
8	Spacer	POM		1	1
• 9	Spacer	POM		1	1
10	Washer	Stainless steel		1	1
** 11	Snap ring	Steel	Nickel plated	1	1
12	Piston	Die cast aluminium		2	2
• 13	O-ring	NBR		2	2
• 14	Antifriction ring	POM		2	2
• 15	Thrust block	POM		2 [4]	2 [4]
16	Stop bolt retaining nut	Stainless steel		2	2
17	Stop bolt	Stainless steel		2	2
18	External spring	Steel	Painted	0	See spring settings at page 109
*** 19	Central spring	Steel	Painted	0	
20	Internal spring	Steel	Painted	0	
21	Left end cap	Die cast aluminium	Painted	1	1
22	Right end cap	Die cast aluminium	Painted	1	1
23	End cap seats	NBR		2	2
24	O-ring	NBR		2	2
25	End cap fixing screw	Stainless steel		8	8
26	Position indicator	Thermoplastic rubber TPE		1	1

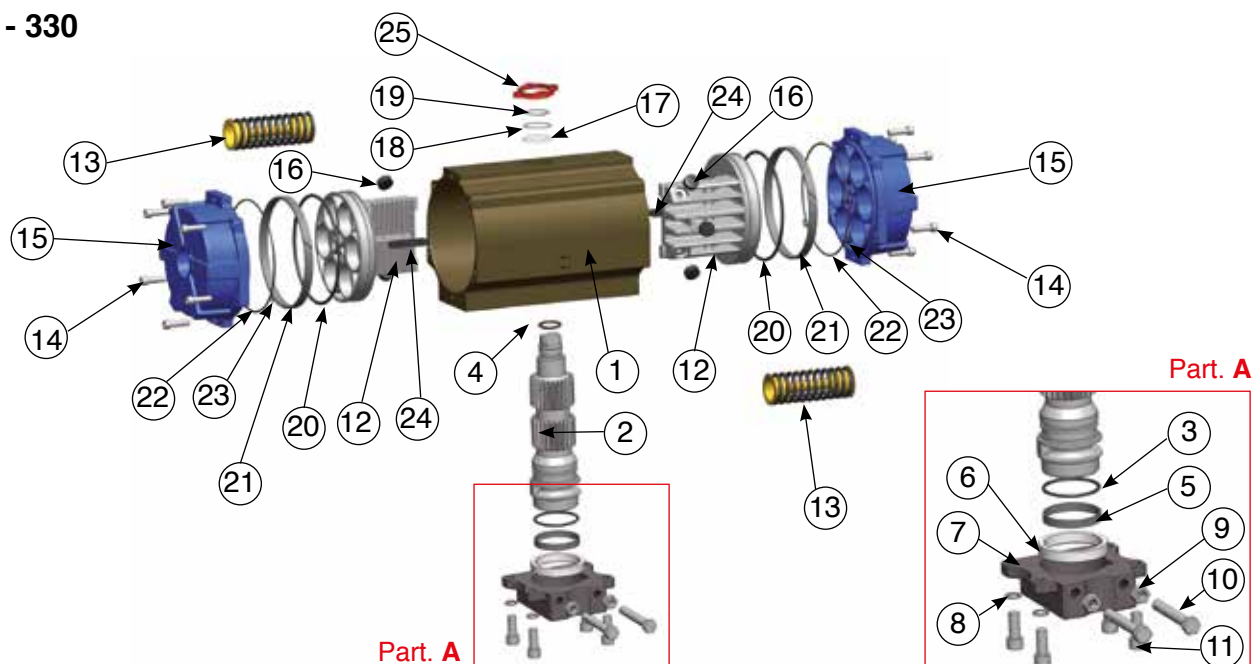
• Parts subject to wear.

** Reinforced series DIN 471 - UNI 7436.

(4) Valid for mod. 140-160-180-200-230 only.

*** Only for mod. 160-180-200.

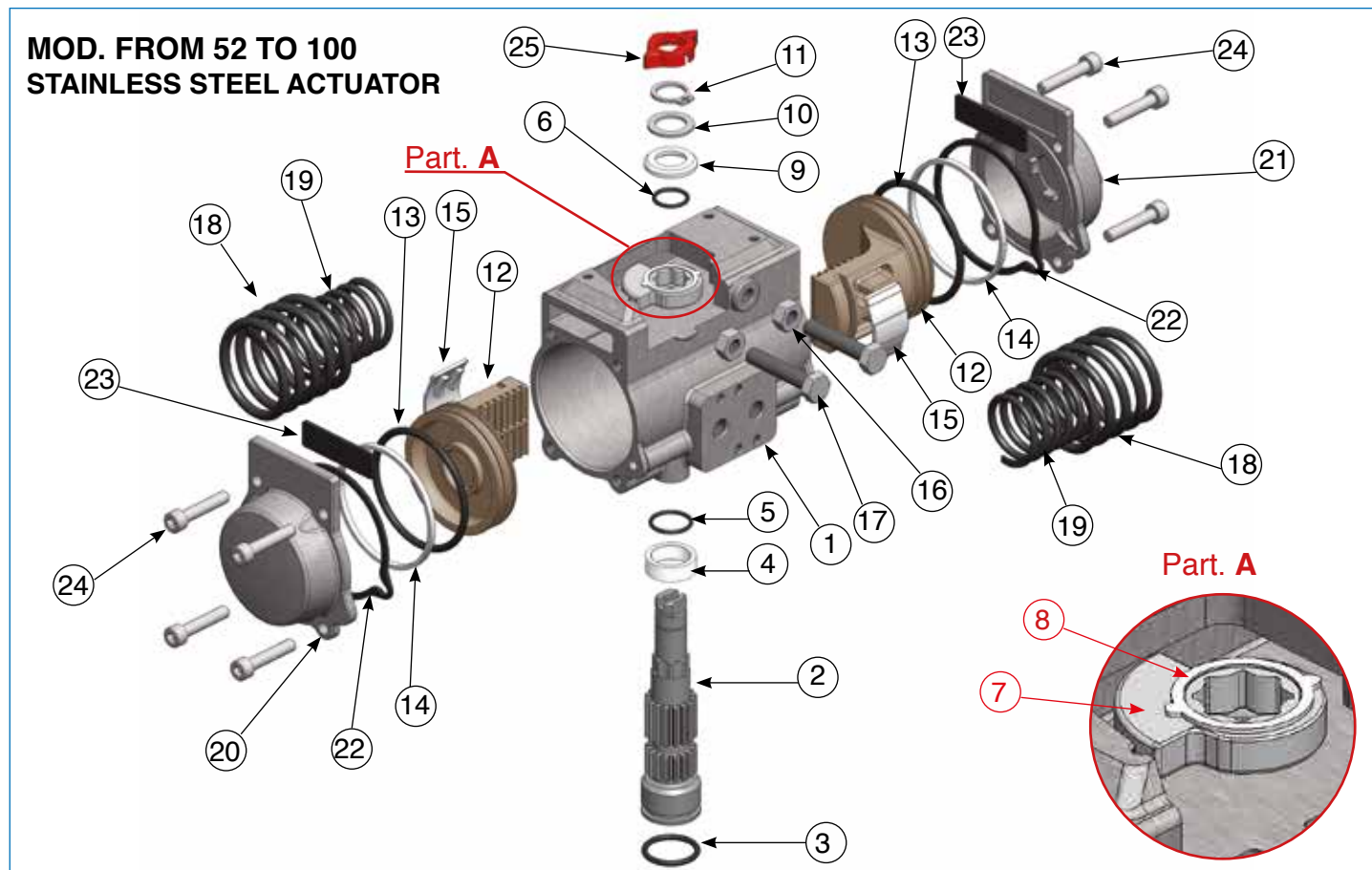
MOD. 270 - 330



ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Extruded aluminium	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	NBR		1	1
• 4	O-ring	NBR		1	1
• 5	Antifriction ring	P.T.F.E 15% graphite		1	1
• 6	Antifriction ring	P.T.F.E		1	1
7	Plate	mod.270 GGG40 - mod.330 C45	Painted	1	1
8	Washer	Stainless steel		4	8
9	Stop bolt retaining nut	Stainless steel		2	2
10	Stop crew	Steel	Zinc plated	2	2
11	Fixing screws	Stainless steel		4	4
12	Piston	Die cast aluminium		2	2
13	Precompressed spring	Steel	Painted	0	See spring
14	End cap fixing screw	Stainless steel		mod.270 12 mod.330 16	mod.270 12 mod.330 16
15	End cap	Die cast aluminium	Painted	2	2
• 16	Thrust block	POM		mod.270 6 mod.330 8	mod.270 6 mod.330 8
• 17	Spacer ring	POM		1	1
18	Pinion washer	Stainless steel		1	1
19	Snap ring	Steel	Nickel plated	1	1
• 20	O-ring	NBR		2	2
• 21	Antifriction ring	P.T.F.E 15% graphite		2	2
22	O-ring	NBR		2	2
23	O-ring	NBR		mod.270 4 mod.330 2	mod.270 4 mod.330 2
24	Anti blowout key	POM		2	2
25	Position indicator	Thermoplastic rubber TPE		1	1

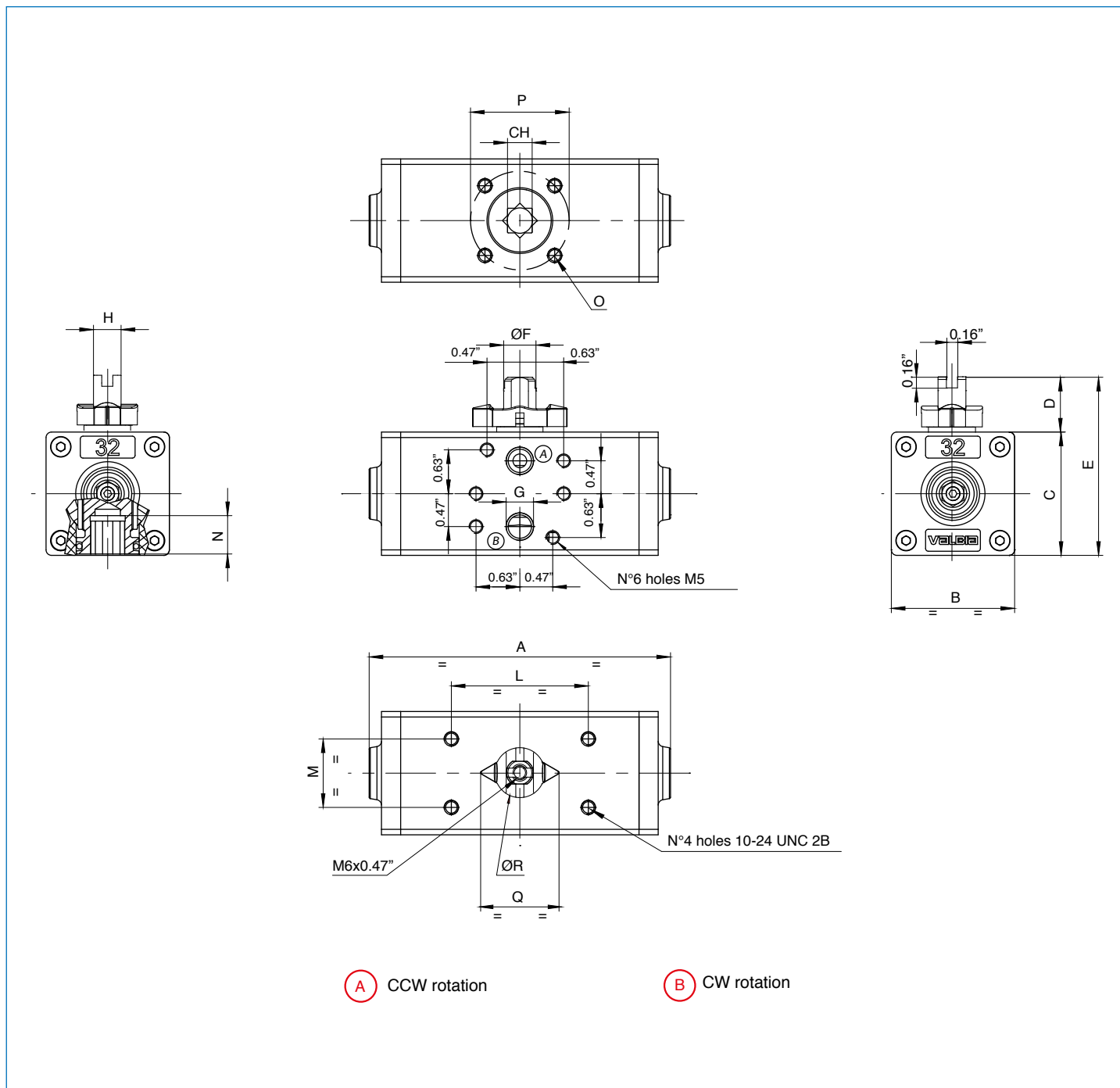
• Parts subject to wear.

**MOD. FROM 52 TO 100
STAINLESS STEEL ACTUATOR**

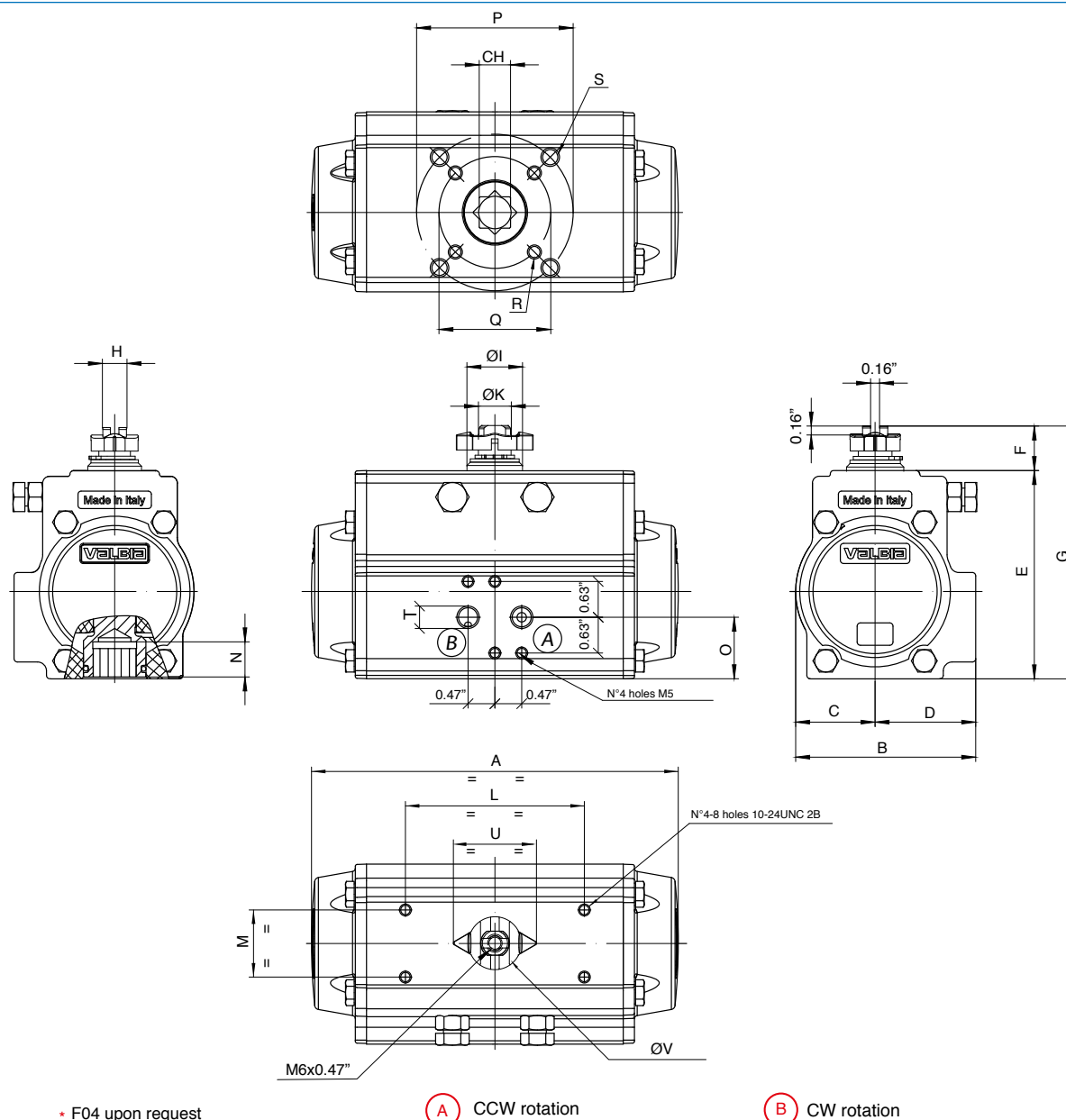


ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TY DA	Q.TY SR
1	Body	Stainless steel		1	1
2	Anti-blowout pinion	Stainless steel		1	1
• 3	O-ring	NBR		1	1
• 4	Spacer ring	POM		1	1
• 5	O-ring	NBR		1	1
• 6	O-ring	NBR		1	1
7	Cam	Stainless steel		1	1
8	Spacer	POM		1	1
• 9	Spacer	POM		1	1
10	Washer	Stainless steel		1	1
11	Snap ring	Stainless steel		1	1
12	Piston	Die cast aluminium	Hard anodized	2	2
• 13	O-ring	NBR		2	2
• 14	Antifriction ring	POM		2	2
• 15	Thrust block	POM		2	2
16	Stop bolt retaining nut	Stainless steel		2	2
17	Stop bolt	Stainless steel		2	2
18	External spring	Steel	Powder coating (bonderizing)	0	See spring settings at page 109
19	Internal spring	Steel	Powder coating (bonderizing)	0	
20	Left end cap	Stainless steel		1	1
21	Right end cap	Stainless steel		1	1
22	End cap seats	NBR		2	2
23	End cap seats	NBR		2	2
24	End cap fixing screw	Stainless steel		8	8
25	Position indicator	Thermoplastic rubber TPE		1	1

• Parts subject to wear.



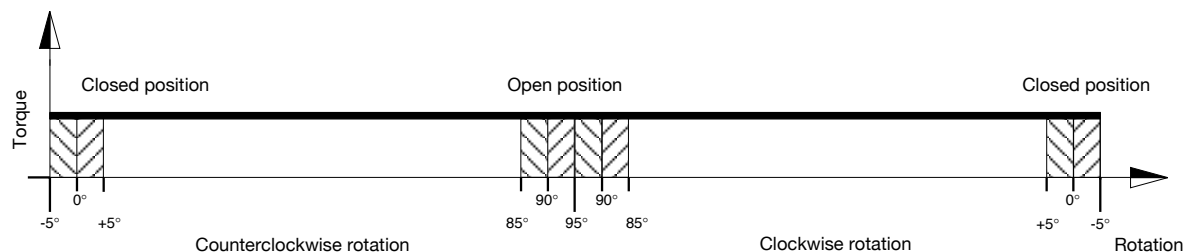
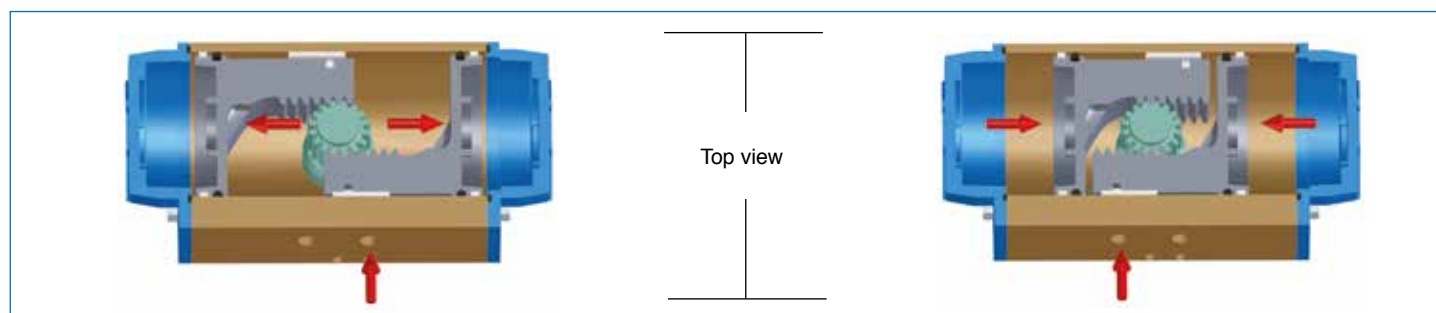
MOD.	DRILLING ISO 5211	CH	A	B	C	D	E	ØF	G NPT	H	L	M	N	O	P	Q	øR
32	F03	0.35	4.33	1.77	1.77	0.79	2.56	0.46	1/8"	0.39	1.97	0.98	0.47	10-24 UNC 2Bx0.30	1.42	1.36	0.87



MOD.	DRILLING ISO 5211	CH	A	B	C	D	E	F	G	H	ØI	ØK	L	M	N	O	P	Q	R	S	T NPT	U	øV
52	F03-F05 *	0.43	5.55	2.80	1.18	1.61	3.21	0.79	4.00	0.39	0.83	0.47	3.15	1.18	0.47	1.04	1.97	1.42	10-24 UNC 2Bx0.29"	1/4-20 UNC 2Bx0.35"	1/8"	1.36	0.87
63	F05 - F07	0.55	6.46	3.17	1.40	1.77	3.66	0.79	4.45	0.43	0.98	0.59	3.15	1.18	0.63	1.08	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.36	0.87
75	F05 - F07	0.67	8.27	3.72	1.65	2.07	4.37	0.79	5.16	0.51	1.14	0.75	3.15	1.18	0.75	1.38	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.65	1.14
85	F05 - F07	0.67	9.47	4.17	1.87	2.30	4.92	0.79	5.71	0.59	1.38	0.86	3.15	1.18	0.75	1.65	2.76	1.97	1/4-20 UNC 2Bx0.31"	5/16-18 UNC 2Bx0.47"	1/8"	1.65	1.14
100	F07 - F10	0.67	10.83	4.84	2.17	2.68	5.43	0.79	6.21	0.59	1.38	0.86	3.15	1.18	0.81	1.97	4.02	2.76	5/16-18 UNC 2Bx0.31"	3/8-16 UNC 2Bx0.55"	1/4"	1.65	1.14
115	F07 - F10	0.87	13.11	5.39	2.52	2.87	6.39	1.18	7.57	0.87	1.93	1.26	3.15/5.12	1.18	0.94	1.97	4.02	2.76	5/16-18 UNC 2Bx0.47"	3/8-16 UNC 2Bx0.59"	1/4"	2.52	1.73
125	F07 - F10	0.87	14.65	5.83	2.68	3.15	6.87	1.18	8.05	0.87	1.93	1.26	3.15/5.12	1.18	0.94	2.40	4.02	2.76	5/16-18 UNC 2Bx0.47"	3/8-16 UNC 2Bx0.59"	1/4"	2.52	1.73
140	F10 - F12	1.06	17.13	6.46	3.01	3.44	7.76	1.18	8.94	0.94	1.93	1.38	3.15/5.12	1.18	1.14	2.80	4.92	4.02	3/8-16 UNC 2Bx0.59"	1/2-13 UNC 2Bx0.71"	1/4"	2.52	1.73
160	F10 - F12	1.06	19.69	7.32	3.43	3.90	8.70	1.18	9.88	1.18	2.24	1.57	3.15/5.12	1.18	1.26	3.15	4.92	4.02	3/8-16 UNC 2Bx0.55"	1/2-13 UNC 2Bx0.67"	1/4"	3.17	2.36
180	F10 - F14	1.42	19.41	8.38	3.86	4.53	9.96	1.18	11.14	1.42	2.44	1.77	3.15/5.12	1.18	1.69	3.90	5.51	4.02	3/8-16 UNC 2Bx0.59"	5/8-11 UNC 2Bx0.98"	1/4"	3.17	2.36
200	F14	1.42	22.76	8.54	4.25	4.29	10.94	1.18	12.13	1.42	2.64	1.97	3.15/5.12	1.18	1.46	3.07	5.51	/	/	5/8-11 UNC 2Bx0.94"	1/4"	3.17	2.36
230	F16	1.81	27.17	9.78	4.88	4.90	12.80	1.18	13.98	1.42	2.64	1.97	3.15/5.12	1.18	1.97	3.62	6.50	/	/	3/4-10 UNC 2Bx1.14"	1/4"	3.17	2.36

** Only square connection at 45°.

DOUBLE ACTING ACTUATOR



With reference to the above diagram it can be noted that the torque of a double acting actuator remains constant through-out the complete action.

The user can decide on which model to choose according to the own specific requirements, using the following guidelines:

1. Define the maximum torque of the valve to automate.
2. To obtain a safety factor increase the torque value chosen by 25% - 50% (subject to the type of valve and working conditions).
3. Once the torque value suggested is obtained consult the torque chart and in relation to the corresponding air pressure find a torque value exact to or exceeding the one obtained.
4. Once the torque value is determined move horizontally to the column "model" to find the actuator model required.

TYPE	AIR SUPPLY PRESSURE (psi)							
	40	50	60	70	80	90	100	115
	TORQUE OUTPUT DOUBLE ACTING ACTUATORS (in-Lbs)							
DA 32	34	43	55	64	71	82	87	101
DA 52 *	88	112	133	158	178	201	227	263
DA 63 *	152	193	238	282	320	361	405	469
DA 75 *	283	356	435	513	586	659	736	851
DA 85 *	406	514	628	744	853	960	1072	1237
DA 100 *	645	814	989	1163	1333	1505	1681	1939
DA 115	1065	1344	1640	1932	2212	2488	2779	3211
DA 125	1402	1771	2153	2539	2905	3274	3650	4220
DA 140	2003	2504	3005	3506	4006	4509	5009	5764
DA 160	2804	3501	4196	4899	5596	6292	6987	8045
DA 180	3860	4825	5790	6746	7711	8661	9627	11081
DA 200	5198	6494	7796	9089	10393	11670	12972	14924
DA 230	8589	10738	12880	15031	17180	19289	21440	24671
DA 270	12625	15777	18935	22093	25246	28361	31511	36269
DA 330	22464	28083	33702	39321	44939	50476	56086	64555

* Valid also for stainless steel actuator