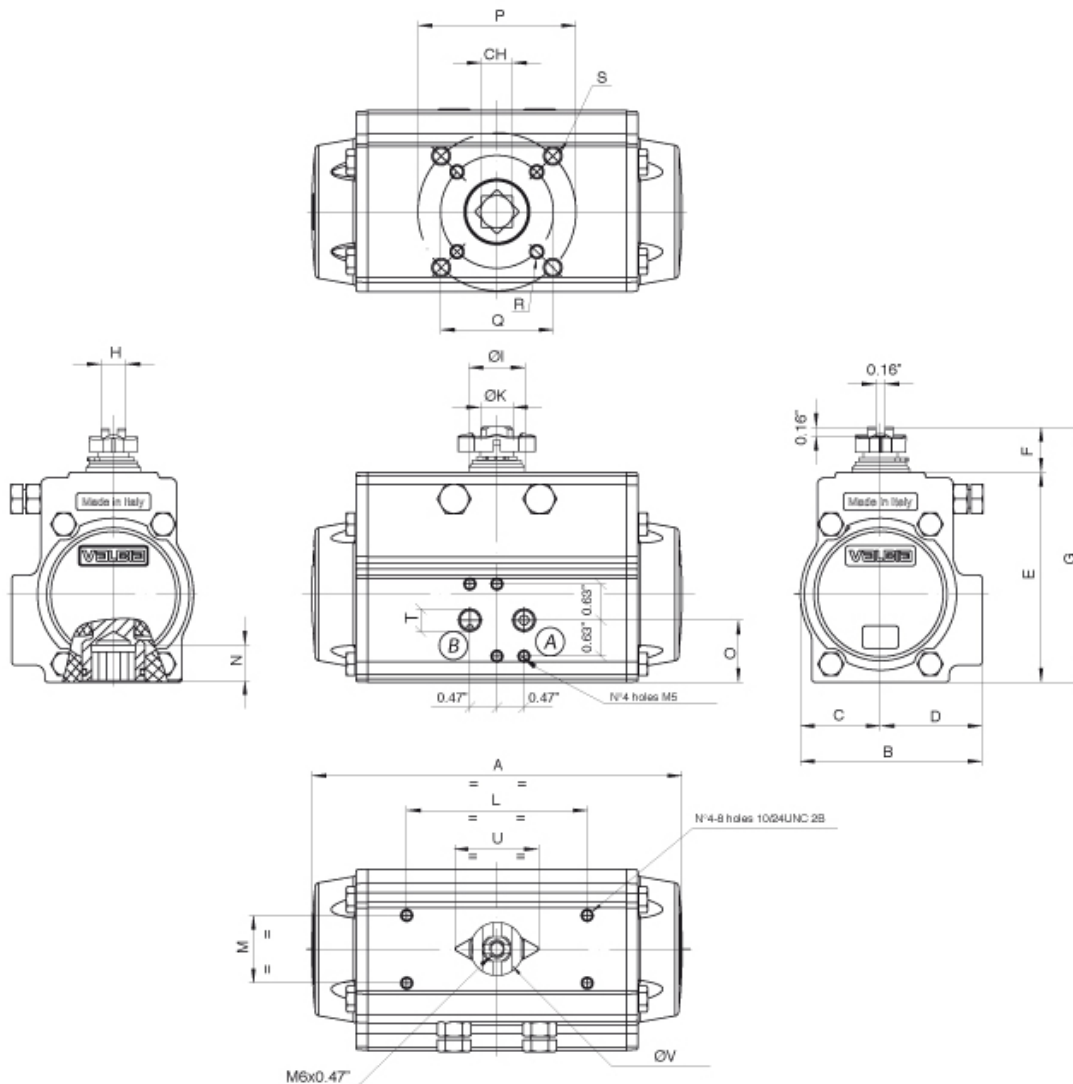


ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TA' DA	Q.TA' SR
1	Body	Extruded aluminium	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	NBR		1	1
• 4	spacer ring	POM		1	1
• 5	O-ring	NBR		1	1
• 6	O-ring	NBR		1	1
7	Cam	Stainless steel		1	1
8	Spacer	POM		1	1
• 9	Spacer	POM		1	1
10	Washer	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	
*** 19	central spring	Steel	Painted	0	See spring
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

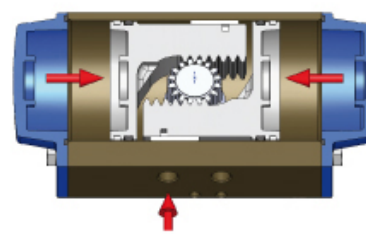
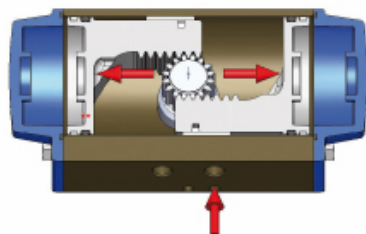


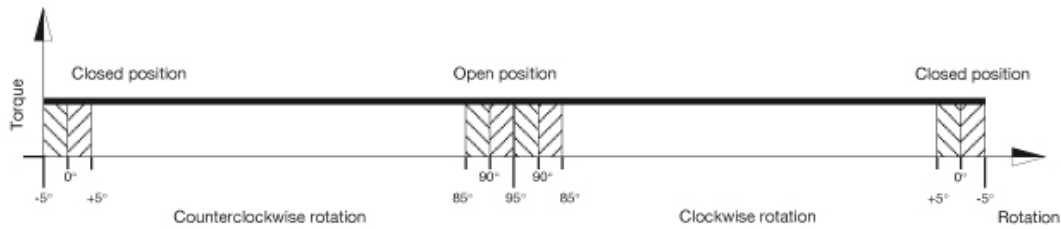
- F04 upon request

(A) CCW rotation

(B) CW rotation

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
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

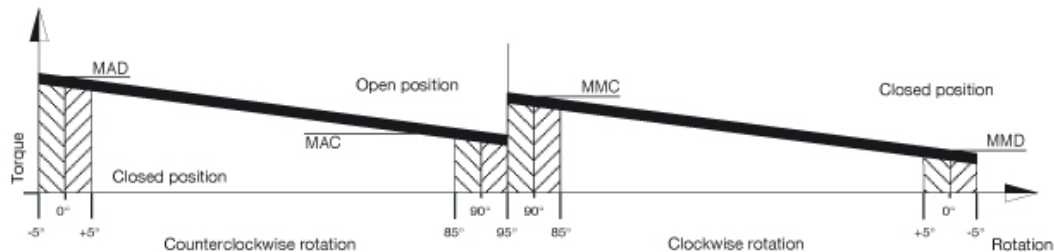
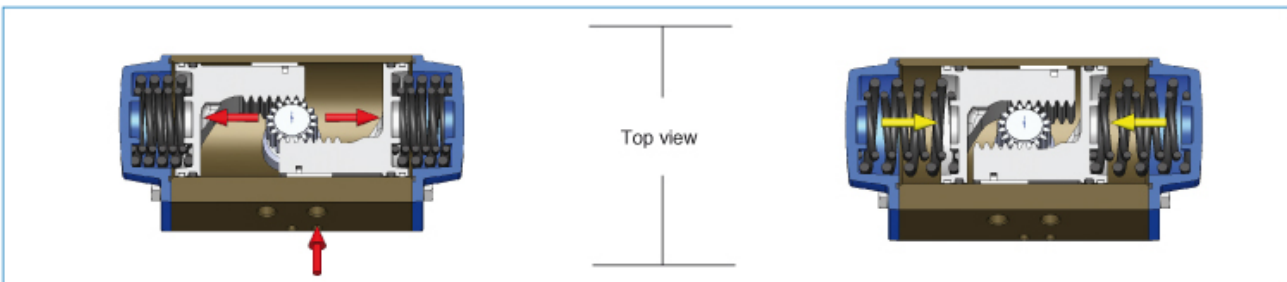




With reference to the above diagram it can be noted that the torque of a double acting actuator remains constant through-out the complete action. The user can decide on which model to choose according to his/her own specific requirements, using the following guidelines:

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 160	2804	3501	4196	4899	5596	6292	6987	8045



With reference to the above diagram the torque of a spring return actuator is not constant but decreasing. This is due to the action of the springs that when compressed during air actuation counteract the piston movement and accumulate energy which will be available in a decreasing way during the rotation inversion. The torque given by the actuator is defined by four fundamental values.

Opening rotation

MAD = Actuator torque with unfolded springs
 MAC = Actuator torque with compressed springs.

Closing rotation

MMC = Torque with compressed springs.
 MMD = Torque with unfolded springs

The user can decide on which model to choose according to his/her 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 the torque value exact to or exceeding the one obtained, taking account of the lower value between the MMD and MAC values.
4. Once the torque value is determined move horizontally to the column "model" to find the actuator model required.