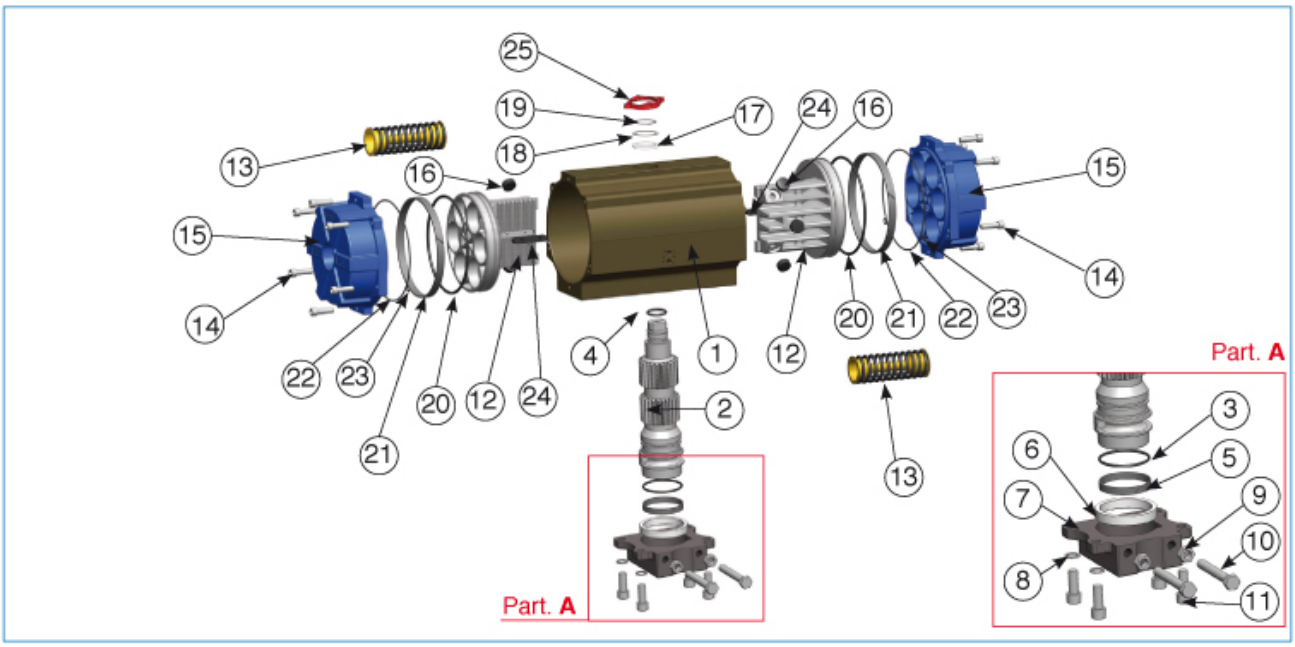
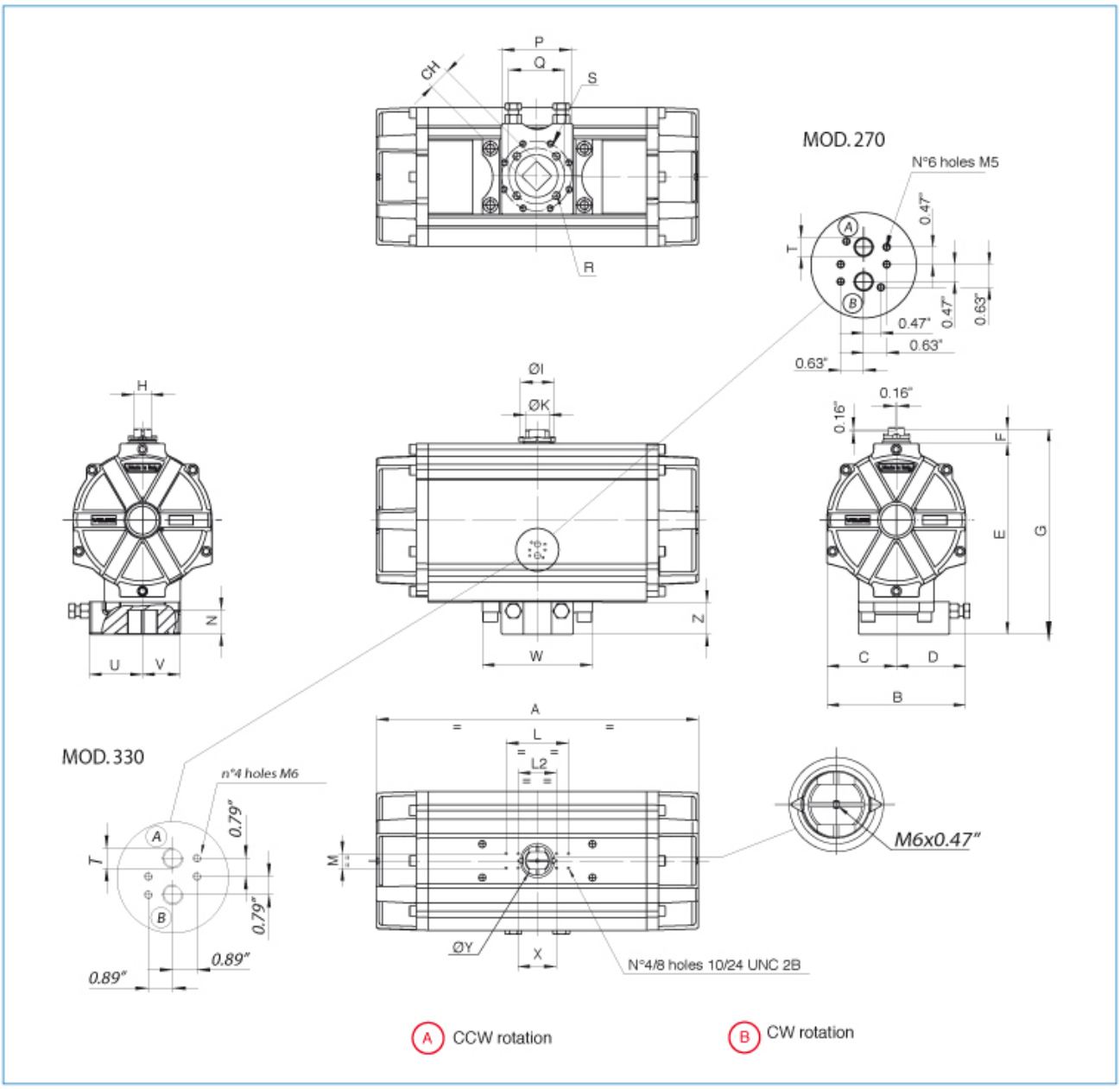


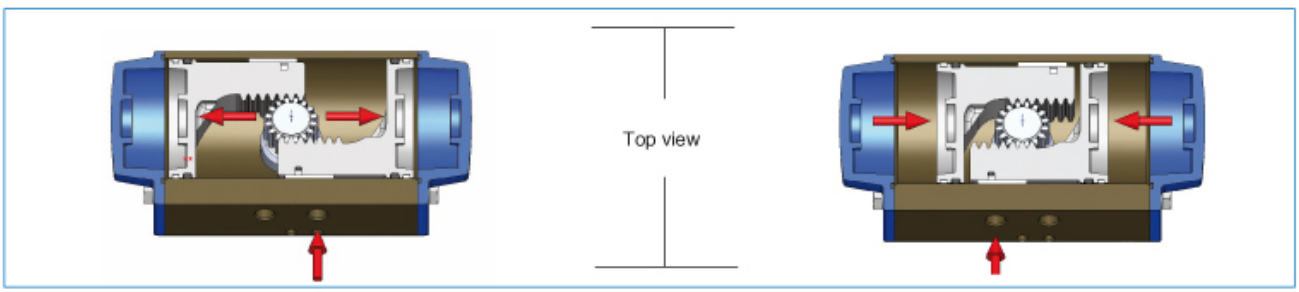
ITEM	DESCRIPTION	MATERIAL	TREATMENT	Q.TA' DA	Q.TA' SR
1	Body	Extruded aluminium	Hard anodized	1	1
2	Anti-blowout pinion	Steel	Nickel plated	1	1
• 3	O-ring	NBR		1	1
• 4	O-ring	NBR		1	1
• 5	Antifriction ring	PTFE 15% graphite		1	1
• 6	Antifriction ring	PTFE		1	1
7	Plate	mod.270 GGG40 - mod.330 C45	Painted	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	PTFE 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

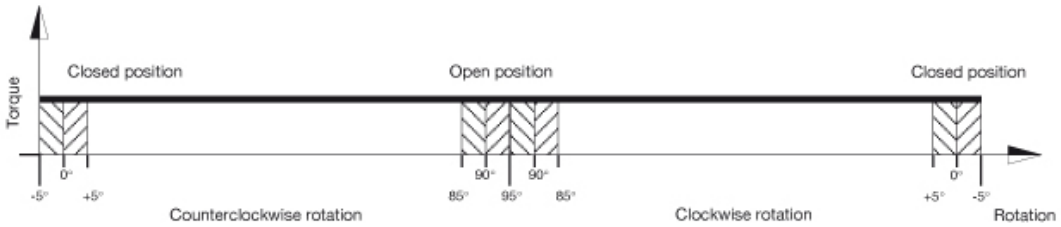
• Parts subject to wear



MOD.	DRILLING ISO 5211	CH	A	B	C	D	E	F	G	H	ØI	ØK	L	L2	M	N	P	Q	R	S	T NPT	U	V	W	Z	X	ØY
270	F16	** 1.81	26.46	11.42	5.71	5.71	15.71	1.18	16.89	1.42	2.76	1.97	5.12	3.15	1.18	1.97	/	6.50	3/4-10 UNC 2Bx1.18"	/	1/4"	4.37	3.11	9.06	2.68	3.17	2.36

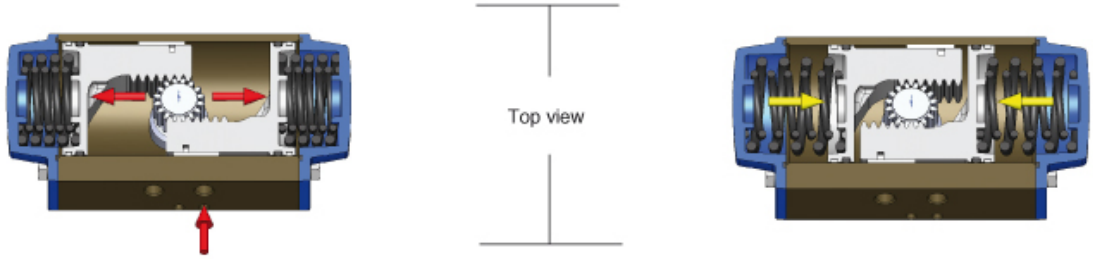
** Only square connection at 45°

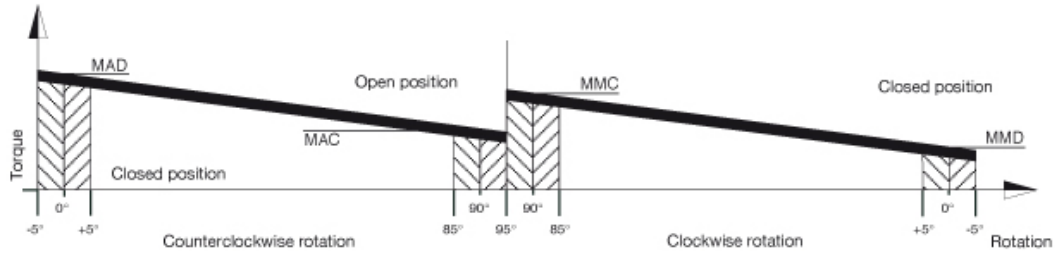




With reference to the above diagram it can be noted that the torque of a double acting actuator remains constant through-out the complete action.
The user can decide on which model to choose according to his/her own specific requirements, using the following guidelines:
1. Define the maximum torque of 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 270	12625	15777	18935	22093	25246	28361	31511	36269





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 chose 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.

SPRING SETTING	
	
PRETENSIONED SPRING	
SET	N° OF SPRINGS FOR EACH SIDE
01	2/3
02	3/3
03	3/4
04	4/4
05	4/5
06	5/5
07	5/6
08	6/6

MOD	SET	SPRING TORQUE (Nm)		AIR SUPPLY PRESSURE (psi)															
				40		50		60		70		80		70		100		115	
				TORQUE OUTPUT SPRING RETURN ACTUATORS (in-Lbs)															
		0° MMD	90° MMC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC	0° MAD	90° MAC
SR270	1	4478	7001	8096	5530	11308	8742	14548	11982										
	2	5372	8399	7141	4061	10353	7273	13627	10513										
	3	6266	9798	5229	2592	9397	5804	12637	9044	15877	12284								
	4	7169	11196			8450	4344	11690	7583	14930	10823	18141	14036						
	5	8063	12595					10734	6114	13974	9354	17185	12566	20397	18478				
	6	8957	13993					9778	4645	13018	7885	16230	11097	19441	14308				
	7	9851	15400					8823	3216	12062	6416	15275	9628	18486	12839	21717	16071		
	8	10745	16799					7867	1707	11107	4947	14319	8159	17530	11370	20762	14602	25593	19434

WORKING TIME (SEC)		
COUNTERCLOCKWISE ROTATION (DA)	CCW	6,16
CLOCKWISE ROTATION (DA)	CW	5,47
COUNTERCLOCKWISE ROTATION (SR)	CCW	8,97
CLOCKWISE ROTATION (SR)	CW	6,62

WEIGHT CHART (Lbs)	
DOUBLE ACTING	182,29
SPRING RETURN	221,10

ACTUATOR AIR CONSUMPTION CHART		Litres: 1 Litre = 1000 cm3
COUNTERCLOCKWISE ROTATION (DA/SR)	CCW	915,35
CLOCKWISE ROTATION (DA)	CW	1086,22

To obtain the air consumption in Nl/min multiply the value in the chart for the correct parameters. That is to say for the supplied absolute pressure and the number of strokes in a minute.