



technische import

Product informatie



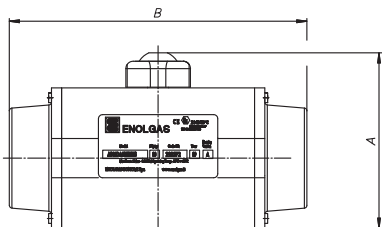
ENOLGAS



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Enolgas the trust of 50 years of experience.

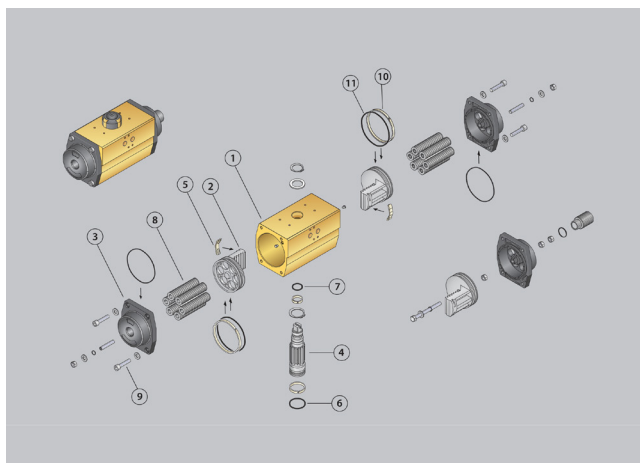
For more than 50 years Enolgas has been synonymous with reliability, quality and safety. It has always been a point of reference for qualified customers who are careful to protect, through their choices, the value of 100% Made in Italy products.



ALUMINIUM "SR" PNEUMATIC ACTUATOR

The Enolgas Rack & Pinion aluminium pneumatic actuators are suitable for use in civil and industrial automation. They are available in both single and double acting version, in various dimensions and with different executions, with bores connection in accordance with ISO 5211 standard. Actuators are CE marked and Ped and Atex certificated.

MATERIALS SPECIFICATIONS ALUMINIUM PNEUMATIC "SR" ACTUATOR S2971:



1	Body	Extruded	Aluminium Alloy
2	Piston	Casted	Aluminium Alloy
3	End-Cap	Casted	Extruded
4	Pinion	From bar	Carbon Steel
5	Piston guide	From bar	Carbon Steel
6	Lower Pinion guide ring	From bar	Acetal resin
7	O-ring	Moulded	Nitrile rubber
8	Springs	Forged	Acciaio per molle
9	Screw end cap	from bard	Stainless steel
10	Piston guide ring	From bar	Acetal resin
11	O-ring	Forged	Nitrile rubber

PNEUMATIC ACTUATOR

Rack and Pinion aluminium pneumatic actuator with hard anodized external surface.

END CONNECTIONS

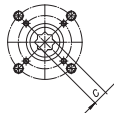
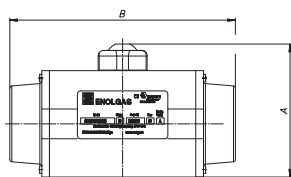
Bottom drilling to match valve is in accordance with ISO 5211. Interface for solenoid valve, shaft top end and top drilling to assemble accessories are in accordance with VDI/VDE 3845, NAMUR.

INLET PRESSURE RANGE

From 2 bar to 8 bar double acting.
From 3 bar to 8 bar single acting.

TEMPERATURE LIMITS

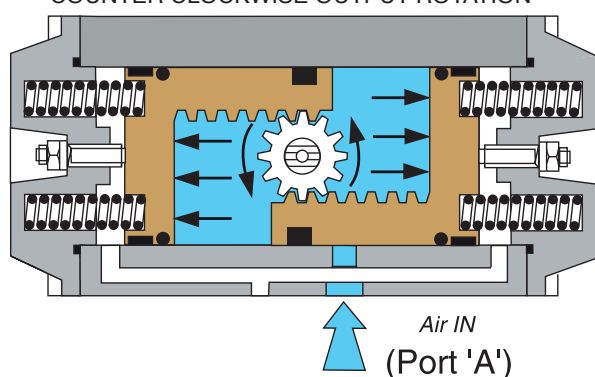
From -20°C to +80°C.



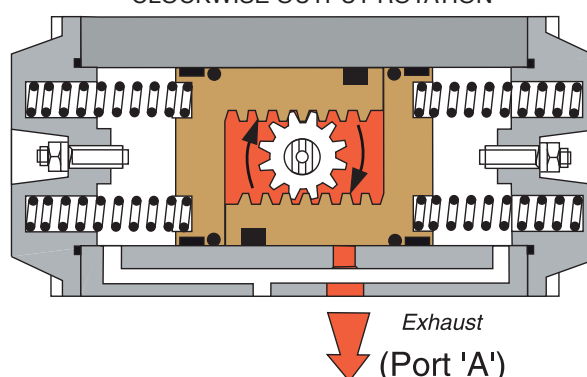
Code	S297110_	S297120_	S297130_	S297135_	S297140_	S297145_	S297150_	S297155_	S297160_	S297180_	S297100_
A mm	87	103	120	130	145	172	185	206	230	300	385
B mm	142	155	213	236	276	310	366	388	468	563	750
C mm	9	11	14	17	17	22	22	27	27	36	46
FLANGIA	F03-F05	F04-F05	F05-F07	F07	F07-F10	F10	F10	F12	F12	F14	F16

OUTPUT ALUMINIUM "SR" PNEUMATIC ACTUATOR

COUNTER CLOCKWISE OUTPUT ROTATION



CLOCKWISE OUTPUT ROTATION





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OPERATING PRESSURE (BAR) ALUMINIUM “SR” SINGLE ACTING PNEUMATIC ACTUATORS

Torque output spring return actuators (SR)

The codes refer to normally closed actuators

Modello Model	N° Molle N° Of springs	ISO5211 connessione ISO5211 connection	PRESSIONE DI ALIMENTAZIONE / OPERATING PRESSURE - bar														SPRING STROKE	
			3		4		5		6		7		8				90°	0°
			0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°				
S297110	2	03	6.5	5.4	9.4	8.3	12.4	11.3	15.3	14.2	19.3	18.2	22.4	21.3	3.5	2.4		
	3	03	5.3	3.7	8.2	6.6	11.2	9.6	14.1	12.5	18.1	16.5	21.2	19.6	5.2	3.6		
	4	03	4.1	1.9	7	4.8	10	7.8	12.9	10.7	16.9	14.7	20	17.8	7.0	4.8		
	5	03	-	-	3.1	2.7	8.8	6.1	11.7	9.0	15.7	13.0	18.8	16.1	8.7	6		
	6	03	-	-	-	-	7.6	4.3	10.5	7.2	14.5	11.2	17.6	14.3	10.5	7.2		
S297120	2	04	10.3	8.5	15.0	13.2	19.7	17.9	24.4	22.6	29.1	27.3	33.8	32.0	5.6	3.8		
	3	04	8.4	5.7	13.1	10.4	17.8	15.1	22.5	19.8	27.2	24.5	31.9	29.2	8.4	5.7		
	4	04	-	-	11.2	7.6	15.9	12.3	20.6	17.0	25.3	21.7	30.0	26.4	11.2	7.6		
	5	04	-	-	-	-	14.0	9.5	18.7	14.2	23.4	18.9	28.1	23.6	14.0	9.5		
	6	04	-	-	-	-	12.1	6.7	16.8	11.4	21.5	16.1	26.2	20.8	16.8	11.4		
S297130	2	05	22.0	18.0	32.0	28.0	42.0	38.0	52.0	48.0	62.0	58.0	72.0	68.0	12.0	8.0		
	3	05	18.0	12.0	28.0	22.0	38.0	32.0	48.0	42.0	58.0	52.0	68.0	62.0	18.0	12.0		
	4	05	-	-	24.0	16.0	34.0	26.0	44.0	36.0	54.0	46.0	64.0	56.0	24.0	16.0		
	5	05	-	-	-	-	30.0	20.0	40.0	30.0	50.0	40.0	60.0	50.0	30.0	20.0		
	6	05	-	-	-	-	26.0	14.0	36.0	24.0	46.0	34.0	56.0	44.0	36.0	24.0		
S297135	2	07	41.5	30.0	58.5	47.0	75.5	64.0	92.5	81.0	109.5	98.0	126.5	115.0	21.0	9.5		
	3	07	32.0	20.0	49.0	37.0	66.0	54.0	83.0	71.0	100.0	88.0	117.0	105.0	31.0	19.0		
	4	07	-	-	43.0	20.0	60.0	37.0	77.0	54.0	94.0	71.0	111.0	88.0	48.0	25.0		
	5	07	-	-	-	-	53.0	33.0	70.0	50.0	87.0	67.0	104.0	84.0	52.0	32.0		
	6	07	-	-	-	-	47.0	22.0	64.0	39.0	81.0	56.0	106.4	73.0	63.0	38.0		
S297140	2	07	52.7	42.4	76.7	66.4	100.7	90.4	123.7	113.4	149.7	139.4	173.7	175.2	28.6	18.3		
	3	07	43.0	28.0	67.0	52.0	91.0	76.0	114.0	99.0	140.0	125.0	164.0	153.6	43.0	28.0		
	4	07	-	-	58.0	38.0	82.0	62.0	105.0	85.0	131.0	111.0	155.0	132.0	57.0	37.0		
	5	07	-	-	-	-	73.0	47.0	96.0	70.0	122.0	96.0	146.0	110.4	72.0	46.0		
	6	07	-	-	-	-	64.0	33.0	87.0	56.0	113.0	82.0	137.0	88.8	86.0	55.0		
S297145	2	10	96.8	77.5	140.4	121.1	184.0	164.7	227.6	208.3	271.2	251.9	314.8	295.5	53.3	34.0		
	3	10	79.8	50.9	123.4	94.5	167.0	138.1	210.6	181.7	254.2	225.3	297.8	268.9	79.9	51.0		
	4	10	62.8	24.2	106.4	67.8	150.0	111.4	193.6	155.0	237.2	198.6	280.8	242.2	106.6	68.0		
	5	10	-	-	89.4	41.1	133.0	84.7	176.6	128.3	220.2	171.9	263.8	215.5	133.3	85.0		
	6	10	-	-	72.4	14.4	116.0	58.0	159.6	101.6	203.2	145.2	246.8	188.8	160.0	102.0		
S297150	2	10	123.7	99.4	178.7	154.4	234.7	210.4	289.7	265.4	345.2	320.9	400.7	376.4	67.6	43.3		
	3	10	103.0	66.0	158.0	121.0	214.0	177.0	269.0	232.0	324.5	287.5	380.0	343.0	101.0	64.0		
	4	10	-	-	136.0	87.0	192.0	143.0	247.0	198.0	302.5	253.5	358.0	309.0	135.0	86.0		
	5	10	-	-	-	-	170.0	109.0	225.0	164.0	280.5	219.5	336.0	275.0	169.0	108.0		
	6	10	-	-	-	-	148.0	75.0	203.0	130.0	258.5	185.5	314.0	241.0	203.0	130.0		
S297155	2	12	176.2	132.8	258.7	215.3	337.5	294.1	416.4	373.0	495.2	451.8	574.0	530.6	100.0	56.6		
	3	12	147.9	82.8	230.4	165.3	309.2	244.1	388.1	323.0	466.9	401.8	545.7	480.6	150.0	84.9		
	4	12	119.5	32.8	202.0	115.3	280.8	194.1	359.7	273.0	438.5	351.8	517.3	430.6	200.0	113.3		
	5	12	-	-	173.7	65.3	252.5	144.1	331.4	223.0	410.2	301.8	489.0	380.6	250.0	141.6		
	6	12	-	-	145.3	15.3	224.1	94.1	303.0	173.0	381.8	251.8	460.6	330.6	300.0	170.0		
S297160	2	12	257.0	200.0	371.0	314.0	484.0	427.0	597.0	540.0	711.5	654.5	825.0	768.0	140.0	83.0		
	3	12	215.0	130.0	329.0	244.0	442.0	357.0	555.0	470.0	669.5	584.5	783.0	698.0	210.0	125.0		
	4	12	-	-	287.0	174.0	400.0	287.0	513.0	400.0	627.5	514.5	741.0	628.0	280.0	167.0		
	5	12	-	-	-	-	358.0	217.0	471.0	330.0	585.5	444.5	699.0	558.0	350.0	209.0		
	6	12	-	-	-	-	316.0	147.0	429.0	260.0	543.5	374.5	657.0	488.0	420.0	251.0		
S297180	2	14	478.0	386.0	691.0	599.0	904.0	812.0	1116.0	1024.0	1331.0	1239.0	1704.0	1452.0	252.0	160.0		
	3	14	398.0	260.0	611.0	473.0	824.0	686.0	1036.0	898.0	1251.0	1113.0	1464.0	1326.0	378.0	240.0		
	4	14	-	-	531.0	347.0	744.0	560.0	956.0	772.0	1171.0	987.0	1384.0	1200.0	504.0	320.0		
	5	14	-	-	-	-	664.0	434.0	876.0	646.0	1091.0	861.0	1304.0	1074.0	630.0	400.0		
	6	14	-	-	-	-	584.0	308.0	796.0	520.0	1011.0	735.0	1224.0	948.0	756.0	480.0		
S297100	2	16	1181.0	957.0	1720.0	1496.0	2259.0	2032.0	2798.0	2574.0	3337.0	3113.0	3876.0	3652.0	660.0	436.0		
	3	16	963.0	628.0	1502.0	1167.0	2041.0	1706.0	2580.0	2245.0	3119.0	2748.0	3658.0	3323.0	989.0	654.0		
	4	16	-	-	1284.0	837.0	1823.0	1376.0	2362.0	1915.0	2901.0	2454.0	3440.0	2993.0	1319.0	872.0		
	5	16	-	-	-	-	1605.0	1046.0	2144.0	1585.0	2683.0	2124.0	3222.0	2663.0	1649.0	1090.0		
	6	16	-	-	-	-	-	-	1909.0	1254.0	2448.0	1793.0	2987.0	2332.0	1980.0	1325.0		



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Single acting actuators (SR) dimensioning

The single acting actuators contain springs between the pistons and the end-cups. Because of this the single acting actuator's torque will always have a value inferior to the dual acting actuator's of the same dimensions (bore). Moreover this torque is not constant throughout the stroke, but it decreases, because of the springs compression which opposes the pistons movement.

Therefore in order to dimension the actuator it is necessary to know the requested torque and the air pressure available at the actuator entrance. The requested torque is given by the declared breaking torque increased by a suitable safety factor. On the table, column 0°, of "Spring Stroke" it is necessary to look for the torque's value higher or equal to the requested one. On that same

line move to the left and cross the inlet pressure value at the actuator and check that the torque's value in column 90° (compressed springs) is higher or equal to the requested torque. If this is the case the actuator has been dimensioned correctly, if not it is necessary to chose a model with bigger dimensions (bore) repeating the procedure until both values found are verified.

Safety factor

The safety factor is given by the medium going through the valve, its temperature, density and viscosity.

The safety factor is moreover determined by the medium's state of aggregation, if it has lubricant features, if it contains materials which can deposit or get stuck inside the valve.



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