

Descrizione - Description

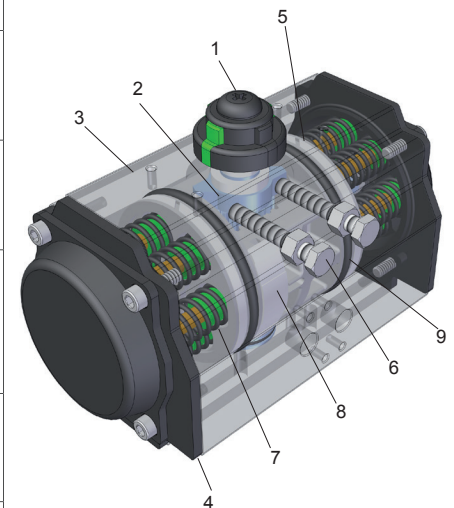
La nostra nuova serie di attuatori pneumatici RA è stata progettata con pignone e cremagliera, corpo in alluminio con versioni a doppio e semplice effetto con molle di ritorno.

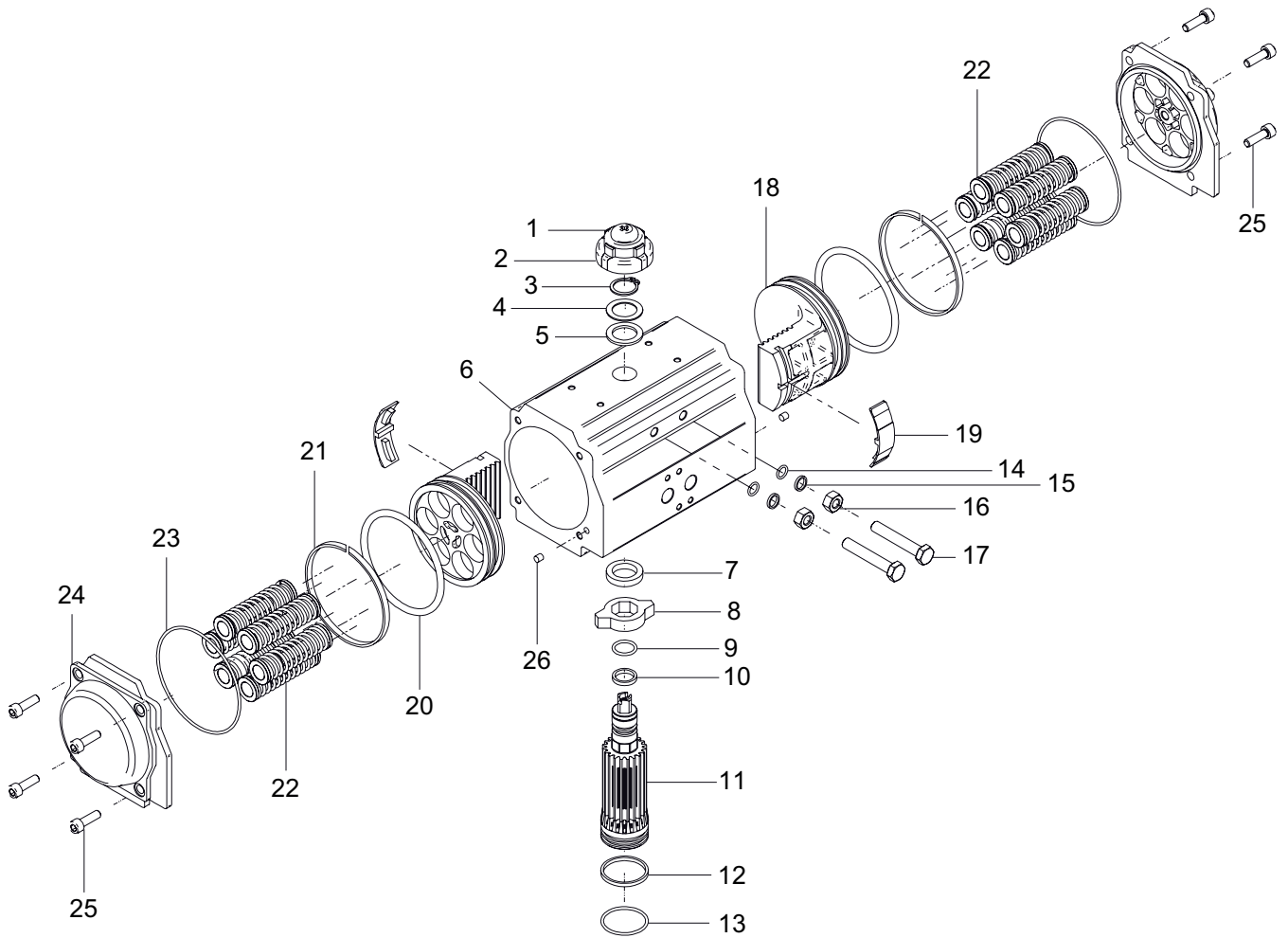
Questo tipo di attuatore è dotato come standard di un indicatore superiore multi funzione open-close e della regolazione della apertura / chiusura. Siamo inoltre riusciti a ridurre le dimensioni dell'attuatore mantenendo un ottimo livello di coppia. Queste caratteristiche permettono al nostro attuatore di soddisfare le sempre più esigenti richieste di mercato.

Our new series of pneumatic actuators RA was designed with rack and pinion, aluminium body with double and single-acting versions with return springs. This type of actuator is equipped with a top indicator multi open-close function and the adjustment of the opening / closing as standard. We also succeeded in reducing the size of the actuator while maintaining an excellent level of torque. These features enable our actuator to meet the increasingly demanding market requirements.

Componenti - Components

N°	Descrizione Description	Materiali Materials
1	Indicatore Indicator	Indicatore di posizione a normativa NAMUR per montaggio di accessori tipo: box fine-corsa, posizionatori, ecc. <i>Position indicator conforming to NAMUR normative for convenient assembly of accessories such as limit switch box, positioner and so on.</i>
2	Pignone Pinion	Ad alta precisione, in lega d'acciaio nichelato, conforme alle normative ISO 5211, DIN 3337 e NAMUR. Su richiesta fornibile in acciaio Inox. <i>High-precision, in steel alloy nickel-plated, conforming to normatives ISO 5211, DIN 3337 and NAMUR. On request available in Stainless Steel.</i>
3	Corpo Body	In estruso d'alluminio anodizzato duro, su richiesta fornibile con altri trattamenti. <i>In extruded hard anodized aluminium, on request available with other treatment.</i>
4	Testate Heads	In alluminio pressofuso verniciato con polvere di poliestere, fornibili anche rivestite in PTFE o nichelate. <i>In die-casting aluminium painted with polyester powder, available with PTFE coating or nickel-plated.</i>
5	Pistoni Pistons	A doppia cremagliera in alluminio pressofuso anodizzato duro. La posizione di montaggio è simmetrica ed è possibile invertire il senso di rotazione invertendo i pistoni. <i>Twin-rack in die-casting hard anodized aluminium. Mounting position is symmetric and by simply inverting the pistons rotation reverse.</i>
6	Viti di regolazione Adjustment screw	Le due viti di regolazione indipendenti possono regolare $\pm 5^\circ$ in entrambe le operazioni di apertura e chiusura con precisione. <i>The two independent adjustment screw can adjust $\pm 5^\circ$ at both open and close operations easily and precisely.</i>
7	Molle Springs	In materiale di alta qualità, garantiscono resistenza alla corrosione e lunga durata. Possono essere smontate facilmente per soddisfare diverse necessità di forze cambiando il numero di molle. <i>In high quality material, grant resistance to corrosion and long life. Can easily be demonted to satisfy different torque requirement by changing spring number.</i>
8	Cuscinetti e guide Bearings and guides	In materiali a bassa frizione per evitare il diretto contatto tra le parti metalliche. Facili da sostituire. <i>In low friction materials to avoid direct contact between metal parts. Easy to replace.</i>
9	O-rings O-rings	O-ring in NBR / NBR O-ring: $-20^\circ\text{C} \div +80^\circ\text{C}$ (standard) O-ring in LNBR / LNBR O-ring: $-40^\circ\text{C} \div +80^\circ\text{C}$ (option) O-ring in Viton / Viton O-ring: $-15^\circ\text{C} \div +150^\circ\text{C}$ (option)

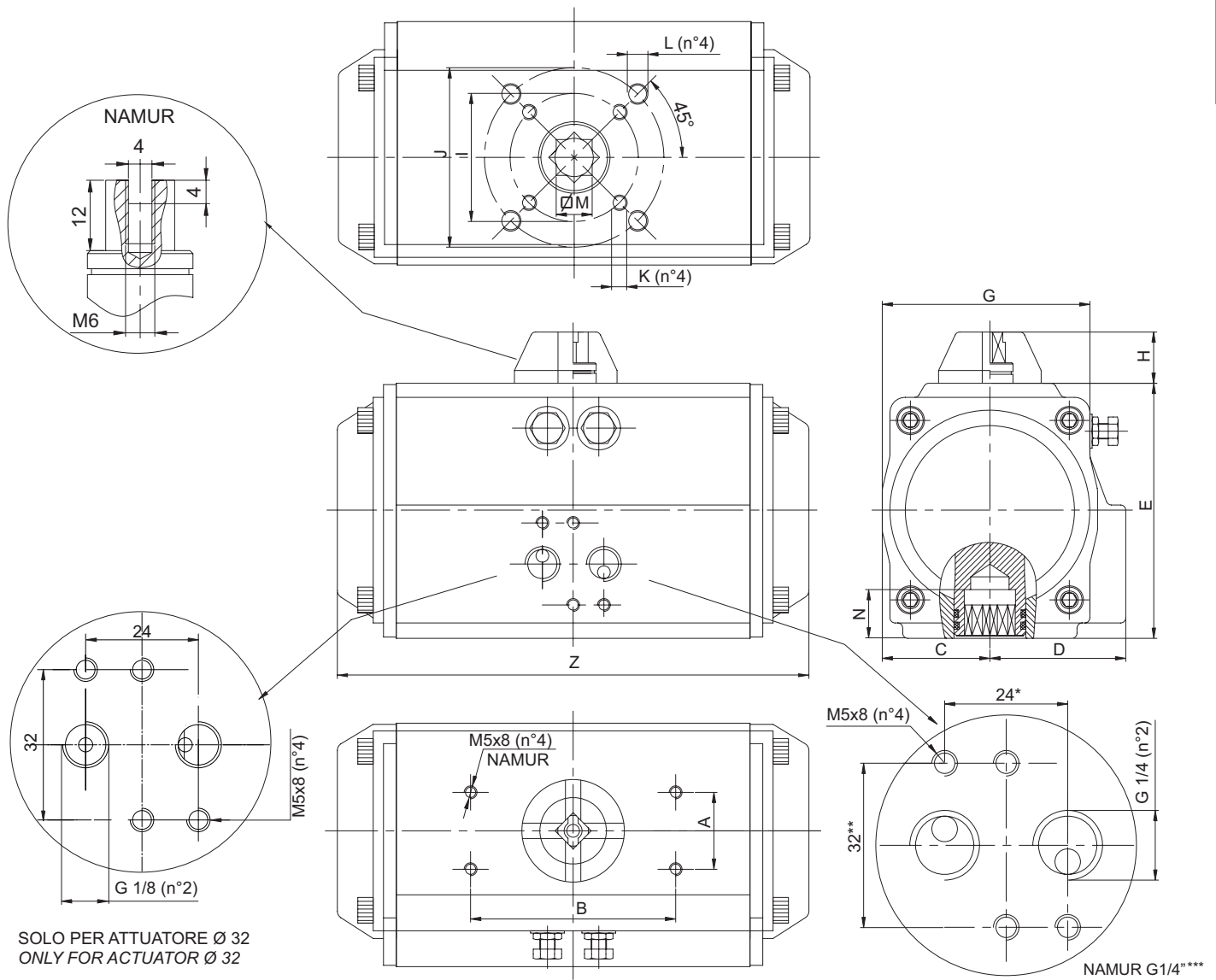




N°	Descrizione / Description	Q.tà / Q.ty	Materiali / Materials
1	Vite indicatore / Indicator screw	1	ABS e Acciaio Inox / ABS and Stainless Steel
2	Indicatore / Indicator	1	ABS
3	Seeger / Seeger	1	Acciaio Inox / Stainless Steel
4	Rosetta / Washer	1	Acciaio Inox / Stainless Steel
5	Rosetta esterna / Outside washer	1	Polioossimetilene / Polyoxymethylene
6	Corpo / Body	1	Lega d'alluminio estruso anodizzato duro / Extruded hard anodized aluminium alloy
7	Rosetta interna / Inside washer	1	Polioossimetilene / Polyoxymethylene
8	Camma / Cam	1	Acciaio C 45 / Steel C 45
9	O-ring (Pignone superiore) / O-ring (Pinion top)	1	NBR
10	Anello (Pignone superiore) / Bearing (Pinion top)	1	Polioossimetilene / Polyoxymethylene
11	Pignone / Pinion	1	Lega d'acciaio nichelato / Nickel plated alloy steel
12	Anello (Pignone inferiore) / Bearing (Pinion bottom)	1	Polioossimetilene / Polyoxymethylene
13	O-ring (Pignone inferiore) / O-ring (Pinion bottom)	1	NBR
14	O-ring (Vite di regolazione) / O-ring (Adjust screw)	2	NBR
15	Rondella (Vite di regolazione) / Gasket (Adjust screw)	2	Acciaio Inox / Stainless Steel
16	Dado (Vite di regolazione) / Nut (Adjust screw)	2	Acciaio Inox / Stainless Steel
17	Vite di regolazione / Adjust screw	2	Acciaio Inox / Stainless Steel
18	Pistone / Piston	2	Alluminio anodizzato pressofuso / Cast anodized aluminium
19	Guida (Pistone) / Guide (Piston)	2	Nylon 66
20	O-ring (Pistone) / O-ring (Piston)	2	NBR
21	Anello (Pistone) / Bearing (Piston)	2	Polioossimetilene / Polyoxymethylene
22	Molla / Spring	0 ÷ 12*	Acciaio armonico verniciato elettroforeticamente / Electrophoretic painted spring steel
23	O-ring (Testata) / O-ring (End cap)	2	NBR
24	Testata / End cap	2	Alluminio anodizzato verniciato a polvere / Powder painted cast aluminium
25	Vite testata / Cap screw	8	Acciaio Inox / Stainless Steel
26	Tappo / Plug	2	NBR

Su richiesta fornibili con guarnizioni per alte temperature (Viton -15°C ÷ +150°C) e basse temperature (LNBR -40°C ÷ +80°C)
 On request available with seals for high temperatures (Viton -15°C ÷ +150°C) and low temperatures (LNBR -40°C ÷ +80°C)

* Per gli attuatori RA400SR lo standard è a 16 molle / For RA400SR Actuators the standard is at 16 springs



* 40 per Ø 300 ÷ 400 / 40 for Ø 300 ÷ 400
 ** 45 per Ø 300 ÷ 400 / 45 for Ø 300 ÷ 400
 *** G1/2" per Ø 300 ÷ 400 / G1/2" for Ø 300 ÷ 400

Ø Attuatore Actuator Ø	A	B	C	D	E	G	H	I	J	K	L	M	N	Z	Connessione Connection	Flangia ISO ISO flange
32	30	80	24.5	30.5	49	51	20	Ø 36	-	M5x8	-	9x11	-	114	G 1/8	F03
40	30	80	24	36.5	60	65	20	Ø 36	Ø 50	M5x8	M6x9	11x14	14	120	G 1/4 NAMUR	F03 / F05
52	30	80	26	41	72	65	20	Ø 36	Ø 50	M5x8	M6x9	11x14	14	147	G 1/4 NAMUR	F03 / F05
63	30	80	33.5	47	88	72	20	Ø 50	Ø 70	M6x10	M8x13	14x18	18	165	G 1/4 NAMUR	F05 / F07
75	30	80	39	53	99.5	81	20	Ø 50	Ø 70	M6x10	M8x13	14x18	18	182	G 1/4 NAMUR	F05 / F07
83	30	80	40	57	109	92	20	Ø 50	Ø 70	M6x10	M8x13	17x21	21	208	G 1/4 NAMUR	F05 / F07
92	30	80	44.5	58.5	116.5	98	20	Ø 50	Ø 70	M6x10	M8x13	17x21	21	262	G 1/4 NAMUR	F05 / F07
105	30	80	52	66.5	133	109.5	20	Ø 70	Ø 102	M8x13	M10x16	22x26	26	270	G 1/4 NAMUR	F07 / F10
125	30	80	67.5	65	77	127.5	20	Ø 70	Ø 102	M8x13	M10x16	22x26	26	301	G 1/4 NAMUR	F07 / F10
140	30	80	75	77	172	137.5	20	Ø 102	Ø 125	M10x16	M12x19	27x31	31	395	G 1/4 NAMUR	F10 / F12
160	30	80	87	87	197	158	20	Ø 102	Ø 125	M10x16	M12x19	27x31	31	454	G 1/4 NAMUR	F10 / F12
190	30	130	103	103	230	189	30	-	Ø 140	-	M16x24	36x40	50	528	G 1/4 NAMUR	F14
210	30	130	114	114	255	211	30	-	Ø 140	-	M16x24	36x40	50	536	G 1/4 NAMUR	F14
240	30	130	130	130	289	245	30	-	Ø 165	-	M20x25	46x50	60	608	G 1/4 NAMUR	F16
270	30	130	147	147	328	273	30	-	Ø 165	-	M20x25	46x50	60	721	G 1/4 NAMUR	F16
300	30	130	203	203	348	406	30	Ø 165	Ø 215	M20x25	M20x25	46x60	63	769	G 1/2 NAMUR	F16
350	30	130	230	230	408	460	30	Ø 165	Ø 254	M20x25	M16x24*	46x60	63	909	G 1/2 NAMUR	F16 / F25
400	30	130	258	258	480	516	30	Ø 165	Ø 254	M20x25	M16x24*	55x60	73	925	G 1/2 NAMUR	F16 / F25

*Con 8 fori di connessione / *With 8 connection holes

Attuatori alluminio a doppio effetto

Aluminium actuators double acting

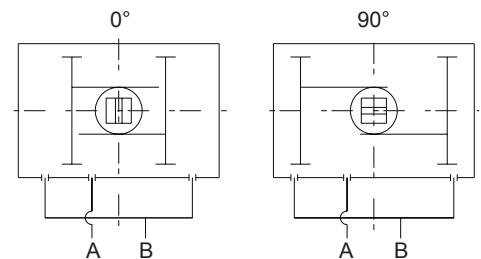
II 2Gc IIC T6
II 2Dc T85°CDoppio effetto
Double acting

Codice / Code	Articolo / Article	Ø Attuatore / Actuator Ø	Peso in kg / Weight in kg
40257	RA032DA	32	0,65
40001	RA040DA	40	0,86
40002	RA052DA	52	1,32
40003	RA063DA	63	2,02
40004	RA075DA	75	2,67
40005	RA083DA	83	3,22
40006	RA092DA	92	4,59
40007	RA105DA	105	5,89
40008	RA125DA	125	9,13
40009	RA140DA	140	13,33
40010	RA160DA	160	19,88
40011	RA190DA	190	32,75
40012	RA210DA	210	39,40
40013	RA240DA	240	55,45
40014	RA270DA	270	83,80
40434	RA300DA	300	128,50
40435	RA350DA	350	210,15
40436	RA400DA	400	280

Rotazione Standard - Standard rotation

L'aria sulla connessione A forza i pistoni all'esterno, muovendo il pignone in senso antiorario mentre l'aria viene scaricata dalla connessione B. L'aria nella connessione B forza il pistone verso l'interno, muovendo il pignone in senso orario mentre l'aria viene scaricata dalla connessione A.

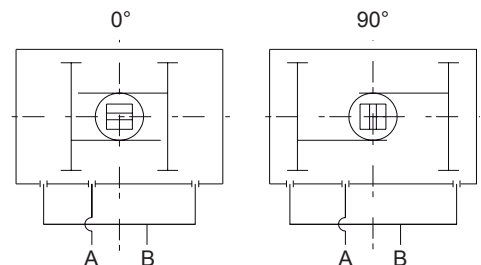
Air to port A forces the pistons outwards, causing the pinion to turn counter-clockwise while the air is being exhausted from port B. Air to port B forces the pistons inwards, causing the pinion to turn clockwise while the air is being exhausted from port A.



Rotazione inversa - Reverse rotation (a richiesta - on request)

L'aria sulla connessione A forza i pistoni all'esterno, muovendo il pignone in senso orario mentre l'aria viene scaricata dalla connessione B. L'aria nella connessione B forza il pistone verso l'interno, muovendo il pignone in senso antiorario mentre l'aria viene scaricata dalla connessione A.

Air to port A forces the pistons outwards, causing the pinion to turn clockwise while the air is being exhausted from port B. Air to port B forces the pistons inwards, causing the pinion to turn counter-clockwise while the air is being exhausted from port A.

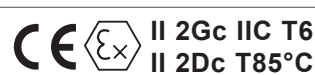


Momenti torcenti degli attuatori doppio effetto (Nm)

Output torque of double acting actuators (Nm)

Ø Attuatore Actuator Ø	Pressione (bar) / Pressure (bar)									
	2	2.5	3	4	4.5	5	5.5	6	7	8
32	3.1	3.8	4.6	6.1	6.9	7.6	8.4	9.2	10.7	12.2
40	4.8	6	7.2	9.5	10.7	11.9	13.1	14.3	16.7	19.1
52	8.0	10.0	12.0	16.0	18.0	20.0	21.9	23.9	27.9	31.9
63	14.6	18.2	21.9	29.2	32.8	36.5	40.1	43.8	51.1	58.4
75	20.1	25.1	30.1	40.1	45.1	50.2	55.2	60.2	70.2	80.3
83	31.4	39.2	47.0	62.7	70.5	78.4	86.2	94.1	109.7	125.4
92	45.1	56.4	67.7	90.3	101.6	112.9	124.1	135.4	158.0	180.6
105	66.1	82.7	99.2	132.2	148.8	165.3	181.8	198.4	231.4	264.5
125	100.3	125.4	150.5	200.6	225.7	250.8	275.9	301.0	351.1	401.3
140	171.0	213.8	256.5	342.0	384.8	427.5	470.3	513.0	598.5	684.0
160	266.0	332.5	399.0	532.0	598.5	665.0	731.5	798.0	931.0	1064.0
190	425.6	532.0	638.4	851.2	957.6	1064.0	1170.4	1276.8	1489.6	1702.4
210	532.0	665.0	798.0	1064.0	1197.0	1330.0	1463.0	1596.0	1862.0	2128.0
240	796.5	961.9	1154.3	1539.0	1731.4	1923.8	2116.1	2308.5	2693.3	3078.0
270	1169.6	1462.1	1754.5	2339.3	2631.7	2924.1	3216.5	3508.9	4093.7	4678.6
300	1526	1908	2289	3052	3434	3815	4187	4578	5341	6104
350	2285	2856	3427	4570	5141	5712	6283	6854	7997	9139
400	3256	4070	4884	6512	7326	8140	8954	9768	11396	13024

Momento torcente costante / Output torque constant 0° - 90° e 90° - 0°

Attuatori alluminio a semplice effetto
Aluminium actuators spring return


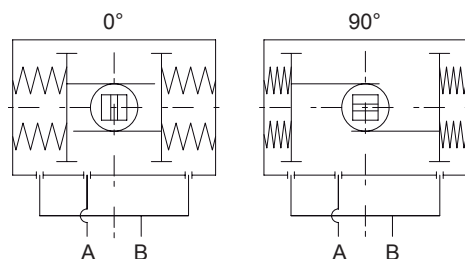
Semplice effetto (standard 12 molle) <i>Spring return (standard 12 springs)</i>			
Codice / Code	Articolo / Article	Ø Attuatore / Actuator Ø	Peso in kg / Weight in kg
40015	RA052SR	52	1,47
40016	RA063SR	63	2,17
40017	RA075SR	75	2,97
40018	RA083SR	83	3,62
40019	RA092SR	92	5,34
40020	RA105SR	105	6,74
40021	RA125SR	125	10,53
40022	RA140SR	140	15,83
40023	RA160SR	160	23,78
40024	RA190SR	190	39,35
40025	RA210SR	210	49,00
40026	RA240SR	240	69,25
40027	RA270SR	270	106,60
40437	RA300SR	300	156,10
40438	RA350SR	350	259,35
40439	RA400SR*	400	360

*Standard 16 molle / *Standard 16 springs

Rotazione Standard - Standard rotation

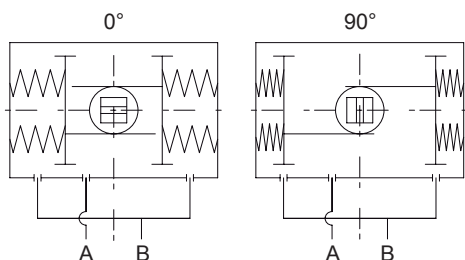
L'aria sulla connessione A forza i pistoni all'esterno, comprimendo le molle e muovendo il pignone in senso antiorario mentre l'aria viene scaricata dalla connessione B. Togliendo l'aria dalla connessione A l'energia immagazzinata dalle molle forza il pistone verso l'interno. Il pignone ruota in senso orario mentre l'aria viene scaricata dalla connessione A.

Air to port A forces the pistons outwards, causing the spring to compress, the pinion to turn counter-clockwise while the air is being exhausted from port B. Removing air pressure on port A, causes the stored energy in the springs to force the pistons inwards. The pinion turn clockwise while the air is being exhausted from port A.


Rotazione inversa - Reverse rotation (a richiesta - on request)

L'aria sulla connessione A forza i pistoni all'esterno, comprimendo le molle e muovendo il pignone in senso orario mentre l'aria viene scaricata dalla connessione B. Togliendo l'aria dalla connessione A l'energia immagazzinata dalle molle forza il pistone verso l'interno. Il pignone ruota in senso antiorario mentre l'aria viene scaricata dalla connessione A.

Air to port A forces the pistons outwards, causing the spring to compress, the pinion to turn clockwise while the air is being exhausted from port B. Removing air pressure on port A, causes the stored energy in the springs to force the pistons inwards. The pinion turn counter-clockwise while the air is being exhausted from port A.



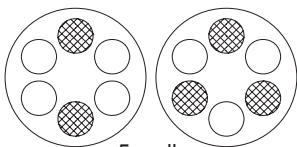
Momenti torcenti degli attuatori semplice effetto (Nm) <i>Output torque of spring return actuators (Nm)</i>																	
Ø Attuatore Actuator Ø	Molle Springs	Pressione (bar) / Pressure (bar)														Forza della molla Spring output	
		2.5		3		4		5		6		7		8			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
52	5	5.7	3.8	7.6	5.7											6.2	4.3
	6	4.9	2.5	6.9	4.5	10.9	8.5									7.4	5.0
	7	4.0	1.3	6.0	3.3	9.8	7.3	14.0	10.4							8.6	5.9
	8			5.2	2.0	9.2	6.0	13.2	9.1	17.2	14.1					9.9	6.7
	9			4.3	0.8	8.3	4.8	12.3	7.9	16.3	12.8	20.3	16.8			11.1	7.6
	10					7.4	3.6	11.5	6.7	15.5	11.6	19.5	15.6			12.4	8.5
	11					6.6	2.3	10.6	5.4	14.6	10.4	18.6	14.3	22.6	18.3	13.6	9.3
	12						9.7	4.2	13.8	9.1	17.8	12.2	21.8	17.1	14.8	10.2	
63	5	11.4	7.7	15.0	11.4	22.3	14.9									10.4	6.8
	6	10.1	5.7	13.6	9.3	20.9	16.6	29.3	23.9							12.5	8.2
	7	8.6	3.6	12.5	7.2	19.5	14.5	26.8	21.9							14.6	9.6
	8			10.9	5.1	18.2	12.4	25.5	19.8	32.8	27.0	40.1	34.3			16.7	10.9
	9					16.8	10.4	24.1	17.7	31.4	24.9	38.7	32.2			18.8	12.3
	10					1.4	8.2	22.8	15.6	30.0	22.8	37.3	30.1	44.7	37.4	20.9	13.7
	11							21.5	13.5	28.7	20.7	36.0	28.0	43.3	35.3	22.9	15.0
	12						20.0	11.4	27.3	18.6	34.6	25.9	41.9	33.3	25.0	16.4	

Momenti torcenti degli attuatori semplice effetto (Nm) <i>Output torque of spring return actuators (Nm)</i>																	
Ø Attuatore <i>Actuator Ø</i>	Molle <i>Springs</i>	Pressione (bar) / Pressure (bar)														Forza della molla <i>Springs' output</i>	
		2.5		3		4		5		6		7		8			
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	90°	0°
75	5	14.5	10.6	19.4	15.5	29.5	25.7									14.5	10.5
	6	12.4	7.6	17.3	12.6	27.4	22.7	37.5	32.8							17.4	12.7
	7	10.4	4.8	15.2	9.7	25.3	19.9	35.4	29.9							20.3	14.8
	8			13.1	6.8	23.1	16.9	33.3	27.0	43.2	37.0	53.3	47.0			23.2	16.9
	9					19.0	14.1	31.2	24.1	41.1	34.1	51.2	44.2			26.1	19.0
	10						11.1	28.8	21.2	39.0	31.2	49.1	41.2	59.1	51.2	29.0	21.1
	11							27.0	18.3	37.0	28.3	47.0	38.4	57.0	48.4	31.9	23.2
12							24.9	15.4	34.9	25.4	44.9	35.4	54.9	45.4	34.7	25.3	
83	5	23.3	16.1	31.1	24.0	46.8	39.7									23.0	15.8
	6	20.1	11.5	28.0	19.3	43.7	35.1	59.4	50.7							27.6	19.0
	7	17.0	6.9	24.8	14.8	40.5	30.5	56.2	46.2							32.2	22.1
	8			21.7	10.1	37.4	25.8	53.1	41.5	68.8	57.2	84.5	72.9			36.8	25.3
	9					34.2	21.3	49.9	37.0	65.6	52.6	81.2	68.3			41.4	28.5
	10					31.0	16.6	46.7	32.3	62.4	48.0	78.1	63.7	93.8	79.3	46.0	31.6
	11							43.6	27.7	59.3	43.4	75.0	59.1	90.6	74.8	50.6	34.8
12							40.4	23.2	56.1	38.9	71.7	54.5	87.4	70.2	55.2	38.0	
92	5	33.1	22.0	44.2	33.2	66.8	55.9									34.4	23.3
	6	28.4	15.2	39.6	26.4	62.2	49.0	84.8	71.6							41.2	28.0
	7	23.8	8.2	34.9	19.4	57.5	42.1	80.2	64.7							48.1	32.7
	8			31.3	12.6	52.9	35.2	75.5	57.9	98.1	80.5	120.7	103.0			55.0	37.3
	9					48.2	28.4	70.9	51.0	93.5	73.6	116.0	96.1			61.9	42.0
	10					43.6	21.5	66.2	44.1	88.8	66.7	111.3	89.2	134.0	111.8	68.7	46.7
	11							61.5	37.2	84.1	59.9	106.6	82.4	129.2	105.0	75.6	51.4
12							56.8	30.4	79.4	53.0	101.9	75.5	124.5	98.1	82.5	56.0	
105	5	51.0	33.4	67.5	49.9	100.6	83.0									49.2	31.6
	6	44.7	23.5	61.1	40.0	94.2	73.2	127.3	106.2							59.1	38.0
	7	38.4	13.7	54.9	30.3	87.9	63.4	121.0	96.4							68.9	44.3
	8			48.5	20.4	81.6	53.5	114.7	86.5	147.7	119.6	180.8	152.7			78.7	50.6
	9					75.3	43.7	108.4	76.8	141.5	109.8	174.5	142.9			88.6	56.9
	10					68.9	33.4	102.0	66.5	135.1	99.6	168.2	132.9	201.2	165.7	98.4	63.3
	11							95.7	57.0	128.7	90.1	161.8	123.1	194.8	156.2	108.3	69.6
12							89.4	47.5	122.5	80.6	155.5	113.6	188.6	146.7	118.1	75.9	
125	5	73	47	98	72	148	122									79	52
	6	63	31	88	56	138	107	188	157							94	63
	7	52	15	77	40	127	90	178	141							110	73
	8			67	25	117	75	167	125	217	176	268	226			125	84
	9					107	59	157	109	207	159	257	210			141	90
	10					96	44	146	94	196	144	247	194	297	245	157	105
	11							136	78	186	128	236	178	286	228	173	115
12							125	63	176	113	226	163	276	213	188	125	
140	5	128	85	171	127	256	213									129	86
	6	111	59	154	102	239	187	325	273							155	103
	7	94	33	137	76	222	162	308	247							181	120
	8			120	50	205	136	291	221	376	307	462	392			206	137
	9					187	110	273	196	358	281	444	367			232	155
	10					170	84	256	169	341	255	427	340	512	426	258	172
	11							238	143	324	229	409	314	495	400	284	189
12							221	118	307	203	392	289	478	374	310	206	
160	5	193	124	259	191	392	324									208	140
	6	165	83	232	149	365	282	498	415							250	168
	7	137	41	203	107	336	240	469	373							292	196
	8			176	66	309	199	442	273	575	465	708	598			333	223
	9					280	157	413	290	546	423	679	556			375	251
	10					253	115	386	248	519	381	652	514	785	647	417	279
	11							358	207	491	340	624	473	757	606	458	307
12							330	165	463	298	596	431	729	564	500	355	
190	5	332	222	438	329	651	542									309	200
	6	292	161	398	267	611	480	824	693							371	240
	7	252	99	358	205	571	418	784	631							433	280
	8			318	143	531	356	744	569	957	782	1169	995			495	320
	9					491	295	704	507	917	720	1130	933			557	360
	10					451	233	664	446	877	658	1090	871	1302	1084	618	400
	11							624	384	837	597	1050	809	1263	1022	680	440
12							584	322	797	535	1010	748	1223	960	742	480	

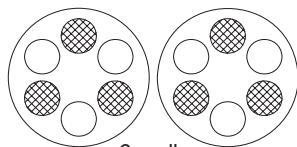
Momenti torcenti degli attuatori semplice effetto (Nm) <i>Output torque of spring return actuators (Nm)</i>																	
Ø Attuatore <i>Actuator Ø</i>	Molle <i>Springs</i>	Pressione (bar) / Pressure (bar)														Forza della molla <i>Springs' output</i>	
		2.5		3		4		5		6		7		8		90°	0°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
210	5	390	285	523	418	789	684									380	275
	6	335	209	468	342	734	608	1000	874							456	330
	7	280	133	413	266	679	532	945	798							532	385
	8			358	190	624	456	890	722	1156	988	1422	1254			608	440
	9					569	380	835	646	1101	912	1367	1178			684	495
	10					514	304	780	570	1046	836	1312	1102	1578	1368	760	550
	11							725	494	991	760	1257	1026	1523	1292	836	605
	12							670	418	936	684	1202	950	1468	1216	912	660
240	5	552	409	744	600	1129	985									554	410
	6	470	297	662	489	1047	874	1432	1259							665	492
	7	388	187	580	379	964	764	1349	1149							775	575
	8			498	268	883	653	1267	1037	1652	1422	2037	1807			886	656
	9					800	542	1185	926	1569	1311	1954	1696			998	739
	10					718	431	1103	816	1488	1201	1872	1586	2257	1970	1108	821
	11							1021	705	1406	1090	1791	1474	2176	1859	1219	903
	12							939	594	1323	979	1708	1363	2093	1748	1330	985
270	5	903	675	1195	968	1779	1552									787	560
	6	790	519	1083	811	1667	1396	2252	1981							943	672
	7	679	361	972	654	1556	1238	2141	798							1101	783
	8			860	497	1444	1081	2029	1823	2614	2252	3199	2836			1258	895
	9					1332	923	1917	1666	2502	2094	3087	2678			1416	1007
	10					1220	767	1805	1509	2390	1937	2974	2521	3560	3107	1572	1119
	11							1693	1352	2278	1179	2862	2364	3448	2949	1730	1231
	12							1582	1037	2167	1623	2751	2207	3336	2792	1887	1342
300	5	1097	729													1061	730
	6	935	494	1316	875											1273	876
	7	772	258	1153	639	1916	1402									1485	1022
	8			991	403	1754	1166	2517	1929							1697	1168
	9					1592	930	2255	1693	3118	2456					1909	1314
	10					1430	695	2193	1458	2956	2221	3719	2984	4482	3747	2122	1460
	11							2030	1222	2793	1985	3556	2748	4319	3511	2334	1606
	12							1868	986	2631	1749	3394	2512	4157	3275	2546	1752
350	5	1552	964													1702	1173
	6	1292	586	1863	1157											2043	1408
	7	1031	208	1602	779	2745	1922									2383	1642
	8			1341	401	2484	1544	3626	2686							2724	1877
	9					2224	1165	3336	2307	4508	3449					3064	2112
	10					1963	787	3105	1929	4247	3071	5390	4214	6532	5356	3405	2346
	11							2844	1551	3986	2693	5129	3836	6271	4978	3745	2581
	12							2584	1172	3726	2314	4869	3457	6011	4599	4086	2816
400	7	2028	869													2880	1837
	8	1736	411	2550	1225											3292	2100
	9			2259	768	3887	2396									3703	2362
	10			1967	311	3595	1939	5223	3567							4115	2624
	11					3303	1482	4931	3110	6559	4738					4526	2887
	12					3012	1025	4640	2653	6268	4281	7895	5908	9523	7536	4938	3149
	13							4348	2195	5976	3823	7603	5450	9231	7078	5349	3412
	14							4057	1738	5685	3366	7312	4993	8940	6621	5761	3674
15							3756	1281	4393	2909	7020	4536	8648	6164	6172	3937	
16									5101	2452	6728	4079	8356	5707	6584	4199	

Momento torcente aria in decremento da 90° - 0° / Output torque air decreasing 90° - 0°
 Momento torcente molle in decremento da 90° - 0° / Output torque springs decreasing 90° - 0°

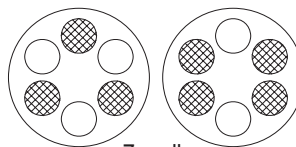
Specifica di montaggio delle molle per attuatori semplice effetto Springs mounting form for spring return actuators



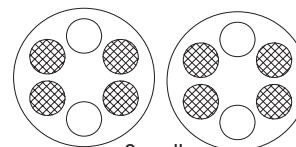
5 molle
5 springs



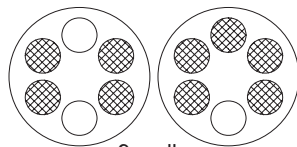
6 molle
6 springs



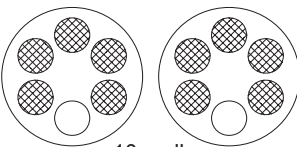
7 molle
7 springs



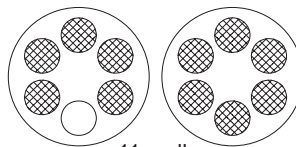
8 molle
8 springs



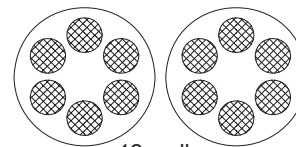
9 molle
9 springs



10 molle
10 springs



11 molle
11 springs



12 molle
12 springs