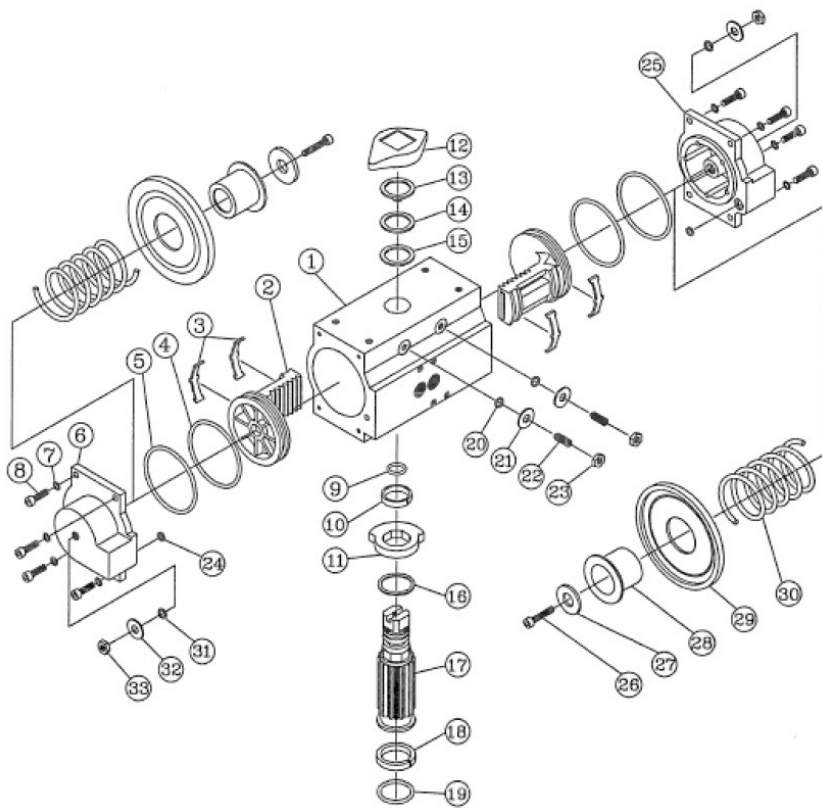


Series RPS - Spring Return



**Features:**

- ISO 5211 mounting interface allows direct actuator mounting without using bracket & coupling.
- Air supply connections & rod shaft comply with VDI/VDE 3845 (NAMUR) standard for good interchangeability.
- Hard and aluminum body & Electroless nickel coated steel drive-shaft give high corrosion-resistance & superior wear-resistance .
- Independent travel stops in both directions offer +/-5" travel adjustment to ensure accurate valve alignment.
- One-piece blowout-proof shaft ensures safety, strength, and extended cycle life.
- Extruded aluminum body with precision machined internal surface guarantee low friction, high cycle life and precision piston fit.
- Precision machined gear teeth with extra fine tolerance reduce backlash on the system, ensure excellent tooth engagement, and maximize cycle life.



**Material List:**

No.	Parts	Materials	Qty.
1.	Body	Extruded Aluminum Alloy (Hard anodized)	1
2.	Piston	Die cast Aluminum Alloy	2
3.	Piston Bearing	Nylon	4
4.	Piston O-ring	Buna-N	2
5.	End Cap O-ring	Buna-N	2
6.	End Cap	Die cast Aluminum Alloy	1
7.	Washer	AISI 304	8
8.	Cap Screw	AISI 304	8
9.	O-ring	Buna-N	1
10.	Shaft Bearing	Nylon	1
11.	Stop Cam	Sintering Steel	1
12.	Piston Indicator	Polyethylene	1
13.	Retaining Ring	AISI 420	1
14.	Washer	AISI 304	1
15.	Top Bearing	Nylon	1
16.	Retaining Ring	AISI 304	2
17.	Drive Shaft	Carbon Steel (Electroless Nickel coated)	1
18.	Shaft Bearing	Nylon	1
19.	Shaft O-ring	Buna-N	1
20.	O-ring	Buna-N	2
21.	Washer	AISI 304	2
22.	Stop Screw	AISI 304	2
23.	Nut	AISI 304	2
24.	O-ring	Buna-N	2
25.	End Cap	Die cast Aluminum Alloy	1
26.	Screw	AISI 304	2
27.	Washer	Carbon Steel	2
28.	Spring Guide	Carbon Steel	2
29.	Retainer	Carbon Steel	2
30.	Spring	Spring Steel	2
31.	O-ring	Buna-N	2
32.	Washer	AISI 304	2
33.	Nut	AISI 304	2

**Specifications:**

Air Supply Pressure	40 psi to 120 psi (2.8 bar to 8.3 bar)
Working Temperature	0° F to 180° F (-17° C to 82° C)
Rotation Adjustment Range	Max. -5° to 95°; Min. +5° to 85°

**Note:**

1. For operation at or below 32°F(0°C), steps must be taken to assure a moisture-free air supply.
2. Viton seals are available for higher temperature up to 280°F(137°C), but temperatures above 180°F(82°C) require a remote mounted solenoid.

**Options:**

- Series SY: Scotch Yoke design, Double Acting.
- Series SYS: Scotch Yoke design, Spring Return.

## Series RP - Double Acting

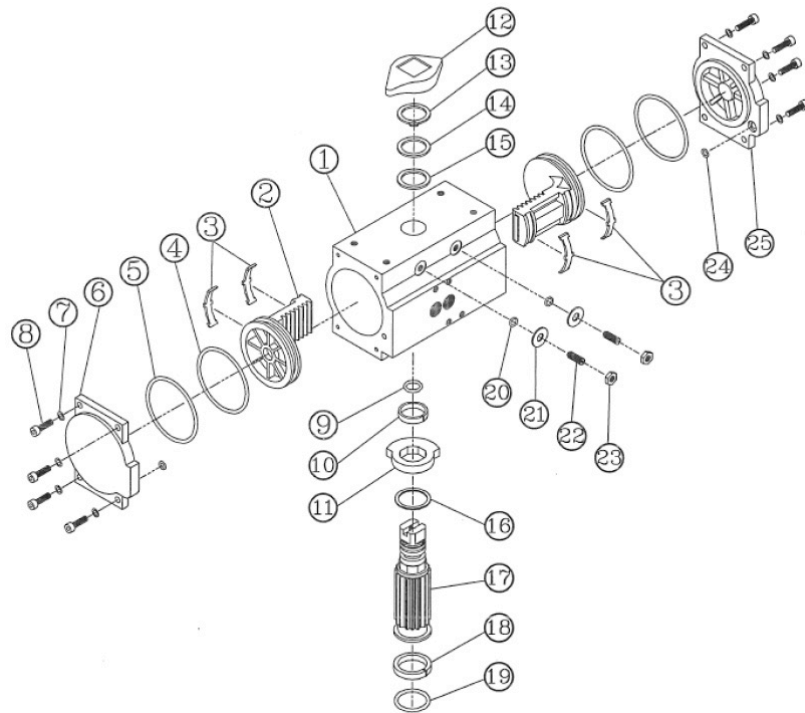


### Features:

- ISO 5211 mounting interface allows direct actuator mounting without using bracket & coupling.
- Air supply connections & rod shaft comply with VDI/VDE 3845 (NAMUR) standard for good interchangeability.
- Hard and aluminum body & Electroless nickel coated steel drive-shaft give high corrosion-resistance & superior wear-resistance.
- Independent travel stops in both directions offer +/-5" travel adjustment to ensure accurate valve alignment.
- One-piece blowout-proof shaft ensures safety, strength, and extended cycle life.
- Extruded aluminum body with precision machined internal surface guarantee low friction, high cycle life and precision piston fit.
- Precision machined gear teeth with extra fine tolerance reduce backlash on the system, ensure excellent tooth engagement, and maximize cycle life.

### Material List:

No.	Parts	Materials	Qty.
1.	Body	Extruded Aluminum Alloy (Hard anodized)	1
2.	Piston	Die cast Aluminum Alloy	2
3.	Piston Bearing	Nylon	4
4.	Piston O-ring	Buna-N	2
5.	End Cap O-ring	Buna-N	2
6.	End Cap	Die cast Aluminum Alloy	1
7.	Washer	AISI 304	8
8.	Cap Screw	AISI 304	8
9.	O-ring	Buna-N	1
10.	Shaft Bearing	Nylon	1
11.	Stop Cam	Sintering Steel	1
12.	Piston Indicator	Polyethylene	1
13.	Retaining Ring	AISI 420	1
14.	Washer	AISI 304	1
15.	Top Bearing	Nylon	1
16.	Retaining Ring	AISI 304	2
17.	Drive Shaft	Carbon Steel (Electroless Nickel coated)	1
18.	Shaft Bearing	Nylon	1
19.	Shaft O-ring	Buna-N	1
20.	O-ring	Buna-N	2
21.	Washer	AISI 304	2
22.	Stop Screw	AISI 304	2
23.	Nut	AISI 304	2
24.	O-ring	Buna-N	2
25.	End Cap	Die cast Aluminum Alloy	1



### Specifications:

Air Supply Pressure	40 psi to 120 psi (2.8 bar to 8.3 bar)
Working Temperature	0° F to 180° F (-17° C to 82° C)
Rotation Adjustment Range	Max. -5° to 95°; Min. +5° to 85°

#### Note:

1. For operation at or below 32°F(0°C), steps must be taken to assure a moisture-free air supply.
2. Viton seals are available for higher temperature up to 280°F(137°C), but temperatures above 180°F(82°C) require a remote mounted solenoid.

### Options:

- Series SY: Scotch Yoke design, Double Acting.  
 Series SYS: Scotch Yoke design, Spring Return.

Series RP - Double Acting; Series RPS - Spring Return

Minimum Output Torque in In-lbs. & Nm

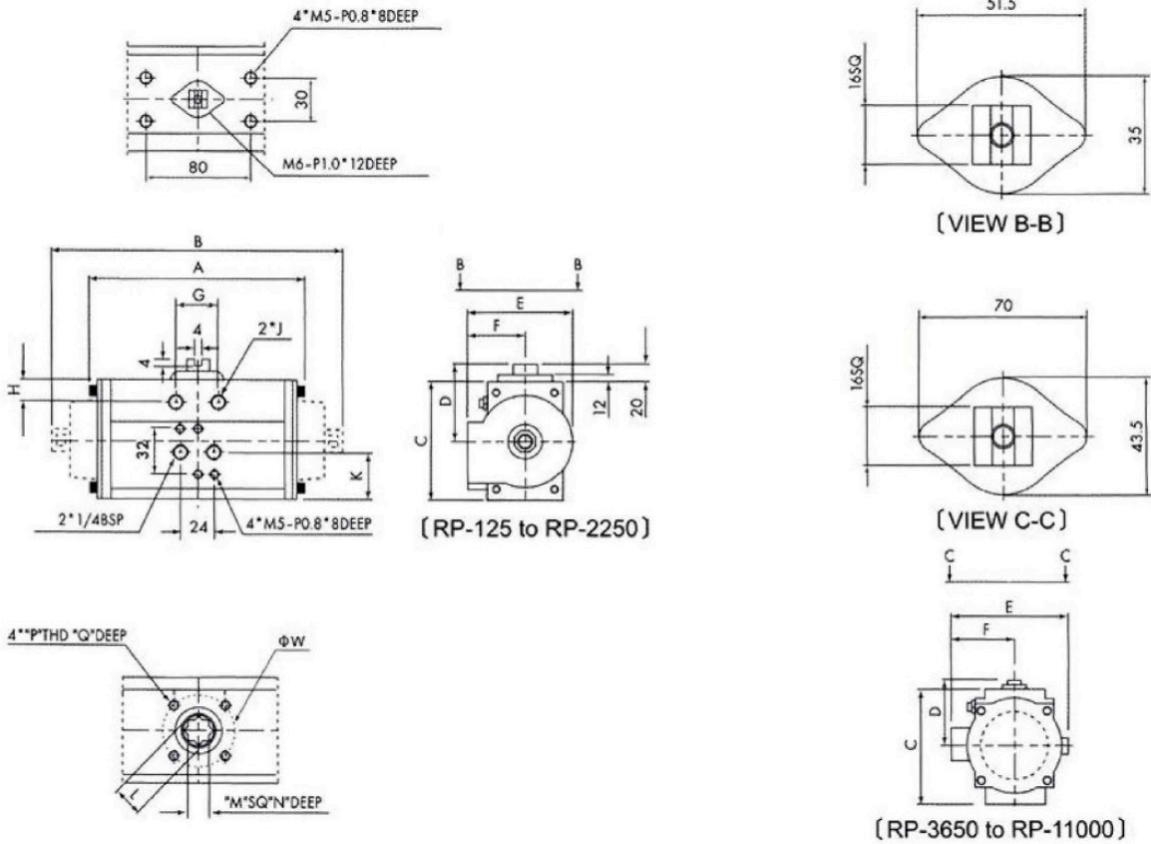
Series RP - Double Acting:

Fig. No.	Air supply pressure in P.S.I. & (Bar)									
	40 (2.8)		60 (4.1)		80 (5.5)		100 (7.0)		120 (8.3)	
	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm
RP-125	63	7	94	10	125	14	156	17	188	21
RP-250	127	14	190	21	250	28	315	36	378	43
RP-450	225	25	335	38	450	51	562	63	675	76
RP-1000	505	57	750	85	1020	115	1250	141	1500	169
RP-2250	1130	128	1690	191	2250	254	2815	318	3380	382
RP-3650	1825	206	2750	311	3650	412	4560	515	5475	618
RP-5000	2500	282	3750	424	5000	565	6250	706	7500	847
RP-11000	5500	621	8250	932	11000	1243	13750	1553	16500	1864

Series RPS - Spring Return:

Fig. No.	No. of Spr.	Air supply pressure in P.S.I. & (Bar)																			
		60 (4.1)				80 (5.5)				100 (7.0)				120 (8.3)				Spring Stroke			
		In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm	In-lbs	Nm
RPS-250	2	138	16	110	12	202	23	172	19	265	30	235	27	326	37	310	35	70	8	45	5
	3	112	13	70	8	176	20	133	15	230	26	195	22	302	34	260	29	105	12	65	7
	4	88	10	32	4	152	17	93	11	210	24	155	18	276	31	220	25	140	16	90	10
	5					126	14	55	6	190	21	115	13	250	28	180	20	175	20	110	12
	6									164	19	77	9	230	26	140	16	210	24	135	15
RPS-450	2	250	28	196	22	362	41	310	35	470	53	420	47	585	66	532	60	125	14	80	9
	3	202	23	125	14	316	36	240	27	430	49	350	40	540	61	462	52	190	21	120	14
	4	160	18	55	6	270	31	168	19	380	43	280	32	496	56	392	44	255	29	160	18
	5					226	26	96	11	340	38	210	24	450	51	320	36	315	36	200	23
	6									295	33	135	15	405	46	250	28	380	43	240	27
RPS-1000	2	550	62	435	49	800	90	682	77	1050	119	930	105	1297	147	1180	133	280	32	180	20
	3	450	51	278	31	705	80	526	59	950	107	775	88	1196	135	1025	116	420	47	270	31
	4	350	40	120	14	600	68	370	42	850	96	620	70	1100	124	867	98	560	63	360	41
	5					500	56	212	24	750	85	465	53	1000	113	710	80	700	79	450	51
	6									650	73	305	34	900	102	560	63	840	95	540	61
RPS-2250	2	1255	142	958	108	1816	205	1520	172	2380	269	2085	236	2940	332	2650	299	659	74	395	45
	3	1035	117	595	67	1600	181	1155	130	2160	244	1715	194	2722	307	2280	258	990	112	590	67
	4	815	92	225	25	1380	156	792	89	2030	229	1350	153	2505	283	1915	216	1320	149	790	89
	5					1160	131	425	48	1725	195	985	111	2290	259	1550	175	1650	186	984	111
	6									1505	170	620	70	2070	234	1180	133	1980	224	1180	133
RPS-3650	2	2060	233	1570	177	2975	336	2480	280	3890	439	3395	384	4800	542	4310	487	1050	119	605	68
	3	1725	195	1000	113	2650	299	1905	215	3550	401	2820	319	4450	503	3750	424	1570	177	910	103
	4	1390	157	425	48	2300	260	1335	151	3210	363	2245	254	4130	467	3150	356	2090	236	1220	138
	5					1970	223	750	85	2880	325	1655	187	3790	428	2570	290	2625	297	1520	172
	6									2540	287	1090	123	3450	390	1995	225	3150	356	1825	206
RPS-5000	2	2780	314	1990	225	3970	448	3180	359	5160	583	4380	495	6350	717	5570	629	1560	176	785	89
	3	2380	269	1200	136	3570	403	2400	271	4760	538	3590	406	5960	673	4780	540	2340	264	1180	133
	4	1980	224	416	47	3180	359	1600	181	4370	494	2800	316	5560	628	3990	451	3130	354	1570	177
	5					2780	314	815	92	3970	448	2010	227	5160	583	3200	361	3910	442	1960	221
	6									3570	403	1220	138	4760	538	2410	272	4690	530	2360	267
RPS-11000	2	6060	685	4360	493	8660	978	6960	786	11300	1277	9560	1080	13900	1570	12200	1378	3400	384	1720	194
	3	5200	587	2650	299	7790	880	5240	592	10400	1175	7840	886	13000	1469	10400	1175	5100	576	2570	290
	4	4330	489	932	105	6930	783	3530	399	9520	1075	6130	692	12100	1367	8730	986	6790	767	3430	387
	5					6060	685	1810	204	8660	978	4410	498	11300	1277	7010	792	8490	959	4290	485
	6									7790	880	2700	305	10400	1175	5300	599	10200	1152	5150	582

Series RP - Double Acting; Series RPS - Spring Return



Dimensions:

Fig. No.	A*		B**		C		D		E		F		G		H	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
RP-125	4.72	120	-	-	2.52	64	2.07	52.50	2.45	62.20	1.33	33.70	0.94	24	0.43	11
RP-250	5.67	144	7.68	195	3.11	79	2.28	58.00	3.19	81.00	1.89	48.00	1.30	33	0.51	13
RP-450	5.87	149	8.11	206	3.86	98	2.64	67.00	3.74	95.00	2.05	52.00	1.30	33	0.55	14
RP-1000	7.20	183	9.84	250	4.76	121	3.11	79.00	4.69	119.00	2.56	65.00	1.81	46	0.67	17
RP-2250	10.24	260	13.98	355	5.55	141	3.54	90.00	5.55	141.00	2.99	76.00	2.13	54	0.75	19
RP-3650	11.97	304	16.61	422	6.93	176	3.90	99.00	7.28	185.00	4.17	106.00	3.15	80	1.06	27
RP-5000	14.33	364	19.17	487	7.72	196	4.61	117.00	8.07	205.00	4.25	108.00	3.11	79	1.10	28
RP-11000	19.29	490	25.28	642	9.61	244	5.47	139.00	9.37	238.00	4.92	125.00	3.74	95	1.42	36

Fig. No.	J		K		L		M		N		P	Q		W		ISO 5211
	mm	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm		
RP-125	11	M5	0.93	23.50	0.49	12.50	0.354	9.00	0.39	10.00	M5	0.31	8	1.65	42	F04
RP-250	13	M5	1.17	29.70	0.57	14.50	0.433	11.00	0.67	17.00	M5 or M6	0.31 or 0.39	8 or 10	1.65 or 1.97	42 or 50	F04 or F05
RP-450	14	M6	1.19	30.20	0.74	18.80	0.551	14.00	0.83	21.00	M6 & M8	0.39 & 0.47	10 & 12	1.97 & 2.76	50 & 70	F05 & F07
RP-1000	17	M8	1.32	33.50	0.91	23.00	0.669	17.00	1.00	25.50	M6 & M8	0.39 & 0.47	10 & 12	1.97 & 2.76	50 & 70	F05 & F07
RP-2250	19	M10	1.54	39.00	1.16	29.50	0.866	22.00	1.22	31.00	M8 & M10	0.47 & 0.59	12 & 15	2.76 & 4.02	70 & 102	F07 & F10
RP-3650	27	M12	3.83	97.40	1.40	35.50	1.063	27.00	1.38	35.00	M10 & M12	0.59 & 0.75	15 & 19	4.02 & 4.92	102 & 125	F10 & F12
RP-5000	28	M12	3.90	99.00	1.40	35.50	1.063	27.00	1.38	35.00	M10 & M12	0.59 & 0.75	15 & 19	4.02 & 4.92	102 & 125	F10 & F12
RP-11000	36	M16	4.91	124.70	1.87	47.50	1.417	36.00	1.77	45.00	M16	0.94	24	5.51	140	F14

Note:

- \* Dimension "A" is for Series RP (Double Acting Actuator)
- \*\* Dimension "B" is for Series RPS (Spring Return Actuator)