

Bettis RPX-Series

Rack and Pinion Pneumatic Actuators



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General Specifications

Features

- Direct mounting to all ISO 5211 butterfly valves and ball valves.
- Double Rack and Pinion design nullifies side loads on the pinion shaft, minimizing bearing wear and extending life.
- Optimized product flow with standard mounted travel stops for valve position adjustment in open and close position (+/- 5° at each end)
- Anodized aluminium body with electrostatic powder coating (ESPC) finish provides durable protection against corrosive environments.
- Double acting and spring return versions available for cost effective and safe operation.
- Up to 12 individual springs offer flexible torque range for both ball as butterfly valves.
- Pre-compressed spring design and anti-blowout drive pinion means safe maintenance and operation.



Technical data

Materials

- Body: Extruded aluminium (ESPC finish)
- End caps: Cast aluminium (ESPC finish)

Mounting specifications

- Actuator to valve: ISO 5211
- Accessories: Namur VDI/VDE 3845

Torque output range:

- Double acting: 17 - 4173 Nm (51 - 36820 lbf.in)
- Spring return: 6- 1663 Nm (51 - 14718 lbf.in) spring-end

Pressure media

- Operating medium: Compressed air, dry or lubricated
- Air supply pressure: MOP: 8.3 bar (120 psi) max. dynamic
MAP: 10 bar (145 psi) max. static
- Travel adjustment: +/- 5° at each end of travel
Option: End Cap Stroke Limiter allows adjustment between full open and 30° before closed position.
- Temperature range: -20° C to +80° C (-4° F to +176° F)
- Low temp version: -40° C to +65° C (-40° F to +149° F)
- High temp version: -15° C to +150° C (+5° F to +302° F)
- Certification: ATEX II 2 GD IIC T6

Principle of operation

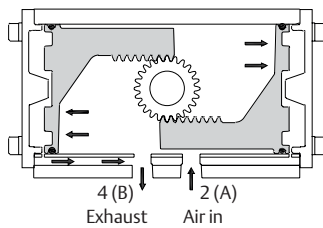
Both the double acting and spring return actuators feature a compact design each with their own set of end caps. The unit can be converted from double acting to single acting (or reverse) in the field without the requirement of special tools. The spring return actuator is available with spring sets representing 2.8 bar (40 psi) to 8.3 bar (120 psi) in 0.7 bar (10 psi) increments. The springs are manufactured from heavy gauge wire to assure long life and ESPC coated for corrosion resistance. They are pre-compressed using a special container to ensure safe operation and maintenance.

Double acting

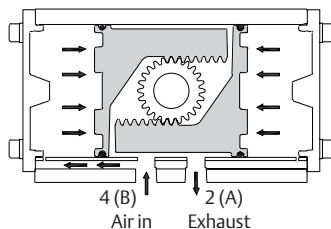
To open valve

In a double acting application, air pressure is introduced to Port 2 (A), pressurizing the space between the pistons and driving the pistons out towards the actuator ends. The volume of air above the piston heads is exhausted to atmosphere. This causes the piston racks to drive the pinion in a counterclockwise direction, resulting in a quarter-turn rotation. This rotation is transferred to the valve shaft, opening the valve.

To close valve



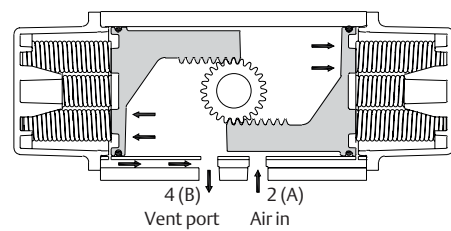
Air pressure introduced to Port 4 (B), pressurizes the spaces above each piston head and drives the pistons inward. The volume of air between the pistons is exhausted to atmosphere. This causes the piston racks to drive the pinion in a clockwise direction, resulting in a quarter-turn rotation. This rotation is transferred to the valve shaft, closing the valve.



Spring return

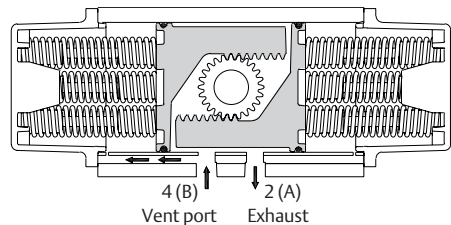
To open valve

In a single acting application, air pressure is introduced to Port 2 (A), pressurizing the space between the pistons and driving the pistons out towards the actuator ends while at the same time compressing the springs. This causes the piston racks to drive the pinion in a counterclockwise direction, resulting in a quarter-turn rotation. This rotation is transferred to the valve shaft, opening the valve.



To close valve

When the air pressure is relieved, the spring tension moves the pistons inward and exhausts the air through Port 2 (A). This causes the piston racks to drive the pinion in a clockwise direction, resulting in a quarter-turn rotation. This rotation is transferred to the valve shaft, closing the valve.



Parallel or perpendicular mounting

The dual-keyed output shaft allows parallel or perpendicular mounting to the valve flow direction. In normal conditions the actuator is mounted in parallel with the valve flow direction, operating in a counter clockwise (CCW) rotation from the closed to the open position.

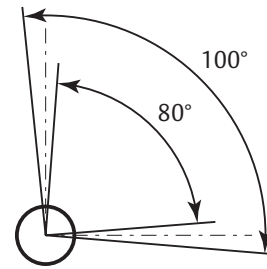
The standard operation direction

The standard operation direction of the spring fail close action is clockwise (CW). By rotating the pistons 180 degrees in the body in relation to the pinion, the actuator operation direction can be reversed. Although rotating the actuator 90 degrees will have a similar effect, the piston rotation is preferred as it maintains the parallel mounting and keeps the valve operation in the correct quadrant.

Travel adjustment

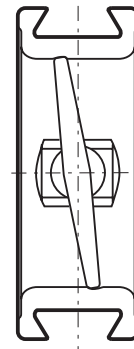
Within the mechanical connections of the drive between the valve and the actuator there are several points of manufacturing tolerance, including valve disc or ball to stem, stem to adapter, and adapter to actuator that must be compensated for in the operation of the assembly. Therefore, adjustment is necessary to ensure that valve operation is as precise as required. The F89 dual travel stops allow $\pm 5^\circ$ adjustment at both ends of the stroke, resulting in a total stroke range of 80° to 100° rotation.

For special applications an optional linear travel stop is available, which reduces the stroke from 0 - 100%.



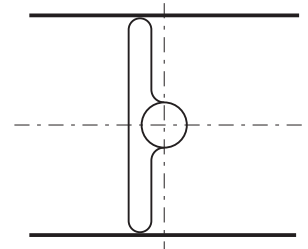
Resilient seated butterfly valves

Shut-off occurs before the disc has rotated a full 90° from the open position. Travel adjustment is therefore desirable to prevent over travel, which would result in unnecessary operating torque and premature deterioration of seat life. In the open position, adjustment is necessary to ensure maximum flow through the valve and minimum dynamic forces acting on the disc.



High performance butterfly valves

The double offset design of high performance butterfly valves results in the disc moving into the seat with a camming action. It is important that the disc does not travel beyond the seat position, otherwise damage to the seat will occur.



Ball and plug valves

The ball or plug must be precisely in line with the valve port to prevent damage to the seat in the open position. Adjustment at the closed position is necessary to ensure that complete shut-off is achieved.

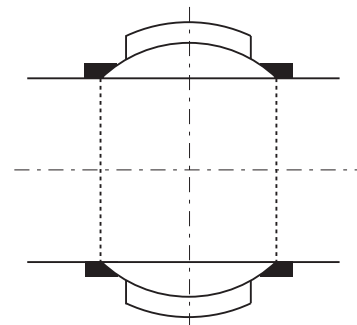


Table 1. Actuator piston displacement

Model	Opening		Closing	
	litres	cu.in	litres	cu.in
RPX003	0.17	10.4	0.14	8.5
RPX004	0.25	15.3	0.21	12.8
RPX006	0.36	21.8	0.29	17.7
RPX009	0.57	34.9	0.48	29.3
RPX014	0.9	54.9	0.73	44.5
RPX020	1.37	83.8	1.08	65.9
RPX032	2.1	128.2	1.66	101.3
RPX052	3.1	189.2	2.63	160.5
RPX084/085	5.09	310.6	3.87	236.2
RPX140/141	8.92	544.3	6.81	415.6
RPX240	15.4	939.8	12.63	770.7

Table 2. Weight

Model	Double Acting		Spring Return	
	kg	lbs	kg	lbs
RPX003	1.7	3.7	2.0	4.4
RPX004	2.2	4.9	2.7	5.9
RPX006	3.0	6.6	3.8	8.3
RPX009	3.8	8.4	4.9	10.9
RPX014	5.5	12.1	7.5	16.6
RPX020	8.1	17.8	11.2	24.6
RPX032	12.3	27.1	17.0	37.4
RPX052	18.5	40.7	25.1	55.4
RPX084/085	29.2	64.4	41.9	92.4
RPX140/141	45.8	101.0	70.6	155.7
RPX240	79.5	175.3	116.4	256.6

1. Piston displacement is the total volume of pressurized air after the actuator has completed its stroke.

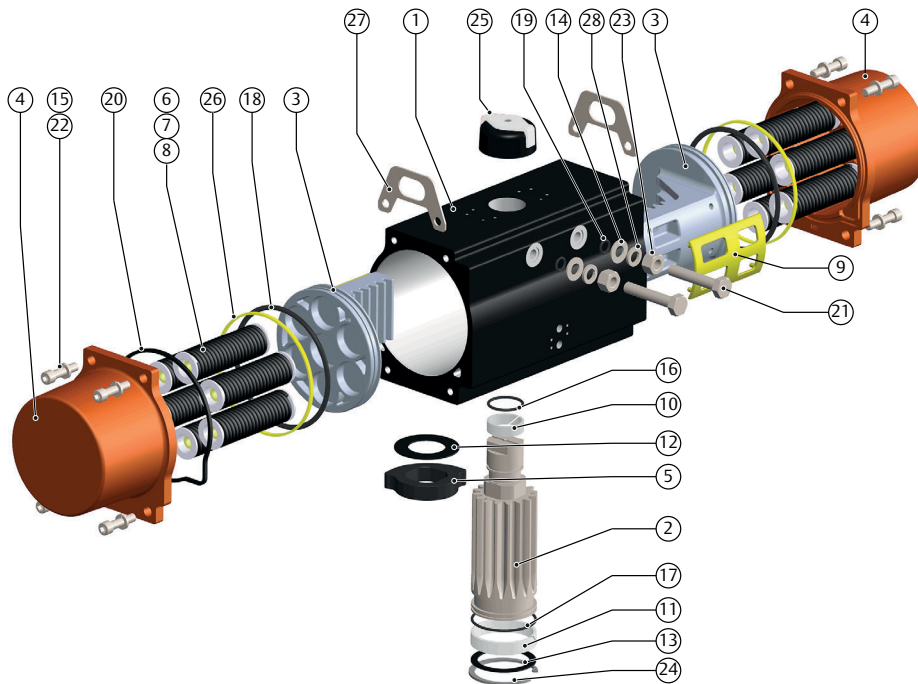
Table 3. Actuator cycling time (seconds)

Model	Double Acting				Spring Return			
	Travel time		Total time		Travel time		Total time	
	Opening	Closing	Opening	Closing	Opening	Closing	Opening	Closing
RPX003	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RPX004	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RPX006	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RPX009	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RPX014	0.3	0.2	0.3	0.3	0.4	0.2	0.5	0.2
RPX020	0.4	0.3	0.5	0.4	0.9	0.3	1.0	0.4
RPX032	0.5	0.5	0.7	0.6	1.0	0.5	1.2	0.7
RPX052	0.8	0.7	1.1	0.9	1.2	0.7	1.5	0.9
RPX084/085	0.8	0.8	1.8	1.7	1.9	0.6	3.0	1.1
RPX140/141	1.4	1.5	3.1	2.9	3.2	1.1	5.0	1.8
RPX240	2.9	3.4	6.5	6.0	6.1	4.1	9.7	6.9

Notes:

1. The actuator cycling time consist of a time required to build up the pressure and secondly move the pistons and valve [travel time]. The sum of these values is the total cycling time.
2. The actuator cycle time varies with the supplied air pressure, solenoid valve, and required valve torque, and are for indication only.
3. Indicated times above are based on bare actuator using 5.5 bar (80 psi) air pressure and a solenoid valve with Cv of 1300 l/m 146 CFM).

Construction, Parts and Materials

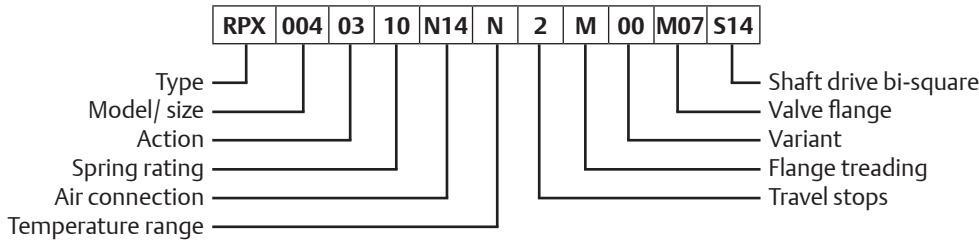


Notes:

1. Included in repair kit
2. SS = Stainless steel
3. Anodized: 5 - 8 microns
+ ESPC 60 - 130 microns
4. Zinc-Nickel plated: 8 - 12 microns
5. Anodized
6. ESPC 60 - 130 microns
7. Blackodised
8. Epoxy coated 20 - 30 microns
9. Zinc plated
10. Only on size 084 and larger.

Pos.	Description	Qty	Notes	Material	Material standards:		
					US ASTM	British	DIN
1	Body	1	3	Extruded Aluminium	B221: 6063T6	BS 1474: 6063	DIN 3.33206.51
2	Pinion	1	4	Hot rolled carbon steel	A108: grade 1045	BS 970: 080M40	V40
3	Piston	2	5	Die cast aluminium alloy	B85 A380	BS 1490: grade LM24	DIN1725: 2300 or 226
4	End cap	2	6	Die cast aluminium alloy	B85 A380	BS 1490: grade LM24	DIN1725: 2300 or 226
5	Cam	1	7	Cast grade SAE 1045/C45/ EN8			
6	Spring	max 12	8	Spring steel	A401	BS 5216 HS3	DIN 17223 Pti
7	Spring retainer	max 12	9	Carbon steel			
8	Spring cup	max 12	- 5	Polyamide grade 66 (up to size 052) Die cast aluminium (size 084 and larger)	- B85 A380	- BS 1490: grade LM24	- DIN1725: 2300 or 226
9	Backing pad	2	1	Zytel 101F NCO10			
10	Top bearing	1	1	POM Acetal Resin + 25% glass filled			
11	Bottom bearing	1	1	POM Acetal Resin + 25% glass filled			
12	Top thrust washer	1	1	Polyamide grade 66			
13	Bottom thrust washer	1	1	Polyamide grade 66			
14	Travel stop washer	2	2	SS ISO 3506 A2-70 grade			
15	End cap washer	8	2	SS ISO 3506 A2-70 grade			
16	O-ring pinion top	1	1	NBR shore 70 A			
17	O-ring pinion bottom	1	1	NBR shore 70 A			
18	O-ring Piston	2	1	NBR shore 70 A			
19	O-ring travel stop	2	1	NBR shore 70 A			
20	Gasket end cap	2	1	NBR shore 70 A			
21	Travel stop screw	2	2	SS ISO 3506 A2-70 grade			
22	End cap screw	8	2	SS ISO 3506 A2-70 grade			
23	Travel stop nut	2	2	SS ISO 3506 A2-70 grade			
24	Circlip	1	1 / 4	Carbon steel			
25	Indicator assy	1		ABS + SS A2-70 grade screw			
26	Piston head guide	2	1 / 10	Zytel 101F NCO10			
27	Lifting eye	2	10	Stainless steel			
28	Travel stop lock washer	2	2	SS ISO 3506 A2-70 grade			

Product Configuration Code



Type					
RPX	Bettis RPX-Series Rack and Pinion actuators				
Model / Size: (Notes 1)					
Code	Size	Code	Size	Code	Size
003	003	014	014	084	084
004	004	020	020	085	085
006	006	032	032	140	140
009	009	052	052	141	141
				240	240
Action: (Notes 2)					
01	DA				
03	SR FC CW [std]				
04	SR FC CCW				
Spring rating					
04	4 springs	08	8 springs	12	12 springs
05	5 springs	09	9 springs	XX	not applicable
06	6 springs	10	10 springs		
07	7 springs	11	11 springs		
Air connection (Notes 3)					
N14	1/4" NPT	P14	1/4" BSPP		
N12	1/2" NPT	P12	1/2" BSPP		
Temperature range					
H	High temp. -15°/+150°C +5°/+302°F (FKM)				
N	Standard temp. -20°/+80°C -4°/+176°F (NBR)				
L	Low temp. -40°/+65°C -40°/+149°F (L-NBR)				
Travel stops					
2	Dual shaft (std)				
3	30° - 90° stroke limiter ≤ 5.5 bar/80psi (single)				
4	30° - 90° stroke limiter > 5.5 bar/80psi (double)				
Flange threading (Notes 3)					
M	Metric				
U	Imperial				
Variant					
00	Standard visual indicator knob				
N0	No Indicator				
N4	A4 SST bolts, no indicator				
A4	Stainless Steel Bolts grade A4				

Valve flange: (Notes 1, 3)			
Actuator size	Code	ISO drilling patterns	
003	M07	= F05 + F07	
004	M07	= F05 + F07	
006	M07	= F05 + F07	
009	M07	= F05 + F07	
014	F07	= F07	
020	M11	= F07 + F10 + F12	
032	M12	= F10 + F12	
052	M12	= F10 + F12	
084	F14	= F14	
085	M16	= F12 + F16	
140	F14	= F14	
141	M16	= F12 + F16	
240	M25	= F16 + F25	
Shaft drive bi-square (Notes 1)			
Actuator size	Code	mm	Inch
003	S14	14	0.551
004	S14	14	0.551
006	S17	17	0.669
009	S17	17	0.669
014	S17	17	0.669
020	S22	22	0.866
032	S27	27	1.063
052	S27	27	1.063
084	S36	36	1.417
085	S36	36	1.417
140	S46	46	1.811
141	S46	46	1.811
240	S46	46	1.811

Notes:

- Sizes 084 and 085 generate the same torque output but have different valve flange drilling patterns. Sizes 140 and 141 generate the same torque output but have different valve flange drilling patterns.
- In case of a Double acting actuator, the spring rating is XX
- Actuator sizes 003 up to 141 come with 1/4" air connections. Size 240 comes with 1/2" air connections. Metric units come with BSPP air connections and metric threaded valve flange. Imperial units come with NPT air connections and UNC threaded valve flange.

Spring Return Actuator Torque (Nm)

Size	Spring set	Spring Stroke (Nm)		Air Stroke (supply pressure in barg)																	
		Start	End	3		3.5		4		4.5		5		5.5		6		7		8.3	
				Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
RPX003	4	9	6	11	8	14	11	16	13	19	16	22	19	25	22	27	24	33	30	40	37
	5	11	7	9	6	12	8	15	11	18	14	20	17	23	19	26	22	32	28	39	35
	6	13	9	8	3	11	6	13	9	16	12	19	14	22	17	25	20	30	26	37	33
	7	16	10	6	1	9	4	12	7	15	9	18	12	20	15	23	18	29	23	36	30
	8	18	12	-	-	8	2	11	4	13	7	16	10	19	13	22	16	27	21	34	28
	9	20	13	-	-	-	-	9	2	12	5	15	8	17	10	20	13	26	19	33	26
	10	22	15	-	-	-	-	-	-	10	3	13	5	16	8	19	11	24	17	32	24
	11	24	16	-	-	-	-	-	-	-	-	12	3	15	6	17	9	23	14	30	22
	12	27	17	-	-	-	-	-	-	-	-	10	1	13	4	16	7	21	12	29	19
RPX004	4	13	9	17	12	21	16	25	21	29	25	33	29	38	33	42	37	50	46	61	57
	5	16	11	15	9	19	13	23	17	27	22	31	26	36	30	40	34	48	43	59	54
	6	19	13	12	6	17	10	21	14	25	18	29	23	33	27	38	31	46	39	57	50
	7	23	15	10	3	14	7	19	11	23	15	27	19	31	24	35	28	44	36	55	47
	8	26	17	-	-	12	3	17	8	21	12	25	16	29	20	33	24	42	33	53	44
	9	29	19	-	-	-	-	14	4	19	9	23	13	27	17	31	21	40	30	51	41
	10	32	21	-	-	-	-	12	1	16	5	21	10	25	14	29	18	37	26	48	37
	11	36	23	-	-	-	-	-	-	14	2	19	6	23	11	27	15	35	23	46	34
	12	39	26	-	-	-	-	-	-	-	-	16	3	21	7	25	11	33	20	44	31
RPX006	4	24	12	23	12	29	18	35	24	42	30	48	36	54	42	60	48	72	60	88	76
	5	30	15	20	5	26	12	32	18	39	24	45	30	51	36	57	42	69	54	85	70
	6	36	18	-	-	23	6	29	12	35	18	42	24	48	30	54	36	66	48	82	64
	7	42	21	-	-	-	-	26	6	32	12	38	18	45	24	51	30	63	42	79	58
	8	48	25	-	-	-	-	-	-	29	6	35	12	42	18	48	24	60	36	76	52
	9	54	28	-	-	-	-	-	-	-	-	32	6	38	12	45	18	57	30	73	46
	10	60	31	-	-	-	-	-	-	-	-	-	-	35	6	41	12	54	24	70	40
	11	66	34	-	-	-	-	-	-	-	-	-	-	-	-	38	6	51	18	67	34
	12	72	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	12	63	28
RPX009	4	29	19	38	29	48	38	58	48	67	58	77	67	87	77	96	86	115	106	140	131
	5	37	24	33	21	43	31	53	41	62	50	72	60	82	70	91	79	111	98	136	123
	6	44	29	29	14	38	24	48	33	58	43	67	53	77	62	86	72	106	91	131	116
	7	51	34	24	7	33	16	43	26	53	36	62	45	72	55	82	65	101	84	126	109
	8	58	39	-	-	29	9	38	19	48	28	57	38	67	48	77	57	96	77	121	102
	9	66	44	-	-	24	2	33	11	43	21	53	31	62	40	72	50	91	69	116	94
	10	73	49	-	-	-	-	28	4	38	14	48	23	57	33	67	43	86	62	111	87
	11	80	53	-	-	-	-	-	-	33	6	43	16	52	26	62	35	81	55	106	80
	12	88	58	-	-	-	-	-	-	-	-	38	9	48	18	57	28	77	47	102	72
RPX014	4	45	30	60	46	75	61	91	76	106	91	121	106	136	121	151	136	181	166	220	205
	5	56	38	53	35	68	50	83	65	98	80	113	95	128	110	143	125	173	155	213	194
	6	67	45	45	23	60	38	75	53	91	69	106	84	121	99	136	114	166	144	205	183
	7	78	53	38	12	53	27	68	42	83	57	98	72	113	88	128	103	158	133	198	172
	8	89	60	30	1	45	16	60	31	76	46	91	61	106	76	121	91	151	122	190	161
	9	101	68	-	-	38	5	53	20	68	35	83	50	98	65	113	80	143	110	183	150
	10	112	75	-	-	-	-	45	9	61	24	76	39	91	54	106	69	136	99	175	138
	11	123	83	-	-	-	-	-	-	53	13	68	28	83	43	98	58	128	88	168	127
	12	134	90	-	-	-	-	-	-	46	2	61	17	76	32	91	47	121	77	160	116
RPX020	4	70	47	86	62	108	84	130	107	152	129	174	151	196	173	218	195	262	239	320	296
	5	88	58	74	45	96	67	118	89	140	111	162	133	184	155	206	177	251	221	308	279
	6	105	70	62	27	84	49	107	72	129	94	151	116	173	138	195	160	239	204	296	261
	7	123	82	51	10	73	32	95	54	117	76	139	98	161	120	183	142	227	186	285	244
	8	140	93	-	-	61	14	83	37	105	59	127	81	149	103	171	125	216	169	273	226
	9	158	105	-	-	-	-	72	19	94	41	116	63	138	85	160	107	204	151	261	209
	10	175	117	-	-	-	-	60	1	82	24	104	46	126	68	148	90	192	134	250	191
	11	193	128	-	-	-	-	-	-	70	6	92	28	114	50	136	72	181	116	238	174
	12	210	140	-	-	-	-	-	-	-	-	81	11	103	33	125	55	169	99	226	156
RPX032	4	111	74	134	96	168	131	203	166	237	200	272	235	307	270	341	304	411	374	501	464
	5	139	93	115	69	150	103	184	138	219	172	254	207	288	242	323	276	392	346	482	436
	6	167	111	96	41	131	75	166	110	200	145	235	179	270	214	304	249	374	318	464	408
	7	195	130	78	13	112	47	147	82	182	117	216	151	251	186	286	221	355	290	445	380
	8	223	149	-	-	94	20	129	54	163	89	198	124	232	158	267	193	336	262	426	352
	9	251	167	-	-	-	-	110	26	145	61	179	96	214	130	249	165	318	234	408	324
	10	279	186	-	-	-	-	-	-	126	33	161	68	195	102	230	137	299	206	389	296
	11	307	204	-	-	-	-	-	-	107	5	142	40	177	75	211	109	281	179	371	269
	12	334	223	-	-	-	-	-	-	-	-	124	12	158	47	193	81	262	151	352	241

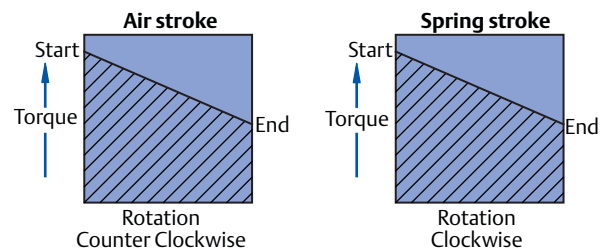
Spring Return Actuator Torque (Nm)

Size	Spring set	Spring Stroke (Nm)		Air Stroke (supply pressure in barg)																		
				3		3.5		4		4.5		5		5.5		6		7		8.3		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
RPX052	4	180	120	195	135	248	188	300	240	353	293	405	345	457	398	510	450	615	555	751	691	
	5	225	150	165	90	218	143	270	195	323	248	375	300	428	353	480	405	585	510	721	647	
	6	269	180	135	45	188	98	240	150	293	203	345	255	398	308	450	360	555	465	691	602	
	7	314	210	105	1	158	53	210	106	263	158	315	210	368	263	420	315	525	420	662	557	
	8	359	240	-	-	128	8	180	61	233	113	285	166	338	218	390	271	495	375	632	512	
	9	404	269	-	-	-	-	150	16	203	68	255	121	308	173	360	226	465	331	602	467	
	10	449	299	-	-	-	-	-	-	173	23	225	76	278	128	330	181	435	286	572	422	
	11	494	329	-	-	-	-	-	-	-	-	195	31	248	83	300	136	405	241	542	377	
	12	539	359	-	-	-	-	-	-	-	-	-	-	218	38	271	91	475	196	512	332	
	RPX084/ RPX085	4	294	196	329	231	417	319	504	406	592	494	679	581	767	669	855	756	1030	932	1257	1159
		5	368	245	280	157	368	245	455	333	543	420	630	508	718	595	806	683	981	858	1208	1086
		6	442	294	231	84	319	171	406	259	494	347	581	434	669	522	756	609	932	784	1159	1012
7		515	344	182	10	270	98	357	185	445	273	532	360	620	448	707	536	883	711	1110	938	
8		589	393	-	-	220	24	308	112	396	199	483	287	571	374	658	462	833	637	1061	865	
9		663	442	-	-	-	-	259	38	347	126	434	213	522	301	609	388	784	564	1012	791	
10		736	491	-	-	-	-	-	-	297	52	385	140	473	227	560	315	735	490	963	718	
11		810	540	-	-	-	-	-	-	-	-	336	66	424	154	511	241	686	416	914	644	
12		883	589	-	-	-	-	-	-	-	-	-	-	374	80	462	168	637	343	865	570	
RPX140/ RPX141		4	491	327	586	423	738	575	890	727	1043	879	1195	1031	1347	1184	1499	1336	1804	1640	2199	2036
		5	613	409	504	300	656	452	809	604	961	756	1113	909	1265	1061	1417	1213	1722	1517	2118	1913
		6	736	491	423	177	575	329	727	482	879	634	1031	786	1184	938	1336	1090	1640	1395	2036	1790
	7	859	572	341	55	493	207	645	359	797	511	950	663	1102	816	1254	968	1558	1272	1954	1668	
	8	981	654	-	-	411	84	563	236	716	388	868	541	1020	693	1172	845	1477	1149	1872	1545	
	9	1104	736	-	-	-	-	482	114	634	266	786	418	938	570	1090	722	1395	1027	1790	1422	
	10	1227	818	-	-	-	-	-	-	552	143	704	295	856	447	1009	600	1313	904	1709	1300	
	11	1349	900	-	-	-	-	-	-	470	20	622	173	775	325	927	477	1231	781	1627	1177	
	12	1472	981	-	-	-	-	-	-	-	-	541	50	693	202	845	354	1149	659	1545	1054	
	RPX240	4	832	554	954	677	1206	928	1457	1180	1708	1431	1960	1683	2211	1934	2463	2185	2966	2688	3619	3342
		5	1039	693	815	469	1067	720	1318	972	1570	1223	1821	1475	2073	1726	2324	1977	2827	2480	3481	3134
		6	1247	832	677	261	928	512	1180	764	1431	1015	1683	1267	1934	1518	2185	1769	2688	2272	3342	2926
7		1455	970	538	53	790	304	1041	556	1292	807	1544	1059	1795	1310	2047	1561	2550	2064	3203	2718	
8		1663	1109	-	-	651	96	902	348	1154	599	1405	851	1657	1102	1908	1353	2411	1856	3065	2510	
9		1871	1247	-	-	-	-	764	140	1015	391	1267	643	1518	894	1769	1145	2272	1648	2926	2302	
10		2079	1386	-	-	-	-	-	-	876	183	1128	435	1379	686	1631	937	2134	1440	2787	2094	
11		2287	1524	-	-	-	-	-	-	-	-	989	227	1241	478	1492	729	1995	1232	2649	1886	
12		2495	1663	-	-	-	-	-	-	-	-	851	19	1102	270	1353	521	1856	1024	2510	1678	

Notes:

- Emerson recommends that the valve manufacturer supply the maximum required torque values (including any adjustments or suggested safety factors for valve service conditions or application).
- Additionally, the valve manufacturer must identify at which position(s) and direction(s) of rotation (Counter Clock Wise or Clock Wise) these maximum requirements occur.
- If in doubt, or you require any assistance with sizing actuators, do not hesitate to contact your nearest Emerson Automation Solutions - Actuation Technologies Center.

Figure 1. Spring Return torque diagram



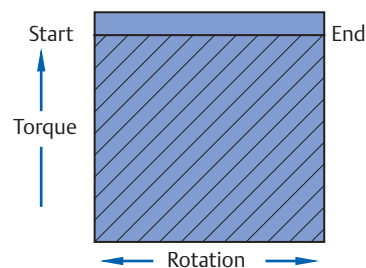
Double acting Actuator Torque (Nm)

Actuator size	Supply pressure in barg						
	3.0	4.0	5.0	5.5	6.0	7.0	8.3
RPX003	17	23	28	31	34	39	47
RPX004	25	33	42	46	50	59	69
RPX006	36	48	60	66	72	84	100
RPX009	58	77	96	106	116	135	160
RPX014	91	121	151	166	181	211	251
RPX020	133	177	221	243	265	309	367
RPX032	208	277	346	381	416	485	575
RPX052	315	420	525	577	629	734	871
RPX085/084	525	700	875	963	1050	1226	1453
RPX140/141	913	1218	1522	1674	1826	2131	2526
RPX240	1508	2011	2514	2765	3016	3519	4173

Notes:

1. Emerson recommends that the valve manufacturer supply the maximum required torque values (including any adjustments or suggested safety factors for valve service conditions or application).
2. Additionally, the valve manufacturer must identify at which position(s) and direction(s) of rotation (Counter Clock Wise or Clock Wise) these maximum requirements occur.
3. If in doubt, or you require any assistance with sizing actuators, do not hesitate to contact your nearest Emerson Automation Solutions - Actuation Technologies Center.

Figure 2. Double acting torque diagram



Spring Return Actuator Torque (lbf.in)

Size	Spring set	Spring Stroke (lbf.in)		Air Stroke (supply pressure in psig)																		
				40		50		60		70		80		90		100		110		120		
				Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
RPX003	4	79	51	84	57	118	91	152	125	186	158	220	192	253	226	287	260	321	294	355	328	
	5	98	64	71	37	105	71	139	105	173	139	207	173	241	206	274	240	308	274	342	308	
	6	118	77	58	17	92	51	126	85	160	119	194	153	228	187	262	221	295	255	329	288	
	7	137	90	-	-	79	32	113	65	147	99	181	133	215	167	249	201	283	235	316	269	
	8	157	103	-	-	66	12	100	46	134	80	168	113	202	147	236	181	270	215	304	249	
	9	177	115	-	-	-	-	87	26	121	60	155	94	189	128	223	162	257	195	291	229	
	10	196	128	-	-	-	-	74	6	108	40	142	74	176	108	210	142	244	176	278	210	
	11	216	141	-	-	-	-	-	-	95	20	129	54	163	88	197	122	231	156	265	190	
	12	236	154	-	-	-	-	-	-	83	1	117	35	150	69	184	102	218	136	252	170	
	RPX004	4	115	75	130	90	181	142	232	193	283	244	335	295	386	347	437	398	488	449	540	500
		5	143	94	111	62	162	113	213	164	264	215	316	267	367	318	418	369	470	420	521	472
		6	172	113	92	33	143	84	194	135	246	187	297	238	348	289	399	341	451	392	502	443
7		201	132	73	4	124	55	175	107	227	158	278	209	329	261	381	312	432	363	483	414	
8		229	151	-	-	105	27	157	78	208	129	259	181	310	232	362	283	413	334	464	386	
9		258	170	-	-	-	-	138	49	189	101	240	152	292	203	343	254	394	306	445	357	
10		287	189	-	-	-	-	119	21	170	72	221	123	273	174	324	226	375	277	426	328	
11		316	208	-	-	-	-	-	-	151	43	202	94	254	146	305	197	356	248	408	300	
12		344	226	-	-	-	-	-	-	132	15	184	66	235	117	286	168	337	220	389	271	
RPX006		4	213	109	180	76	254	150	329	225	404	300	478	374	553	449	628	524	702	598	777	673
		5	266	136	152	22	227	97	302	172	376	246	451	321	526	396	600	470	675	545	750	620
		6	320	163	-	-	200	44	275	119	349	193	424	268	499	343	573	417	648	492	723	567
	7	373	190	-	-	-	-	247	65	322	140	397	215	471	289	546	364	621	439	695	513	
	8	426	217	-	-	-	-	220	12	295	87	369	161	444	236	519	311	593	385	668	460	
	9	479	245	-	-	-	-	-	-	267	33	342	108	417	183	491	257	566	332	641	407	
	10	533	272	-	-	-	-	-	-	-	-	315	55	389	129	464	204	539	279	613	353	
	11	586	299	-	-	-	-	-	-	-	-	288	2	362	76	437	151	512	226	586	300	
	12	639	326	-	-	-	-	-	-	-	-	-	-	335	23	410	98	484	172	559	247	
	RPX009	4	258	172	298	212	416	330	533	447	651	565	769	683	886	800	1004	918	1121	1035	1239	1153
		5	323	215	255	148	373	265	490	383	608	500	726	618	843	736	961	853	1078	971	1196	1088
		6	388	258	212	83	330	201	447	318	565	436	683	554	800	671	918	789	1035	906	1153	1024
7		452	300	169	19	287	136	404	254	522	371	640	489	757	607	875	724	992	842	1110	959	
8		517	343	-	-	244	72	361	189	479	307	597	425	714	542	832	660	949	777	1067	895	
9		581	386	-	-	201	7	318	125	436	242	554	360	671	478	789	595	906	713	1024	830	
10		646	429	-	-	-	-	275	60	393	178	511	295	628	413	746	531	863	648	981	766	
11		711	472	-	-	-	-	-	-	350	113	468	231	585	349	703	466	820	584	938	701	
12		775	515	-	-	-	-	-	-	307	49	425	166	542	284	660	402	777	519	895	637	
RPX014		4	396	266	470	340	654	524	838	708	1022	892	1206	1076	1390	1260	1573	1444	1757	1628	1941	1811
		5	494	332	404	241	587	425	771	609	955	793	1139	977	1323	1161	1507	1345	1691	1529	1875	1713
		6	593	399	337	142	521	326	705	510	889	694	1073	878	1257	1062	1441	1246	1625	1430	1808	1614
	7	692	465	271	43	455	227	639	411	822	595	1006	779	1190	963	1374	1147	1558	1331	1742	1515	
	8	791	531	-	-	388	129	572	312	756	496	940	680	1124	864	1308	1048	1492	1232	1676	1416	
	9	890	598	-	-	322	30	506	214	690	397	874	581	1057	765	1241	949	1425	1133	1609	1317	
	10	989	664	-	-	-	-	439	115	623	299	807	482	991	666	1175	850	1359	1034	1543	1218	
	11	1088	731	-	-	-	-	373	16	557	200	741	384	925	568	1109	751	1292	935	1476	1119	
	12	1187	797	-	-	-	-	-	-	490	101	674	285	858	469	1042	653	1226	836	1410	1020	
	RPX020	4	620	413	664	458	934	727	1203	997	1473	1266	1742	1535	2011	1805	2281	2074	2550	2344	2820	2613
		5	775	516	561	303	831	572	1100	842	1369	1111	1639	1380	1908	1650	2177	1919	2447	2189	2716	2458
		6	930	619	458	148	727	417	997	687	1266	956	1535	1226	1805	1495	2074	1764	2344	2034	2613	2303
7		1085	722	-	-	624	262	893	532	1163	801	1432	1071	1702	1340	1971	1609	2240	1879	2510	2148	
8		1240	826	-	-	521	108	790	377	1059	646	1329	916	1598	1185	1868	1454	2137	1724	2406	1993	
9		1395	929	-	-	-	-	687	222	956	491	1226	761	1495	1030	1764	1300	2034	1569	2303	1838	
10		1551	1032	-	-	-	-	584	67	853	336	1122	606	1392	875	1661	1145	1930	1414	2200	1683	
11		1706	1135	-	-	-	-	-	-	750	182	1019	451	1288	720	1558	990	1827	1259	2097	1529	
12		1861	1238	-	-	-	-	-	-	646	27	916	296	1185	565	1455	835	1724	1104	1993	1374	
RPX032		4	986	658	1034	705	1457	1128	1880	1551	2302	1974	2725	2397	3148	2819	3571	3242	3994	3665	4417	4088
		5	1233	822	870	459	1292	881	1715	1304	2138	1727	2561	2150	2984	2573	3407	2996	3829	3419	4252	3841
		6	1480	986	705	212	1128	635	1551	1058	1974	1481	2397	1903	2819	2326	3242	2749	3665	3172	4088	3595
	7	1726	1151	-	-	964	388	1386	811	1809	1234	2232	1657	2655	2080	3078	2503	3501	2925	3924	3348	
	8	1973	1315	-	-	799	142	1222	565	1645	988	2068	1410	2491	1833	2913	2256	3336	2679	3759	3102	
	9	2219	1480	-	-	-	-	1058	318	1481	741	1903	1164	2326	1587	2749	2009	3172	2432	3595	2855	
	10	2466	1644	-	-	-	-	893	72	1316	494	1739	917	2162	1340	2585	1763	3008	2186	3430	2609	
	11	2713	1808	-	-	-	-	-	-	1152	248	1575	671	1998	1094	2420	1516	2843	1939	3266	2362	
	12	2959	1973	-	-	-	-	-	-	988	1	1410	424	1833	847	2256	1270	2679	1693	3102	2116	

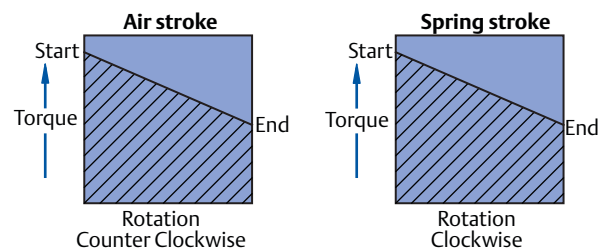
Spring Return Actuator Torque (lbf.in)

Size	Spring set	Spring Stroke (lbf.in)		Air Stroke (supply pressure in psig)																		
				40		50		60		70		80		90		100		110		120		
				Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	
RPX052	4	1590	1060	1503	973	2143	1613	2784	2254	3424	2895	4065	3535	4705	4176	5346	4816	5987	5457	6627	6097	
	5	1987	1325	1238	575	1878	1216	2519	1857	3159	2497	3800	3138	4441	3778	5081	4419	5722	5059	6362	5700	
	6	2385	1590	973	178	1613	819	2254	1459	2895	2100	3535	2740	4176	3381	4816	4021	5457	4662	6097	5303	
	7	2782	1855	-	-	1348	421	1989	1062	2630	1702	3270	2343	3911	2984	4551	3624	5192	4265	5832	4905	
	8	3179	2120	-	-	1084	24	1724	665	2365	1305	3005	1946	3646	2586	4286	3227	4927	3867	5568	4508	
	9	3577	2385	-	-	-	-	1459	267	2100	908	2740	1548	3381	2189	4021	2829	4662	3470	5303	4111	
	10	3974	2650	-	-	-	-	-	-	1835	510	2475	1151	3116	1792	3757	2432	4397	3073	5038	3713	
	11	4372	2914	-	-	-	-	-	-	1570	113	2211	754	2851	1394	3492	2035	4132	2675	4773	3316	
	12	4769	3179	-	-	-	-	-	-	-	-	1946	356	2586	997	3227	1637	3867	2278	4508	2919	
	RPX084/ RPX085	4	2606	1737	2539	1670	3608	2739	4677	3808	5746	4877	6815	5946	7884	7015	8953	8084	10022	9153	11091	10223
		5	3258	2172	2105	1019	3174	2088	4243	3157	5312	4226	6381	5295	7450	6364	8519	7433	9588	8502	10657	9571
		6	3909	2606	1670	367	2739	1436	3808	2505	4877	3574	5946	4643	7015	5712	8084	6781	9153	7851	10223	8920
7		4561	3040	-	-	2305	785	3374	1854	4443	2923	5512	3992	6581	5061	7650	6130	8719	7199	9788	8268	
8		5212	3475	-	-	1871	133	2940	1202	4009	2271	5078	3340	6147	4409	7216	5479	8285	6548	9354	7617	
9		5864	3909	-	-	-	-	2505	551	3574	1620	4643	2689	5712	3758	6781	4827	7851	5896	8920	6965	
10		6515	4343	-	-	-	-	-	-	3140	968	4209	2037	5278	3107	6347	4176	7416	5245	8485	6314	
11		7167	4778	-	-	-	-	-	-	2706	317	3775	1386	4844	2455	5913	3524	6982	4593	8051	5662	
12		7818	5212	-	-	-	-	-	-	-	-	3340	735	4409	1804	5479	2873	6548	3942	7617	5011	
RPX140/ RPX141		4	4343	2895	4537	3089	6394	4947	8252	6805	10110	8663	11968	10521	13826	12378	15684	14236	17542	16094	19400	17952
		5	5428	3619	3813	2003	5671	3861	7529	5719	9386	7577	11244	9435	13102	11293	14960	13151	16818	15009	18676	16866
		6	6514	4343	3089	918	4947	2776	6805	4634	8663	6491	10521	8349	12378	10207	14236	12065	16094	13923	17952	15781
	7	7599	5066	-	-	4223	1690	6081	3548	7939	5406	9797	7264	11655	9122	13513	10979	15370	12837	17228	14695	
	8	8685	5790	-	-	3499	604	5357	2462	7215	4320	9073	6178	10931	8036	12789	9894	14647	11752	16505	13610	
	9	9771	6514	-	-	-	-	4634	1377	6491	3234	8349	5092	10207	6950	12065	8808	13923	10666	15781	12524	
	10	10856	7238	-	-	-	-	3910	291	5768	2149	7626	4007	9483	5865	11341	7723	13199	9580	15057	11438	
	11	11942	7961	-	-	-	-	-	-	5044	1063	6902	2921	8760	4779	10618	6637	12475	8495	14333	10353	
	12	13028	8685	-	-	-	-	-	-	-	-	6178	1835	8036	3693	9894	5551	11752	7409	13610	9267	
	RPX240	4	7359	4906	7369	4915	10439	7984	13508	11054	16577	14123	19647	17193	22716	20262	25786	23331	28855	26401	31925	29470
		5	9199	6132	6142	3074	9211	6143	12281	9213	15350	12282	18420	15352	21489	18421	24559	21491	27628	24560	30698	27630
		6	11038	7359	4915	1233	7984	4303	11054	7372	14123	10441	17193	13511	20262	16580	23331	19650	26401	22719	29470	25789
7		12878	8585	-	-	6757	2462	9826	5531	12896	8601	15965	11670	19035	14740	22104	17809	25174	20879	28243	23948	
8		14718	9812	-	-	5530	621	8599	3690	11669	6760	14738	9829	17808	12899	20877	15968	23947	19038	27016	22107	
9		16558	11038	-	-	-	-	7372	1850	10441	4919	13511	7989	16580	11058	19650	14127	22719	17197	25789	20266	
10		18397	12265	-	-	-	-	6145	9	9214	3078	12284	6148	15353	9217	18423	12287	21492	15356	24562	18426	
11		20237	13491	-	-	-	-	-	-	7987	1237	11057	4307	14126	7376	17195	10446	20265	13515	23334	16585	
12		22077	14718	-	-	-	-	-	-	-	-	9829	2466	12899	5536	15968	8605	19038	11675	22107	14744	

Notes:

- Emerson recommends that the valve manufacturer supply the maximum required torque values (Including any adjustments or suggested safety factors for valve service conditions or application).
- Additionally, the valve manufacturer must identify at which position(s) and direction(s) of rotation (Counter Clock Wise or Clock Wise) these maximum requirements occur.
- If in doubt, or you require any assistance with sizing actuators, do not hesitate to contact your nearest Emerson Automation Solutions - Actuation Technologies Center.

Figure 3. Spring Return torque diagram



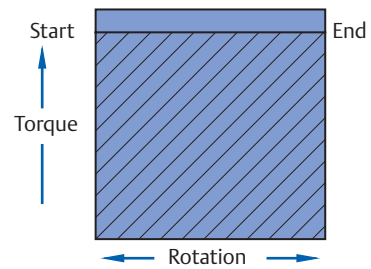
Double acting Actuator Torque (lbf.in)

Actuator size	Supply pressure in psig								
	40	50	60	70	80	90	100	110	120
RPX003	138	172	206	241	275	310	344	378	413
RPX004	204	255	306	357	408	459	510	562	613
RPX006	293	366	439	513	586	659	732	806	879
RPX009	470	588	706	823	941	1059	1176	1294	1411
RPX014	737	921	1106	1290	1474	1658	1843	2027	2211
RPX020	1079	1348	1618	1888	2157	2427	2697	2966	3236
RPX032	1691	2114	2537	2960	3383	3805	4228	4651	5074
RPX052	2561	3202	3842	4482	5123	5763	6403	7043	7684
RPX085/084	4274	5343	6412	7480	8549	9617	10686	11755	12823
RPX140/141	7431	9289	11147	13004	14862	16720	18578	20435	22293
RPX240	12273	15342	18410	21478	24547	27615	30683	33752	36820

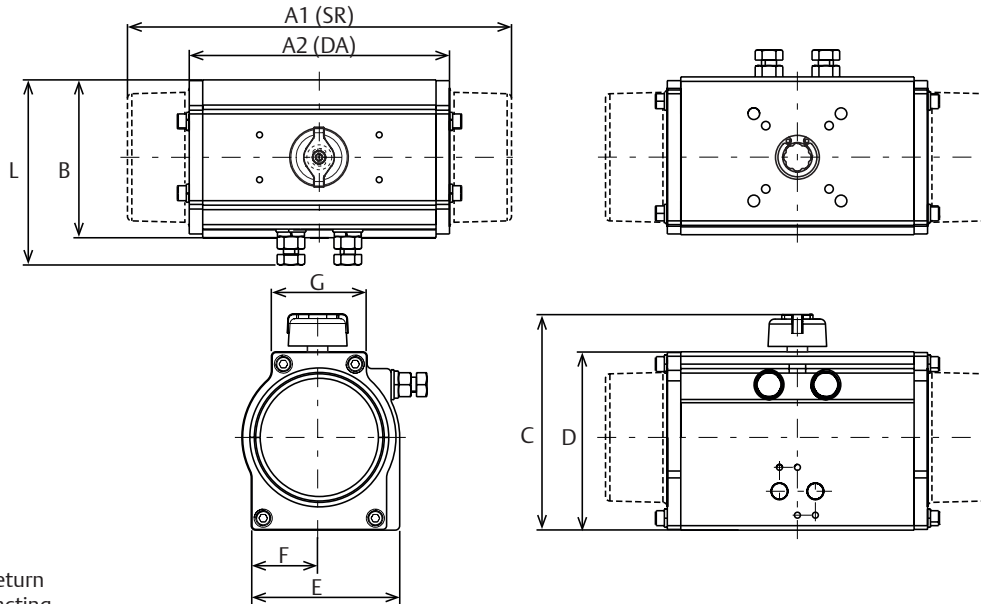
Notes:

1. Emerson recommends that the valve manufacturer supply the maximum required torque values (Including any adjustments or suggested safety factors for valve service conditions or application).
2. Additionally, the valve manufacturer must identify at which position(s) and direction(s) of rotation (Counter Clock Wise or Clock Wise) these maximum requirements occur.
3. If in doubt, or you require any assistance with sizing actuators, do not hesitate to contact your nearest Emerson Automation Solutions - Actuation Technologies Center.

Figure 4. Double acting torque diagram



Envelope dimensions



Notes

1. A1 - spring return
A2 - double acting

Model	Dimensions in mm							
	A1 (SR)	A2 (DA)	B	C	D	E	F	L
RPX-003	186	125	78.5	114.2	86.0	78.5	36.0	80.9
RPX-004	217	143	83.5	123.2	95.0	80.0	36.0	96.4
RPX-006	259	169	89.3	128.9	100.8	86.8	40.0	108.2
RPX-009	257	174	105.5	147.4	119.3	99.3	45.5	123.6
RPX-014	307	193	120.0	165.8	137.7	112.0	52.0	140.6
RPX-020	378	236	131.0	183.2	155.0	122.5	57.0	157.5
RPX-032	462	283	147.0	199.2	171.0	136.0	68.0	182.3
RPX-052	476	298	177.0	240.7	212.5	159.0	79.5	210.3
RPX-084/085	627	384	199.0	271.2	226.5	189.5	90.0	130.0
RPX-140/141	726	431	246.0	318.7	274.0	246.0	110.0	154.0
RPX-240	845	507	290.0	375.3	324.5	290.0	145.0	186.0

Model	Dimensions in inches							
	A1 (SR)	A2 (DA)	B	C	D	E	F	L
RPX-003	7.30	4.90	3.09	4.50	3.39	3.09	1.42	3.19
RPX-004	8.53	5.63	3.29	4.85	3.74	3.15	1.42	3.80
RPX-006	10.20	6.65	3.52	5.07	3.97	3.42	1.57	4.26
RPX-009	10.10	6.85	4.15	5.80	4.70	3.91	1.79	4.87
RPX-014	12.07	7.60	4.72	6.53	5.42	4.41	2.05	5.54
RPX-020	14.89	9.29	5.16	7.21	6.10	4.82	2.24	6.20
RPX-032	18.20	11.14	5.79	7.84	6.73	5.35	2.68	7.18
RPX-052	18.72	11.73	6.97	9.48	8.37	6.26	3.13	8.28
RPX-084/085	24.69	15.12	7.83	10.68	8.92	7.46	3.54	5.12
RPX-140/141	28.58	16.97	9.69	12.55	10.79	9.69	4.33	6.06
RPX-240	33.27	19.96	11.42	14.78	12.78	11.42	5.71	7.32

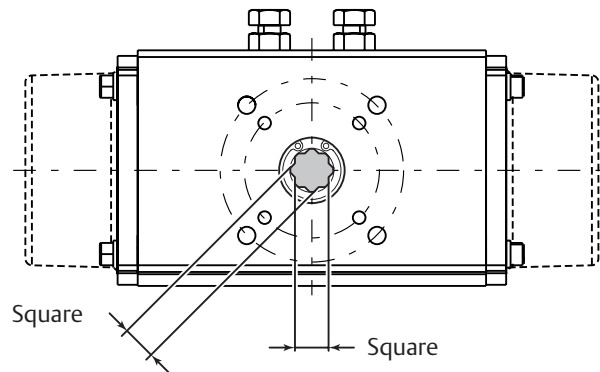
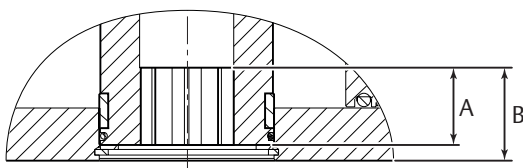
Valve Flange dimensions

Model	Metric (mm)					Imperial (inch)				
	ISO 5211 PCD:	Mounting holes No x Size x Depth	Bottom of shaft Drive, Star no	Depth		ISO 5211 PCD:	Mounting holes No x Size x Depth	Bottom of shaft Drive, Star no	Depth	
				A	B				A	B
RPX003	F05	4x M6x 10.0	14	16.8	22.2	F05	4x 1/4-20 UNC x 0.39	0.551	0.661	0.874
	F07	4x M8x 12.0				F07	4x 5/16-18 UNC x 0.47			
RPX004	F05	4x M6x 10.0	14	16.8	22.1	F05	4x 1/4-20 UNC x 0.39	0.551	0.661	0.870
	F07	4x M8x 12.0				F07	4x 5/16-18 UNC x 0.47			
RPX006	F05	4x M6x 10.0	17	19.8	27.1	F05	4x 1/4-20 UNC x 0.39	0.669	0.780	1.067
	F07	4x M8x 12.0				F07	4x 5/16-18 UNC x 0.47			
RPX009	F05	4x M6x 10.0	17	19.8	27.1	F05	4x 1/4-20 UNC x 0.39	0.669	0.780	1.067
	F07	4x M8x 12.0				F07	4x 5/16-18 UNC x 0.47			
RPX014	F07	4x M8x 12.0	17	19.8	26.9	F07	4x 5/16-18 UNC x 0.47	0.669	0.780	1.059
RPX020	F07	4x M8x 12.0	22	27.75	36.25	F07	4x 5/16-18 UNC x 0.47	0.866	1.093	1.427
	F10	4x M10 x 15.0				F10	4x 3/8-16 UNC x 0.59			
	F12	4x M12 x 18.0				F12	4x 1/2-13 UNC x 0.71			
RPX032	F10	4x M10 x 15.0	27	29.3	38.3	F10	4x 3/8-16 UNC x 0.59	1.063	1.154	1.508
	F12	4x M12 x 18.0				F12	4x 1/2-13 UNC x 0.71			
RPX052	F10	4x M10 x 15.0	27	29.3	38.3	F10	4x 3/8-16 UNC x 0.59	1.063	1.154	1.508
	F12	4x M12 x 18.0				F12	4x 1/2-13 UNC x 0.71			
RPX084	F14	4x M16x 25.0	36	40.5	48.5	F14	4x 5/8-11 UNC x 0.98	1.417	1.594	1.909
RPX085	F12	4x M12x 19.0				F12	4x 1/2-13 UNC x 0.75			
	F16	4x M20x 30.0				F16	4x 3/4-10 UNC x 1.18			
RPX140	F14	4x M16x 25.0	46	53.5	62.5	F14	4x 5/8-11 UNC x 0.98	1.811	2.106	2.461
RPX141	F12	4x M12x 19.0				F12	4x 1/2-13 UNC x 0.75			
	F16	4x M20x 30.0				F16	4x 3/4-10 UNC x 1.18			
RPX240	F16	4x M20x 30.0	46	53.5	63.5	F16	4x 3/4-10 UNC x 1.18	1.811	2.106	2.500
	F25	8x M16x 24.0				F25	8x 5/8-11 UNC x 0.94			

Notes:

A = Depth in shaft

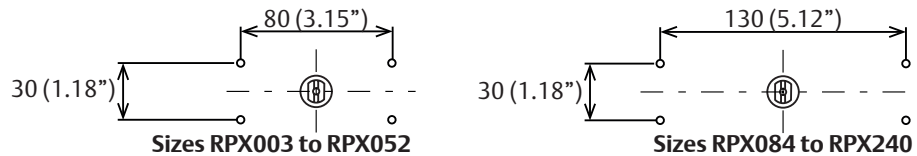
B = Star Connection Depth from bottom of body



VDI/VDE (NAMUR) interface dimensions

Top mount drilling

The top mount drilling is available with metric or imperial threading. The dimensions of the hole pattern are identical.

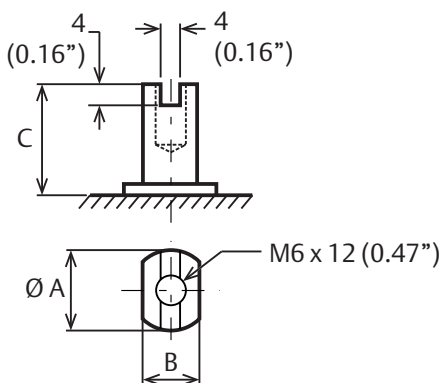


Notes:

- Metric threaded versions have a bolt threading of M5x0.8x8.0 mm deep.
- Imperial threaded versions have a bolt threading of 10-24 UNC x 0.28 inch deep.

VDI/VDE3845 (NAMUR) Control accessory mounting

The pinion top of the Bettis RPX actuator comply to the VDI/VDE 3845 standard for control accessory mounting.



Model	Metric (mm)			Imperial (inch)		
	A	B	C	A	B	D
RPX 003	21.6	14	20.0	0.85	0.55	0.79
RPX 004	20.0	14	20.0	0.79	0.55	0.79
RPX 006	22.0	14	20.0	0.87	0.55	0.79
RPX 009	22.0	14	20.0	0.87	0.55	0.79
RPX 014	26.0	14	20.0	1.02	0.55	0.79
RPX 020	27.6	14	20.0	1.09	0.55	0.79
RPX 032	35.0	14	20.0	1.38	0.55	0.79
RPX 052	35.0	19	20.0	1.38	0.75	0.79
RPX 084/085	50.6	36	30.0	1.99	1.42	1.18
RPX 140/141	60.6	36	30.0	2.39	1.42	1.18
RPX 240	63	36	30.0	2.62	1.42	1.18

Air connection

The actuator is controlled by applying compressed air to the 1/4" BSP/NPT ports (1/2" BSP/NPT for Model RPX240) or with a Namur solenoid valve.

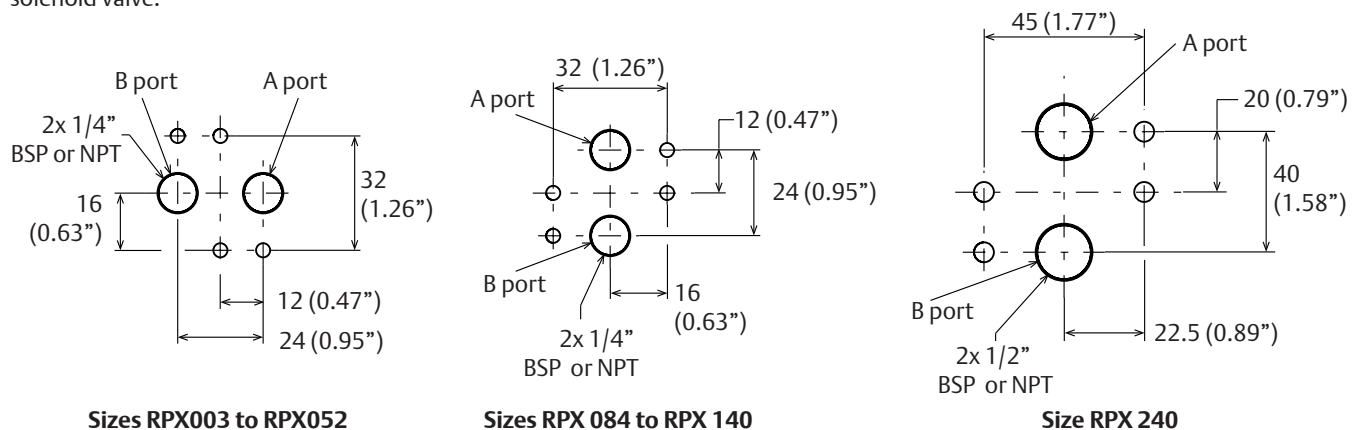


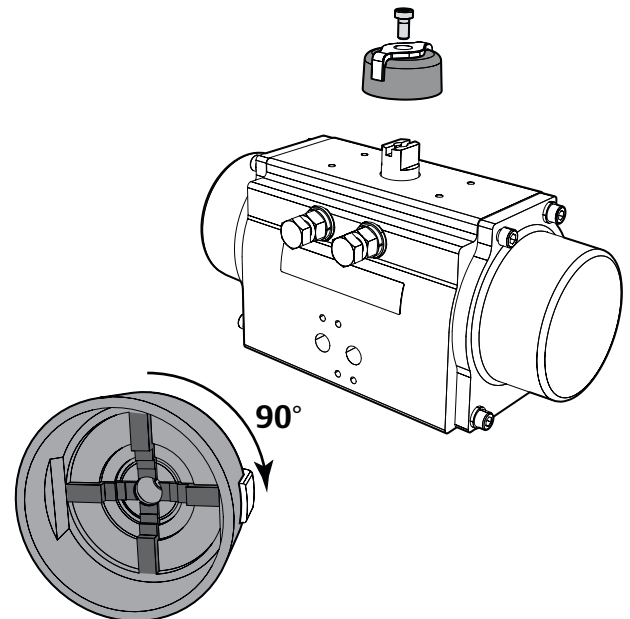
Table 4. Bolt Threading Air Connection Interface

Actuator sizes:	Metric sizes	Imperial sizes
RPX003 to RPX140	M5x0.8x8.0 mm deep	10-24 UNC x 0.28 inch deep
RPX240	M6x1.0 x 10.0 mm deep	1/4-20 UNC x 0.39 inch deep

Visual indicator Bettis RPX-Series actuators

Key Features

- Large, high visibility position indicator.
- Easy mounting for "In-line" or "Across-Line" applications by rotating the indicator 90°.
- Suitable for pinion top according to VDI/VDE 3845 (NAMUR).



Description

Bettis RPX-Series actuators have a large visual position indicator which allows clear indication of the valve's position at almost any position.

The Bettis RPX-Series indicator is designed for position indication of actuators mounted "in line" with the pipe line and mounted "across line" with the pipe line.

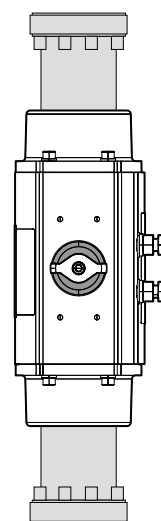
The cross shaped protrusion on the inside of the indicator fits in the NAMUR slot on the actuators pinion top. This makes conversion from "in line" (with the pipe line) and "across line" indication easy by simply turning the indicator 90° and reassemble back in place.

By default, the position indicator will be mounted "in line".

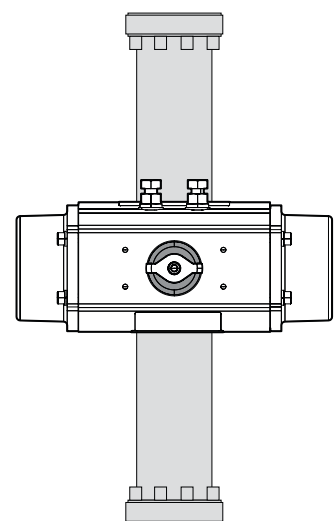
Material Specifications:

- Indicator knob: ABS, Black
- Indicator arrow: ABS, White
- Indicator screw: SS Head cap screw M6x12

"In line" Mounting



"Across line" Mounting



In both situations the valve is in the closed position

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