

**Series APR Rack and Pinion Actuator**



**FEATURES**

- ▶ Rack and Pinion Actuators
- ▶ Double-Acting (air to open, air to close)
- ▶ Single-Acting, Spring-Return (air to open or close, spring return open or close)
- ▶ Bi-Directional Travel Stops
- ▶ Optional Spring Cartridges for retrofit to spring-return from double acting
- ▶ Direct-Mount Designs - ISO 5211/DIN 3337/GB 12223-89
- ▶ Various Control Options - solenoids, limit switches and positioners - NAMUR mounting available

*Equipment should be installed, operated, serviced, and maintained only by qualified personnel.  
No responsibility is assumed by Schneider Electric for any consequences arising from the use of this material.*



**Table 1. Parts and Materials (see Figure 1) (Continued)**

No.	Name	Qty.	Material	Anti-corrosion	Optional
14	Spring (single-action)	4-12	Alloy spring steel	Anti-rust coating	
15	Cap screw	8	Stainless steel		
16	Left end cap	1	Die casting aluminum alloy	Epoxy powder coat finish	
17	O-ring for end cap	2	Buna-N		Fluoropolymer or Silicone Rubber
18	Piston bearing	2	Engineering plastic		
19	O-ring for piston	2	Buna-N		Fluoropolymer or Silicone Rubber
20	Piston	2	Die casting aluminum alloy		
21	Piston cover	2	Nylon 6		
22	Right end cap	1	Die casting aluminum alloy	Epoxy powder coat finish	
23	Adjustable travel limit stops	2	Stainless steel		
24	Nut	2	Stainless steel		
25	Sealing ring	2	Stainless steel		
26	O-ring	2	Buna-N		Fluoropolymer or Silicone Rubber

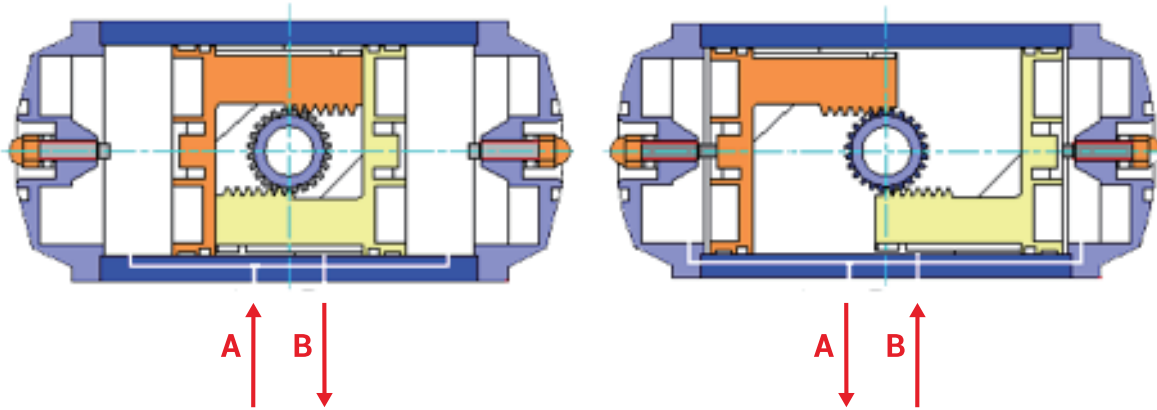
**Table 2. Key Components**

<b>Item Name</b>	Material
<b>Body</b>	Extruded Anodized Aluminum Alloy, Optional Power Coat
<b>End Caps</b>	Powder-Coated Die Cast Aluminum
<b>Piston</b>	Die Cast Aluminum
<b>Shaft Bearing</b>	NYLON 66
<b>Piston Bearing</b>	PTFE/Bronze Composite
<b>O-Rings</b>	Buna-N, Fluoropolymer, Silicone Rubber
<b>Fasteners</b>	Stainless Steel
<b>Springs</b>	Spring Steel, Protective Coating

DOUBLE ACTING ACTUATORS

Position of Actuator Open and Close

Figure 2. Position of Actuator Open and Close

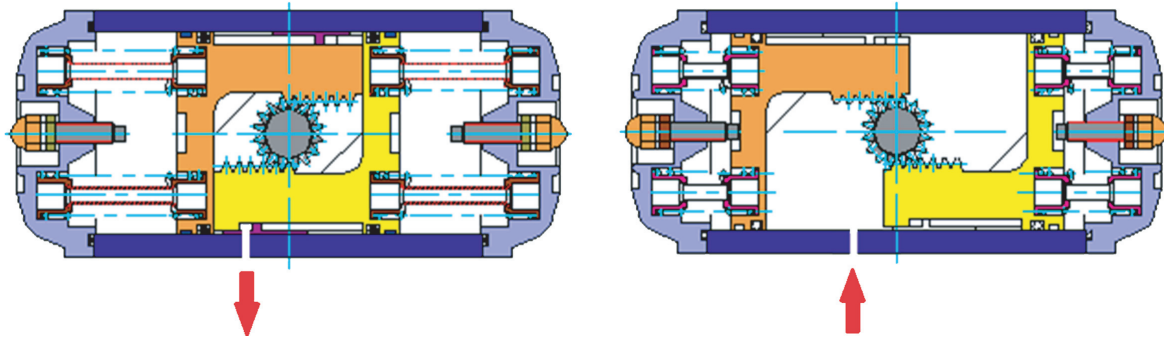


A- When air pressure is applied to flow through the "A" port the racks are pushed toward each other rotating the pinion in a clockwise motion.

B- When air pressure is applied to flow through the "B" port the racks are pushed away from each other rotating the pinion in a counter-clockwise motion.

## SPRING RETURN ACTUATORS

## Position of Spring Return Pneumatic Actuator

*Figure 3. Position of Spring Return Pneumatic Actuator*

The output torque of the spring return actuator during operation is not constant, but varies gradually, because the spring accumulates energy during compression and the torque decreases as the spring is reset. The output torque of the single acting spring return actuator is related to the number of spring sets installed and the available pressure of the air supply must be clearly defined when the user selects it.

Proper selection for an actuator is as follows:

1. Determine the torque required for the valve
2. Multiply the required torque by a safety factor of 1.25
3. According to the air supply pressure and the torque obtained in step 2, the spring return actuator required is checked to ensure the spring torque and the output torque of air to spring is greater than the torque obtained in Step 2
4. Determine the exact RB spring return actuator based on torque value from the torque tables supplied
5. Ensure that the safe torque value of the valve is not exceeded

TORQUE OF DOUBLE ACTING ACTUATORS

Table 3. Actuator Torque, Metric

Actuator (a)	Double Acting Actuator Torque Metric (N-m, air pressure barg)									
	2.5	3	3.5	4	4.5	5	5.5	6	7	8
32	2.9	3.4	4.0	4.6	5.3	5.9	6.5	7.1	8.3	9.5
50	8.6	10.4	12.3	14.2	16.0	17.9	19.8	21.6	25.4	29.1
63	17.4	21.2	25.0	28.7	32.5	36.3	40.1	43.9	51.4	59.0
75	27.0	32.9	38.8	44.7	50.5	56.4	62.3	68.2	79.9	91.7
80	39.7	48.3	56.9	65.6	74.2	82.8	91.4	100.1	117.3	134.6
95	55.7	67.9	80.0	92.1	104.2	116.4	128.5	140.6	164.8	189.1
100	72.0	89.3	105.0	120.6	136.3	152.0	167.6	183.3	215	246
125	129.0	160.0	188.0	215	243	271	299	327	383	439
140	196.0	208	243	278	312	347	382	417	486	555
160	264	327	384	441	499	556	613	670	785	900
190	429	518	607	697	786	875	965	1054	1233	1411
200	598	723	848	973	1097	1222	1347	1471	1721	1970
254	928	1122	1315	1508	1702	1895	2089	2282	2669	3056
280	1305	1577	1849	2121	2393	2665	2937	3209	3753	4297
300	1679	2029	2379	2729	3079	3429	3779	4129	4829	5528
350	2493	3012	3531	4050	4570	5089	5608	6128	7166	8205
400	3798	4589	5381	6172	6963	7755	8546	9337	10920	12502

a. For sizes not shown, contact Global Customer Support.

Table 4. Actuator Torque, Imperial

Actuator (a)	Double Acting Actuator Torque Imperial (ft-lb, air pressure psig)									
	36	44	51	58	65	73	80	87	102	116
32	2.1	2.5	3.0	3.4	3.9	4.4	4.8	5.2	6.1	7.0
50	6.3	7.7	9.1	10	12	13	15	16	19	21
63	13	16	18	21	24	27	30	32	38	44
75	20	24	29	33	37	42	46	50	59	68
80	29	36	42	48	55	61	67	74	87	99
95	41	50	59	68	77	86	95	104	122	139
100	53	66	77	89	101	112	124	135	158	181
125	95	118	139	159	179	200	221	241	282	324
140	145	154	179	205	230	256	282	307	358	410
160	195	241	283	325	368	410	452	494	579	664
190	316	382	448	514	580	645	712	777	909	1041
200	441	533	625	718	809	901	993	1085	1269	1453
254	684	828	970	1112	1255	1398	1541	1683	1969	2254
280	963	1163	1364	1564	1765	1966	2166	2367	2768	3169
300	1238	1497	1755	2013	2271	2529	2787	3045	3585	4077
350	1839	2222	2604	2987	3371	3753	4136	4520	5285	6052
400	2801	3385	3969	4552	5136	5720	6303	6887	8054	9221

a. For sizes not shown, contact Global Customer Support.

TORQUE OF SPRING RETURN ACTUATORS

Table 5. Actuator Torque, SR Actuator Metric

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Metric (N-m, air pressure barg)																			
				2.5		3		3.5		4		4.5		5		5.5		6		7		8	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
50	5	5.2	3.5	5.1	3.4	6.9	5.3	8.8	7.2	10.7	9	12.5	10.9	/	/	/	/	/	/	/	/	/	/
	6	6.2	4.2	4.4	2.4	6.2	4.3	8.1	6.1	10	8	11.8	9.9	13.7	/	/	/	/	/	/	/	/	/
	7	7.2	4.9	/	/	5.5	3.2	7.4	5.1	9.3	7	11.1	8.8	13	10.7	14.9	/	/	/	/	/	/	/
	8	8.2	5.6	/	/	/	/	6.7	4.1	8.6	5.9	10.4	7.8	12.3	9.7	14.2	11.5	16	/	/	/	/	/
	9	9.3	6.3	/	/	/	/	/	/	7.9	4.9	9.7	6.8	11.6	8.6	13.5	10.5	15.3	12.4	19.1	16.1	/	/
	10	10.3	7	/	/	/	/	/	/	/	/	9.0	5.7	10.9	7.6	12.8	9.5	14.6	11.3	18.4	15.1	22.1	18.8
	11	11.3	7.7	/	/	/	/	/	/	/	/	/	/	10.2	6.6	12.1	8.4	13.9	10.3	17.7	14	21.4	17.8
	12	12.4	8.4	/	/	/	/	/	/	/	/	/	/	/	/	11.4	7.4	13.2	9.3	17	13	20.7	16.7
63	5	13.1	8.7	8.7	4.3	12.5	8.1	16.3	11.9	20	15.6	23.8	19.4	/	/	/	/	/	/	/	/	/	/
	6	15.7	10.4	7	1.7	10.7	5.5	14.5	9.2	18.3	13	22.1	16.8	25.9	/	/	/	/	/	/	/	/	/
	7	18.3	12.2	/	/	9	2.8	12.8	6.6	16.6	10.4	20.4	14.2	24.1	18	27.9	/	/	/	/	/	/	/
	8	21	13.9	/	/	/	/	11	4	14.8	7.8	18.6	11.6	22.4	15.4	26.2	19.1	30	/	/	/	/	/
	9	23.6	15.7	/	/	/	/	/	/	13.1	5.2	16.9	9	20.7	12.7	24.4	16.5	28.2	20.3	35.8	27.9	/	/
	10	26.2	17.4	/	/	/	/	/	/	/	/	15.1	6.3	18.9	10.1	22.7	13.9	26.5	17.7	34	25.2	41.6	32.8
	11	28.8	19.1	/	/	/	/	/	/	/	/	/	17.2	7.5	21	11.3	24.7	15.1	32.3	22.6	39.9	30.2	30.2
	12	31.4	20.9	/	/	/	/	/	/	/	/	/	/	/	/	19.2	8.7	23	12.4	30.6	20	38.1	27.6
75	5	16.9	10.7	16.3	10.2	22.2	16	28.1	21.9	34	27.8	39.8	33.7	/	/	/	/	/	/	/	/	/	/
	6	20.2	12.8	14.2	6.8	20.1	12.7	25.9	18.6	31.8	24.4	37.7	30.3	43.6	36.2	/	/	/	/	/	/	/	/
	7	23.9	15	/	/	17.9	9.3	23.8	15.2	29.7	21.1	35.6	26.9	41.4	32.8	47.3	38.7	/	/	/	/	/	/
	8	27	17.1	/	/	/	/	21.7	11.8	27.5	17.7	33.4	23.6	39.3	29.4	45.2	35.3	51	41.2	/	/	/	/
	9	30.3	19.3	/	/	/	/	/	/	25.4	14.3	31.3	20.2	37.1	26.1	43	32	48.9	37.8	60.7	49.6	/	/
	10	33.7	21.4	/	/	/	/	/	/	/	/	29.1	16.8	35	22.7	40.9	28.6	46.8	34.5	58.5	46.2	70.3	58
	11	37.1	23.5	/	/	/	/	/	/	/	/	/	32.9	19.3	38.7	25.2	44.6	31.1	56.4	42.8	68.1	54.6	54.6
	12	49.4	25.7	/	/	/	/	/	/	/	/	/	/	/	/	36.6	21.8	42.5	27.7	54.2	39.5	66	51.2
80	5	29.1	16.6	23.2	13.7	31.8	22.3	40.4	30.9	49	39.5	57.6	48.1	/	/	/	/	/	/	/	/	/	/
	6	31.3	19.9	19.8	8.4	28.4	17	37.1	25.7	45.7	34.3	54.3	42.9	62.9	51.5	/	/	/	/	/	/	/	/
	7	36.5	23.2	/	/	25.1	11.8	33.8	20.5	42.4	29.1	51	37.7	59.6	46.3	68.3	55	/	/	/	/	/	/
	8	41.7	26.5	/	/	/	/	30.4	15.2	39.1	23.9	47.7	32.5	56.3	41.1	64.9	49.7	73.6	58.4	/	/	/	/
	9	46.9	29.8	/	/	/	/	/	/	35.8	18.7	44.4	27.3	53	35.9	61.6	44.5	70.3	53.2	87.5	70.4	/	/
	10	52.1	33.1	/	/	/	/	/	/	/	/	41.1	22.1	49.7	30.7	58.3	39.3	67	48	84.2	65.2	102	82.5
	11	57.3	36.4	/	/	/	/	/	/	/	/	/	46.4	25.5	55	34.1	63.6	42.7	80.9	60	98.1	77.2	77.2
	12	62.5	39.7	/	/	/	/	/	/	/	/	/	/	/	/	51.7	28.9	60.3	37.5	77.6	54.8	94.8	72
95	5	34.9	22.1	33.6	20.9	45.8	33	57.9	45.1	70	57.3	82.1	69.4	/	/	/	/	/	/	/	/	/	/
	6	41.8	26.5	29.2	13.9	41.4	26.1	53.5	38.2	65.6	50.3	77.7	62.4	89.8	74.5	/	/	/	/	/	/	/	/
	7	48.8	30.9	/	/	36.9	19.1	49.1	31.2	61.2	43.3	73.3	55.4	85.4	67.6	97.5	/	/	/	/	/	/	/
	8	55.8	35.4	/	/	/	/	44.6	24.2	56.8	36.4	68.9	48.5	81	60.6	93.1	72.7	105	/	/	/	/	/
	9	62.7	39.8	/	/	/	/	/	/	52.3	29.4	64.5	41.5	76.6	53.6	88.7	65.8	101	77.9	125	102	/	/
	10	69.7	44.2	/	/	/	/	/	/	/	/	60	34.5	72.2	46.7	84.3	58.8	96.4	70.9	121	95.1	145	119
	11	76.7	48.6	/	/	/	/	/	/	/	/	/	67.7	39.7	79.9	51.8	92	63.9	116	88.2	141	112	112
	12	83.6	53	/	/	/	/	/	/	/	/	/	/	/	/	75.4	44.8	87.6	57	112	81.2	136	105

Table 5. Actuator Torque, SR Actuator Metric (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Metric (N-m, air pressure barg)																			
				2.5		3		3.5		4		4.5		5		5.5		6		7		8	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
100	5	45.9	28.6	43.4	26.2	60.7	43.4	76.4	59.1	92.0	74.8	108	90	/	/	/	/	/	/	/	/	/	/
	6	55	34.3	37.7	17.0	55.0	34.3	70.6	49.9	86.3	65.6	102	81	118	97	/	/	/	/	/	/	/	/
	7	64.2	40	/	/	49.3	25.1	64.9	40.8	80.6	56.4	96.2	72.1	112	88	128	103	/	/	/	/	/	/
	8	73.4	45.8	/	/	/	/	59.2	31.6	74.9	47.3	90.5	62.9	106	78.6	122	94.3	138	110	/	/	/	/
	9	82.5	51.5	/	/	/	/	/	/	69.1	38.1	84.8	53.8	101	69.4	116	85.1	132	101	163	132	/	/
	10	91.7	57.2	/	/	/	/	/	/	/	/	79.1	44.6	94.8	60.3	110	75.9	126	91.6	157	123	189	154
	11	100.9	62.9	/	/	/	/	/	/	/	/	/	/	89.0	51.1	105	66.7	120	82.4	152	114	183	145
12	110	68.6	/	/	/	/	/	/	/	/	/	/	/	/	99.0	57.6	115	73.2	146	105	177	136	
125	5	80.6	51	77.7	48.2	109	78.9	137	107	164	135	192	163	/	/	/	/	/	/	/	/	/	/
	6	96.7	61	67.5	32	98.3	62.8	126	90.8	154	119	182	147	210	175	/	/	/	/	/	/	/	/
	7	112.8	71.4	/	/	88.1	46.7	116	74.7	144	103	172	131	200	159	228	187	/	/	/	/	/	/
	8	128.9	81.6	/	/	/	/	106	58.6	134	86.6	162	115	190	143	218	171	246	199	/	/	/	/
	9	145	91.8	/	/	/	/	/	/	124	70.5	152	98.4	180	126	208	154	236	182	292	238	/	/
	10	161.1	102	/	/	/	/	/	/	/	/	141	82.3	169	110	197	138	225	166	281	222	337	278
	11	177.2	112.2	/	/	/	/	/	/	/	/	/	/	159	94.2	187	122	215	150	271	206	327	262
12	193.3	122.4	/	/	/	/	/	/	/	/	/	/	/	/	177	106	205	134	261	190	317	246	
140	5	68.54	101.6	114	74.1	140	107	174	141	209	176	244	211	/	/	/	/	/	/	/	/	/	/
	6	82.25	122	97.7	49.6	126	86.2	161	121	195	156	230	190	265	225	/	/	/	/	/	/	/	/
	7	95.95	142.3	/	/	112.3	65.9	147	101	182	135	216	170	251	205	286	240	/	/	/	/	/	/
	8	109.6	162.6	/	/	/	/	133	80.3	168	115	203	150	237	184	272	219	307	254	376	323	/	/
	9	123.3	183	/	/	/	/	120	60.0	154.3	94.7	189	129	224	164	258	199	293	234	363	303	432	372
	10	137	203.3	/	/	/	/	/	/	140.6	74.4	175	109	210	144	245	179	280	213	349	283	418	352
	11	150.7	223.6	/	/	/	/	/	/	126.9	54.0	162	89	196	123	231	158	266	193	335	262	405	332
12	164.5	244	/	/	/	/	/	/	/	/	148	68.39	183	103	217	138	252	173	322	242	391	311	
160	5	162.3	110	154	101	217	164	274	222	331	279	604	336	/	/	/	/	/	/	/	/	/	/
	6	194.7	132	132	68.8	195	132	252	189	309	247	568	304	424	361	/	/	/	/	/	/	/	/
	7	227.2	154	/	/	173	100	230	157	287	214	532	271	402	329	459	386	/	/	/	/	/	/
	8	259.6	176	/	/	/	/	208	124	265	182	323	239	380	296	437	354	494	411	/	/	/	/
	9	292.1	198	/	/	/	/	/	/	243	149	301	207	358	264	415	321	472	378	587	493	/	/
	10	324.5	220	/	/	/	/	/	/	/	/	279	174	336	231	393	289	450	346	565	461	680	575
	11	357	242	/	/	/	/	/	/	/	/	/	/	314	199	371	256	428	314	543	428	658	543
12	389.4	264	/	/	/	/	/	/	/	/	/	/	/	/	349	224	406	281	521	396	636	510	
190	5	261	182	247	167	336	257	426	346	515	436	604	525	/	/	/	/	/	/	/	/	/	/
	6	313	218	210	115	300	205	389	294	479	383	568	473	657	562	/	/	/	/	/	/	/	/
	7	366	255	/	/	264	152	353	242	442	331	532	420	621	510	710	599	/	/	/	/	/	/
	8	418	291	/	/	/	/	317	190	406	279	495	368	585	457	674	547	763	636	/	/	/	/
	9	470	327	/	/	/	/	/	/	370	227	459	316	548	405	637	495	727	584	905	762	/	/
	10	522	364	/	/	/	/	/	/	/	/	422	264	512	353	601	442	690	532	869	710	1048	889
	11	575	400	/	/	/	/	/	/	/	/	/	/	475	301	565	390	654	479	833	658	1011	837
12	627	437	/	/	/	/	/	/	/	/	/	/	/	/	528	338	618	427	796	606	975	784	

Table 5. Actuator Torque, SR Actuator Metric (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Metric (N-m, air pressure barg)																			
				2.5		3		3.5		4		4.5		5		5.5		6		7		8	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
200	5	359	245	353	239	478	364	603	489	727	614	852	738	/	/	/	/	/	/	/	/	/	/
	6	431	295	304	167	429	292	553	417	678	542	803	666	928	791	/	/	/	/	/	/	/	/
	7	503	344	/	/	380	221	504	345	629	470	754	595	878	719	1003	844	/	/	/	/	/	/
	8	575	393	/	/	/	/	455	273	580	398	705	523	829	647	954	772	1079	897	/	/	/	/
	9	646	442	/	/	/	/	/	/	531	326	656	451	780	576	905	700	1030	825	1279	1074	/	/
	10	718	491	/	/	/	/	/	/	/	/	607	379	731	504	856	628	981	753	1230	1003	1479	1252
	11	790	540	/	/	/	/	/	/	/	/	/	/	682	432	807	557	932	681	1181	931	1430	1180
12	862	589	/	/	/	/	/	/	/	/	/	/	/	/	758	485	882	610	1132	859	1381	1108	
254	5	554	411	518	374	711	568	905	761	1098	955	1291	1148	/	/	/	/	/	/	/	/	/	/
	6	665	493	436	264	629	457	823	650	1016	844	1209	1037	1403	1231	/	/	/	/	/	/	/	/
	7	776	575	/	/	547	346	740	540	934	733	1127	926	1321	1120	1514	1313	/	/	/	/	/	/
	8	886	657	/	/	/	/	658	429	852	622	1045	816	1239	1009	1432	1202	1625	1396	/	/	/	/
	9	997	739	/	/	/	/	/	/	770	511	963	705	1156	898	1350	1092	1543	1285	1930	1672	/	/
	10	1108	821	/	/	/	/	/	/	/	/	881	594	1074	787	1268	981	1461	1174	1848	1561	2235	1948
	11	1219	903	/	/	/	/	/	/	/	/	/	/	992	677	1186	870	1379	1063	1766	1450	2153	1837
12	1330	985	/	/	/	/	/	/	/	/	/	/	/	/	1104	759	1297	953	1684	1339	2071	1726	
280	5	786	560	746	519	1018	791	1290	1063	1562	1335	1834	1607	/	/	/	/	/	/	/	/	/	/
	6	943	671	634	362	906	634	1178	906	1450	1178	1722	1450	1994	1722	/	/	/	/	/	/	/	/
	7	1100	783	/	/	794	477	1166	749	1338	1021	1610	1293	1882	1565	2154	1837	/	/	/	/	/	/
	8	1258	895	/	/	/	/	954	592	1226	864	1498	1136	1770	1408	2042	1680	2314	1952	/	/	/	/
	9	1415	1007	/	/	/	/	/	/	1114	707	1386	979	1658	1250	1930	1522	2202	1794	2746	2338	/	/
	10	1572	1119	/	/	/	/	/	/	/	/	1274	821	1546	1093	1818	1365	2090	1637	2634	2181	3178	2725
	11	1729	1231	/	/	/	/	/	/	/	/	/	/	1434	936	1706	1208	1978	1480	2522	2024	3066	2568
12	1886	1343	/	/	/	/	/	/	/	/	/	/	/	/	1594	1051	1866	1323	2410	1867	2954	2411	
300	5	1032	691	988	647	1338	998	1688	1347	2038	1697	2388	2047	/	/	/	/	/	/	/	/	/	/
	6	1238	829	849	440	1200	791	1550	1141	1900	1491	2250	1841	2600	2191	/	/	/	/	/	/	/	/
	7	1445	968	/	/	1062	585	1412	935	1762	1285	2112	1634	2461	1984	2811	2334	/	/	/	/	/	/
	8	1651	1106	/	/	/	/	1274	728	1623	1078	1973	1428	2323	1778	2673	2128	3023	2478	/	/	/	/
	9	1857	1244	/	/	/	/	/	/	1485	872	1835	1222	2185	1572	2535	1921	2885	2271	4284	2971	/	/
	10	2064	1382	/	/	/	/	/	/	/	/	1697	1015	2047	1365	2397	1715	2747	2065	4146	2765	4146	3465
	11	2270	1520	/	/	/	/	/	/	/	/	/	/	1909	1159	2258	1509	2608	1859	4008	2558	4008	3258
12	2477	1659	/	/	/	/	/	/	/	/	/	/	/	/	2120	1302	2470	1652	3870	2352	3870	3052	
350	5	1476	994	1498	1017	2018	1536	2537	2056	3056	2575	3576	3094	/	/	/	/	/	/	/	/	/	/
	6	1771	1193	/	/	1819	1241	2338	1761	2857	2280	3377	2799	3896	3318	/	/	/	/	/	/	/	/
	7	2066	1392	/	/	1620	946	2139	1466	2658	1985	3178	2504	3697	3023	4216	3543	/	/	/	/	/	/
	8	2361	1591	/	/	/	/	1940	1170	2460	1690	2979	2209	3498	2728	4017	3248	4537	3767	/	/	/	/
	9	2656	1790	/	/	/	/	1741	875	2261	1395	2780	1914	3299	2433	3819	2952	4338	3472	5376	4510	/	/
	10	2951	1989	/	/	/	/	/	/	2062	1100	2581	1619	3100	2138	3620	2657	4139	3177	5177	4215	6216	5254
	11	3246	2188	/	/	/	/	/	/	1863	804	2382	1324	2902	1843	3421	2362	3940	2882	4979	3920	6017	4959
12	3541	2386	/	/	/	/	/	/	/	/	2183	1029	2703	1548	3222	2067	3741	2586	4780	3625	5818	4664	

Table 5. Actuator Torque, SR Actuator Metric (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Metric (N-m, air pressure barg)																			
				2.5		3		3.5		4		4.5		5		5.5		6		7		8	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
400	5	2301	1576	2222	1497	3013	2288	3805	3080	4596	3871	5387	4662	/	/	/	/	/	/	/	/	/	/
	6	2761	1891	/	/	2698	1828	3490	2620	4281	3411	5072	4202	5863	4993	/	/	/	/	/	/	/	/
	7	3221	2206	/	/	2383	1368	3174	2195	3699	2951	4757	3742	5548	4533	6339	5324	/	/	/	/	/	/
	8	3682	2522	/	/	/	/	2859	1699	3650	2490	4442	3282	5233	4073	6024	4864	6816	5656	/	/	/	/
	9	4142	2837	/	/	/	/	2544	1239	3335	2030	4126	2821	4918	3613	5709	4404	6500	5195	8083	6778	/	/
	10	4602	3152	/	/	/	/	/	/	3020	1570	3811	2361	4603	3153	5394	3944	6185	4735	7768	6318	9350	7900
	11	5062	3467	/	/	/	/	/	/	2705	1110	3496	1901	4287	2962	5079	3484	5870	4275	7452	5857	9035	7440
12	5522	3782	/	/	/	/	/	/	/	/	/	3181	1441	3972	2232	4763	3023	5555	3815	7137	5397	8720	6980

a. Additional sizes available, contact Global Customer Support.

Table 6. Actuator Torque, Imperial

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Imperial (ft-lb, air pressure psig)																			
				36.3		43.5		50.8		58.0		65.3		72.5		79.8		87.0		101.5		116.0	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
50	5	3.8	2.6	3.8	2.5	5.1	3.9	6.5	5.3	7.9	6.6	9.2	8.0	/	/	/	/	/	/	/	/	/	/
	6	4.6	3.1	3.2	1.8	4.6	3.2	6.0	4.5	7.4	5.9	8.7	7.3	10.1	/	/	/	/	/	/	/	/	/
	7	5.3	3.6	/	/	4.1	2.4	5.5	3.8	6.9	5.2	8.2	6.5	9.6	7.9	11.0	/	/	/	/	/	/	/
	8	6.0	4.1	/	/	/	/	4.9	3.0	6.3	4.4	7.7	5.8	9.1	7.2	10.5	8.5	11.8	/	/	/	/	/
	9	6.9	4.6	/	/	/	/	/	/	5.8	3.6	7.2	5.0	8.6	6.3	10.0	7.7	11.3	9.1	14.1	11.9	/	/
	10	7.6	5.2	/	/	/	/	/	/	/	/	6.6	4.2	8.0	5.6	9.4	7.0	10.8	8.3	13.6	11.1	16.3	13.9
	11	8.3	5.7	/	/	/	/	/	/	/	/	/	/	7.5	4.9	8.9	6.2	10.3	7.6	13.1	10.3	15.8	13.1
12	9.1	6.2	/	/	/	/	/	/	/	/	/	/	/	/	8.4	5.5	9.7	6.9	12.5	9.6	15.3	12.3	
63	5	9.7	6.4	6.4	3.2	9.2	6.0	12.0	8.8	14.8	11.5	17.6	14.3	/	/	/	/	/	/	/	/	/	/
	6	11.6	7.7	5.2	1.3	7.9	4.1	10.7	6.8	13.5	9.6	16.3	12.4	19.1	/	/	/	/	/	/	/	/	/
	7	13.5	9.0	/	/	6.6	2.1	9.4	4.9	12.2	7.7	15.0	10.5	17.8	13.3	20.6	/	/	/	/	/	/	/
	8	15.5	10.3	/	/	/	/	8.1	3.0	10.9	5.8	13.7	8.6	16.5	11.4	19.3	14.1	22.1	/	/	/	/	/
	9	17.4	11.6	/	/	/	/	/	/	9.7	3.8	12.5	6.6	15.3	9.4	18.0	12.2	20.8	15.0	26.4	20.6	/	/
	10	19.3	12.8	/	/	/	/	/	/	/	/	11.1	4.6	13.9	7.4	16.7	10.3	19.5	13.1	25.1	18.6	30.7	24.2
	11	21.2	14.1	/	/	/	/	/	/	/	/	/	/	12.7	5.5	15.5	8.3	18.2	11.1	23.8	16.7	29.4	22.3
12	23.2	15.4	/	/	/	/	/	/	/	/	/	/	/	/	14.2	6.4	17.0	9.1	22.6	14.8	28.1	20.4	
75	5	12.5	7.9	12.0	7.5	16.4	11.8	20.7	16.2	25.1	20.5	29.4	24.9	/	/	/	/	/	/	/	/	/	/
	6	14.9	9.4	10.5	5.0	14.8	9.4	19.1	13.7	23.5	18.0	27.8	22.3	32.2	26.7	/	/	/	/	/	/	/	/
	7	17.4	11.1	/	/	13.2	6.9	17.6	11.2	21.9	15.6	26.3	19.8	30.5	24.2	34.9	28.5	/	/	/	/	/	/
	8	19.9	12.6	/	/	/	/	16.0	8.7	20.3	13.1	24.6	17.4	29.0	21.7	33.3	26.0	37.6	30.4	/	/	/	/
	9	22.3	14.2	/	/	/	/	/	/	18.7	10.5	23.1	14.9	27.4	19.3	31.7	23.6	36.1	27.9	44.8	36.6	/	/
	10	24.9	15.8	/	/	/	/	/	/	/	/	21.5	12.4	25.8	16.7	30.2	21.1	34.5	25.4	43.1	34.1	51.9	42.8
	11	27.4	17.3	/	/	/	/	/	/	/	/	/	/	24.3	14.2	28.5	18.6	32.9	22.9	41.6	31.6	50.2	40.3
12	36.4	19.0	/	/	/	/	/	/	/	/	/	/	/	/	27.0	16.1	31.3	20.4	40.0	29.1	48.7	37.8	

Table 6. Actuator Torque, Imperial (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Imperial (ft-lb, air pressure psig)																				
				36.3		43.5		50.8		58.0		65.3		72.5		79.8		87.0		101.5		116.0		
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
80	5	19.3	12.2	17.1	10.1	23.5	16.4	29.8	22.8	36.1	29.1	42.5	35.5	/	/	/	/	/	/	/	/	/	/	
	6	23.1	14.7	14.6	6.2	20.9	12.5	27.4	19.0	33.7	25.3	40.0	31.6	46.4	38.0	/	/	/	/	/	/	/	/	
	7	26.9	17.1	/	/	18.5	8.7	24.9	15.1	31.3	21.5	37.6	27.8	44.0	34.1	50.4	40.6	/	/	/	/	/	/	
	8	30.8	19.5	/	/	/	/	22.4	11.2	28.8	17.6	35.2	24.0	41.5	30.3	47.9	36.7	54.3	43.1	/	/	/	/	
	9	34.6	22.0	/	/	/	/	/	/	26.4	13.8	32.7	20.1	39.1	26.5	45.4	32.8	51.9	39.2	64.5	51.9	/	/	
	10	38.4	24.4	/	/	/	/	/	/	/	/	/	30.3	16.3	36.7	22.6	43.0	29.0	49.4	35.4	62.1	48.1	74.9	60.8
	11	42.3	26.8	/	/	/	/	/	/	/	/	/	/	/	34.2	18.8	40.6	25.2	46.9	31.5	59.7	44.3	72.4	56.9
12	46.1	29.3	/	/	/	/	/	/	/	/	/	/	/	/	/	38.1	21.3	44.5	27.7	57.2	40.4	69.9	53.1	
95	5	25.7	16.3	24.8	15.4	33.8	24.3	42.7	33.3	51.6	42.3	60.6	51.2	/	/	/	/	/	/	/	/	/	/	
	6	30.8	19.5	21.5	10.3	30.5	19.3	39.5	28.2	48.4	37.1	57.3	46.0	66.2	54.9	/	/	/	/	/	/	/	/	
	7	36.0	22.8	/	/	27.2	14.1	36.2	23.0	45.1	31.9	54.1	40.9	63.0	49.9	71.9	/	/	/	/	/	/	/	
	8	41.2	26.1	/	/	/	/	32.9	17.8	41.9	26.8	50.8	35.8	59.7	44.7	68.7	53.6	77.6	/	/	/	/	/	
	9	46.2	29.4	/	/	/	/	/	/	38.6	21.7	47.6	30.6	56.5	39.5	65.4	48.5	74.3	57.5	92.3	75.3	/	/	
	10	51.4	32.6	/	/	/	/	/	/	/	/	/	44.3	25.4	53.3	34.4	62.2	43.4	71.1	52.3	88.9	70.1	107	88.1
	11	56.6	35.8	/	/	/	/	/	/	/	/	/	/	/	49.9	29.3	58.9	38.2	67.9	47.1	85.7	65.1	104	82.9
12	61.7	39.1	/	/	/	/	/	/	/	/	/	/	/	/	/	55.6	33.0	64.6	42.0	82.5	59.9	100	77.7	
100	5	33.9	21.1	32.0	19.3	44.8	32.0	56.3	43.6	67.9	55.2	79.4	66.7	/	/	/	/	/	/	/	/	/	/	
	6	40.6	25.3	27.8	12.5	40.6	25.3	52.1	36.8	63.7	48.4	75.2	60.0	86.7	71.5	/	/	/	/	/	/	/	/	
	7	47.4	29.5	/	/	36.4	18.5	47.9	30.1	59.4	41.6	71.0	53.2	82.5	64.8	94.1	/	/	/	/	/	/	/	
	8	54.1	33.8	/	/	/	/	43.7	23.3	55.2	34.9	66.7	46.4	78.3	58.0	89.9	69.6	101	/	/	/	/	/	
	9	60.8	38.0	/	/	/	/	/	/	51.0	28.1	62.5	39.7	74.1	51.2	85.6	62.8	97.2	74.3	120	97.4	/	/	
	10	67.6	42.2	/	/	/	/	/	/	/	/	/	58.3	32.9	69.9	44.5	81.4	56.0	93.0	67.6	116	90.6	139	114
	11	74.4	46.4	/	/	/	/	/	/	/	/	/	/	/	65.6	37.7	77.2	49.2	88.8	60.8	112	83.9	135	107
12	81.1	50.6	/	/	/	/	/	/	/	/	/	/	/	/	/	73.0	42.5	84.5	54.0	108	77.1	131	100	
125	5	59.4	37.6	57.3	35.6	80.0	58.2	101	78.8	121	99.5	142	120	/	/	/	/	/	/	/	/	/	/	
	6	71.3	45.0	49.8	23.6	72.5	46.3	93.2	67.0	114	87.6	134	108	155	129	/	/	/	/	/	/	/	/	
	7	83.2	52.7	/	/	65.0	34.4	85.6	55.1	106	75.7	127	96.4	148	117	168	138	/	/	/	/	/	/	
	8	95.1	60.2	/	/	/	/	78.1	43.2	98.7	63.9	119	84.5	140	105	161	126	181	146	/	/	/	/	
	9	106.9	67.7	/	/	/	/	/	/	91.2	52.0	112	72.6	132	93	153	114	174	135	215	176	/	/	
	10	118.8	75.2	/	/	/	/	/	/	/	/	104	60.7	125	81	146	102	166	123	207	164	249	205	
	11	130.7	82.8	/	/	/	/	/	/	/	/	/	/	117	69	138	90	159	111	200	152	241	193	
12	142.6	90.3	/	/	/	/	/	/	/	/	/	/	/	/	131	78	151	99	192	140	234	181		
140	5	50.6	74.9	84.2	54.7	103	78.6	129	104	154	130	180	155	/	/	/	/	/	/	/	/	/	/	
	6	60.7	90.0	72.1	36.6	92.9	63.6	119	89.2	144	115	170	140	195	166	/	/	/	/	/	/	/	/	
	7	70.8	105.0	/	/	82.8	48.6	108	74.2	134	99.8	160	125	185	151	211	177	/	/	/	/	/	/	
	8	80.8	119.9	/	/	/	/	98.3	59.2	124	84.8	150	110	175	136	201	162	226	187	278	238	/	/	
	9	90.9	135.0	/	/	/	/	88.2	44.2	114	69.8	139	95.4	165	121	191	147	216	172	267	223	319	275	
	10	101.0	149.9	/	/	/	/	/	/	104	54.8	129	80.4	155	106	180	132	206	157	257	208	309	260	
	11	111.2	164.9	/	/	/	/	/	/	93.6	39.8	119	65.4	146	91.0	170	117	196	142	247	193	298	245	
12	121.3	180.0	/	/	/	/	/	/	/	/	109	50.4	135	76.0	160	102	186	127	237	178	288	230		

Table 6. Actuator Torque, Imperial (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Imperial (ft-lb, air pressure psig)																			
				36.3		43.5		50.8		58.0		65.3		72.5		79.8		87.0		101.5		116.0	
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°
160	5	119.7	81.1	113	74.7	160	121	202	164	244	206	445	248	/	/	/	/	/	/	/	/	/	/
	6	143.6	97.4	97.0	50.7	144	97	186	140	228	182	419	224	313	266	/	/	/	/	/	/	/	/
	7	168	114	/	/	127	73	170	116	212	158	392	200	296	242	339	285	/	/	/	/	/	/
	8	191	130	/	/	/	/	153	92	196	134	238	176	280	218	322	261	365	303	/	/	/	/
	9	215	146	/	/	/	/	/	/	179	110	222	152	264	195	306	237	348	279	433	364	/	/
	10	239	162	/	/	/	/	/	/	/	/	205	128	248	171	290	213	332	255	417	340	501	424
	11	263	178	/	/	/	/	/	/	/	/	/	/	231	147	274	189	316	231	400	316	485	400
12	287	195	/	/	/	/	/	/	/	/	/	/	/	/	257	165	300	207	384	292	469	376	
190	5	193	134	182	123	248	190	314	255	380	322	445	387	/	/	/	/	/	/	/	/	/	/
	6	231	161	155	85	221	151	287	217	353	282	419	349	485	415	/	/	/	/	/	/	/	/
	7	270	188	/	/	195	112	260	178	326	244	392	310	458	376	524	442	/	/	/	/	/	/
	8	308	215	/	/	/	/	234	140	299	206	365	271	431	337	497	403	563	469	/	/	/	/
	9	347	241	/	/	/	/	/	/	273	167	339	233	404	299	470	365	536	431	667	562	/	/
	10	385	268	/	/	/	/	/	/	/	/	311	195	378	260	443	326	509	392	641	524	773	656
	11	424	295	/	/	/	/	/	/	/	/	/	/	350	222	417	288	482	353	614	485	746	617
12	462	322	/	/	/	/	/	/	/	/	/	/	/	/	389	249	456	315	587	447	719	578	
200	5	265	181	260	176	353	268	445	361	536	453	628	544	/	/	/	/	/	/	/	/	/	/
	6	318	218	224	123	316	215	408	308	500	400	592	491	684	583	/	/	/	/	/	/	/	/
	7	371	254	/	/	280	163	372	254	464	347	556	439	648	530	740	623	/	/	/	/	/	/
	8	424	290	/	/	/	/	336	201	428	294	520	386	611	477	704	569	796	662	/	/	/	/
	9	476	326	/	/	/	/	/	/	392	240	484	333	575	425	667	516	760	608	943	792	/	/
	10	530	362	/	/	/	/	/	/	/	/	448	280	539	372	631	463	724	555	907	740	1091	923
	11	583	398	/	/	/	/	/	/	/	/	/	/	503	319	595	411	687	502	871	687	1055	870
12	636	434	/	/	/	/	/	/	/	/	/	/	/	/	559	358	651	450	835	634	1019	817	
254	5	409	303	382	276	524	419	667	561	810	704	952	847	/	/	/	/	/	/	/	/	/	/
	6	490	364	322	195	464	337	607	479	749	623	892	765	1035	908	/	/	/	/	/	/	/	/
	7	572	424	/	/	403	255	546	398	689	541	831	683	974	826	1117	968	/	/	/	/	/	/
	8	653	485	/	/	/	/	485	316	628	459	771	602	914	744	1056	887	1199	1030	/	/	/	/
	9	735	545	/	/	/	/	/	/	568	377	710	520	853	662	996	805	1138	948	1423	1233	/	/
	10	817	606	/	/	/	/	/	/	/	/	650	438	792	580	935	724	1078	866	1363	1151	1648	1437
	11	899	666	/	/	/	/	/	/	/	/	/	/	732	499	875	642	1017	784	1303	1069	1588	1355
12	981	726	/	/	/	/	/	/	/	/	/	/	/	/	814	560	957	703	1242	988	1527	1273	
280	5	580	413	550	383	751	583	951	784	1152	985	1353	1185	/	/	/	/	/	/	/	/	/	/
	6	696	495	468	267	668	468	869	668	1069	869	1270	1069	1471	1270	/	/	/	/	/	/	/	/
	7	811	578	/	/	586	352	860	552	987	753	1187	954	1388	1154	1589	1355	/	/	/	/	/	/
	8	928	660	/	/	/	/	704	437	904	637	1105	838	1305	1038	1506	1239	1707	1440	/	/	/	/
	9	1044	743	/	/	/	/	/	/	822	521	1022	722	1223	922	1423	1123	1624	1323	2025	1724	/	/
	10	1159	825	/	/	/	/	/	/	/	/	940	606	1140	806	1341	1007	1542	1207	1943	1609	2344	2010
	11	1275	908	/	/	/	/	/	/	/	/	/	/	1058	690	1258	891	1459	1092	1860	1493	2261	1894
12	1391	991	/	/	/	/	/	/	/	/	/	/	/	/	1176	775	1376	976	1778	1377	2179	1778	

Table 6. Actuator Torque, Imperial (Continued)

Size (a)	No. of Springs	Spring Return		Spring Return Actuator Torque Imperial (ft-lb, air pressure psig)																				
				36.3		43.5		50.8		58.0		65.3		72.5		79.8		87.0		101.5		116.0		
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	
300	5	761	510	729	477	987	736	1245	993	1503	1252	1761	1510	/	/	/	/	/	/	/	/	/	/	/
	6	913	611	626	325	885	583	1143	842	1401	1100	1660	1358	1918	1616	/	/	/	/	/	/	/	/	/
	7	1066	714	/	/	783	431	1041	690	1300	948	1558	1205	1815	1463	2073	1721	/	/	/	/	/	/	/
	8	1218	816	/	/	/	/	940	537	1197	795	1455	1053	1713	1311	1972	1570	2230	1828	/	/	/	/	/
	9	1370	918	/	/	/	/	/	/	1095	643	1353	901	1612	1159	1870	1417	2128	1675	3160	2191	/	/	/
	10	1522	1019	/	/	/	/	/	/	/	/	1252	749	1510	1007	1768	1265	2026	1523	3058	2039	3058	2556	/
	11	1674	1121	/	/	/	/	/	/	/	/	/	/	1408	855	1665	1113	1924	1371	2956	1887	2956	2403	/
	12	1827	1224	/	/	/	/	/	/	/	/	/	/	/	1564	960	1822	1218	2854	1735	2854	2251	/	
350	5	1089	733	1105	750	1488	1133	1871	1516	2254	1899	2637	2282	/	/	/	/	/	/	/	/	/	/	/
	6	1306	880	/	/	1342	915	1724	1299	2017	1682	2491	2064	2874	2447	/	/	/	/	/	/	/	/	/
	7	1524	1027	/	/	1195	698	1578	1081	1960	1464	2344	1847	2727	2230	3110	2613	/	/	/	/	/	/	/
	8	1741	1173	/	/	/	/	1431	863	1814	1246	2197	1629	2580	2012	2963	2396	3346	2778	/	/	/	/	/
	9	1959	1320	/	/	/	/	1284	645	1668	1029	2050	1412	2433	1794	2817	2177	3200	2561	3965	3326	/	/	/
	10	2177	1467	/	/	/	/	/	/	1521	811	1904	1194	2286	1577	2670	1960	3053	2343	3818	3109	4585	3875	/
	11	2394	1614	/	/	/	/	/	/	1374	593	1757	977	2140	1359	2523	1742	2906	2126	3672	2891	4438	3656	/
	12	2612	1760	/	/	/	/	/	/	/	/	1610	759	1994	1142	2376	1525	2759	1907	3526	2674	4291	3440	/
400	5	1697	1162	1639	1104	2222	1688	2806	2272	3390	2855	3973	3439	/	/	/	/	/	/	/	/	/	/	/
	6	2036	1395	/	/	1990	1348	2574	1932	3158	2516	3741	3099	4324	3683	/	/	/	/	/	/	/	/	/
	7	2376	1627	/	/	1758	1009	2341	1619	2728	2177	3509	2760	4092	3343	4675	3927	/	/	/	/	/	/	/
	8	2716	1860	/	/	/	/	2109	1253	2692	1837	3276	2421	3860	3004	4443	3588	5027	4172	/	/	/	/	/
	9	3055	2092	/	/	/	/	1876	914	2460	1497	3043	2081	3627	2665	4211	3248	4794	3832	5962	4999	/	/	/
	10	3394	2325	/	/	/	/	/	/	2227	1158	2811	1741	3395	2326	3978	2909	4562	3492	5729	4660	6896	5827	/
	11	3734	2557	/	/	/	/	/	/	1995	819	2579	1402	3162	2185	3746	2570	4329	3153	5496	4320	6664	5487	/
	12	4073	2789	/	/	/	/	/	/	/	/	2346	1063	2930	1646	3513	2230	4097	2814	5264	3981	6432	5148	/

a. Additional sizes available, contact Global Customer Support.

DIMENSIONS AND WEIGHT

Figure 4. Actuator Dimensions

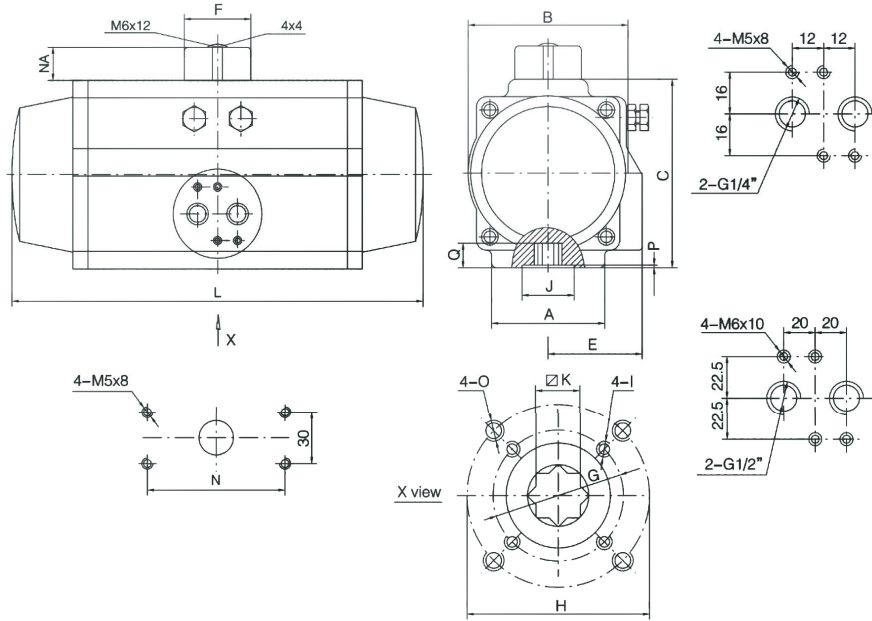


Table 7. Actuator Dimensions, mm

Size (a) (b)	A	B	C	E	NA	ΦF	ΦG	ΦH	I	ΦJ	∅K	L	N	O	P	Q	Air Connection	
DA SR 50	52	58	70	41	20	40	-	ISO F05 Φ50	-	25	11	160	80	M6x10	1	12	G1/4"	
DA SR 63	64	74	89	48			ISO F05 Φ50	ISO F07 Φ70	M6x10	28	14	192		M8x13		16		
DA SR 75	68	85	100	52			ISO F05 Φ50	ISO F07 Φ70	M6x10	32	14	218		M8x13		19		
DA SR 80	68	96	113	56			ISO F05 Φ50	ISO F07 Φ70	M6x10	36	17	238		M8x13		19		
DA SR 95	95	107	123	65			ISO F07 Φ70	ISO F10 Φ102	M8x13	40	17	273		M10x16		19		
DA SR 100	96	120	136	70			ISO F07 Φ70	ISO F10 Φ102	M8x13	40	17	274		M10x16		19		
DA SR 125	96	138	161	80	30	58	ISO F07 Φ70	ISO F12 Φ102	M10x6	53	22	335	130	M10x16	1.5	24	G1/4"	
DA SR 140	118	154	178	90			ISO F10 Φ102	ISO F12 Φ125		M10x6	53	27		370		M12x20		29
DA SR 160	118	176	200	103			ISO F10 Φ102	ISO F12 Φ125		M10x6	66	27		428		M12x20		29
DA SR 190	136	209	232	112			ISO F10 Φ102	ISO F14 Φ140		M10x6	78	36		488		M12x20		38
DA SR 200	140	231	255	122			-	ISO F14 Φ140		-	88	36		550		-M16x25		38
DA SR 254	160	230	292	130			-	ISO F16 Φ165		-	100	46		598		-M16x25		38
DA SR 280	160	253	330	147	80	-	ISO F16 Φ165	-	117	46	772	M20x28	2	50	G1/2"			
DA SR 300	174	326	354	175		-	ISO F16 Φ165	-	125	46	784					M20x28	50	
DA SR 350	270	380	410	195		-	ISO F25 Φ254	-	134	46	845					8-M16x30	50	

a. For sizes not shown, contact Global Customer Support.  
 b. DA = double acting, SR = spring return (also known as single acting).

Figure 5. Handwheel Dimensions

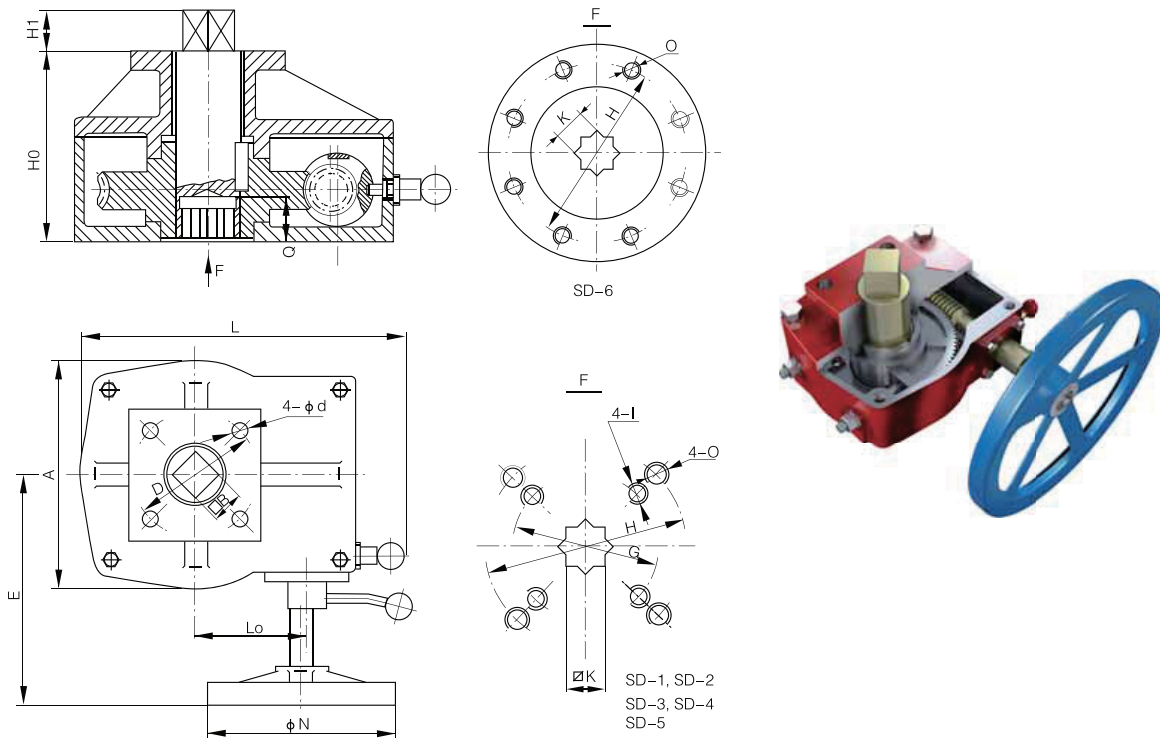


Table 8. Handwheel Dimensions, mm

Model (a)	H <sub>0</sub>	H <sub>1</sub>	□B	□K	Q	A	L	N	L <sub>0</sub>	D	d	H	OX	G	IX	E	Actuator Sizes (b)
SD-1	93	15	14	14	16	98	147	140	42	50	7	70	M8x10	50	M6x8	135	DA SR 50 65 75
SD-2	108	19	17	17	19	106	170	180	53	70	9	102	4-M10x14	70	M8x10	155	DA SR 85 95 100
SD-3	128	25	22	22	25	136	210	250	74	102	12	125	4-M12x16	102	M10x14	190	DA SR 125
			27	27													DA SR 140 160
SD-4	159	38	36	36	40	200	254	340	97	140	18	140	4-M16x22	-	-	230	DA SR 190 200
SD-5	181	48	46	46	50	256	348	500	126	165	22	165	4-M20x28	-	-	292	DA SR 254 280 300
SD-6	228	50	46	46	50	372	430	500	186	165	22	165	4-M20x28	-	-	400	DA SR 350
			55	55	60					254	8-18	254	8-M16x22	-	-		DA 400 450
SD-7	324	55	55	55	60	505	610	650	250	254	8-18	254	8-M16x22	-	-	495	SR 400 450

- a. For sizes not shown, contact Global Customer Support.
- b. DA = double acting, SR = spring return (also known as single acting).

Table 9. Weight

Model (a)	APR63		APR80		APR100		APR125		APR160		APR200		APR254		APR300		APR350	
	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb	kg	lb
Double Acting	2	4.4	4.5	10	6.2	14	12.3	28	22.5	50	48	106	86	190	95	210	128	282
Single Acting	2.5	6	5.1	11	7.2	16	15.2	34	26.3	58	57	126	101	223	115	254	150	331

a. Weights are for actuators without handwheels.

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