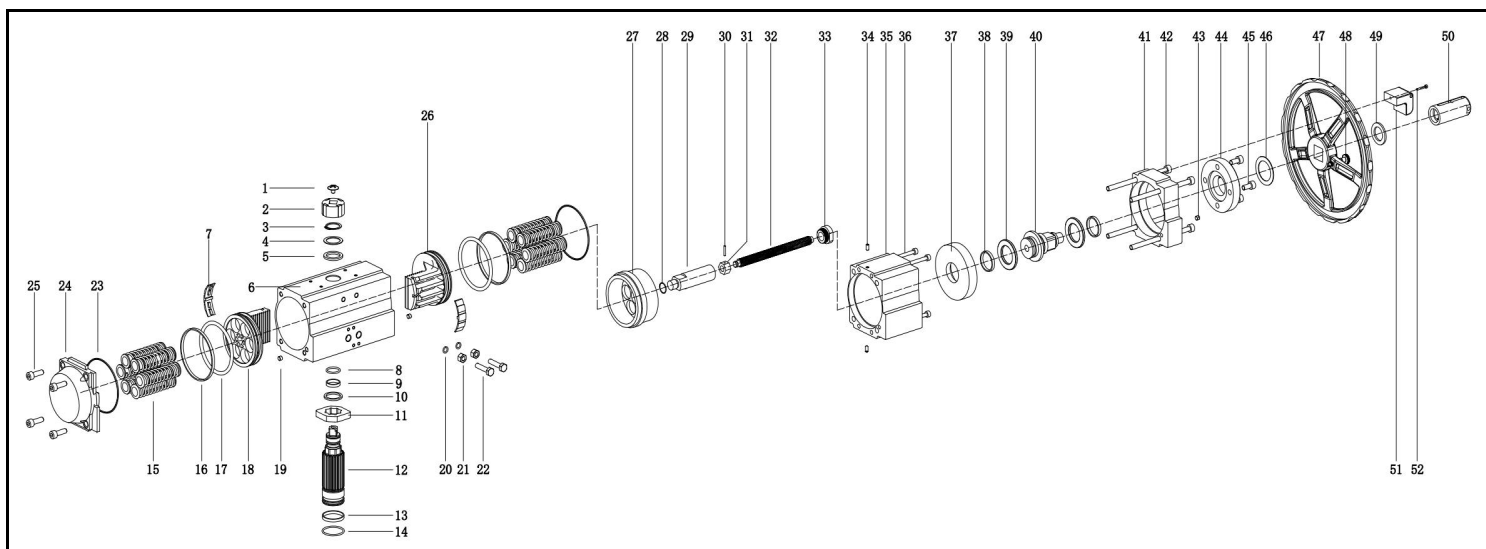


FlowLine



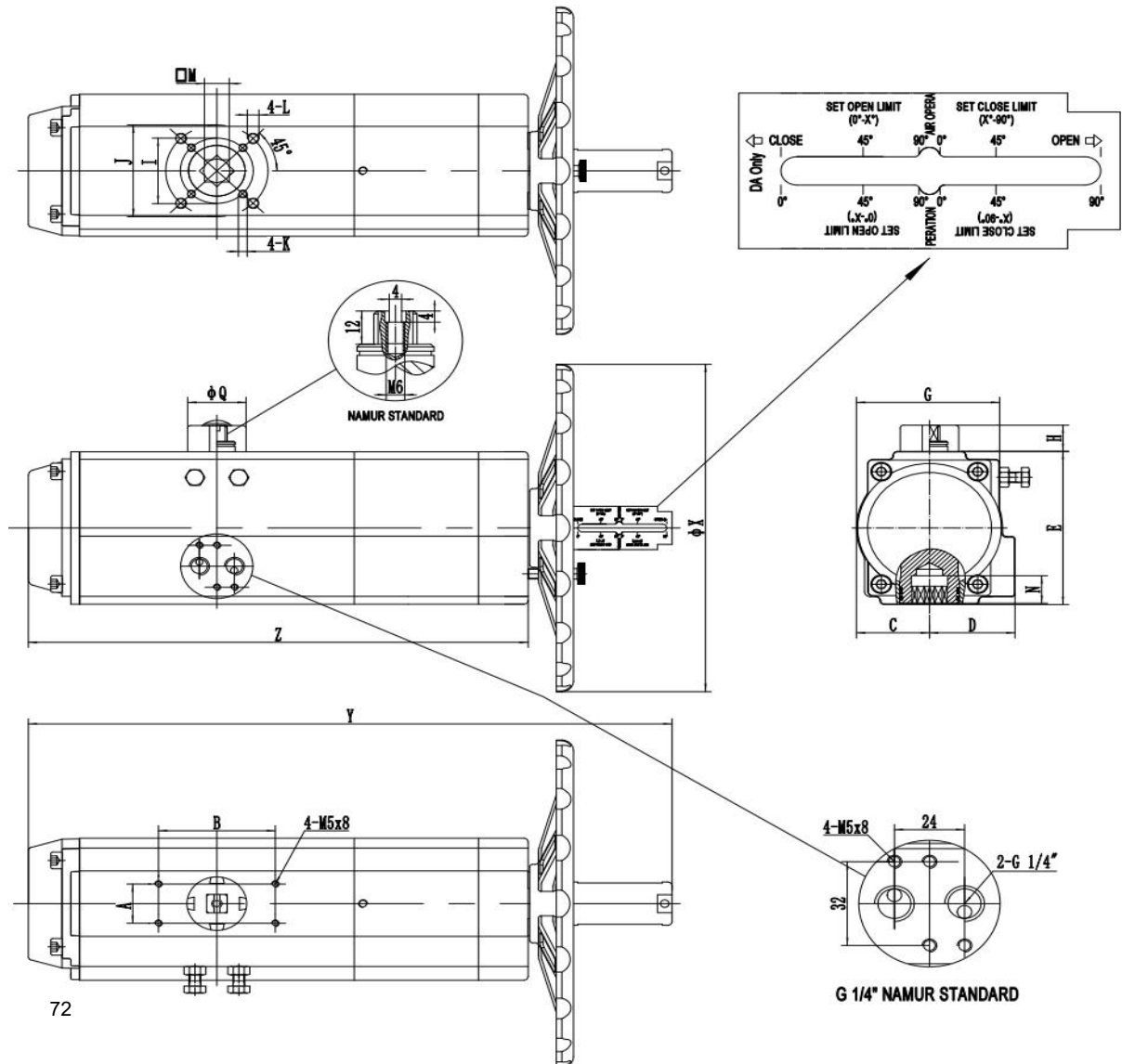
Series 20/21
(SM/FM)

***Pneumatic Actuators with
integrated manual override***



Parts and Material

No.	Description	Qty	Material	No.	Description	Qty	Material	No.	Description	Qty	Material
1	Indicator screw	1	304+ABS	19	Plug	2	NBR/LNBR/Viton	37	Inner limit cap	1	Extruded Alu.
2	Top Indicator	1	ABS	20	O-ring (adjust)	2	NBR/LNBR/Viton	38	Support ring	2	POM
3	Circlip	1	Stainless steel	21	Nut (adjust)	2	Stainless steel	39	Thrust bearing	2	304
4	Thrust washer	1	Stainless steel	22	Stop screw	2	Stainless steel	40	Guide screw sleeve	1	20CrMnTi
5	Outside washer	1	POM	23	O-ring(end-cap)	2	NBR/LNBR/Viton	41	External cap	1	Extruded Alu.
6	Body	1	Extruded Alu.	24	End-cap	1	Die-casting Alu.	42	Mounting screw (External cap)	4	304
7	Guide	2	Nylon66+30%gf	25	End-cap holding screw	4	Stainless steel	43	Breathing silencer	1	copper
8	O-ring (Top)	1	NBR	26	Right piston	1	Casting steel	44	External limit cap	1	Extruded Alu.
9	Bearing(Top)	1	POM	27	Inner cap	1	Extruded Alu.	45	Mounting screw (External limit cap)	4	304
10	Inside washer	1	POM	28	O-ring(Inner cap	1	NBR	46	Hand wheel buffer pad	1	Nylon 66
11	Cam	1	Alloy steel (45)	29	Clutch body	1	45# Carbon steel	47	Hand wheel	1	Casting steel
12	Pinion	1	Alloy steel (20)	30	Straight pin	1	304	48	Index pin	1	Carbon steel
13	Bearing(Bottom)	1	POM	31	Head of guide screw	1	304	49	Buffer pad	1	Nylon 66
14	O-ring (Bottom)	1	NBR/LNBR/Viton	32	Guide screw	1	45# Carbon steel	50	Window sleeve	1	Extruded Alu.
15	Spring	0-12	spring steel	33	Clutch cap	1	45# Carbon steel	51	Lock seat	1	Extruded Alu.
16	Bearing(piston)	2	POM	34	Inner cap holding screw	2	304	52	Lock seat screw	1	304
17	O-ring (piston)	2	NBR/LNBR/Viton	35	Sub body	1	Extruded Alu.				
18	Left piston	1	Die-casting Alu.	36	Sub body holding screw	4	304				



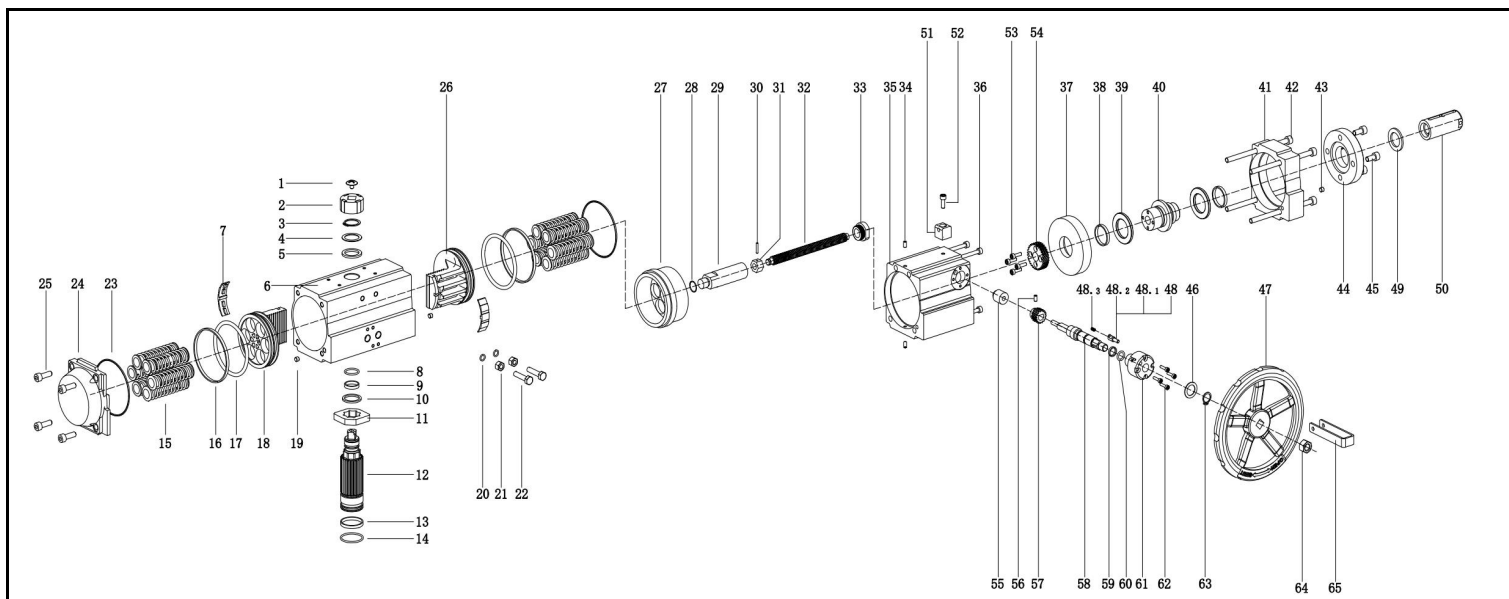
Model	A	B	C	D	E	G	H	I	J	K	L	M	N	Q	X	Y	Z	Air Connection
20-0075	1.18	3.15	1.18	1.65	2.83	2.56	0.79	Ø1.42	Ø1.97	M5x8	M6x10	0.43	0.55	Ø1.57	7.09	10.59	7.99	1/4" NPT
20-0100	1.18	3.15	1.41	1.85	3.46	2.83	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.55	0.71	Ø1.57	7.87	12.05	9.17	1/4" NPT
20-0150	1.18	3.15	1.65	2.09	3.94	3.19	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.55	0.71	Ø1.57	7.87	12.48	9.57	1/4" NPT
20-0200	1.18	3.15	1.81	2.24	4.28	3.62	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.67	0.83	Ø1.57	7.87	14.02	10.71	1/4" NPT
20-0300	1.18	3.15	1.97	2.32	4.59	3.86	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.67	0.83	Ø1.57	9.84	17.36	13.46	1/4" NPT
20-0400	1.18	3.15	2.28	2.52	5.24	4.33	0.79	Ø2.76	Ø4.02	M8x13	M10x16	0.87	1.02	Ø1.57	9.84	17.8	13.7	1/4" NPT
20-0500	1.18	3.15	2.68	2.95	6.1	5.04	0.79	Ø2.76	Ø4.02	M8x13	M10x16	0.87	1.02	Ø2.17	15.75	20.75	15.87	1/4" NPT
20-0600	1.18	3.15	2.95	3.03	6.77	5.43	0.79	Ø4.02	Ø4.92	M10x16	M12x20	1.06	1.22	Ø2.17	15.75	26.22	20.24	1/4" NPT
20-0700	1.18	3.15	3.43	3.43	7.76	6.22	0.79	Ø4.02	Ø4.92	M10x16	M12x20	1.06	1.22	Ø2.17	19.69	29.45	22.8	1/4" NPT

Dimension are in inches

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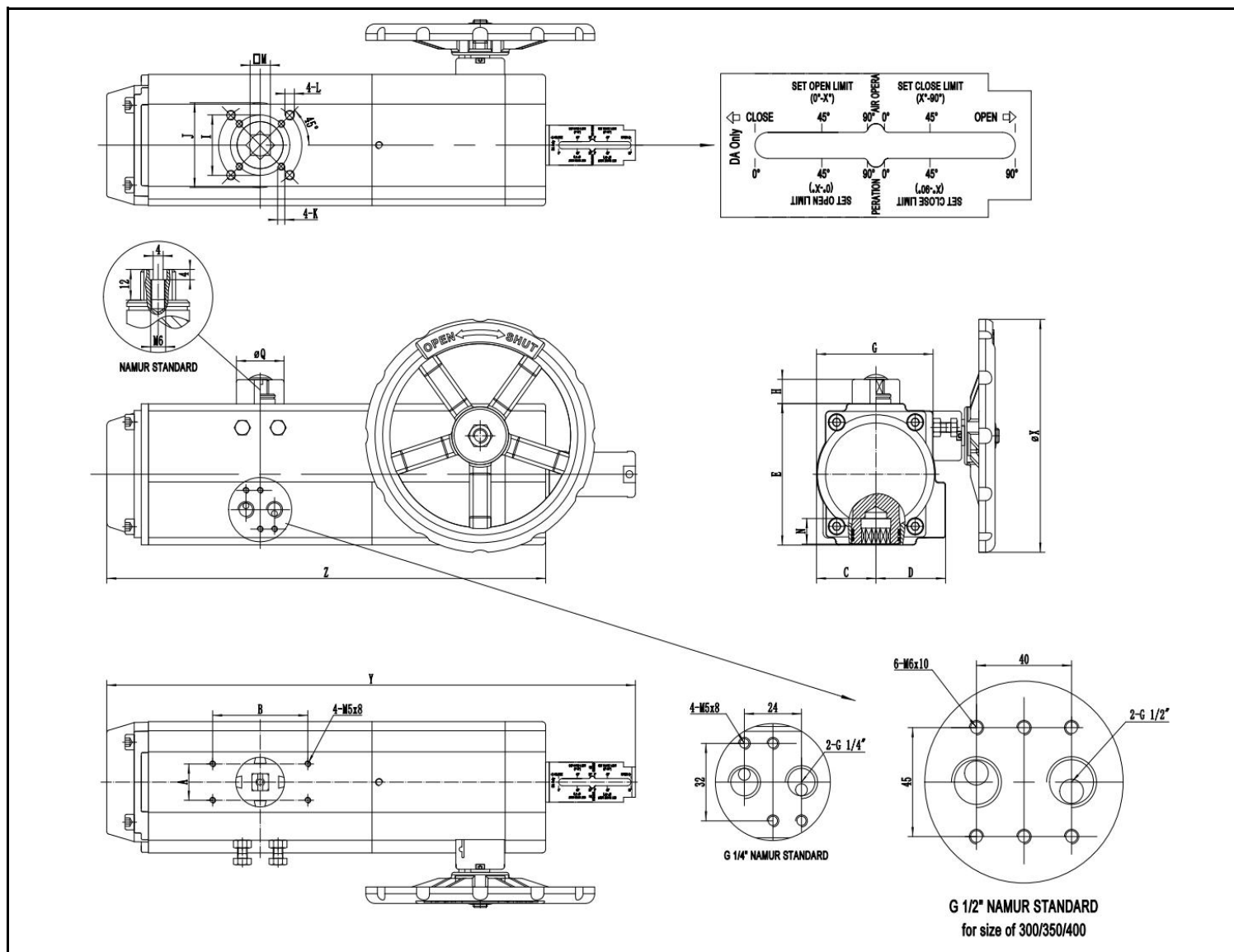
Revision Date:
7-23-25



Parts and Material

No.	Description	Qty								Qty	Material
1	Indicator screw	1	304+ABS	24	End-cap	1	Die-casting Alu.	47	Hand wheel	1	Casting steel
2	Top Indicator	1	ABS	25	End-cap holding screw	4	Stainless steel	48	Index pin	1	Carbon steel
3	Circlip	1	Stainless steel	26	Right piston	1	Casting steel	48.1	Handle (Index pin)	1	Extruded Alu.
4	Thrust washer	1	Stainless steel	27	Inner cap	1	Extruded Alu.	48.2	Handle cover	1	Rubber
5	Outside washer	1	POM	28	O-ring(Inner cap	1	NBR	48.3	Spring of the pin	1	304
6	Body	1	Extruded Alu.	29	Clutch body	1	45# Carbon steel	49	Buffer pad	1	Nylon 66
7	Guide	2	Nylon66+30%gf	30	Straight pin	1	304	50	Window sleeve	1	Extruded Alu.
8	O-ring (Top)	1	NBR	31	Head of guide screw	1	304	51	Lock seat	1	Extruded Alu.
9	Bearing(Top)	1	POM	32	Guide screw	1	45# Carbon steel	52	Lock seat screw	1	304
10	Inside washer	1	POM	33	Clutch cap	1	45# Carbon steel	53	Mounting screw	4	304
11	Cam	1	Alloy steel (45)	34	Inner cap holding screw	2	304	54	Big helical gear	1	45# carbon steel
12	Pinion	1	Alloy steel (20)	35	Sub body	1	Extruded Alu.	55	Support sleeve	1	Nylon 66
13	Bearing(Bottom)	1	POM	36	Sub body holding screw	4	304	56	Tightening screw	1	304
14	O-ring (Bottom)	1	NBR/LNBR/Viton	37	Inner limit cap	1	Extruded Alu.	57	Small helical gear	1	45# carbon steel
15	Spring	0-12	spring steel	38	Support ring	2	POM	58	Hand wheel shaft	1	45# carbon steel
16	Bearing(piston)	2	POM	39	Thrust bearing	2	304	59	Support ring of shaft	1	POM
17	O-ring (piston)	2	NBR/LNBR/Viton	40	Guide screw sleeve	1	20CrMnTi	60	"O" ring of shaft	1	NBR/LNBR/Viton
18	Left piston	1	Die-casting Alu.	41	External cap	1	Extruded Alu.	61	Shaft locating collar	1	Extruded Alu.
19	Plug	2	NBR/LNBR/Viton	42	Mounting screw (External cap)	4	304	62	Mounting screw	4	304
20	O-ring (adjust)	2	NBR/LNBR/Viton	43	Breathing silencer	1	copper	63	Spring ring	1	304
21	Nut (adjust)	2	Stainless steel	44	External limit cap	1	Extruded Alu.	64	Tighten nut	1	304
22	Stop screw	2	Stainless steel	45	Mounting screw (External limit cap)	4	304	65	Lock ring	1	A3 carbon steel
23	O-ring(end-cap)	2	NBR/LNBR/Viton	46	Hand wheel buffer pad	1	Nylon 66				

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Model	A	B	C	D	E	G	H	I	J	K	L	M	N	Q	X	Y	Z	Air Connection
20-0150	1.18	3.15	1.65	2.09	3.94	3.19	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.55	0.71	Ø1.57	6.3	12.6	9.61	1/4" NPT
20-0200	1.18	3.15	1.81	2.24	4.28	3.62	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.67	0.83	Ø1.57	6.3	14.45	11.69	1/4" NPT
20-0300	1.18	3.15	1.97	2.32	4.59	3.86	0.79	Ø1.97	Ø2.76	M6x10	M8x13	0.67	0.83	Ø1.57	7.87	17.52	14.53	1/4" NPT
20-0400	1.18	3.15	2.28	2.52	5.24	4.33	0.79	Ø2.76	Ø4.02	M8x13	M10x16	0.87	1.02	Ø1.57	9.84	17.76	14.76	1/4" NPT
20-0500	1.18	3.15	2.68	2.95	6.1	5.04	0.79	Ø2.76	Ø4.02	M8x13	M10x16	0.87	1.02	Ø2.17	9.84	20.71	16.93	1/4" NPT
20-0600	1.18	3.15	2.95	3.03	6.77	5.43	0.79	Ø4.02	Ø4.92	M10x16	M12x20	1.06	1.22	Ø2.17	9.84	26.22	21.38	1/4" NPT
20-0700	1.18	3.15	3.43	3.43	7.76	6.22	0.79	Ø4.02	Ø4.92	M10x16	M12x20	1.06	1.22	Ø2.17	15.75	29.53	23.98	1/4" NPT
20-0800	1.18	5.12	4.06	4.06	9.06	7.44	1.18		Ø5.51		M16x25	1.42	1.57	Ø3.15	17.72	34.65	27.99	1/4" NPT
20-0900	1.18	5.12	4.45	4.45	10.04	8.27	1.18		Ø5.51		M16x25	1.42	1.57	Ø3.15	19.69	34.84	28.03	1/4" NPT
20-1000	1.18	5.12	5.12	5.12	11.38	9.65	1.18		Ø6.5		M20x25	1.81	1.97	Ø3.15	19.69	39.33	31.73	1/4" NPT
20-2000	1.18	5.12	5.79	5.79	12.83	10.75	1.18		Ø6.5		M20x25	1.81	1.97	Ø3.15	23.62	45.87	37.09	1/2" NPT

Dimensions are in inches

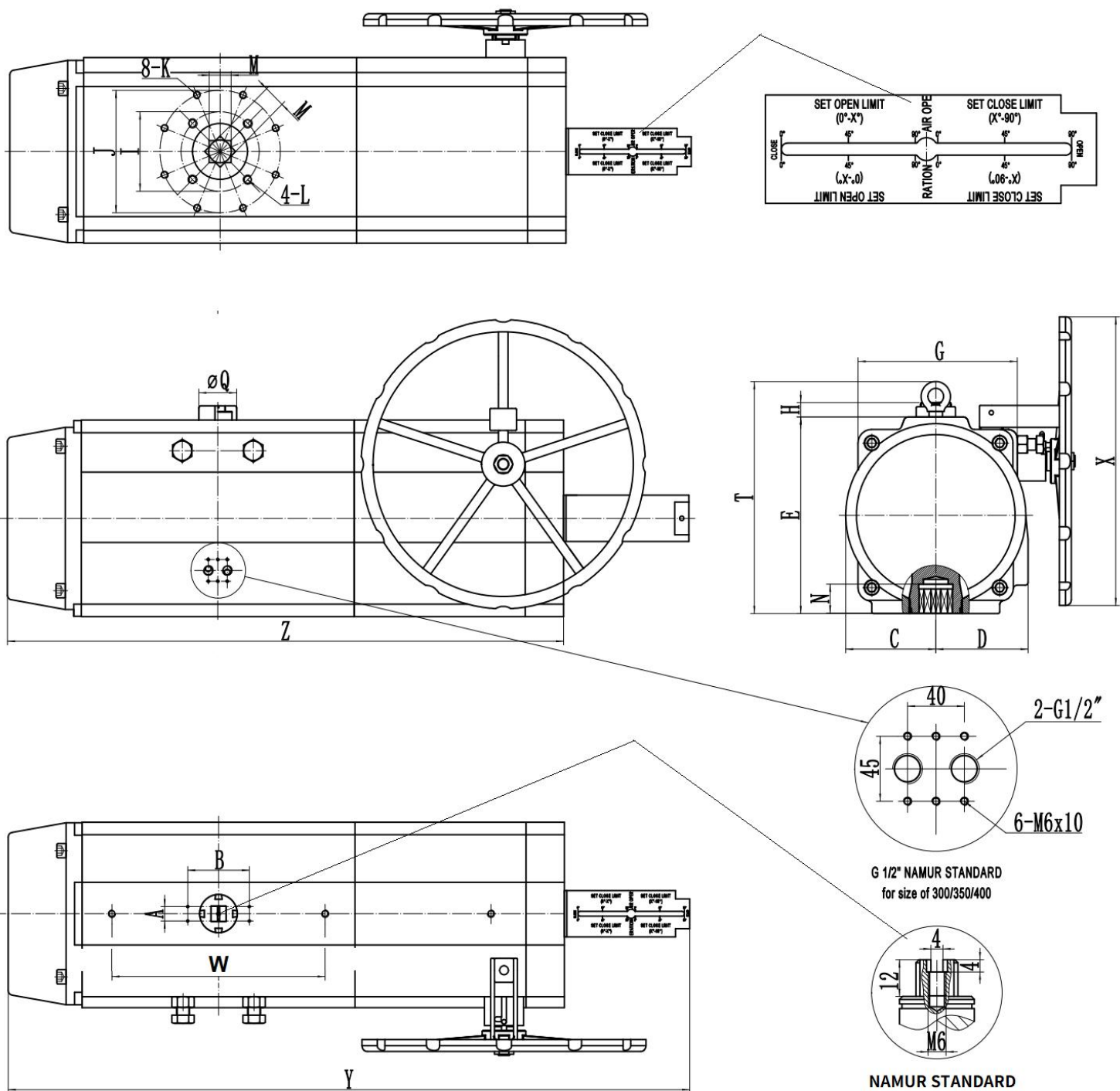
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Model	A	B	C	D	E	G	H	I	J	K	L	M	N	Q	W	T	X	Y	Z	Air Connection
20-3000	1.18	5.12	6.3	6.81	13.86	11.38	1.18	Ø6.5	Ø8.46	4*M20x25	4*M20x25	1.81	2.36	3.15	13.78	16.78	25.59	52.28	42.44	1/2" NPT
20-4000	1.18	5.12	7.48	7.68	16.06	13.23	1.18	Ø6.5	Ø10	4*M20x25	8*M16x25	1.81	2.36	3.15	17.72	18.98	25.59	56.61	46.22	1/2" NPT

Dimensions are in inches

Flow Line Valve and Controls, LLC

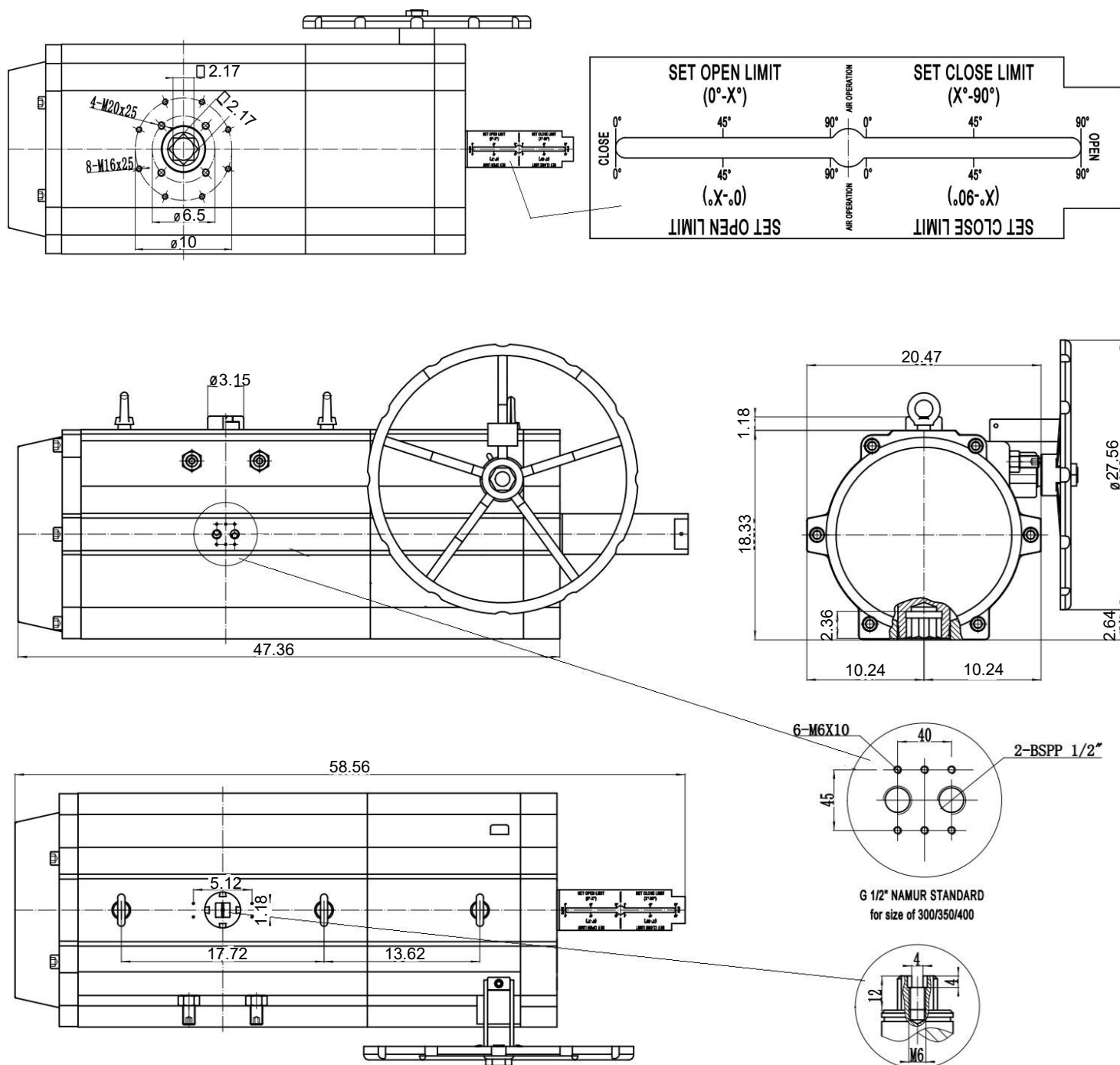
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Revision Date:

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Dimensional Drawing of 20-5000



Dimensions are in inches

Flow Line Valve and Controls, LLC

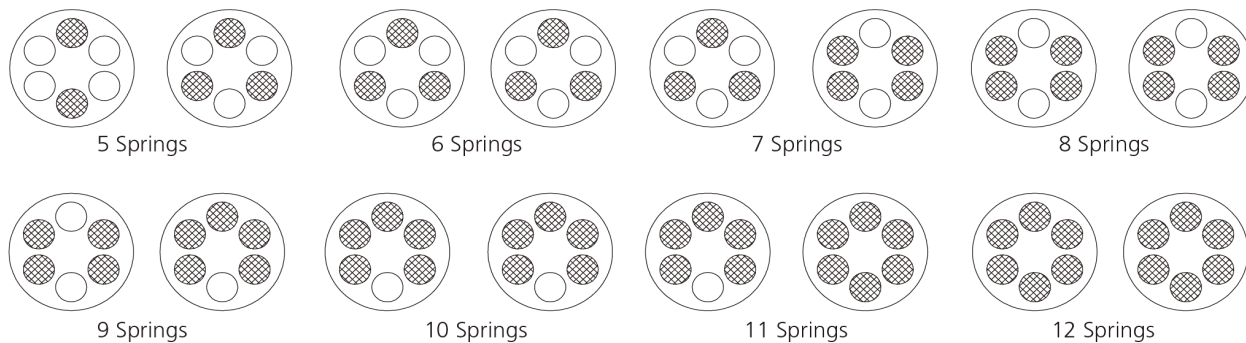
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Operation Time (s) & Weight (lbs)

Model	Double Acting			Spring Return										Weight
Size	0°-90°	90°-0°	Weight	3+3		4+4		5+5		5+6		6+6		
				0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	0°-90°	90°-0°	
20-0075	0.2	0.2	6.4	0.2	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.5	0.2	6.8
20-0100	0.3	0.3	9.5	0.3	0.4	0.3	0.4	0.4	0.3	0.5	0.3	0.6	0.3	9.7
20-0150	0.3	0.3	11.7	0.3	0.4	0.4	0.4	0.4	0.3	0.5	0.3	0.6	0.3	12.3
20-0200	0.4	0.4	14.1	0.6	0.7	0.7	0.6	0.7	0.5	0.8	0.5	0.9	0.4	15
20-0300	0.6	0.6	19	0.6	0.8	0.8	0.7	0.8	0.6	0.9	0.6	1.0	0.5	20.7
20-0400	0.8	0.8	23.4	1.0	1.4	1.4	1.2	1.8	1.0	2.0	0.9	2.2	0.9	25.4
20-0500	1.2	1.2	36.2	1.4	1.6	1.8	1.4	2.2	1.2	2.3	1.1	2.6	1.1	39.2
20-0600	1.6	1.6	52.9	2.1	2.7	2.9	2.1	3.7	1.7	4.1	1.6	4.5	1.5	58.4
20-0700	2.9	2.9	74.5	3.3	3.8	4.3	3.2	5.1	2.8	5.3	2.7	6.0	2.5	83.1
20-0800	5.0	5.2	122.8	5.3	7.0	6.5	7.0	8.2	6.3	8.7	6.0	9.2	5.6	137.3
20-0900	6.0	5.5	138.9	8.0	10.0	9.0	9.4	10.0	8.9	10.5	8.6	11.0	8.2	160.1
20-1000	8.5	8.5	195.6	15.0	13.0	16.0	12.2	17.0	11.4	17.5	11.0	19.0	10.6	226
20-2000	11.0	11.0	295.6	20.0	17.0	22.0	15.0	24.0	13.0	25.0	12.0	26.0	11.0	350.3
20-3000	14.0	14.9	425.1	27.0	25.0	25.0	23.0	22.0	21.0	20.5	20.0	27.0	19.0	447.3
20-4000	25.0	25.0	694.9	31.0	29.0	34.0	27.0	37.0	25.0	38.5	24.0	40.0	23.0	743.4
20-5000	31.0	31.0	727.5	44.0	32.4	47.0	30.6	50.0	27.8	52.0	26.4	54.0	25.0	745.2

Spring Configuration

The spring configuration is very flexible, to increase and decrease the spring numbers in the actuators is also very convenient. The springs are mounted between the end cap and piston on each side of the actuator as shown below. The springs are made from piano spring material with cartridge structure which can be de-mounted safely and conveniently to drive a variety of valves by changing the quantity of springs.



ACTUATOR	DATA SHEET FLOW LINE SERIES 20/21 (SM/FM) Double Acting an Spring Return Pneumatic Actuators (Multi-function) Sizes 20-0075--20-5000	PART NO.	
PRESSURE RATING		DRAWING NO.	REV
CUSTOMER/PROJECT		FL 20-21001(SM/FM)	A
SPECIFICATION		DATE	
CERTIFIED BY		7/29/2025	

Output Torque of Double Acting (Unit: in-lb)							
Model	Air Pressure (Bar/PSI)						
	2/30	3/40	4/60	5/70	6/90	7/100	8/120
20-0075	69	103	137	172	205	240	273
20-0100	126	188	250	313	376	439	501
20-0150	173	258	344	431	517	603	689
20-0200	270	404	538	673	808	942	1076
20-0300	387	581	775	969	1162	1357	1551
20-0400	567	851	1135	1419	1703	1987	2271
20-0500	861	1292	1722	2153	2584	3015	3446
20-0600	1468	2202	2936	3670	4404	5138	5872
20-0700	2283	3425	4567	5710	6851	7993	9135
20-0800	3654	5480	7308	9135	10962	12788	14615
20-0900	4567	6851	9135	11418	13702	15985	18270
20-1000	6606	9910	13212	16516	19819	23123	26426
20-2000	10041	15063	20083	25104	30124	35145	40166
20-3000	13101	19651	26202	32753	39304	45854	52404
20-4000	19618	29422	39234	49038	58843	68656	78460
20-5000	27953	41930	55907	69884	83861	97837	111814

Output Torque of Spring Return (Unit: in-lb)

Model	Spring Qty.	Air Stroke at Bar/PSI														Spring Stroke	
		2/30		3/40		4/60		5/70		6/90		7/100		8/120		90°	0°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End		
20-0075	4	40	26	73	59											42	27
	5	32	15	65	49	99	82									52	35
	6			60	39	94	73									62	41
	7			53	28	87	62	120	96							73	48
	8					80	51	113	85	146	118					83	55
	9					73	42	106	75	139	108	173	142			93	62
	10							99	64	132	96	166	130			104	69
	11							92	54	125	87	158	120	192	154	114	76
20-0100	12									118	76	151	110	185	143	125	83
	4	79	53	140	114											70	44
	5	67	35	128	96	190	158									88	56
	6			118	79	179	141									105	66
	7			106	61	167	123	228	184							123	78
	8					157	105	218	166	280	227					141	89
	9					145	88	207	149	268	211	329	272			158	100
	10							196	131	257	193	318	254			176	112
20-0150	11							185	114	246	176	307	237	369	298	193	122
	12									235	158	296	219	358	281	211	134
	4	101	72	185	156											97	68
	5	83	47	167	131	251	215									122	86
	6			150	107	234	191									146	104
	7			133	82	217	166	302	251							171	120
	8					199	142	284	227	368	312					195	137
	9					182	118	267	203	351	287	435	371			219	155
20-0150	10							250	178	335	262	419	346			244	172
	11							233	254	317	238	401	322	486	407	268	189
	12									300	214	384	298	469	383	292	206

Output Torque of Spring Return (Unit: in-lb)

Model	Spring Qty.	Air Stroke at Bar/PSI														Spring Stroke	
		2/30		3/40		4/60		5/70		6/90		7/100		8/120		90°	0°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End		
20-0200	4	160	110	292	241											155	104
	5	135	71	266	202	398	334									194	128
	6			241	263	373	295									232	155
	7			215	125	347	257	479	389							271	180
	8					321	218	453	350	585	481					310	206
	9					295	179	427	312	559	443	690	574			348	232
	10							402	273	534	404	665	535			387	258
	11							376	234	508	366	639	497	771	629	426	283
	12									481	327	613	458	745	590	464	310
20-0300	4	227	148	417	338											231	152
	5	189	90	380	280	569	470									289	189
	6			342	223	531	412									346	228
	7			303	165	493	355	683	545							404	266
	8					456	296	645	487	835	676					463	304
	9					417	239	607	429	797	618	987	808			520	342
	10							569	372	759	561	948	751			578	381
	11							531	313	720	503	910	693	1100	883	635	419
	12									682	445	873	635	1063	825	694	456
20-0400	4	350	225	628	503											331	206
	5	298	142	577	420	854	698									413	258
	6			525	337	802	614									497	310
	7			474	255	751	532	1029	811							580	361
	8					699	450	978	728	1256	1006					662	412
	9					648	366	927	645	1205	923	1482	1201			745	463
	10							874	563	1152	841	1430	1119			828	515
	11							823	480	1101	758	1379	1035	1657	1313	911	566
	12									1051	675	1328	952	1606	1231	993	618
20-0500	4	504	312	927	734											531	339
	5	420	179	842	601	1263	1022									665	423
	6			752	475	1174	897									790	513
	7			671	341	1092	762	1514	1184							925	595
	8					1003	635	1425	1058	1874	1480					1051	684
	9					921	501	1344	923	1205	923	1482	1201			1186	766
	10							1254	789	1152	841	1430	1119			1321	855
	11							1173	654	1101	758	1379	1035	1657	1313	1455	936
	12									1051	675	1328	952	1606	1231	1581	1018
20-0600	4	878	570	1597	1289											867	560
	5	737	353	1457	1072	2176	1791									1085	700
	6			1318	853	2037	1573									1304	839
	7			1180	635	1898	1354	2617	2071							1522	977
	8					1760	1144	2479	1862	3198	2582					1732	1115
	9					1613	925	2332	1644	3052	2363	3770	3082			1951	1262
	10							2194	1425	2913	2145	3631	2863			2169	1400
	11							2055	1206	2772	1926	3493	2645	4212	3363	2388	1539
	12									2636	1707	3355	2426	4074	3145	2607	1677



Output Torque of Spring Return (Unit: in-lb)

Model /Spring Qty.		Air Stroke at Bar/PSI														Spring Stroke	
		2/30		3/40		4/60		5/70		6/90		7/100		8/120		90°	0°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End		
20-0700	4	1325	837	2443	1956											1399	912
	5	1097	488	2215	1606	3333	2724									1749	1140
	6			1987	1253	3105	2371									2102	1368
	7			1759	900	2877	2018	3995	3137							2455	1596
	8					2657	1674	3776	2792	4894	3910					2800	1816
	9					2430	1321	3547	2438	4666	3557	5784	4675			3154	2044
	10							3320	2085	4438	3204	5556	4322			3507	2272
	11							3092	1741	4210	2859	5328	3978	6447	5095	3851	2499
	12									3982	2506	5101	3624	6219	4742	4204	2728
20-0800	4	2276	1500	4065	3289											2078	1303
	5	1950	981	3739	2769	5528	4559									2599	1629
	6			3414	2248	5202	4038									3120	1954
	7			3088	1727	4877	3516	6666	5306							3641	2280
	8					4551	2995	6341	4785	8130	6573					4163	2606
	9					4225	2474	6015	4263	7805	6052	9593	7842			4684	2931
	10							5689	3750	7479	5540	9268	7328			5196	3257
	11							5364	3229	7153	5018	8942	6807	10732	8597	5718	3583
	12									6827	4497	8616	6286	10406	8075	6239	3908
20-0900	4	2682	1917	4918	4154											2556	1791
	5	2234	1278	4471	3515	6707	5751									3195	2239
	6			4023	2876	6259	5112									3834	2687
	7			3575	2237	5811	4473	8048	6710							4473	3135
	8					5364	3834	7600	6071	9837	8307					5112	3583
	9					4916	3195	7152	5432	9389	7668	11625	9905			5751	4031
	10							6704	4793	8941	7029	11178	9266			6390	4478
	11							6257	4154	8493	6390	10730	8627	12966	10863	7029	4926
	12									8045	5751	10282	7988	12518	10224	7668	5374
20-1000	4	3800	2744	7035	5979											3726	2671
	5	3131	1812	6367	5048	9602	8283									4658	3339
	6			5716	4114	8951	7349									5592	3990
	7			5024	3189	8259	6424	11494	9660							6517	4682
	8					7598	5491	10834	8726	14069	11961					7450	5341
	9					6923	4549	10158	7784	13393	11019	16629	14254			8391	6018
	10							9491	6859	12726	10094	15961	13329			9316	6685
	11							8823	5926	12057	9161	15293	12396	18527	15631	10250	7353
	12									11231	8228	14625	11463	17860	14698	11183	8021
20-2000	4	6187	4540	11104	9459											5294	3648
	5	5274	3217	10193	8135	15109	13052									6618	4560
	6			9280	6823	14197	11741									7929	5472
	7			8376	5495	13294	10412	18210	15329							9258	6376
	8					12381	9091	17299	14009	22216	18926					10578	7288
	9					11470	7763	16387	12680	21304	17598	26221	22515			11906	8199
	10							15475	11369	20392	16286	25309	21203			13218	9112
	11							14563	10040	19480	14958	24397	19874	29315	24793	14546	10023
	12									18576	13637	23493	18555	28411	23472	15867	10927



Output Torque of Spring Return (Unit: in-lb)

Model /Spring Qty.		Air Stroke at Bar/PSI														Spring Stroke	
		2/30		3/40		4/60		5/70		6/90		7/100		8/120		90°	0°
		0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°	0°	90°		
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End		
20-3000	4	7400	5018													7137	4756
	5	6211	3235	12289	9313											8922	5944
	6	5023	1452	11101	7530	17178	13608									10704	7133
	7			9912	5748	15990	11825	22068	17903							12487	8321
	8			8722	3965	14800	10043	20878	16121							14269	9511
	9					13612	8260	19689	14338							16052	10700
	10					12423	6469	18501	12547	24579	18625					17842	11888
	11							17312	10764	23390	16842	29468	22920			19625	13077
	12									22201	15060	28279	21137	34357	27215	21407	14266
20-4000	4	10561	6753													11448	7641
	5	8650	3891	17747	12988											14311	9552
	6	6736	1024	15833	10121	24938	19226									17178	11465
	7			13944	7262	23049	16367	32146	25464							20037	13354
	8			12015	4394	21120	13499	30216	22596							22904	15283
	9					19206	10640	28303	19737							25763	17197
	10					17301	7774	26397	16870	35494	25967					28630	19103
	11							24484	14012	33581	23108	42685	32213			31489	21016
	12									31667	20241	40772	29346	49869	38442	34356	22930
20-5000	5	15252	8639													17297	10685
	6	13115	5180	26083	18148											20756	12821
	7			23947	14689											24216	14958
	8			21805	11225	34773	24193									27680	17100
	9					32640	20737									31136	19233
	10					30506	17273	43474	30241							34600	21367
	11					28365	13817	41333	26785							38056	23508
	12							39199	23321	52167	36289					41520	25641
	13							37058	19865	50026	32834					44976	27782
	14									47892	29369					48440	29916
	15									45751	25913	58719	38881	71688	49118	51895	32057
	16											56585	35417	69554	45472	55360	4191

How to Order

Part Numbering System

Series	Size	Direction	Rotation	Seals	Coatings	Trav. Stops	Mounting	Springs
1	2	3	4	5	6	7	8	9

1	Series
20	Double Act
21	Single Act

2 Size		
0075	0500	2000
0100	0600	3000
0150	7000	4000
0200	0800	5000
0300	0900	
0400	1000	

3	Travel
4	90°
6	120°
7	180°

4	Rotation
1	Standard Rotation
2	Reverse Rotation
3	90 x 90 3 Position

5	Seals
1	Standard 30 +176
2	High Temperature Seals -5 to +300
3	Low Temperature -80 to +176

6	Coatings
0	Standard (Black)
1	FL-1
2	FL-2
3	FL-3
4	Exceleron 9 (C-Green)

7	Travel Stops
0	Standard + or -5%
1	Extended 45%
2	Extended 90%
3	SM Integrated Manual Override
4	FM Integrated Manual Override

8	Mounting
1	"ISO"
2	"K"
3	"B"
4	Special

9	Springs
0	None
1	2
2	4
3	6
4	8
5	10
6	12
7	Special

Example: Double Acting

0200
Travel 90°
Std. Rotation
Std. Seals
Std. Coatings
Std. Travel Stops
ISO Mounting
0 Springs

Series	Size	Trim
20	1200	4110010