

# Series SPNII

## Pneumatic Actuator Datasheet



## Pneumatic Actuator

- Rack & pinion design
- The standard actuator configuration has an epoxy coated, hard anodized aluminum body and epoxy coated end caps.
- Inside surface finish (Ra 0.4–0.6µm) to minimize friction and to maximize the life of the actuator.
- Standard applications for temperature ranges from -4°F to 180°F.
- Special options for extreme temperatures (upon request).
- Piston bearing made of material with a low friction coefficient to avoid metal-on-metal contact, easily replaceable for maintenance.
- Base drilling, for valve mounting and centering, according to ISO 5211/DIN 3337 standards.
- The indicator is designed to remain on the actuator for continuous indication when limit switch is not being used. (Not available on SPN II 032)
- Independent bidirectional travel stop adjustment  $\pm 5^\circ$  ensuring precise positioning in all flow control services. (Not available on SPN II 032)
- Direct mounted solenoid connections according to NAMUR standards.
- Same body and end caps for double acting and spring return.
- Air supply can be dry or lubricated filter compressed air. Pressure: 40 psi to 120 psi.
- Lubricated for a minimum of 1,000,000 operations.



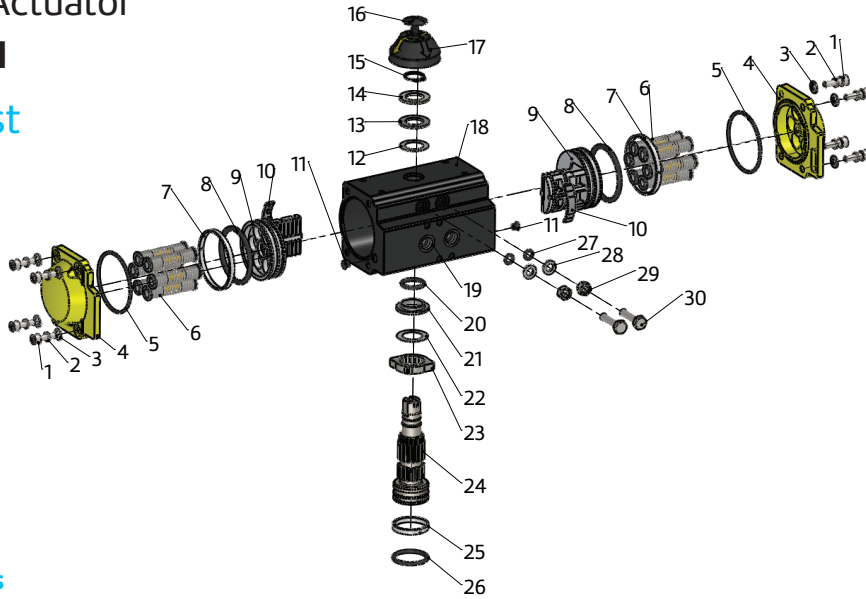
Electroless Nickel Treatment



Standard

- Epoxy coating is a deposit of powder on clear sandblasted pieces. The chemical process is controlled and after coating, the pieces are subjected to heat treatment. Epoxy painting of actuators is advised where the environment is aggressive. Except for certain solvents, epoxy coatings resist acids and alkali, and also has good resistance to UV rays. To retain its properties, the coating must not be scratched.
- Multi-function position indicator with NAMUR slot to allow confirmation of position.
- The SPN II features inserts to allow easy conversion to many square and diamond valve stems. There are also double D along with round bores with keyway inserts for the same actuators for butterfly applications. The pinion is drilled deeper than standard actuators. The SPN II series has mounting plates for the transition of the bolt circles of the actuator to be used with other industry standards for butterfly valves.
- For conditions or applications that demand the most from equipment, ASC offers our SPNII with chemical nickel plating. These actuators are designed to be a cost-effective option in comparison to stainless steel actuators. The Nickel plating is done through chemical impregnation to provide uniform coverage and protection. The bath is a mixture of nickel and phosphorous to provide excellent qualities in: hardness, wear resistance, appearance and its inherent ability to withstand many wash-down applications.

# Pneumatic Actuator Series SPNII Material List



## Parts & Materials

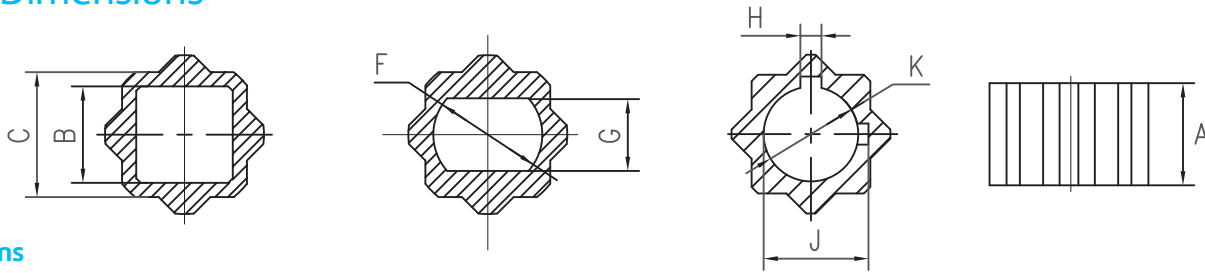
Part No.	Qty.	Part Description	Materials	Surface Treated	Optional Material
1	8	Socket Head Screw	Stainless Steel 304		
2	8	Washer	Stainless Steel 304		
3	8	Washer	Stainless Steel 304		
4	2	End Cap	A380 (SPN II 032 - SPN II 200) WCB (SPN II 240 - SPN II 300)	Epoxy Coated	CF8/CF8M
5*	2	"O" Ring (Cylinder Head)	NBR Rubber		Viton
6	2-12	Spring	Spring Steel	Polyester Resin Coating	
7*	2	Piston Ring	POM		
8*	2	"O" Ring (Piston)**	NBR Rubber		Viton
9	2	Piston	A380 (SPN II 032 - SPN II 265) WCB (SPN II 300)	Anode Hardening	
10*	2	Guide Ring	PA66		
11*	2	Stopper	NBR Rubber		Viton
12	1	Disc Bearing	Stainless Steel 304		
13*	1	Thrust Bearing	POM		
14	1	Washer	Stainless Steel 304		
15	1	Snap Ring	Stainless Steel		
16	1	Indicator	ABS		
17	1	Indicator Bolt	C15		
18	1	Body	6063-T6	Anode Hardening & Epoxy Coated	
19*	2	Plug	PVC		
20*	1	"O" Ring (Pinion Top)**	NBR Rubber		Viton
21*	1	Bearing (Pinion Top)	POM		
22	1	Disc Bearing	Stainless Steel 304		
23	1	Stoke Adjustment Stop	C45	Nickel Plated	CF8/CF8M
24	1	Pinion Shaft	C45	Nickel Plated	
25*	1	Bearing (Pinion Bottom)	POM		
26*	1	"O" Ring (Pinion Bottom)	NBR Rubber		Viton
27*	2	"O" Ring (Adjusting Bolt)	NBR Rubber		Viton
28	2	Metal Washer	Stainless Steel 304		
29	2	Nut	Stainless Steel 304		
30	2	Adjusting Bolt	Stainless Steel 304		

Note: \*Parts typically supplied in Service Kits.

# Pneumatic Actuator Series SPNII



## Insert Dimensions



### Dimensions

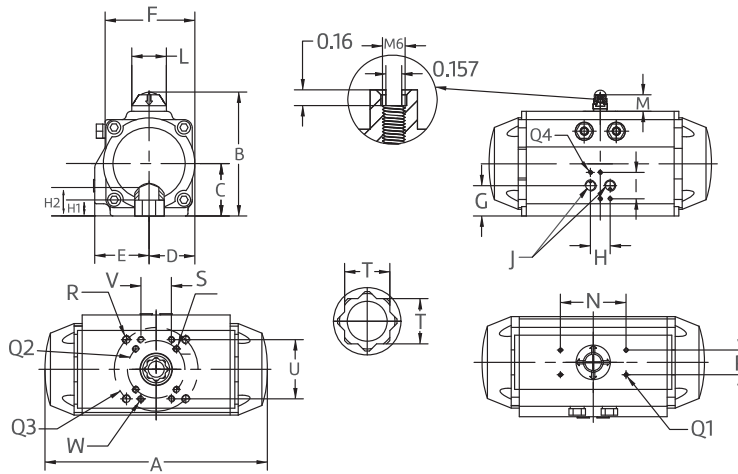
Model	Insert Code	Insert Shape	Unit	Insert Size	A	B	C	F	G	H	J	K
50	A	Square	in	0.354	0.472	0.354	0.669					
			mm	9	12	9	17					
	B*	Square	in	0.433	0.472	0.433	0.669					
			mm	11	12	11	17					
63	C	Square	in	0.551	0.472	0.551	0.669					
			mm	14	12	14	17					
	G	Flat	in	0.378	0.472	-	0.669	0.567	0.378			
			mm	10	12	-	17	14	10			
75 & 85	A	Square	in	0.354	0.630	0.354	0.669					
			mm	9	16	9	17					
	B*	Square	in	0.433	0.630	0.433	0.669					
			mm	11	16	11	17					
75 & 85	C	Square	in	0.551	0.630	0.551	0.669					
			mm	14	16	14	17					
	G	Flat	in	0.378	0.630	-	0.669	0.567	0.378			
			mm	10	16	-	17	14	10			
	A	Square	in	0.354	0.709	0.354	0.866					
			mm	9	18	9	22					
75 & 85	B	Square	in	0.433	0.709	0.433	0.866					
			mm	11	18	11	22					
	C*	Square	in	0.551	0.709	0.551	0.866					
			mm	14	18	14	22					
	D	Square	in	0.669	0.709	0.669	0.866					
			mm	17	18	17	22					
75 & 85	G	Flat	in	0.378	0.709	-	0.866	0.567	0.378			
			mm	10	18	-	22	14	10			
	H	Flat	in	0.441	0.709	-	0.866	0.63	0.441			
			mm	11	18	-	22	16	11			
	I	Flat	in	0.503	0.709	-	0.866	0.756	0.503			
			mm	13	18	-	22	19	13			
100 & 115	B	Square	in	0.433	0.906	0.433	0.866					
			mm	11	23	11	22					
	C	Square	in	0.551	0.906	0.551	0.866					
			mm	14	23	14	22					
	D*	Square	in	0.669	0.906	0.669	0.866					
			mm	17	23	17	22					
100 & 115	G	Flat	in	0.378	0.906	-	0.866	0.567	0.378			
			mm	10	23	-	22	14	10			
	H	Flat	in	0.441	0.906	-	0.866	0.63	0.441			
			mm	11	23	-	22	16	11			
	I	Flat	in	0.503	0.906	-	0.866	0.756	0.503			
			mm	13	23	-	22	19	13			
125, 145 & 160	C	Square	in	0.551	1.142	0.551	1.417					
			mm	14	29	14	36					
	D	Square	in	0.669	1.142	0.669	1.417					
			mm	17	29	17	36					
	E	Square	in	0.866	1.142	0.866	1.417					
			mm	22	29	22	36					
	F	Square	in	1.063	1.142	1.063	1.417					
			mm	27	29	27	36					
	G	Flat	in	0.378	1.142	-	1.417	0.563	0.378			
			mm	10	29	-	36	14	10			
125, 145 & 160	H	Flat	in	0.441	1.142	-	1.417	0.63	0.441			
			mm	11	29	-	36	16	11			
	I	Flat	in	0.503	1.142	-	1.417	0.756	0.503			
			mm	13	29	-	36	19	13			
	J	Flat	in	0.628	1.142	-	1.417	0.882	0.628			
			mm	16	29	-	36	22	16			
180 & 200	K	Round	in	1.130	1.142	-	1.417			0.252	1.252	1.13
			mm	29	29	-	36			6	32	29
	E	Square	in	0.866	1.654	0.866	1.417					
			mm	22	42	22	36					
	F*	Square	in	1.063	1.654	1.063	1.417					
			mm	27	42	27	36					
180 & 200	J	Flat	in	0.628	1.654	-	1.417	0.882	0.628			
			mm	16	42	-	36	22	16			
	K	Round	in	1.130	1.654	-	1.417			0.252	1.252	1.13
			mm	29	42	-	36			6	32	29

Note: \*Standard Insert

# Pneumatic Actuator Series SPNII



## Dimensions



### Dimensions

Model	Unit	A	B	C	D	E	F	G	H	H1	H2	I	J	L
32	in	3.23	2.83	1.22	.81	1.18	1.99	102	0.94	.43	-	1.26	1/8"	-
	mm	82	72	31	21	30	51	26	24	11	-	32	-	-
50	in	5.8	3.62	1.35	1.12	1.61	2.28	1.02	0.94	0.47	1.26	1.26	1/4"	1.65
	mm	147	92	34	28	41	58	26	24	12	32	32	32	42
63	in	6.26	4.25	1.67	1.42	1.93	2.83	1.18	0.94	0.63	1.34	1.26	1/4"	1.65
	mm	159	108	42	36	49	72	30	24	16	34	32	32	42
75	in	8.39	4.92	2.01	1.71	2.07	3.39	1.03	0.94	0.75	1.34	1.26	1/4"	1.65
	mm	213	125	51	43	53	86	26	24	19	34	32	32	42
85	in	9.8	5.43	2.27	1.91	2.22	3.8	1.26	0.94	0.75	1.34	1.26	1/4"	1.65
	mm	249	138	58	49	56	97	32	24	19	34	32	32	42
100	in	10.67	5.94	2.5	2.2	2.6	4.17	1.46	0.94	0.91	1.89	1.26	1/4"	1.65
	mm	271	151	64	56	66	106	37	24	23	48	32	32	42
115	in	12.40	7.28	2.85	2.52	3.03	5.00	1.67	0.94	0.91	1.89	1.26	1/4"	2.6
	mm	315	185	72	64	77	127	42	24	23	48	32	32	66
125	in	13.62	7.48	3.09	2.72	3.23	5.12	1.8	0.94	1.14	2.56	1.26	1/4"	2.6
	mm	346	190	78	69	82	130	46	24	29	65	32	32	66
145	in	16.22	8.25	3.46	3.15	3.54	5.85	2.17	0.94	1.14	2.56	1.26	1/4"	2.6
	mm	412	210	88	80	90	149	55	24	29	65	32	32	66
160	in	17.44	9.06	3.87	3.46	3.87	6.28	2.04	0.94	1.14	2.56	1.26	1/4"	2.6
	mm	443	230	98	88	98	160	52	24	29	65	32	32	66
180	in	19.37	9.96	4.33	3.88	4.15	7.07	2.37	0.94	1.65	3.62	1.26	1/4"	3.15
	mm	492	253	110	99	105	180	60	24	42	92	32	32	80
200	in	21.54	10.91	4.8	4.29	4.41	7.64	2.6	0.94	1.65	3.62	1.26	1/4"	3.15
	mm	547	277	122	109	112	194	66	24	42	92	32	32	80
240	in	24.17	13.7	5.75	5.14	5.16	9.09	2.76	1.57	1.97	3.62	1.77	3/8"	3.15
	mm	614	348	146	131	131	231	70	40	50	92	45	45	80
265	in	28.7	15.31	6.57	5.79	5.78	9.99	3.54	1.57	1.97	3.62	1.77	1/2"	3.15
	mm	729	389	167	147	146	254	90	40	50	92	45	45	80
300	in	33.03	16.14	6.99	6.38	6.81	11.42	3.35	1.57	1.97	3.62	1.77	1/2"	3.15
	mm	839	410	178	162	173	290	85	40	50	92	45	45	80

### Dimensions

Model	Unit	M	N	P	Q1	Q2	Q3	Q4	R	S	T	U	V	W
32	in	0.79	1.00	1.00	M5	F03	-	M5	-	M5	0.35	-	-	-
	mm	20	25	25	M5	F03	-	M5	-	M5	9	-	-	-
50	in	0.79	3.15	1.18	M5	F04	-	M5	-	M5	0.67	-	-	-
	mm	20	80	30	M5	F04	-	M5	-	M5	17	-	-	-
63	in	0.79	3.15	1.18	M5	F05	F07	M5	-	M6	0.67	-	-	-
	mm	20	80	30	M5	F05	F07	M5	-	M6	17	-	-	-
75	in	0.79	3.15	1.18	M5	F05	F07	M5	M8	M6	0.87	-	-	-
	mm	20	80	30	M5	F05	F07	M5	M8	M6	22	-	-	-
85	in	0.79	3.15	1.18	M5	F05	F07	M5	M8	M6	0.87	-	-	-
	mm	20	80	30	M5	F05	F07	M5	M8	M6	22	-	-	-
100	in	0.79	3.15	1.18	M5	F07	F10	M5	M10	M8	0.87	2.83	1.46	M8
	mm	20	80	30	M5	F07	F10	M5	M10	M8	22	72	37	37
115	in	1.18	3.15	1.18	M5	F07	F10	M5	M10	M8	0.87	2.83	1.46	M8
	mm	30	80	30	M5	F07	F10	M5	M10	M8	22	72	37	37
125	in	1.18	3.15	1.18	M5	F10	-	M5	-	M10	1.42	2.83	1.46	M8
	mm	30	80	30	M5	F10	-	M5	-	M10	36	72	37	37
145	in	1.18	3.15	1.18	M5	F10	F12	M5	M12	M10	1.42	2.83	1.46	M8
	mm	30	80	30	M5	F10	F12	M5	M12	M10	36	72	37	37
160	in	1.18	3.15	1.18	M5	F10	F12	M5	M12	M10	1.42	2.83	1.46	M8
	mm	30	80	30	M5	F10	F12	M5	M12	M10	36	72	37	37
180	in	1.18	5.12	1.18	M5	F10	F14	M5	M16	M10	1.42	3.9	2.09	M10
	mm	30	130	30	M5	F10	F14	M5	M16	M10	36	99	53	53
200	in	1.18	5.12	1.18	M5	F10	F14	M5	M16	M10	1.42	3.9	2.09	M10
	mm	30	130	30	M5	F10	F14	M5	M16	M10	36	99	53	53
240	in	1.97	5.12	1.18	M5	F12	F16	M6	M20	M12	1.81	-	-	-
	mm	50	130	30	M5	F12	F16	M6	M20	M12	46	-	-	-
265	in	1.97	5.12	1.18	M5	-	F16	M6	M20	-	1.81	-	-	-
	mm	50	130	30	M5	-	F16	M6	M20	-	46	-	-	-
300	in	1.97	5.12	1.18	M5	-	F16	M6	M20	-	1.81	-	-	-
	mm	50	130	30	M5	-	F16	M6	M20	-	46	-	-	-

## Spring Return Torques

Model	Spring Quantity	Torque Output (lbf-inch) at Supply Pressure														Spring Return	
		40 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi		Start	End
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End		
50	5	53	39	82	67	109	95	129	114	146	131	174	160	215	200	42	27
	6	46	31	75	58	103	86	122	105	139	122	167	151	208	190	50	34
	7	41	23	69	49	97	78	115	96	133	113	161	142	201	181	59	40
	8	0	0	61	38	90	68	108	86	125	103	154	133	194	171	69	47
	9	0	0	55	30	84	61	102	78	119	94	148	125	188	163	77	53
	10	0	0	0	0	78	53	96	70	113	86	142	117	181	155	85	59
	11	0	0	0	0	71	44	89	60	105	76	135	107	174	145	95	66
	12	0	0	0	0	64	34	82	51	98	66	128	98	167	135	104	73
63	5	84	60	145	118	197	172	225	199	259	233	290	265	369	342	76	50
	6	75	46	135	102	187	156	215	183	249	216	281	249	359	326	92	60
	7	66	31	125	85	178	141	205	167	239	200	271	234	349	309	108	70
	8	0	0	114	70	167	127	194	153	228	185	261	220	338	295	122	81
	9	0	0	103	54	157	112	184	137	217	168	250	204	327	278	138	91
	10	0	0	92	38	147	97	173	121	206	152	240	188	316	262	154	102
	11	0	0	0	0	138	81	163	105	196	135	230	173	306	245	170	112
	12	0	0	0	0	128	67	154	90	186	120	221	158	296	230	185	121
75	5	183	130	325	266	402	346	457	399	526	467	602	545	728	668	159	102
	6	167	102	307	233	385	316	439	368	508	435	584	514	710	636	190	119
	7	149	73	287	201	366	286	420	337	488	403	565	484	689	604	221	139
	8	0	0	266	169	346	256	399	306	467	371	545	453	668	572	252	159
	9	0	0	246	137	328	226	381	275	448	339	527	423	649	540	283	178
	10	0	0	226	105	309	197	361	244	428	307	507	392	629	508	314	197
	11	0	0	0	0	291	167	342	213	407	275	488	362	609	476	345	217
	12	0	0	0	0	272	137	322	182	387	243	469	331	589	444	376	236

## Spring Return Torques (Cont.)

Model	Spring Quantity	Torque Output (lbf-inch) at Supply Pressure														Spring Return	
		40 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi			
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
85	5	278	187	469	366	591	496	703	604	798	696	917	820	1155	1053	266	166
	6	248	140	435	313	560	446	670	552	764	643	885	769	1122	1000	317	199
	7	218	93	401	260	528	396	637	501	731	590	853	718	1088	947	368	232
	8	0	0	368	207	497	347	605	449	698	536	821	668	1055	894	419	264
	9	0	0	335	154	467	297	574	398	665	483	790	617	1022	840	471	296
	10	0	0	301	101	435	248	541	346	631	430	758	567	988	787	522	328
	11	0	0	0	0	403	198	508	295	597	377	725	516	954	734	573	361
	12	0	0	0	0	372	149	475	243	563	324	693	466	920	681	625	394
100	5	418	305	722	595	871	752	1038	914	1189	1062	1385	1264	1729	1602	345	222
	6	377	241	676	523	827	684	993	844	1143	990	1341	1195	1683	1530	415	267
	7	335	177	629	450	784	617	947	774	1096	917	1297	1127	1636	1458	485	312
	8	0	0	582	378	740	549	902	704	1049	845	1252	1058	1589	1385	555	358
	9	0	0	536	306	696	482	857	634	1002	773	1208	989	1543	1313	625	403
	10	0	0	490	234	654	415	812	565	957	701	1164	921	1497	1241	694	447
	11	0	0	0	0	610	348	767	494	910	629	1120	852	1450	1169	764	492
	12	0	0	0	0	566	280	721	424	862	557	1074	783	1403	1097	834	538

## Spring Return Torques (Cont.)

Model	Spring Quantity	Torque Output (lbf-inch) at Supply Pressure														Spring Return	
		40 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi			
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
115	5	716	513	1199	970	1487	1273	1731	1509	1987	1758	2267	2049	2774	2554	584	363
	6	651	407	1126	851	1418	1162	1660	1403	1913	1648	2197	1936	2701	2435	699	434
	7	586	301	1053	732	1350	1051	1589	1287	1831	1520	2127	1822	2628	2307	814	504
	8	0	0	970	613	1273	940	1518	1172	1758	1401	2049	1709	2554	2188	929	584
	9	0	0	897	494	1205	829	1447	1048	1685	1282	1979	1596	2472	2069	1044	655
	10	0	0	824	375	1136	718	1367	932	1611	1163	1910	1482	2399	1950	1159	726
	11	0	0	0	0	1068	607	1296	817	1538	1044	1840	1369	2325	1831	1274	797
	12	0	0	0	0	1000	496	1225	701	1456	925	1761	1256	2243	1712	1389	867
125	5	911	667	1456	1181	1854	1598	2211	1944	2536	2261	2912	2651	3580	3305	717	451
	6	826	529	1360	1025	1765	1453	2117	1793	2440	2106	2821	2502	3484	3149	867	544
	7	741	399	1263	879	1675	1316	2024	1651	2344	1959	2729	2363	3387	3003	1009	637
	8	0	0	1163	723	1581	1171	1926	1500	2243	1804	2633	2215	3287	2847	1159	735
	9	0	0	1067	568	1491	1025	1833	1349	2147	1648	2542	2066	3191	2692	1310	827
	10	0	0	965	411	1401	880	1740	1198	2051	1492	2450	1918	3094	2536	1460	920
	11	0	0	0	0	1312	743	1647	1056	1955	1346	2359	1779	2998	2390	1602	1013
	12	0	0	0	0	1218	598	1549	906	1854	1190	2263	1630	2898	2234	1752	1111

# Pneumatic Actuator Series SPNII

## Spring Return Torques (Cont.)

Model	Spring Quantity	Torque Output (lbf-inch) at Supply Pressure														Spring Return	
		40 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi			
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
145	5	1213	838	2142	1721	2897	2504	3382	2974	4120	3699	4438	4037	5576	5154	1124	717
	6	1074	627	1987	1483	2751	2281	3231	2743	3964	3461	4290	3810	5420	4916	1354	867
	7	936	415	1831	1245	2606	2059	3081	2512	3809	3233	4142	3584	5264	4678	1584	1018
	8	0	0	1685	1007	2469	1837	2939	2282	3662	2985	4002	3357	5118	4440	1814	1159
	9	0	0	1529	778	2324	1624	2788	2060	3506	2756	3854	3139	4962	4211	2036	1310
	10	0	0	1373	540	2179	1401	2637	1829	3351	2518	3706	2912	4806	3973	2266	1460
	11	0	0	0	0	2042	1179	2495	1598	3204	2280	3566	2686	4660	3735	2496	1602
	12	0	0	0	0	1905	957	2353	1367	3058	2042	3427	2459	4514	3497	2726	1743
160	5	1953	1506	3113	2609	3845	3375	4572	4084	5173	4669	5912	5432	7324	6821	1460	974
	6	1766	1237	2902	2307	3649	3093	4368	3791	4962	4367	5711	5144	7114	6518	1752	1177
	7	1579	960	2692	1996	3452	2803	4164	3489	4752	4056	5511	4848	6903	6207	2053	1381
	8	0	0	2481	1694	3256	2521	3959	3196	4541	3754	5310	4560	6692	5905	2345	1584
	9	0	0	2280	1382	3068	2230	3764	2894	4340	3442	5118	4264	6491	5594	2646	1779
	10	0	0	2069	1080	2871	1948	3560	2601	4129	3140	4918	3976	6280	5292	2938	1982
	11	0	0	0	0	2675	1658	3356	2299	3918	2829	4717	3680	6070	4980	3239	2186
	12	0	0	0	0	2487	1376	3160	2006	3717	2527	4525	3392	5868	4678	3531	2381
180	5	2352	1676	4129	3369	5161	4452	6143	5407	6903	6143	7917	7193	9897	9137	2115	1381
	6	2091	1294	3836	2939	4888	4050	5859	4989	6610	5713	7638	6784	9604	8707	2531	1664
	7	1831	911	3543	2509	4614	3649	5575	4572	6317	5283	7359	6374	9311	8276	2947	1947
	8	0	0	3250	2069	4341	3238	5291	4146	6024	4843	7080	5955	9018	7837	3372	2230
	9	0	0	2966	1639	4076	2837	5016	3729	5740	4413	6810	5545	8734	7407	3788	2505
	10	0	0	2673	1208	3802	2435	4732	3311	5447	3983	6531	5136	8441	6976	4204	2788
	11	0	0	0	0	3538	2034	4457	2894	5164	3552	6260	4726	8157	6546	4620	3062
	12	0	0	0	0	3264	1632	4173	2477	4871	3122	5981	4316	7864	6116	5036	3345
200	5	3328	2498	5713	4779	7195	6323	8425	7519	9558	8624	10864	9975	13412	12479	2814	1912
	6	2987	1986	5328	4202	6836	5785	8052	6960	9173	8047	10498	9425	13028	11902	3372	2283
	7	2645	1473	4944	3625	6477	5247	7679	6401	8789	7471	10132	8876	12643	11325	3929	2655
	8	0	0	4559	3058	6118	4717	7306	5850	8404	6903	9766	8336	12259	10757	4478	3027
	9	0	0	4166	2490	5751	4187	6925	5300	8011	6335	9391	7795	11865	10190	5027	3407
	10	0	0	3772	1913	5383	3649	6543	4741	7617	5759	9016	7246	11471	9613	5584	3788
	11	0	0	0	0	5024	3119	6170	4190	7233	5191	8649	6705	11087	9045	6133	4160
	12	0	0	0	0	4657	2581	5788	3631	6839	4614	8275	6156	10693	8469	6691	4540

## Spring Return Torques (Cont.)

Model	Spring Quantity	Torque Output (lbf-inch) at Supply Pressure														Spring Return	
		40 psi		60 psi		70 psi		80 psi		90 psi		100 psi		120 psi			
		Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
240	5	5737	4419	9796	8313	12134	10749	14249	12811	16342	14859	18685	17273	22888	21405	4664	3230
	6	5135	3564	9119	7352	11501	9852	13592	11878	15665	13898	18040	16357	22210	20444	5593	3885
	7	4541	2694	8450	6372	10878	8938	12944	10929	14996	12936	17395	15450	21524	19482	6540	4531
	8	0	0	7736	5402	10245	8032	12287	9987	14319	11975	16758	14535	20846	18521	7478	5186
	9	0	0	7123	4449	9639	7143	11656	9064	13669	11014	16113	13628	20160	17560	8399	5814
	10	0	0	6445	3506	9006	6263	11000	8150	12991	10052	15459	12713	19491	16589	9310	6469
	11	0	0	0	0	8374	5358	10343	7209	12314	9100	14823	11788	18814	15637	10248	7124
	12	0	0	0	0	7742	4426	9686	6241	11636	8148	14169	10882	18127	14667	11213	7779
265	5	9790	7690	16278	13916	20149	17944	23597	21307	27081	24719	30849	28599	37793	35431	7080	4797
	6	8887	6429	15298	12479	19217	16577	22629	19886	26083	23254	29898	27204	36795	33966	8452	5779
	7	8016	5119	14319	11041	18286	15210	21742	18466	22613	21789	28948	25809	35797	32501	9877	6726
	8	0	0	13339	9567	17355	13843	20685	17045	24087	20324	27997	24414	34799	31036	11284	7655
	9	0	0	12359	8111	16423	12475	19726	15625	23089	18860	27047	23019	33709	29571	12744	8673
	10	0	0	11297	6628	15492	11108	18759	14204	22091	17395	26097	21624	32803	28106	14125	9611
	11	0	0	0	0	14560	9741	17791	12784	21094	15930	25146	20229	31805	26642	15523	10558
	12	0	0	0	0	13672	8459	16823	11364	20096	14465	24196	18833	30807	25177	16904	11505
300	5	11857	8854	20041	16662	25147	21994	29181	25905	33444	30066	38225	35008	46838	43460	9797	6531
	6	10661	7064	18695	14648	23891	20115	27876	23952	32098	28051	36943	33089	45492	41445	11744	7832
	7	9464	5265	17349	12625	22635	18226	26571	21990	30752	26028	35662	31162	44146	39422	13700	9133
	8	0	0	16003	10602	21379	16338	25266	20028	29406	24005	34380	29236	42800	37399	15656	10434
	9	0	0	14648	8578	20115	14449	23952	18066	28051	21982	33089	27309	41445	35376	17612	11744
	10	0	0	13302	6555	18858	12561	22647	16104	26706	19958	31808	25382	40100	33352	19567	13045
	11	0	0	0	0	17602	10672	21342	14145	25359	17935	30526	23455	38754	31329	21523	14346
	12	0	0	0	0	0	0	20035	12184	24011	15914	29242	21530	37399	29306	23479	15656

# Pneumatic Actuator

## Series SPNII

### Double Acting Torques & Technical Information

#### Torque Output (lbf-inch) at Supply Pressure

Model	40 psi	60 psi	70 psi	80 psi	90 psi	100 psi	120 psi
32	26	41	51	59	67	76	92
50	77	110	135	155	174	201	243
63	130	197	245	275	311	340	421
75	277	430	500	559	632	702	833
85	431	641	752	870	970	1081	1328
100	623	952	1085	1261	1419	1604	1959
115	1050	1556	1837	2095	2362	2625	3149
125	1327	1923	2289	2664	3003	3357	4047
145	1872	2884	3588	4102	4862	5145	6317
160	2849	4120	4784	5549	6180	6871	8331
180	3622	5557	6492	7529	8331	9278	11325
200	5087	7690	9037	10344	11536	12748	15390
240	8709	13138	15248	17492	19684	21869	26230
265	14203	21240	24772	28413	32044	35577	42755
300	17865	26798	31443	35738	40201	44663	53595

#### Air Consumption and Weights

	Unit	32	50	63	75	85	100	115	125	145	160	180	200	240	265	300
Body Diameter	in	1.26	1.97	2.48	2.95	3.46	3.94	4.53	4.92	5.71	6.3	7.09	7.87	9.45	10.43	11.81
	mm	32	50	63	75	88	100	115	125	145	160	180	200	240	265	300
Air Consumption Per Stroke Actual in <sup>3</sup>	CCW	0.9	4.9	9.2	18.3	30.5	45.8	72.6	94.6	146.5	195.3	262.4	358.2	610.2	884.8	1287.6
	CW	2.1	7.9	15.3	29.3	44.6	65.9	109.8	133.0	216.6	288.0	415.0	581.6	927.6	1305.9	1861.2
Opening Time DA	Sec.	0.13	0.2	0.2	0.2	0.3	0.4	0.7	0.8	1.3	1.6	2.0	2.7	3.5	4.0	8.8
Closing Time DA	Sec.	0.14	0.2	0.2	0.3	0.4	0.5	0.9	1.1	1.4	2.0	2.4	3.5	4.1	4.5	12.7
Approximate Weight DA	Lb	0.71	2.40	3.40	6.10	8.30	11.70	18.50	21.90	31.10	40.50	55.10	77.20	119.05	178.57	299.39
	kg	0.32	1.09	1.54	2.77	3.76	5.31	8.39	9.93	14.10	18.37	24.99	35.01	53.99	80.98	135.80

# Pneumatic Actuator Series SPNII



## SPNII Ordering Information

### SPN II Sample Specification

Actuator shall be Sharpe® Automation SPN II series with rack and pinion design. The body to be hard anodized, extruded aluminum. Powder coated body and epoxy coated end caps for corrosion protection. Internal parts to be dual aluminum pistons, with alloy steel blow out proof pinion. Bearings, bushings, and O-rings designed to maximize service life and prevent premature failure. Actuators will have dual travel stops, with adjustments for travel on both ends. All markings screened on body to easily identify threading on ports, ISO and NAMUR interfaces. Accessory bolt patterns and mounting areas to NAMUR VDI / VDE industry standards. Fasteners are to be stainless steel. Bottom drilling patterns are to ISO 5211 to provide mounting to valves, and mounting kits when necessary.



Insert system for the pinion allows for flexible mounting combinations, with close fits to actuator as well as valve stem or coupler. Pinion to have double bore to provide fitting to the valve stem or coupler as well as having extra depth to insert taller stems seen in butterfly valves.



Actuator to use cartridge style springs for easy identification of sizing. The same end caps and fasteners to be used whether for double acting or spring return applications. Inside surface finish minimizing friction and maximizing service life. Lubrication of actuator suitable for 1,000,000 operations. The visual indicator designed to be used with other top mounted devices.

**Fig:** SPNII 100-SR-10-D

**Description:** SPNII 100 - Spring Return - 10 Springs - Size D Insert

## How to order

SPNII	100	-	SR	-	10	-	D	Suffix / Options	
Series	Size		Action		No. of Springs		Insert		
SPNII	032	DA	Double Acting		5		A	P1	High/Low Temp EPDM Seals -40°F to 300°F
	050	SR	Spring Return		6		B		
	063				7		C	P3	Electroless Nickel Treatment
	075				8		D	P6	SR spring-to-open, CCW rotation. Loss of air to actuator, valve fails open.
	085				9		E		
	100				10		F	<b>Note:</b> Standard SR is spring-to-close, CW rotation. Loss of air to actuator, valve fails closed.	
	115				11		G		
	125				12		H		
	145						I		
	160						J		
	180						K		
	200								
	240								
	265								
300									

Responsibility for proper selection, use and maintenance of any product remains solely with the purchaser and end user. We reserve the right to modify or improve the designs or specifications of any product at any time without notice.

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