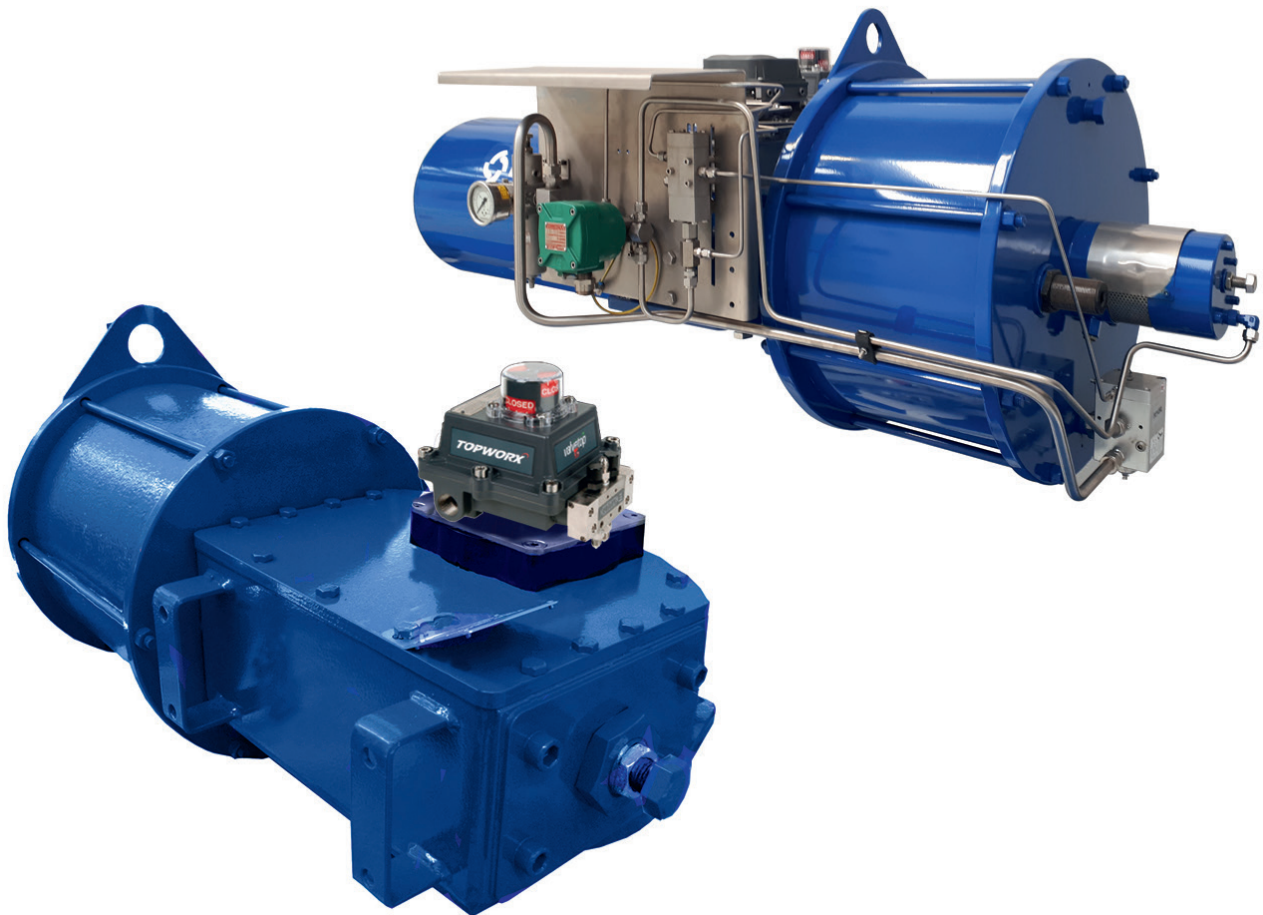


Biffi ALGA/ALGAS/ALGAS-QA Pneumatic Actuators

Scotch Yoke Design

Double-acting and spring-return pneumatic quarter-turn actuators for on/off and modulating control of valves in heavy-duty service. Available for output torques to 8,850,750 lb-in.



This page is intentionally left blank.

Table of Contents

Section 1: General Application

General Application 5

Section 2: Technical Data

Technical Data..... 5

Section 3: Features

Features 5

Section 4: Approvals

Approvals..... 5

Section 5: ALGA Double-Acting Pneumatic Actuator Output Torques (lb-in)

Canted Yoke Design7

Symmetric Yoke Design..... 12

Section 6: ALGAS Spring-Return Pneumatic Actuator Output Torques (lb-in)

Canted Yoke Design, Spring to Close 17

Canted Yoke Design, Spring to Open..... 33

Symmetric Yoke Design, Spring to Close 47

Symmetric Yoke Design, Spring to Open 63

Section 7: ALGA Double-Acting Pneumatic Actuator Overall Dimensions

Single Cylinder..... 79

Two Cylinders..... 81

Section 8: ALGAS Spring-Return Pneumatic Actuator Overall Dimensions

Spring to Close 82

Spring to Open..... 87

Section 9: ALGA/ALGAS/ALGAS-QA Pneumatic Actuator

Mounting Dimensions 93

Accessories Mounting Dimensions..... 98

Selection Guide 100

This page is intentionally left blank.

General Application

ALGA, ALGAS and ALGAS-QA pneumatic actuators are designed for on/off or modulating control of quarter-turn ball, butterfly, plug or damper style valves.

Technical Data

Design pressure (MAWP): up to 174 psi

Supply medium: Air, nitrogen or sweet gas
Sour gas version available

Output torque

ALGA: Double-acting torque up to 8,850,750 lb-in

ALGAS/ALGAS-QA: Spring starting torque up to 2,964,000 lb-in
Spring end torque up to 2,079,900 lb-in

Ambient temperature

Standard range: -4 to +210 °F / -20 to +100 °C

Extended temperature: -70 to +275 °F / -60 to +135 °C

MAWP: Maximum Allowable Working Pressure is the pressure defined for the design of the actuator pressure containing parts.

MOP: Maximum Operating Pressure is the pressure that generates the torque used to engineer the mechanical loaded parts of the actuator and it is the one required to produce the design torque of the actuator.

Features

- Totally enclosed, weatherproof housing in fabricated carbon steel for maximum strength.
- Guide bar resists transverse loads and supports the piston rod.
- Hard chromium plated alloy steel material guarantees corrosion protection and minimal friction.
- Polytetrafluoroethylene (PTFE)-impregnated bronze or sintered bronze bushings provide minimal friction and extended service life.
- Scotch yoke design with canted or symmetric torque arm allows close working to distinctive valve torque profiles.
- External travel stops for precise angular stroke adjustment 90° ±4° at each end of travel.
- Electroless nickel plated and polished cylinder provides maximum corrosion resistance and reduces friction.
- Floating type piston seals provide low hysteresis and high sensitivity, preventing sticking problems.
- ALGAS spring-return pack incorporates up to four springs, fully encapsulated in a factory welded cartridge ensuring personnel safety and simplifying assembly.
- ALGAS spring action can be changed easily in the field from to close to open or vice versa.
- Special coatings for offshore or corrosive environments.

Approvals

Safety Integrity Level: (IEC 61508-1÷7:2010)	SIL 3
Area Classification: (ATEX)	II 2GD
Enclosure standards: (IEC 60529) (ANSI/NEMA 250)	IP66, IP66M, IP67M NEMA 4, 4X, 6
Pressure Equipment Directive:	2014/68/EU
Machinery Directive:	2006/42/EC

Figure 1. ALGA Double-Acting

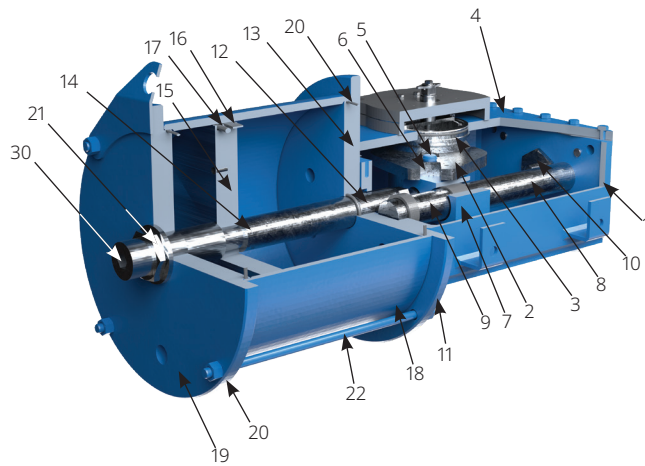


Figure 2. ALGAS Spring-Return

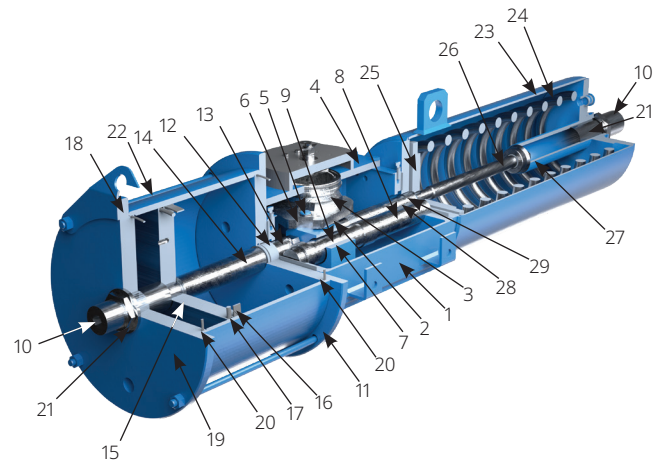


Table 1. Materials

Part	Material
1 Housing	Carbon steel
2 Yoke	Carbon steel
3 Yoke bushing	Bronze
4 Cover	Carbon steel
5 Guide block pin	Alloy steel
6 Sliding block	Bronze
7 Guide block	Carbon steel
8 Guide bar	Alloy steel (hard chrome plated)
9 Guide block bushing	Steel + Bronze + PTFE
10 Travel stop screw	Carbon steel
11 Cylinder head flange	Carbon steel
12 Piston rod bushing	Steel + Bronze + PTFE
13 Piston rod seal	Nitrile Butadiene Rubber (NBR)
14 Piston rod	Alloy steel (hard chrome plated)
15 Piston	Carbon steel

Part	Material
16 Piston guide sliding ring	PTFE + Graphite
17 Piston seal O-ring	NBR
18 Cylinder tube	Carbon steel (ENP)
19 Cylinder end flange	Carbon steel
20 Cylinder seal O-ring	NBR
21 Sealing washer	PVC
22 Tie rod	Alloy steel
23 Spring container	Carbon steel
24 Spring	Carbon steel
25 Spring thrust flange	Carbon steel
26 Guide rod	Alloy steel (hard chrome plated)
27 Guide rod bushing	Steel + Bronze + PTFE
28 Container rod	Alloy steel (hard chrome plated)
29 Container rod bushing	Steel + Bronze + PTFE
30 Travel stop screw	Carbon steel

NOTES:

Mounting brackets and tie rods available in stainless steel as an option.
 Fluoroelastomer and fluorosilicone seals available as an option.
 BOM is for info only, please refer to factory for more details.

ALGA Double-Acting Pneumatic Actuator Output Torques (lb-in)

Canted Yoke Design

Table 2. Models 0.3C-100 to 3C-335

Model	Position	Operating Supply Pressure (psi)																				MOP* (psi)		
		40		50		60		70		80		90		100		110		120		150			174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL
0.3C-100	0°	2628	2717	3345	3469	4062	4213	4779	4956	5496	5699	6204	6443	6921	7186	7638	7930	8354	8673	10505	10912	12222	12700	174
	45°	1027	956	1301	1221	1584	1478	1867	1743	2142	2009	2425	2266	2708	2531	2982	2797	3266	3053	4106	3841	4770	4469	
	90°	1478	1328	1885	1690	2283	2053	2690	2416	3098	2779	3496	3142	3903	3505	4301	3867	4708	4230	5921	5328	6885	6195	
0.3C-135	0°	4876	5213	6177	6611	7478	8000	8788	9399	10089	10797	11390	12195	12700	13594	14001	14992	15311	16390	19222	20585	22346	23939	174
	45°	1903	1832	2416	2328	2921	2814	3434	3310	3938	3806	4452	4292	4965	4788	5469	5283	5983	5779	7514	7257	8735	8434	
	90°	2744	2540	3478	3221	4213	3903	4947	4584	5682	5275	6416	5956	7151	6638	7894	7319	8629	8000	10832	10045	12594	11682	
0.3C-175	0°	8284	9000	10478	11381	12673	13762	14859	16142	17054	18532	19240	20913	21435	23293	23630	25674	-	-	-	-	-	-	113
	45°	3239	3168	4089	4009	4947	4850	5806	5691	6664	6531	7523	7363	8372	8204	9231	9045	-	-	-	-	-	-	
	90°	4664	4390	5903	5558	7142	6717	8372	7877	9611	9045	10841	10204	12080	11372	13319	12532	-	-	-	-	-	-	
0.3C-235	0°	15116	16576	19072	20913	23019	25249	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	45°	5903	5841	7452	7372	8992	8894	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	8523	8089	10744	10213	12974	12328	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9C-235	0°	17479	19169	22054	24187	26621	29196	31187	34214	35763	39223	40329	44241	44896	49259	49472	54268	54038	59286	67747	74331	-	-	160
	45°	6832	6753	8620	8523	10399	10293	12186	12054	13974	13824	15762	15594	17550	17355	19337	19125	21125	20895	26479	26196	-	-	
	90°	9850	9354	12425	11806	15001	14257	17576	16700	20151	19151	22727	21594	25302	24045	27878	26497	30453	28940	38188	36285	-	-	
0.9C-280	0°	24913	27063	31400	34108	37887	41161	44374	48215	50861	55268	57348	62322	63835	69375	70322	76429	-	-	-	-	-	-	115
	45°	9735	9531	12275	12018	14806	14505	17346	16992	19877	19479	22417	21966	24948	24453	27488	26939	-	-	-	-	-	-	
	90°	14036	13213	17700	16656	21355	20098	25010	23541	28665	26984	32320	30426	35975	33869	39639	37312	-	-	-	-	-	-	
1.5C-280	0°	31506	34214	39710	43135	47914	52056	56118	60977	64322	69897	72526	78809	80730	87730	88934	96651	97138	105572	121741	132325	-	-	149
	45°	12310	12054	15514	15204	18727	18346	21930	21488	25143	24630	28347	27780	31550	30922	34763	34064	37967	37205	47586	46640	-	-	
	90°	17753	16709	22382	21063	27001	25417	31630	29771	36250	34126	40878	38480	45498	42834	50126	47188	54746	51542	68614	64605	-	-	
1.5C-335	0°	45268	49489	57012	62339	68756	75190	80500	88031	92244	100881	103979	113731	115723	126573	-	-	-	-	-	-	-	-	104
	45°	17691	17443	22284	21966	26869	26497	31462	31028	36055	35550	40639	40082	45232	44613	-	-	-	-	-	-	-	-	
	90°	25515	24161	32134	30435	38745	36710	45365	42976	51985	49250	58605	55525	65225	61800	-	-	-	-	-	-	-	-	
1.5C-385	0°	60242	66110	75747	83137	91261	100164	106766	117192	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78
	45°	23541	23302	29603	29302	35666	35303	41737	41303	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	33949	32276	42692	40586	51436	48905	60180	57215	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
3C-335	0°	74924	81924	94368	103191	113802	124449	133237	145715	152671	166982	172115	188240	191549	209506	210984	230773	230427	252030	-	-	-	-	126
	45°	29285	28869	36887	36365	44480	43861	52082	51357	59676	58853	67278	66348	74871	73844	82473	81340	90066	88827	-	-	-	-	
	90°	42232	39993	53189	50374	64136	60755	75092	71145	86049	81526	97005	91907	107961	102288	118917	112669	129874	123050	-	-	-	-	

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 3. Models 3C-385 to 6C-585

Model	Position	Operating Supply Pressure (psi)																		MOP* (psi)					
		40		50		60		70		80		90		100		110		120			150		174		
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL	OP	CL	
3C-385	0°	99704	109421	125378	137609	151052	165796	176726	193974	202400	222162	228073	250340	-	-	-	-	-	-	-	-	-	-	94	
	45°	38975	38568	49011	48498	59038	58437	69074	68366	79110	78305	89146	88235	-	-	-	-	-	-	-	-	-	-		
	90°	56198	53427	70667	67180	85137	80942	99607	94704	114077	108466	128546	122227	-	-	-	-	-	-	-	-	-	-		
3C-435	0°	127767	140565	160539	176628	193311	212692	226082	248756	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	
	45°	49941	49542	62747	62251	75561	74960	88367	87677	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	90°	72012	68623	90482	86234	108952	103846	127431	121449	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3C-485	0°	159415	175690	200152	220595	240897	265500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59	
	45°	62313	61923	78234	77747	94164	93580	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	90°	89854	85774	112811	107705	135777	129626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
6C-485	0°	186372	205400	234003	257898	281634	310396	329264	362894	376895	415392	424517	467891	472148	520398	-	-	-	-	-	-	-	-	-	102
	45°	72844	72393	91465	90898	110085	109404	128706	127909	147317	146414	165938	164911	184558	183416	-	-	-	-	-	-	-	-	-	
	90°	105041	100279	131892	125909	158734	151547	185585	177177	212427	202807	239277	228445	266120	254075	-	-	-	-	-	-	-	-	-	
6C-535	0°	227622	251172	285581	315131	343530	379099	401489	443058	459448	507017	-	-	-	-	-	-	-	-	-	-	-	-	83	
	45°	88969	88527	111625	111068	134281	133617	156937	156158	179593	178708	-	-	-	-	-	-	-	-	-	-	-	-		
	90°	128290	122634	160964	153857	193629	185089	226295	216312	258960	247543	-	-	-	-	-	-	-	-	-	-	-	-		
6C-585	0°	272155	300599	341451	377143	410746	453686	480042	530230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70	
	45°	106377	105952	133467	132927	160557	159911	187638	186885	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	90°	153397	146760	192452	184133	231507	221507	270571	258880	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 4. Models 14C-635 to 32C-835

Model	Position	Operating Supply Pressure (psi)																				MOP* (psi)					
		40		50		60		70		80		90		100		110		120		150			174				
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL			
14C-635	0°	350478	385418	439712	483573	528956	581719	618190	679875	707425	778021	796668	876177	885903	974323	-	-	-	-	-	-	-	-	-	-	109	
	45°	136998	135848	171876	170442	206763	205037	241640	239631	276527	274226	311405	308821	346292	343415	-	-	-	-	-	-	-	-	-	-		81
	90°	197541	188178	247835	236100	298139	284014	348433	331937	398728	379860	449031	427782	499326	475705	-	-	-	-	-	-	-	-	-	-		
14C-735	0°	469554	517575	589109	649369	708673	781172	828227	912975	947782	1044769	-	-	-	-	-	-	-	-	-	-	-	-	-	141		
	45°	183540	182425	230277	228879	277014	275332	323742	321795	370479	368249	-	-	-	-	-	-	-	-	-	-	-	-	-		122	
	90°	264659	252703	332043	317051	399427	381400	466820	445748	534204	510096	-	-	-	-	-	-	-	-	-	-	-	-	-			
18C-635	0°	403047	443235	505671	556107	608296	668980	710921	781853	813545	894726	916161	1007599	1018785	1120472	1121410	1233354	1224035	1346227	-	-	-	-	-	104		
	45°	157548	156220	197656	196010	237773	235791	277890	275580	318007	315361	358115	355142	398232	394931	438349	434712	478458	474502	-	-	-	-	-		70	
	90°	227171	216400	285014	271509	342858	326618	400701	381736	458536	436845	516380	491954	574223	547063	632067	602172	689911	657281	-	-	-	-	-			
18C-685	0°	469023	516451	588445	647962	707858	779481	827280	910992	946702	1042512	1066124	1174023	1185546	1305543	1304968	1437054	1424390	1568574	-	-	-	-	-	61		
	45°	183337	182027	230012	228383	276695	274739	323370	321096	370054	367452	416738	413799	463413	460156	510096	506512	556780	552868	-	-	-	-	-		160	
	90°	264358	252145	331663	316361	398976	380568	466289	444783	533593	508990	600906	573206	668219	637421	735524	701628	802837	765844	-	-	-	-	-			
18C-735	0°	539992	595207	677485	746781	814970	898346	952464	1049920	1089957	1201485	1227442	1353059	1364936	1504624	-	-	-	-	-	-	-	-	-	174		
	45°	211073	209789	264819	263217	318565	316635	372302	370063	426048	423481	479794	476909	533540	530327	-	-	-	-	-	-	-	-	-		123	
	90°	304360	290607	381851	364602	459350	438606	536841	512610	614332	586613	691831	660617	769322	734621	-	-	-	-	-	-	-	-	-			
18C2-635	0°	802438	890540	1006767	1117304	1211096	1344067	1415425	1570831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160		
	45°	313662	313883	393533	393807	473404	473741	553275	553665	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		123	
	90°	452279	434792	567453	545514	682618	656228	797783	766941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
18C2-685	0°	934383	1036972	1172306	1301012	1410230	1565061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	174		
	45°	365240	365496	458244	458563	551240	551629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		160	
	90°	526646	506291	660750	635209	794854	764127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
32C-685	0°	550594	606269	690778	760658	830971	915046	971155	1069425	1111348	1223813	1251540	1378202	1391724	1532590	1531917	1686978	1672110	1841366	2092671	2304531	2429130	2675063	-	-	160	
	45°	215214	213683	270014	268102	324813	322521	379612	376939	434411	431358	489210	485768	544010	540186	598809	594605	653608	649024	818006	812271	949525	942870	-	-		123
	90°	310334	296006	389347	371381	468360	446757	547381	522141	626394	597517	705407	672892	784429	748276	863441	823652	942463	899027	1179510	1125162	1369148	1306074	-	-		
32C-735	0°	633899	698725	795305	876654	956703	1054584	1118109	1232513	1279506	1410442	1440913	1588371	1602319	1766301	1763717	1944230	1925123	2122159	2409324	2655947	-	-	-	-	123	
	45°	247782	246278	310874	308989	373966	371709	437057	434420	500149	497131	563241	559851	626323	622562	689415	685273	752507	747993	941782	936135	-	-	-	-		123
	90°	357292	341141	448261	428013	539231	514893	630209	601765	721178	688636	812147	775508	903125	862379	994094	949251	1085063	1036123	1357979	1296737	-	-	-	-		
32C-835	0°	818129	903178	1026441	1133163	1234743	1363148	1443054	1593133	1651366	1823118	1859668	2053103	2067980	2283096	2276291	2513081	2484602	2743066	-	-	-	-	-	123		
	45°	319795	318335	401224	399401	482644	480467	564072	561524	645501	642590	726921	723656	808350	804713	889779	885779	971199	966836	-	-	-	-	-		123	
	90°	461129	440969	578533	553258	695946	665547	813359	777835	930763	890124	1048176	1002413	1165589	1114702	1283002	1226991	1400406	1339279	-	-	-	-	-			

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 5. Models 32C2-685 to 50C2-1000

Model	Position	Operating Supply Pressure (psi)																		MOP* (psi)				
		40		50		60		70		80		90		100		110		120			150		174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL	OP	CL
32C2-685	0°	1096878	1217309	1376184	1527280	1655490	1837251	1934796	2147222	2214093	2457185	2493399	2767156	-	-	-	-	-	-	-	-	-	-	125
	45°	428756	429057	537938	538319	647112	647572	756286	756825	865468	866079	974642	975332	-	-	-	-	-	-	-	-	-	-	125
	90°	618243	594339	775667	745683	933091	897018	1090515	1048362	1247947	1199697	1405371	1351041	-	-	-	-	-	-	-	-	-	-	125
50C-935	0°	1139800	1257727	1430018	1577990	1720228	1898263	2010437	2218536	2300655	2538800	2590864	2859072	2881073	3179345	3171282	3499609	3461501	3819881	-	-	-	-	109
	45°	445536	443305	558975	556187	672414	669078	785862	781959	899302	894841	1012741	1007732	1126180	1120614	1239620	1233495	1353068	1346386	-	-	-	-	109
	90°	642430	614075	806005	770437	969579	926807	1133154	1083178	1296729	1239549	1460303	1395919	1623878	1552281	1787452	1708652	1951027	1865022	-	-	-	-	109
50C-1000	0°	1303791	1437506	1635754	1803559	1967718	2169613	2299681	2535667	2631645	2901720	2963608	3267774	3295572	3633828	-	-	-	-	-	-	-	-	90
	45°	509636	506671	639395	635696	769162	764720	898921	893735	1028680	1022759	1158447	1151783	1288206	1280807	-	-	-	-	-	-	-	-	90
	90°	734860	701849	921966	880566	1109073	1059292	1296180	1238018	1483295	1416735	1670402	1595460	1857509	1774186	-	-	-	-	-	-	-	-	90
50C-1100	0°	1577583	1741361	1979258	2184782	2380942	2628202	2782617	3071623	3184292	3515043	3585967	3958463	-	-	-	-	-	-	-	-	-	-	62
	45°	616659	613774	773676	770065	930684	926356	1087692	1082647	1244708	1238938	1401716	1395229	-	-	-	-	-	-	-	-	-	-	62
	90°	889186	850202	1115587	1066699	1341979	1283197	1568379	1499694	1794780	1716183	2021181	1932681	-	-	-	-	-	-	-	-	-	-	62
50C2-935	0°	2273105	2522675	2851904	3165017	3430694	3807359	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	45°	888531	889160	1114781	1115569	1341023	1341970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	90°	1281206	1231672	1607434	1545290	1933663	1858907	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
50C2-1000	0°	2599077	2884436	3260889	3618907	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	45°	1015953	1016670	1274648	1275551	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62
	90°	1464932	1408301	1837950	1766894	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	62

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 6. Models 80C-935 to 80C2-1200

Model	Position	Operating Supply Pressure (psi)																				MOP* (psi)		
		40		50		60		70		80		90		100		110		120		150			174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL
80C-935	0°	1329774	1467348	1668349	1840995	2006932	2214642	2345516	2588289	2684090	2961936	3022673	3335583	3361257	3709230	3699831	4082886	4038414	4456533	5054155	5577474	5866754	6474226	174
	45°	519796	517194	652139	648891	784491	780588	916833	912285	1049185	1043990	1181528	1175687	1313880	1307384	1446232	1439081	1578575	1570787	1975621	1965877	2293256	2281955	
	90°	749507	716416	940339	898850	1131180	1081275	1322013	1263709	1512854	1446134	1703687	1628568	1894528	1811002	2085361	1993427	2276202	2175861	2848709	2723154	3306714	3160981	
80C-1000	0°	1521085	1677084	1908379	2104149	2295672	2531215	2682966	2958272	3070251	3385337	3457545	3812403	3844838	4239469	4232132	4666525	4619426	5093591	5781298	6374779	-	-	155
	45°	594578	591118	745967	741639	897355	892169	1048743	1042698	1200131	1193219	1351519	1343749	1502907	1494278	1654295	1644799	1805683	1795329	2259856	2246909	-	-	
	90°	857335	818820	1075629	1027335	1293923	1235841	1512217	1444347	1730511	1652861	1948797	1861367	2167091	2069882	2385385	2278388	2603679	2486903	3258552	3112430	-	-	
80C-1100	0°	1840517	2031588	2309142	2548906	2777758	3066233	3246384	3583560	3715009	4100886	4183634	4618204	4652259	5135531	5120884	5652858	5589501	6170176	-	-	-	-	128
	45°	719434	716071	902620	898408	1085798	1080744	1268975	1263090	1452161	1445426	1635338	1627772	1818516	1810108	2001702	1992445	2184879	2174790	-	-	-	-	
	90°	1037379	991899	1301516	1244478	1565645	1497057	1829782	1749636	2093919	2002215	2358047	2254794	2622184	2507373	2886312	2759952	3150450	3012531	-	-	-	-	
80C-1200	0°	2190366	2419847	2748067	3036028	3305767	3652209	3863468	4268390	4421168	4884572	4978868	5500753	5536569	6116934	-	-	-	-	-	-	-	-	107
	45°	856193	852919	1074186	1070098	1292189	1287286	1510191	1504473	1728193	1721652	1946186	1938840	2164188	2156019	-	-	-	-	-	-	-	-	
	90°	1234566	1181466	1548909	1482313	1863252	1783160	2177596	2084007	2491930	2384845	2806273	2685692	3120616	2986539	-	-	-	-	-	-	-	-	
80C2-935	0°	2651956	2943121	3327219	3692521	4002483	4441921	4677747	5191322	5353011	5940731	-	-	-	-	-	-	-	-	-	-	-	-	88
	45°	1036618	1037353	1300578	1301490	1564530	1565636	1828481	1829773	2092441	2093919	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	1494738	1436948	1875342	1802842	2255945	2168728	2636548	2534622	3017151	2900508	-	-	-	-	-	-	-	-	-	-	-	-	
80C2-1000	0°	3032258	3365177	3804367	4222061	4576477	5078935	5348577	5935810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	77
	45°	1185281	1186112	1487092	1488136	1788895	1790160	2090706	2092184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	1709094	1643020	2144284	2061377	2579465	2479743	3014655	2898110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80C2-1100	0°	3671122	4074177	4605885	5111583	5540658	6148980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64
	45°	1435001	1436019	1800391	1801665	2165790	2167321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	2069174	1989179	2596050	2495682	3122917	3002186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
80C2-1200	0°	4370820	4850703	5483743	6085818	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	54
	45°	1708510	1709714	2143541	2145054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	2463557	2368313	3090836	2971343	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NOTE:

* MOP = Maximum Operating Pressure (psi)

Symmetric Yoke Design

Table 7. Models 0.3S-100 to 3S-335

Model	Position	Operating Supply Pressure (psi)																		MOP* (psi)				
		40		50		60		70		80		90		100		110		120			150		174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL	OP	CL
0.3S-100	0°	1646	1726	2097	2195	2549	2664	3000	3142	3443	3611	3894	4080	4345	4558	4797	5027	5239	5496	6593	6912	7664	8045	174
	45°	1044	974	1328	1239	1611	1513	1903	1779	2186	2044	2469	2310	2752	2575	3036	2850	3319	3115	4177	3912	4859	4558	
	90°	1885	1602	2398	2036	2912	2478	3425	2912	3938	3354	4452	3788	4965	4230	5487	4664	6000	5106	7540	6416	8770	7469	
0.3S-135	0°	3053	3301	3876	4186	4691	5071	5514	5956	6328	6841	7151	7735	7965	8620	8788	9505	9602	10390	12063	13045	14027	15178	174
	45°	1938	1867	2451	2372	2974	2876	3496	3372	4009	3876	4531	4381	5053	4876	5567	5381	6089	5885	7646	7390	8894	8593	
	90°	3496	3062	4434	3885	5372	4708	6301	5531	7239	6354	8177	7177	9116	8000	10054	8815	10983	9638	13797	12107	16045	14080	
0.3S-175	0°	5195	5699	6576	7213	7947	8726	9328	10231	10700	11744	12080	13257	13452	14762	14824	16275	16204	17780	20328	22311	-	-	169
	45°	3292	3230	4168	4080	5036	4938	5912	5797	6788	6655	7655	7505	8531	8363	9399	9222	10275	10071	12894	12638	-	-	
	90°	5947	5292	7523	6691	9089	8098	10664	9496	12240	10894	13815	12302	15390	13700	16957	15098	18532	16505	23249	20709	-	-	
0.3S-235	0°	9487	10505	11965	13257	14443	16001	16930	18753	19408	21506	21886	24249	-	-	-	-	-	-	-	-	-	-	94
	45°	6018	5947	7584	7505	9160	9062	10735	10620	12302	12178	13877	13735	-	-	-	-	-	-	-	-	-	-	
	90°	10850	9753	13691	12302	16523	14850	19364	17399	22196	19957	25037	22506	-	-	-	-	-	-	-	-	-	-	
0.9S-235	0°	10974	12151	13841	15328	16709	18505	19576	21683	22444	24860	25311	28046	28178	31223	31046	34400	33913	37577	42524	47109	49401	54737	174
	45°	6956	6885	8770	8682	10593	10487	12408	12284	14231	14080	16045	15886	17868	17682	19682	19488	21506	21284	26966	26692	31329	31010	
	90°	12549	11275	15824	14222	19107	17178	22391	20125	25665	23072	28948	26019	32232	28975	35506	31922	38790	34869	48631	43719	56507	50799	
0.9S-280	0°	15638	17151	19709	21621	23780	26090	27851	30559	31922	35037	35993	39506	40064	43976	44135	48445	48206	52914	60428	66331	-	-	172
	45°	9912	9717	12496	12248	15080	14780	17656	17311	20240	19851	22824	22382	25408	24913	27984	27444	30568	29975	38312	37577	-	-	
	90°	17877	15912	22541	20063	27196	24214	31851	28364	36506	32515	41170	36657	45825	40807	50480	44958	55136	49109	69110	61552	-	-	
1.5S-280	0°	21452	23532	27037	29665	32621	35798	38205	41931	43790	48064	49383	54197	54967	60330	60552	66464	66136	72597	82898	90996	96306	105713	174
	45°	12549	12248	15815	15443	19081	18638	22346	21824	25621	25019	28886	28214	32152	31409	35418	34604	38692	37798	48489	47374	56339	55038	
	90°	20691	18417	26081	23222	31471	28019	36860	32825	42250	37621	47640	42427	53029	47224	58419	52029	63809	56826	79977	71234	92916	82756	
1.5S-335	0°	30825	34037	38816	42869	46817	51702	54808	60534	62808	69366	70800	78207	78800	87040	86792	95872	94792	104704	118776	131210	-	-	150
	45°	18027	17718	22709	22320	27382	26913	32064	31515	36736	36117	41418	40719	46091	45312	50772	49914	55454	54516	69481	68313	-	-	
	90°	29736	26639	37453	33559	45162	40471	52879	47392	60596	54304	68313	61224	76022	68136	83739	75057	91456	81969	114599	102713	-	-	
1.5S-385	0°	41011	45462	51578	57171	62136	68880	72703	80588	83261	92297	93819	104005	104386	115714	114944	127422	-	-	-	-	-	-	114
	45°	23992	23665	30170	29763	36347	35860	42524	41958	48702	48056	54888	54153	61065	60242	67242	66340	-	-	-	-	-	-	
	90°	39568	35586	49764	44754	59950	53923	70136	63083	80331	72251	90518	81420	100704	90589	110899	99748	-	-	-	-	-	-	
3S-335	0°	50348	55596	63410	70030	76473	84464	89535	98899	102598	113324	115661	127759	128723	142193	141786	156618	154848	171053	194036	214347	225392	248986	174
	45°	29860	29364	37604	36984	45347	44604	53091	52233	60844	59853	68588	67472	76331	75092	84075	82721	91828	90341	115059	113209	133653	131502	
	90°	49985	44781	62950	56401	75915	68030	88881	79650	101846	91279	114811	102899	127776	114528	140750	126148	153716	137768	192611	172646	223728	200541	

NOTE:

* MOP = Maximum Operating Pressure (psi)

Table 8. Models 3S-385 to 6S-585

Model	Position	Operating Supply Pressure (psi)																				MOP* (psi)		
		40		50		60		70		80		90		100		110		120		150			174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL
3S-385	0°	67003	74269	84261	93394	101510	112519	118767	131653	136016	150777	153264	169902	170522	189036	187770	208161	205028	227286	-	-	-	-	139
	45°	39728	39223	49958	49321	60198	59428	70428	69526	80659	79632	90890	89730	101120	99837	111351	109935	121581	120041	-	-	-	-	
	90°	66517	59817	83641	75225	100766	90624	117891	106032	135016	121440	152140	136848	169265	152255	186390	167663	203523	183071	-	-	-	-	
3S-435	0°	85863	95394	107882	119873	129909	144352	151937	168831	173956	193302	195983	217781	218011	242260	-	-	-	-	-	-	-	-	108
	45°	50914	50383	63977	63313	77030	76234	90093	89164	103156	102094	116218	115015	129281	127944	-	-	-	-	-	-	-	-	
	90°	85226	76836	107094	96554	128953	116262	150822	135980	172681	155698	194541	175407	216409	195125	-	-	-	-	-	-	-	-	
3S-485	0°	107129	119236	134511	149715	161884	180195	189266	210674	216648	241145	-	-	-	-	-	-	-	-	-	-	-	-	87
	45°	63525	62977	79765	79066	95996	95164	112236	111262	128467	127360	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	106342	96040	133520	120581	160698	145131	187877	169681	215055	194231	-	-	-	-	-	-	-	-	-	-	-	-	
6S-485	0°	125024	139149	156972	174717	188930	210285	220878	245853	252827	281421	284784	316989	316733	352557	348681	388126	380639	423694	476493	530398	-	-	149
	45°	74269	73632	93252	92456	112236	111271	131219	130095	150202	148919	169185	167743	188160	186558	207143	205382	226126	224206	283076	280669	-	-	
	90°	124581	112510	156424	141264	188257	170026	220100	198780	251933	227542	283775	256296	315618	285059	347451	313812	379293	342575	474811	428844	-	-	
6S-535	0°	152698	170168	191576	213497	230454	256827	269332	300165	308210	343495	347088	386825	385966	430163	424844	473493	463731	516822	-	-	-	-	123
	45°	90713	90040	113811	112970	136910	135901	159999	158831	183098	181761	206196	204692	229295	227622	252393	250552	275492	273483	-	-	-	-	
	90°	152158	137582	190895	172619	229640	207656	268376	242694	307122	277731	345867	312759	384603	347796	423349	382833	462094	417870	-	-	-	-	
6S-585	0°	182567	203647	229056	255508	275545	307369	322025	359222	368514	411083	415003	462944	461483	514796	-	-	-	-	-	-	-	-	102
	45°	108457	107766	136078	135201	163690	162645	191310	190089	218922	217533	246543	244968	274155	272412	-	-	-	-	-	-	-	-	
	90°	181921	164654	228250	206586	274571	248517	320892	290448	367213	332371	413534	374302	459855	416233	-	-	-	-	-	-	-	-	

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 9. Models 14S-635 to 32S-835

Model	Position	Operating Supply Pressure (psi)																				MOP* (psi)		
		40		50		60		70		80		90		100		110		120		150			174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL
14S-635	0°	238640	265040	299404	332530	360168	400029	420933	467519	481688	535018	542452	602517	603216	670007	663980	737506	724744	804996	907028	1007484	-	-	158
	45°	139600	137989	175150	173133	210701	208276	246242	243419	281793	278563	317334	313697	352885	348840	388427	383984	423977	419127	530611	524548	-	-	
	90°	230242	207479	288864	260323	347486	313157	406109	365992	464731	418835	523362	471670	581985	524504	640607	577347	699230	630182	875106	788694	-	-	
14S-735	0°	319724	355912	401126	446544	482537	537186	563949	627819	645351	718452	726762	809085	808164	899718	889575	990350	-	-	-	-	-	-	117
	45°	187036	185310	234658	232498	282288	279687	329910	326875	377532	374063	425154	421251	472776	468439	520407	515628	-	-	-	-	-	-	
	90°	308467	278625	387011	349575	465554	420525	544098	491476	622633	562426	701177	633386	779720	704336	858264	775287	-	-	-	-	-	-	
18S-635	0°	274359	304706	344221	382302	414074	459899	483936	537496	553789	615093	623642	692690	693504	770295	763357	847892	833219	925489	1042787	1158279	1210450	1344510	174
	45°	160548	158698	201426	199107	242304	239525	283182	279934	324060	320352	364939	360770	405826	401179	446704	441597	487582	482006	610216	603251	708327	700247	
	90°	264863	238685	332309	299466	399746	360248	467183	421039	534629	481821	602066	542602	669503	603384	736948	664175	804385	724957	1006705	907302	1168563	1053185	
18S-685	0°	319264	355044	400560	445456	481847	535868	563143	626279	644430	716691	725727	807102	807014	897514	888310	987926	969597	1078346	1213477	1349581	1408575	1566574	174
	45°	186824	184912	234401	232003	281970	279085	329539	326176	377107	373266	424676	420357	472245	467439	519814	514530	567391	561621	710097	702885	824262	815899	
	90°	308219	278111	386701	348938	465174	419756	543656	490582	622137	561400	700610	632226	779092	703044	857574	773871	936047	844688	1171483	1057159	1359829	1227132	
18S-735	0°	367576	409189	461174	513389	554762	617588	648351	721788	741949	825979	835537	930179	929126	1034379	1022724	1138579	1116312	1242779	1397088	1555379	-	-	152
	45°	215099	213108	269863	267376	324636	321644	379400	375921	434172	430190	488936	484458	543709	538726	598472	592994	653245	647262	817545	810067	-	-	
	90°	354858	320529	445208	402144	535567	483768	625916	565391	716275	647015	806624	728638	896983	810253	987333	891876	1077682	973500	1348749	1218362	-	-	
18S2-635	0°	546231	612216	685317	768109	824413	924002	963500	1079895	1102595	1235787	1241682	1391680	1380777	1547573	-	-	-	-	-	-	-	-	101
	45°	319644	318857	401029	400047	482422	481236	563816	562426	645209	643625	726603	724815	807996	806005	-	-	-	-	-	-	-	-	
	90°	527327	479564	661608	601676	795881	723797	930162	845910	1064443	968022	1198715	1090143	1332996	1212255	-	-	-	-	-	-	-	-	
18S2-685	0°	636050	712885	798005	894408	959960	1075930	1121923	1257452	1283878	1438983	-	-	-	-	-	-	-	-	-	-	-	88	
	45°	372196	371284	466970	465820	561745	560364	656520	654909	751303	749445	-	-	-	-	-	-	-	-	-	-	-		
	90°	614040	558417	770393	700610	926745	842803	1083098	984996	1239460	1127189	-	-	-	-	-	-	-	-	-	-	-		
32S-685	0°	370921	412481	465360	517513	559798	622553	654245	727594	748683	832635	843131	937675	937569	1042716	1032016	1147748	1126455	1252788	1409778	1567910	1636445	1820003	174
	45°	219400	217276	275262	272607	331123	327928	386993	383258	442854	438588	498715	493919	554576	549249	610446	604579	666308	659909	833900	825900	967969	958694	
	90°	366257	330477	459510	414640	552771	498795	646023	582950	739276	667113	832537	751268	925790	835431	1019051	919586	1112303	1003740	1392070	1256222	1615886	1458197	
32S-735	0°	427039	475387	535779	596437	644510	717496	753241	838546	861972	959606	970703	1080665	1079435	1201715	1188174	1322774	1296906	1443833	1623099	1806993	1884059	2097530	174
	45°	252597	250411	316919	314175	381231	377939	445544	441712	509866	505477	574179	569241	638501	633005	702814	696778	767127	760542	960083	951844	1114436	1104878	
	90°	421676	380877	529044	477873	636412	574861	743781	671848	851140	768844	958508	865831	1065876	962827	1173245	1059814	1280613	1156801	1602708	1447780	1860385	1680553	
32S-835	0°	551151	614482	691486	770959	831820	927427	972146	1083904	1112480	1240372	1252815	1396849	1393149	1553325	1533475	1709793	1673809	1866270	2094804	2335683	2431608	2711224	174
	45°	326007	323680	409020	406100	492025	488529	575038	570949	658042	653369	741046	735798	824059	818218	907063	900638	990076	983067	1239097	1230336	1438320	1428151	
	90°	544231	492326	682795	617695	821369	743064	959933	868433	1098506	993793	1237071	1119162	1375644	1244531	1514208	1369900	1652782	1495269	2068493	1871368	2401058	2172250	

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 10. Models 32S2-685 to 50S2-1000

Model	Position	Operating Supply Pressure (psi)																		MOP* (psi)				
		40		50		60		70		80		90		100		110		120			150		174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL	OP	CL
32S2-685	0°	738940	828210	927099	1039096	1115259	1249992	1303419	1460878	1491579	1671765	1679739	1882661	1867899	2093547	2056059	2304443	2244218	2515329	-	-	-	-	134
	45°	437093	436261	548390	547346	659688	658440	770985	769525	882283	880610	993581	991696	1104878	1102790	1216176	1213875	1327473	1324960	-	-	-	-	
	90°	729656	663564	915453	832528	1101250	1001501	1287047	1170466	1472844	1339430	1658640	1508403	1844429	1677367	2030225	1846331	2216022	2015295	-	-	-	-	
50S-935	0°	765985	853618	961013	1070983	1156049	1288348	1351076	1505712	1546104	1723086	1741140	1940451	1936168	2157816	2131204	2375181	2326231	2592546	2911331	3244649	3379408	3766330	174
	45°	454226	450828	569878	565630	685530	680432	801182	795234	916833	910037	1032485	1024839	1148137	1139641	1263789	1254443	1379441	1369245	1726405	1713652	2003967	1989170	
	90°	760348	687530	953950	862610	1147544	1037680	1341147	1212760	1534740	1387830	1728343	1562910	1921937	1737981	2115539	1913060	2309133	2088131	2889923	2613361	3354566	3033541	
50S-1000	0°	876185	975633	1099276	1224070	1322367	1472507	1545458	1720953	1768549	1969391	1991639	2217837	2214730	2466274	2437821	2714711	2660912	2963157	3330184	3708477	-	-	159
	45°	519575	515274	651864	646484	784154	777703	916444	908913	1048743	1040123	1181033	1171342	1313322	1302552	1445612	1433762	1577902	1564981	1974780	1958620	-	-	
	90°	869743	785809	1091196	985908	1312650	1186015	1534094	1386114	1755548	1586221	1977002	1786328	2198446	1986427	2419900	2186534	2641353	2386633	3305705	2986946	-	-	
50S-1100	0°	1060186	1181856	1330128	1482809	1600062	1783753	1870005	2084706	2139948	2385650	2409882	2686603	2679824	2987556	2949767	3288501	3219701	3589454	-	-	-	-	131
	45°	628686	624191	788756	783137	948826	942083	1108905	1101029	1268975	1259975	1429045	1418921	1589124	1577867	1749194	1736813	1909264	1895750	-	-	-	-	
	90°	1052389	951915	1320349	1194308	1588301	1436700	1856261	1679102	2124212	1921494	2392173	2163887	2660124	2406288	2928076	2648681	3196036	2891074	-	-	-	-	
50S2-935	0°	1527599	1712139	1916565	2148090	2305540	2584050	2694506	3020009	3083473	3455969	3472448	3891929	-	-	-	-	-	-	-	-	-	-	91
	45°	905859	904258	1136508	1134508	1367166	1364759	1597823	1595009	1828481	1825259	2059138	2055510	-	-	-	-	-	-	-	-	-	-	
	90°	1516368	1379016	1902476	1730157	2288583	2081290	2674700	2432431	3060808	2783564	3446916	3134705	-	-	-	-	-	-	-	-	-	-	
50S2-1000	0°	1746663	1957664	2191419	2456149	2636167	2954626	3080924	3453111	3525681	3951596	-	-	-	-	-	-	-	-	-	-	-	-	79
	45°	1035760	1033928	1299499	1297206	1563237	1560476	1826967	1823746	2090706	2087016	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	1733821	1576778	2175303	1978267	2616795	2379765	3058277	2781263	3499759	3182761	-	-	-	-	-	-	-	-	-	-	-	-	

NOTE:
* MOP = Maximum Operating Pressure (psi)

Table 11. Models 80S-935 to 80S2-1200

Model	Position	Operating Supply Pressure (psi)																MOP* (psi)						
		40		50		60		70		80		90		100		110			120		150		174	
		OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL	OP	CL		OP	CL	OP	CL	OP	CL
80S-935	0°	893646	995882	1121180	1249478	1348722	1503075	1576256	1756672	1803789	2010260	2031332	2263857	2258865	2517453	2486408	2771050	2713941	3024638	3396550	3785428	3942640	4394052	174
	45°	529929	525973	664856	659909	799783	793845	934710	927772	1069638	1061708	1204565	1195644	1339492	1329580	1474428	1463516	1609355	1597452	2014136	1999259	2337966	2320700	
	90°	887080	802120	1112941	1006378	1338801	1210627	1564671	1414885	1790532	1619143	2016402	1823392	2242263	2027650	2468123	2231899	2693993	2436157	3371585	3048922	3913656	3539133	
80S-1000	0°	1022219	1138234	1282489	1428080	1542759	1717927	1803037	2007782	2063307	2297628	2323576	2587475	2583855	2877321	2844125	3167167	3104394	3457014	3885212	4326561	4509872	5022189	174
	45°	606172	601154	760507	754232	914851	907320	1069186	1060398	1223530	1213477	1377865	1366564	1532209	1519642	1686553	1672730	1840889	1825808	2303912	2285052	2674328	2652451	
	90°	1014706	916780	1273064	1150235	1531422	1383680	1789780	1617134	2048138	1850588	2306496	2084042	2564854	2317496	2823221	2550951	3081579	2784405	3856653	3484767	4476719	4045061	
80S-1100	0°	1236885	1378839	1551812	1729945	1866739	2081051	2181675	2432157	2496603	2783263	2811530	3134369	3126457	3485475	3441393	3836590	3756321	4187696	4701111	5241014	5456945	6083676	174
	45°	733461	728222	920214	913656	1106967	1099099	1293720	1284533	1480472	1469967	1667225	1655401	1853978	1840844	2040730	2026278	2227474	2211712	2787732	2768023	3235941	3213072	
	90°	1227787	1110560	1540404	1393362	1853022	1676155	2165630	1958948	2478248	2241740	2790865	2524542	3103483	2807335	3416091	3090128	3728709	3372921	4666552	4221308	5416828	4900015	
80S-1200	0°	1471994	1642348	1846783	2060546	2221580	2478752	2596369	2896950	2971166	3315157	3345955	3733355	3720752	4151562	4095541	4569759	4470330	4987957	5594713	6242569	-	-	158
	45°	872884	867397	1095134	1088267	1317384	1309145	1539635	1530015	1761885	1750884	1984135	1971753	2206385	2192632	2428635	2413501	2650885	2634371	3317635	3296988	-	-	
	90°	1461170	1322810	1833207	1659641	2205243	1996480	2577288	2333311	2949324	2670151	3321361	3006982	3693397	3343813	4065433	3680653	4437470	4017484	5553587	5027995	-	-	
80S2-935	0°	1782195	1997489	2235997	2506108	2689789	3014726	3143591	3523344	3597392	4031963	4051185	4540581	4504986	5049199	4958788	5557818	5412580	6066436	-	-	-	-	130
	45°	1056832	1054964	1325934	1323588	1595036	1592212	1864129	1860845	2133231	2129469	2402333	2398093	2671434	2666717	2940536	2935341	3209630	3203966	-	-	-	-	
	90°	1769097	1608850	2219553	2018517	2670018	2428175	3120483	2837832	3570948	3247490	4021405	3657156	4471870	4066814	4922335	4476472	5372791	4886138	-	-	-	-	
80S2-1000	0°	2037774	2283946	2556650	2865506	3075534	3447066	3594410	4028626	4113294	4610195	4632170	5191755	5151054	5773315	5669930	6354875	-	-	-	-	-	-	114
	45°	1208388	1206255	1516085	1513403	1823773	1820551	2131469	2127708	2439157	2434856	2746854	2742004	3054542	3049152	3362239	3356301	-	-	-	-	-	-	
	90°	2022791	1839570	2537861	2307983	3052923	2776395	3567993	3244808	4083054	3713221	4598124	4181625	5113185	4650038	5628246	5118451	-	-	-	-	-	-	
80S2-1100	0°	2467106	2765138	3095296	3469227	3723496	4173306	4351687	4877385	4979886	5581465	5608077	6285553	-	-	-	-	-	-	-	-	-	-	94
	45°	1462985	1460400	1835499	1832260	2208013	2204110	2580527	2575970	2953041	2947829	3325565	3319688	-	-	-	-	-	-	-	-	-	-	
	90°	2448972	2227147	3072543	2794237	3696123	3361336	4319703	3928427	4943274	4495517	5566854	5062616	-	-	-	-	-	-	-	-	-	-	
80S2-1200	0°	2937324	3292165	3685246	4130437	4433169	4968709	5181082	5806981	-	-	-	-	-	-	-	-	-	-	-	-	-	-	79
	45°	1741822	1738742	2185331	2181472	2628848	2624202	3072357	3066932	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	90°	2915739	2651628	3658156	3326804	4400574	4001979	5143001	4677154	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NOTE:
* MOP = Maximum Operating Pressure (psi)

ALGAS Spring-Return Pneumatic Actuator Output Torques (lb-in) Canted Yoke Design, Spring to Close

Table 12. Models 0.3C-008A-100-CL to 0.9C-0350-335-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-100-CL	62	174	1752	982	1620	-	-	-	-	-	-	-	-	-	2903	628	628	3620	938	1035	4337	1221	1443
0.3C-008A-135-CL	38	174	1690	938	1496	-	-	-	4301	1212	1425	5611	1726	2159	6912	2248	2894	8213	2752	3629	9523	3266	4363
0.3C-008B-100-CL	86	174	2690	1354	1611	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-008B-135-CL	51	174	2628	1310	1487	-	-	-	-	-	-	5620	1186	1186	6930	1752	1920	8231	2283	2655	9531	2805	3390
0.3C-008C-100-CL	101	174	3248	1664	2080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-008C-135-CL	59	174	3186	1611	1956	-	-	-	-	-	-	-	-	-	6452	1319	1319	7761	1912	2053	9062	2443	2788
0.3C-008C-175-CL	39	145	3115	1558	1805	-	-	-	8151	2071	2266	10337	2956	3505	12532	3823	4744	14726	4691	5974	16912	5558	7213
0.3C-0100-135-CL	89	174	5186	2823	4230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-0100-175-CL	57	144	5106	2761	4080	-	-	-	-	-	-	-	-	-	10266	2425	2540	12461	3328	3770	14656	4213	5009
0.3C-0100-235-CL	35	80	4991	2673	3841	-	-	-	14479	4142	4912	18426	5708	7142	22382	7266	9363	26338	8823	11594	-	-	-
0.3C-0150-175-CL	70	154	6478	3788	6876	-	-	-	-	-	-	-	-	-	-	-	-	9673	2168	2204	11868	3089	3434
0.3C-0150-235-CL	42	87	6363	3708	6638	-	-	-	11691	3018	3336	15638	4602	5567	19594	6168	7797	23550	7726	10018	-	-	-
0.9C-0200-235-CL	47	174	8531	4947	8779	-	-	-	-	-	-	17001	4549	5160	21567	6381	7735	26134	8186	10310	30710	9992	12886
0.9C-0200-280-CL	36	139	8399	4850	8514	-	-	-	21780	6461	7850	28267	9027	11505	34754	11576	15160	41241	14125	18824	47728	16673	22479
0.9C-0200-335-CL	28	97	8310	4779	8310	26311	8257	10408	35595	11912	15638	44878	15549	20877	54171	19187	26108	63455	22824	31338	72738	26462	36577
0.9C-0250-235-CL	55	174	10248	6222	12284	-	-	-	-	-	-	-	-	-	18072	4983	5761	22638	6806	8337	27214	8611	10912
0.9C-0250-280-CL	41	144	10116	6124	12018	-	-	-	18275	5062	5876	24762	7646	9540	31258	10204	13195	37745	12753	16850	44232	15302	20505
0.9C-0250-335-CL	31	100	10018	6053	11824	22806	6876	8434	32099	10540	13664	41383	14187	18904	50666	17824	24134	59959	21461	29373	69242	25090	34604
0.9C-0350-280-CL	59	152	16257	9514	17222	-	-	-	-	-	-	-	-	-	26072	6213	6531	32559	8877	10186	39046	11478	13841
0.9C-0350-335-CL	44	106	16160	9443	17027	-	-	-	-	-	-	36205	10337	12240	45489	14027	17470	54773	17691	22709	64065	21346	27939

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 13. Models 0.3C-008A-100-CL to 0.9C-0350-335-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3C-008A-100-CL	62	174	1752	982	1620	5053	1505	1841	5770	1788	2248	6478	2071	2646	8629	2921	3859	10346	3593	4823
0.3C-008A-135-CL	38	174	1690	938	1496	10824	3779	5098	12133	4292	5832	13434	4797	6567	17346	6328	8770	20479	7558	10540
0.3C-008B-100-CL	86	174	2690	1354	1611	5062	867	867	5779	1266	1274	6496	1575	1673	8646	2451	2885	10363	3133	3859
0.3C-008B-135-CL	51	174	2628	1310	1487	10841	3319	4124	12142	3841	4859	13452	4354	5593	17364	5885	7797	20488	7115	9567
0.3C-008C-100-CL	101	174	3248	1664	2080	-	-	-	5310	673	673	6027	1071	1071	8169	2080	2283	9885	2779	3248
0.3C-008C-135-CL	59	174	3186	1611	1956	10372	2965	3522	11673	3487	4257	12974	4000	4991	16886	5549	7195	20019	6779	8956
0.3C-008C-175-CL	39	145	3115	1558	1805	19107	6416	8443	21293	7275	9682	23488	8133	10912	-	-	-	-	-	-
0.3C-0100-135-CL	89	174	5186	2823	4230	8107	1319	1319	9408	2044	2053	10717	2611	2788	14629	4204	4991	17762	5443	6761
0.3C-0100-175-CL	57	144	5106	2761	4080	16842	5080	6248	19036	5947	7478	21231	6815	8717	-	-	-	-	-	-
0.3C-0100-235-CL	35	80	4991	2673	3841	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-0150-175-CL	70	154	6478	3788	6876	14054	3974	4673	16249	4850	5912	18443	5717	7142	25019	8301	10850	-	-	-
0.3C-0150-235-CL	42	87	6363	3708	6638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0200-235-CL	47	174	8531	4947	8779	35276	11788	15461	39843	13576	18036	44418	15372	20612	58127	20744	28338	69092	25037	34524
0.9C-0200-280-CL	36	139	8399	4850	8514	54215	19213	26134	60702	21753	29789	67189	24293	33444	-	-	-	-	-	-
0.9C-0200-335-CL	28	97	8310	4779	8310	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0250-235-CL	55	174	10248	6222	12284	31780	10416	13487	36347	12204	16063	40922	14001	18638	54631	19373	26364	65596	23665	32550
0.9C-0250-280-CL	41	144	10116	6124	12018	50719	17842	24161	57206	20382	27816	63693	22922	31479	-	-	-	-	-	-
0.9C-0250-335-CL	31	100	10018	6053	11824	78526	28727	39843	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0350-280-CL	59	152	16257	9514	17222	45533	14045	17496	52020	16611	21152	58516	19160	24815	77977	26798	35781	-	-	-
0.9C-0350-335-CL	44	106	16160	9443	17027	73349	24992	33179	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 14. Models 0.9C-0350-385-CL to 1.5C-0800-485-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.9C-0350-385-CL	35	80	16045	9354	16788	-	-	-	41604	12487	15284	53870	17337	22196	66136	22152	29108	78402	26966	36020	-	-	-
0.9C-0350-435-CL	29	62	15957	9293	16603	42737	12939	15921	58401	19116	24745	74057	25267	33577	-	-	-	-	-	-	-	-	-
0.9C-0350-485-CL	25	44	15903	9248	16488	57861	18904	24444	77331	26550	35418	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-280-CL	69	161	19231	11717	23311	-	-	-	-	-	-	-	-	-	-	-	-	26497	6390	6770	32984	9045	10425
0.9C-0400-335-CL	51	113	19134	11647	23116	-	-	-	-	-	-	30143	7894	8823	39427	11620	14054	48710	15302	19293	58003	18957	24523
0.9C-0400-385-CL	40	86	19019	11558	22877	-	-	-	35542	10071	11859	47799	14939	18780	60065	19771	25692	72331	24594	32603	-	-	-
0.9C-0400-435-CL	33	67	18930	11496	22691	-	-	-	52339	16727	21329	67995	22886	30152	-	-	-	-	-	-	-	-	-
0.9C-0400-485-CL	28	54	18868	11452	22576	51799	16523	21028	71260	24169	32002	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-335-CL	55	117	20859	12956	26966	-	-	-	-	-	-	-	-	-	35595	10178	12054	44878	13868	17284	54162	17523	22523
0.9C-0420-385-CL	43	88	20744	12877	26727	-	-	-	-	-	-	43967	13505	16771	56233	18337	23683	68499	23160	30603	-	-	-
0.9C-0420-435-CL	35	70	20656	12815	26541	-	-	-	48498	15293	19328	64163	21452	28152	-	-	-	-	-	-	-	-	-
0.9C-0420-485-CL	30	57	20603	12771	26426	47967	15080	19028	67428	22736	29993	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-335-CL	68	120	27223	16275	30975	-	-	-	-	-	-	-	-	-	-	-	-	40887	9868	10452	50171	13673	15691
0.9C-0700-385-CL	53	91	27108	16187	30736	-	-	-	-	-	-	39975	9478	9947	52242	14514	16859	64508	19399	23771	76774	24258	30683
0.9C-0700-435-CL	43	71	27019	16116	30550	-	-	-	-	-	-	60171	17682	21320	75827	23877	30152	-	-	-	-	-	-
0.9C-0700-485-CL	36	58	26957	16080	30435	-	-	-	63437	18974	23169	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-385-CL	61	100	31922	19736	40595	-	-	-	-	-	-	-	-	-	42427	10514	11319	54693	15496	18240	66959	20373	25152
0.9C-0720-435-CL	49	78	31825	19665	40409	-	-	-	-	-	-	50348	13744	15788	66012	20001	24612	-	-	-	-	-	-
0.9C-0720-485-CL	41	64	31772	19629	40294	-	-	-	53622	15063	17629	73083	22798	28603	-	-	-	-	-	-	-	-	-
1.5C-0800-385-CL	53	109	36099	20559	34772	-	-	-	-	-	-	-	-	-	70145	17886	19638	85650	24169	28382	101164	30356	37117
1.5C-0800-435-CL	43	86	35993	20479	34542	-	-	-	-	-	-	80163	21966	25284	99961	29878	36444	119767	37710	47604	-	-	-
1.5C-0800-485-CL	36	68	35922	20426	34400	-	-	-	84296	23630	27612	108908	33426	41489	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 15. Models 0.9C-0350-385-CL to 1.5C-0800-485-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.9C-0350-385-CL	35	80	16045	9354	16788	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0350-435-CL	29	62	15957	9293	16603	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0350-485-CL	25	44	15903	9248	16488	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-280-CL	69	161	19231	11717	23311	39471	11647	14080	45958	14213	17735	52445	16771	21390	71915	24426	32364	-	-	-
0.9C-0400-335-CL	51	113	19134	11647	23116	67287	22612	29754	76570	26249	34993	-	-	-	-	-	-	-	-	-
0.9C-0400-385-CL	40	86	19019	11558	22877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-435-CL	33	67	18930	11496	22691	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-485-CL	28	54	18868	11452	22576	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-335-CL	55	117	20859	12956	26966	63455	21178	27754	72738	24824	32993	-	-	-	-	-	-	-	-	-
0.9C-0420-385-CL	43	88	20744	12877	26727	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-435-CL	35	70	20656	12815	26541	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-485-CL	30	57	20603	12771	26426	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-335-CL	68	120	27223	16275	30975	59463	17399	20921	68747	21081	26161	78030	24753	31391	-	-	-	-	-	-
0.9C-0700-385-CL	53	91	27108	16187	30736	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-435-CL	43	71	27019	16116	30550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-485-CL	36	58	26957	16080	30435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-385-CL	61	100	31922	19736	40595	79225	25223	32064	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-435-CL	49	78	31825	19665	40409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-485-CL	41	64	31772	19629	40294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-0800-385-CL	53	109	36099	20559	34772	116670	36489	45861	132184	42604	54605	-	-	-	-	-	-	-	-	-
1.5C-0800-435-CL	43	86	35993	20479	34542	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-0800-485-CL	36	68	35922	20426	34400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 16. Models 1.5C-0800-535-CL to 1.5C-1300-585-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
1.5C-0800-535-CL	31	57	35904	20408	34365	81004	22302	25754	110952	34232	42639	-	-	-	-	-	-	-	-	-	-	-	
1.5C-1100-385-CL	73	116	50489	28267	45728	-	-	-	-	-	-	-	-	-	-	-	74738	12824	12824	90252	20877	21567	
1.5C-1100-435-CL	59	91	50374	28178	45498	-	-	-	-	-	-	-	-	-	89058	20355	20895	108855	28621	32055	128652	36604	43215
1.5C-1100-485-CL	49	74	50303	28125	45347	-	-	-	-	-	-	98005	24161	25939	122617	34188	39807	-	-	-	-	-	-
1.5C-1100-535-CL	41	61	50286	28116	45321	-	-	-	100040	25001	27090	129989	37143	43967	-	-	-	-	-	-	-	-	-
1.5C-1100-585-CL	36	44	50056	27939	44843	-	-	-	128918	36710	43365	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-385-CL	83	128	58560	34400	62800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-435-CL	67	100	58445	34311	62561	-	-	-	-	-	-	-	-	-	-	-	91854	21727	22745	111660	29904	33904	
1.5C-1200-485-CL	55	80	58375	34258	62419	-	-	-	-	-	-	-	-	-	105616	27453	30506	130228	37374	44374	-	-	-
1.5C-1200-535-CL	47	65	58357	34250	62384	-	-	-	-	-	-	112997	30453	34657	-	-	-	-	-	-	-	-	-
1.5C-1200-585-CL	40	44	58127	34073	61915	-	-	-	111917	30010	34055	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-385-CL	97	134	69419	41037	76075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-435-CL	78	105	69304	40958	75845	-	-	-	-	-	-	-	-	-	-	-	78712	10788	10788	98518	21753	21948	
1.5C-1300-485-CL	65	83	69234	40896	75694	-	-	-	-	-	-	-	-	-	92483	18550	18550	117103	29674	32426	-	-	-
1.5C-1300-535-CL	55	68	69216	40887	75659	-	-	-	-	-	-	99863	22355	22709	129830	34869	39595	-	-	-	-	-	-
1.5C-1300-585-CL	46	58	68986	40719	75190	-	-	-	98784	21877	22098	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 17. Models 1.5C-0800-535-CL to 1.5C-1300-585-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
1.5C-0800-535-CL	31	57	35904	20408	34365	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-385-CL	73	116	50489	28267	45728	105766	27364	30311	121272	33648	39055	-	-	-	-	-	-	-	-	-
1.5C-1100-435-CL	59	91	50374	28178	45498	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-485-CL	49	74	50303	28125	45347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-535-CL	41	61	50286	28116	45321	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-585-CL	36	44	50056	27939	44843	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-385-CL	83	128	58560	34400	62800	88766	20399	21001	104280	26904	29745	119785	33188	38489	-	-	-	-	-	-
1.5C-1200-435-CL	67	100	58445	34311	62561	131458	37869	45064	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-485-CL	55	80	58375	34258	62419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-535-CL	47	65	58357	34250	62384	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-585-CL	40	44	58127	34073	61915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-385-CL	97	134	69419	41037	76075	75614	9045	9045	91137	17789	17789	106651	25302	26532	-	-	-	-	-	-
1.5C-1300-435-CL	78	105	69304	40958	75845	118333	30179	33117	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-485-CL	65	83	69234	40896	75694	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-535-CL	55	68	69216	40887	75659	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-585-CL	46	58	68986	40719	75190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 18. Models 3C-2000-385-CL to 14C-5100-785-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
3C-2000-385-CL	75	144	86155	51826	100067	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	125112	30037	31718
3C-2000-435-CL	61	113	85960	51684	99686	-	-	-	-	-	-	-	-	-	123121	29196	30603	155902	42666	49073	188673	55782	67543
3C-2000-485-CL	50	90	85845	51596	99439	-	-	-	-	-	-	137936	35365	38949	178673	51799	61915	219418	67959	84872	260155	84031	107837
3C-2000-535-CL	43	74	85818	51578	99386	-	-	-	141308	36745	40852	190886	56658	68791	240455	76269	96739	-	-	-	-	-	-
3C-2000-585-CL	37	62	85438	51295	98607	-	-	-	189107	55950	67791	248375	79393	101200	-	-	-	-	-	-	-	-	-
3C-2050-385-CL	98	148	117183	66959	114183	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-435-CL	79	116	116997	66818	113802	-	-	-	-	-	-	-	-	-	-	-	-	141972	16116	16116	174761	34595	34595
3C-2050-485-CL	65	94	116873	66729	113554	-	-	-	-	-	-	-	-	-	164760	28957	28957	205524	49241	51932	246278	66039	74906
3C-2050-535-CL	53	76	116847	66702	113501	-	-	-	-	-	-	176973	35843	35843	226569	57994	63800	-	-	-	-	-	-
3C-2050-585-CL	44	65	116466	66419	112722	-	-	-	175195	34842	34842	234498	61242	68269	-	-	-	-	-	-	-	-	-
6C-2500-485-CL	60	144	122962	75021	149556	-	-	-	-	-	-	-	-	-	175726	43648	47091	223356	63003	73933	270987	81969	100784
6C-2500-535-CL	50	117	122935	74995	149494	-	-	-	-	-	-	190001	49525	55136	247950	72827	87801	305909	95784	120466	363868	118625	153132
6C-2500-585-CL	44	99	122484	74667	148583	-	-	-	-	-	-	257208	76508	93022	326503	103908	132077	395799	131175	171132	465103	158380	210196
6C-2500-635-CL	38	84	121997	74305	147591	-	-	-	248782	73154	88270	330424	105457	134290	412074	137564	180310	493724	169601	226330	-	-	-
6C-2500-685-CL	34	128	121475	73915	146512	-	-	-	314626	99226	125387	409640	136609	178938	504654	173885	232490	-	-	-	-	-	-
6C-2500-735-CL	30	62	120909	73499	145361	276085	83987	103660	385471	127113	165309	494857	170044	226967	-	-	-	-	-	-	-	-	-
6C-3800-535-CL	65	131	166522	104766	224259	-	-	-	-	-	-	-	-	-	-	-	-	231454	62446	71127	289413	85650	103793
6C-3800-585-CL	56	110	166079	104439	223347	-	-	-	-	-	-	-	-	-	252048	70738	82739	321344	98315	121794	390639	125661	160849
6C-3800-635-CL	49	93	165592	104085	222356	-	-	-	-	-	-	255969	72313	84942	337619	104749	130962	419260	136936	176982	500910	169017	223002
6C-3800-685-CL	43	136	165070	103695	221277	-	-	-	240171	65959	76039	335185	103793	129591	430199	141237	183142	525203	178540	236693	-	-	-
6C-3800-735-CL	38	70	164504	103288	220117	-	-	-	311016	94226	115970	420402	137387	177620	529788	180336	239277	-	-	-	-	-	-
6C-3900-535-CL	69	134	177708	113218	249322	-	-	-	-	-	-	-	-	-	148733	25603	25603	206718	52958	58286	264704	76358	90969
6C-3900-585-CL	59	112	177257	112891	248411	-	-	-	-	-	-	157999	30825	30825	227330	61348	69897	296661	89075	108979	365983	116475	148052
6C-3900-635-CL	52	94	176770	112537	247419	-	-	-	-	-	-	231251	62932	72110	312936	95527	118156	394622	127759	164194	476316	159866	210241
6C-3900-685-CL	46	79	176248	112156	246349	-	-	-	215444	56525	63207	310502	94562	116785	405560	132069	170363	500618	169407	223940	-	-	-
6C-3900-735-CL	40	68	175681	111749	245189	-	-	-	286324	84969	103156	395763	128201	164840	505202	171212	226525	-	-	-	-	-	-
14C-5100-635-CL	53	149	198975	125405	269518	-	-	-	-	-	-	253376	65605	72712	342619	101465	123006	431853	136777	173310	521097	171902	223604
14C-5100-685-CL	46	129	198399	124980	268341	-	-	-	-	-	-	339964	100403	121511	443801	141485	180044	547647	182337	238569	651493	223082	297103
14C-5100-735-CL	41	112	197780	124528	267075	-	-	-	313538	89881	106625	433101	137272	174009	552656	184301	241393	672211	231206	308785	791774	278067	376169
14C-5100-785-CL	37	99	197125	124050	265721	-	-	-	396418	122785	153335	532797	176496	230206	669175	230020	307068	805554	283457	383940	941923	336849	460802

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 19. Models 3C-2000-385-CL to 14C-5100-785-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
3C-2000-385-CL	75	144	86155	51826	100067	150777	40604	46188	176451	50914	60658	202125	61118	75128	-	-	-	-	-	-
3C-2000-435-CL	61	113	85960	51684	99686	221445	68765	86022	254216	81694	104492	-	-	-	-	-	-	-	-	-
3C-2000-485-CL	50	90	85845	51596	99439	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2000-535-CL	43	74	85818	51578	99386	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2000-585-CL	37	62	85438	51295	98607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-385-CL	98	148	117183	66959	114183	136848	13231	13231	162539	27709	27709	188222	41737	42179	264907	73552	85403	-	-	-
3C-2050-435-CL	79	116	116997	66818	113802	207550	50091	53073	240339	63623	71561	-	-	-	-	-	-	-	-	-
3C-2050-485-CL	65	94	116873	66729	113554	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-535-CL	53	76	116847	66702	113501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-585-CL	44	65	116466	66419	112722	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-485-CL	60	144	122962	75021	149556	318618	100802	127626	366248	119564	154477	413870	138272	181319	-	-	-	-	-	-
6C-2500-535-CL	50	117	122935	74995	149494	421826	141396	185806	479785	164132	218471	-	-	-	-	-	-	-	-	-
6C-2500-585-CL	44	99	122484	74667	148583	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-635-CL	38	84	121997	74305	147591	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-685-CL	34	128	121475	73915	146512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-735-CL	30	62	120909	73499	145361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-535-CL	65	131	166522	104766	224259	347363	108598	136458	405321	131449	169124	463280	154229	201789	-	-	-	-	-	-
6C-3800-585-CL	56	110	166079	104439	223347	459935	152919	199904	529230	180124	238968	-	-	-	-	-	-	-	-	-
6C-3800-635-CL	49	93	165592	104085	222356	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-685-CL	43	136	165070	103695	221277	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-735-CL	38	70	164504	103288	220117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-535-CL	69	134	177708	113218	249322	322689	99386	123652	380674	122263	156335	438659	145078	189018	-	-	-	-	-	-
6C-3900-585-CL	59	112	177257	112891	248411	435314	143759	187133	504645	170991	226206	-	-	-	-	-	-	-	-	-
6C-3900-635-CL	52	94	176770	112537	247419	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-685-CL	46	79	176248	112156	246349	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-735-CL	40	68	175681	111749	245189	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5100-635-CL	53	149	198975	125405	269518	610331	206948	273908	699566	241932	324202	788809	276908	374497	1056522	381709	525389	-	-	-
14C-5100-685-CL	46	129	198399	124980	268341	755339	263801	355637	859185	304458	414162	963022	345106	472696	-	-	-	-	-	-
14C-5100-735-CL	41	112	197780	124528	267075	911329	324875	443553	1030883	371673	510946	-	-	-	-	-	-	-	-	-
14C-5100-785-CL	37	99	197125	124050	265721	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 20. Models 14C-5100-835-CL to 14C-8300-935-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14C-5100-835-CL	34	87	196417	123537	264279	-	-	-	484750	157610	203125	639050	218206	290094	793358	278687	377063	947658	339097	464032	-	-	-
14C-5100-885-CL	31	77	195674	122988	262748	405197	126254	158282	578533	194470	255977	751869	262438	353681	925206	330300	451377	-	-	-	-	-	-
14C-5100-935-CL	29	70	194877	122413	261128	484299	157433	202869	677768	233392	311918	871247	309184	420968	-	-	-	-	-	-	-	-	-
14C-5400-635-CL	66	157	258393	158937	322963	-	-	-	-	-	-	-	-	-	-	-	-	378630	98023	108643	467864	134033	158937
14C-5400-685-CL	58	133	257818	158521	321786	-	-	-	-	-	-	-	-	-	390577	102908	115377	494423	144627	173911	598260	185797	232436
14C-5400-735-CL	51	125	257199	158070	320520	-	-	-	-	-	-	379869	98536	109342	499423	146618	176726	618987	193983	244118	738541	241101	311502
14C-5400-785-CL	46	102	256544	157583	319166	-	-	-	-	-	-	479573	138715	165539	615942	192780	242402	752321	246517	319273	888699	300095	396135
14C-5400-835-CL	41	90	255836	157070	317724	-	-	-	431526	119466	138458	585826	180885	225427	740126	241720	312396	894434	302343	399365	1048734	362841	486343
14C-5400-885-CL	38	80	255092	156521	316193	-	-	-	525309	156911	191319	698646	225383	289014	871973	293519	386710	1045309	361496	484414	-	-	-
14C-5400-935-CL	35	73	254296	155937	314573	-	-	-	624545	196178	247251	818014	272323	356301	1011493	348239	465351	-	-	-	-	-	-
14C-8300-735-CL	63	122	331618	204833	420322	-	-	-	-	-	-	-	-	-	-	-	-	519592	141069	161371	639147	188930	228764
14C-8300-785-CL	57	109	330955	204355	418968	-	-	-	-	-	-	-	-	-	516557	139839	159663	652926	194408	236525	789305	248375	313396
14C-8300-835-CL	51	97	330255	203833	417525	-	-	-	-	-	-	486431	127617	142689	640731	189558	229658	795040	250641	316626	949340	311405	403595
14C-8300-885-CL	46	86	329503	203293	415994	-	-	-	-	-	-	599251	173035	206276	772587	241773	303971	945923	310069	401666	-	-	-
14C-8300-935-CL	42	77	328716	202709	414375	-	-	-	525150	143317	164504	718620	220454	273554	912099	296758	382603	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 22. Models 18C-9600-835-CL to 18C-11000-1100-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																		
						40			50			60			70			80			90			
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	
18C-9600-835-CL	68	116	536354	313157	563480	-	-	-	-	-	-	-	-	-	-	-	-	-	831307	191125	196797	1008750	265155	296811
18C-9600-935-CL	56	97	534584	311839	559851	-	-	-	-	-	-	-	-	-	965924	247632	272677	1188422	337610	398082	1410911	426172	523486	
18C-9600-1000-CL	50	86	533328	310901	557276	-	-	-	-	-	-	933171	234127	254216	1187679	337309	397666	1442178	438571	541116	-	-	-	
18C-9600-1100-CL	42	71	531230	309334	552975	-	-	-	942021	237791	259199	1249974	362213	432774	1557927	484352	606349	-	-	-	-	-	-	
18C-9600-1200-CL	37	59	528929	307626	548266	-	-	-	1230460	354407	421773	-	-	-	-	-	-	-	-	-	-	-	-	
18C-9600-1300-CL	33	51	526433	305759	543151	1113861	307688	356062	1543980	478847	598490	-	-	-	-	-	-	-	-	-	-	-	-	
18C-9800-835-CL	83	131	680733	394887	699327	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18C-9800-935-CL	68	103	678963	393568	695707	-	-	-	-	-	-	-	-	-	-	-	-	1053115	236578	240640	1275612	330264	366045	
18C-9800-1000-CL	61	90	677706	392639	693132	-	-	-	-	-	-	-	-	-	1052371	236251	240224	1306880	343053	383674	1561388	445633	527124	
18C-9800-1100-CL	51	75	675600	391073	688831	-	-	-	-	-	-	1114675	263288	275332	1422629	389940	448907	-	-	-	-	-	-	
18C-9800-1200-CL	45	62	673299	389356	684123	-	-	-	-	-	-	1461648	405649	470900	-	-	-	-	-	-	-	-	-	
18C-9800-1300-CL	39	44	670803	387488	678999	-	-	-	1408681	384311	441049	-	-	-	-	-	-	-	-	-	-	-	-	
18C-10500-935-CL	75	106	761348	437340	755870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1215689	272677	277129	
18C-10500-1000-CL	67	93	760091	436402	753294	-	-	-	-	-	-	-	-	-	-	-	-	1246956	286413	294758	1501464	392719	438208	
18C-10500-1100-CL	57	77	757985	434827	748993	-	-	-	-	-	-	-	-	-	1362696	335539	359991	-	-	-	-	-	-	
18C-10500-1200-CL	49	64	755684	433110	744285	-	-	-	-	-	-	1401725	351752	381984	-	-	-	-	-	-	-	-	-	
18C-10500-1300-CL	43	44	753188	431234	739170	-	-	-	1348758	329716	352133	-	-	-	-	-	-	-	-	-	-	-	-	
18C-11000-935-CL	68	115	852556	505344	942684	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1029644	172265	172265	
18C-11000-1000-CL	61	100	851299	504415	940109	-	-	-	-	-	-	-	-	-	-	-	-	1060911	189894	189894	1315420	315697	333344	
18C-11000-1100-CL	51	83	849193	502857	935808	-	-	-	-	-	-	-	-	-	1176652	254880	255128	1484605	385833	428703	-	-	-	

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 23. Models 18C-9600-835-CL to 18C-11000-1100-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
18C-9600-835-CL	68	116	536354	313157	563480	1186201	336716	396834	1363652	407436	496848	1541095	477705	596862	-	-	-	-	-	-
18C-9600-935-CL	56	97	534584	311839	559851	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1000-CL	50	86	533328	310901	557276	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1100-CL	42	71	531230	309334	552975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1200-CL	37	59	528929	307626	548266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1300-CL	33	51	526433	305759	543151	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-835-CL	83	131	680733	394887	699327	1050902	235596	239393	1228345	310847	339406	1405796	383152	439420	-	-	-	-	-	-
18C-9800-935-CL	68	103	678963	393568	695707	1498110	420295	491449	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1000-CL	61	90	677706	392639	693132	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1100-CL	51	75	675600	391073	688831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1200-CL	45	62	673299	389356	684123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1300-CL	39	44	670803	387488	678999	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-935-CL	75	106	761348	437340	755870	1438187	366797	402542	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1000-CL	67	93	760091	436402	753294	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1100-CL	57	77	757985	434827	748993	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1200-CL	49	64	755684	433110	744285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1300-CL	43	44	753188	431234	739170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-935-CL	68	115	852556	505344	942684	1252142	288652	297679	1474631	381754	423083	-	-	-	-	-	-	-	-	-
18C-11000-1000-CL	61	100	851299	504415	940109	1569919	420570	476794	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-1100-CL	51	83	849193	502857	935808	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 24. Models 18C-11000-1200-CL to 50C-18600-1200-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
18C-11000-1200-CL	45	70	846892	501149	931100	-	-	-	-	-	-	1215680	272669	277120	1582168	425535	483688	-	-	-	-	-	-
18C-11000-1300-CL	39	59	844396	499290	925976	-	-	-	1162704	247269	247269	1592823	429845	489697	-	-	-	-	-	-	-	-	-
32C-9900-1100-CL	52	99	802642	442456	686300	-	-	-	-	-	-	1430355	316653	319830	1791860	469023	523593	2153373	614783	727346	2514878	758666	931109
32C-9900-1200-CL	45	83	799943	440403	680769	-	-	-	-	-	-	1837667	487662	549408	2267901	660520	791898	2698126	831254	1034388	-	-	-
32C-9900-1300-CL	39	70	797013	438181	674759	-	-	-	1775487	462324	514362	2280406	665493	798951	2785325	865698	1083541	-	-	-	-	-	-
32C-12000-1100-CL	61	104	979270	553568	918134	-	-	-	-	-	-	-	-	-	1560972	327468	327468	1922486	486520	531230	2283990	633439	734984
32C-12000-1200-CL	53	88	976571	551541	912603	-	-	-	-	-	-	1606779	351575	353283	2037005	533487	595773	2467230	706876	838272	-	-	-
32C-12000-1300-CL	46	75	973633	549328	906594	-	-	-	-	-	-	2049518	538602	602827	2554437	741719	887416	-	-	-	-	-	-
32C-15000-1100-CL	70	112	1138889	658413	1156084	-	-	-	-	-	-	-	-	-	-	-	-	1685500	352469	352469	2047014	512778	556231
32C-15000-1200-CL	60	93	1136190	656405	1150553	-	-	-	-	-	-	-	-	-	1800028	408074	417021	2230253	587976	659511	2660478	761268	902001
32C-15000-1300-CL	52	80	1133251	654201	1144544	-	-	-	-	-	-	1812542	413552	424074	2317461	623394	708664	2822380	825855	993253	-	-	-
50C-15400-1100-CL	68	126	1236991	685893	1081036	-	-	-	-	-	-	-	-	-	-	-	-	2075449	432092	432092	2477133	612296	658493
50C-15400-1200-CL	59	106	1233991	683627	1074894	-	-	-	-	-	-	-	-	-	2202703	495149	503813	2680727	696230	773251	3158760	889514	1042689
50C-15400-1300-CL	51	91	1230734	681176	1068213	-	-	-	-	-	-	2216606	501299	511654	2777626	735736	827864	3338645	961464	1144075	3899664	1184484	1460285
50C-15400-1450-CL	43	75	1225353	677114	1057194	-	-	-	2330329	550505	575754	3028284	837104	969146	3726248	1115737	1362537	-	-	-	-	-	-
50C-15600-1100-CL	71	129	1292702	727895	1195148	-	-	-	-	-	-	-	-	-	-	-	-	1961806	368036	368036	2363481	564595	594437
50C-15600-1200-CL	61	109	1289702	725638	1188998	-	-	-	-	-	-	-	-	-	2089060	439765	439765	2567084	649572	709195	3045117	843865	978633
50C-15600-1300-CL	53	93	1286445	723178	1182325	-	-	-	-	-	-	-	-	-	2663983	689380	763808	3225002	916037	1080019	3786021	1139438	1396229
50C-15600-1450-CL	44	73	1281064	719124	1171306	-	-	-	-	-	-	2914641	791261	905090	3612597	1070585	1298490	-	-	-	-	-	-
50C-17300-1100-CL	80	174	1473286	848423	1475428	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2084343	391604	391604
50C-17300-1200-CL	69	170	1470286	846175	1469286	-	-	-	-	-	-	-	-	-	-	-	-	2287946	502928	506362	2765970	706327	775800
50C-17300-1300-CL	60	145	1467029	843732	1462604	-	-	-	-	-	-	-	-	-	2384836	546036	560975	2945855	779862	877185	3506874	1005696	1193405
50C-17300-1450-CL	49	116	1461648	839697	1451586	-	-	-	-	-	-	2635503	652395	702265	3333459	936295	1095657	-	-	-	-	-	-
50C-18600-1100-CL	100	145	1885714	1059779	1731449	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-18600-1200-CL	85	174	1882714	1057522	1725308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 25. Models 18C-11000-1200-CL to 50C-18600-1200-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)															
						100			110			120			150			174			
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	
18C-11000-1200-CL	45	70	846892	501149	931100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-1300-CL	39	59	844396	499290	925976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-9900-1100-CL	52	99	802642	442456	686300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-9900-1200-CL	45	83	799943	440403	680769	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-9900-1300-CL	39	70	797013	438181	674759	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-12000-1100-CL	61	104	979270	553568	918134	2645504	777950	938746	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-12000-1200-CL	53	88	976571	551541	912603	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-12000-1300-CL	46	75	973633	549328	906594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-15000-1100-CL	70	112	1138889	658413	1156084	2408528	660175	759985	2770032	805031	963747	-	-	-	-	-	-	-	-	-	-
32C-15000-1200-CL	60	93	1136190	656405	1150553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-15000-1300-CL	52	80	1133251	654201	1144544	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15400-1100-CL	68	126	1236991	685893	1081036	2878808	776791	884894	3280483	938215	1111295	3682158	1098267	1337695	-	-	-	-	-	-	-
50C-15400-1200-CL	59	106	1233991	683627	1074894	3636792	1080213	1312119	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15400-1300-CL	51	91	1230734	681176	1068213	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15400-1450-CL	43	75	1225353	677114	1057194	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15600-1100-CL	71	129	1292702	727895	1195148	2765165	730674	820838	3166840	892761	1047238	3568515	1053044	1273639	-	-	-	-	-	-	-
50C-15600-1200-CL	61	109	1289702	725638	1188998	3523141	1034990	1248062	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15600-1300-CL	53	93	1286445	723178	1182325	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15600-1450-CL	44	73	1281064	719124	1171306	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-17300-1100-CL	80	174	1473286	848423	1475428	2486018	589543	618004	2887702	756188	844405	3289377	918586	1070806	-	-	-	-	-	-	-
50C-17300-1200-CL	69	170	1470286	846175	1469286	3244003	900364	1045238	3722036	1091497	1314668	-	-	-	-	-	-	-	-	-	-
50C-17300-1300-CL	60	145	1467029	843732	1462604	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-17300-1450-CL	49	116	1461648	839697	1451586	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-18600-1100-CL	100	145	1885714	1059779	1731449	-	-	-	2632716	401710	401710	3034391	628111	628111	-	-	-	-	-	-	-
50C-18600-1200-CL	85	174	1882714	1057522	1725308	2989017	602535	602535	3467049	828210	871973	3945073	1026467	1141402	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 26. Models 50C-18600-1300-CL to 80C-19700-1800-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
50C-18600-1300-CL	74	149	1879448	1055062	1718626	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3251897	735488	750701
50C-18600-1450-CL	61	120	1874067	1051008	1707608	-	-	-	-	-	-	-	-	-	3078473	652953	652953	3776428	957260	1046344	-	-	-
65C-18400-1600-CL	51	102	1765725	1004431	1693448	-	-	-	-	-	-	3034223	707009	733523	3841564	1040627	1188573	4648896	1364086	1643622	5456237	1684305	2098662
65C-18400-1700-CL	46	87	1761637	1001360	1685075	-	-	-	-	-	-	3651103	963393	1081222	4562511	1329713	1594929	5473920	1691288	2108628	-	-	-
65C-18400-1800-CL	42	73	1757300	998112	1676190	-	-	-	3283580	812324	874079	4305375	1227035	1449993	5327160	1633285	2025907	-	-	-	-	-	-
65C-19400-1600-CL	61	102	2175188	1256700	2202933	-	-	-	-	-	-	-	-	-	3334149	731143	735400	4141481	1073355	1190440	4948823	1399698	1645489
65C-19400-1700-CL	55	87	2171100	1253638	2194561	-	-	-	-	-	-	-	-	-	4055097	1037937	1141747	4966505	1406761	1655454	-	-	-
65C-19400-1800-CL	50	87	2166763	1250390	2185685	-	-	-	-	-	-	3797960	931445	996820	4819745	1347882	1572734	-	-	-	-	-	-
80C-18700-1800-CL	42	73	2169153	1140261	1542520	-	-	-	4546316	1053460	1089497	5801148	1572441	1796762	-	-	-	-	-	-	-	-	-
80C-19700-1800-CL	49	73	2645053	1415735	2020809	-	-	-	-	-	-	5324797	1233902	1276143	6579621	1754716	1983409	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 27. Models 50C-18600-1300-CL to 80C-19700-1800-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
50C-18600-1300-CL	74	149	1879448	1055062	1718626	3812916	972279	1066912	-	-	-	-	-	-	-	-	-	-	-	-
50C-18600-1450-CL	61	120	1874067	1051008	1707608	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1600-CL	51	102	1765725	1004431	1693448	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1700-CL	46	87	1761637	1001360	1685075	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1800-CL	42	73	1757300	998112	1676190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-19400-1600-CL	61	102	2175188	1256700	2202933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-19400-1700-CL	55	87	2171100	1253638	2194561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-19400-1800-CL	50	87	2166763	1250390	2185685	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80C-18700-1800-CL	42	73	2169153	1140261	1542520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80C-19700-1800-CL	49	73	2645053	1415735	2020809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Canted Yoke Design, Spring to Open

Table 28. Models 0.3C-008A-100-OP to 0.9C-0350-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-100-OP	65	174	3257	788	832	-	-	-	-	-	-	-	-	-	-	-	-	1850	1053	1814	2239	1345	2611
0.3C-008A-135-OP	40	174	3142	735	770	-	-	-	2221	1336	2575	2929	1850	4018	3629	2363	5469	4337	2876	6921	5045	3390	8363
0.3C-008B-100-OP	91	174	5000	832	832	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-008B-135-OP	54	174	4894	770	770	-	-	-	-	-	-	-	-	-	3531	2000	3328	4239	2522	4779	4947	3044	6222
0.3C-008C-100-OP	91	174	6036	1080	1080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-008C-135-OP	63	174	5921	1009	1009	-	-	-	-	-	-	-	-	-	-	-	-	3947	2195	3513	4655	2726	4965
0.3C-008C-175-OP	41	145	5779	938	938	-	-	-	4160	2354	3947	5345	3239	6381	6531	4106	8806	7717	4974	11240	8903	5832	13673
0.3C-0100-135-OP	95	174	9638	2151	2177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-0100-175-OP	60	161	9496	2089	2106	-	-	-	-	-	-	-	-	-	5195	2832	4248	6381	3717	6682	7567	4602	9116
0.3C-0100-235-OP	37	90	9284	1982	1982	-	-	-	7478	4531	8921	9620	6098	13310	11762	7655	17691	13903	9213	22081	16045	10762	26470
0.3C-0150-175-OP	73	174	12018	3151	3522	-	-	-	-	-	-	-	-	-	-	-	-	4876	2584	3593	6062	3478	6018
0.3C-0150-235-OP	44	97	11815	3062	3407	-	-	-	-	-	-	8107	5000	10213	10248	6558	14603	12390	8115	18983	14532	9664	23373
0.9C-0200-235-OP	48	174	15240	3832	4168	-	-	-	-	-	-	9071	5345	9868	11540	7177	14939	14018	8974	20010	16496	10779	25081
0.9C-0200-280-OP	36	139	15001	3735	4036	-	-	-	11655	7257	15178	15169	9815	22373	18691	12363	29577	22205	14912	36772	25718	17461	43976
0.9C-0200-335-OP	28	97	14824	3655	3929	14116	9045	20205	19143	12700	30506	24178	16346	40816	29205	19983	51118	34241	23621	61428	39267	27258	71738
0.9C-0250-235-OP	56	174	18399	5115	5947	-	-	-	-	-	-	-	-	-	9647	5779	11063	12125	7602	16134	14603	9399	21205
0.9C-0250-280-OP	42	144	18160	5018	5814	-	-	-	9762	5859	11293	13275	8434	18497	16788	10992	25692	20311	13541	32895	23824	16089	40091
0.9C-0250-335-OP	32	100	17983	4947	5717	12213	7664	16319	17249	11328	26630	22284	14974	36931	27311	18612	47241	32347	22249	57543	37374	25886	67853
0.9C-0350-280-OP	60	162	29063	7452	8213	-	-	-	-	-	-	-	-	-	13868	7717	12319	17381	10346	19523	20895	12939	26718
0.9C-0350-335-OP	45	113	28886	7381	8115	-	-	-	-	-	-	19355	11806	23559	24382	15488	33869	29417	19143	44179	34444	22798	54481
0.9C-0350-385-OP	36	86	28674	7292	7992	-	-	-	22275	13948	29550	28922	18789	43161	35568	23603	56782	42215	28417	70393	-	-	-
0.9C-0350-435-OP	30	67	28506	7230	7903	22895	14399	30816	31382	20567	48197	39860	26718	65570	-	-	-	-	-	-	-	-	-

- NOTES:**
- Hold pressure: the minimum pressure to operate the actuator
 - MOP: Maximum Operating Pressure
 - BTC: Break to Close
 - RTC: Run to Close
 - ETC: End to Close
 - BTO: Break to Open
 - RTO: Run to Open
 - ETO: End to Open

Table 29. Models 0.3C-008A-100-OP to 0.9C-0350-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3C-008A-100-OP	65	174	3257	788	832	2620	1628	3407	3009	1912	4195	3398	2195	4991	4567	3036	7372	5496	3717	9284
0.3C-008A-135-OP	40	174	3142	735	770	5753	3903	9815	6461	4407	11257	7169	4921	12709	9284	6452	17045	10983	7682	20523
0.3C-008B-100-OP	91	174	5000	832	832	2522	1221	1266	2912	1522	2062	3301	1823	2850	4460	2690	5230	5390	3372	7142
0.3C-008B-135-OP	54	174	4894	770	770	5646	3558	7673	6354	4080	9116	7062	4593	10567	9186	6124	14912	10877	7354	18381
0.3C-008C-100-OP	91	174	6036	1080	1080	-	-	-	2620	797	797	3009	1469	1593	4168	2363	3974	5098	3062	5876
0.3C-008C-135-OP	63	174	5921	1009	1009	5354	3248	6407	6062	3770	7859	6770	4283	9301	8894	5823	13647	10585	7053	17116
0.3C-008C-175-OP	41	145	5779	938	938	10089	6699	16107	11284	7558	18541	12470	8416	20975	-	-	-	-	-	-
0.3C-0100-135-OP	95	174	9638	2151	2177	-	-	-	4735	2469	3301	5434	3009	4744	7558	4593	9089	9257	5832	12567
0.3C-0100-175-OP	60	161	9496	2089	2106	8762	5469	11549	9947	6337	13983	11133	7204	16417	14700	9788	23709	-	-	-
0.3C-0100-235-OP	37	90	9284	1982	1982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3C-0150-175-OP	73	174	12018	3151	3522	7248	4363	8452	8434	5239	10886	9620	6107	13319	13187	8691	20612	16036	10753	26453
0.3C-0150-235-OP	44	97	11815	3062	3407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0200-235-OP	48	174	15240	3832	4168	18974	12576	30152	21444	14364	35232	23922	16160	40303	31356	21532	55516	37294	25824	67685
0.9C-0200-280-OP	36	139	15001	3735	4036	29232	20001	51171	32745	22541	58375	36267	25081	65570	-	-	-	-	-	-
0.9C-0200-335-OP	28	97	14824	3655	3929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0250-235-OP	56	174	18399	5115	5947	17081	11195	26276	19550	12992	31347	22028	14788	36418	29462	20160	51631	35400	24461	63809
0.9C-0250-280-OP	42	144	18160	5018	5814	27338	18629	47294	30851	21169	54489	34365	23709	61693	-	-	-	-	-	-
0.9C-0250-335-OP	32	100	17983	4947	5717	42409	29524	78163	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0350-280-OP	60	162	29063	7452	8213	24408	15505	33922	27922	18063	41117	31444	20612	48321	41984	28258	69924	-	-	-
0.9C-0350-335-OP	45	113	28886	7381	8115	39480	26435	64791	44516	30081	75092	-	-	-	-	-	-	-	-	-
0.9C-0350-385-OP	36	86	28674	7292	7992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0350-435-OP	30	67	28506	7230	7903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 31. Models 0.9C-0350-485-OP to 1.5C-1300-585-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.9C-0350-485-OP	25	51	28409	7186	7841	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-280-OP	70	173	34550	9673	11310	21125	13107	27196	24638	15673	34391	28152	18231	41595	38701	25877	63189	-	-	-
0.9C-0400-335-OP	51	120	34373	9602	11204	36197	24063	58056	41223	27701	68366	46259	31347	78668	-	-	-	-	-	-
0.9C-0400-385-OP	41	91	34161	9523	11089	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-435-OP	33	71	33993	9452	10992	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0400-485-OP	28	51	33896	9416	10939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-335-OP	55	125	37843	11071	13319	33966	22488	53808	38993	26134	64109	44029	29771	74420	-	-	-	-	-	-
0.9C-0420-385-OP	44	94	37630	10992	13204	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-435-OP	36	74	37462	10921	13107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0420-485-OP	30	54	37365	10877	13045	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-335-OP	68	138	48790	13116	14912	31816	19656	40383	36843	23329	50684	41878	26993	60994	-	-	-	-	-	-
0.9C-0700-385-OP	54	104	48578	13027	14788	47843	31320	73207	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-435-OP	44	81	48410	12965	14700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0700-485-OP	37	58	48303	12921	14638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-385-OP	61	113	57454	16603	19797	42524	27462	62313	49171	32285	75924	-	-	-	-	-	-	-	-	-
0.9C-0720-435-OP	50	88	57295	16532	19700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9C-0720-485-OP	42	71	57189	16488	19647	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-0800-385-OP	53	123	60693	13921	14310	64764	41622	93474	73163	47728	110687	81570	53826	127900	-	-	-	-	-	-
1.5C-0800-435-OP	43	97	60481	13824	14195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-0800-485-OP	36	78	60357	13771	14116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-0800-535-OP	31	64	60322	13753	14098	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-385-OP	73	142	89128	20390	20939	56773	32975	58596	65180	39223	75809	73579	45409	93022	-	-	-	-	-	-
1.5C-1100-435-OP	59	112	88916	20293	20815	79907	50038	105979	90633	57852	127953	-	-	-	-	-	-	-	-	-
1.5C-1100-485-OP	49	90	88783	20240	20744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-535-OP	42	74	88757	20222	20727	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1100-585-OP	36	61	88332	20036	20488	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-385-OP	84	154	104067	26816	29630	47560	26152	40276	55967	32462	57490	64375	38710	74703	89589	57162	126343	-	-	-
1.5C-1200-435-OP	67	120	103855	26727	29506	70694	43383	87650	81429	51224	109625	92155	59038	131600	-	-	-	-	-	-
1.5C-1200-485-OP	56	96	103722	26674	29435	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-535-OP	47	78	103695	26665	29417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1200-585-OP	41	67	103271	26488	29178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-385-OP	98	166	123519	32303	36046	40329	16496	16496	48737	25444	33719	57144	31851	50941	82252	50525	102350	-	-	-
1.5C-1300-435-OP	78	130	123307	32214	35922	63472	36604	63897	74207	44586	85880	84942	52498	107873	-	-	-	-	-	-
1.5C-1300-485-OP	65	105	123183	32161	35851	89500	55826	117201	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-535-OP	55	87	123148	32152	35834	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5C-1300-585-OP	47	72	122723	31975	35595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 32. Models 3C-2000-385-OP to 14C-5100-885-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
3C-2000-385-OP	76	161	153105	41542	47498	-	-	-	-	-	-	-	-	-	-	-	-	-	67393	37834	61649		
3C-2000-435-OP	61	126	152760	41400	47303	-	-	-	-	-	-	-	-	-	66313	37020	59445	84075	50286	95819	101828	63357	132192
3C-2000-485-OP	51	104	152539	41312	47179	-	-	-	-	-	-	74340	43046	75880	96412	59392	121095	118493	75499	166309	140565	91544	211524
3C-2000-535-OP	43	83	152494	41294	47153	-	-	-	76172	44409	79632	103032	64224	134644	129891	83792	189664	156751	103297	244676	-	-	-
3C-2000-585-OP	37	70	151786	41011	46755	-	-	-	102067	63525	132670	134184	86916	198452	166300	110218	264226	-	-	-	-	-	-
3C-2050-385-OP	98	174	206311	49569	52374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-435-OP	79	141	205957	49418	52180	-	-	-	-	-	-	-	-	-	-	-	-	76420	30710	30710	94191	49533	67101
3C-2050-485-OP	65	116	205745	49330	52056	-	-	-	-	-	-	-	-	-	88774	45330	56003	110855	62207	101235	132945	78721	146476
3C-2050-535-OP	55	94	205692	49312	52029	-	-	-	-	-	-	95394	50463	69552	122263	70765	124599	149140	90721	179646	176018	110395	234693
3C-2050-585-OP	47	79	204993	49011	51631	-	-	-	94430	49710	67579	126555	73959	133396	158689	97739	199205	190824	121201	265022	-	-	-
6C-2500-485-OP	60	152	218330	60985	71101	-	-	-	-	-	-	-	-	-	95111	54321	92518	120918	73508	145379	146733	92403	198240
6C-2500-535-OP	50	125	218268	60959	71074	-	-	-	-	-	-	102846	60100	108359	134255	83296	172681	165654	106182	237003	197054	128998	301325
6C-2500-585-OP	44	113	217445	60631	70605	-	-	-	-	-	-	139264	86951	182956	176814	114298	259854	214365	141547	336760	251906	168743	413667
6C-2500-635-OP	38	88	216551	60269	70101	-	-	-	134697	83624	173593	178938	115847	264208	223179	147945	354814	267420	179974	445429	-	-	-
6C-2500-685-OP	34	126	215586	59879	69561	-	-	-	170380	109616	246676	221861	146990	352124	273341	184266	457563	-	-	-	-	-	-
6C-2500-735-OP	31	67	214542	59463	68968	149494	94412	203895	208763	137485	325291	268031	180425	446695	-	-	-	-	-	-	-	-	-
6C-3800-535-OP	66	141	297537	88881	108377	-	-	-	-	-	-	-	-	-	-	-	-	125272	74446	139768	156672	97571	204090
6C-3800-585-OP	56	117	296714	88553	107908	-	-	-	-	-	-	-	-	-	136432	82721	162628	173982	110200	239525	211524	137511	316432
6C-3800-635-OP	49	100	295820	88199	107404	-	-	-	-	-	-	138556	84287	166973	182797	116616	257588	227038	148760	348194	271279	180832	438810
6C-3800-685-OP	43	136	294855	87819	106864	-	-	-	-	-	-	181478	115661	254889	232959	153061	360328	284439	190364	465776	-	-	-
6C-3800-735-OP	39	74	293811	87403	106271	-	-	-	168380	106120	228065	227649	149211	349460	286926	192160	470855	-	-	-	-	-	-
6C-3900-535-OP	69	145	320122	98377	122210	-	-	-	-	-	-	-	-	-	79393	40135	47967	110811	64039	112324	142228	87323	176673
6C-3900-585-OP	60	119	319308	98049	121741	-	-	-	-	-	-	-	-	-	121980	72349	135193	159548	99978	212135	197116	127334	289076
6C-3900-635-OP	52	101	318405	97695	121236	-	-	-	-	-	-	124104	73924	139538	168362	106412	230197	212630	138600	320857	256889	170708	411516
6C-3900-685-OP	46	87	317441	97306	120696	-	-	-	115537	67561	122006	167044	105457	227498	218560	142901	332999	270067	180239	438491	-	-	-
6C-3900-735-OP	42	76	316396	96899	120103	-	-	-	153946	95890	200665	213250	139051	322122	272545	182045	443580	-	-	-	-	-	-
14C-5100-635-OP	53	152	355505	106581	130272	-	-	-	-	-	-	137219	79933	143025	185567	115616	242056	233923	150839	341097	282280	185939	440128
14C-5100-685-OP	47	131	354443	106165	129679	-	-	-	-	-	-	184133	114572	239109	240401	155548	354354	296670	196382	469599	352929	237127	584843
14C-5100-735-OP	41	107	353301	105713	129033	-	-	-	169814	104094	209789	234596	151335	342477	299378	198346	475157	364160	245260	607845	428942	292121	740524
14C-5100-785-OP	37	100	352088	105227	128343	-	-	-	214728	136874	301767	288616	190541	453120	362514	244065	604473	436411	297519	755817	510309	350947	907169
14C-5100-835-OP	34	88	350787	104713	127617	-	-	-	262588	171655	399799	346194	232251	571046	429800	292740	742285	513406	353195	913532	-	-	-
14C-5100-885-OP	31	78	349407	104165	126838	219480	140334	311511	313405	208497	503875	407321	276492	696247	501246	344398	888611	-	-	-	-	-	-

- NOTES:**
- Hold pressure: the minimum pressure to operate the actuator
 - MOP: Maximum Operating Pressure
 - BTC: Break to Close
 - RTC: Run to Close
 - ETC: End to Close
 - BTO: Break to Open
 - RTO: Run to Open
 - ETO: End to Open

Table 33. Models 3C-2000-385-OP to 14C-5100-885-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
3C-2000-385-OP	76	161	153105	41542	47498	81305	48224	90137	95208	58507	118634	109121	68676	147122	150857	99014	232596	-	-	-
3C-2000-435-OP	61	126	152760	41400	47303	119590	76296	168557	137352	89208	204931	155105	102094	241304	-	-	-	-	-	-
3C-2000-485-OP	51	104	152539	41312	47179	162645	107563	256739	-	-	-	-	-	-	-	-	-	-	-	-
3C-2000-535-OP	43	83	152494	41294	47153	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2000-585-OP	37	70	151786	41011	46755	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-385-OP	98	174	206311	49569	52374	73650	25028	25028	87571	44392	53534	101483	55118	82040	143034	86199	167141	176522	110767	235720
3C-2050-435-OP	79	141	205957	49418	52180	111961	63039	103492	129723	76322	139874	147494	89500	176265	-	-	-	-	-	-
3C-2050-485-OP	65	116	205745	49330	52056	155034	95058	191709	177115	111200	236950	-	-	-	-	-	-	-	-	-
3C-2050-535-OP	55	94	205692	49312	52029	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3C-2050-585-OP	47	79	204993	49011	51631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-485-OP	60	152	218330	60985	71101	172540	111191	251101	198346	129927	303962	224153	148645	356814	301581	204701	515397	-	-	-
6C-2500-535-OP	50	125	218268	60959	71074	228463	151769	365638	259863	174504	429960	291271	197240	494281	-	-	-	-	-	-
6C-2500-585-OP	44	113	217445	60631	70605	289457	195930	490573	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-635-OP	38	88	216551	60269	70101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-685-OP	34	126	215586	59879	69561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-2500-735-OP	31	67	214542	59463	68968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-535-OP	66	141	297537	88881	108377	188080	120457	268412	219480	143282	332725	250889	166061	397046	-	-	-	-	-	-
6C-3800-585-OP	56	117	296714	88553	107908	249074	164752	393338	286625	191948	470245	-	-	-	-	-	-	-	-	-
6C-3800-635-OP	49	100	295820	88199	107404	315520	212869	529425	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-685-OP	43	136	294855	87819	106864	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3800-735-OP	39	74	293811	87403	106271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-535-OP	69	145	320122	98377	122210	173655	110271	241021	205072	133122	305378	236490	155919	369726	-	-	-	-	-	-
6C-3900-585-OP	60	119	319308	98049	121741	234675	154601	366018	272244	181823	442960	309812	209019	519902	-	-	-	-	-	-
6C-3900-635-OP	52	101	318405	97695	121236	301157	202754	502167	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-685-OP	46	87	317441	97306	120696	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6C-3900-735-OP	42	76	316396	96899	120103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5100-635-OP	53	152	355505	106581	130272	330627	220976	539169	378984	255986	638200	427340	290961	737240	572400	395834	1034344	-	-	-
14C-5100-685-OP	47	131	354443	106165	129679	409197	277846	700088	465466	318529	815333	521734	359213	930586	-	-	-	-	-	-
14C-5100-735-OP	41	107	353301	105713	129033	493724	338955	873212	558506	385798	1005891	-	-	-	-	-	-	-	-	-
14C-5100-785-OP	37	100	352088	105227	128343	584197	404365	1058522	-	-	-	-	-	-	-	-	-	-	-	-
14C-5100-835-OP	34	88	350787	104713	127617	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5100-885-OP	31	78	349407	104165	126838	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 34. Models 14C-5100-935-OP to 14C-8300-935-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-935-OP	29	70	347947	103580	126015	262341	171478	399294	367169	247437	614013	472006	323255	828723	576843	399047	1043442	-	-	-	-	-	-
14C-5400-635-OP	66	165	459970	130874	154486	-	-	-	-	-	-	-	-	-	-	-	-	204692	119174	212958	253039	155017	311998
14C-5400-685-OP	58	142	458908	130449	153893	-	-	-	-	-	-	-	-	-	211161	123997	226224	267429	165557	341468	323698	206594	456713
14C-5400-735-OP	51	123	457766	129998	153247	-	-	-	-	-	-	205364	119670	214338	270146	167539	347026	334928	214754	479705	399710	261810	612393
14C-5400-785-OP	46	104	456545	129511	152565	-	-	-	-	-	-	259385	159663	324981	333273	213559	476334	407171	267235	627686	481068	320795	779030
14C-5400-835-OP	41	96	455253	128989	151831	-	-	-	233348	140467	271660	316954	201692	442907	400569	262438	614155	484175	323043	785393	567781	383586	956641
14C-5400-885-OP	38	86	453872	128440	151052	-	-	-	284165	177779	375744	378090	246127	568108	472006	314237	760472	565931	382240	952844	-	-	-
14C-5400-935-OP	35	75	452412	127856	150229	-	-	-	337937	216949	485874	442766	293059	700593	547603	368974	915311	-	-	-	-	-	-
14C-8300-735-OP	63	135	589286	169053	200656	-	-	-	-	-	-	-	-	-	-	-	-	281846	168123	318388	346628	215816	451076
14C-8300-785-OP	57	119	588065	168566	199966	-	-	-	-	-	-	-	-	-	280200	166902	315016	354097	221268	466368	427995	275093	617712
14C-8300-835-OP	51	112	586764	168044	199240	-	-	-	-	-	-	263880	154778	281589	347495	216444	452837	431101	277350	624075	514707	338061	795323
14C-8300-885-OP	46	93	585383	167495	198461	-	-	-	-	-	-	325007	200001	406790	418932	268500	599154	512858	336716	791526	606774	404790	983890
14C-8300-935-OP	42	84	583923	166911	197638	-	-	-	284864	170363	324556	389692	247234	539275	494529	323423	753993	599366	399427	968703	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 35. Models 14C-5100-935-OP to 14C-8300-935-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14C-5100-935-OP	29	70	347947	103580	126015	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5400-635-OP	66	165	459970	130874	154486	301396	190346	411029	349743	225542	510070	398100	260650	609101	543160	365753	906205	-	-	-
14C-5400-685-OP	58	142	458908	130449	153893	379966	247490	571958	436234	288315	687203	492503	329070	802447	-	-	-	-	-	-
14C-5400-735-OP	51	123	457766	129998	153247	464483	308785	745073	529265	355699	877761	594047	402595	1010440	-	-	-	-	-	-
14C-5400-785-OP	46	104	456545	129511	152565	554966	374302	930383	-	-	-	-	-	-	-	-	-	-	-	-
14C-5400-835-OP	41	96	455253	128989	151831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5400-885-OP	38	86	453872	128440	151052	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-5400-935-OP	35	75	452412	127856	150229	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-8300-735-OP	63	135	589286	169053	200656	411410	263031	583755	476192	310122	716443	540974	357124	849122	-	-	-	-	-	-
14C-8300-785-OP	57	119	588065	168566	199966	501892	328760	769065	575781	382355	920418	-	-	-	-	-	-	-	-	-
14C-8300-835-OP	51	112	586764	168044	199240	598313	398666	966562	-	-	-	-	-	-	-	-	-	-	-	-
14C-8300-885-OP	46	93	585383	167495	198461	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14C-8300-935-OP	42	84	583923	166911	197638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

- NOTES:**
- Hold pressure: the minimum pressure to operate the actuator
 - MOP: Maximum Operating Pressure
 - BTC: Break to Close
 - RTC: Run to Close
 - ETC: End to Close
 - BTO: Break to Open
 - RTO: Run to Open
 - ETO: End to Open

Table 36. Models 18C-9600-835-OP to 18C-11000-1300-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																				
						40			50			60			70			80			90					
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC			
18C-9600-835-OP	67	141	936082	235330	255862	-	-	-	-	-	-	-	-	-	-	-	-	-	455164	252278	397170	551311	324299	594101		
18C-9600-935-OP	55	109	932817	233976	254022	-	-	-	-	-	-	-	-	-	528106	307007	546576	648661	396445	793500	769224	484582	1040424			
18C-9600-1000-OP	49	97	930498	233012	252712	-	-	-	-	-	-	510353	293749	510220	648263	396144	792677	786163	496945	1075125	924064	597295	1357572			
18C-9600-1100-OP	42	81	926622	231410	250526	-	-	-	515150	297342	520044	682016	420888	861813	848874	542594	1203573	1015741	663839	1545334	-	-	-			
18C-9600-1200-OP	37	68	922382	229649	248136	-	-	-	671441	413145	840148	870026	557975	1246877	-	-	-	-	-	-	-	-	-			
18C-9600-1300-OP	32	58	917772	227737	245534	608261	366567	710752	841325	537098	1188095	-	-	-	-	-	-	-	-	-	-	-	-			
18C-9800-835-OP	83	155	1188316	294271	316839	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	478298	240977	284722		
18C-9800-935-OP	68	125	1185050	292908	314998	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	575648	315910	484113	696212	406427	731037
18C-9800-1000-OP	60	103	1182732	291935	313697	-	-	-	-	-	-	-	-	-	575250	315609	483290	713151	419048	765737	851051	521212	1048185			
18C-9800-1100-OP	51	90	1178855	290324	311511	-	-	-	-	-	-	609004	341114	552426	775871	465616	894186	942729	588268	1235947	1109595	709876	1577716			
18C-9800-1200-OP	44	75	1174607	288545	309122	-	-	-	-	-	-	797013	481298	937489	995590	626846	1344218	-	-	-	-	-	-			
18C-9800-1300-OP	39	64	1169997	286616	306520	-	-	-	768313	460014	878708	1001369	631058	1356050	-	-	-	-	-	-	-	-	-	-		
18C-10500-935-OP	78	133	1385184	344893	372665	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	629368	337707	485555	
18C-10500-1000-OP	69	117	1382857	343929	371355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	646307	350637	520256	784207	454448	802704
18C-10500-1100-OP	58	97	1378980	342327	369169	-	-	-	-	-	-	-	-	-	709018	398082	648705	875885	522646	990474	1042751	645652	1332235			
18C-10500-1200-OP	50	81	1374741	340566	366779	-	-	-	-	-	-	730169	413985	692017	928746	561842	1098745	1127331	707398	1505465	-	-	-			
18C-10500-1300-OP	44	70	1370130	338645	364178	-	-	-	-	-	-	934525	566126	1110569	1167581	736771	1587911	-	-	-	-	-	-			
18C-11000-935-OP	86	144	1553511	413897	467537	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
18C-11000-1000-OP	76	125	1551184	412959	466227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	683406	378762	596233	
18C-11000-1100-OP	64	106	1547316	411383	464050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	775074	447633	783995	941941	571604	1125764
18C-11000-1200-OP	55	87	1543068	409658	461651	-	-	-	-	-	-	-	-	-	827935	487033	892266	1026520	633766	1298994	-	-	-			
18C-11000-1300-OP	48	74	1538457	407781	459050	-	-	-	-	-	-	833714	491334	904098	1066770	663210	1381432	-	-	-	-	-	-	-		

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 37. Models 18C-9600-835-OP to 18C-11000-1300-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
18C-9600-835-OP	67	141	936082	235330	255862	647457	395551	791031	743612	465891	987961	839759	535965	1184900	-	-	-	-	-	-
18C-9600-935-OP	55	109	932817	233976	254022	889779	572347	1287348	1010343	659918	1534271	-	-	-	-	-	-	-	-	-
18C-9600-1000-OP	49	97	930498	233012	252712	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1100-OP	42	81	926622	231410	250526	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1200-OP	37	68	922382	229649	248136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9600-1300-OP	32	58	917772	227737	245534	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-835-OP	83	155	1188316	294271	316839	574445	314998	481652	670600	387338	678583	766746	458855	875513	1055194	670299	1466303	-	-	-
18C-9800-935-OP	68	125	1185050	292908	314998	816767	495919	977960	937330	584321	1224884	1057885	672255	1471808	-	-	-	-	-	-
18C-9800-1000-OP	60	103	1182732	291935	313697	988961	622005	1330633	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1100-OP	51	90	1178855	290324	311511	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1200-OP	44	75	1174607	288545	309122	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-9800-1300-OP	39	64	1169997	286616	306520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-935-OP	78	133	1385184	344893	372665	749922	428783	732479	870486	518637	979403	991041	607783	1226327	-	-	-	-	-	-
18C-10500-1000-OP	69	117	1382857	343929	371355	922117	556922	1085152	1060018	658281	1367608	-	-	-	-	-	-	-	-	-
18C-10500-1100-OP	58	97	1378980	342327	369169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1200-OP	50	81	1374741	340566	366779	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-10500-1300-OP	44	70	1370130	338645	364178	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-935-OP	86	144	1553511	413897	467537	649112	352761	526009	769676	443589	772932	890230	533283	1019856	-	-	-	-	-	-
18C-11000-1000-OP	76	125	1551184	412959	466227	821307	482086	878681	959207	584348	1161129	1097108	685353	1443577	-	-	-	-	-	-
18C-11000-1100-OP	64	106	1547316	411383	464050	1108799	693884	1467525	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-1200-OP	55	87	1543068	409658	461651	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18C-11000-1300-OP	48	74	1538457	407781	459050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 38. Models 32C-9900-1100-OP to 50C-17300-1450-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
32C-9900-1100-OP	53	116	1438240	320202	324273	-	-	-	-	-	-	751631	403657	581817	947516	551205	983014	1143393	696575	1384220	1339279	839962	1785417
32C-9900-1200-OP	46	97	1433258	317963	321467	-	-	-	-	-	-	972332	569701	1033857	1205450	742170	1511315	1438568	912400	1988781	1671685	1081983	2466238
32C-9900-1300-OP	40	83	1427841	315511	318414	-	-	-	938640	544594	964845	1212229	747135	1525200	1485818	946773	2085556	1759407	1145650	2645911	-	-	-
32C-12000-1100-OP	63	125	1758327	417924	438703	-	-	-	-	-	-	-	-	-	819253	432092	590401	1015139	580445	991598	1211016	726311	1392795
32C-12000-1200-OP	54	113	1753344	415808	435889	-	-	-	-	-	-	-	-	-	1077195	626828	1118702	1310304	799783	1596159	1543422	970296	2073626
32C-12000-1300-OP	47	90	1747928	413507	432845	-	-	-	-	-	-	1083975	631881	1132579	1357555	834484	1692934	1631144	1034300	2253290	1904732	1233318	2813645
32C-15000-1100-OP	71	133	2048952	513583	557320	-	-	-	-	-	-	-	-	-	-	-	-	884522	466094	635111	1080408	614606	1036308
32C-15000-1200-OP	61	109	2043969	511521	554514	-	-	-	-	-	-	-	-	-	946578	513583	762206	1179696	688831	1239673	1412814	861751	1717130
32C-15000-1300-OP	54	96	2038553	509273	551461	-	-	-	-	-	-	-	-	-	1226946	724036	1336447	1500535	926126	1896803	1774124	1125853	2457158
50C-15400-1100-OP	70	151	2217606	501742	512211	-	-	-	-	-	-	-	-	-	-	-	-	1089072	573153	778065	1306720	738453	1223849
50C-15400-1200-OP	60	128	2212066	499290	509096	-	-	-	-	-	-	-	-	-	1158023	625996	919285	1417035	821059	1449798	1676057	1013529	1980311
50C-15400-1300-OP	52	110	2206048	496635	505707	-	-	-	-	-	-	1165554	631722	934719	1469534	860185	1557335	1773522	1085514	2179950	2077511	1307694	2802565
50C-15400-1450-OP	44	87	2196128	492237	500105	-	-	-	-	-	-	1605363	961110	1835517	1983542	1239124	2610104	2361729	1514660	3384691	-	-	-
50C-15600-1100-OP	73	154	2320426	546293	570170	-	-	-	-	-	-	-	-	-	-	-	-	1027494	525451	651944	1245142	692035	1097727
50C-15600-1200-OP	62	129	2314895	543912	567046	-	-	-	-	-	-	-	-	-	1096444	578843	793164	1355457	774977	1323677	1614479	967871	1854190
50C-15600-1300-OP	54	109	2308877	541337	563657	-	-	-	-	-	-	-	-	-	1407955	814297	1431213	1711944	1040070	2053828	2015933	1262753	2676444
50C-15600-1450-OP	45	88	2298947	537071	558063	-	-	-	-	-	-	1543785	915453	1709395	1921963	1194184	2483983	2300150	1469870	3258570	-	-	-
50C-17300-1100-OP	80	161	2572722	626164	666874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1137783	594278	788261
50C-17300-1200-OP	68	135	2567181	623845	663759	-	-	-	-	-	-	-	-	-	-	-	-	1248107	678777	1014210	1507120	873707	1544723
50C-17300-1300-OP	59	115	2561172	621314	660360	-	-	-	-	-	-	-	-	-	1300605	718638	1121746	1604594	946331	1744362	1908573	1171262	2366977
50C-17300-1450-OP	49	93	2551243	617128	654767	-	-	-	-	-	-	1436426	820802	1399928	1814613	1102064	2174516	2192791	1378972	2949103	2570978	1654339	3723691

- NOTES:**
- Hold pressure: the minimum pressure to operate the actuator
 - MOP: Maximum Operating Pressure
 - BTC: Break to Close
 - RTC: Run to Close
 - ETC: End to Close
 - BTO: Break to Open
 - RTO: Run to Open
 - ETO: End to Open

Table 39. Models 32C-9900-1100-OP to 50C-17300-1450-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)															
						100			110			120			150			174			
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	
32C-9900-1100-OP	53	116	1438240	320202	324273	1535165	982669	2186623	1731042	1125074	2587820	-	-	-	-	-	-	-	-	-	-
32C-9900-1200-OP	46	97	1433258	317963	321467	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-9900-1300-OP	40	83	1427841	315511	318414	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-12000-1100-OP	63	125	1758327	417924	438703	1406902	870619	1794001	1602788	1013608	2195198	1798665	1156164	2596404	-	-	-	-	-	-	-
32C-12000-1200-OP	54	113	1753344	415808	435889	1776540	1140066	2551083	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-12000-1300-OP	47	90	1747928	413507	432845	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32C-15000-1100-OP	71	133	2048952	513583	557320	1276294	760666	1437514	1472171	905355	1838711	1668057	1048486	2239917	-	-	-	-	-	-	-
32C-15000-1200-OP	61	109	2043969	511521	554514	1645932	1032335	2194596	1879050	1202175	2672054	-	-	-	-	-	-	-	-	-	-
32C-15000-1300-OP	54	96	2038553	509273	551461	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15400-1100-OP	70	151	2217606	501742	512211	1524359	901036	1669623	1742007	1062266	2115407	1959656	1221689	2561181	2612600	1697049	3898514	-	-	-	-
50C-15400-1200-OP	60	128	2212066	499290	509096	1935070	1203750	2510825	2194092	1392716	3041338	2453114	1581141	3571851	-	-	-	-	-	-	-
50C-15400-1300-OP	52	110	2206048	496635	505707	2381500	1529041	3425180	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15400-1450-OP	44	87	2196128	492237	500105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-15600-1100-OP	73	154	2320426	546293	570170	1462781	855149	1543502	1680429	1016768	1989276	1898077	1176740	2435060	2551021	1652366	3772392	-	-	-	-
50C-15600-1200-OP	62	129	2314895	543912	567046	1873492	1158731	2384703	2132514	1347828	2915217	2391536	1536342	3445730	-	-	-	-	-	-	-
50C-15600-1300-OP	54	109	2308877	541337	563657	2319921	1484251	3299059	2623910	1705253	3921674	-	-	-	-	-	-	-	-	-	-
50C-15600-1450-OP	45	88	2298947	537071	558063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-17300-1100-OP	80	161	2572722	626164	666874	1355431	759976	1234035	1573079	922851	1679810	1790727	1084408	2125593	2443671	1561724	3462925	-	-	-	-
50C-17300-1200-OP	68	135	2567181	623845	663759	1766141	1066186	2075237	2025154	1256638	2605750	2284176	1445648	3136263	-	-	-	-	-	-	-
50C-17300-1300-OP	59	115	2561172	621314	660360	2212562	1393397	2989592	2516551	1614744	3612207	-	-	-	-	-	-	-	-	-	-
50C-17300-1450-OP	49	93	2551243	617128	654767	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 40. Models 50C-18600-1100-OP to 80C-19700-1800-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
50C-18600-1100-OP	99	145	3277668	746798	765233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-18600-1200-OP	85	151	3272137	744382	762109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50C-18600-1300-OP	73	129	3266119	741745	758719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1773823	975305	1502288
50C-18600-1450-OP	60	104	3256189	737391	753126	-	-	-	-	-	-	1679854	903851	1309827	2058041	1189042	2084414	2436228	1470135	2859001			
65C-18400-1600-OP	51	116	3075826	724850	756976	-	-	-	-	-	-	1654817	920993	1466295	2092273	1247885	2362277	2529728	1570202	3258251	2967184	1889218	4154234
65C-18400-1700-OP	46	102	3068277	721620	752719	-	-	-	-	-	-	1989073	1171236	2150904	2482921	1535944	3162379	2976759	1896192	4173855	3470607	2255272	5185330
65C-18400-1800-OP	42	87	3060277	718186	748214	-	-	-	1789930	1022564	1743034	2343586	1433895	2877011	2897242	1838340	4010979	3450889	2240962	5144956	-	-	-
65C-19400-1600-OP	59	116	3668599	877097	923905	-	-	-	-	-	-	-	-	-	1897989	1048406	1635170	2335435	1376113	2531153	2772891	1699961	3427127
65C-19400-1700-OP	53	102	3661059	873893	919657	-	-	-	-	-	-	-	-	-	2288628	1341235	2435281	2782475	1706979	3446756	3276323	2067794	4458232
65C-19400-1800-OP	48	87	3653059	870486	915143	-	-	-	-	-	-	2149302	1237301	2149904	2702949	1648481	3283881	3256605	2053412	4417849	3810252	2456424	5551817
80C-18700-1800-OP	42	87	3727558	628014	628014	-	-	-	2479522	1376777	2178206	3159441	1884953	3570807	3839369	2385730	4963407	4519288	2881480	6355999	-	-	-
80C-19700-1800-OP	49	87	4560290	845246	845246	-	-	-	-	-	-	2903119	1611824	2549375	3583046	2120699	3941976	4262965	2623131	5334568	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 41. Models 50C-18600-1100-OP to 80C-19700-1800-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
50C-18600-1100-OP	99	145	3277668	746798	765233	-	-	-	1438320	716593	815120	1655968	885575	1260904	2308912	1375733	2598236	2831265	1760451	3668104
50C-18600-1200-OP	85	151	3272137	744382	762109	1631382	866778	1210547	1890404	1063319	1741061	2149426	1257134	2271574	2926483	1829923	3863114	-	-	-
50C-18600-1300-OP	73	129	3266119	741745	758719	2077812	1203777	2124903	2381801	1429779	2747518	2685780	1653994	3370133	-	-	-	-	-	-
50C-18600-1450-OP	60	104	3256189	737391	753126	2814415	1748149	3633580	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1600-OP	51	116	3075826	724850	756976	3404630	2207402	5050208	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1700-OP	46	102	3068277	721620	752719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-18400-1800-OP	42	87	3060277	718186	748214	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65C-19400-1600-OP	59	116	3668599	877097	923905	3210346	2019659	4323110	3647802	2338250	5219084	-	-	-	-	-	-	-	-	-
65C-19400-1700-OP	53	102	3661059	873893	919657	3770162	2427263	5469707	-	-	-	-	-	-	-	-	-	-	-	-
65C-19400-1800-OP	48	87	3653059	870486	915143	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80C-18700-1800-OP	42	87	3727558	628014	628014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80C-19700-1800-OP	49	87	4560290	845246	845246	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Symmetric Yoke Design, Spring to Close

Table 42. Models 0.3S-008A-100-CL to 0.9S-0350-435-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-100-CL	63	174	2177	956	1151	-	-	-	-	-	-	-	-	-	-	-	-	2151	1000	1239	2602	1292	1752
0.3S-008A-135-CL	39	174	2106	912	1071	-	-	-	2575	1283	1726	3398	1805	2664	4213	2336	3602	5036	2850	4540	5850	3372	5469
0.3S-008B-100-CL	89	174	3372	1266	1266	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-008B-135-CL	53	174	3301	1186	1186	-	-	-	-	-	-	-	-	-	4098	1876	2274	4921	2416	3213	5735	2947	4151
0.3S-008C-100-CL	105	174	4053	1566	1602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-008C-135-CL	61	174	3983	1513	1522	-	-	-	-	-	-	-	-	-	3770	1487	1487	4593	2062	2425	5407	2602	3354
0.3S-008C-175-CL	40	174	3894	1425	1425	-	-	-	4832	2221	2699	6213	3124	4275	7584	4009	5850	8956	4894	7416	10337	5770	8992
0.3S-0100-135-CL	93	174	6469	2717	3098	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-0100-175-CL	59	174	6381	2664	3000	-	-	-	-	-	-	-	-	-	6036	2620	2947	7407	3540	4522	8788	4434	6089
0.3S-0100-235-CL	36	122	6239	2567	2850	-	-	-	8673	4363	5965	11160	5965	8806	13638	7549	11638	16116	9133	14479	18594	10709	17311
0.3S-0150-175-CL	71	174	8027	3708	4770	-	-	-	-	-	-	-	-	-	-	-	-	5664	2363	2513	7036	3292	4089
0.3S-0150-235-CL	43	129	7885	3629	4629	-	-	-	-	-	-	9408	4832	6806	11886	6425	9638	14364	8018	12479	16850	9593	15311
0.9S-0200-235-CL	48	174	10549	4814	6089	-	-	-	-	-	-	10142	4850	6213	13010	6717	9496	15877	8558	12771	18744	10390	16054
0.9S-0200-280-CL	37	174	10399	4717	5921	-	-	-	13142	6797	9647	17213	9416	14302	21284	12009	18957	25355	14603	23612	29426	17187	28276
0.9S-0200-335-CL	28	139	10284	4646	5797	15983	8629	12894	21815	12346	19567	27647	16054	26231	33471	19753	32895	39303	23461	39560	45126	27161	46232
0.9S-0250-235-CL	56	174	12620	6115	8319	-	-	-	-	-	-	-	-	-	10815	5292	6983	13682	7151	10266	16550	8992	13541
0.9S-0250-280-CL	42	174	12461	6018	8151	-	-	-	10947	5381	7133	15018	8009	11788	19089	10611	16443	23160	13204	21107	27231	15797	25762
0.9S-0250-335-CL	32	144	12346	5938	8027	13788	7222	10390	19620	10947	17054	25453	14664	23718	31276	18364	30382	37108	22063	37055	42931	25762	43719
0.9S-0350-280-CL	61	174	20098	9284	11903	-	-	-	-	-	-	-	-	-	15381	6735	7646	19461	9443	12302	23532	12080	16965
0.9S-0350-335-CL	45	157	19983	9213	11779	-	-	-	-	-	-	21744	10930	14921	27568	14682	21585	33400	18417	28249	39232	22134	34922
0.9S-0350-385-CL	36	119	19842	9124	11638	-	-	-	25134	13116	18797	32834	18045	27603	40524	22957	36400	48224	27860	45206	55923	32745	54012
0.9S-0350-435-CL	30	93	19736	9054	11514	25842	13576	19612	35674	19868	30851	45498	26125	42091	55330	32373	53330	65154	38613	64570	74986	44852	75818

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 43. Models 0.3S-008A-100-CL to 0.9S-0350-435-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.3S-008A-100-CL	63	174	2177	956	1151	3044	1584	2266	3496	1876	2779	3947	2159	3292	5292	3018	4832	6372	3708	6062
0.3S-008A-135-CL	39	174	2106	912	1071	6673	3894	6407	7487	4416	7346	8310	4938	8284	10762	6496	11089	12726	7744	13337
0.3S-008B-100-CL	89	174	3372	1266	1266	2929	938	938	3381	1389	1451	3832	1699	1965	5177	2584	3505	6257	3283	4744
0.3S-008B-135-CL	53	174	3301	1186	1186	6558	3478	5080	7372	4000	6018	8195	4522	6956	10647	6089	9762	12611	7337	12009
0.3S-008C-100-CL	105	174	4053	1566	1602	-	-	-	-	-	-	3505	1177	1177	4850	2230	2717	5930	2938	3947
0.3S-008C-135-CL	61	174	3983	1513	1522	6230	3133	4292	7045	3664	5230	7868	4186	6168	10319	5761	8974	12284	7009	11222
0.3S-008C-175-CL	40	174	3894	1425	1425	11709	6646	10567	13089	7523	12142	14461	8399	13709	18585	11018	18435	21886	13116	22205
0.3S-0100-135-CL	93	174	6469	2717	3098	4673	1389	1389	5496	2248	2328	6310	2814	3266	8770	4425	6071	10735	5691	8319
0.3S-0100-175-CL	59	174	6381	2664	3000	10160	5319	7664	11540	6204	9239	12912	7089	10815	17036	9717	15532	20337	11815	19311
0.3S-0100-235-CL	36	122	6239	2567	2850	21081	12284	20151	23559	13859	22992	26037	15434	25824	-	-	-	-	-	-
0.3S-0150-175-CL	71	174	8027	3708	4770	8408	4195	5664	9788	5080	7239	11160	5965	8806	15293	8602	13532	18594	10700	17302
0.3S-0150-235-CL	43	129	7885	3629	4629	19328	11169	18151	21806	12744	20983	24293	14319	23824	-	-	-	-	-	-
0.9S-0200-235-CL	48	174	10549	4814	6089	21612	12222	19337	24479	14045	22612	27355	15868	25895	35958	21337	35736	42843	25709	43613
0.9S-0200-280-CL	37	174	10399	4717	5921	33497	19780	32931	37577	22364	37586	41648	24948	42241	53861	32701	56215	63632	38896	67393
0.9S-0200-335-CL	28	139	10284	4646	5797	50958	30860	52896	56790	34559	59561	62614	38250	66225	-	-	-	-	-	-
0.9S-0250-235-CL	56	174	12620	6115	8319	19417	10824	16824	22284	12647	20107	25161	14479	23382	33763	19939	33223	40648	24311	41099
0.9S-0250-280-CL	42	174	12461	6018	8151	31302	18381	30417	35382	20966	35073	39453	23550	39737	51666	31311	53702	61437	37506	64879
0.9S-0250-335-CL	32	144	12346	5938	8027	48764	29462	50383	54596	33161	57047	60419	36860	63720	-	-	-	-	-	-
0.9S-0350-280-CL	61	174	20098	9284	11903	27603	14700	21621	31674	17311	26276	35745	19913	30931	47958	27692	44905	57737	33896	56082
0.9S-0350-335-CL	45	157	19983	9213	11779	45055	25842	41586	50888	29550	48250	56720	33249	54914	74198	44356	74915	-	-	-
0.9S-0350-385-CL	36	119	19842	9124	11638	63623	37639	62817	71322	42524	71623	-	-	-	-	-	-	-	-	-
0.9S-0350-435-CL	30	93	19736	9054	11514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 44. Models 0.9S-0350-485-CL to 1.5S-0800-485-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
0.9S-0350-485-CL	26	74	19665	9009	11443	35338	19647	30471	47551	27426	44436	59773	35188	58410	71986	42949	72384	-	-	-	-	-	-
0.9S-0400-280-CL	70	174	23683	11523	15771	-	-	-	-	-	-	-	-	-	-	-	-	15656	6921	7956	19727	9611	12611
0.9S-0400-335-CL	52	162	23568	11452	15638	-	-	-	-	-	-	17939	8443	10567	23762	12231	17231	29594	15983	23904	35427	19709	30568
0.9S-0400-385-CL	41	123	23426	11363	15496	-	-	-	21329	10655	14443	29028	15611	23249	36719	20532	32055	44418	25435	40860	52118	30329	49657
0.9S-0400-435-CL	34	97	23320	11293	15372	-	-	-	31869	17435	26497	41692	23700	37736	51525	29957	48976	61348	36197	60224	71181	42436	71464
0.9S-0400-485-CL	29	78	23249	11257	15302	31533	17222	26116	43746	25010	40091	55967	32772	54056	68180	40533	68030	-	-	-	-	-	-
0.9S-0420-335-CL	56	171	25656	12806	18081	-	-	-	-	-	-	-	-	-	21364	10744	14673	27187	14496	21337	33019	18222	28010
0.9S-0420-385-CL	44	128	25515	12726	17930	-	-	-	-	-	-	26621	14133	20691	34311	19054	29488	42011	23957	38294	49710	28860	47100
0.9S-0420-435-CL	36	100	25408	12656	17815	-	-	-	29462	15948	23939	39294	22222	35179	49118	28479	46418	58950	34719	57658	68773	40958	68906
0.9S-0420-485-CL	30	81	25338	12611	17744	29125	15735	23559	41338	23532	37524	53560	31302	51498	65773	39055	65472	77995	46817	79446	-	-	-
0.9S-0700-335-CL	69	174	33586	15948	21169	-	-	-	-	-	-	-	-	-	-	-	-	24152	10682	12284	29975	14541	18948
0.9S-0700-385-CL	54	132	33453	15859	21019	-	-	-	-	-	-	-	-	-	31276	15390	20435	38975	20364	29240	46675	25311	38046
0.9S-0700-435-CL	44	103	33338	15788	20904	-	-	-	-	-	-	36250	18612	26125	46073	24930	37365	55905	31205	48604	65729	37471	59844
0.9S-0700-485-CL	37	83	33276	15753	20824	-	-	-	38303	19939	28470	50516	27762	42445	62738	35559	56419	74951	43330	70393	-	-	-
0.9S-0720-385-CL	62	141	39250	19470	27267	-	-	-	-	-	-	-	-	-	25116	11328	13390	32816	16390	22196	40506	21355	30993
0.9S-0720-435-CL	50	110	39144	19399	27152	-	-	-	-	-	-	30090	14611	19072	39914	20975	30320	49746	27267	41560	59569	33542	52799
0.9S-0720-485-CL	42	88	39073	19364	27072	-	-	-	32143	15948	21426	44356	23824	35400	56578	31630	49365	68791	39409	63339	-	-	-
1.5S-0800-385-CL	52	149	39064	19390	24134	-	-	-	-	-	-	36975	13133	13487	47542	19780	23683	58100	26152	33869	68658	32444	44064
1.5S-0800-435-CL	43	117	38940	19302	23975	-	-	-	40878	15656	17258	54366	23913	30267	67844	31957	43268	81323	39940	56277	94810	47887	69287
1.5S-0800-485-CL	36	94	38860	19249	23877	-	-	-	57180	25594	32984	73942	35568	49153	90695	45471	65322	107457	55330	81491	124219	65180	97660

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 45. Models 0.9S-0350-485-CL to 1.5S-0800-485-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)															
						100			110			120			150			174			
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	
0.9S-0350-485-CL	26	74	19665	9009	11443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0400-280-CL	70	174	23683	11523	15771	23798	12257	17266	27869	14877	21921	31940	17479	26577	44153	25267	40551	53932	31479	51728	
0.9S-0400-335-CL	52	162	23568	11452	15638	41250	23417	37232	47082	27125	43896	52914	30833	50569	70393	41940	70561	-	-	-	
0.9S-0400-385-CL	41	123	23426	11363	15496	59817	35223	58463	67517	40108	67269	75216	44993	76075	-	-	-	-	-	-	
0.9S-0400-435-CL	34	97	23320	11293	15372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0400-485-CL	29	78	23249	11257	15302	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0420-335-CL	56	171	25656	12806	18081	38843	21939	34674	44675	25656	41338	50507	29355	48002	67986	40462	68003	-	-	-	
0.9S-0420-385-CL	44	128	25515	12726	17930	57410	33745	55905	65109	38630	64711	72809	43524	73517	-	-	-	-	-	-	
0.9S-0420-435-CL	36	100	25408	12656	17815	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0420-485-CL	30	81	25338	12611	17744	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0700-335-CL	69	174	33586	15948	21169	35807	18328	25612	41630	22081	32285	47463	25815	38949	64950	36966	58950	78942	45870	74951	
0.9S-0700-385-CL	54	132	33453	15859	21019	54374	30232	46852	62074	35135	55658	69765	40037	64463	-	-	-	-	-	-	
0.9S-0700-435-CL	44	103	33338	15788	20904	75561	43719	71083	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0700-485-CL	37	83	33276	15753	20824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0.9S-0720-385-CL	62	141	39250	19470	27267	48206	26293	39798	55905	31205	48604	63605	36117	57410	-	-	-	-	-	-	
0.9S-0720-435-CL	50	110	39144	19399	27152	69402	39798	64039	79225	46047	75278	-	-	-	-	-	-	-	-	-	
0.9S-0720-485-CL	42	88	39073	19364	27072	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1.5S-0800-385-CL	52	149	39064	19390	24134	79225	38692	54251	89783	44931	64437	100341	51144	74632	132024	69765	105200	-	-	-	
1.5S-0800-435-CL	43	117	38940	19302	23975	108289	55817	82296	121776	63738	95306	-	-	-	-	-	-	-	-	-	
1.5S-0800-485-CL	36	94	38860	19249	23877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 46. Models 1.5S-0800-535-CL to 1.5S-1300-585-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
1.5S-0800-535-CL	31	77	38843	19240	23851	54932	24249	30816	75322	36391	50489	95722	48427	70163	116112	60419	89845	-	-	-	-	-	-
1.5S-1100-385-CL	72	158	54950	26762	32241	-	-	-	-	-	-	-	-	-	-	-	-	50109	15673	15673	60667	23346	25860
1.5S-1100-435-CL	58	123	54826	26674	32081	-	-	-	-	-	-	-	-	-	59853	22833	25072	73331	31152	38082	86819	39267	51091
1.5S-1100-485-CL	48	99	54746	26621	31984	-	-	-	-	-	-	65941	26630	30957	82703	36798	47126	99465	46799	63295	116227	56729	79464
1.5S-1100-535-CL	41	81	54728	26603	31957	-	-	-	67331	27488	32294	87730	39807	51967	108120	51932	71650	128511	63986	91323	-	-	-
1.5S-1100-585-CL	36	65	54472	26426	31630	-	-	-	86996	39374	51259	111377	53861	74791	-	-	-	-	-	-	-	-	-
1.5S-1200-385-CL	83	168	63862	33011	43976	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49091	15001	15001
1.5S-1200-435-CL	66	132	63738	32922	43816	-	-	-	-	-	-	-	-	-	-	-	-	61755	24169	27223	75243	32426	40232
1.5S-1200-485-CL	55	106	63658	32869	43719	-	-	-	-	-	-	-	-	-	71127	29940	36258	87889	40020	52436	104651	49985	68605
1.5S-1200-535-CL	46	87	63640	32860	43692	-	-	-	-	-	-	76154	32975	41108	96545	45179	60782	116935	57260	80455	-	-	-
1.5S-1200-585-CL	40	73	63384	32683	43374	-	-	-	75420	32533	40400	99801	47117	63924	124183	61534	87456	-	-	-	-	-	-
1.5S-1300-385-CL	97	174	75721	39453	53233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-435-CL	78	137	75597	39365	53073	-	-	-	-	-	-	-	-	-	-	-	-	52684	13390	13390	66171	24630	26400
1.5S-1300-485-CL	63	112	75517	39312	52976	-	-	-	-	-	-	-	-	-	62056	21939	22435	78827	32524	38613	95598	42666	54790
1.5S-1300-535-CL	53	90	75499	39294	52950	-	-	-	-	-	-	67083	25214	27285	87491	37790	46967	107890	50011	66658	128298	62109	86341
1.5S-1300-585-CL	46	76	75243	39126	52631	-	-	-	66348	24745	26577	90748	39745	50109	115139	54321	73650	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 47. Models 1.5S-0800-535-CL to 1.5S-1300-585-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
1.5S-0800-535-CL	31	77	38843	19240	23851	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1100-385-CL	72	158	54950	26762	32241	71225	29869	36055	81792	36250	46241	92350	42569	56428	124033	61339	87004	-	-	-
1.5S-1100-435-CL	58	123	54826	26674	32081	100297	47294	64101	113776	55286	77110	127263	63242	90120	-	-	-	-	-	-
1.5S-1100-485-CL	48	99	54746	26621	31984	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1100-535-CL	41	81	54728	26603	31957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1100-585-CL	36	65	54472	26426	31630	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-385-CL	83	168	63862	33011	43976	59658	22851	25187	70216	29382	35382	80774	35763	45569	112457	54613	76137	-	-	-
1.5S-1200-435-CL	66	132	63738	32922	43816	88721	40515	53233	102209	48542	66242	115687	56525	79252	-	-	-	-	-	-
1.5S-1200-485-CL	55	106	63658	32869	43719	121404	59897	84774	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-535-CL	46	87	63640	32860	43692	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-585-CL	40	73	63384	32683	43374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-385-CL	97	174	75721	39453	53233	50578	11355	11355	61145	21320	21550	71712	28125	31745	103253	47241	62180	128679	62339	86712
1.5S-1300-435-CL	78	137	75597	39365	53073	79659	33028	39418	93155	41197	52436	106643	49259	65446	-	-	-	-	-	-
1.5S-1300-485-CL	63	112	75517	39312	52976	112368	52666	70968	129130	62605	87146	-	-	-	-	-	-	-	-	-
1.5S-1300-535-CL	53	90	75499	39294	52950	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-585-CL	46	76	75243	39126	52631	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 48. Models 3S-2000-385-CL to 14S-5100-885-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
3S-2000-385-CL	75	174	95978	50162	69561	-	-	-	-	-	-	-	-	-	-	-	-	-	-	82455	33232	37922	
3S-2000-435-CL	61	154	95766	50020	69304	-	-	-	-	-	-	-	-	-	81119	32391	36595	103138	46029	58463	125166	59384	80323
3S-2000-485-CL	50	123	95633	49932	69136	-	-	-	-	-	-	91075	38613	46480	118448	55321	73659	145830	71800	100837	173212	88190	128006
3S-2000-535-CL	43	102	95598	49914	69101	-	-	-	93341	40020	48728	126652	60277	81801	159973	80270	114873	193284	100164	147937	226604	120015	181009
3S-2000-585-CL	37	84	95173	49631	68570	-	-	-	125458	59552	80615	165291	83456	120148	205125	107227	159689	244959	130945	199231	-	-	-
3S-2050-385-CL	98	174	130378	63932	80172																		
3S-2050-435-CL	78	155	130166	63791	79916													92766	19727	19727	114802	41073	41604
3S-2050-485-CL	65	126	130033	63702	79747										108085	34931	34931	135476	54534	62127	162867	71517	89314
3S-2050-535-CL	55	101	129998	63685	79712							116289	42091	43082	149627	63366	76172	182956	83765	109253	216285	103899	142343
3S-2050-585-CL	46	87	129573	63393	79181				115094	41268	41896	154946	66649	81455	194797	90943	121015	234658	114935	160574			
6S-2500-485-CL	60	174	137467	72924	103731	-	-	-	-	-	-	-	-	-	115510	47887	56162	147459	67534	87996	179416	86872	119838
6S-2500-535-CL	50	164	137432	72906	103687	-	-	-	-	-	-	125086	53835	65702	163964	77544	104439	202842	100961	143184	241720	124245	181929
6S-2500-585-CL	44	136	136936	72570	103067	-	-	-	-	-	-	170177	81296	110634	216657	109236	156955	263146	137051	203276	309635	164787	249597
6S-2500-635-CL	38	116	136387	72207	102395	-	-	-	164513	77880	104996	219285	110811	159574	274058	143574	214152	328831	176239	268730	383603	208860	323308
6S-2500-685-CL	34	100	135803	71818	101660	-	-	-	208692	104465	149016	272430	142600	212524	336167	180611	276032	399905	218568	339548	463643	256517	403056
6S-2500-735-CL	30	87	135166	71393	100881	182832	88925	123245	256216	132900	196364	329592	176690	269491	402976	220400	342610	476360	264075	415729	-	-	-
6S-3800-535-CL	65	174	186301	102704	154707	-	-	-	-	-	-	-	-	-	-	-	-	152530	67437	84677	191408	91067	123422
6S-3800-585-CL	56	148	185797	102377	154087	-	-	-	-	-	-	-	-	-	166345	75880	98447	212825	103979	144768	259314	131874	191089
6S-3800-635-CL	49	125	185257	102014	153415	-	-	-	-	-	-	168973	77473	101067	223746	110545	155645	278518	143361	210223	333282	176071	264801
6S-3800-685-CL	43	107	184664	101625	152689	-	-	-	158371	71012	90500	222108	109563	154017	285846	147742	217524	349584	185797	281041	413322	223781	344548
6S-3800-735-CL	38	94	184036	101209	151901	-	-	-	205895	99810	137856	279279	143813	210984	352655	187629	284103	426039	231357	357221	499423	275049	430349
6S-3900-535-CL	40	174	198877	111377	171663	-	-	-	-	-	-	-	-	-	97058	30656	30656	135963	57720	69419	174858	81517	108182
6S-3900-585-CL	36	148	198373	111050	171044	-	-	-	-	-	-	103271	36692	36851	149786	66242	83190	196293	94474	129537	242800	122413	175885
6S-3900-635-CL	31	126	197833	110687	170371	-	-	-	97616	31205	31205	152415	67853	85810	207214	101049	140423	262013	133927	195027	316812	166672	249632
6S-3900-685-CL	29	108	197240	110298	169646	78048	11709	11709	141812	61339	75252	205586	100067	138795	269350	138308	202338	333123	176398	265881	396887	214409	329424
6S-3900-735-CL	26	94	196612	109882	168858	115944	45108	49472	189355	90288	122626	262774	134378	195789	336194	178230	268943	409613	221993	342106	483033	265704	415260
14S-5100-635-CL	52	174	217675	122590	187257	-	-	-	-	-	-	170628	71597	86465	231392	108059	145087	292156	144034	203709	352920	179841	262332
14S-5100-685-CL	46	174	217037	122165	186443	-	-	-	-	-	-	229587	106979	143343	300289	148839	211559	371001	190487	279784	441712	232020	348000
14S-5100-735-CL	41	154	216356	121705	185576	-	-	-	211595	96261	125989	293006	144538	204524	374408	192488	283067	455819	240304	361611	537222	288050	440155
14S-5100-785-CL	37	135	215630	121218	184646	-	-	-	268031	129785	180434	360885	184540	270022	453748	239092	359611	546611	293546	449208	639466	347973	538797
14S-5100-835-CL	34	119	214851	120696	183655	-	-	-	328176	165274	238463	433243	227047	339831	538310	288678	441199	643368	350265	542567	748436	411799	643926
14S-5100-885-CL	31	106	214028	120139	182602	274005	133325	186195	392028	202842	300068	510061	272111	413941	628085	341309	527814	746108	410436	641678	864132	479564	755551

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 49. Models 3S-2000-385-CL to 14S-5100-885-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
3S-2000-385-CL	75	174	95978	50162	69561	99704	43931	55047	116953	54419	72172	134210	64826	89297	185965	95801	140680	227374	120475	181779
3S-2000-435-CL	61	154	95766	50020	69304	147193	72614	102182	169221	85801	124050	191240	98952	145910	257314	138299	211497	-	-	-
3S-2000-485-CL	50	123	95633	49932	69136	200585	104519	155185	227967	120829	182363	255349	137131	209541	-	-	-	-	-	-
3S-2000-535-CL	43	102	95598	49914	69101	259916	139848	214082	-	-	-	-	-	-	-	-	-	-	-	-
3S-2000-585-CL	37	84	95173	49631	68570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3S-2050-385-CL	98	174	130378	63932	80172	89323	16319	16319	106589	33453	33453	123847	47100	50587	175380	79163	101740	216914	104271	142963
3S-2050-435-CL	78	155	130166	63791	79916	136839	55392	63481	158875	69074	85349	180912	82526	107227	246703	122157	172531	-	-	-
3S-2050-485-CL	65	126	130033	63702	79747	190257	88199	116510	217657	104722	143697	245048	121165	170894	-	-	-	-	-	-
3S-2050-535-CL	55	101	129998	63685	79712	249623	123909	175434	-	-	-	-	-	-	-	-	-	-	-	-
3S-2050-585-CL	46	87	129573	63393	79181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-2500-485-CL	60	174	137467	72924	103731	211365	106067	151680	243313	125192	183514	275270	144290	215356	371125	201435	310874	447810	247092	387285
6S-2500-535-CL	50	164	137432	72906	103687	280598	147476	220666	319485	170663	259411	358363	193833	298148	474997	263270	414375	-	-	-
6S-2500-585-CL	44	136	136936	72570	103067	356115	192496	295917	402604	220179	342238	449093	247853	388559	-	-	-	-	-	-
6S-2500-635-CL	38	116	136387	72207	102395	438376	241481	377886	493149	274067	432464	-	-	-	-	-	-	-	-	-
6S-2500-685-CL	34	100	135803	71818	101660	527380	294422	466572	-	-	-	-	-	-	-	-	-	-	-	-
6S-2500-735-CL	30	87	135166	71393	100881	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-3800-535-CL	65	174	186301	102704	154707	230286	114475	162159	269164	137768	200904	308042	161008	239640	424676	230543	355867	517991	286112	448854
6S-3800-585-CL	56	148	185797	102377	154087	305803	159672	237410	352283	187408	283731	398772	215117	330052	-	-	-	-	-	-
6S-3800-635-CL	49	125	185257	102014	153415	388055	208745	319379	442827	241357	373957	497600	273969	428535	-	-	-	-	-	-
6S-3800-685-CL	43	107	184664	101625	152689	477059	261739	408065	-	-	-	-	-	-	-	-	-	-	-	-
6S-3800-735-CL	38	94	184036	101209	151901	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-3900-535-CL	40	174	198877	111377	171663	213754	104988	146937	252659	128325	185700	291554	151583	224463	407684	220843	340185	501273	276563	433438
6S-3900-585-CL	36	148	198373	111050	171044	289315	150246	222224	335822	178009	268571	382329	205745	314918	521185	288413	453279	-	-	-
6S-3900-635-CL	31	126	197833	110687	170371	371612	199355	304236	426411	231994	358841	481210	264624	413445	-	-	-	-	-	-
6S-3900-685-CL	29	108	197240	110298	169646	460660	252384	392967	524424	290342	456510	-	-	-	-	-	-	-	-	-
6S-3900-735-CL	26	94	196612	109882	168858	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14S-5100-635-CL	52	174	217675	122590	187257	413684	215559	320954	474449	251234	379585	535204	286864	438208	717496	393675	614075	863326	479086	754772
14S-5100-685-CL	46	174	217037	122165	186443	512415	273500	416216	583127	314963	484440	653838	356390	552656	865964	480626	757312	1035662	579958	921037
14S-5100-735-CL	41	154	216356	121705	185576	618633	335769	518699	700044	383453	597233	781446	431128	675777	1025671	574117	911400	-	-	-
14S-5100-785-CL	37	135	215630	121218	184646	732329	402365	628385	825192	456749	717983	918046	511132	807571	-	-	-	-	-	-
14S-5100-835-CL	34	119	214851	120696	183655	853503	473333	745294	958570	534850	846662	-	-	-	-	-	-	-	-	-
14S-5100-885-CL	31	106	214028	120139	182602	982155	548647	869424	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 50. Models 14S-5100-935-CL to 14S-8300-935-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
14S-5100-935-CL	28	96	213161	119555	181487	327866	165088	238162	459598	242525	365266	591339	319786	492361	723080	396949	619465	854822	474103	746568	986554	551222	873663
14S-5400-635-CL	65	174	282333	154309	224949	-	-	-	-	-	-	-	-	-	-	-	-	254977	106988	129192	315741	143574	187815
14S-5400-685-CL	57	174	281704	153884	224144	-	-	-	-	-	-	-	-	-	263119	111926	137042	333822	154362	205258	404534	196311	273483
14S-5400-735-CL	51	158	281023	153424	223277	-	-	-	-	-	-	255827	107501	130007	337238	156388	208550	418640	204647	287094	500052	252650	365638
14S-5400-785-CL	46	139	280288	152937	222347	-	-	-	-	-	-	323715	148326	195505	416570	203426	285094	509433	258172	374682	602296	312777	464280
14S-5400-835-CL	41	123	279518	152415	221356	-	-	-	290997	128750	163937	396064	191293	265305	501131	253287	366673	606198	315069	468041	711266	376753	569409
14S-5400-885-CL	38	109	278695	151857	220303	-	-	-	354858	166867	225551	472882	236658	339424	590906	306086	453288	708929	375390	567161	826962	444606	681034
14S-5400-935-CL	35	97	277819	151273	219188	-	-	-	422428	206878	290740	554160	284501	417844	685902	361885	544948	817643	439146	672042	949384	516353	799146
14S-8300-735-CL	63	167	362416	199107	292643	-	-	-	-	-	-	-	-	-	268828	102625	112758	350239	152574	191302	431641	201267	269845
14S-8300-785-CL	56	146	361691	198621	291714	-	-	-	-	-	-	-	-	-	348168	151326	189302	441022	206851	278890	533885	261845	368487
14S-8300-835-CL	51	129	360912	198098	290723	-	-	-	-	-	-	327654	138918	169513	432721	201913	270881	537788	264146	372249	642855	326078	473617
14S-8300-885-CL	46	115	360089	197541	289669	-	-	-	-	-	-	404472	185089	243632	522504	255119	357505	640528	324707	471369	758551	394108	585242
14S-8300-935-CL	42	103	359222	196948	288554	-	-	-	354018	154857	194948	485759	233383	322052	617500	311148	449155	749232	388630	576250	880973	465988	703354

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 51. Models 14S-5100-935-CL to 14S-8300-935-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)															
						100			110			120			150			174			
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	
14S-5100-935-CL	28	96	213161	119555	181487	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14S-5400-635-CL	65	174	282333	154309	224949	376506	179708	246437	437270	215639	305060	498034	251464	363691	680317	358611	539558	826148	444128	680255	
14S-5400-685-CL	57	174	281704	153884	224144	475245	238047	341699	545948	279678	409914	616659	321220	478139	828785	445677	682795	998484	545116	846520	
14S-5400-735-CL	51	158	281023	153424	223277	581454	300537	444173	662865	348363	522716	744267	396117	601260	988492	539266	836883	-	-	-	
14S-5400-785-CL	46	139	280288	152937	222347	695150	367310	553868	788013	421764	643457	880876	476227	733054	-	-	-	-	-	-	
14S-5400-835-CL	41	123	279518	152415	221356	816324	438367	670777	921391	499963	772145	1026458	561497	873513	-	-	-	-	-	-	
14S-5400-885-CL	38	109	278695	151857	220303	944985	513778	794907	-	-	-	-	-	-	-	-	-	-	-	-	
14S-5400-935-CL	35	97	277819	151273	219188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
14S-8300-735-CL	63	167	362416	199107	292643	513052	249543	348380	594455	297590	426924	675866	345513	505468	920090	488927	741090	-	-	-	
14S-8300-785-CL	56	146	361691	198621	291714	626748	316600	458076	719602	371231	547665	812465	425782	637262	-	-	-	-	-	-	
14S-8300-835-CL	51	129	360912	198098	290723	747922	387860	574985	852990	449580	676352	958057	511194	777720	-	-	-	-	-	-	
14S-8300-885-CL	46	115	360089	197541	289669	876575	463413	699115	994598	532628	812988	-	-	-	-	-	-	-	-	-	
14S-8300-935-CL	42	103	359222	196948	288554	1012714	543248	830457	-	-	-	-	-	-	-	-	-	-	-	-	

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 52. Models 18S-9600-835-CL to 18S-11000-1300-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																		
						40			50			60			70			80			90			
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	
18S-9600-835-CL	67	165	586790	301325	397197	-	-	-	-	-	-	-	-	-	-	-	-	-	556187	212612	233835	676981	287147	350442
18S-9600-935-CL	55	132	584835	299988	394710	-	-	-	-	-	-	-	-	-	647829	269394	322299	799279	360823	468510	950738	451031	614730	
18S-9600-1000-CL	49	115	583454	299033	392940	-	-	-	-	-	-	625527	255738	300776	798774	360514	468023	972022	463643	635280	1145270	566117	802527	
18S-9600-1100-CL	42	96	581135	297449	389975	-	-	-	631554	259438	306591	841184	385842	508964	1050814	510318	711336	1260435	634041	913709	1470065	757436	1116091	
18S-9600-1200-CL	37	80	578595	295705	386745	-	-	-	827900	377904	496140	1077372	526017	736984	1326845	673158	977828	1576327	819882	1218663	-	-	-	
18S-9600-1300-CL	32	65	575843	293811	383223	748533	330379	419517	1041318	504698	702177	1334102	677432	984828	-	-	-	-	-	-	-	-	-	
18S-9800-835-CL	83	173	742692	378028	491095	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	584383	170495	170495	
18S-9800-935-CL	68	138	740736	376691	488609	-	-	-	-	-	-	-	-	-	-	-	-	706681	266190	288572	858140	360115	434783	
18S-9800-1000-CL	60	120	739356	375736	486839	-	-	-	-	-	-	-	-	-	706177	265872	288076	879425	373054	455333	1052672	477334	622580	
18S-9800-1100-CL	51	100	737037	374143	483883	-	-	-	-	-	-	748577	292634	329016	958207	420676	531389	1167837	545992	733771	1377467	670317	936144	
18S-9800-1200-CL	44	84	734497	372399	480644	-	-	-	-	-	-	984775	436650	557037	1234248	585472	797881	1483720	733063	1038725	-	-	-	
18S-9800-1300-CL	39	65	731745	370514	477121	-	-	-	948720	414959	522230	1241505	589773	804881	1534289	762923	1087541	-	-	-	-	-	-	
18S-10500-935-CL	74	139	820342	410675	518831	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	828333	314927	344504	
18S-10500-1000-CL	66	122	818961	409720	517061	-	-	-	-	-	-	-	-	-	-	-	-	849618	328362	365054	1022865	435004	532301	
18S-10500-1100-CL	56	102	816643	408118	514105	-	-	-	-	-	-	-	-	-	928400	377329	441119	1138030	504512	643492	1347660	629731	845865	
18S-10500-1200-CL	48	86	814103	406365	510866	-	-	-	-	-	-	954968	393639	466758	1204441	544337	707602	1453913	692840	948446	-	-	-	
18S-10500-1300-CL	42	73	811350	404463	507344	-	-	-	918913	371479	431951	1211698	548673	714602	1504482	722797	997262	-	-	-	-	-	-	
18S-11000-935-CL	82	148	920949	479661	647254	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	701690	222241	222241	
18S-11000-1000-CL	73	129	919559	478714	645484	-	-	-	-	-	-	-	-	-	-	-	-	722974	242791	242791	896213	357443	410038	
18S-11000-1100-CL	62	107	917241	477130	642528	-	-	-	-	-	-	-	-	-	801757	297971	318857	1011387	428048	521230	1221017	554231	723603	
18S-11000-1200-CL	53	90	914709	475395	639289	-	-	-	-	-	-	-	-	-	1077797	468245	585339	1327270	617606	826183	1576743	765614	1067027	
18S-11000-1300-CL	46	77	911948	473510	635775	-	-	-	-	-	-	1085054	472617	592339	1377839	647670	875000	-	-	-	-	-	-	

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 53. Models 18S-9600-835-CL to 18S-11000-1300-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
18S-9600-835-CL	67	165	586790	301325	397197	797774	359912	467059	918559	431907	583666	1039353	503530	700283	1401734	717257	1050114	-	-	-
18S-9600-935-CL	55	132	584835	299988	394710	1102197	540682	760941	1253647	630049	907160	1405106	719248	1053371	-	-	-	-	-	-
18S-9600-1000-CL	49	115	583454	299033	392940	1318517	668246	969783	1491765	770189	1137030	-	-	-	-	-	-	-	-	-
18S-9600-1100-CL	42	96	581135	297449	389975	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9600-1200-CL	37	80	578595	295705	386745	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9600-1300-CL	32	65	575843	293811	383223	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9800-835-CL	83	173	742692	378028	491095	705168	265226	287112	825962	340468	403719	946755	413773	520336	1309127	629837	870167	-	-	-
18S-9800-935-CL	68	138	740736	376691	488609	1009590	451536	581003	1161049	541956	727213	1312508	631837	873433	-	-	-	-	-	-
18S-9800-1000-CL	60	120	739356	375736	486839	1225911	580525	789836	1399158	683123	957083	1572406	785429	1124339	-	-	-	-	-	-
18S-9800-1100-CL	51	100	737037	374143	483883	1587097	794075	1138517	-	-	-	-	-	-	-	-	-	-	-	-
18S-9800-1200-CL	44	84	734497	372399	480644	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9800-1300-CL	39	65	731745	370514	477121	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-10500-935-CL	74	139	820342	410675	518831	979784	408799	490724	1131242	500441	636935	1282701	591065	783154	-	-	-	-	-	-
18S-10500-1000-CL	66	122	818961	409720	517061	1196104	539346	699557	1369352	642625	866804	1542599	745382	1034061	-	-	-	-	-	-
18S-10500-1100-CL	56	102	816643	408118	514105	1557290	754082	1048238	-	-	-	-	-	-	-	-	-	-	-	-
18S-10500-1200-CL	48	86	814103	406365	510866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-10500-1300-CL	42	73	811350	404463	507344	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-11000-935-CL	82	148	920949	479661	647254	853140	330574	368461	1004599	423933	514672	1156058	515327	660891	-	-	-	-	-	-
18S-11000-1000-CL	73	129	919559	478714	645484	1069461	463218	577294	1242708	567188	744542	1415956	670334	911798	-	-	-	-	-	-
18S-11000-1100-CL	62	107	917241	477130	642528	1430638	679061	925976	-	-	-	-	-	-	-	-	-	-	-	-
18S-11000-1200-CL	53	90	914709	475395	639289	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-11000-1300-CL	46	77	911948	473510	635775	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 54. Models 32S-9900-1100-CL to 50S-17300-1450-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
32S-9900-1100-CL	51	138	889186	418003	486511	-	-	-	-	-	-	944286	357319	383285	1187829	510070	623766	1431364	658307	864247	1674907	804899	1104728
32S-9900-1200-CL	45	115	886177	415906	482750	-	-	-	-	-	-	1218689	529009	654236	1508518	704858	940428	1798355	878876	1226619	2088184	1052000	1512810
32S-9900-1300-CL	39	99	882903	413631	478661	-	-	-	1176793	503291	612871	1516943	709938	948747	1857102	914010	1284631	2197251	1117029	1620506	2537401	1319455	1956381
32S-12000-1100-CL	61	144	1085435	527000	646891	-	-	-	-	-	-	-	-	-	1029671	377745	393090	1273205	532540	633572	1516748	681698	874053
32S-12000-1200-CL	52	120	1082426	524938	643130	-	-	-	-	-	-	1060531	398082	423570	1350360	580126	709761	1640197	756480	995952	1930026	930834	1282144
32S-12000-1300-CL	46	103	1079151	522690	639041	-	-	-	-	-	-	1358785	585304	718080	1698943	791916	1053955	2039093	996174	1389839	2379243	1199343	1725715
32S-15000-1100-CL	70	151	1263479	631085	811191	-	-	-	-	-	-	-	-	-	-	-	-	1111179	406835	422561	1354723	562090	663042
32S-15000-1200-CL	60	126	1260461	629031	807430	-	-	-	-	-	-	-	-	-	1188334	457218	498751	1478171	638244	784942	1768000	814501	1071133
32S-15000-1300-CL	52	107	1257187	626801	803341	-	-	-	-	-	-	1196759	462643	507070	1536918	674175	842945	1877067	880274	1178829	2217217	1084435	1514704
50S-15400-1100-CL	68	174	1376901	650094	766410	-	-	-	-	-	-	-	-	-	-	-	-	1362511	499388	517229	1632453	672538	785181
50S-15400-1200-CL	58	148	1373538	647767	762242	-	-	-	-	-	-	-	-	-	1448028	555559	602119	1769274	757472	921002	2090529	953933	1239894
50S-15400-1300-CL	51	126	1369892	645236	757702	-	-	-	-	-	-	1457365	561594	611393	1834393	797571	985642	2211411	1027237	1359891	2588439	1254558	1734149
50S-15400-1450-CL	43	102	1363865	641059	750232	-	-	-	1533794	610455	687256	2002844	900611	1152854	2471894	1184404	1618461	2940944	1466011	2084060	3409994	1746415	2549658
50S-15600-1100-CL	71	174	1439276	693097	843856	-	-	-	-	-	-	-	-	-	-	-	-	1286135	441420	441420	1556078	624571	709372
50S-15600-1200-CL	61	151	1435921	690787	839688	-	-	-	-	-	-	-	-	-	1371653	505485	526310	1692908	710195	845193	2014154	907506	1164085
50S-15600-1300-CL	53	128	1432266	688273	835157	-	-	-	-	-	-	-	-	-	1758017	750524	909833	2135045	980952	1284082	2512064	1208591	1658331
50S-15600-1450-CL	44	103	1426248	684132	827679	-	-	-	-	-	-	1926468	854016	1077045	2395518	1138437	1542644	2864568	1420230	2008251	3333618	1700837	2473849
50S-17300-1100-CL	80	174	1640967	812917	1036096	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1366493	469670	469670
50S-17300-1200-CL	68	157	1637613	810633	1031928	-	-	-	-	-	-	-	-	-	-	-	-	1503323	567710	605490	1824569	770932	924383
50S-17300-1300-CL	59	133	1633958	808155	1027397	-	-	-	-	-	-	-	-	-	1568441	609862	670131	1945460	845502	1044380	2322488	1075293	1418637
50S-17300-1450-CL	49	107	1627940	804067	1019918	-	-	-	-	-	-	1736892	716363	837343	2205942	1004555	1302941	2674992	1287941	1768549	3144033	1569406	2234147

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 55. Models 32S-9900-1100-CL to 50S-17300-1450-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
32S-9900-1100-CL	51	138	889186	418003	486511	1918450	950702	1345209	2161984	1096002	1585690	2405527	1241018	1826162	-	-	-	-	-	-
32S-9900-1200-CL	45	115	886177	415906	482750	2378013	1224654	1799001	2667850	1397043	2085193	-	-	-	-	-	-	-	-	-
32S-9900-1300-CL	39	99	882903	413631	478661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32S-12000-1100-CL	61	144	1085435	527000	646891	1760292	828873	1114534	2003826	975084	1355015	2247369	1120711	1595496	-	-	-	-	-	-
32S-12000-1200-CL	52	120	1082426	524938	643130	2219863	1104285	1568335	2509692	1277135	1854526	2799521	1449612	2140718	-	-	-	-	-	-
32S-12000-1300-CL	46	103	1079151	522690	639041	2719393	1401955	2061590	-	-	-	-	-	-	-	-	-	-	-	-
32S-15000-1100-CL	70	151	1263479	631085	811191	1598266	711584	903523	1841800	859034	1144004	2085343	1005440	1384485	2815964	1441762	2105928	-	-	-
32S-15000-1200-CL	60	126	1260461	629031	807430	2057837	988926	1357325	2347666	1162456	1643516	2637495	1335394	1929707	-	-	-	-	-	-
32S-15000-1300-CL	52	107	1257187	626801	803341	2557367	1287613	1850579	-	-	-	-	-	-	-	-	-	-	-	-
50S-15400-1100-CL	68	174	1376901	650094	766410	1902387	839290	1053141	2172330	1003590	1321093	2442273	1166572	1589053	3252092	1652083	2392916	3899947	2038668	3036010
50S-15400-1200-CL	58	148	1373538	647767	762242	2411775	1148226	1558786	2733030	1341333	1877678	3054277	1533785	2196561	-	-	-	-	-	-
50S-15400-1300-CL	51	126	1369892	645236	757702	2965458	1480667	2108397	3342486	1706138	2482646	3719505	1931043	2856904	-	-	-	-	-	-
50S-15400-1450-CL	43	102	1363865	641059	750232	3879035	2026199	3015257	-	-	-	-	-	-	-	-	-	-	-	-
50S-15600-1100-CL	71	174	1439276	693097	843856	1826021	792438	977332	2095954	957225	1245284	2365897	1120596	1513244	3175716	1606408	2317107	3823572	1993117	2960201
50S-15600-1200-CL	61	151	1435921	690787	839688	2335409	1102170	1482977	2656655	1295516	1801860	2977910	1488110	2120752	3941657	2063555	3077419	-	-	-
50S-15600-1300-CL	53	128	1432266	688273	835157	2889091	1434939	2032588	3266110	1660464	2406837	3643138	1885484	2781086	-	-	-	-	-	-
50S-15600-1450-CL	44	103	1426248	684132	827679	3802668	1980648	2939448	-	-	-	-	-	-	-	-	-	-	-	-
50S-17300-1100-CL	80	174	1640967	812917	1036096	1636436	653210	737630	1906379	821457	1005581	2176312	986571	1273542	2986132	1474773	2077405	3633987	1862297	2720499
50S-17300-1200-CL	68	157	1637613	810633	1031928	2145824	968022	1243275	2467079	1162669	1562158	2788325	1356121	1881050	3752081	1932734	2837717	-	-	-
50S-17300-1300-CL	59	133	1633958	808155	1027397	2699507	1302702	1792886	3076534	1528997	2167135	3453553	1754504	2541393	-	-	-	-	-	-
50S-17300-1450-CL	49	107	1627940	804067	1019918	3613083	1849827	2699746	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 56. Models 50S-18600-1100-CL to 80S-19700-1800-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
50S-18600-1100-CL	99	174	2099406	1008519	1223061	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50S-18600-1200-CL	85	162	2096052	1006210	1218884	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50S-18600-1300-CL	73	149	2092397	1003705	1214353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2138107	823970	897098
50S-18600-1450-CL	61	112	2086379	999563	1206875	-	-	-	-	-	-	-	-	-	2021570	747790	781402	2490611	1046300	1247009	2959661	1334315	1712608
65S-18400-1600-CL	51	131	1962089	956340	1187458	-	-	-	-	-	-	2001507	789694	880956	2544065	1126720	1419531	3086623	1455993	1958098	3629173	1782328	2496665
65S-18400-1700-CL	46	116	1957514	953216	1181776	-	-	-	-	-	-	2416068	1048247	1292472	3028567	1420912	1900467	3641058	1789461	2508462	4253558	2156152	3116457
65S-18400-1800-CL	41	102	1952655	949897	1175740	-	-	-	2169082	895293	1047309	2855753	1316384	1728927	3542434	1730299	2410554	4229105	2141532	3092181	4915777	2551437	3773808
65S-19400-1600-CL	61	131	2423272	1205361	1546325	-	-	-	-	-	-	-	-	-	2190163	825599	878947	2732721	1167943	1417513	3275279	1499641	1956080
65S-19400-1700-CL	55	116	2418696	1202255	1540643	-	-	-	-	-	-	-	-	-	2674665	1132092	1359882	3287164	1506854	1967877	3899655	1876731	2575872
65S-19400-1800-CL	50	102	2413846	1198954	1534617	-	-	-	-	-	-	2501860	1024458	1188351	3188531	1446984	1869970	3875203	1862013	2551597	4561883	2274193	3233224
80S-18700-1800-CL	42	102	2412457	1060442	1112135	-	-	-	2990946	1173360	1301189	3834227	1697669	2138275	4677517	2209411	2975361	5520798	2716481	3812447	6364079	3221347	4649525
80S-19700-1800-CL	49	102	2942554	1325978	1447949	-	-	-	-	-	-	3503060	1374299	1524067	4346341	1899874	2361153	5189631	2413218	3198231	6032912	2921668	4035317

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 57. Models 50S-18600-1100-CL to 80S-19700-1800-CL

Model	Hold Pressure (psi)	MOP (psi)	BTC	RTC	ETC	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO	BTO	RTO	ETO
50S-18600-1100-CL	99	174	2099406	1008519	1223061	-	-	-	1721998	484042	484042	1991940	728001	752002	2801760	1237965	1555865	3449615	1631144	2198960
50S-18600-1200-CL	85	162	2096052	1006210	1218884	1961452	707372	721735	2282698	916214	1040618	2603953	1116428	1359510	3567701	1702289	2316178	-	-	-
50S-18600-1300-CL	73	149	2092397	1003705	1214353	2515135	1061531	1271347	2892153	1293127	1645596	3269181	1522094	2019853	-	-	-	-	-	-
50S-18600-1450-CL	61	112	2086379	999563	1206875	3428711	1618515	2178206	3897761	1900803	2643805	-	-	-	-	-	-	-	-	-
65S-18400-1600-CL	51	131	1962089	956340	1187458	4171731	2107220	3035231	4714289	2431254	3573798	5256847	2754881	4112374	-	-	-	-	-	-
65S-18400-1700-CL	46	116	1957514	953216	1181776	4866049	2521781	3724452	5478548	2886861	4332438	-	-	-	-	-	-	-	-	-
65S-18400-1800-CL	41	102	1952655	949897	1175740	5602448	2960608	4455435	-	-	-	-	-	-	-	-	-	-	-	-
65S-19400-1600-CL	61	131	2423272	1205361	1546325	3817837	1827481	2494647	4360395	2153400	3033222	4902944	2478159	3571789	-	-	-	-	-	-
65S-19400-1700-CL	55	116	2418696	1202255	1540643	4512155	2244431	3183867	5124646	2610741	3791862	5737145	2976202	4399848	-	-	-	-	-	-
65S-19400-1800-CL	50	102	2413846	1198954	1534617	5248554	2684763	3914851	-	-	-	-	-	-	-	-	-	-	-	-
80S-18700-1800-CL	42	102	2412457	1060442	1112135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80S-19700-1800-CL	49	102	2942554	1325978	1447949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Symmetric Yoke Design, Spring to Open

Table 58. Models 0.3S-008A-100-OP to 0.9S-0350-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-100-OP	61	174	1920	841	974	-	-	-	-	-	-	-	-	-	1859	743	805	2319	1044	1310	2788	1336	1805
0.3S-008A-135-OP	38	174	1850	797	894	-	-	-	2770	1328	1788	3620	1859	2708	4469	2381	3620	5319	2903	4540	6177	3425	5460
0.3S-008B-100-OP	86	174	2903	903	903	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-008B-135-OP	51	174	2832	823	823	-	-	-	-	-	-	3575	1407	1487	4425	1965	2398	5275	2505	3319	6133	3036	4239
0.3S-008C-100-OP	101	174	3505	1186	1186	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-008C-135-OP	59	174	3434	1106	1106	-	-	-	-	-	-	-	-	-	4106	1593	1646	4956	2159	2567	5806	2699	3487
0.3S-008C-175-OP	39	174	3354	1009	1009	-	-	-	5204	2319	2841	6638	3213	4381	8071	4106	5921	9505	4983	7469	10930	5868	9009
0.3S-0100-135-OP	90	174	5673	2372	2531	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.3S-0100-175-OP	57	174	5593	2310	2434	-	-	-	-	-	-	-	-	-	6522	2752	3151	7956	3664	4691	9390	4558	6239
0.3S-0100-235-OP	35	116	5460	2221	2283	-	-	-	9275	4487	6115	11850	6089	8894	14434	7673	11673	17010	9257	14452	19594	10841	17231
0.3S-0150-175-OP	70	174	7169	3381	4248	-	-	-	-	-	-	-	-	-	-	-	-	6133	2496	2735	7567	3416	4275
0.3S-0150-235-OP	42	123	7045	3292	4098	-	-	-	7452	3345	4151	10027	4965	6930	12611	6558	9708	15195	8142	12496	17771	9726	15275
0.9S-0200-235-OP	46	174	9089	4160	5009	-	-	-	-	-	-	11248	5257	6841	14231	7115	10054	17213	8956	13275	20196	10788	16488
0.9S-0200-280-OP	35	174	8939	4053	4841	-	-	-	14372	7195	10204	18603	9815	14771	22842	12408	19328	27072	15010	23895	31311	17594	28462
0.9S-0200-335-OP	27	141	8823	3983	4708	17328	9027	13390	23391	12753	19921	29453	16461	26462	35515	20169	32993	41577	23877	39524	47640	27577	46055
0.9S-0250-235-OP	54	174	11071	5460	7284	-	-	-	-	-	-	-	-	-	11948	5691	7593	14930	7549	10815	17912	9390	14027
0.9S-0250-280-OP	40	174	10921	5363	7107	-	-	-	12089	5779	7744	16319	8408	12310	20559	11009	16868	24789	13611	21435	29028	16204	26001
0.9S-0250-335-OP	31	145	10815	5292	6983	15045	7620	10930	21107	11346	17461	27170	15063	24001	33232	18771	30533	39294	22479	37064	45356	26187	43595
0.9S-0350-280-OP	58	174	17355	8054	9903	-	-	-	-	-	-	-	-	-	17311	7514	8903	21550	10195	13470	25780	12833	18036
0.9S-0350-335-OP	43	151	17249	7983	9770	-	-	-	17859	7868	9496	23922	11673	16027	29984	15426	22568	36046	19160	29099	42108	22877	35630
0.9S-0350-385-OP	34	115	17116	7894	9620	-	-	-	27444	13859	19824	35453	18797	28453	43462	23709	37082	51472	28612	45710	59481	33515	54339
0.9S-0350-435-OP	29	90	17010	7823	9505	28196	14319	20629	38418	20612	31648	48640	26877	42657	58861	33134	53675	69083	39391	64694	79305	45631	75703

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 59. Models 0.3S-008A-100-OP to 0.9S-0350-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.3S-008A-100-OP	61	174	1920	841	974	3257	1628	2310	3726	1920	2814	4195	2204	3319	5593	3062	4832	6717	3752	6036
0.3S-008A-135-OP	38	174	1850	797	894	7027	3947	6372	7877	4469	7292	8726	4983	8213	11284	6549	10965	13328	7797	13160
0.3S-008B-100-OP	86	174	2903	903	903	3213	1089	1089	3682	1478	1593	4142	1788	2097	5549	2673	3611	6673	3363	4814
0.3S-008B-135-OP	51	174	2832	823	823	6983	3558	5151	7832	4080	6071	8682	4611	6992	11240	6177	9744	13284	7425	11948
0.3S-008C-100-OP	101	174	3505	1186	1186	-	-	-	3354	841	841	3823	1345	1345	5222	2328	2859	6345	3036	4062
0.3S-008C-135-OP	59	174	3434	1106	1106	6655	3230	4407	7514	3761	5319	8363	4283	6239	10912	5859	8992	12956	7107	11195
0.3S-008C-175-OP	39	174	3354	1009	1009	12363	6744	10549	13797	7620	12089	15222	8496	13629	19514	11124	18258	22948	13222	21957
0.3S-0100-135-OP	90	174	5673	2372	2531	5115	1628	1628	5965	2381	2549	6815	2938	3469	9372	4549	6222	11417	5814	8425
0.3S-0100-175-OP	57	174	5593	2310	2434	10815	5452	7779	12248	6337	9319	13682	7213	10859	17974	9850	15488	21408	11948	19187
0.3S-0100-235-OP	35	116	5460	2221	2283	22169	12417	20019	24753	14001	22798	-	-	-	-	-	-	-	-	-
0.3S-0150-175-OP	70	174	7169	3381	4248	9000	4319	5814	10425	5204	7354	11859	6089	8903	16151	8735	13523	19585	10832	17222
0.3S-0150-235-OP	42	123	7045	3292	4098	20355	11310	18054	22930	12886	20833	25515	14461	23612	-	-	-	-	-	-
0.9S-0200-235-OP	46	174	9089	4160	5009	23178	12620	19700	26169	14452	22913	29152	16275	26134	38099	21753	35772	45259	26125	43489
0.9S-0200-280-OP	35	174	8939	4053	4841	35542	20187	33028	39781	22780	37586	44020	25364	42153	56720	33126	55844	66888	39338	66800
0.9S-0200-335-OP	27	141	8823	3983	4708	53702	31285	52587	59764	34984	59127	65826	38692	65658	-	-	-	-	-	-
0.9S-0250-235-OP	54	174	11071	5460	7284	20895	11222	17240	23886	13054	20452	26869	14877	23674	35816	20355	33311	42976	24727	41029
0.9S-0250-280-OP	40	174	10921	5363	7107	33258	18789	30568	37497	21382	35126	41737	23975	39692	54436	31736	53383	64605	37940	64340
0.9S-0250-335-OP	31	145	10815	5292	6983	51419	29886	50126	57481	33595	56667	63543	37294	63198	-	-	-	-	-	-
0.9S-0350-280-OP	58	174	17355	8054	9903	30019	15443	22594	34250	18054	27161	38489	20656	31727	51197	28444	45418	61357	34665	56366
0.9S-0350-335-OP	43	151	17249	7983	9770	48179	26594	42161	54242	30311	48693	60304	34019	55233	78491	45135	74827	-	-	-
0.9S-0350-385-OP	34	115	17116	7894	9620	67481	38409	62968	75491	43303	71597	-	-	-	-	-	-	-	-	-
0.9S-0350-435-OP	29	90	17010	7823	9505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 60. Models 0.9S-0350-485-OP to 0.9S-0720-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.9S-0350-485-OP	25	73	16939	7779	9425	38064	20399	31267	50772	28187	44958	63481	35958	58649	76190	43728	72349	-	-	-	-	-	-
0.9S-0400-280-OP	67	174	20798	10310	13841	-	-	-	-	-	-	-	-	-	-	-	-	17585	7691	9204	21824	10363	13771
0.9S-0400-335-OP	49	158	20691	10239	13709	-	-	-	-	-	-	19966	9195	11762	26028	12983	18302	32090	16727	24833	38152	20452	31364
0.9S-0400-385-OP	39	119	20559	10151	13558	-	-	-	23488	11408	15558	31497	16355	24187	39506	21284	32816	47516	26187	41445	55516	31090	50073
0.9S-0400-435-OP	32	93	20452	10089	13443	24231	11868	16364	34453	18178	27382	44675	24453	38391	54897	30710	49410	65118	36966	60428	75349	43215	71437
0.9S-0400-485-OP	28	75	20382	10045	13364	34108	17966	27001	46817	25762	40692	59516	33542	54383	72225	41312	68083	-	-	-	-	-	-
0.9S-0420-335-OP	54	162	22868	11717	16399	-	-	-	-	-	-	-	-	-	23346	11381	15603	29409	15134	22134	35480	18868	28665
0.9S-0420-385-OP	42	123	22736	11629	16240	-	-	-	20815	9797	12868	28816	14771	21497	36825	19691	30125	44834	24603	38754	52843	29506	47383
0.9S-0420-435-OP	35	97	22629	11558	16125	-	-	-	31780	16594	24683	42002	22868	35701	52224	29134	46710	62446	35382	57729	72667	41630	68747
0.9S-0420-485-OP	30	78	22559	11523	16054	31426	16373	24302	44135	24178	38002	56844	31957	51693	69552	39728	65384	-	-	-	-	-	-
0.9S-0700-335-OP	66	165	29249	14063	18116	-	-	-	-	-	-	-	-	-	-	-	-	27143	11877	14222	33205	15709	20753
0.9S-0700-385-OP	52	126	29117	13974	17966	-	-	-	-	-	-	26550	11496	13585	34559	16550	22214	42569	21523	30842	50578	26462	39471
0.9S-0700-435-OP	42	99	29010	13912	17850	-	-	-	29515	13381	16771	39737	19771	27789	49958	26081	38798	60180	32364	49817	70402	38630	60835
0.9S-0700-485-OP	35	78	28948	13868	17771	-	-	-	41869	21090	30090	54578	28922	43781	67287	36719	57472	-	-	-	-	-	-
0.9S-0720-385-OP	60	135	34692	17612	24346	-	-	-	-	-	-	-	-	-	28152	12514	15302	36161	17550	23930	44162	22514	32559
0.9S-0720-435-OP	48	106	34586	17541	24222	-	-	-	-	-	-	33320	15780	20877	43542	22125	31895	53773	28426	42914	63994	34710	53923

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 61. Models 0.9S-0350-485-OP to 0.9S-0720-435-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.9S-0350-485-OP	25	73	16939	7779	9425	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0400-280-OP	67	174	20798	10310	13841	26063	13001	18328	30294	15620	22895	34533	18222	27462	47232	26019	41153	57401	32241	52100
0.9S-0400-335-OP	49	158	20691	10239	13709	44215	24169	37896	50277	27886	44427	56339	31595	50967	74526	42719	70561	-	-	-
0.9S-0400-385-OP	39	119	20559	10151	13558	63525	35993	58702	71535	40887	67331	79544	45781	75960	-	-	-	-	-	-
0.9S-0400-435-OP	32	93	20452	10089	13443	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0400-485-OP	28	75	20382	10045	13364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0420-335-OP	54	162	22868	11717	16399	41542	22585	35196	47604	26302	41737	53666	30010	48268	71853	41135	67862	-	-	-
0.9S-0420-385-OP	42	123	22736	11629	16240	60853	34409	56012	68853	39303	64640	76862	44197	73269	-	-	-	-	-	-
0.9S-0420-435-OP	35	97	22629	11558	16125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0420-485-OP	30	78	22559	11523	16054	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0700-335-OP	66	165	29249	14063	18116	39267	19488	27293	45339	23231	33825	51401	26966	40356	69588	38135	59950	-	-	-
0.9S-0700-385-OP	52	126	29117	13974	17966	58578	31382	48100	66587	36294	56729	74597	41206	65357	-	-	-	-	-	-
0.9S-0700-435-OP	42	99	29010	13912	17850	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0700-485-OP	35	78	28948	13868	17771	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
0.9S-0720-385-OP	60	135	34692	17612	24346	52171	27444	41188	60180	32364	49817	68189	37276	58445	-	-	-	-	-	-
0.9S-0720-435-OP	48	106	34586	17541	24222	74216	40967	64941	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 62. Models 0.9S-0720-485-OP to 1.5S-1300-585-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.9S-0720-485-OP	40	86	34524	17496	24152	-	-	-	35462	17116	23178	48162	24984	36878	60870	32789	50569	73579	40577	64260	-	-	-
1.5S-0800-385-OP	52	158	40852	15638	17231	-	-	-	-	-	-	33887	15753	17514	43153	22205	29355	52419	28497	41188	61685	34727	53029
1.5S-0800-435-OP	43	123	40710	15549	17089	-	-	-	37312	18169	21886	49135	26276	37002	60968	34250	52109	72800	42170	67225	84624	50056	82332
1.5S-0800-485-OP	36	99	40622	15488	17001	-	-	-	51613	27948	40152	66313	37834	58941	81022	47657	77721	95722	57463	96509	110430	67278	115298
1.5S-0800-535-OP	31	81	40595	15479	16983	49640	26612	37639	67534	38648	60499	85429	50595	83349	103324	62534	106209	121210	74464	129068	-	-	-
1.5S-1100-385-OP	73	174	59976	22913	25196	-	-	-	-	-	-	-	-	-	-	-	-	43409	17496	17496	52675	25169	29338
1.5S-1100-435-OP	59	138	59835	22824	25054	-	-	-	-	-	-	-	-	-	51958	24656	28426	63791	32860	43533	75614	40896	58640
1.5S-1100-485-OP	49	110	59738	22762	24975	-	-	-	-	-	-	57304	28400	35250	72012	38462	54038	86712	48374	72818	101421	58233	91606
1.5S-1100-535-OP	41	91	59720	22753	24948	-	-	-	58525	29240	36807	76420	41436	59667	94306	53472	82526	112200	65437	105377	130095	77367	128237
1.5S-1100-585-OP	36	75	59437	22568	24674	-	-	-	75774	41002	58844	97164	55383	86172	118563	69676	113501	-	-	-	-	-	-
1.5S-1200-385-OP	83	174	70145	29338	35312	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-435-OP	67	146	70004	29249	35179	-	-	-	-	-	-	-	-	-	-	-	-	53649	25957	30931	65472	34117	46047
1.5S-1200-485-OP	55	117	69915	29196	35090	-	-	-	-	-	-	-	-	-	61870	31648	41436	76570	41639	60215	91279	51525	79004
1.5S-1200-535-OP	47	97	69897	29178	35073	-	-	-	-	-	-	66278	34657	47064	84164	46755	69924	102058	58746	92775	119953	70694	115634
1.5S-1200-585-OP	40	80	69605	29010	34789	-	-	-	65632	34223	46241	87022	48675	73570	108421	62994	100899	129812	77269	128228	-	-	-
1.5S-1300-385-OP	97	174	83279	35241	42914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-435-OP	77	152	83137	35152	42772	-	-	-	-	-	-	-	-	-	-	-	-	45569	14718	14718	57410	26745	29842
1.5S-1300-485-OP	65	123	83048	35099	42684	-	-	-	-	-	-	-	-	-	53799	24134	25231	68508	34506	44020	83225	44542	62817
1.5S-1300-535-OP	55	101	83031	35081	42666	-	-	-	-	-	-	58206	27311	30860	76110	39710	53728	94014	51826	76597	111917	63844	99465
1.5S-1300-585-OP	46	83	82739	34904	42392	-	-	-	57560	26851	30037	78969	41657	57383	100377	56109	84730	121776	70446	112068	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 63. Models 0.9S-0720-485-OP to 1.5S-1300-585-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
0.9S-0720-485-OP	40	86	34524	17496	24152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-0800-385-OP	52	158	40852	15638	17231	70950	40931	64862	80216	47117	76703	89482	53304	88535	117280	71844	124050	-	-	-
1.5S-0800-435-OP	43	123	40710	15549	17089	96456	57950	97447	108289	65844	112554	120112	73738	127670	-	-	-	-	-	-
1.5S-0800-485-OP	36	99	40622	15488	17001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-0800-535-OP	31	81	40595	15479	16983	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1100-385-OP	73	174	59976	22913	25196	61941	31595	41170	71207	37913	53012	80473	44179	64853	108271	62808	100359	130511	77650	128768
1.5S-1100-435-OP	59	138	59835	22824	25054	87447	48870	73756	99279	56790	88863	111103	64702	103979	-	-	-	-	-	-
1.5S-1100-485-OP	49	110	59738	22762	24975	116121	68048	110386	130830	77862	129175	-	-	-	-	-	-	-	-	-
1.5S-1100-535-OP	41	91	59720	22753	24948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1100-585-OP	36	75	59437	22568	24674	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-385-OP	83	174	70145	29338	35312	51799	24656	28577	61065	31099	40409	70331	37418	52250	98129	56118	87757	120369	70968	116165
1.5S-1200-435-OP	67	146	70004	29249	35179	77305	42135	61154	89137	50091	76269	100961	58012	91376	-	-	-	-	-	-
1.5S-1200-485-OP	55	117	69915	29196	35090	105988	61375	97793	120687	71181	116572	-	-	-	-	-	-	-	-	-
1.5S-1200-535-OP	47	97	69897	29178	35073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1200-585-OP	40	80	69605	29010	34789	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-385-OP	97	174	83279	35241	42914	43728	12363	12363	52994	23541	24205	62269	30170	36046	89943	49091	71402	112253	64065	99899
1.5S-1300-435-OP	77	152	83137	35152	42772	69242	35011	44958	81075	43091	60074	92916	51091	75198	128245	74765	120333	-	-	-
1.5S-1300-485-OP	65	123	83048	35099	42684	97934	54472	81615	112652	64340	100403	127360	74172	119201	-	-	-	-	-	-
1.5S-1300-535-OP	55	101	83031	35081	42666	129821	75809	122334	-	-	-	-	-	-	-	-	-	-	-	-
1.5S-1300-585-OP	46	83	82739	34904	42392	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 64. Models 3S-2000-385-OP to 14S-5100-885-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
3S-2000-385-OP	75	174	101421	44976	56755	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75110	36046	43657
3S-2000-435-OP	60	160	101191	44834	56516	-	-	-	-	-	-	-	-	-	73906	35223	42161	93792	48702	66853	113669	61950	91536
3S-2000-485-OP	50	129	101040	44746	56375	-	-	-	-	-	-	82889	41356	53321	107607	57914	84004	132325	74287	114696	157043	90580	145379
3S-2000-535-OP	42	106	101005	44728	56339	-	-	-	84942	42746	55861	115015	62835	93199	145087	82712	130546	175168	102501	167885	205240	122254	205223
3S-2000-585-OP	37	88	100536	44436	55870	-	-	-	113935	62118	91863	149892	85872	136502	185850	109519	181151	221808	133139	225799	-	-	-
3S-2050-385-OP	97	174	136255	55020	62897	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3S-2050-435-OP	78	170	136025	54879	62667	-	-	-	-	-	-	-	-	-	-	-	-	84969	23798	23798	104864	46153	48498
3S-2050-485-OP	65	137	135874	54782	62525	-	-	-	-	-	-	-	-	-	98793	40967	40967	123519	59242	71667	148255	76030	102368
3S-2050-535-OP	55	112	135839	54764	62490	-	-	-	-	-	-	106200	47117	50162	136290	67959	87527	166380	88173	124882	196470	108156	162238
3S-2050-585-OP	46	94	135370	54463	62021	-	-	-	105120	46339	48825	141104	71207	93491	177080	95288	138157	213055	119130	182823	249030	142857	227489
6S-2500-485-OP	59	174	144317	65623	84863	-	-	-	-	-	-	-	-	-	106430	52091	65340	135387	71535	101147	164345	90730	136963
6S-2500-535-OP	50	164	144282	65596	84827	-	-	-	-	-	-	115103	57959	76066	150344	81473	119643	185576	104731	163221	220808	127891	206798
6S-2500-585-OP	43	136	143724	65260	84279	-	-	-	-	-	-	155964	85190	126608	198090	112970	178708	240216	140627	230808	282342	168247	282908
6S-2500-635-OP	38	116	143122	64897	83677	-	-	-	150839	81801	120263	200479	114537	181655	250110	147114	243039	299741	179655	304431	349380	212196	365815
6S-2500-685-OP	38	174	142476	64508	83031	-	-	-	190877	108227	169778	248632	146140	241216	306387	184009	312644	364151	221878	384081	421906	259748	455518
6S-2500-735-OP	30	87	141777	64074	82332	167442	92783	140795	233941	136511	223038	300440	180106	305281	366939	223701	387533	433438	267297	469776	-	-	-
6S-3800-535-OP	65	174	197116	94518	129113	-	-	-	-	-	-	-	-	-	-	-	-	140255	72110	97757	175487	95553	141335
6S-3800-585-OP	56	149	196567	94182	128564	-	-	-	-	-	-	-	-	-	152778	80473	113245	194904	108386	165345	237030	136113	217445
6S-3800-635-OP	48	126	195966	93819	127962	-	-	-	-	-	-	155158	82057	116192	204789	114908	177575	254429	147547	238968	304059	180089	300360
6S-3800-685-OP	43	174	195320	93429	127316	-	-	-	145556	75659	104315	203311	113926	175752	261075	151901	247189	318830	189771	318627	376594	227640	390064
6S-3800-735-OP	38	94	194620	93014	126617	-	-	-	188620	104235	157574	255119	147999	239826	321618	191594	322069	388117	235198	404312	454616	278793	486564
6S-3900-535-OP	69	174	216560	106669	149733	-	-	-	-	-	-	-	-	-	84535	30249	30249	119794	58720	73853	155043	82376	117448
6S-3900-585-OP	59	152	216011	106342	149184	-	-	-	-	-	-	90173	37214	37214	132316	67189	89341	174460	95261	141476	216613	123059	193603
6S-3900-635-OP	52	130	215409	105979	148583	-	-	-	-	-	-	134697	68791	92297	184363	101802	153716	234021	134502	215135	283678	167079	276554
6S-3900-685-OP	46	112	214754	105589	147937	-	-	-	125095	62313	80411	182885	100828	151884	240667	138874	223356	298457	176770	294829	356248	214657	366302
6S-3900-735-OP	40	97	214055	105165	147237	-	-	-	168177	91102	133697	234711	134954	215984	301245	178602	298272	367779	222215	380559	434305	265836	462846
14S-5100-635-OP	53	174	240348	113377	153725	-	-	-	-	-	-	149733	76650	100474	203054	112776	168575	256367	148485	236684	309679	184062	304785
14S-5100-685-OP	46	173	239631	112953	153034	-	-	-	-	-	-	201461	111705	166548	263500	153255	245800	325547	194638	325052	387586	236030	404303
14S-5100-735-OP	41	149	238853	112492	152282	-	-	-	185682	101076	146388	257110	148990	237631	328539	196638	328875	399967	244287	420110	471386	291935	511353
14S-5100-785-OP	37	131	238021	111997	151485	-	-	-	235198	134325	209639	316671	188726	313715	398144	243074	417791	479626	297422	521876	561099	351699	625952
14S-5100-835-OP	34	116	237136	111475	150627	-	-	-	287970	169575	277049	380152	231074	394807	472342	292572	512565	564524	353982	630324	656705	415392	748082
14S-5100-885-OP	31	103	236198	110917	149724	240437	137839	216338	344000	206948	348619	447553	276040	480900	551107	345044	613190	654670	414030	745471	758224	482962	877752

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 65. Models 3S-2000-385-OP to 14S-5100-885-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
3S-2000-385-OP	75	174	101421	44976	56755	90686	46613	62994	106262	57021	82332	121838	67357	101669	168557	98155	159681	205940	122714	206090
3S-2000-435-OP	60	160	101191	44834	56516	133555	75101	116218	153432	88208	140910	173318	101288	165592	232967	140467	239649	-	-	-
3S-2000-485-OP	50	129	101040	44746	56375	181752	106828	176071	206471	123068	206754	231189	139299	237437	-	-	-	-	-	-
3S-2000-535-OP	42	106	101005	44728	56339	235313	142016	242561	-	-	-	-	-	-	-	-	-	-	-	-
3S-2000-585-OP	37	88	100536	44436	55870	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3S-2050-385-OP	97	174	136255	55020	62897	81863	19939	19939	97447	39294	39294	113023	51958	58640	159548	83606	116395	197036	108536	162937
3S-2050-435-OP	78	170	136025	54879	62667	124750	60092	73198	144644	73605	97890	164539	86934	122590	223932	126307	196328	-	-	-
3S-2050-485-OP	65	137	135874	54782	62525	172982	92562	133069	197709	108979	163769	222436	125325	194470	-	-	-	-	-	-
3S-2050-535-OP	55	112	135839	54764	62490	226560	128051	199603	256650	147875	236959	-	-	-	-	-	-	-	-	-
3S-2050-585-OP	46	94	135370	54463	62021	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-2500-485-OP	59	174	144317	65623	84863	193293	109820	172770	222250	128847	208586	251207	147830	244393	338070	204780	351832	407560	250340	437774
6S-2500-535-OP	50	164	144282	65596	84827	256039	150999	250375	291271	174097	293944	326503	197196	337521	432199	266491	468254	-	-	-
6S-2500-585-OP	43	136	143724	65260	84279	324468	195859	335008	366594	223480	387108	408720	251101	439217	-	-	-	-	-	-
6S-2500-635-OP	38	116	143122	64897	83677	399011	244738	427207	448651	277279	488591	-	-	-	-	-	-	-	-	-
6S-2500-685-OP	38	174	142476	64508	83031	479670	297608	526956	-	-	-	-	-	-	-	-	-	-	-	-
6S-2500-735-OP	30	87	141777	64074	82332	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-3800-535-OP	65	174	197116	94518	129113	210719	118811	184912	245950	141981	228489	281182	165088	272067	386887	234383	402790	471440	289829	507371
6S-3800-585-OP	56	149	196567	94182	128564	279156	163760	269553	321282	191372	321653	363408	218993	373753	489786	301847	530053	-	-	-
6S-3800-635-OP	48	126	195966	93819	127962	353699	212630	361744	403330	245172	423136	452970	277713	484520	-	-	-	-	-	-
6S-3800-685-OP	43	174	195320	93429	127316	434349	265509	461501	-	-	-	-	-	-	-	-	-	-	-	-
6S-3800-735-OP	38	94	194620	93014	126617	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6S-3900-535-OP	69	174	216560	106669	149733	190293	105722	161043	225542	128927	204647	260792	152078	248243	366027	221073	378399	450837	276669	483290
6S-3900-585-OP	59	152	216011	106342	149184	258756	150742	245729	300909	178372	297856	343053	206010	349982	468882	288501	505609	-	-	-
6S-3900-635-OP	52	130	215409	105979	148583	333335	199638	337973	383001	232197	399392	432659	264757	460811	-	-	-	-	-	-
6S-3900-685-OP	46	112	214754	105589	147937	414030	252544	437774	471820	290430	509247	-	-	-	-	-	-	-	-	-
6S-3900-735-OP	40	97	214055	105165	147237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14S-5100-635-OP	53	174	240348	113377	153725	362992	219622	372886	416304	255190	440987	469616	290758	509096	629562	397312	713399	757516	482484	876849
14S-5100-685-OP	46	173	239631	112953	153034	449624	277421	483546	511663	318768	562798	573701	360098	642050	759826	484024	879796	-	-	-
14S-5100-735-OP	41	149	238853	112492	152282	542815	339521	602597	614243	387108	693840	685671	434677	785084	899957	577286	1058805	-	-	-
14S-5100-785-OP	37	131	238021	111997	151485	642572	405976	730028	724054	460218	834104	805527	514442	938180	-	-	-	-	-	-
14S-5100-835-OP	34	116	237136	111475	150627	748896	476750	865840	841077	538107	983598	-	-	-	-	-	-	-	-	-
14S-5100-885-OP	31	103	236198	110917	149724	861778	551877	1010042	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 66. Models 14S-5100-935-OP to 14S-8300-935-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-935-OP	29	93	235206	110324	148760	287696	169389	276704	403286	246499	424358	518876	323574	572011	634457	400569	719664	750046	477519	867309	865636	554444	1014962
14S-5400-635-OP	65	174	310635	140520	182885	-	-	-	-	-	-	-	-	-	-	-	-	223356	114262	149609	276669	150494	217719
14S-5400-685-OP	57	174	309918	140096	182195	-	-	-	-	-	-	-	-	-	230489	119148	158734	292537	161185	237985	354575	202807	317228
14S-5400-735-OP	51	160	309139	139626	181443	-	-	-	-	-	-	224100	114776	150565	295528	163194	241800	366956	211090	333043	438376	258774	424287
14S-5400-785-OP	46	139	308307	139131	180646	-	-	-	-	-	-	283660	155202	226649	365133	209878	330725	446615	264270	434801	528088	318618	538877
14S-5400-835-OP	41	123	307422	138600	179788	-	-	-	254960	135803	189983	347141	197842	307741	439332	259411	425499	531513	320910	543257	623704	382409	661015
14S-5400-885-OP	38	110	306484	138042	178885	-	-	-	310989	173593	261553	414543	242871	393834	518097	311954	526124	621659	381037	658405	725213	450111	790686
14S-5400-935-OP	35	99	305493	137441	177920	-	-	-	370275	213312	337282	485865	290448	484936	601446	367558	632589	717036	444659	780243	832626	521663	927896
14S-8300-735-OP	63	171	398029	181239	237410	-	-	-	-	-	-	-	-	-	236419	112961	131688	307847	162194	222932	379276	210462	314175
14S-8300-785-OP	56	151	397197	180744	236614	-	-	-	-	-	-	-	-	-	306033	160955	220613	387506	215993	324689	468979	270571	428765
14S-8300-835-OP	51	133	396312	180213	235755	-	-	-	-	-	-	288032	148689	197621	380223	211099	315379	472404	272863	433137	564595	334388	550895
14S-8300-885-OP	46	117	395374	179655	234852	-	-	-	-	-	-	355434	194408	283722	458988	263889	416003	562550	333017	548284	666104	402109	680574
14S-8300-935-OP	42	106	394383	179062	233888	-	-	-	311166	164451	227171	426756	242322	374824	542346	319538	522477	657927	396648	670131	773517	473767	817784

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 67. Models 14S-5100-935-OP to 14S-8300-935-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
14S-5100-935-OP	29	93	235206	110324	148760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14S-5400-635-OP	65	174	310635	140520	182885	329981	186346	285820	383294	222020	353920	436606	257597	422021	596552	364293	626332	724505	449633	789783
14S-5400-685-OP	57	174	309918	140096	182195	416614	244251	396480	478652	285643	475732	540691	327034	554984	726815	451173	792730	875708	550364	982934
14S-5400-735-OP	51	160	309139	139626	181443	509804	306422	515530	581233	354080	606774	652661	401728	698008	866946	544523	971739	-	-	-
14S-5400-785-OP	46	139	308307	139131	180646	609561	372974	642961	691043	427331	747037	772517	481617	851113	-	-	-	-	-	-
14S-5400-835-OP	41	123	307422	138600	179788	715885	443898	778773	808067	505308	896532	900257	566719	1014290	-	-	-	-	-	-
14S-5400-885-OP	38	110	306484	138042	178885	828767	519097	922967	932321	588083	1055256	-	-	-	-	-	-	-	-	-
14S-5400-935-OP	35	99	305493	137441	177920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14S-8300-735-OP	63	171	398029	181239	237410	450704	258349	405410	522132	306060	496653	593552	353708	587897	807837	496662	861618	-	-	-
14S-8300-785-OP	56	151	397197	180744	236614	550461	324954	532841	631934	379311	636917	713407	433659	741002	957836	596658	1053230	-	-	-
14S-8300-835-OP	51	133	396312	180213	235755	656776	395887	668653	748967	457386	786411	841148	518884	904169	-	-	-	-	-	-
14S-8300-885-OP	46	117	395374	179655	234852	769658	471192	812855	873221	540275	945136	-	-	-	-	-	-	-	-	-
14S-8300-935-OP	42	106	394383	179062	233888	889106	550868	965438	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 68. Models 18S-9600-835-OP to 18S-11000-1300-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																		
						40			50			60			70			80			90			
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	
18S-9600-835-OP	66	174	628412	257508	303555	-	-	-	-	-	-	-	-	-	-	-	-	-	498069	239950	283943	604119	313157	419331
18S-9600-935-OP	55	141	626182	256146	301404	-	-	-	-	-	-	-	-	-	578525	295652	386648	711496	386019	556400	844467	475440	726151	
18S-9600-1000-OP	49	125	624606	255172	299882	-	-	-	-	-	-	558948	282209	361664	711053	385718	555833	863158	487980	750011	1015254	589702	944189	
18S-9600-1100-OP	42	102	621969	253553	297333	-	-	-	564241	285846	368417	748285	410808	603366	932330	534266	838316	1116374	657130	1073266	1300419	779871	1308225	
18S-9600-1200-OP	36	80	619075	251774	294546	-	-	-	736621	402958	588481	955650	549868	868088	1174678	696017	1147703	1393707	842086	1427310	-	-	-	
18S-9600-1300-OP	32	73	615942	249853	291519	666945	355885	499521	923993	528690	827679	1181041	700265	1155828	1438098	871690	1483986	-	-	-	-	-	-	
18S-9800-835-OP	82	174	799686	324335	378355	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	520274	207152	207152	
18S-9800-935-OP	67	152	797465	322963	376205	-	-	-	-	-	-	-	-	-	-	-	-	627651	298112	344230	760622	390338	513981	
18S-9800-1000-OP	60	133	795881	321990	374682	-	-	-	-	-	-	-	-	-	627200	297794	343663	779304	403100	537841	931409	506317	732019	
18S-9800-1100-OP	51	110	793243	320352	372134	-	-	-	-	-	-	664431	323928	391197	848476	450191	626146	1032521	574383	861096	1216565	697699	1096046	
18S-9800-1200-OP	44	93	790358	318565	369346	-	-	-	-	-	-	871796	466006	655918	1090824	613500	935534	1309853	760065	1215140	1528882	906134	1494756	
18S-9800-1300-OP	39	78	787216	316626	366319	-	-	-	840139	444527	615509	1097196	617774	943658	1354245	789668	1271816	-	-	-	-	-	-	
18S-10500-935-OP	77	158	932206	379656	444783	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	685795	316272	347070	
18S-10500-1000-OP	68	138	930631	378692	443261	-	-	-	-	-	-	-	-	-	-	-	-	704487	329636	370921	856592	435624	565099	
18S-10500-1100-OP	58	113	927993	377072	440712	-	-	-	-	-	-	-	-	-	773658	378311	459227	957703	504671	694176	1141747	629076	929135	
18S-10500-1200-OP	50	96	925099	375293	437925	-	-	-	-	-	-	796978	394524	488998	1016007	544222	768614	1235035	691760	1048221	1454064	838414	1327836	
18S-10500-1300-OP	44	80	921958	373364	434898	-	-	-	-	-	-	1022379	548523	776747	1279427	721549	1104896	1536484	893478	1433054	-	-	-	
18S-11000-935-OP	85	20	1046787	449509	555408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18S-11000-1000-OP	76	145	1045212	448553	553877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	745400	358549	423154	
18S-11000-1100-OP	64	120	1042574	446960	551337	-	-	-	-	-	-	-	-	-	-	-	-	846511	428703	552240	1030556	554063	787190	
18S-11000-1200-OP	55	100	1039680	445208	548550	-	-	-	-	-	-	-	-	-	904815	468643	626669	1123844	617022	906284	1342872	764065	1185891	
18S-11000-1300-OP	48	80	1036547	443305	545514	-	-	-	-	-	-	911187	472997	634802	1168235	646917	962951	1425293	819183	1291109	-	-	-	

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 69. Models 18S-9600-835-OP to 18S-11000-1300-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
18S-9600-835-OP	66	174	628412	257508	303555	710168	385125	554709	816218	456492	690096	922267	527540	825475	1240416	739860	1231628	1494933	909594	1556547
18S-9600-935-OP	55	141	626182	256146	301404	977438	564435	895912	1110410	653157	1065664	1243381	741834	1235416	-	-	-	-	-	-
18S-9600-1000-OP	49	125	624606	255172	299882	1167359	691141	1138358	1319464	792571	1332536	1471560	894009	1526714	-	-	-	-	-	-
18S-9600-1100-OP	42	102	621969	253553	297333	1484455	902603	1543175	-	-	-	-	-	-	-	-	-	-	-	-
18S-9600-1200-OP	36	80	619075	251774	294546	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9600-1300-OP	32	73	615942	249853	291519	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9800-835-OP	82	174	799686	324335	378355	626323	297174	342539	732373	370939	477927	838422	443358	613305	1156571	657573	1019458	1411088	827581	1344377
18S-9800-935-OP	67	152	797465	322963	376205	893593	480741	683733	1026565	570383	853494	1159536	659555	1023246	1558450	925852	1532501	-	-	-
18S-9800-1000-OP	60	133	795881	321990	374682	1083506	608597	926188	1235610	710434	1120366	1387715	811988	1314544	-	-	-	-	-	-
18S-9800-1100-OP	51	110	793243	320352	372134	1400610	820590	1331005	1584654	943322	1565954	-	-	-	-	-	-	-	-	-
18S-9800-1200-OP	44	93	790358	318565	369346	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-9800-1300-OP	39	78	787216	316626	366319	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-10500-935-OP	77	158	932206	379656	444783	818767	409587	516822	951738	500618	686574	1084709	590667	856326	1483632	858193	1365582	-	-	-
18S-10500-1000-OP	68	138	930631	378692	443261	1008688	539275	759268	1160793	641899	953446	1312898	744002	1147624	-	-	-	-	-	-
18S-10500-1100-OP	58	113	927993	377072	440712	1325792	752639	1164085	1509828	875699	1399035	-	-	-	-	-	-	-	-	-
18S-10500-1200-OP	50	96	925099	375293	437925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-10500-1300-OP	44	80	921958	373364	434898	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18S-11000-935-OP	85	20	1046787	449509	555408	707584	331840	374877	840555	424614	544629	973527	515415	714381	1372440	783836	1223636	-	-	-
18S-11000-1000-OP	76	145	1045212	448553	553877	897505	463643	617332	1049601	566940	811501	1201706	669405	1005679	-	-	-	-	-	-
18S-11000-1100-OP	64	120	1042574	446960	551337	1214601	678052	1022140	1398645	801359	1257089	1582690	924285	1492039	-	-	-	-	-	-
18S-11000-1200-OP	55	100	1039680	445208	548550	1561901	910426	1465507	-	-	-	-	-	-	-	-	-	-	-	-
18S-11000-1300-OP	48	80	1036547	443305	545514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 70. Models 32S-9900-1100-OP to 50S-17300-1450-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
32S-9900-1100-OP	52	158	962623	369178	401392	-	-	-	-	-	-	822776	371213	403622	1041477	522566	676583	1260178	669786	949543	1478870	815466	1222504
32S-9900-1200-OP	45	132	959269	367018	398082	-	-	-	-	-	-	1069186	541328	711168	1329456	716027	1036016	1589726	888991	1360856	1849995	1061142	1685704
32S-9900-1300-OP	40	113	955623	364664	394480	-	-	-	1031574	515822	664219	1337023	721080	1045459	1642480	923940	1426700	1947938	1125826	1807949	2253387	1327137	2189189
32S-12000-1100-OP	62	158	1177413	472794	538983	-	-	-	-	-	-	-	-	-	896045	393940	410507	1114746	547089	683468	1333447	695176	956428
32S-12000-1200-OP	54	132	1174059	470678	535673	-	-	-	-	-	-	-	-	-	1184033	594313	769941	1444302	769446	1094789	1704563	942755	1419629
32S-12000-1300-OP	47	113	1170413	468395	532071	-	-	-	-	-	-	1191599	599437	779384	1497048	804651	1160633	1802506	1007688	1541874	2107964	1209715	1923114
32S-15000-1100-OP	71	164	1373139	573489	681229	-	-	-	-	-	-	-	-	-	-	-	-	966889	424375	441013	1185590	577896	713974
32S-15000-1200-OP	61	138	1369776	571409	677910	-	-	-	-	-	-	-	-	-	1036176	474059	527487	1296445	653457	852335	1556715	828555	1177183
32S-15000-1300-OP	53	117	1366130	569152	674308	-	-	-	-	-	-	-	-	-	1349200	689185	918179	1654649	893912	1299419	1960107	1096834	1680659
50S-15400-1100-OP	70	174	1483534	578409	637359	-	-	-	-	-	-	-	-	-	-	-	-	1191688	519070	536452	1435373	690406	839007
50S-15400-1200-OP	60	162	1479817	576029	633669	-	-	-	-	-	-	-	-	-	1268886	574533	632297	1558892	774685	992359	1848898	969836	1352422
50S-15400-1300-OP	52	138	1475773	573436	629660	-	-	-	-	-	-	1277321	580516	642767	1617674	814501	1065336	1958027	1042707	1487906	2298380	1268674	1910476
50S-15400-1450-OP	44	112	1469100	569170	623031	-	-	-	-	-	-	1769743	916851	1254142	2193172	1198954	1779859	2616591	1478968	2305567	3040019	1757902	2831274
50S-15600-1100-OP	72	174	1552635	622394	705956	-	-	-	-	-	-	-	-	-	-	-	-	1122738	450854	450854	1366422	642837	753401
50S-15600-1200-OP	62	165	1548909	620058	702265	-	-	-	-	-	-	-	-	-	1199936	525106	546700	1489942	727771	906762	1779947	923701	1266816
50S-15600-1300-OP	54	141	1544865	617491	698247	-	-	-	-	-	-	-	-	-	1548723	767791	979739	1889077	996687	1402309	2229430	1222982	1824879
50S-15600-1450-OP	45	113	1538201	613252	691628	-	-	-	-	-	-	1700793	870557	1168545	2124221	1153261	1694253	2547650	1433435	2219969	2971078	1712502	2745677
50S-17300-1100-OP	78	174	1698005	692043	798739	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1268232	553311	573321
50S-17300-1200-OP	67	170	1694279	689698	795049	-	-	-	-	-	-	-	-	-	-	-	-	1391751	641413	726682	1681757	840608	1086736
50S-17300-1300-OP	58	145	1690235	687149	791040	-	-	-	-	-	-	-	-	-	1450533	682362	799659	1790886	914302	1222229	2131239	1141907	1644799
50S-17300-1450-OP	49	116	1683571	682946	784411	-	-	-	-	-	-	1602602	786836	988465	2026031	1071815	1514173	2449459	1353103	2039890	2872878	1632772	2565597

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 71. Models 32S-9900-1100-OP to 50S-17300-1450-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
32S-9900-1100-OP	52	158	962623	369178	401392	1697572	960429	1495464	1916273	1104914	1768425	2134965	1249116	2041385	-	-	-	-	-	-
32S-9900-1200-OP	45	132	959269	367018	398082	2110265	1232840	2010552	2370534	1404309	2335400	2630804	1575778	2660239	-	-	-	-	-	-
32S-9900-1300-OP	40	113	955623	364664	394480	2558845	1528377	2570429	-	-	-	-	-	-	-	-	-	-	-	-
32S-12000-1100-OP	62	158	1177413	472794	538983	1552140	841414	1229389	1770841	986704	1502349	1989542	1131499	1775310	2645637	1564193	2594192	-	-	-
32S-12000-1200-OP	54	132	1174059	470678	535673	1964833	1115189	1744477	2225102	1287082	2069325	2485372	1458613	2394164	-	-	-	-	-	-
32S-12000-1300-OP	47	113	1170413	468395	532071	2413413	1411203	2304354	2718870	1612443	2685594	-	-	-	-	-	-	-	-	-
32S-15000-1100-OP	71	164	1373139	573489	681229	1404283	726293	986934	1622984	872787	1259895	1841685	1018325	1532855	2497780	1452152	2351737	-	-	-
32S-15000-1200-OP	61	138	1369776	571409	677910	1816976	1001909	1502022	2077245	1174439	1826870	2337515	1346395	2151718	-	-	-	-	-	-
32S-15000-1300-OP	53	117	1366130	569152	674308	2265556	1298870	2061900	2571014	1500402	2443149	-	-	-	-	-	-	-	-	-
50S-15400-1100-OP	70	174	1483534	578409	637359	1679057	855937	1141553	1922742	1019175	1444099	2166427	1181227	1746654	2897481	1664030	2654301	3482325	2048571	3380417
50S-15400-1200-OP	60	162	1479817	576029	633669	2138895	1162987	1712475	2428900	1354997	2072537	2718906	1546431	2432591	3588923	2118602	3512769	-	-	-
50S-15400-1300-OP	52	138	1475773	573436	629660	2638725	1493588	2333046	2979078	1717776	2755616	3319431	1941557	3178185	-	-	-	-	-	-
50S-15400-1450-OP	44	112	1469100	569170	623031	3463448	2036173	3356991	3886876	2314346	3882699	-	-	-	-	-	-	-	-	-
50S-15600-1100-OP	72	174	1552635	622394	705956	1610107	809394	1055955	1853792	973111	1358502	2097477	1135482	1661057	2828531	1618630	2568704	3413374	2003277	3294820
50S-15600-1200-OP	62	165	1548909	620058	702265	2069953	1117171	1626878	2359959	1309464	1986940	2649964	1501004	2346993	3519981	2073307	3427171	-	-	-
50S-15600-1300-OP	54	141	1544865	617491	698247	2569783	1448046	2247449	2910137	1672367	2670018	3250490	1896272	3092588	-	-	-	-	-	-
50S-15600-1450-OP	45	113	1538201	613252	691628	3394506	1990878	3271385	3817934	2269052	3797101	-	-	-	-	-	-	-	-	-
50S-17300-1100-OP	78	174	1698005	692043	798739	1511916	724744	875876	1755601	890496	1178422	1999286	1053947	1480968	2730340	1538723	2388624	3315183	1924017	3114740
50S-17300-1200-OP	67	170	1694279	689698	795049	1971762	1035556	1446798	2261759	1228716	1806860	2551765	1420779	2166914	3421782	1994047	3247092	-	-	-
50S-17300-1300-OP	58	145	1690235	687149	791040	2471593	1367768	2067369	2811937	1592619	2489939	3152290	1816790	2912508	-	-	-	-	-	-
50S-17300-1450-OP	49	116	1683571	682946	784411	3296306	1911618	3091305	3719735	2189791	3617022	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 72. Models 50S-18600-1100-OP to 80S-19700-1800-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operatings Supply Pressure (psi)																	
						40			50			60			70			80			90		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
50S-18600-1100-OP	97	174	2159940	838042	918763	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50S-18600-1200-OP	83	174	2156214	835652	915063	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50S-18600-1300-OP	72	158	2152170	833068	911054	-	-	-	-	-	-	-	-	-	1637852	650006	650006	1978205	924781	1072567			
50S-18600-1450-OP	59	128	2145506	828749	904426	-	-	-	-	-	-	1872996	851034	941950	2296416	1142951	1467657	2719844	1427788	1993374			
65S-18400-1600-OP	50	145	2033040	809722	912267	-	-	-	-	-	-	1841145	873309	1037300	2330931	1205733	1645401	2820716	1532404	2253502	3310502	1856544	2861603
65S-18400-1700-OP	45	116	2027969	806501	907231	-	-	-	-	-	-	2215394	1128092	1501942	2768315	1497570	2188437	3321237	1863633	2874923	3874158	2228147	3561408
65S-18400-1800-OP	41	116	2022597	803093	901895	-	-	-	1992427	977075	1225123	2612316	1393787	1994746	3232197	1804825	2764377	3852086	2213615	3534000	4471967	2621255	4303631
65S-19400-1600-OP	58	145	2420404	973235	1107498	-	-	-	-	-	-	-	-	-	2116584	995271	1165545	2606369	1329137	1773646	3096155	1656773	2381747
65S-19400-1700-OP	52	131	2415333	970040	1102462	-	-	-	-	-	-	2001038	914541	1022087	2553960	1293755	1708581	3106881	1663915	2395067	3659802	2030765	3081552
65S-19400-1800-OP	48	116	2409961	966650	1097126	-	-	-	-	-	-	2397961	1188174	1514890	3017841	1604682	2284521	3637731	2016172	3054144	4257620	2425360	3823775
80S-18700-1800-OP	41	102	2446795	761038	761038	-	-	-	2765528	1309313	1550493	3526796	1826074	2495647	4288055	2333612	3440809	5049314	2837319	4385963	5810583	3339158	5331116
80S-19700-1800-OP	48	102	2996424	1021157	1021157	-	-	-	-	-	-	3238020	1532811	1814790	3999280	2050563	2759943	4760539	2559261	3705097	5521807	3064197	4650250

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

Table 73. Models 50S-18600-1100-OP to 80S-19700-1800-OP

Model	Hold Pressure (psi)	MOP (psi)	BTO	RTO	ETO	Operating Supply Pressure (psi)														
						100			110			120			150			174		
						BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC	BTC	RTC	ETC
50S-18600-1100-OP	97	174	2159940	838042	918763	-	-	-	1602567	606198	606198	1846252	832050	908745	2577306	1332332	1816392	3162149	1722272	2542508
50S-18600-1200-OP	83	174	2156214	835652	915063	1818719	812430	874566	2108725	1014936	1234628	2398731	1212167	1594690	3268748	1792913	2674868	3964756	2252900	3539009
50S-18600-1300-OP	72	158	2152170	833068	911054	2318550	1157978	1495137	2658903	1387061	1917707	2999256	1614045	2340276	-	-	-	-	-	-
50S-18600-1450-OP	59	128	2145506	828749	904426	3143272	1709758	2519082	3566700	1990108	3044789	-	-	-	-	-	-	-	-	-
65S-18400-1600-OP	50	145	2033040	809722	912267	3800287	2179507	3469696	4290073	2501762	4077797	4779858	2823531	4685898	-	-	-	-	-	-
65S-18400-1700-OP	45	116	2027969	806501	907231	4427080	2591767	4247894	4980001	2955015	4934379	5532923	3318263	5620865	-	-	-	-	-	-
65S-18400-1800-OP	41	116	2022597	803093	901895	5091856	3028497	5073254	-	-	-	-	-	-	-	-	-	-	-	-
65S-19400-1600-OP	58	145	2420404	973235	1107498	3585940	1981851	2989840	4075726	2305478	3597941	4565511	2628123	4206042	-	-	-	-	-	-
65S-19400-1700-OP	52	131	2415333	970040	1102462	4212724	2395792	3768038	4765645	2759926	4454524	5318567	3123236	5141009	-	-	-	-	-	-
65S-19400-1800-OP	48	116	2409961	966650	1097126	4877501	2833469	4593398	5497390	3240711	5363020	-	-	-	-	-	-	-	-	-
80S-18700-1800-OP	41	102	2446795	761038	761038	6571842	3839882	6276270	-	-	-	-	-	-	-	-	-	-	-	-
80S-19700-1800-OP	48	102	2996424	1021157	1021157	6283066	3566886	5595404	-	-	-	-	-	-	-	-	-	-	-	-

NOTES:

- Hold pressure: the minimum pressure to operate the actuator
- MOP: Maximum Operating Pressure
- BTC: Break to Close
- RTC: Run to Close
- ETC: End to Close
- BTO: Break to Open
- RTO: Run to Open
- ETO: End to Open

ALGA Double-Acting Pneumatic Actuator Overall Dimensions Single Cylinder

Figure 3. Single Cylinder Assembly Drawing

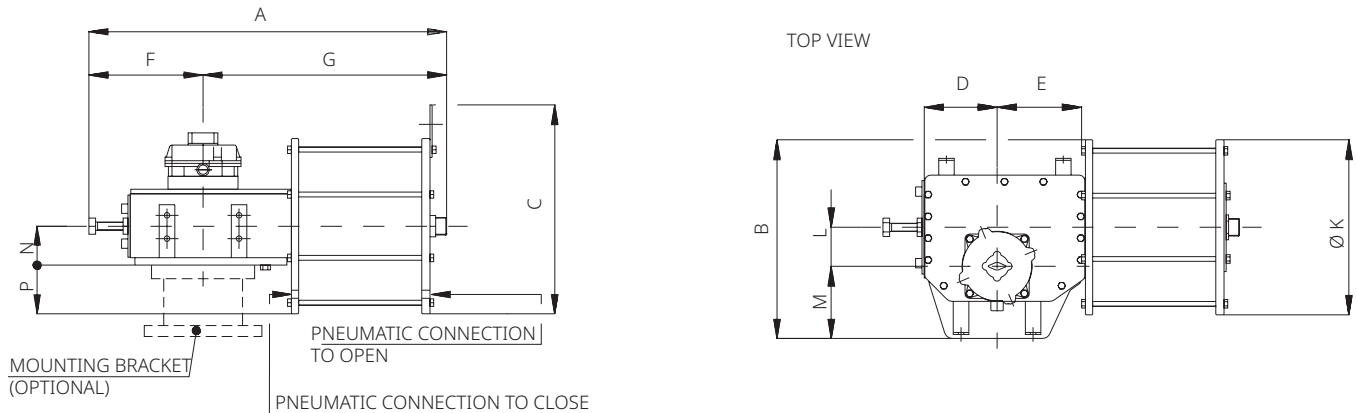


Table 74. Single Cylinder Dimensions (in.)

Model	A	B	C	D	E	F	G	ØK	L	M	N	P	Pneumatic Connection*		Weight (lb)	Air Consumption (cu in.)
													Close	Open		
0.3-100	29.61	12.56	7.17	5.35	5.94	8.94	20.71	4.72	2.76	4.69	2.76	-0.39	1/4	2 x 1/4	82	98
0.3-135	29.53	12.56	8.90	5.35	5.94	8.94	20.63	7.09	2.76	4.69	2.76	0.83	1/4	2 x 1/4	90	177
0.3-175	29.76	12.56	9.96	5.35	5.94	8.94	20.87	7.87	2.76	4.69	2.76	1.22	1/4	2 x 1/2	115	293
0.3-235	30.94	12.56	11.85	5.35	5.94	8.94	22.01	10.24	2.76	4.69	2.76	2.40	1/2	2 x 1/2	159	549
0.9-235	33.35	16.26	11.85	6.30	7.48	9.80	23.54	10.24	3.15	6.69	3.27	1.89	1/2	2 x 1/2	209	549
0.9-280	33.66	16.26	16.54	6.30	7.48	9.80	23.90	14.37	3.15	6.69	3.27	3.54	2 x 1/2	2 x 3/4	309	854
1.5-280	39.02	18.78	16.54	7.36	8.94	12.28	26.73	14.37	3.94	7.28	3.94	2.87	2 x 1/2	2 x 3/4	353	976
1.5-335	39.13	19.09	19.76	7.36	8.94	12.28	26.85	16.34	3.94	7.28	3.94	3.94	2 x 3/4	2 x 1	432	1404
1.5-385	39.13	20.08	22.13	7.36	8.94	12.28	26.85	18.31	3.94	7.28	3.94	4.92	2 x 1	2 x 1	492	1892
3-335	52.52	23.07	19.76	11.22	12.99	16.14	36.38	16.34	6.30	8.46	4.17	3.70	2 x 3/4	2 x 1	619	2197
3-385	52.52	23.62	22.13	11.22	12.99	16.14	36.38	17.72	6.30	8.46	4.17	4.69	2 x 1	2 x 1	686	2868
3-435	52.52	24.61	23.94	11.22	12.99	16.14	36.38	20.28	6.30	8.46	4.17	5.67	2 x 1	2 x 1	754	3661
3-485	52.48	25.79	26.85	11.22	12.99	16.14	36.34	22.83	6.30	8.46	4.17	6.85	2 x 1	2 x 1	809	4516
6-485	61.57	29.13	26.85	12.87	14.92	19.80	41.77	22.83	7.28	10.24	5.51	5.51	2 x 1	2 x 1	1224	5187
6-535	62.09	29.72	28.82	12.87	14.92	19.80	42.28	24.68	7.28	10.24	5.51	6.69	2 x 1	2 x 1	1444	6346
6-585	62.09	30.71	31.26	12.87	14.92	19.80	42.28	26.77	7.28	10.24	5.51	7.68	2 x 1	2 x 1	1618	7567
14-635	67.44	35.04	34.17	14.80	17.13	21.06	46.38	28.94	7.87	12.99	7.60	6.57	2 x 1	2 x 1	2418	9703
14-735	72.80	37.01	37.32	14.80	17.13	21.06	51.73	32.72	7.87	12.99	7.60	8.54	2 x 1	2 x 1	2892	12998
18-635	77.05	37.60	34.17	16.69	19.37	22.76	54.29	28.94	9.06	13.98	7.60	6.77	2 x 1	2 x 1	3025	11228
18-685	78.11	38.19	35.04	16.69	19.37	22.76	55.35	30.59	9.06	13.98	7.60	7.56	2 x 1	2 x 1	2983	12693
18-735	78.19	39.17	37.32	16.69	19.37	22.76	55.43	32.72	9.06	13.98	7.60	8.54	2 x 1	2 x 1	3146	14585

NOTE:

* Pneumatic connection NPT (in.)

Table 75. Single Cylinder Dimensions (in.) (Continued)

Model	A	B	C	D	E	F	G	ØK	L	M	N	P	Pneumatic Connection*		Weight (lb)	Air Consumption (cu in.)
													Close	Open		
32-685	88.19	41.61	35.04	19.88	23.03	25.55	62.64	30.59	10.63	15.55	9.17	6.02	2 x 1	2 x 1	3937	14890
32-735	88.70	42.32	37.32	19.88	23.03	25.55	63.15	32.72	10.63	15.55	9.17	7.01	2 x 1	2 x 1	4116	17575
32-835	89.41	44.41	40.87	19.88	23.03	25.55	63.86	36.42	10.63	15.55	9.17	9.06	2 x 1	2 x 1	4456	22701
50-935	99.17	49.13	46.46	21.57	24.92	27.24	71.93	41.54	11.81	16.54	9.17	11.61	4 x 1	4 x 1	6140	31732
50-1000	100.75	50.39	50.16	21.57	24.92	27.24	73.50	44.29	11.81	16.54	9.17	12.87	4 x 1	4 x 1	6832	36614
50-1100	101.54	52.36	54.33	21.57	24.92	27.24	74.29	48.39	11.81	16.54	9.17	14.84	4 x 1	4 x 1	7705	44547
80-935	120.75	52.56	47.48	26.10	29.96	34.72	86.02	42.13	13.78	17.72	11.89	9.17	4 x 1	4 x 1	9224	37224
80-1100	120.16	55.51	54.33	26.10	29.96	34.72	85.43	48.39	13.78	17.72	11.89	12.13	4 x 1	4 x 1	10161	51260
80-1200	119.96	57.68	57.83	26.10	29.96	34.72	85.24	52.36	13.78	17.72	11.89	14.29	4 x 1	4 x 1	11244	61024

NOTE:

* Pneumatic connection NPT (in.)

Two Cylinders

Figure 4. Two Cylinder Assembly Drawing

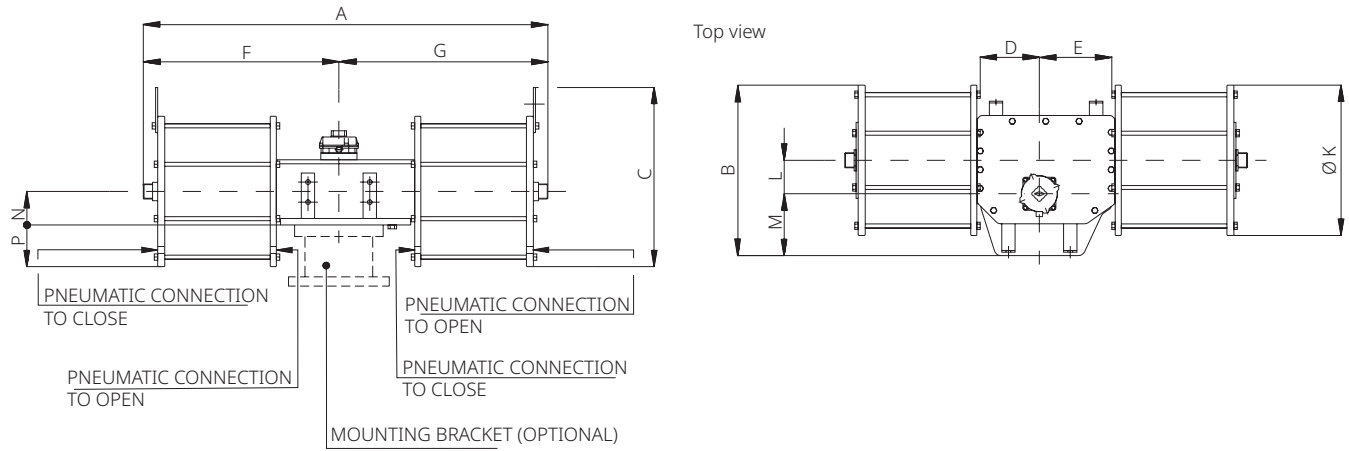


Table 76. Two Cylinder Dimensions (in.)

Model	A	B	C	D	E	F	G	ØK	L	M	N	P	Pneumatic Connection*		Weight (lb)	Air Consumption (cu in.)
													Close	Open		
18-635	105.91	37.60	34.45	16.69	19.37	51.61	54.29	29.02	9.06	13.98	6.77	7.60	4+4 x 1	4+4 x 1	4700	21785
18-685	108.03	38.19	35.67	16.69	19.37	52.68	55.35	30.98	9.06	13.98	7.56	7.60	4+4 x 1	4+4 x 1	4615	25386
32-685	122.13	41.61	35.67	19.88	23.03	59.49	62.64	30.98	10.63	15.55	6.02	9.17	4+4 x 1	4+4 x 1	5623	29719
50-935	140.51	49.13	46.46	21.57	24.92	68.58	71.93	41.54	11.81	16.54	11.61	9.17	4+4 x 1	4+4 x 1	9633	63465
50-1000	143.66	50.39	50.16	21.57	24.92	70.16	73.50	44.29	11.81	16.54	12.87	9.17	4+4 x 1	4+4 x 1	11015	73228
80-935	168.19	52.56	47.48	26.10	29.96	82.17	86.02	42.13	13.78	17.72	9.17	11.89	4+4 x 1	4+4 x 1	13608	74449
80-1100	167.01	55.51	54.33	26.10	29.96	81.57	85.43	48.39	13.78	17.72	12.13	11.89	4+4 x 1	4+4 x 1	15482	102520
80-1200	166.61	57.68	58.50	26.10	29.96	81.38	85.24	52.36	13.78	17.72	14.29	11.89	4+4 x 1	4+4 x 1	17637	122047

NOTE:

* Pneumatic connection NPT (in.)

ALGAS Spring-Return Pneumatic Actuator

Overall Dimensions

Spring to Close

Figure 5. Overall Dimensions

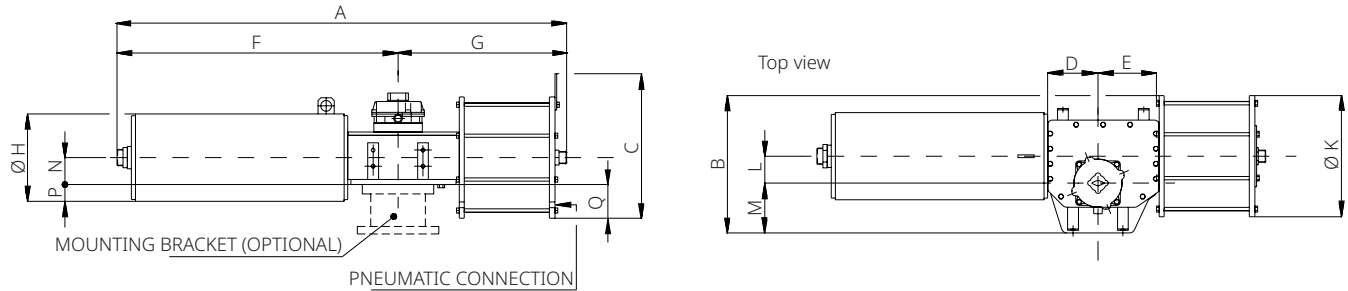


Table 77. Models 0.3-008A-100-CL to 0.9-0250-235-CL Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
0.3-008A-100-CL	48.78	12.56	7.17	5.35	5.94	28.03	20.75	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	125	98
0.3-008B-100-CL	48.78	12.56	7.17	5.35	5.94	28.03	20.75	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	125	98
0.3-008C-100-CL	48.78	12.56	7.17	5.35	5.94	28.03	20.75	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	136	98
0.3-008A-135-CL	48.66	12.56	8.90	5.35	5.94	28.03	20.63	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	140	177
0.3-008B-135-CL	48.66	12.56	8.90	5.35	5.94	28.03	20.63	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	140	177
0.3-008C-135-CL	48.66	12.56	8.90	5.35	5.94	28.03	20.63	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	151	177
0.3-0100-135-CL	53.35	12.56	8.90	5.35	5.94	32.72	20.63	8.82	7.09	2.76	4.69	2.76	1.65	0.79	2 x 1/4	184	177
0.3-0100-175-CL	53.58	12.56	9.96	5.35	5.94	32.72	20.87	8.82	7.87	2.76	4.69	2.76	1.65	1.18	2 x 1/2	202	293
0.3-0150-175-CL	50.91	12.56	9.96	5.35	5.94	30.04	20.87	8.82	7.87	2.76	4.69	2.76	1.65	1.18	2 x 1/2	202	293
0.3-0100-235-CL	54.76	12.56	11.85	5.35	5.94	32.72	22.05	8.82	10.24	2.76	4.69	2.76	1.65	2.36	2 x 1/2	248	549
0.3-0150-235-CL	52.09	12.56	11.85	5.35	5.94	30.04	22.05	8.82	10.24	2.76	4.69	2.76	1.65	2.36	2 x 1/2	248	549
0.9-0350-385-CL	62.01	18.70	22.13	6.30	7.48	36.61	25.39	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	671	1587
0.9-0400-385-CL	59.41	18.70	22.13	6.30	7.48	34.02	25.39	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	671	1587
0.9-0420-385-CL	57.72	18.70	22.13	6.30	7.48	32.32	25.39	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	660	1587
0.9-0700-385-CL	60.47	18.70	22.13	6.30	7.48	35.08	25.39	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	726	1587
0.9-0720-385-CL	57.72	18.70	22.13	6.30	7.48	32.32	25.39	13.78	18.31	3.15	6.69	3.27	3.66	5.59	2 x 1	715	1587
0.9-0350-435-CL	62.01	19.68	23.94	6.30	7.48	36.61	25.39	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	737	2014
0.9-0400-435-CL	59.41	19.68	23.94	6.30	7.48	34.02	25.39	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	737	2014
0.9-0420-435-CL	57.72	19.68	23.94	6.30	7.48	32.32	25.39	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	726	2014
0.9-0700-435-CL	60.47	19.68	23.94	6.30	7.48	35.08	25.39	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	793	2014
0.9-0720-435-CL	57.72	19.68	23.94	6.30	7.48	32.32	25.39	13.78	20.28	3.15	6.69	3.27	3.66	6.87	2 x 1	782	2014
0.9-0350-485-CL	62.01	22.05	26.85	6.30	7.48	36.61	25.39	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	848	2502
0.9-0400-485-CL	59.41	22.05	26.85	6.30	7.48	34.02	25.39	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	848	2502
0.9-0420-485-CL	57.72	22.05	26.85	6.30	7.48	32.32	25.39	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	837	2502
0.9-0700-485-CL	60.47	22.05	26.85	6.30	7.48	35.08	25.39	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	903	2502
0.9-0720-485-CL	57.72	22.05	26.85	6.30	7.48	32.32	25.39	13.78	22.83	3.15	6.69	3.27	3.66	8.15	2 x 1	892	2502
0.9-0200-235-CL	58.11	16.26	11.85	6.30	7.48	34.53	23.58	11.02	10.24	3.15	6.69	3.27	2.24	1.85	2 x 1/2	354	549
0.9-0250-235-CL	55.31	16.26	11.85	6.30	7.48	31.73	23.58	11.02	10.24	3.15	6.69	3.27	2.24	1.85	2 x 1/2	365	549

Table 78. Models 0.9-0200-280-CL to 3-2050-385-CL Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
0.9-0200-280-CL	58.43	16.65	16.54	6.30	7.48	34.53	23.90	11.02	14.37	3.15	6.69	3.27	2.24	100	2 x 3/4	354	854
0.9-0250-280-CL	55.63	16.65	16.54	6.30	7.48	31.73	23.90	11.02	14.37	3.15	6.69	3.27	2.24	100	2 x 3/4	365	854
0.9-0350-280-CL	60.51	16.65	16.54	6.30	7.48	36.61	23.90	13.78	14.37	3.15	6.69	3.27	3.62	100	2 x 3/4	464	854
0.9-0400-280-CL	57.91	16.65	16.54	6.30	7.48	34.02	23.90	13.78	14.37	3.15	6.69	3.27	3.62	100	2 x 3/4	464	854
0.9-0200-335-CL	59.92	17.72	19.76	6.30	7.48	34.53	25.39	11.02	16.34	3.15	6.69	3.27	2.24	125	2 x 1	495	1220
0.9-0250-335-CL	57.13	17.72	19.76	6.30	7.48	31.73	25.39	11.02	16.34	3.15	6.69	3.27	2.24	125	2 x 1	506	1220
0.9-0350-335-CL	62.01	17.72	19.76	6.30	7.48	36.61	25.39	13.78	16.34	3.15	6.69	3.27	3.62	125	2 x 1	605	1220
0.9-0400-335-CL	59.41	17.72	19.76	6.30	7.48	34.02	25.39	13.78	16.34	3.15	6.69	3.27	3.62	125	2 x 1	605	1220
0.9-0420-335-CL	57.72	17.72	19.76	6.30	7.48	32.32	25.39	13.78	16.34	3.15	6.69	3.27	3.62	125	2 x 1	594	1220
0.9-0700-335-CL	60.47	17.72	19.76	6.30	7.48	35.08	25.39	13.78	16.34	3.15	6.69	3.27	3.62	125	2 x 1	660	1220
1.5-0800-385-CL	65.91	20.08	22.13	7.36	8.94	39.06	26.85	15.75	18.31	3.94	7.28	3.94	3.94	133	2 x 1	842	1892
1.5-1100-385-CL	65.91	20.08	22.13	7.36	8.94	39.06	26.85	15.75	18.31	3.94	7.28	3.94	3.94	133	2 x 1	864	1892
1.5-1200-385-CL	69.84	20.08	22.13	7.36	8.94	42.99	26.85	14.57	18.31	3.94	7.28	3.94	3.35	133	2 x 1	886	1892
1.5-0800-435-CL	65.91	21.06	23.94	7.36	8.94	39.06	26.85	15.75	20.28	3.94	7.28	3.94	3.94	158	2 x 1	908	2380
1.5-1100-435-CL	65.91	21.06	23.94	7.36	8.94	39.06	26.85	15.75	20.28	3.94	7.28	3.94	3.94	158	2 x 1	930	2380
1.5-1200-435-CL	69.84	21.06	23.94	7.36	8.94	42.99	26.85	14.57	20.28	3.94	7.28	3.94	3.35	158	2 x 1	952	2380
1.5-0800-485-CL	65.91	22.24	26.85	7.36	8.94	39.06	26.85	15.75	22.83	3.94	7.28	3.94	3.94	190	2 x 1	1019	2929
1.5-1100-485-CL	65.91	22.24	26.85	7.36	8.94	39.06	26.85	15.75	22.83	3.94	7.28	3.94	3.94	190	2 x 1	1041	2929
1.5-1200-485-CL	69.84	22.24	26.85	7.36	8.94	42.99	26.85	14.57	22.83	3.94	7.28	3.94	3.35	190	2 x 1	1063	2929
1.5-0800-535-CL	67.48	24.41	28.82	7.36	8.94	39.06	28.43	15.75	24.68	3.94	7.28	3.94	3.94	214	2 x 1	1173	3600
1.5-1100-535-CL	67.48	24.41	28.82	7.36	8.94	39.06	28.43	15.75	24.68	3.94	7.28	3.94	3.94	214	2 x 1	1195	3600
1.5-1200-535-CL	71.42	24.41	28.82	7.36	8.94	42.99	28.43	14.57	24.68	3.94	7.28	3.94	3.35	214	2 x 1	1217	3600
1.5-1100-585-CL	67.68	26.38	31.26	7.36	8.94	39.06	28.62	15.75	26.77	3.94	7.28	3.94	3.94	240	2 x 1	1327	4272
1.5-1200-585-CL	71.61	26.38	31.26	7.36	8.94	42.99	28.62	14.57	26.77	3.94	7.28	3.94	3.35	240	2 x 1	1349	4272
1.5-1300-385-CL	69.57	20.08	22.13	7.36	8.94	42.72	26.85	14.57	18.31	3.94	7.28	3.94	3.35	133	2 x 1	904	1892
1.5-1300-435-CL	69.57	21.06	23.94	7.36	8.94	42.72	26.85	14.57	20.28	3.94	7.28	3.94	3.35	158	2 x 1	970	2380
1.5-1300-485-CL	69.57	22.24	26.85	7.36	8.94	42.72	26.85	14.57	22.83	3.94	7.28	3.94	3.35	190	2 x 1	1080	2929
1.5-1300-535-CL	71.14	24.41	28.82	7.36	8.94	42.72	28.43	14.57	24.68	3.94	7.28	3.94	3.35	214	2 x 1	1235	3600
1.5-1300-585-CL	71.34	27.95	31.26	7.36	8.94	42.72	28.62	14.57	26.77	3.94	7.28	3.94	3.35	240	2 x 1	1367	4272
3-2000-385-CL	92.05	23.62	22.13	11.22	12.99	55.67	36.38	16.93	18.31	6.30	8.46	4.17	4.29	127	2 x 1	1217	2868
3-2000-435-CL	92.05	24.61	23.94	11.22	12.99	55.67	36.38	16.93	20.28	6.30	8.46	4.17	4.29	152	2 x 1	1294	3661
3-2000-485-CL	92.01	25.79	26.85	11.22	12.99	55.67	36.34	16.93	22.83	6.30	8.46	4.17	4.29	184	2 x 1	1415	4516
3-2000-535-CL	93.74	26.97	28.82	11.22	12.99	55.67	38.07	16.93	24.68	6.30	8.46	4.17	4.29	208	2 x 1	1570	5492
3-2000-585-CL	93.74	27.95	31.26	11.22	12.99	55.67	38.07	16.93	26.77	6.30	8.46	4.17	4.29	234	2 x 1	1713	6591
3-2050-385-CL	91.06	23.62	22.13	11.22	12.99	54.68	36.38	16.93	18.31	6.30	8.46	4.17	4.29	127	2 x 1	1257	2868

Figure 6. Overall Dimensions

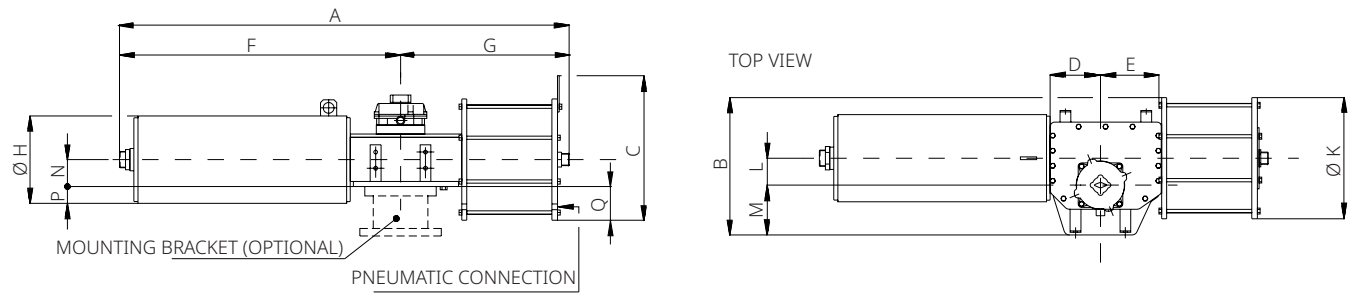


Table 79. Models 3-2050-435-CL to 14-8300-735-CL Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
3-2050-435-CL	91.06	24.61	23.94	11.22	12.99	54.68	36.38	16.93	20.28	6.30	8.46	4.17	4.29	5.96	2 x 1	1334	3661
3-2050-485-CL	91.02	25.79	26.85	11.22	12.99	54.68	36.34	16.93	22.83	6.30	8.46	4.17	4.29	7.24	2 x 1	1455	4516
3-2050-535-CL	92.76	26.97	28.82	11.22	12.99	54.68	38.07	16.93	24.68	6.30	8.46	4.17	4.29	8.17	2 x 1	1609	5492
3-2050-585-CL	92.76	27.95	31.26	11.22	12.99	54.68	38.07	16.93	26.77	6.30	8.46	4.17	4.29	9.21	2 x 1	1775	6591
6-2500-485-CL	119.84	29.13	26.85	12.87	14.92	77.95	41.89	14.96	22.83	7.28	10.24	5.51	4.72	5.91	2 x 1	2068	5187
6-2500-535-CL	120.24	29.72	28.82	12.87	14.92	77.95	42.28	14.96	24.68	7.28	10.24	5.51	4.72	6.83	2 x 1	2222	6346
6-3800-535-CL	127.36	29.72	28.82	12.87	14.92	85.08	42.28	21.65	24.68	7.28	10.24	5.51	8.07	6.83	2 x 1	3005	6346
6-2500-585-CL	120.24	30.71	31.26	12.87	14.92	77.95	42.28	14.96	26.77	7.28	10.24	5.51	4.72	7.87	2 x 1	2366	7567
6-3800-585-CL	127.36	30.71	31.26	12.87	14.92	85.08	42.28	21.65	26.77	7.28	10.24	5.51	8.07	7.87	2 x 1	3148	7567
6-2500-685-CL	127.68	32.68	35.04	12.87	14.92	77.95	49.72	14.96	30.59	7.28	10.24	5.51	4.72	9.78	2 x 1	2818	10374
6-2500-735-CL	122.95	33.58	37.32	12.87	14.92	77.95	45.00	14.96	32.72	7.28	10.24	5.51	4.72	10.85	2 x 1	3060	11961
6-3800-735-CL	130.08	33.58	37.32	12.87	14.92	85.08	45.00	21.65	32.72	7.28	10.24	5.51	8.07	10.85	2 x 1	3843	11961
6-2500-635-CL	122.13	31.69	34.17	12.87	14.92	77.95	44.17	14.96	28.94	7.28	10.24	5.51	4.72	8.96	2 x 1	2575	8909
6-3800-635-CL	129.25	31.69	34.17	12.87	14.92	85.08	44.17	21.65	28.94	7.28	10.24	5.51	8.07	8.96	2 x 1	3358	8909
6-3900-535-CL	120.51	29.72	28.82	12.87	14.92	78.23	42.28	21.57	24.68	7.28	10.24	5.51	8.27	6.83	2 x 1	3203	6346
6-3900-585-CL	120.51	30.71	31.26	12.87	14.92	78.23	42.28	21.57	26.77	7.28	10.24	5.51	8.27	7.87	2 x 1	3347	7567
6-3900-635-CL	122.40	31.69	34.17	12.87	14.92	78.23	44.17	21.57	28.94	7.28	10.24	5.51	8.27	8.96	2 x 1	3556	8909
6-3900-685-CL	127.95	32.68	35.04	12.87	14.92	78.23	49.72	21.57	30.59	7.28	10.24	5.51	8.27	9.78	2 x 1	3799	10374
6-3900-735-CL	123.23	33.58	37.32	12.87	14.92	78.23	45.00	21.57	32.72	7.28	10.24	5.51	8.27	10.85	2 x 1	4041	11961
14-5100-685-CL	135.08	36.02	35.04	14.80	17.13	83.15	51.93	21.73	30.59	7.87	12.99	7.60	6.02	7.70	2 x 1	4136	11289
14-5400-685-CL	132.95	36.02	35.04	14.80	17.13	81.02	51.93	21.73	30.59	7.87	12.99	7.60	6.02	7.70	2 x 1	4323	11289
14-5100-735-CL	130.28	36.93	37.32	14.80	17.13	83.15	47.13	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4345	12998
14-5400-735-CL	128.15	36.93	37.32	14.80	17.13	81.02	47.13	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4533	12998
14-8300-735-CL	130.28	36.93	37.32	14.80	17.13	83.15	47.13	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4742	12998

Table 80. Models 14-5100-785-CL to 18-9800-935-CL Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
14-5100-785-CL	130.28	38.31	39.96	14.80	17.13	83.15	47.13	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4555	14829
14-5400-785-CL	128.15	38.31	39.96	14.80	17.13	81.02	47.13	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4742	14829
14-8300-785-CL	130.28	38.31	39.96	14.80	17.13	83.15	47.13	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4952	14829
14-5100-835-CL	130.28	39.09	41.73	14.80	17.13	83.15	47.13	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	4720	16721
14-5400-835-CL	128.15	39.09	41.73	14.80	17.13	81.02	47.13	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	4907	16721
14-8300-835-CL	130.28	39.09	41.73	14.80	17.13	83.15	47.13	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	5117	16721
14-5100-935-CL	133.39	41.65	46.46	14.80	17.13	83.15	50.24	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	5734	20931
14-5400-935-CL	131.26	41.65	46.46	14.80	17.13	81.02	50.24	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	5922	20931
14-8300-935-CL	133.39	41.65	46.46	14.80	17.13	83.15	50.24	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	6131	20931
14-5100-635-CL	129.53	35.04	33.23	14.80	17.13	83.15	46.38	21.73	28.94	7.87	12.99	7.60	6.02	6.87	2 x 1	3893	9703
14-5400-635-CL	127.40	35.04	33.23	14.80	17.13	81.02	46.38	21.73	28.94	7.87	12.99	7.60	6.02	6.87	2 x 1	4081	9703
14-5100-885-CL	133.39	40.55	44.68	14.80	17.13	83.15	50.24	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5470	18795
14-5400-885-CL	131.26	40.55	44.68	14.80	17.13	81.02	50.24	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5657	18795
14-8300-885-CL	133.39	40.55	44.68	14.80	17.13	83.15	50.24	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5866	18795
18-10500-1000-CL	164.80	45.08	50.16	16.69	19.37	109.21	55.59	27.95	44.29	9.06	13.98	7.60	9.92	14.55	4 x 1	10267	27827
18-11000-1000-CL	160.16	45.08	50.16	16.69	19.37	104.57	55.59	27.95	44.29	9.06	13.98	7.60	9.92	14.55	4 x 1	10190	27827
18-9600-1000-CL	161.46	45.08	50.16	16.69	19.37	105.87	55.59	23.62	44.29	9.06	13.98	7.60	7.76	14.55	4 x 1	8195	27827
18-9800-1000-CL	161.46	45.08	50.16	16.69	19.37	105.87	55.59	23.62	44.29	9.06	13.98	7.60	7.76	14.55	4 x 1	8669	27827
18-9600-835-CL	159.84	41.26	41.73	16.69	19.37	105.87	53.98	23.62	37.05	9.06	13.98	7.60	7.76	10.93	2 x 1	6618	19406
18-9800-835-CL	159.84	41.26	41.73	16.69	19.37	105.87	53.98	23.62	37.05	9.06	13.98	7.60	7.76	10.93	2 x 1	7092	19406
18-10500-935-CL	164.57	43.82	46.46	16.69	19.37	109.21	55.35	27.95	41.57	9.06	13.98	7.60	9.92	13.19	4 x 1	9705	24287
18-11000-935-CL	159.92	43.82	46.46	16.69	19.37	104.57	55.35	27.95	41.57	9.06	13.98	7.60	9.92	13.19	4 x 1	9628	24287
18-9600-935-CL	161.22	43.82	46.46	16.69	19.37	105.87	55.35	23.62	41.57	9.06	13.98	7.60	7.76	13.19	4 x 1	7632	24287
18-9800-935-CL	161.22	43.82	46.46	16.69	19.37	105.87	55.35	23.62	41.57	9.06	13.98	7.60	7.76	13.19	4 x 1	8106	24287

Figure 7. Overall Dimensions

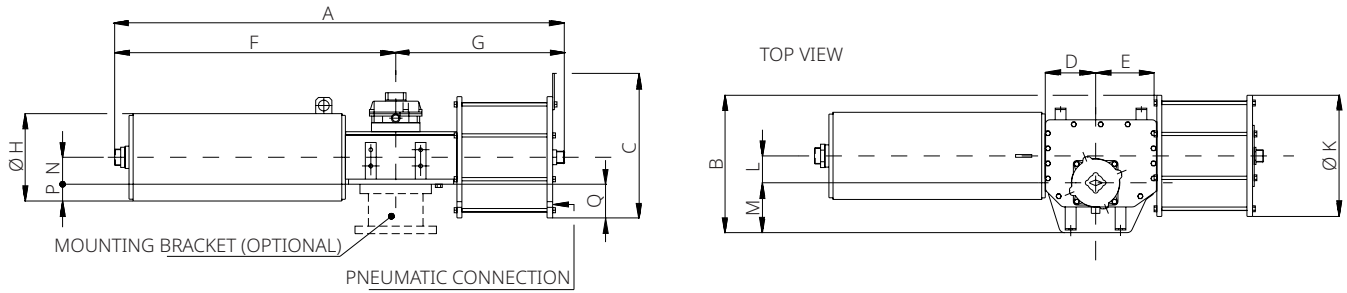


Table 81. Models 18-10500-1100-CL to 80-19700-1800-CL Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
18-10500-1100-CL	164.68	48.03	54.33	16.69	19.37	109.21	55.47	27.95	48.39	9.06	13.98	7.60	9.92	16.59	4 x 1	11061	33685
18-11000-1100-CL	160.04	48.03	54.33	16.69	19.37	104.57	55.47	27.95	48.39	9.06	13.98	7.60	9.92	16.59	4 x 1	10983	33685
18-9600-1100-CL	161.34	48.03	54.33	16.69	19.37	105.87	55.47	23.62	48.39	9.06	13.98	7.60	7.76	16.59	4 x 1	8988	33685
18-9800-1100-CL	161.34	48.03	54.33	16.69	19.37	105.87	55.47	23.62	48.39	9.06	13.98	7.60	7.76	16.59	4 x 1	9462	33685
18-10500-1200-CL	164.68	52.36	57.83	16.69	19.37	109.21	55.47	27.95	52.36	9.06	13.98	7.60	9.92	18.58	4 x 1	11856	40276
18-11000-1200-CL	160.04	52.36	57.83	16.69	19.37	104.57	55.47	27.95	52.36	9.06	13.98	7.60	9.92	18.58	4 x 1	11779	40276
18-9600-1200-CL	161.34	51.57	57.83	16.69	19.37	105.87	55.47	23.62	52.36	9.06	13.98	7.60	7.76	18.58	4 x 1	9784	40276
18-9800-1200-CL	161.34	51.57	57.83	16.69	19.37	105.87	55.47	23.62	52.36	9.06	13.98	7.60	7.76	18.58	4 x 1	10258	40276
32-12000-1100-CL	184.21	51.18	54.33	19.88	23.03	118.27	65.94	31.50	48.39	10.63	16.54	9.29	10.00	14.90	4 x 1	13098	39665
32-15000-1100-CL	184.21	51.18	54.33	19.88	23.03	118.27	65.94	31.50	48.39	10.63	16.54	9.29	10.00	14.90	4 x 1	13755	39665
32-9900-1100-CL	181.77	51.18	54.33	19.88	23.03	115.83	65.94	23.62	48.39	10.63	16.54	9.29	6.06	14.90	4 x 1	10845	39665
32-12000-1300-CL	185.79	56.30	62.20	19.88	23.03	118.15	67.64	38.58	56.30	10.63	16.54	9.29	10.00	18.86	4 x 1	15210	55532
32-15000-1300-CL	185.90	56.30	62.20	19.88	23.03	118.27	67.64	31.50	56.30	10.63	16.54	9.29	10.00	18.86	4 x 1	15867	55532
32-9900-1300-CL	183.46	56.30	62.20	19.88	23.03	115.83	67.64	23.62	56.30	10.63	16.54	9.29	6.06	18.86	4 x 1	12957	55532
50-15400-1100-CL	196.42	52.36	54.33	21.57	24.92	122.91	73.50	31.50	48.39	11.81	16.54	9.17	10.12	15.02	4 x 1	14528	43937
50-15600-1100-CL	196.42	52.36	54.33	21.57	24.92	122.91	73.50	31.50	48.39	11.81	16.54	9.17	10.16	15.02	4 x 1	14991	43937
50-17300-1100-CL	197.09	52.36	54.33	21.57	24.92	123.58	73.50	33.86	48.39	11.81	16.54	9.17	12.48	15.02	4 x 1	15796	43937
50-15400-1450-CL	195.51	62.99	71.06	21.57	24.92	122.91	72.60	31.50	62.99	11.81	16.54	9.17	10.12	22.32	4 x 1 1/2	17890	76646
50-15600-1450-CL	195.51	62.99	71.06	21.57	24.92	122.91	72.60	31.50	62.99	11.81	16.54	9.17	10.16	22.32	4 x 1 1/2	18353	76646
50-17300-1450-CL	196.18	62.99	71.06	21.57	24.92	123.58	72.60	33.86	62.99	11.81	16.54	9.17	12.48	22.32	4 x 1 1/2	19158	76646
50-18600-1450-CL	197.32	62.99	71.06	21.57	24.92	124.72	72.60	34.09	62.99	11.81	16.54	9.17	12.60	22.32	4 x 1 1/2	20591	76646
65-18400-1600-CL	204.41	68.90	78.46	24.53	27.60	127.68	76.73	34.09	68.90	11.22	17.91	11.89	9.88	22.56	4 x 1 1/2	24692	90315
65-19400-1600-CL	208.94	68.90	78.46	24.53	27.60	132.20	76.73	34.09	68.90	11.22	17.91	11.89	9.88	22.56	4 x 1 1/2	25507	90315
65-18400-1700-CL	205.55	74.80	85.04	24.53	27.60	127.68	77.87	34.09	74.80	11.22	17.91	11.89	9.88	25.51	4 x 1 1/2	27569	101910
65-19400-1700-CL	210.08	74.80	85.04	24.53	27.60	132.20	77.87	34.09	74.80	11.22	17.91	11.89	9.88	25.51	4 x 1 1/2	28384	101910
65-18400-1800-CL	205.59	77.17	86.46	24.53	27.60	127.68	77.91	34.09	77.17	11.22	17.91	11.89	9.88	26.69	4 x 1 1/2	28814	114420
65-19400-1800-CL	210.12	77.17	86.46	24.53	27.60	132.20	77.91	34.09	77.17	11.22	17.91	11.89	9.88	26.69	4 x 1 1/2	29630	114420
80-18700-1800-CL	223.58	77.17	86.46	26.10	29.96	134.49	89.09	34.09	77.17	13.78	17.72	11.89	9.88	26.69	4 x 1 1/2	29564	137303
80-19700-1800-CL	228.19	77.17	86.46	26.10	29.96	139.09	89.09	34.09	77.17	13.78	17.72	11.89	9.88	26.69	4 x 1 1/2	30644	137303

Spring to Open

Figure 8. Overall Dimensions

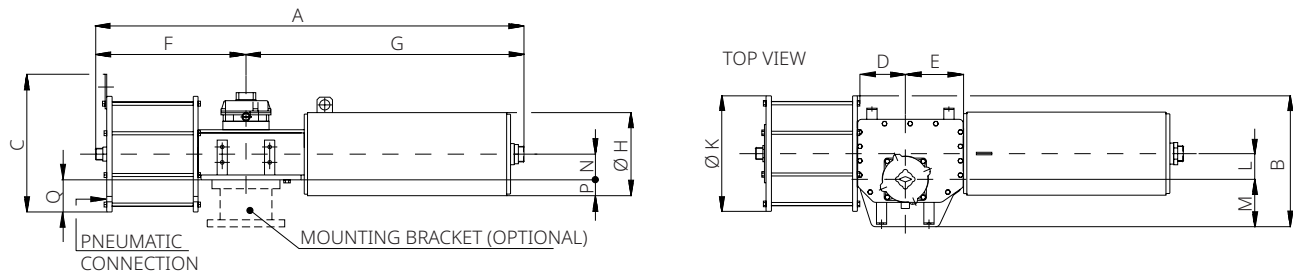


Table 82. Models 0.3-008A-100-OP to 0.9-0700-485-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
0.3-008A-100-OP	48.78	12.56	7.17	5.35	5.94	20.75	28.03	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	125	98
0.3-008B-100-OP	48.78	12.56	7.17	5.35	5.94	20.75	28.03	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	125	98
0.3-008C-100-OP	48.78	12.56	7.17	5.35	5.94	20.75	28.03	5.91	4.72	2.76	4.69	2.76	0.20	-0.39	2 x 1/4	136	98
0.3-008A-135-OP	48.66	12.56	8.90	5.35	5.94	20.63	28.03	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	140	177
0.3-008B-135-OP	48.66	12.56	8.90	5.35	5.94	20.63	28.03	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	140	177
0.3-008C-135-OP	48.66	12.56	8.90	5.35	5.94	20.63	28.03	5.91	7.09	2.76	4.69	2.76	0.20	0.79	2 x 1/4	151	177
0.3-0100-135-OP	53.35	12.56	8.90	5.35	5.94	20.63	32.72	8.82	7.09	2.76	4.69	2.76	1.65	0.79	2 x 1/4	184	177
0.3-0100-175-OP	53.58	12.56	9.96	5.35	5.94	20.87	32.72	8.82	7.87	2.76	4.69	2.76	1.65	1.18	2 x 1/2	202	293
0.3-0150-175-OP	50.91	12.56	9.96	5.35	5.94	20.87	30.04	8.82	7.87	2.76	4.69	2.76	1.65	1.18	2 x 1/2	202	293
0.3-0100-235-OP	54.76	12.56	11.85	5.35	5.94	22.05	32.72	8.82	10.24	2.76	4.69	2.76	1.65	2.36	2 x 1/2	248	549
0.3-0150-235-OP	52.09	12.56	11.85	5.35	5.94	22.05	30.04	8.82	10.24	2.76	4.69	2.76	1.65	2.36	2 x 1/2	248	549
0.9-0350-385-OP	62.01	18.70	21.34	6.30	7.48	25.39	36.61	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	671	1587
0.9-0400-385-OP	59.41	18.70	21.34	6.30	7.48	25.39	34.02	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	671	1587
0.9-0420-385-OP	57.72	18.70	21.34	6.30	7.48	25.39	32.32	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	660	1587
0.9-0700-385-OP	60.47	18.70	21.34	6.30	7.48	25.39	35.08	13.78	18.31	3.15	6.69	3.27	3.62	5.59	2 x 1	726	1587
0.9-0720-385-OP	57.72	18.70	21.34	6.30	7.48	25.39	32.32	13.78	18.31	3.15	6.69	3.27	3.66	5.59	2 x 1	715	1587
0.9-0350-435-OP	62.01	19.68	23.94	6.30	7.48	25.39	36.61	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	737	2014
0.9-0400-435-OP	59.41	19.68	23.94	6.30	7.48	25.39	34.02	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	737	2014
0.9-0420-435-OP	57.72	19.68	23.94	6.30	7.48	25.39	32.32	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	726	2014
0.9-0700-435-OP	60.47	19.68	23.94	6.30	7.48	25.39	35.08	13.78	20.28	3.15	6.69	3.27	3.62	6.87	2 x 1	793	2014
0.9-0720-435-OP	57.72	19.68	23.94	6.30	7.48	25.39	32.32	13.78	20.28	3.15	6.69	3.27	3.66	6.87	2 x 1	782	2014
0.9-0350-485-OP	62.01	22.05	26.85	6.30	7.48	25.39	36.61	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	848	2502
0.9-0400-485-OP	59.41	22.05	26.85	6.30	7.48	25.39	34.02	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	848	2502
0.9-0420-485-OP	57.72	22.05	26.85	6.30	7.48	25.39	32.32	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	837	2502
0.9-0700-485-OP	60.47	22.05	26.85	6.30	7.48	25.39	35.08	13.78	22.83	3.15	6.69	3.27	3.62	8.15	2 x 1	903	2502

Table 83. Models 0.9-0720-485-OP to 1.5-0800-535-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
0.9-0720-485-OP	57.72	22.05	26.85	6.30	7.48	25.39	32.32	13.78	22.83	3.15	6.69	3.27	3.66	8.15	2 x 1	892	2502
0.9-0200-235-OP	58.11	16.26	11.85	6.30	7.48	23.58	34.53	11.02	10.24	3.15	6.69	3.27	2.24	1.85	2 x 1/2	354	549
0.9-0250-235-OP	55.31	16.26	11.85	6.30	7.48	23.58	31.73	11.02	10.24	3.15	6.69	3.27	2.24	1.85	2 x 1/2	365	549
0.9-0200-280-OP	58.43	16.65	16.54	6.30	7.48	23.90	34.53	11.02	14.37	3.15	6.69	3.27	2.24	3.92	2 x 3/4	354	854
0.9-0250-280-OP	55.63	16.65	16.54	6.30	7.48	23.90	31.73	11.02	14.37	3.15	6.69	3.27	2.24	3.92	2 x 3/4	365	854
0.9-0350-280-OP	60.51	16.65	16.54	6.30	7.48	23.90	36.61	13.78	14.37	3.15	6.69	3.27	3.62	3.92	2 x 3/4	464	854
0.9-0400-280-OP	57.91	16.65	16.54	6.30	7.48	23.90	34.02	13.78	14.37	3.15	6.69	3.27	3.62	3.92	2 x 3/4	464	854
0.9-0200-335-OP	59.92	17.72	19.76	6.30	7.48	25.39	34.53	11.02	16.34	3.15	6.69	3.27	2.24	4.90	2 x 1	495	1220
0.9-0250-335-OP	57.13	17.72	19.76	6.30	7.48	25.39	31.73	11.02	16.34	3.15	6.69	3.27	2.24	4.90	2 x 1	506	1220
0.9-0350-335-OP	62.01	17.72	19.76	6.30	7.48	25.39	36.61	13.78	16.34	3.15	6.69	3.27	3.62	4.90	2 x 1	605	1220
0.9-0400-335-OP	59.41	17.72	19.76	6.30	7.48	25.39	34.02	13.78	16.34	3.15	6.69	3.27	3.62	4.90	2 x 1	605	1220
0.9-0420-335-OP	57.72	17.72	19.76	6.30	7.48	25.39	32.32	13.78	16.34	3.15	6.69	3.27	3.62	4.90	2 x 1	594	1220
0.9-0700-335-OP	60.47	17.72	19.76	6.30	7.48	25.39	35.08	13.78	16.34	3.15	6.69	3.27	3.62	4.90	2 x 1	660	1220
1.5-0800-385-OP	65.91	20.08	22.13	7.36	8.94	26.85	39.06	15.75	18.31	3.94	7.28	3.94	3.94	5.22	2 x 1	842	1892
1.5-1100-385-OP	65.91	20.08	22.13	7.36	8.94	26.85	39.06	15.75	18.31	3.94	7.28	3.94	3.94	5.22	2 x 1	864	1892
1.5-1200-385-OP	69.84	20.08	22.13	7.36	8.94	26.85	42.99	14.57	18.31	3.94	7.28	3.94	3.35	5.22	2 x 1	886	1892
1.5-0800-435-OP	65.91	21.06	23.94	7.36	8.94	26.85	39.06	15.75	20.28	3.94	7.28	3.94	3.94	6.20	2 x 1	908	2380
1.5-1100-435-OP	65.91	21.06	23.94	7.36	8.94	26.85	39.06	15.75	20.28	3.94	7.28	3.94	3.94	6.20	2 x 1	930	2380
1.5-1200-435-OP	69.84	21.06	23.94	7.36	8.94	26.85	42.99	14.57	20.28	3.94	7.28	3.94	3.35	6.20	2 x 1	952	2380
1.5-0800-485-OP	65.91	22.24	26.85	7.36	8.94	26.85	39.06	15.75	22.83	3.94	7.28	3.94	3.94	7.48	2 x 1	1019	2929
1.5-1100-485-OP	65.91	22.24	26.85	7.36	8.94	26.85	39.06	15.75	22.83	3.94	7.28	3.94	3.94	7.48	2 x 1	1041	2929
1.5-1200-485-OP	69.84	22.24	26.85	7.36	8.94	26.85	42.99	14.57	22.83	3.94	7.28	3.94	3.35	7.48	2 x 1	1063	2929
1.5-0800-535-OP	67.48	24.41	28.82	7.36	8.94	28.43	39.06	15.75	24.68	3.94	7.28	3.94	3.94	8.41	2 x 1	1173	3600

Figure 9. Overall Dimensions

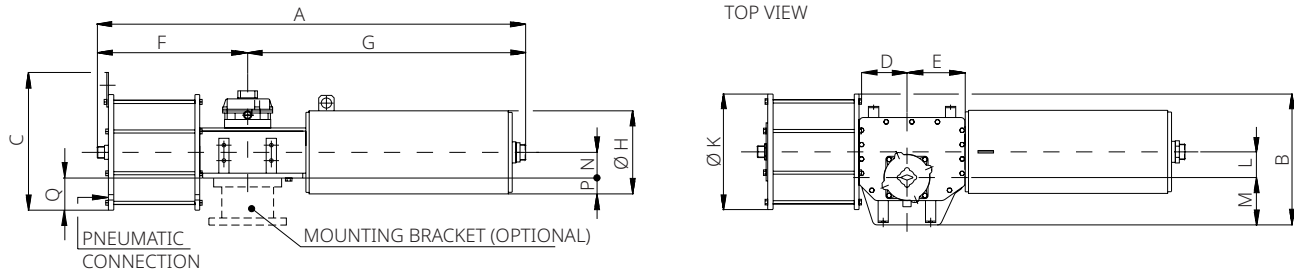


Table 84. Models 1.5-1100-535-OP to 6-2500-685-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
1.5-1100-535-OP	67.48	24.41	28.82	7.36	8.94	28.43	39.06	15.75	24.68	3.94	7.28	3.94	3.94	8.41	2 x 1	1194.90	3600
1.5-1200-535-OP	71.42	24.41	28.82	7.36	8.94	28.43	42.99	14.57	24.68	3.94	7.28	3.94	3.35	8.41	2 x 1	1217	3600
1.5-1100-585-OP	67.68	26.38	31.26	7.36	8.94	28.62	39.06	15.75	26.77	3.94	7.28	3.94	3.94	9.45	2 x 1	1327	4272
1.5-1200-585-OP	71.61	26.38	31.26	7.36	8.94	28.62	42.99	14.57	26.77	3.94	7.28	3.94	3.35	9.45	2 x 1	1349	4272
1.5-1300-385-OP	69.57	20.08	22.13	7.36	8.94	26.85	42.72	14.57	18.31	3.94	7.28	3.94	3.35	5.22	2 x 1	904	1892
1.5-1300-435-OP	69.57	21.06	23.94	7.36	8.94	26.85	42.72	14.57	20.28	3.94	7.28	3.94	3.35	6.20	2 x 1	970	2380
1.5-1300-485-OP	69.57	22.24	26.85	7.36	8.94	26.85	42.72	14.57	22.83	3.94	7.28	3.94	3.35	7.48	2 x 1	1080	2929
1.5-1300-535-OP	71.14	24.41	28.82	7.36	8.94	28.43	42.72	14.57	24.68	3.94	7.28	3.94	3.35	8.41	2 x 1	1235	3600
1.5-1300-585-OP	71.34	27.95	31.26	7.36	8.94	28.62	42.72	14.57	26.77	3.94	7.28	3.94	3.35	9.45	2 x 1	1367	4272
3-2000-385-OP	92.05	23.62	22.13	11.22	12.99	36.38	55.67	16.93	18.31	6.30	8.46	4.17	4.29	4.98	2 x 1	1217	2868
3-2000-435-OP	92.05	24.61	23.94	11.22	12.99	36.38	55.67	16.93	20.28	6.30	8.46	4.17	4.29	5.96	2 x 1	1294	3661
3-2000-485-OP	92.01	25.79	26.85	11.22	12.99	36.34	55.67	16.93	22.83	6.30	8.46	4.17	4.29	7.24	2 x 1	1415	4516
3-2000-535-OP	93.74	26.97	28.82	11.22	12.99	38.07	55.67	16.93	24.68	6.30	8.46	4.17	4.29	8.17	2 x 1	1570	5492
3-2000-585-OP	93.74	27.95	31.26	11.22	12.99	38.07	55.67	16.93	26.77	6.30	8.46	4.17	4.29	9.21	2 x 1	1713	6591
3-2050-385-OP	91.06	23.62	22.13	11.22	12.99	36.38	54.68	16.93	18.31	6.30	8.46	4.17	4.29	4.98	2 x 1	1257	2868
3-2050-435-OP	91.06	24.61	23.94	11.22	12.99	36.38	54.68	16.93	20.28	6.30	8.46	4.17	4.29	5.96	2 x 1	1334	3661
3-2050-485-OP	91.02	25.79	26.85	11.22	12.99	36.34	54.68	16.93	22.83	6.30	8.46	4.17	4.29	7.24	2 x 1	1455	4516
3-2050-535-OP	92.76	26.97	28.82	11.22	12.99	38.07	54.68	16.93	24.68	6.30	8.46	4.17	4.29	8.17	2 x 1	1609	5492
3-2050-585-OP	92.76	27.95	31.26	11.22	12.99	38.07	54.68	16.93	26.77	6.30	8.46	4.17	4.29	9.21	2 x 1	1775	6591
6-2500-485-OP	119.84	29.13	26.85	12.87	14.92	41.89	77.95	14.96	22.83	7.28	10.24	5.51	4.72	5.91	2 x 1	2068	5187
6-2500-535-OP	120.24	29.72	28.82	12.87	14.92	42.28	77.95	14.96	24.68	7.28	10.24	5.51	4.72	6.83	2 x 1	2222	6346
6-3800-535-OP	127.36	29.72	28.82	12.87	14.92	42.28	85.08	21.65	24.68	7.28	10.24	5.51	8.07	6.83	2 x 1	3005	6346
6-2500-585-OP	120.24	30.71	31.26	12.87	14.92	42.28	77.95	14.96	26.77	7.28	10.24	5.51	4.72	7.87	2 x 1	2366	7567
6-3800-585-OP	127.36	30.71	31.26	12.87	14.92	42.28	85.08	21.65	26.77	7.28	10.24	5.51	8.07	7.87	2 x 1	3148	7567
6-2500-685-OP	127.68	32.68	35.04	12.87	14.92	49.72	77.95	14.96	30.59	7.28	10.24	5.51	4.72	9.78	2 x 1	2818	10374

Table 85. Models 6-2500-735-OP to 14-8300-935-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
6-2500-735-OP	122.95	33.58	37.32	12.87	14.92	45.00	77.95	14.96	32.72	7.28	10.24	5.51	4.72	10.85	2 x 1	3060	11961
6-3800-735-OP	130.08	33.58	37.32	12.87	14.92	45.00	85.08	21.65	32.72	7.28	10.24	5.51	8.07	10.85	2 x 1	3843	11961
6-2500-635-OP	122.13	31.69	34.17	12.87	14.92	44.17	77.95	14.96	28.94	7.28	10.24	5.51	4.72	8.96	2 x 1	2575	8909
6-3800-635-OP	129.25	31.69	34.17	12.87	14.92	44.17	85.08	21.65	28.94	7.28	10.24	5.51	8.07	8.96	2 x 1	3358	8909
6-3900-535-OP	120.51	29.72	28.82	12.87	14.92	42.28	78.23	21.57	24.68	7.28	10.24	5.51	8.27	6.83	2 x 1	3203	6346
6-3900-585-OP	120.51	30.71	31.26	12.87	14.92	42.28	78.23	21.57	26.77	7.28	10.24	5.51	8.27	7.87	2 x 1	3347	7567
6-3900-635-OP	122.40	31.69	34.17	12.87	14.92	44.17	78.23	21.57	28.94	7.28	10.24	5.51	8.27	8.96	2 x 1	3556	8909
6-3900-685-OP	127.95	32.68	35.04	12.87	14.92	49.72	78.23	21.57	30.59	7.28	10.24	5.51	8.27	9.78	2 x 1	3799	10374
6-3900-735-OP	123.23	33.58	37.32	12.87	14.92	45.00	78.23	21.57	32.72	7.28	10.24	5.51	8.27	10.85	2 x 1	4041	11961
14-5100-685-OP	135.08	36.02	35.04	14.80	17.13	51.93	83.15	21.73	30.59	7.87	12.99	7.60	6.02	7.70	2 x 1	4136	11289
14-5400-685-OP	132.95	36.02	35.04	14.80	17.13	51.93	81.02	21.73	30.59	7.87	12.99	7.60	6.02	7.70	2 x 1	4323	11289
14-5100-735-OP	130.28	36.93	37.32	14.80	17.13	47.13	83.15	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4345	12998
14-5400-735-OP	128.15	36.93	37.32	14.80	17.13	47.13	81.02	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4533	12998
14-8300-735-OP	130.28	36.93	37.32	14.80	17.13	47.13	83.15	21.73	32.72	7.87	12.99	7.60	6.02	8.76	2 x 1	4742	12998
14-5100-785-OP	130.28	38.31	39.96	14.80	17.13	47.13	83.15	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4555	14829
14-5400-785-OP	128.15	38.31	39.96	14.80	17.13	47.13	81.02	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4742	14829
14-8300-785-OP	130.28	38.31	39.96	14.80	17.13	47.13	83.15	21.73	35.08	7.87	12.99	7.60	6.02	9.94	2 x 1	4952	14829
14-5100-835-OP	130.28	39.09	41.73	14.80	17.13	47.13	83.15	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	4720	16721
14-5400-835-OP	128.15	39.09	41.73	14.80	17.13	47.13	81.02	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	4907	16721
14-8300-835-OP	130.28	39.09	41.73	14.80	17.13	47.13	83.15	21.73	37.05	7.87	12.99	7.60	6.02	10.93	2 x 1	5117	16721

Figure 10. Overall Dimensions

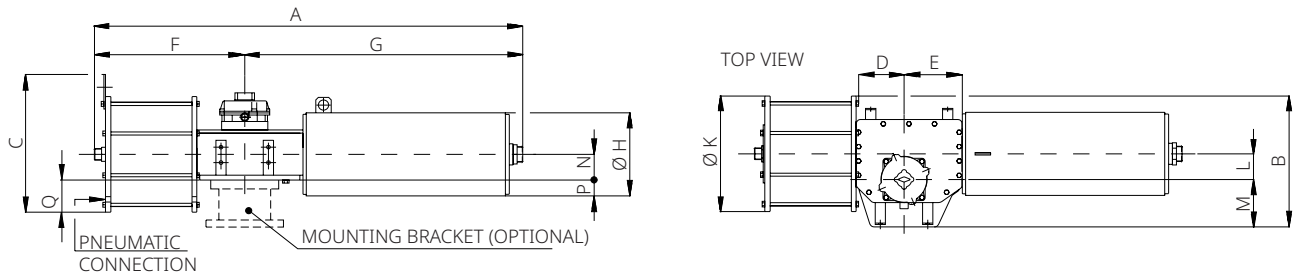


Table 86. Models 14-5100-935-OP to 18-9600-1200-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
14-5100-935-OP	133.39	41.65	46.46	14.80	17.13	50.24	83.15	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	5734	20931
14-5400-935-OP	131.26	41.65	46.46	14.80	17.13	50.24	81.02	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	5922	20931
14-8300-935-OP	133.39	41.65	46.46	14.80	17.13	50.24	83.15	21.73	41.57	7.87	12.99	7.60	6.02	13.19	4 x 1	6131	20931
14-5100-635-OP	129.53	35.04	34.17	14.80	17.13	46.38	83.15	21.73	28.94	7.87	12.99	7.60	6.02	6.87	2 x 1	3893	9703
14-5400-635-OP	127.40	35.04	34.17	14.80	17.13	46.38	81.02	21.73	28.94	7.87	12.99	7.60	6.02	6.87	2 x 1	4081	9703
14-5100-885-OP	133.39	40.55	44.68	14.80	17.13	50.24	83.15	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5470	18795
14-5400-885-OP	131.26	40.55	44.68	14.80	17.13	50.24	81.02	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5657	18795
14-8300-885-OP	133.39	40.55	44.68	14.80	17.13	50.24	83.15	21.73	39.57	7.87	12.99	7.60	6.02	12.19	2 x 1	5866	18795
18-10500-1000-OP	164.80	45.08	50.16	16.69	19.37	55.59	109.21	27.95	44.29	9.06	13.98	7.60	9.92	14.55	4 x 1	10267	27827
18-11000-1000-OP	160.16	45.08	50.16	16.69	19.37	55.59	104.57	27.95	44.29	9.06	13.98	7.60	9.92	14.55	4 x 1	10190	27827
18-9600-1000-OP	161.46	45.08	50.16	16.69	19.37	55.59	105.87	23.62	44.29	9.06	13.98	7.60	7.76	14.55	4 x 1	8195	27827
18-9800-1000-OP	161.46	45.08	50.16	16.69	19.37	55.59	105.87	23.62	44.29	9.06	13.98	7.60	7.76	14.55	4 x 1	8669	27827
18-9600-835-OP	159.84	41.26	40.87	16.69	19.37	53.98	105.87	23.62	36.46	9.06	13.98	7.60	7.76	10.63	2 x 1	6618	19406
18-9800-835-OP	159.84	41.26	40.87	16.69	19.37	53.98	105.87	23.62	36.46	9.06	13.98	7.60	7.76	10.63	2 x 1	7092	19406
18-10500-935-OP	164.57	43.82	46.46	16.69	19.37	55.35	109.21	27.95	41.57	9.06	13.98	7.60	9.92	13.19	4 x 1	9705	24287
18-11000-935-OP	159.92	43.82	46.46	16.69	19.37	55.35	104.57	27.95	41.57	9.06	13.98	7.60	9.92	13.19	4 x 1	9628	24287
18-9600-935-OP	161.22	43.82	46.46	16.69	19.37	55.35	105.87	23.62	41.57	9.06	13.98	7.60	7.76	13.19	4 x 1	7632	24287
18-9800-935-OP	161.22	43.82	46.46	16.69	19.37	55.35	105.87	23.62	41.57	9.06	13.98	7.60	7.76	13.19	4 x 1	8106	24287
18-10500-1100-OP	164.68	48.03	54.33	16.69	19.37	55.47	109.21	27.95	48.39	9.06	13.98	7.60	9.92	16.59	4 x 1	11061	33685
18-11000-1100-OP	160.04	48.03	54.33	16.69	19.37	55.47	104.57	27.95	48.39	9.06	13.98	7.60	9.92	16.59	4 x 1	10983	33685
18-9600-1100-OP	161.34	48.03	54.33	16.69	19.37	55.47	105.87	23.62	48.39	9.06	13.98	7.60	7.76	16.59	4 x 1	8988	33685
18-9800-1100-OP	161.34	48.03	54.33	16.69	19.37	55.47	105.87	23.62	48.39	9.06	13.98	7.60	7.76	16.59	4 x 1	9462	33685
18-10500-1200-OP	164.68	52.36	57.83	16.69	19.37	55.47	109.21	27.95	52.36	9.06	13.98	7.60	9.92	18.58	4 x 1	11856	40276
18-11000-1200-OP	160.04	52.36	57.83	16.69	19.37	55.47	104.57	27.95	52.36	9.06	13.98	7.60	9.92	18.58	4 x 1	11779	40276
18-9600-1200-OP	161.34	51.57	57.44	16.69	19.37	55.47	105.87	23.62	52.36	9.06	13.98	7.60	7.76	18.58	4 x 1	9784	40276

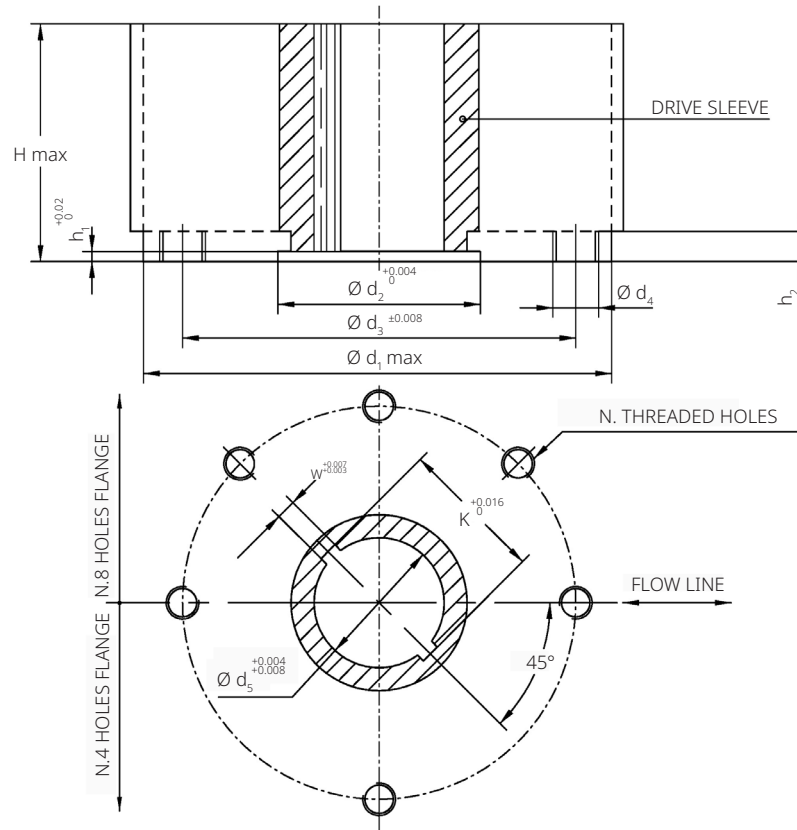
Table 87. Models 18-9800-1200-OP to 80-19700-1800-OP Dimensions (in.)

Model	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	NPT (in.)	Weight (lb)	Air Consumption (cu in.)
18-9800-1200-OP	161.34	51.57	57.83	16.69	19.37	55.47	105.87	23.62	52.36	9.06	13.98	7.60	7.76	18.58	4 x 1	10258	40276
32-12000-1100-OP	184.21	51.18	54.33	19.88	23.03	65.94	118.27	31.50	48.39	10.63	16.54	9.29	10.00	14.90	4 x 1	13098	39665
32-15000-1100-OP	184.21	51.18	54.33	19.88	23.03	65.94	118.27	31.50	48.39	10.63	16.54	9.29	10.00	14.90	4 x 1	13755	39665
32-9900-1100-OP	181.77	51.18	54.33	19.88	23.03	65.94	115.83	23.62	48.39	10.63	16.54	9.29	6.06	14.90	4 x 1	10845	39665
32-12000-1300-OP	185.79	56.30	62.20	19.88	23.03	67.64	118.15	38.58	56.30	10.63	16.54	9.29	10.00	18.86	4 x 1	15210	55532
32-15000-1300-OP	185.90	56.30	62.20	19.88	23.03	67.64	118.27	31.50	56.30	10.63	16.54	9.29	10.00	18.86	4 x 1	15867	55532
32-9900-1300-OP	183.46	56.30	62.20	19.88	23.03	67.64	115.83	23.62	56.30	10.63	16.54	9.29	6.06	18.86	4 x 1	12957	55532
50-15400-1100-OP	196.42	52.36	54.33	21.57	24.92	73.50	122.91	31.50	48.39	11.81	16.54	9.17	10.12	15.02	4 x 1	14528	43937
50-15600-1100-OP	196.42	52.36	54.33	21.57	24.92	73.50	122.91	31.50	48.39	11.81	16.54	9.17	10.16	15.02	4 x 1	14991	43937
50-17300-1100-OP	197.09	52.36	54.33	21.57	24.92	73.50	123.58	33.86	48.39	11.81	16.54	9.17	12.48	15.02	4 x 1	15796	43937
50-15400-1450-OP	195.51	62.99	71.06	21.57	24.92	72.60	122.91	31.50	62.99	11.81	16.54	9.17	10.12	22.32	4 x 1 1/2	17890	76646
50-15600-1450-OP	195.51	62.99	71.06	21.57	24.92	72.60	122.91	31.50	62.99	11.81	16.54	9.17	10.16	22.32	4 x 1 1/2	18353	76646
50-17300-1450-OP	196.18	62.99	71.06	21.57	24.92	72.60	123.58	33.86	62.99	11.81	16.54	9.17	12.48	22.32	4 x 1 1/2	19158	76646
50-18600-1450-OP	197.32	62.99	71.06	21.57	24.92	72.60	124.72	34.09	62.99	11.81	16.54	9.17	12.60	22.32	4 x 1 1/2	20591	76646
65-18400-1600-OP	204.41	68.90	78.46	24.53	27.60	76.73	127.68	34.09	68.90	11.22	17.91	11.89	9.88	22.56	4 x 1 1/2	24692	90315
65-19400-1600-OP	208.94	68.90	78.46	24.53	27.60	76.73	132.20	34.09	68.90	11.22	17.91	11.89	9.88	22.56	4 x 1 1/2	25507	90315
65-18400-1700-OP	205.55	74.80	85.04	24.53	27.60	77.87	127.68	34.09	74.80	11.22	17.91	11.89	9.88	25.51	4 x 1 1/2	27569	101910
65-19400-1700-OP	210.08	74.80	85.04	24.53	27.60	77.87	132.20	34.09	74.80	11.22	17.91	11.89	9.88	25.51	4 x 1 1/2	28384	101910
65-18400-1800-OP	205.59	77.17	86.46	24.53	27.60	77.91	127.68	34.09	77.17	11.22	17.91	11.89	9.88	26.69	4 x 1 1/2	28814	114420
65-19400-1800-OP	210.12	77.17	86.46	24.53	27.60	77.91	132.20	34.09	77.17	11.22	17.91	11.89	9.88	26.69	4 x 1 1/2	29630	114420
80-18700-1800-OP	223.58	77.17	86.46	26.10	29.96	89.09	134.49	34.09	77.17	13.78	17.72	11.89	9.88	26.69	4 x 1 1/2	29564	137303
80-19700-1800-OP	228.19	77.17	86.46	26.10	29.96	89.09	139.09	34.09	77.17	13.78	17.72	11.89	9.88	26.69	4 x 1 1/2	30644	137303

ALGA/ALGAS/ALGAS-QA Pneumatic Actuator

Mounting Dimensions

Figure 11. Actuator Models 0.3 to 6 (SCN6200U - Rev. 15/10/19)



TOP VIEW OF THE SCOTCH YOKE MECHANISM (ACTUATOR SHOWN IN CLOSED POSITION)

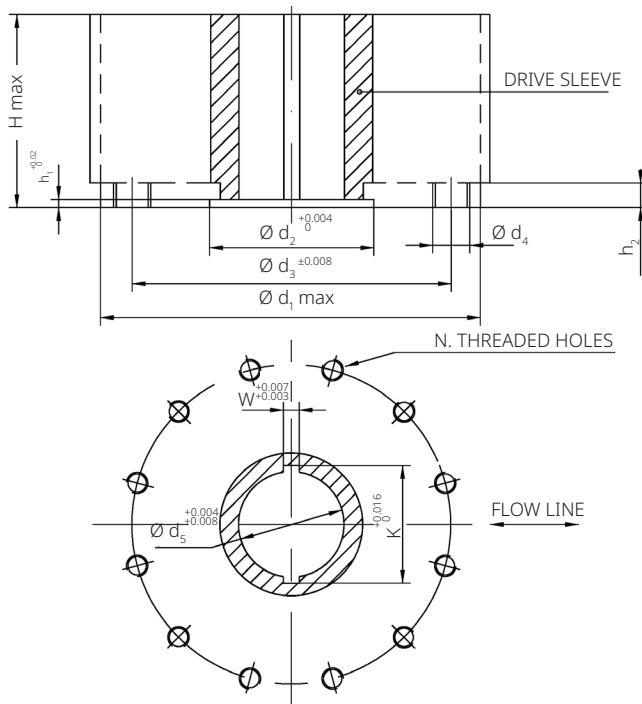
Table 88. Models 0.3 to 6 Coupling Dimensions (in.)

Actuator Model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4^*$	N	h_1	h_2	H max	$\varnothing d_5$	W	K
0.3	9.45	3.66	6.496	M20x2.5	4	0.20	0.67	5.00	2.76	0.27	2.98
0.9	12.20	4.41	10.00	M16x2	8	0.20	0.75	5.90	3.39	0.55	3.68
1.5	14.17	5.66	11.73	M20x2.5	8	0.24	0.75	7.50	4.41	0.71	4.68
3	16.93	7.67	14.01	M30x3.5	8	0.35	0.90	7.90	6.18	0.98	6.61
6	20.47	9.84	15.98	M36x4	8	0.55	1.14	10.20	7.87	1.10	8.39

NOTE:

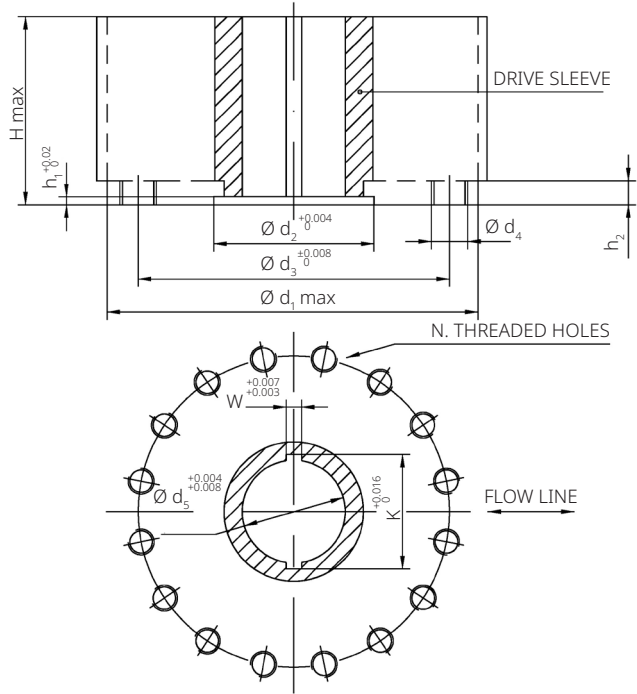
* Thread according to ISO R261.

Figure 12. Actuator Model 14 (SCN6201U - Rev. 15/10/19)



TOP VIEW OF THE SCOTCH YOKE MECHANISM (ACTUATOR SHOWN IN CLOSED POSITION)

Figure 13. Actuator Model 18 to 32 (SCN6201U - Rev. 15/10/19)



TOP VIEW OF THE SCOTCH YOKE MECHANISM (ACTUATOR SHOWN IN CLOSED POSITION)

Table 89. Model 14 Coupling Dimensions (in.)

Actuator Model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4^*$	N	h_1	h_2	H max	$\varnothing d_5$	W	K
14	22.80	9.84	19.02	M36x4	12.00	0.39	1.14	13.38	6.89	1.77	7.71

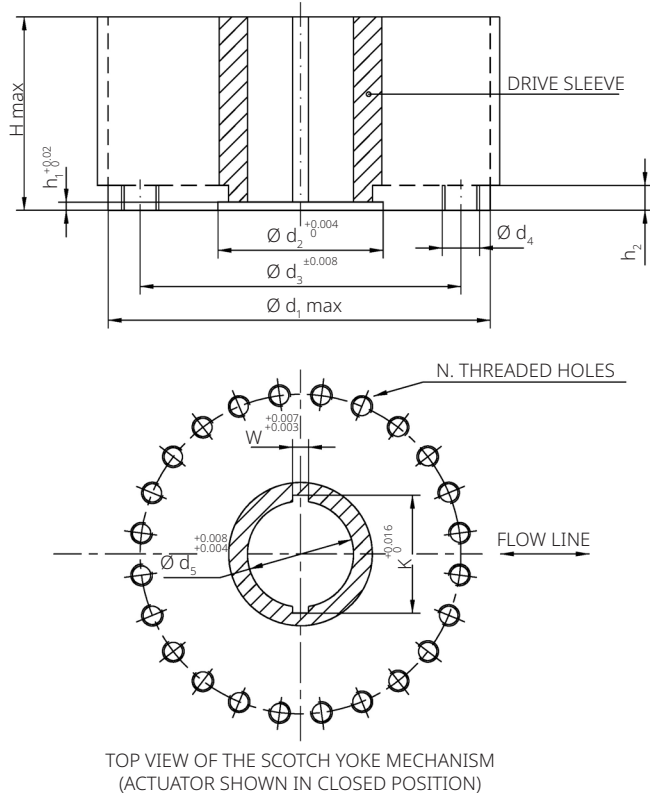
Table 90. Models 18 and 32 Coupling Dimensions (in.)

Actuator Model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4^*$	N	h_1	h_2	H max	$\varnothing d_5$	W	K
18	26.77	11.48	23.74	M36x4	16	0.47	1.26	13.78	7.87	1.77	8.69
32	30.71	12.20	23.74	M36x4	16	0.47	1.26	15.74	8.66	1.97	9.56

NOTE:

* Thread according to ISO R261.

**Figure 14. Actuator Model 50
(SCN62011U - Rev. 15/10/19)**



**Figure 15. Actuator Models 65 and 80
(SCN62013U - Rev. 15/10/19)**

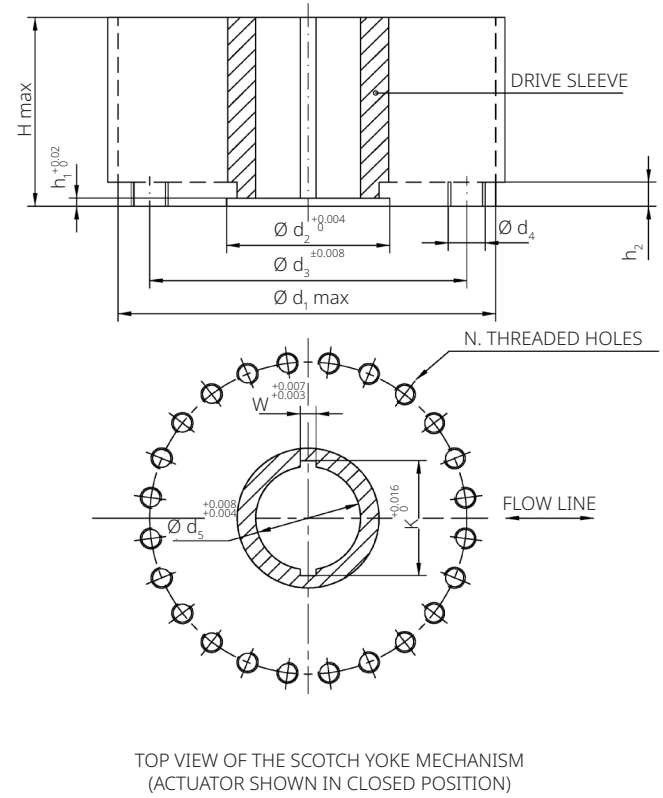


Table 91. Model 50 Coupling Dimensions (in.)

Actuator Model	Ø d ₁	Ø d ₂	Ø d ₃	Ø d ₄ *	N	h ₁	h ₂	H max	Ø d ₅	W	K
50	31.50	12.40	27.48	M36x4	24.00	0.39	1.26	16.93	9.45	2.20	10.425

Table 92. Models 65 and 80 Coupling Dimensions (in.)

Actuator Model	Ø d ₁	Ø d ₂	Ø d ₃	Ø d ₄ *	N	h ₁	h ₂	H max	Ø d ₅	W	K
65	35.83	14.56	32.01	M42x4.5	24.00	0.35	1.46	21.26	11.02	1.81	12.87
80	35.43	14.56	32.01	M24x4.5	24.00	0.35	1.46	21.26	11.02	1.81	12.87

NOTE:

* Thread according to ISO R261.

Figure 16. Actuator Model 100 (SCN66433U - Rev. 22/07/22)

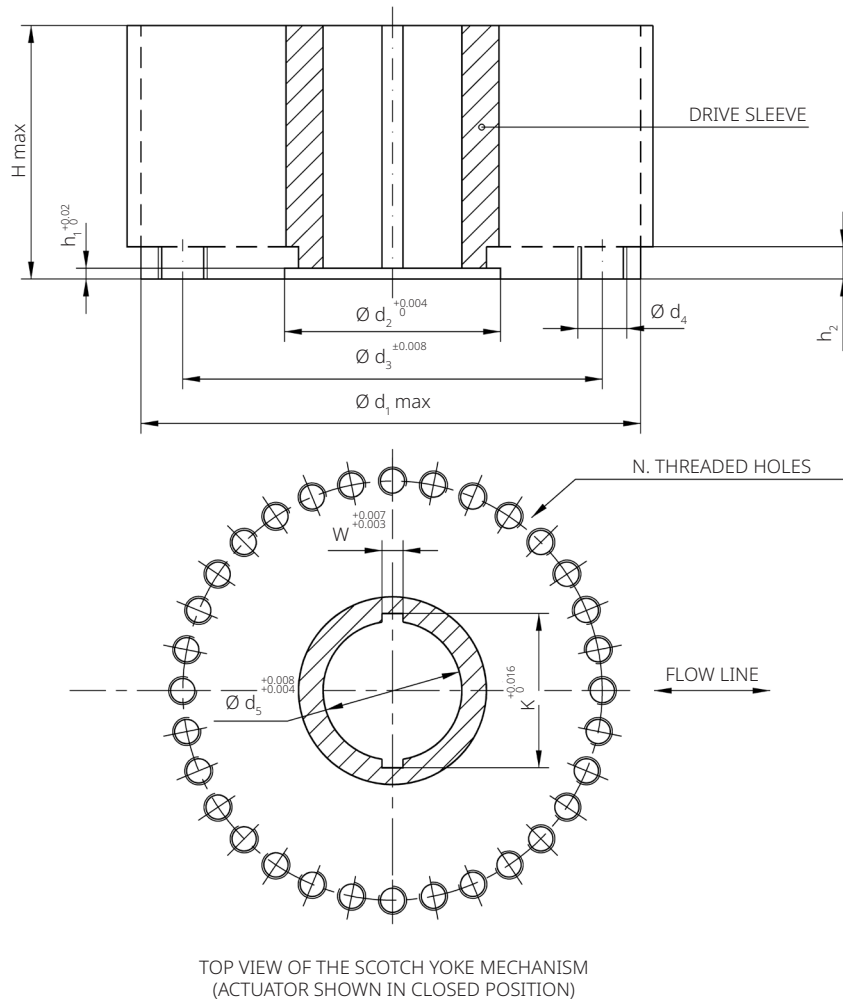


Table 93. Model 100 Coupling Dimensions (in.)

Actuator Model	$\varnothing d_1$	$\varnothing d_2$	$\varnothing d_3$	$\varnothing d_4^*$	N	h_1	h_2	H max	$\varnothing d_5$	W	K
100	47.24	17.72	41.02	1-1/2" - 6UNC-2B	32.00	0.31	2.24	23.62	11.81	2.76	12.91

Figure 17. Stem Acceptance

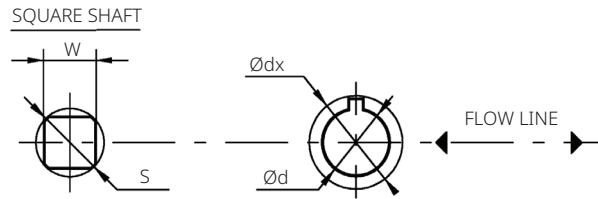


Table 94. Stem Acceptance Dimensions for Insert Bushes (in.)

Housing Size	Maximum Stem Diameter With Rectangular Key	Maximum Accepted Diameter Described By the Key	Maximum Accepted Square Stem (in.)		Maximum Accepted Square Stem Height (in.)**
	d (bxh) ^[2] (in.)	dx ^[3] (in.)	W	S*	
0.3	2.09 (0.63x0.39)	2.52	1.81	2.52	4.72
0.9	2.44 (0.71x0.43)	2.87	2.17	2.87	5.51
1.5	3.35 (0.87x0.55)	3.90	2.87	3.90	7.09
3	4.96 (1.26x0.71)	5.71	4.09	5.71	7.48
6	6.34 (1.57x0.87)	7.28	5.24	7.28	9.84
14	4.13 (1.10x0.63)	4.76	-	-	13.39
18	4.80 (1.26x0.71)	5.51	-	-	13.78
32	6.30 (1.57x0.87)	7.20	-	-	15.75
50	6.30 (1.57x0.87)	7.20	-	-	16.93
65	-	-	-	-	21.26
80	-	-	-	-	21.26
100	-	-	-	-	23.62

NOTES:

1. The listed maximum acceptance values are applicable for stems with keyways parallel or perpendicular to the flow line and for square stems with diagonal parallel with the flow line.
 2. Key according to UNI6604 or DIN 6885 sh.1 or ISO 773 or equivalent.
 3. For stem with key not correspondant to any specification, check the dimension dx.
- * S max: maximum external diameter in case of rounded edge.
 ** Without adapter flange.

Accessories Mounting Dimensions

Figure 18. Actuator Models 0.3 to 100

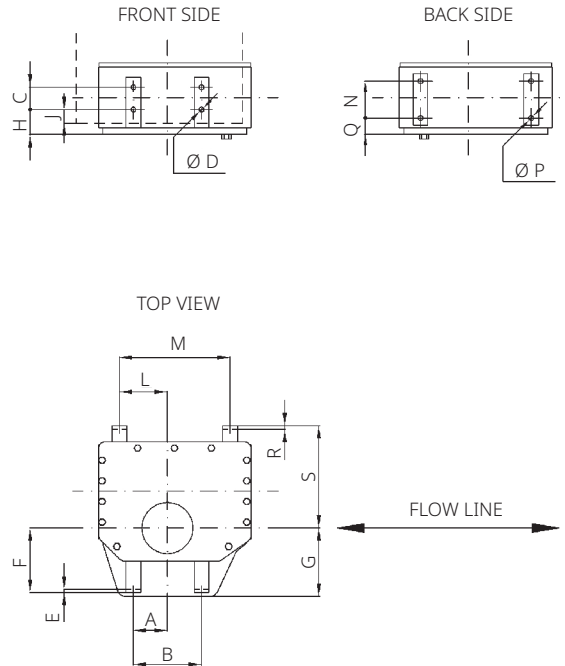


Table 95. Accessories Mounting Dimensions (in.)

Actuator Model	A	B	C	ØD	E	F	G	H	J	L	M	N	ØP	Q	R	S
0.3	3.0	6.0	2.3	0.5	0.2	4.4	4.6	1.4	0.5	3.6	7.8	2.3	0.5	1.4	0.2	7.8
0.9	3.6	7.2	2.3	0.5	0.2	6.0	6.6	2.4	1.4	3.3	7.8	2.3	0.5	1.9	0.2	9.5
1.5	3.6	7.2	2.3	0.5	0.2	6.8	7.2	2.4	1.4	5.1	11.7	3.9	0.5	1.8	0.2	11.1
3	4.6	9.2	3.3	0.9	0.3	7.9	8.4	2.2	1.0	9.0	19.5	3.9	0.5	2.1	0.2	14.5
6	5.3	17.7	4.5	0.9	0.3	9.7	10.1	2.3	0.9	8.7	19.5	3.9	0.5	3.4	0.3	18.7
14	12.3	24.6	7.8	1.1	0.4	8.9	12.9	3.8	2.1	8.6	19.5	6.6	1.1	3.9	0.3	21.2
18	12.3	24.6	7.8	1.1	0.4	9.2	13.3	2.8	1.2	11.9	26.5	8.4	1.1	3.1	0.4	23.4
32	12.3	24.6	7.8	1.1	0.4	15.0	15.4	2.8	1.2	16.1	34.7	8.4	1.1	5.8	0.4	25.7
50	15.1	33.5	9.8	1.2	0.5	14.5	15.1	3.0	1.4	18.4	40.2	8.4	1.1	6.4	0.4	41.8
65	15.4	33.9	9.8	1.2	0.6	15.0	18.0	4.2	2.0	18.7	40.5	8.5	1.1	10.6	0.6	32.7
80	19.5	39.0	9.8	1.2	0.6	17.1	17.6	4.2	2.0	19.5	42.9	8.4	1.1	10.5	0.6	35.1
100	19.7	43.3	9.8	1.2	0.8	22.2	23.6	5.0	2.0	19.7	43.3	8.5	1.1	13.1	0.6	50.2

Figure 19. Accessories Mounting Holes on Actuator Top (Cover and Yoke)

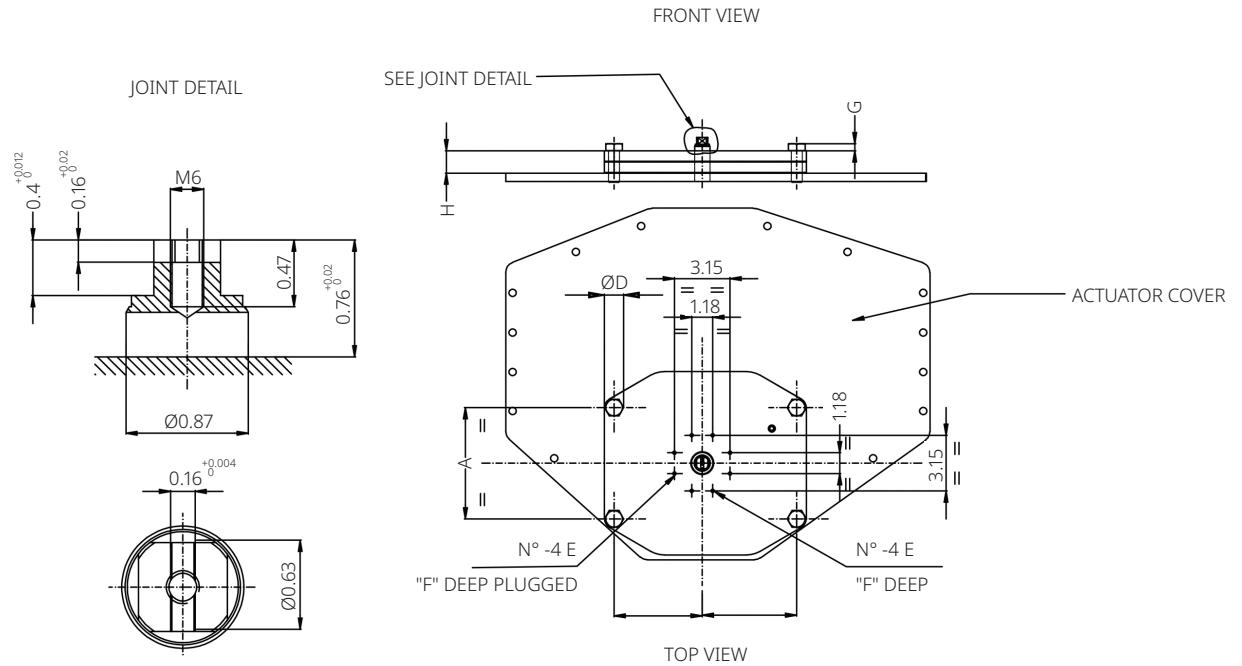


Table 96. Dimensions (in.)

Actuator Model	A	B	C	D	E	F	G	H
0.3	N/A	N/A	N/A	N/A	M5	0.35	N/A	1.26
0.9	N/A	N/A	N/A	N/A	M5	0.35	N/A	1.26
1.5	N/A	N/A	N/A	N/A	M5	0.35	N/A	1.26
3	6.30	5.00	5.35	1.18	M5	0.35	0.43	1.26
6	6.30	5.00	5.35	1.18	M5	0.35	0.43	1.26
14	6.30	5.00	5.35	1.18	M5	0.35	0.43	1.26
18	12.36	4.29	4.29	1.18	M5	0.35	0.43	1.26
32	12.36	4.29	4.29	1.18	M5	0.35	0.43	1.26
50	11.04	5.45	5.45	1.45	M5	0.35	0.51	1.26
65	16.14	7.08	7.08	1.73	M5	0.35	0.63	1.26
80	16.14	7.08	7.08	1.73	M5	0.35	0.63	1.26
100	18.11	8.07	8.07	1.73	M5	0.35	0.63	1.26

Selection Guide

Table 97. Scotch Yoke Double-Acting Pneumatic Actuators

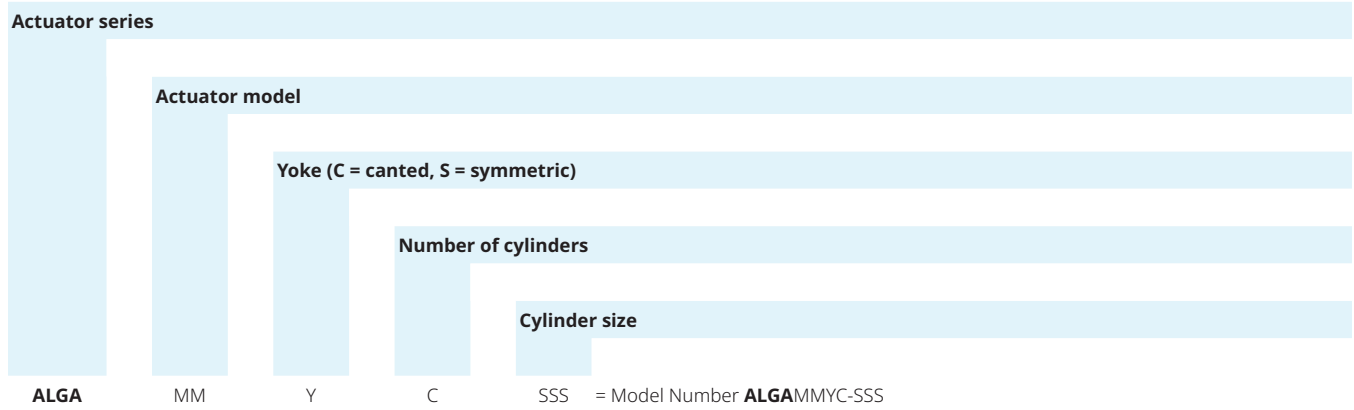
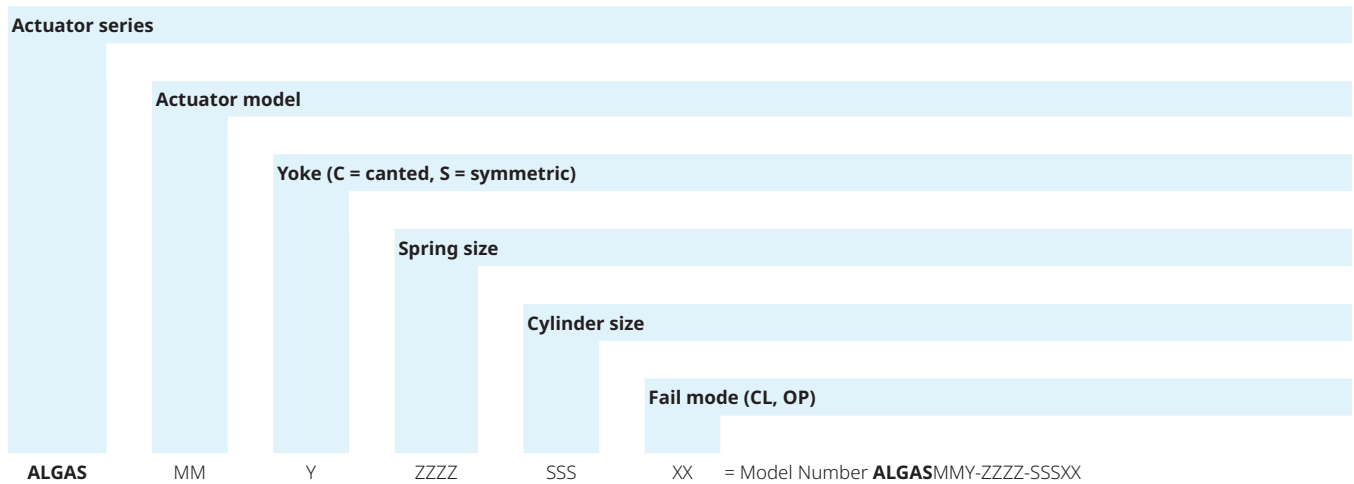


Table 98. Scotch Yoke Single-Acting Pneumatic Actuators



This page is intentionally left blank.

Biffi Italia s.r.l.
Strada Biffi 165
29017 Fiorenzuola d'Arda (PC)
Italy
T +39 0523 944 411

For complete list of sales and manufacturing sites,
please visit www.biffi.it or contact us at biffi_italia@biffi.it

VCTDS-02694-US (PC-15810-US) © 2025 Biffi. All rights reserved.

The contents of this publication are presented for information purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.

