

Morin Actuator Torque Ratings

Series A / B / C / S / HP

Spring Return and Double Acting Actuators

Canted And Symmetrical Yoke Designs

Output Torques to 1300000 lb. in.

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Series A, B and C

A Series -Cast Steel/ Steel Quarter-turn
 B Series -Ductile Iron/Stainless Steel Quarter-turn
 C Series -Ductile Iron/Steel Quarter-turn
 Spring Return and Double Acting Actuators
 B/C/S Low Pressure to 160 psig
 A Series to 175 psig.

Series S

Stainless Steel
 Spring Return and Double Acting Actuators
 B/C/S Low Pressure to 160 psig

Series HP

Ductile Iron/Stainless Steel Quarter-turn
 Direct Gas / Hydraulic Actuators
 Spring Return and Double Acting Actuators
 High Pressure to 1500 psig

NOTE: ALL PUBLISHED TORQUES ARE GUARANTEED MINIMUM VALUES

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Series A/ B/ C/ S: Models 003 - 7114

Double Acting
Symmetrical Yoke Design

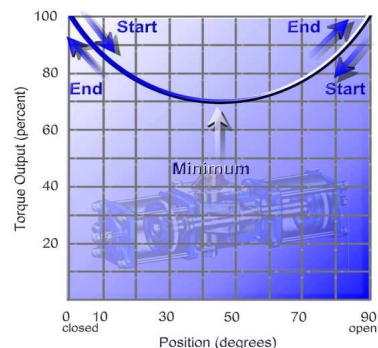
The chart to the right shows the torque curve of the Morin symmetrical yoke double acting actuator.

The start and end indications show how to interpret the following torque chart for correct sizing.

Proper selection of the actuator is critical to the successful operation of your automated package.

Air Start Clockwise = Air Start Counterclockwise

Air End Clockwise = Air End Counterclockwise



Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160
003U-D000 Series S only	Start/End	173	219	259	305	345	391	431	472	518	-	-	-	-
	Minimum	110	140	165	190	220	250	280	310	330	-	-	-	-
006U-D000 Series A/B/S only	Start/End	300	375	450	525	600	675	750	825	900	975	1050	1125	1200
	Minimum	235	290	350	405	460	520	575	640	690	750	810	870	940
012U-D000 Series A/S only	Start/End	690	863	1035	1208	1380	1553	1725	1898	2070	-	-	-	-
	Minimum	470	580	700	810	940	1050	1170	1275	1405	-	-	-	-
015U-D000 Series B only	Start/End	750	935	1125	1310	1500	1685	1875	-	-	-	-	-	-
	Minimum	590	735	885	1030	1180	1325	1475	-	-	-	-	-	-
023U-D000 Series A/B/S only	Start/End	1150	1450	1725	2010	2300	2585	2875	3160	3450	3740	4020	4300	4600
	Minimum	855	1070	1285	1500	1710	1925	2140	2350	2570	2780	3000	3210	3420
036U-D000 Series A/B/S only	Start/End	1980	2475	2970	3465	3960	4455	4950	5445	5940	6435	6930	7425	7920
	Minimum	1370	1710	2055	2400	2740	3080	3425	3770	4110	4450	4800	5140	5480
050U-D000 Series A/B/S only	Start/End	2500	3125	3750	4375	5000	5630	6250	6875	7500	8125	8750	9375	10000
	Minimum	1840	2300	2760	3220	3680	4140	4600	5060	5520	5980	6440	6900	7380
059U-D000 Series A/B/S	Start/End	2950	3688	4425	5163	5900	6638	7375	8113	8850	9587	-	-	-
	Minimum	2210	2763	3315	3868	4420	4973	5525	6078	6630	7183	-	-	-
072U-D000 Series A/B/S only	Start/End	3960	4950	5940	6930	7920	8910	9900	10780	-	Maximum Allowable Pressure 120 psig			
	Minimum	2740	3425	4110	4790	5480	6160	6850	7540	-	(Series A / Max Shell Pressure 175 psig)			
100U-D000 Series B/S only	Start/End	5000	6250	7500	8750	10000	-	-	-	-	Maximum Allowable Pressure 100 psig			
	Minimum	3680	4600	5520	6440	7360	-	-	-	-				
135U-D000	Start/End	6750	8440	10125	11815	13500	15190	16880	18560	20250	21940	23630	25310	27000
	Minimum	3375	4220	5063	5908	6750	7595	8440	9280	10125	10970	11815	12655	13500
210U-D000	Start/End	11550	14438	17325	20213	23100	25988	28875	31763	34650	37538	40425	43313	46200
	Minimum	5775	7219	8663	10107	11550	12994	14438	15882	17325	18769	20213	21657	23100
270U-D000	Start/End	14175	17719	21263	24806	28350	31894	35438	38981	42525	-	-	-	-
	Minimum	10500	13125	15750	18375	21000	23625	26250	28875	31500	-	-	-	-
345U-D000	Start/End	18113	22641	27169	31697	36225	40754	45281	-	-	Maximum Allowable Pressure 120 psig			
	Minimum	13415	16769	20123	23476	26830	30184	33538	-	-	(Series A / Max Shell Pressure 175 psig)			
370U-D000 Series B/C/S only	Start/End	19795	24744	29693	34641	37000	44539	49488	54436	59385	64334	69283	74231	79180
	Minimum	13080	16350	19620	22890	26160	29430	32700	35970	39240	42510	45780	49050	52320
420U-D000	Start/End	21000	26250	31500	36750	42000	-	-	-	-	-	-	-	-
	Minimum	16320	20400	24480	28560	32640	-	-	-	-	-	-	-	-
575U-D000 Series B/C/S only	Start/End	31913	39849	47869	55833	63825	71806	79781	87757	95738	103718	111694	119669	127650
	Minimum	22440	28050	33660	39270	44880	50490	56100	61710	67320	72930	78540	84150	89760
740U-D000 Series B/C/S only	Start/End	38850	48563	58275	67988	77700	87413	97125	106838	116550	Maximum Allowable Pressure			
	Minimum	26160	32700	39240	45780	52320	58860	65400	71940	78480	120 psig			
945U-D000 Series B/C/S only	Start/End	50558	63197	75836	88476	101115	113755	-	-	-	Maximum Allowable Pressure			
	Minimum	36390	45488	54585	63683	72780	81878	-	-	-	120 psig			
1150U-D000 Series B/C/S only	Start/End	60375	75469	90563	105656	120750	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Minimum	44880	56100	67320	78540	89760	-	-	-	-	(Series S / Max Shell Pressure 120 psig)			
Model Number	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
Output torques lb. in.														



Series A/ B/ C/ S: Models 003 - 7114

Double Acting
Symmetrical Yoke Design

Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160
1480U-D000 Series S only	Start/End	74000	92500	111000	129500	148000	166500	185000	203500	222000	Maximum Allowable Pressure			
	Minimum	46621	58276	69931	81586	93242	104897	116552	128207	139862	120 psig			
1485U-D000 Series B/C only	Start/End	84761	105952	127142	148332	169523	190713	211903	233094	254284	Maximum Allowable Pressure			
	Minimum	46619	58273	69928	81583	93237	104892	116547	128201	139856	120 psig			
1935U-D000 Series B/C only	Start/End	110573	138216	165859	193502	221145	248788	276431	304074	331718	Maximum Allowable Pressure			
	Minimum	60815	76019	91222	106426	121630	136833	152037	167241	182445	120 psig			
2380U-D000 Series S only	Start/End	119000	148750	178500	208250	238000	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Minimum	75506	94383	113259	132136	151013	-	-	-	-	(Series S / Max Shell Pressure 120 psig)			
2385U-D000 Series B/C only	Start/End	136384	170480	204576	238671	272767	306863	340959	375055	409151	Maximum Allowable Pressure			
	Minimum	75011	93764	112517	131269	150022	168775	187528	206280	225033	120 psig			
3071U-D000 Series C Only	Start/End	173642	217053	260463	303874	347284	390695	434106	477516	520927	Maximum Allowable Pressure			
	Minimum	95503	119379	143255	167131	191006	214882	238758	262634	286510	120 psig			
3731U-D000 Series C Only	Start/End	210937	263671	316406	369140	421874	474609	527343	580077	-	Maximum Allowable Pressure			
	Minimum	116015	145019	174023	203027	232031	261035	290039	319043	-	120 psig			
4534U-D000 Series C Only	Start/End	256289	320361	384434	448506	512578	576650	-	-	-	Maximum Allowable Pressure			
	Minimum	140959	176199	211438	246678	281918	317158	-	-	-	120 psig			
5336U-D000 Series C only	Start/End	301641	377051	452461	527872	603282	-	-	-	-	Maximum Allowable Pressure			
	Minimum	165903	207378	248854	290329	331805	-	-	-	-	120 psig			
7114U-D000 Series C only	Start/End	396795	495993	595192	694390	793589	892788	991986	1091185	1190384	Maximum Allowable Pressure			
	Minimum	218237	272796	327356	381915	436474	491033	545593	600152	654711	120 psig			
Model Number	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
		Supply Pressure psig												
		Output torques lb. in.												



Series A/ B/ C/ S : Models 023 - 7114

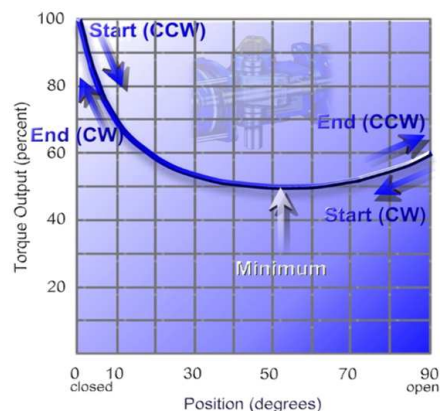
Double Acting
Canted Yoke Design

The chart to the right shows the torque curve of the Morin canted yoke design double acting actuator.

The indications of Start (CCW), End (CCW), Start (CW), End (CW), and Minimum show how to interpret the following torque chart for correct sizing. The canted yoke design generates higher torques at the 0 degree position and less torque at the 90 degree position when compared to the symmetrical yoke.

Proper selection of the actuator is critical to the successful operation of your automated package.

CCW = Counterclockwise (usually opens valve)
CW = Clockwise (usually closes valve)



Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160
023UC-D000 Series A/B/S Only	Start (CCW)	1553	1958	2329	2713	3105	3490	3881	4266	4658	5049	5427	5805	6210
	End (CCW)	920	1160	1380	1608	1840	2068	2300	2582	2760	2992	3216	3440	3680
	Start (CW)	943	1189	1415	1650	1886	2122	2358	2593	2829	3065	3301	3526	3772
	End (CW)	1495	1885	2243	2616	2990	3364	3738	4111	4485	4859	5233	5590	5980
	Minimum	856	1070	1284	1498	1712	1926	2140	2354	2568	2782	2996	3210	3424
036UC-D000 Series A/B/S Only	Start (CCW)	2673	3341	4010	4678	5346	6014	6683	7351	8019	8687	9356	10024	—
	End (CCW)	1584	1980	2376	2772	3168	3564	3960	4356	4752	5148	5544	5940	—
	Start (CW)	1624	2030	2435	2841	3247	3653	4059	4465	4871	5277	5683	6089	—
	End (CW)	2574	3218	3861	4505	5148	5792	6435	7079	7722	8366	9009	9653	—
	Minimum	1370	1713	2055	2398	2740	3083	3425	3768	4110	4453	4795	5138	—
050UC-D000 Series A/B/S Only	Start (CCW)	3375	4219	5063	5906	6750	7594	8438	9281	10125	—	—	—	—
	End (CCW)	2000	2500	3000	3500	4000	4500	5000	5500	6000	—	—	—	—
	Start (CW)	2050	2563	3075	3588	4100	4613	5125	5638	6150	—	—	—	—
	End (CW)	3250	4063	4875	5688	6500	7313	8125	8938	9750	—	—	—	—
	Minimum	1840	2300	2760	3220	3680	4140	4600	5060	5520	—	—	—	—
059UC-D000 Series A/B/S Only	Start (CCW)	3983	4978	5974	6969	7965	8961	9956	—	—	—	—	—	—
	End (CCW)	2360	2950	3540	4130	4720	5310	5900	—	—	—	—	—	—
	Start (CW)	2419	3024	3629	4233	4838	5443	6048	—	—	—	—	—	—
	End (CW)	3835	4794	5753	6711	7670	8629	9588	—	—	—	—	—	—
	Minimum	2210	2763	3315	3868	4420	4973	5525	—	—	—	—	—	—
072UC-D000 Series A/B/S Only	Start (CCW)	5346	6683	8019	9356	—	—	—	—	—	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	End (CCW)	3168	3960	4752	5544	—	—	—	—	—				
	Start (CW)	3247	4059	4871	5683	—	—	—	—	—				
	End (CW)	5148	6435	7722	9009	—	—	—	—	—				
	Minimum	2740	3425	4110	4790	—	—	—	—	—				
100UC-D000 Series B/S Only	Start (CCW)	6750	8438	10125	—	—	—	—	—	—	Maximum Allowable Pressure 100 psig			
	End (CCW)	4000	5000	6000	—	—	—	—	—	—				
	Start (CW)	4100	5125	6150	—	—	—	—	—	—				
	End (CW)	6500	8125	9750	—	—	—	—	—	—				
	Minimum	3680	4600	5520	—	—	—	—	—	—				
135UC-D000	Start (CCW)	9113	11394	13669	15950	18225	20507	22788	25056	27338	29619	31901	34169	36450
	End (CCW)	5400	6752	8100	9452	10800	12152	13504	14848	16200	17552	18904	20248	21600
	Start (CW)	5535	6921	8303	9688	11070	12456	13842	15219	16605	17991	19377	20754	22140
	End (CW)	8775	10972	13163	15360	17550	19747	21944	24128	26325	28522	30719	32903	35100
	Minimum	3375	4220	5063	5908	6750	7595	8440	9280	10125	10970	11815	12655	13500
210UC-D000	Start (CCW)	15593	19491	23389	27288	31185	35084	38981	42880	—	—	—	—	—
	End (CCW)	9240	11550	13860	16170	18480	20790	23100	25410	—	—	—	—	—
	Start (CW)	9471	11839	14207	16575	18942	21310	23678	26046	—	—	—	—	—
	End (CW)	15015	18769	22523	26277	30030	33784	37538	41292	—	—	—	—	—
	Minimum	5775	7219	8663	10107	11550	12994	14438	15882	—	—	—	—	—
270UC-D000	Start (CCW)	19136	23921	28705	33488	38273	43057	—	—	—	—	—	—	—
	End (CCW)	11340	14175	17010	19845	22680	25515	—	—	—	—	—	—	—
	Start (CW)	11624	14530	17436	20341	23247	26153	—	—	—	—	—	—	—
	End (CW)	18428	23035	27642	32248	36855	41462	—	—	—	—	—	—	—
	Minimum	10500	13125	15750	18375	21000	23625	—	—	—	—	—	—	—
Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160



Series A/ B/ C/ S : Models 023 - 7114

Double Acting
Canted Yoke Design

Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160
345UC-D000	Start (CCW)	24453	30565	36678	42791	—	—	—	—	—				
	End (CCW)	14490	18113	21735	25358	—	—	—	—	—	Maximum Allowable Pressure 120 psig			
	Start (CW)	14853	18566	22279	25992	—	—	—	—	—	(Series A / Max Shell Pressure 175 psig)			
	End (CW)	23547	29433	35320	41206	—	—	—	—	—				
	Minimum	13415	16769	20123	23476	—	—	—	—	—				
370UC-D000 Series B/C/S Only	Start (CCW)	26723	33404	40086	46768	53450	60132	66814	73496	80178	86860	93542	100224	106906
	End (CCW)	15836	19795	23754	27713	31672	35631	39590	43549	47508	51467	55426	59385	63344
	Start (CW)	16232	20290	24348	28406	32464	36522	40580	44638	48696	52754	56812	60870	64928
	End (CW)	25734	32167	38601	45035	51469	57903	64337	70771	77205	83639	90073	96507	102941
	Minimum	13080	16350	19620	22890	26160	29430	32700	35970	39240	42510	45780	49050	52320
420UC-D000	Start (CCW)	28350	35438	42525	—	—	—	—	—	—	—	—	—	—
	End (CCW)	16800	21000	25200	—	—	—	—	—	—	—	—	—	—
	Start (CW)	17220	21525	25830	—	—	—	—	—	—	—	—	—	—
	End (CW)	27300	34125	40950	—	—	—	—	—	—	—	—	—	—
	Minimum	16320	20400	24480	—	—	—	—	—	—	—	—	—	—
575UC-D000 Series B/C/S Only	Start (CCW)	43083	53796	64623	75375	86164	96938	107704	118472	—	—	—	—	—
	End (CCW)	25530	31879	38295	44666	51060	57445	63825	70206	—	—	—	—	—
	Start (CW)	26169	32676	39253	45783	52337	58881	65420	71961	—	—	—	—	—
	End (CW)	41487	51804	62230	72583	82973	93348	103715	114084	—	—	—	—	—
	Minimum	22440	28050	33660	39270	44880	50490	56100	61710	—	—	—	—	—
740UC-D000 Series B/C/S Only	Start (CCW)	52448	65560	78671	91784	104895	118008	—	—	—	—	—	—	—
	End (CCW)	31080	38850	46620	54390	62160	69930	—	—	—	Maximum Allowable Pressure 120 psig			
	Start (CW)	31857	39822	47786	55750	63714	71679	—	—	—	—	—	—	—
	End (CW)	50505	63132	75758	88384	101010	113637	—	—	—	—	—	—	—
	Minimum	26160	32700	39240	45780	52320	58860	—	—	—	—	—	—	—
945UC-D000 Series B/C/S Only	Start (CCW)	68253	85316	102379	—	—	—	—	—	—	—	—	—	—
	End (CCW)	40446	50558	60669	—	—	—	—	—	—	—	—	—	—
	Start (CW)	41458	51822	62186	—	—	—	—	—	—	—	—	—	—
	End (CW)	65725	82156	98587	—	—	—	—	—	—	—	—	—	—
	Minimum	36390	45488	54585	—	—	—	—	—	—	—	—	—	—
1150UC-D000 Series B/C/S Only	Start (CCW)	81506	101883	—	—	—	—	—	—	—	—	—	—	—
	End (CCW)	48300	60375	—	—	—	—	—	—	—	—	—	—	—
	Start (CW)	49508	61885	—	—	—	—	—	—	—	—	—	—	—
	End (CW)	78488	98110	—	—	—	—	—	—	—	—	—	—	—
	Minimum	44880	56100	—	—	—	—	—	—	—	—	—	—	—
1480UC-D000 Series S Only	Start (CCW)	99900	124875	149850	174825	199800	224775	—	—	—	—	—	—	—
	End (CCW)	59200	74000	88800	103600	118400	133200	—	—	—	—	—	—	—
	Start (CW)	60680	75850	91020	106190	121360	136530	—	—	—	—	—	—	—
	End (CW)	96200	120250	144300	168350	192400	216450	—	—	—	—	—	—	—
	Minimum	46621	58276	69931	81586	93242	104897	—	—	—	—	—	—	—
1485UC-D000 Series B/C Only	Start (CCW)	123781	154727	185672	216617	247563	278508	309453	340399	371344	—	—	—	—
	End (CCW)	66841	83552	100262	116972	133683	150393	167103	183814	200524	—	—	—	—
	Start (CW)	66841	83552	100262	116972	133683	150393	167103	183814	200524	—	—	—	—
	End (CW)	123781	154727	185672	216617	247563	278508	309453	340399	371344	—	—	—	—
	Minimum	42086	52607	63128	73650	84171	94693	105214	115736	126257	—	—	—	—
1935UC-D000 Series B/C Only	Start (CCW)	161475	201843	242212	282581	322950	363318	403687	444056	484424	—	—	—	—
	End (CCW)	87196	108994	130793	152592	174391	196190	217989	239788	261587	—	—	—	—
	Start (CW)	87196	108994	130793	152592	174391	196190	217989	239788	261587	—	—	—	—
	End (CW)	161475	201843	242212	282581	322950	363318	403687	444056	484424	—	—	—	—
	Minimum	54901	68627	82352	96077	109803	123528	137254	150979	164704	—	—	—	—
2380UC-D000 Series S Only	Start (CCW)	160650	200813	240975	—	—	—	—	—	—	—	—	—	—
	End (CCW)	95200	119000	142800	—	—	—	—	—	—	—	—	—	—
	Start (CW)	97580	121975	146370	—	—	—	—	—	—	—	—	—	—
	End (CW)	154700	193375	232050	—	—	—	—	—	—	—	—	—	—
	Minimum	75506	94383	113259	—	—	—	—	—	—	—	—	—	—
2385UC-D000 Series B/C Only	Start (CCW)	199168	248960	298752	348544	398336	448128	497920	547712	597505	—	—	—	—
	End (CCW)	107550	134437	161325	188212	215100	241987	268874	295762	322649	—	—	—	—
	Start (CW)	107550	134437	161325	188212	215100	241987	268874	295762	322649	—	—	—	—
	End (CW)	199168	248960	298752	348544	398336	448128	497920	547712	597505	—	—	—	—
	Minimum	67717	84646	101576	118505	135434	152364	169293	186222	203152	—	—	—	—
3071UC-D000 Series C Only	Start (CCW)	253579	316973	380368	443763	507157	570552	—	—	—	—	—	—	—
	End (CCW)	136931	171164	205397	239630	273862	308095	-	-	-	—	—	—	—
	Start (CW)	136931	171164	205397	239630	273862	308095	-	-	-	—	—	—	—
	End (CW)	253579	316973	380368	443763	507157	570552	-	-	-	—	—	—	—
	Minimum	86217	107771	129325	150879	172434	193988	-	-	-	—	—	—	—
3731UC-D000 Series C Only	Start (CCW)	308043	385053	462064	539074	616085	-	-	-	-	—	—	—	—
	End (CCW)	166341	207927	249512	291097	332683	-	-	-	-	—	—	—	—
	Start (CW)	166341	207927	249512	291097	332683	-	-	-	-	—	—	—	—
	End (CW)	308043	385053	462064	539074	616085	-	-	-	-	—	—	—	—
	Minimum	104734	130918	157102	183285	209469	-	-	-	-	—	—	—	—

Model Number	Torque at	Supply Pressure psig													
		40	50	60	70	80	90	100	110	120	130	140	150	160	
		Output torques lb. in.													



Series A/ B/ C/ S : Models 023 - 7114

Double Acting
Canted Yoke Design

Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160
4534UC-D000 Series C Only	Start (CCW)	374272	467840	561408	-	-	-	-	-	-	-	-	-	-
	End (CCW)	202105	252631	303158	-	-	-	-	-	-	-	-	-	-
	Start (CW)	202105	252631	303158	-	-	-	-	-	-	-	-	-	-
	End (CW)	374272	467840	561408	-	-	-	-	-	-	-	-	-	-
	Minimum	127253	159066	190879	-	-	-	-	-	-	-	-	-	-
5336UC-D000 Series C Only	Start (CCW)	440502	550627	-	-	-	-	-	-	-	-	-	-	-
	End (CCW)	237869	297336	-	-	-	-	-	-	-	-	-	-	-
	Start (CW)	237869	297336	-	-	-	-	-	-	-	-	-	-	-
	End (CW)	440502	550627	-	-	-	-	-	-	-	-	-	-	-
	Minimum	149771	187213	-	-	-	-	-	-	-	-	-	-	-
7114UC-D000 Series C Only	Start (CCW)	549880	687350	824820	962290	1099760	1237230	1374701	-	-	-	-	-	-
	End (CCW)	310970	388712	466455	544197	621940	699682	777425	-	-	-	-	-	-
	Start (CW)	310970	388712	466455	544197	621940	699682	777425	-	-	-	-	-	-
	End (CW)	549880	687350	824820	962290	1099760	1237230	1374701	-	-	-	-	-	-
	Minimum	225451	281814	338176	394539	450902	507265	563627	-	-	-	-	-	-
Model Number	Torque at	Output torques lb. in.												
		Supply Pressure psig												
		40	50	60	70	80	90	100	110	120	130	140	150	160



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

The chart to the right shows the torque curve of the Morin symmetrical yoke spring return fail clockwise (Closed). This section of the torque charts is to be used for selection of both fail closed and fail open actuators. The fail open curve is identical to the fail closed curve, but the air curve and spring curves are reversed. (For fail open, SST is 100% at the 0 degree position and AST is at 100% at the 90 degree position).

Note: Air torque curve shown is with air pressure equal to spring code, i.e. -S060 at 60 psig. Curve will vary for pressures used not equal to spring code.

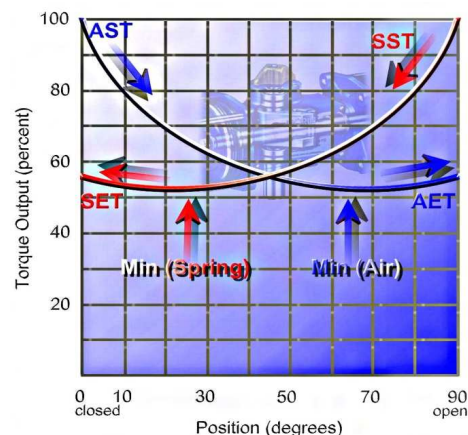
AST = Air Start Torque

SST = Spring Start Torque

AET = Air End Torque

SET = Spring End Torque

Mid = Torque at 45 degrees during the spring stroke or during the air stroke



Fail Closed (CW) Chart shown for clarity

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
003U-S040 Series S Only	Start	110	Start	110	153	196	239	282	326	369	412	455	498	-	-	-
	Mid	50	Mid	50	80	110	140	170	200	230	260	290	320	-	-	-
	End	55	End	55	98	141	184	227	271	314	357	400	443	-	-	-
003U-S050 Series S Only	Start	135	Start	-	135	178	221	264	307	351	394	437	480	-	-	-
	Mid	63	Mid	-	63	93	123	153	183	213	243	273	303	-	-	-
	End	70	End	-	70	113	156	199	242	286	329	372	415	-	-	-
003U-S060 Series S Only	Start	160	Start	-	-	160	203	246	289	332	376	419	462	505	-	-
	Mid	72	Mid	-	-	72	102	132	162	192	222	252	282	312	-	-
	End	80	End	-	-	80	123	166	209	252	296	339	382	425	-	-
003U-S070 Series S Only	Start	185	Start	-	-	142	185	228	271	314	357	401	444	487	-	-
	Mid	86	Mid	-	-	56	86	116	146	176	206	236	266	296	-	-
	End	95	End	-	-	52	95	138	181	224	267	311	354	397	-	-
003U-S080 Series S Only	Start	210	Start	-	-	-	167	210	253	296	339	382	426	469	-	-
	Mid	95	Mid	-	-	-	65	95	125	155	185	215	245	275	-	-
	End	105	End	-	-	-	62	105	148	191	234	277	321	364	-	-
006U-S040 Series A/B/S Only	Start	195	Start	195	270	345	420	495	570	645	720	795	870	945	1020	1095
	Mid	99	Mid	99	159	219	279	339	399	459	519	579	639	699	759	819
	End	110	End	110	185	260	335	410	485	560	635	710	785	860	935	1010
006U-S050 Series A/B/S Only	Start	245	Start	-	245	320	395	470	545	620	695	770	845	920	995	1070
	Mid	123	Mid	-	123	183	243	303	363	423	483	543	603	663	723	783
	End	137	End	-	137	212	287	362	437	512	587	662	737	812	887	962
006U-S060 Series A/B/S Only	Start	290	Start	-	-	290	365	440	515	590	665	740	815	890	965	1040
	Mid	151	Mid	-	-	151	211	271	331	391	451	511	571	631	691	751
	End	168	End	-	-	168	243	318	393	468	543	618	693	768	843	918
006U-S070 Series A/B/S Only	Start	340	Start	-	-	265	340	415	490	565	640	715	790	865	940	1015
	Mid	175	Mid	-	-	115	175	235	295	355	415	475	535	595	655	715
	End	194	End	-	-	119	194	269	344	419	494	569	644	719	794	869
006U-S080 Series A/B/S Only	Start	390	Start	-	-	-	315	390	465	540	615	690	765	840	915	990
	Mid	169	Mid	-	-	-	109	169	229	289	349	409	469	529	589	649
	End	221	End	-	-	-	146	221	296	371	446	521	596	671	746	821
012U-S040 Series A/S Only	Start	390	Start	390	563	735	908	1080	1253	1425	1598	1770	1943	-	-	-
	Mid	208	Mid	208	318	428	538	648	758	868	978	1088	1198	-	-	-
	End	231	End	231	404	576	749	921	1094	1266	1439	1611	1784	-	-	-
012U-S050 Series A/S Only	Start	485	Start	-	485	658	830	1003	1175	1348	1520	1693	1865	-	-	-
	Mid	263	Mid	-	263	373	483	593	703	813	923	1033	1143	-	-	-
	End	292	End	-	292	465	637	810	982	1155	1327	1500	1672	-	-	-
012U-S060 Series A/S Only	Start	585	Start	-	-	585	758	930	1103	1275	1448	1620	1793	1965	-	-
	Mid	312	Mid	-	-	312	422	532	642	752	862	972	1082	1192	-	-
	End	347	End	-	-	347	520	692	865	1037	1210	1382	1555	1727	-	-
012U-S070 Series A/S Only	Start	680	Start	-	-	508	680	853	1025	1198	1370	1543	1715	1888	-	-
	Mid	366	Mid	-	-	256	366	476	586	696	806	916	1026	1136	-	-
	End	407	End	-	-	235	407	580	752	925	1097	1270	1442	1615	-	-

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.												
			Supply Pressure psig												
			40	50	60	70	80	90	100	110	120	130	140	150	160
012U-S080 Series A/S Only	Start	780	-	-	-	608	780	953	1125	1298	1470	1643	1815	-	-
	Mid	416	-	-	-	306	416	526	636	746	856	966	1076	-	-
	End	462	-	-	-	290	462	635	807	980	1152	1325	1497	-	-
015U-S040 Series B Only	Start	485	485	673	860	1048	1235	1423	1610	1798	-	-	-	-	-
	Mid	234	234	384	534	684	834	984	1134	1284	-	-	-	-	-
	End	260	260	448	635	823	1010	1198	1385	1573	-	-	-	-	-
015U-S050 Series B Only	Start	605	-	605	793	980	1168	1355	1543	1730	-	-	-	-	-
	Mid	293	-	293	443	593	743	893	1043	1193	-	-	-	-	-
	End	325	-	325	513	700	888	1075	1263	1450	-	-	-	-	-
015U-S060 Series B Only	Start	730	-	-	730	918	1105	1293	1480	1668	1855	-	-	-	-
	Mid	351	-	-	351	501	651	801	951	1101	1251	-	-	-	-
	End	390	-	-	390	578	765	953	1140	1328	1515	-	-	-	-
015U-S070 Series B Only	Start	850	-	-	663	850	1038	1225	1413	1600	1788	-	-	-	-
	Mid	410	-	-	260	410	560	710	860	1010	1160	-	-	-	-
	End	455	-	-	268	455	643	830	1018	1205	1393	-	-	-	-
015U-S080 Series B Only	Start	970	-	-	-	783	970	1158	1345	1533	1720	-	-	-	-
	Mid	473	-	-	-	323	473	623	773	923	1073	-	-	-	-
	End	525	-	-	-	338	525	713	900	1088	1275	-	-	-	-
023U-S040 Series A/B/S Only	Start	750	750	1038	1325	1613	1900	2188	2475	2763	3050	3338	3625	3913	4200
	Mid	360	360	575	790	1005	1220	1435	1650	1865	2080	2295	2510	2725	2940
	End	400	400	688	975	1263	1550	1838	2125	2413	2700	2988	3275	3563	3850
023U-S050 Series A/B/S Only	Start	945	-	945	1233	1520	1808	2095	2383	2670	2958	3245	3533	3820	4108
	Mid	459	-	459	674	889	1104	1319	1534	1749	1964	2179	2394	2609	2824
	End	510	-	510	798	1085	1373	1660	1948	2235	2523	2810	3098	3385	3673
023U-S060 Series A/B/S Only	Start	1125	-	-	1125	1413	1700	1988	2275	2563	2850	3138	3425	3713	4000
	Mid	540	-	-	540	755	970	1185	1400	1615	1830	2045	2260	2475	2690
	End	600	-	-	600	888	1175	1463	1750	2038	2325	2613	2900	3188	3475
023U-S070 Series A/B/S Only	Start	1305	-	-	1018	1305	1593	1880	2168	2455	2743	3030	3318	3605	3893
	Mid	635	-	-	420	635	850	1065	1280	1495	1710	1925	2140	2355	2570
	End	705	-	-	418	705	993	1280	1568	1855	2143	2430	2718	3005	3293
023U-S080 Series A/B/S Only	Start	1500	-	-	-	1213	1500	1788	2075	2363	2650	2938	3225	3513	3800
	Mid	720	-	-	-	505	720	935	1150	1365	1580	1795	2010	2225	2440
	End	800	-	-	-	513	800	1088	1375	1663	1950	2238	2525	2813	3100
023U-S090 Series A/B/S Only	Start	1680	-	-	-	-	1393	1680	1968	2255	2543	2830	3118	3405	3693
	Mid	815	-	-	-	-	600	815	1030	1245	1460	1675	1890	2105	2320
	End	905	-	-	-	-	618	905	1193	1480	1768	2055	2343	2630	2918
023U-S100 Series A/B/S Only	Start	1870	-	-	-	-	-	1583	1870	2158	2445	2733	3020	3308	3595
	Mid	905	-	-	-	-	-	690	905	1120	1335	1550	1765	1980	2195
	End	1005	-	-	-	-	-	718	1005	1293	1580	1868	2155	2443	2730
023U-S120 Series A/B/S Only	Start	2250	-	-	-	-	-	-	-	1963	2250	2538	2825	3113	3400
	Mid	1080	-	-	-	-	-	-	-	865	1080	1295	1510	1725	1940
	End	1200	-	-	-	-	-	-	-	913	1200	1488	1775	2063	2350
023U-S140 Series A/B/S Only	Start	2615	-	-	-	-	-	-	-	-	-	2328	2615	2903	3190
	Mid	1269	-	-	-	-	-	-	-	-	-	1054	1269	1484	1699
	End	1410	-	-	-	-	-	-	-	-	-	1123	1410	1698	1985
023U-S160 Series A/B/S Only	Start	3000	-	-	-	-	-	-	-	-	-	-	-	2713	3000
	Mid	1440	-	-	-	-	-	-	-	-	-	-	-	1225	1440
	End	1600	-	-	-	-	-	-	-	-	-	-	-	1313	1600
036U-S040 Series A/B/S Only	Start	1170	1170	1665	2160	2655	3150	3645	4140	4635	5130	5625	6120	6615	7110
	Mid	567	567	907	1247	1587	1927	2267	2607	2947	3287	3627	3967	4307	4647
	End	630	630	1125	1620	2115	2610	3105	3600	4095	4590	5085	5580	6075	6570
036U-S050 Series A/B/S Only	Start	1460	-	1460	1955	2450	2945	3440	3935	4430	4925	5420	5915	6410	6905
	Mid	711	-	711	1051	1391	1731	2071	2411	2751	3091	3431	3771	4111	4451
	End	790	-	790	1285	1780	2275	2770	3265	3760	4255	4750	5245	5740	6235
036U-S060 Series A/B/S Only	Start	1755	-	-	1755	2250	2745	3240	3735	4230	4725	5220	5715	6210	6705
	Mid	855	-	-	855	1195	1535	1875	2215	2555	2895	3235	3575	3915	4255
	End	950	-	-	950	1445	1940	2435	2930	3425	3920	4415	4910	5405	5900
036U-S070 Series A/B/S Only	Start	2050	-	-	1555	2050	2545	3040	3535	4030	4525	5020	5515	6010	6505
	Mid	990	-	-	650	990	1330	1670	2010	2350	2690	3030	3370	3710	4050
	End	1100	-	-	605	1100	1595	2090	2585	3080	3575	4070	4565	5060	5555

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.																				
			Supply Pressure psig																				
			40	50	60	70	80	90	100	110	120	130	140	150	160								
036U-S080 Series A/B/S Only	Start	2340	Start	-	-	-	1845	2340	2835	3330	3825	4320	4815	5310	5805	6300							
	Mid	1134	Mid	-	-	-	794	1134	1474	1814	2154	2494	2834	3174	3514	3854							
	End	1260	End	-	-	-	765	1260	1755	2250	2745	3240	3735	4230	4725	5220							
036U-S090 Series A/B/S Only	Start	2630	Start	-	-	-	2135	2630	3125	3620	4115	4610	5105	5600	6095								
	Mid	1274	Mid	-	-	-	934	1274	1614	1954	2294	2634	2974	3314	3654								
	End	1415	End	-	-	-	920	1415	1910	2405	2900	3395	3890	4385	4880								
036U-S100 Series A/B/S Only	Start	2925	Start	-	-	-	-	2430	2925	3420	3915	4410	4905	5400	5895								
	Mid	1418	Mid	-	-	-	-	1078	1418	1758	2098	2438	2778	3118	3458								
	End	1575	End	-	-	-	-	1080	1575	2070	2565	3060	3555	4050	4545								
036U-S120 Series A/B/S Only	Start	3510	Start	-	-	-	-	-	-	3015	3510	4005	4500	4995	5490								
	Mid	1701	Mid	-	-	-	-	-	-	1361	1701	2041	2381	2721	3061								
	End	1890	End	-	-	-	-	-	-	1395	1890	2385	2880	3375	3870								
036U-S140 Series A/B/S Only	Start	4095	Start	-	-	-	-	-	-	-	-	3600	4095	4590	5085								
	Mid	1985	Mid	-	-	-	-	-	-	-	-	1645	1985	2325	2665								
	End	2205	End	-	-	-	-	-	-	-	-	1710	2205	2700	3195								
036U-S160 Series A/B/S Only	Start	4700	Start	-	-	-	-	-	-	-	-	-	-	4205	4700								
	Mid	2250	Mid	-	-	-	-	-	-	-	-	-	-	1910	2250								
	End	2500	End	-	-	-	-	-	-	-	-	-	-	2005	2500								
046U-S040 Series A/B/S Only	Start	1500	Start	1500	2075	2650	3225	3800	4375	4950	5525	6100	-	-	-	-							
	Mid	720	Mid	720	1150	1580	2010	2440	2870	3300	3730	4160	-	-	-	-							
	End	800	End	800	1375	1950	2525	3100	3675	4250	4825	5400	-	-	-	-							
046U-S050 Series A/B/S Only	Start	1870	Start	-	1870	2445	3020	3595	4170	4745	5320	5895	-	-	-	-							
	Mid	905	Mid	-	905	1335	1765	2195	2625	3055	3485	3915	-	-	-	-							
	End	1005	End	-	1005	1580	2155	2730	3305	3880	4455	5030	-	-	-	-							
046U-S060 Series A/B/S Only	Start	2250	Start	-	-	2250	2825	3400	3975	4550	5125	5700	-	-	-	-							
	Mid	1080	Mid	-	-	1080	1510	1940	2370	2800	3230	3660	-	-	-	-							
	End	1200	End	-	-	1200	1775	2350	2925	3500	4075	4650	-	-	-	-							
046U-S070 Series A/B/S Only	Start	2615	Start	-	-	2040	2615	3190	3765	4340	4915	5490	-	-	-	-							
	Mid	1269	Mid	-	-	839	1269	1699	2129	2559	2989	3419	-	-	-	-							
	End	1410	End	-	-	835	1410	1985	2560	3135	3710	4285	-	-	-	-							
046U-S080 Series A/B/S Only	Start	3000	Start	-	-	-	2425	3000	3575	4150	4725	5300	-	-	-	-							
	Mid	1440	Mid	-	-	-	1010	1440	1870	2300	2730	3160	-	-	-	-							
	End	1600	End	-	-	-	1025	1600	2175	2750	3325	3900	-	-	-	-							
058U-S040 Series A/B/S Only	Start	1870	Start	1870	2608	3345	4083	-	-	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	905	Mid	905	1458	2011	2564	-	-	-	-	-											
	End	1005	End	1005	1743	2480	3218	-	-	-	-	-											
058U-S050 Series A/B/S Only	Start	2250	Start	-	2250	2988	3725	4463	-	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	1080	Mid	-	1080	1633	2186	2739	-	-	-	-											
	End	1200	End	-	1200	1938	2675	3413	-	-	-	-											
058U-S060 Series A/B/S Only	Start	2615	Start	-	-	2615	3353	4090	4828	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	1269	Mid	-	-	1269	1822	2375	2928	-	-	-											
	End	1410	End	-	-	1410	2148	2885	3623	-	-	-											
058U-S070 Series A/B/S Only	Start	3000	Start	-	-	2263	3000	3738	4475	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	1440	Mid	-	-	887	1440	1993	2546	-	-	-											
	End	1600	End	-	-	863	1600	2338	3075	-	-	-											
059U-S080 Series A/B/S Only	Start	3510	Start	-	-	-	-	3510	4248	4985	5723	6460	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	1701	Mid	-	-	-	-	1701	2254	2807	3360	3913											
	End	1890	End	-	-	-	-	1890	2628	3365	4103	4840											
059U-S090 Series A/B/S Only	Start	4095	Start	-	-	-	-	-	4095	4833	5570	6308	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	1985	Mid	-	-	-	-	-	1985	2538	3091	3644											
	End	2205	End	-	-	-	-	-	2205	2943	3680	4418											
059U-S100 Series A/B/S Only	Start	4700	Start	-	-	-	-	-	-	4700	5438	6175	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)										
	Mid	2250	Mid	-	-	-	-	-	-	2250	2803	3356											
	End	2500	End	-	-	-	-	-	-	2500	3238	3975											
072U-S040 Series A/B/S Only	Start	2340	Start	2340	3330	4320	5310	6300	7290	8280	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)												
	Mid	1134	Mid	1134	1819	2504	3189	3874	4559	5244													
	End	1260	End	1260	2250	3240	4230	5220	6210	7200													
072U-S050 Series A/B/S Only	Start	2925	Start	-	2925	3915	4905	5895	6885	7875	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)												
	Mid	1418	Mid	-	1418	2103	2788	3473	4158	4843													
	End	1575	End	-	1575	2565	3555	4545	5535	6525													
Model Number	Spring torques lb. in.	Torque at	40	50	60	70	80	Supply Pressure psig								90	100	110	120	130	140	150	160
Air torques lb. in.																							

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
072U-S060 Series A/B/S Only	Start	3510	Start	-	-	3510	4500	5490	6480	7470	Maximum Allowable Pressure 100 psig					
	Mid	1701	Mid	-	-	1701	2386	3071	3756	4441	(Series A / Max Shell Pressure 175 psig)					
	End	1890	End	-	-	1890	2880	3870	4860	5850						
072U-S070 Series A/B/S Only	Start	4095	Start	-	-	3105	4095	5085	6075	7065	Maximum Allowable Pressure 100 psig					
	Mid	1985	Mid	-	-	1300	1985	2670	3355	4040	(Series A / Max Shell Pressure 175 psig)					
	End	2205	End	-	-	1215	2205	3195	4185	5175						
072U-S080 Series A/B/S Only	Start	4700	Start	-	-	-	3710	4700	5690	6680	Maximum Allowable Pressure 100 psig					
	Mid	2250	Mid	-	-	-	1565	2250	2935	3620	(Series A / Max Shell Pressure 175 psig)					
	End	2500	End	-	-	-	1510	2500	3490	4480						
100U-S040 Series B/S Only	Start	3250	Start	3250	4500	5750	7000	8250	9500	10750	Maximum Allowable Pressure 100 psig					
	Mid	1575	Mid	1575	2495	3415	4335	5255	6175	7095						
	End	1750	End	1750	3000	4250	5500	6750	8000	9250						
100U-S050 Series B/S Only	Start	4060	Start	-	4060	5310	6560	7810	9060	10310	Maximum Allowable Pressure 100 psig					
	Mid	1971	Mid	-	1971	2891	3811	4731	5651	6571						
	End	2190	End	-	2190	3440	4690	5940	7190	8440						
100U-S060 Series B/S Only	Start	4880	Start	-	-	4880	6130	7380	8630	9880	Maximum Allowable Pressure 100 psig					
	Mid	2358	Mid	-	-	2358	3278	4198	5118	6038						
	End	2620	End	-	-	2620	3870	5120	6370	7620						
100U-S070 Series B/S Only	Start	5690	Start	-	-	4440	5690	6940	8190	9440	Maximum Allowable Pressure 100 psig					
	Mid	2754	Mid	-	-	1834	2754	3674	4594	5514						
	End	3060	End	-	-	1810	3060	4310	5560	6810						
100U-S080 Series B/S Only	Start	6500	Start	-	-	-	5250	6500	7750	9000	Maximum Allowable Pressure 100 psig					
	Mid	3150	Mid	-	-	-	2230	3150	4070	4990						
	End	3500	End	-	-	-	2250	3500	4750	6000						
135U-S040	Start	4388	Start	4388	6078	7768	9458	11148	12838	14528	16218	17908	19598	21288	22978	24668
	Mid	1650	Mid	1650	2495	3340	4185	5030	5875	6720	7565	8410	9255	10100	10945	11790
	End	2133	End	2133	3823	5513	7203	8893	10583	12273	13963	15653	17343	19033	20723	22413
135U-S050	Start	5486	Start	-	5486	7176	8866	10556	12246	13936	15626	17316	19006	20696	22386	24076
	Mid	2064	Mid	-	2064	2909	3754	4599	5444	6289	7134	7979	8824	9669	10514	11359
	End	2667	End	-	2667	4357	6047	7737	9427	11117	12807	14497	16187	17877	19567	21257
135U-S060	Start	6581	Start	-	-	6581	8271	9961	11651	13341	15031	16721	18411	20101	21791	23481
	Mid	2476	Mid	-	-	2476	3321	4166	5011	5856	6701	7546	8391	9236	10081	10926
	End	3200	End	-	-	3200	4890	6580	8270	9960	11650	13340	15030	16720	18410	20100
135U-S070	Start	7680	Start	-	-	5990	7680	9370	11060	12750	14440	16130	17820	19510	21200	22890
	Mid	2889	Mid	-	-	2044	2889	3734	4579	5424	6269	7114	7959	8804	9649	10494
	End	3734	End	-	-	2044	3734	5424	7114	8804	10494	12184	13874	15564	17254	18944
135U-S080	Start	8775	Start	-	-	-	7085	8775	10465	12155	13845	15535	17225	18915	20605	22295
	Mid	3301	Mid	-	-	-	2456	3301	4146	4991	5836	6681	7526	8371	9216	10061
	End	4266	End	-	-	-	2576	4266	5956	7646	9336	11026	12716	14406	16096	17786
135U-S090	Start	9874	Start	-	-	-	-	8184	9874	11564	13254	14944	16634	18324	20014	21704
	Mid	3714	Mid	-	-	-	-	2869	3714	4559	5404	6249	7094	7939	8784	9629
	End	4800	End	-	-	-	-	3110	4800	6490	8180	9870	11560	13250	14940	16630
135U-S100	Start	10972	Start	-	-	-	-	-	9282	10972	12662	14352	16042	17732	19422	21112
	Mid	4127	Mid	-	-	-	-	-	3282	4127	4972	5817	6662	7507	8352	9197
	End	5334	End	-	-	-	-	-	3644	5334	7024	8714	10404	12094	13784	15474
135U-S120	Start	13163	Start	-	-	-	-	-	-	-	11473	13163	14853	16543	18233	19923
	Mid	4951	Mid	-	-	-	-	-	-	-	4106	4951	5796	6641	7486	8331
	End	6399	End	-	-	-	-	-	-	-	4709	6399	8089	9779	11469	13159
135U-S140	Start	15360	Start	-	-	-	-	-	-	-	-	-	13670	15360	17050	18740
	Mid	4951	Mid	-	-	-	-	-	-	-	-	-	4106	4951	5796	6641
	End	7467	End	-	-	-	-	-	-	-	-	-	5777	7467	9157	10847
135U-S160	Start	17550	Start	-	-	-	-	-	-	-	-	-	-	-	15860	17550
	Mid	6602	Mid	-	-	-	-	-	-	-	-	-	-	-	5757	6602
	End	8532	End	-	-	-	-	-	-	-	-	-	-	-	6842	8532
210U-S040	Start	6825	Start	6825	9713	12601	15489	18377	21265	24153	27041	29929	32817	35705	38593	41481
	Mid	3292	Mid	3292	4736	6180	7624	9068	10512	11956	13400	14844	16288	17732	19176	20620
	End	3465	End	3465	6353	9241	12129	15017	17905	20793	23681	26569	29457	32345	35233	38121
210U-S050	Start	8530	Start	-	8530	11418	14306	17194	20082	22970	25858	28746	31634	34522	37410	40298
	Mid	4115	Mid	-	4115	5559	7003	8447	9891	11335	12779	14223	15667	17111	18555	19999
	End	4331	End	-	4331	7219	10107	12995	15883	18771	21659	24547	27435	30323	33211	36099
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
210U-S060	Start	10240	Start	-	-	10240	13128	16016	18904	21792	24680	27568	30456	33344	36232	39120
	Mid	4938	Mid	-	-	4938	6382	7826	9270	10714	12158	13602	15046	16490	17934	19378
	End	5198	End	-	-	5198	8086	10974	13862	16750	19638	22526	25414	28302	31190	34078
210U-S070	Start	11940	Start	-	-	9052	11940	14828	17716	20604	23492	26380	29268	32156	35044	37932
	Mid	5761	Mid	-	-	4317	5761	7205	8649	10093	11537	12981	14425	15869	17313	18757
	End	6064	End	-	-	3176	6064	8952	11840	14728	17616	20504	23392	26280	29168	32056
210U-S080	Start	13650	Start	-	-	-	10762	13650	16538	19426	22314	25202	28090	30978	33866	36754
	Mid	6584	Mid	-	-	-	5140	6584	8028	9472	10916	12360	13804	15248	16692	18136
	End	6930	End	-	-	-	4042	6930	9818	12706	15594	18482	21370	24258	27146	30034
210U-S090	Start	15350	Start	-	-	-	-	12462	15350	18238	21126	24014	26902	29790	32678	35566
	Mid	7407	Mid	-	-	-	-	5963	7407	8851	10295	11739	13183	14627	16071	17515
	End	7796	End	-	-	-	-	4908	7796	10684	13572	16460	19348	22236	25124	28012
210U-S100	Start	17060	Start	-	-	-	-	-	14172	17060	19948	22836	25724	28612	31500	34388
	Mid	8229	Mid	-	-	-	-	-	6785	8229	9673	11117	12561	14005	15449	16893
	End	8663	End	-	-	-	-	-	5775	8663	11551	14439	17327	20215	23103	25991
210U-S120	Start	20475	Start	-	-	-	-	-	-	-	17587	20475	23363	26251	29139	32027
	Mid	9875	Mid	-	-	-	-	-	-	-	8431	9875	11319	12763	14207	15651
	End	10395	End	-	-	-	-	-	-	-	7507	10395	13283	16171	19059	21947
210U-S140	Start	23890	Start	-	-	-	-	-	-	-	-	-	21002	23890	26778	29666
	Mid	11521	Mid	-	-	-	-	-	-	-	-	-	10077	11521	12965	14409
	End	12128	End	-	-	-	-	-	-	-	-	-	9240	12128	15016	17904
210U-S160	Start	27300	Start	-	-	-	-	-	-	-	-	-	-	-	24412	27300
	Mid	13167	Mid	-	-	-	-	-	-	-	-	-	-	-	11723	13167
	End	13860	End	-	-	-	-	-	-	-	-	-	-	-	10972	13860
270U-S040	Start	8780	Start	8780	12324	15868	19411	22955	26499	30043	33587	37130	Maximum Allowable Pressure 160 psig			
	Mid	4683	Mid	4683	7308	9933	12558	15183	17808	20433	23058	25683	(Series S / Max Shell Pressure 120 psig)			
	End	5203	End	5203	8747	12291	15834	19378	22922	26466	30010	33553	(Series A / Max Shell Pressure 175 psig)			
270U-S050	Start	10970	Start	-	10970	14514	18058	21601	25145	28689	32233	35777	Maximum Allowable Pressure 160 psig			
	Mid	5846	Mid	-	5846	8471	11096	13721	16346	18971	21596	24221	(Series S / Max Shell Pressure 120 psig)			
	End	6496	End	-	6496	10040	13584	17127	20671	24215	27759	31303	(Series A / Max Shell Pressure 175 psig)			
270U-S060	Start	13160	Start	-	-	13160	16704	20248	23791	27335	30879	34423	Maximum Allowable Pressure 160 psig			
	Mid	7019	Mid	-	-	7019	9644	12269	14894	17519	20144	22769	(Series S / Max Shell Pressure 120 psig)			
	End	7799	End	-	-	7799	11343	14887	18430	21974	25518	29062	(Series A / Max Shell Pressure 175 psig)			
270U-S070	Start	15355	Start	-	-	11811	15355	18899	22443	25986	29530	33074	Maximum Allowable Pressure 160 psig			
	Mid	8187	Mid	-	-	5562	8187	10812	13437	16062	18687	21312	(Series S / Max Shell Pressure 120 psig)			
	End	9097	End	-	-	5553	9097	12641	16185	19728	23272	26816	(Series A / Max Shell Pressure 175 psig)			
270U-S080	Start	17550	Start	-	-	-	14006	17550	21094	24638	28181	31725	Maximum Allowable Pressure 160 psig			
	Mid	9356	Mid	-	-	-	6731	9356	11981	14606	17231	19856	(Series S / Max Shell Pressure 120 psig)			
	End	10395	End	-	-	-	6851	10395	13939	17483	21026	24570	(Series A / Max Shell Pressure 175 psig)			
270U-S090	Start	19746	Start	-	-	-	-	16202	19746	23290	26834	30377	Maximum Allowable Pressure 160 psig			
	Mid	10524	Mid	-	-	-	-	7899	10524	13149	15774	18399	(Series S / Max Shell Pressure 120 psig)			
	End	11693	End	-	-	-	-	8149	11693	15237	18781	22324	(Series A / Max Shell Pressure 175 psig)			
270U-S100	Start	21940	Start	-	-	-	-	-	18396	21940	25484	29028	Maximum Allowable Pressure 160 psig			
	Mid	11693	Mid	-	-	-	-	-	9068	11693	14318	16943	(Series S / Max Shell Pressure 120 psig)			
	End	12992	End	-	-	-	-	-	9448	12992	16536	20080	(Series A / Max Shell Pressure 175 psig)			
344U-S040	Start	10970	Start	10970	15498	20026	24554	29082	33611	38139	42667	47195	Maximum Allowable Pressure 120 psig			
	Mid	5686	Mid	5686	9040	12394	15748	19102	22456	25810	29164	32518	(Series A / Max Shell Pressure 175 psig)			
	End	6318	End	6318	10846	15374	19902	24430	28959	33487	38015	42543	(Series A / Max Shell Pressure 175 psig)			
344U-S050	Start	13160	Start	-	13160	17688	22216	26744	31272	35801	40329	44857	Maximum Allowable Pressure 120 psig			
	Mid	6827	Mid	-	6827	10181	13535	16889	20243	23597	26951	30305	(Series A / Max Shell Pressure 175 psig)			
	End	7586	End	-	7586	12114	16642	21170	25698	30227	34755	39283	(Series A / Max Shell Pressure 175 psig)			
344U-S060	Start	15355	Start	-	-	15355	19883	24411	28939	33467	37996	42524	Maximum Allowable Pressure 120 psig			
	Mid	7964	Mid	-	-	7964	11318	14672	18026	21380	24734	28088	(Series A / Max Shell Pressure 175 psig)			
	End	8849	End	-	-	8849	13377	17905	22433	26961	31490	36018	(Series A / Max Shell Pressure 175 psig)			
344U-S070	Start	19746	Start	-	-	15218	19746	24274	28802	33330	37858	42387	Maximum Allowable Pressure 120 psig			
	Mid	10236	Mid	-	-	5708	10236	13590	16944	20298	23652	27006	(Series A / Max Shell Pressure 175 psig)			
	End	11373	End	-	-	6845	11373	15901	20429	24957	29485	34014	(Series A / Max Shell Pressure 175 psig)			
344U-S080	Start	21940	Start	-	-	-	17412	21940	26468	30996	35524	40052	Maximum Allowable Pressure 120 psig			
	Mid	11373	Mid	-	-	-	6845	11373	14727	18081	21435	24789	(Series A / Max Shell Pressure 175 psig)			
	End	12637	End	-	-	-	8109	12637	17165	21693	26221	30749	(Series A / Max Shell Pressure 175 psig)			
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
			Air torques lb. in.													

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
345U-S090	Start	23890	Start	-	-	-	-	19362	23890	28418	32946	37474	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid	12384	Mid	-	-	-	-	7856	12384	15738	19092	22446				
	End	13760	End	-	-	-	-	9232	13760	18288	22816	27344				
345U-S100	Start	27300	Start	-	-	-	-	-	22772	27300	31828	36356	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid	14156	Mid	-	-	-	-	-	9628	14156	17510	20864				
	End	15729	End	-	-	-	-	-	11201	15729	20257	24785				
345U-S110	Start	30705	Start	-	-	-	-	-	-	26177	30705	35233	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid	15928	Mid	-	-	-	-	-	-	11400	15928	19282				
	End	17698	End	-	-	-	-	-	-	13170	17698	22226				
345U-S120	Start	30705	Start	-	-	-	-	-	-	26177	30705	35233	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid	15928	Mid	-	-	-	-	-	-	11400	15928	19282				
	End	17698	End	-	-	-	-	-	-	13170	17698	22226				
345U-S130	Start	34120	Start	-	-	-	-	-	-	-	-	29592	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid	17700	Mid	-	-	-	-	-	-	-	-	13172				
	End	19667	End	-	-	-	-	-	-	-	-	15139				
370U-S040 Series B/C/S Only	Start	12025	Start	12025	16974	21923	26871	31820	36769	41718	46667	51615	56564	61513	66462	71411
	Mid	6701	Mid	6701	9971	13241	16511	19781	23051	26321	29591	32861	36131	39401	42671	45941
	End	7446	End	7446	12395	17344	22292	27241	32190	37139	42088	47036	51985	56934	61883	66832
370U-S050 Series B/C/S Only	Start	15030	Start	-	15030	19979	24928	29876	34825	39774	44723	49672	54620	59569	64518	69467
	Mid	9403	Mid	-	9403	12673	15943	19213	22483	25753	29023	32293	35563	38833	42103	45373
	End	10448	End	-	10448	15397	20346	25294	30243	35192	40141	45090	50038	54987	59936	64885
370U-S060 Series B/C/S Only	Start	18040	Start	-	-	18040	22989	27938	32886	37835	42784	47733	52682	57630	62579	67528
	Mid	10050	Mid	-	-	10050	13320	16590	19860	23130	26400	29670	32940	36210	39480	42750
	End	11167	End	-	-	11167	16116	21065	26013	30962	35911	40860	45809	50757	55706	60655
370U-S070 Series B/C/S Only	Start	21045	Start	-	-	16096	21045	25994	30943	35891	40840	45789	50738	55687	60635	65584
	Mid	11727	Mid	-	-	8457	11727	14997	18267	21537	24807	28077	31347	34617	37887	41157
	End	13030	End	-	-	8081	13030	17979	22928	27876	32825	37774	42723	47672	52620	57569
370U-S080 Series B/C/S Only	Start	24050	Start	-	-	-	19101	24050	28999	33948	38896	43845	48794	53743	58692	63640
	Mid	13404	Mid	-	-	-	10134	13404	16674	19944	23214	26484	29754	33024	36294	39564
	End	14893	End	-	-	-	9944	14893	19842	24791	29739	34688	39637	44586	49535	54483
370U-S090 Series B/C/S Only	Start	27055	Start	-	-	-	-	22106	27055	32004	36953	41901	46850	51799	56748	61697
	Mid	15080	Mid	-	-	-	-	11810	15080	18350	21620	24890	28160	31430	34700	37970
	End	16756	End	-	-	-	-	11807	16756	21705	26654	31602	36551	41500	46449	51398
370U-S100 Series B/C/S Only	Start	30060	Start	-	-	-	-	-	25111	30060	35009	39958	44906	49855	54804	59753
	Mid	16757	Mid	-	-	-	-	-	13487	16757	20027	23297	26567	29837	33107	36377
	End	18619	End	-	-	-	-	-	13670	18619	23568	28517	33465	38414	43363	48312
370U-S120 Series B/C/S Only	Start	36075	Start	-	-	-	-	-	-	-	31126	36075	41024	45973	50921	55870
	Mid	20105	Mid	-	-	-	-	-	-	-	16835	20105	23375	26645	29915	33185
	End	22339	End	-	-	-	-	-	-	-	17390	22339	27288	32237	37185	42134
370U-S140 Series B/C/S Only	Start	42090	Start	-	-	-	-	-	-	-	-	-	37141	42090	47039	51988
	Mid	23453	Mid	-	-	-	-	-	-	-	-	-	20183	23453	26723	29993
	End	26059	End	-	-	-	-	-	-	-	-	-	21110	26059	31008	35957
370U-S160 Series B/C/S Only	Start	48100	Start	-	-	-	-	-	-	-	-	-	-	-	43151	48100
	Mid	26807	Mid	-	-	-	-	-	-	-	-	-	-	-	23537	26807
	End	29785	End	-	-	-	-	-	-	-	-	-	-	-	24836	29785
420U-S040	Start	13650	Start	13650	19425	25200	30975	36750	42525	-	-	-	-	-	-	-
	Mid	6946	Mid	6946	11026	15106	19186	23266	27346	-	-	-	-	-	-	-
	End	7718	End	7718	13493	19268	25043	30818	36593	-	-	-	-	-	-	-
420U-S050	Start	17060	Start	-	17060	22835	28610	34385	40160	-	-	-	-	-	-	-
	Mid	8685	Mid	-	8685	12765	16845	20925	25005	-	-	-	-	-	-	-
	End	9650	End	-	9650	15425	21200	26975	32750	-	-	-	-	-	-	-
420U-S060	Start	20475	Start	-	-	20475	26250	32025	37800	43575	-	-	-	-	-	-
	Mid	10418	Mid	-	-	10418	14498	18578	22658	26738	-	-	-	-	-	-
	End	11576	End	-	-	11576	17351	23126	28901	34676	-	-	-	-	-	-
420U-S070	Start	23890	Start	-	-	18115	23890	29665	35440	41215	-	-	-	-	-	-
	Mid	12153	Mid	-	-	8073	12153	16233	20313	24393	-	-	-	-	-	-
	End	13503	End	-	-	7728	13503	19278	25053	30828	-	-	-	-	-	-
420U-S080	Start	27300	Start	-	-	-	21525	27300	33075	38850	-	-	-	-	-	-
	Mid	13892	Mid	-	-	-	9812	13892	17972	22052	-	-	-	-	-	-
	End	15435	End	-	-	-	9660	15435	21210	26985	-	-	-	-	-	-
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
420U-S090	Start	30705	Start	-	-	-	-	24930	30705	36480	42255	-	-	-	-	-
	Mid	15630	Mid	-	-	-	-	11550	15630	19710	23790	-	-	-	-	-
	End	17367	End	-	-	-	-	11592	17367	23142	28917	-	-	-	-	-
420U-S100	Start	34120	Start	-	-	-	-	-	28345	34120	39895	-	-	-	-	-
	Mid	17369	Mid	-	-	-	-	-	13289	17369	21449	-	-	-	-	-
	End	19299	End	-	-	-	-	-	13524	19299	25074	-	-	-	-	-
575U-S040 Series B/C/S Only	Start	18690	Start	18690	26668	34646	42624	50602	58581	66559	74537	82515	90493	98471	106449	114427
	Mid	9507	Mid	9507	15117	20727	26337	31947	37557	43167	48777	54387	59997	65607	71217	76827
	End	10563	End	10563	18541	26519	34497	42475	50454	58432	66410	74388	82366	90344	98322	106300
575U-S050 Series B/C/S Only	Start	23360	Start	-	23360	31338	39316	47294	55272	63251	71229	79207	87185	95163	103141	111119
	Mid	11888	Mid	-	11888	17498	23108	28718	34328	39938	45548	51158	56768	62378	67988	73598
	End	13209	End	-	13209	21187	29165	37143	45121	53100	61078	69056	77034	85012	92990	100968
575U-S060 Series B/C/S Only	Start	28030	Start	-	-	28030	36008	43986	51964	59942	67921	75899	83877	91855	99833	107811
	Mid	14261	Mid	-	-	14261	19871	25481	31091	36701	42311	47921	53531	59141	64751	70361
	End	15845	End	-	-	15845	23823	31801	39779	47757	55736	63714	71692	79670	87648	95626
575U-S070 Series B/C/S Only	Start	32700	Start	-	-	24722	32700	40678	48656	56634	64612	72591	80569	88547	96525	104503
	Mid	16642	Mid	-	-	11032	16642	22252	27862	33472	39082	44692	50302	55912	61522	67132
	End	18491	End	-	-	10513	18491	26469	34447	42425	50403	58382	66360	74338	82316	90294
575U-S080 Series B/C/S Only	Start	37375	Start	-	-	-	29397	37375	45353	53331	61309	69287	77266	85244	93222	101200
	Mid	19018	Mid	-	-	-	13408	19018	24628	30238	35848	41458	47068	52678	58288	63898
	End	21131	End	-	-	-	13153	21131	29109	37087	45065	53043	61022	69000	76978	84956
575U-S090 Series B/C/S Only	Start	42045	Start	-	-	-	-	34067	42045	50023	58001	65979	73957	81936	89914	97892
	Mid	21390	Mid	-	-	-	-	15780	21390	27000	32610	38220	43830	49440	55050	60660
	End	23767	End	-	-	-	-	15789	23767	31745	39723	47701	55679	63658	71636	79614
575U-S100 Series B/C/S Only	Start	46720	Start	-	-	-	-	-	38742	46720	54698	62676	70654	78632	86611	94589
	Mid	23767	Mid	-	-	-	-	-	18157	23767	29377	34987	40597	46207	51817	57427
	End	26408	End	-	-	-	-	-	18430	26408	34386	42364	50342	58320	66299	74277
575U-S120 Series B/S Only	Start	56060	Start	-	-	-	-	-	-	-	48082	56060	64038	72016	79994	87972
	Mid	28530	Mid	-	-	-	-	-	-	-	22920	28530	34140	39750	45360	50970
	End	31700	End	-	-	-	-	-	-	-	23722	31700	39678	47656	55634	63612
575U-S140 Series B/C/S Only	Start	65400	Start	-	-	-	-	-	-	-	-	-	57422	65400	73378	81356
	Mid	33283	Mid	-	-	-	-	-	-	-	-	-	27673	33283	38893	44503
	End	36981	End	-	-	-	-	-	-	-	-	-	29003	36981	44959	52937
575U-S160 Series B/C/S Only	Start	74750	Start	-	-	-	-	-	-	-	-	-	-	-	66772	74750
	Mid	38037	Mid	-	-	-	-	-	-	-	-	-	-	-	32427	38037
	End	42263	End	-	-	-	-	-	-	-	-	-	-	-	34285	42263
740U-S040 Series B/C/S Only	Start	24050	Start	24050	33763	43475	53188	62900	72613	82325	92038	101750	Maximum Allowable Pressure 120 psig			
	Mid	13404	Mid	13404	19944	26484	33024	39564	46104	52644	59184	65724				
	End	14893	End	14893	24606	34318	44031	53743	63456	73168	82881	92593				
740U-S050 Series B/C/S Only	Start	30060	Start	-	30060	39773	49485	59198	68910	78623	88335	98048	Maximum Allowable Pressure 120 psig			
	Mid	16757	Mid	-	16757	23297	29837	36377	42917	49457	55997	62537				
	End	18619	End	-	18619	28332	38044	47757	57469	67182	76894	86607				
740U-S060 Series B/C/S Only	Start	36075	Start	-	-	36075	45788	55500	65213	74925	84638	94350	Maximum Allowable Pressure 120 psig			
	Mid	20105	Mid	-	-	20105	26645	33185	39725	46265	52805	59345				
	End	22339	End	-	-	22339	32052	41764	51477	61189	70902	80614				
740U-S070 Series B/C/S Only	Start	42090	Start	-	-	32378	42090	51803	61515	71228	80940	90653	Maximum Allowable Pressure 120 psig			
	Mid	23453	Mid	-	-	16913	23453	29993	36533	43073	49613	56153				
	End	26059	End	-	-	16347	26059	35772	45484	55197	64909	74622				
740U-S080 Series B/C/S Only	Start	48100	Start	-	-	-	38388	48100	57813	67525	77238	86950	Maximum Allowable Pressure 120 psig			
	Mid	26807	Mid	-	-	-	20267	26807	33347	39887	46427	52967				
	End	29785	End	-	-	-	20073	29785	39498	49210	58923	68635				
740U-S090 Series B/C/S Only	Start	54108	Start	-	-	-	-	44396	54108	63821	73533	83246	Maximum Allowable Pressure 120 psig			
	Mid	30163	Mid	-	-	-	-	23623	30163	36703	43243	49783				
	End	33514	End	-	-	-	-	23802	33514	43227	52939	62652				
740U-S100 Series B/C/S Only	Start	60120	Start	-	-	-	-	-	50408	60120	69833	79545	Maximum Allowable Pressure 120 psig			
	Mid	33514	Mid	-	-	-	-	-	26974	33514	40054	46594				
	End	37238	End	-	-	-	-	-	27526	37238	46951	56663				
944U-S040 Series B/C/S Only	Start	30060	Start	30060	42699	55339	67978	80618	93257	105896	118536	-	Maximum Allowable Pressure 120 psig			
	Mid	15591	Mid	15591	24689	33787	42885	51983	61081	70179	79277	-				
	End	17323	End	17323	29962	42602	55241	67881	80520	93159	105799	-				
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
			Air torques lb. in.													

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
944U-S050 Series B/C/S Only	Start	36075	Start	-	36075	48714	61354	73993	86633	99272	111911	-	Maximum Allowable Pressure			
	Mid	18707	Mid	-	18707	27805	36903	46001	55099	64197	73295	-	120 psig			
	End	20785	End	-	20785	33424	46064	58703	71343	83982	96621	-				
944U-S060 Series B/C/S Only	Start	42090	Start	-	-	42090	54729	67369	80008	92648	105287	117926	Maximum Allowable Pressure			
	Mid	21821	Mid	-	-	21821	30919	40017	49115	58213	67311	76409	120 psig			
	End	24246	End	-	-	24246	36885	49525	62164	74804	87443	100082				
944U-S070 Series B/C/S Only	Start	48100	Start	-	-	35461	48100	60739	73379	86018	98658	111297	Maximum Allowable Pressure			
	Mid	24942	Mid	-	-	15844	24942	34040	43138	52236	61334	70432	120 psig			
	End	27713	End	-	-	15074	27713	40352	52992	65631	78271	90910				
945U-S080 Series B/C/S Only	Start	56060	Start	-	-	-	43421	56060	68699	81339	93978	106618	Maximum Allowable Pressure			
	Mid	29073	Mid	-	-	-	19975	29073	38171	47269	56367	65465	120 psig			
	End	32303	End	-	-	-	19664	32303	44942	57582	70221	82861				
945U-S090 Series B/C/S Only	Start	65400	Start	-	-	-	-	52761	65400	78039	90679	103318	Maximum Allowable Pressure			
	Mid	33917	Mid	-	-	-	-	24819	33917	43015	52113	61211	120 psig			
	End	37685	End	-	-	-	-	25046	37685	50324	62964	75603				
945U-S100 Series B/C/S Only	Start	74750	Start	-	-	-	-	-	62111	74750	87389	100029	Maximum Allowable Pressure			
	Mid	38761	Mid	-	-	-	-	-	29663	38761	47859	56957	120 psig			
	End	43068	End	-	-	-	-	-	30429	43068	55707	68347				
945U-S110 Series B/C/S Only	Start	84090	Start	-	-	-	-	-	-	71451	84090	96729	Maximum Allowable Pressure			
	Mid	43605	Mid	-	-	-	-	-	-	34507	43605	52703	120 psig			
	End	48450	End	-	-	-	-	-	-	35811	48450	61089				
945U-S120 Series B/C/S Only	Start	84090	Start	-	-	-	-	-	-	71451	84090	96729	Maximum Allowable Pressure			
	Mid	43605	Mid	-	-	-	-	-	-	34507	43605	52703	120 psig			
	End	48450	End	-	-	-	-	-	-	35811	48450	61089				
945U-S130 Series B/C/S Only	Start	93440	Start	-	-	-	-	-	-	-	-	80801	Maximum Allowable Pressure			
	Mid	51130	Mid	-	-	-	-	-	-	-	-	38491	120 psig			
	End	53821	End	-	-	-	-	-	-	-	-	41182				
1150U-S040 Series B/C/S Only	Start	37375	Start	37375	53331	69287	85244	101200	117156	-	-	-	Maximum Allowable Pressure			
	Mid	19018	Mid	19018	30238	41458	52678	63898	75118	-	-	-	120 psig			
	End	21131	End	21131	37087	53043	69000	84956	100912	-	-	-				
1150U-S050 Series B/C/S Only	Start	46720	Start	-	46720	62676	78632	94589	110545	-	-	-	Maximum Allowable Pressure			
	Mid	23767	Mid	-	23767	34987	46207	57427	68647	-	-	-	120 psig			
	End	26408	End	-	26408	42364	58320	74277	90233	-	-	-				
1150U-S060 Series B/C/S Only	Start	56060	Start	-	-	56060	72016	87972	103929	119885	-	-	Maximum Allowable Pressure			
	Mid	28530	Mid	-	-	28530	39750	50970	62190	73410	-	-	120 psig			
	End	31700	End	-	-	31700	47656	63612	79569	95525	-	-				
1150U-S070 Series B/C/S Only	Start	65400	Start	-	-	49444	65400	81356	97312	113269	-	-	Maximum Allowable Pressure			
	Mid	33283	Mid	-	-	22063	33283	44503	55723	66943	-	-	120 psig			
	End	36981	End	-	-	21025	36981	52937	68893	84850	-	-				
1150U-S080 Series B/C/S Only	Start	74750	Start	-	-	-	58794	74750	90706	106662	-	-	Maximum Allowable Pressure			
	Mid	38037	Mid	-	-	-	26817	38037	49257	60477	-	-	120 psig			
	End	42263	End	-	-	-	26307	42263	58219	74175	-	-				
1150U-S090 Series B/C/S Only	Start	84090	Start	-	-	-	-	68134	84090	100046	116002	-	Maximum Allowable Pressure			
	Mid	42790	Mid	-	-	-	-	31570	42790	54010	65230	-	120 psig			
	End	47544	End	-	-	-	-	31588	47544	63500	79456	-				
1150U-S100 Series B/C/S Only	Start	93440	Start	-	-	-	-	-	77484	93440	109396	-	Maximum Allowable Pressure			
	Mid	47534	Mid	-	-	-	-	-	36314	47534	58754	-	120 psig			
	End	52815	End	-	-	-	-	-	36859	52815	68771	-				
1480U-S040 Series S Only	Start	48100	Start	48100	66600	85100	103600	122100	140600	159100	177600	196100	Maximum Allowable Pressure			
	Mid	23310	Mid	23310	34965	46620	58275	69930	81585	93240	104895	116550	120 psig			
	End	25900	End	25900	44400	62900	81400	99900	118400	136900	155400	173900				
1480U-S050 Series S Only	Start	60125	Start	-	60125	78625	97125	115625	134125	152625	171125	189625	Maximum Allowable Pressure			
	Mid	29138	Mid	-	29138	40793	52448	64103	75758	87413	99068	110723	120 psig			
	End	32375	End	-	32375	50875	69375	87875	106375	124875	143375	161875				
1480U-S060 Series S Only	Start	72150	Start	-	-	72150	90650	109150	127650	146150	164650	183150	Maximum Allowable Pressure			
	Mid	34965	Mid	-	-	34965	46620	58275	69930	81585	93240	104895	120 psig			
	End	38850	End	-	-	38850	57350	75850	94350	112850	131350	149850				
1480U-S070 Series S Only	Start	84175	Start	-	-	65675	84175	102675	121175	139675	158175	176675	Maximum Allowable Pressure			
	Mid	40712	Mid	-	-	29057	40712	52367	64022	75677	87332	98987	120 psig			
	End	45235	End	-	-	26735	45235	63735	82235	100735	119235	137735				
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
			Air torques lb. in.													

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.												
			Supply Pressure psig												
			40	50	60	70	80	90	100	110	120	130	140	150	160
1480U-S080 Series S Only	Start	96200	Start	-	-	-	77700	96200	114700	133200	151700	170200	Maximum Allowable Pressure 120 psig		
	Mid	46620	Mid	-	-	-	34965	46620	58275	69930	81585	93240			
	End	51800	End	-	-	-	33300	51800	70300	88800	107300	125800			
1480U-S090 Series S Only	Start	108225	Start	-	-	-	-	89725	108225	126725	145225	163725	Maximum Allowable Pressure 120 psig		
	Mid	52448	Mid	-	-	-	-	40793	52448	64103	75758	87413			
	End	58275	End	-	-	-	-	39775	58275	76775	95275	113775			
1480U-S100 Series S Only	Start	120250	Start	-	-	-	-	-	101750	120250	138750	157250	Maximum Allowable Pressure 120 psig		
	Mid	60705	Mid	-	-	-	-	-	49050	60705	72360	84015			
	End	67450	End	-	-	-	-	-	48950	67450	85950	104450			
1485U-S040 Series B/C Only	Start	54247	Start	54247	75437	96627	117817	139007	160197	181387	202577	223767	Maximum Allowable Pressure 120 psig		
	Mid	26700	Mid	26700	38355	50010	61665	73320	84975	96630	108285	119940			
	End	29666	End	29666	50856	72046	93236	114426	135616	156806	177996	199186			
1485U-S050 Series B/C Only	Start	67809	Start	46619	67809	88999	110189	131379	152569	173759	194949	216139	Maximum Allowable Pressure 120 psig		
	Mid	33375	Mid	12185	33375	45030	56685	68340	79995	91650	103305	114960			
	End	37083	End	15893	37083	58273	79463	100653	121843	143033	164223	185413			
1485U-S060 Series B/C Only	Start	81371	Start	-	60181	81371	102561	123751	144941	166131	187321	208511	Maximum Allowable Pressure 120 psig		
	Mid	40050	Mid	-	28395	40050	51705	63360	75015	86670	98325	109980			
	End	44500	End	-	23310	44500	56590	68680	80870	92960	105050	117160			
1485U-S070 Series B/C Only	Start	94933	Start	-	-	73743	94933	116123	137313	158503	179693	200883	Maximum Allowable Pressure 120 psig		
	Mid	46725	Mid	-	-	35070	46725	58380	70035	81690	93345	105000			
	End	51916	End	-	-	30726	51916	73106	94296	115486	136676	157866			
1485U-S080 Series B/C Only	Start	108494	Start	-	-	-	87304	108494	129684	150874	172064	193254	Maximum Allowable Pressure 120 psig		
	Mid	53400	Mid	-	-	-	41745	53400	65055	76710	88365	100020			
	End	59333	End	-	-	-	38143	59333	80523	101713	122903	144093			
1485U-S090 Series B/C Only	Start	122056	Start	-	-	-	-	100866	122056	143246	164436	185626	Maximum Allowable Pressure 120 psig		
	Mid	60075	Mid	-	-	-	-	48420	60075	71730	83385	95040			
	End	66750	End	-	-	-	-	45560	66750	87940	109130	130320			
1485U-S100 Series B/C Only	Start	135618	Start	-	-	-	-	-	114428	135618	156808	177998	Maximum Allowable Pressure 120 psig		
	Mid	66750	Mid	-	-	-	-	-	55095	66750	78405	90060			
	End	74166	End	-	-	-	-	-	52976	74166	95356	116546			
1934U-S040 Series B/C Only	Start	67809	Start	67809	95452	123095	150738	178381	206024	233667	261310	288953	Maximum Allowable Pressure 120 psig		
	Mid	33375	Mid	33375	48579	63783	78987	94191	109395	124599	139803	155007			
	End	37083	End	37083	64726	92369	120012	147655	175298	202941	230584	258227			
1934U-S050 Series B/C Only	Start	81371	Start	53728	81371	109014	136657	164300	191943	219586	247229	274872	Maximum Allowable Pressure 120 psig		
	Mid	40050	Mid	24846	40050	55254	70458	85662	100866	116070	131274	146478			
	End	44500	End	16857	44500	72143	99786	127429	155072	182715	210358	238001			
1934U-S060 Series B/C Only	Start	94933	Start	-	67290	94933	122576	150219	177862	205505	233148	260791	Maximum Allowable Pressure 120 psig		
	Mid	46725	Mid	-	31521	46725	61929	77133	92337	107541	122745	137949			
	End	51916	End	-	24273	51916	79559	107202	134845	162488	190131	217774			
1934U-S070 Series B/C Only	Start	122056	Start	-	-	94413	122056	149699	177342	204985	232628	260271	Maximum Allowable Pressure 120 psig		
	Mid	60075	Mid	-	-	44871	60075	75279	90483	105687	120891	136095			
	End	66750	End	-	-	39107	66750	94393	122036	149679	177322	204965			
1935U-S080 Series B/C Only	Start	132974	Start	-	-	-	105331	132974	160617	188260	215903	243546	Maximum Allowable Pressure 120 psig		
	Mid	64441	Mid	-	-	-	49237	64441	79645	94849	110053	125257			
	End	71601	End	-	-	-	43958	71601	99244	126887	154530	182173			
1935U-S090 Series B/C Only	Start	155136	Start	-	-	-	-	127493	155136	182779	210422	238065	Maximum Allowable Pressure 120 psig		
	Mid	75182	Mid	-	-	-	-	59978	75182	90386	105590	120794			
	End	83535	End	-	-	-	-	55892	83535	111178	138821	166464			
1935U-S100 Series B/C Only	Start	177299	Start	-	-	-	-	-	149656	177299	204942	232585	Maximum Allowable Pressure 120 psig		
	Mid	85922	Mid	-	-	-	-	-	70718	85922	101126	116330			
	End	95469	End	-	-	-	-	-	67826	95469	123112	150755			
1935U-S110 Series B/C Only	Start	199461	Start	-	-	-	-	-	-	171818	199461	227104	Maximum Allowable Pressure 120 psig		
	Mid	96662	Mid	-	-	-	-	-	-	81458	96662	111866			
	End	107402	End	-	-	-	-	-	-	79759	107402	135045			
1935U-S120 Series B/C Only	Start	199461	Start	-	-	-	-	-	-	-	171818	199461	Maximum Allowable Pressure 120 psig		
	Mid	96662	Mid	-	-	-	-	-	-	-	81458	96662			
	End	107402	End	-	-	-	-	-	-	-	79759	107402			
2380U-S040 Series S Only	Start	77350	Start	77350	107100	136850	166600	196350	226100	-	-	-	Maximum Allowable Pressure 120 psig		
	Mid	37485	Mid	37485	56362	75239	94116	112993	131870	-	-	-			
	End	41650	End	41650	71400	101150	130900	160650	190400	-	-	-			
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig												
			40	50	60	70	80	90	100	110	120	130	140	150	160
Air torques lb. in.															

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.												
			Supply Pressure psig												
			40	50	60	70	80	90	100	110	120	130	140	150	160
2380U-S050 Series S Only	Start	96688	Start	-	96688	126438	156188	185938	215688	-	-	-	Maximum Allowable Pressure		
	Mid	46857	Mid	-	46857	65734	84611	103488	122365	-	-	-	120 psig		
	End	52063	End	-	52063	81813	111563	141313	171063	-	-	-			
2380U-S060 Series S Only	Start	116025	Start	-	-	116025	145775	175525	205275	235025	-	-	Maximum Allowable Pressure		
	Mid	56228	Mid	-	-	56228	75105	93982	112859	131736	-	-	120 psig		
	End	62475	End	-	-	62475	92225	121975	151725	181475	-	-			
2380U-S070 Series S Only	Start	135363	Start	-	-	105613	135363	165113	194863	224613	-	-	Maximum Allowable Pressure		
	Mid	65599	Mid	-	-	46722	65599	84476	103353	122230	-	-	120 psig		
	End	72888	End	-	-	43138	72888	102638	132388	162138	-	-			
2380U-S080 Series S Only	Start	154700	Start	-	-	-	124950	154700	184450	214200	-	-	Maximum Allowable Pressure		
	Mid	74970	Mid	-	-	-	56093	74970	93847	112724	-	-	120 psig		
	End	83300	End	-	-	-	53550	83300	113050	142800	-	-			
2380U-S090 Series S Only	Start	174038	Start	-	-	-	-	144288	174038	203788	233538	-	Maximum Allowable Pressure		
	Mid	84342	Mid	-	-	-	-	65465	84342	103219	122096	-	120 psig		
	End	93713	End	-	-	-	-	63963	93713	123463	153213	-			
2380U-S100 Series S Only	Start	193375	Start	-	-	-	-	-	163625	193375	223125	-	Maximum Allowable Pressure		
	Mid	93713	Mid	-	-	-	-	-	74836	93713	112590	-	120 psig		
	End	104125	End	-	-	-	-	-	74375	104125	133875	-			
2385U-S040 Series B/C Only	Start	88649	Start	88649	122745	156841	190937	225033	259129	293225	327321	361417	Maximum Allowable Pressure		
	Mid	42961	Mid	42961	61714	80467	99220	117973	136726	155479	174232	192985	120 psig		
	End	47734	End	47734	81830	115926	150022	184118	218214	252310	286406	320502			
2385U-S050 Series B/C Only	Start	110812	Start	76717	110812	144907	179002	213097	247192	281287	315382	349477	Maximum Allowable Pressure		
	Mid	53701	Mid	34948	53701	72454	91207	109960	128713	147466	166219	184972	120 psig		
	End	59668	End	25573	59668	93763	127858	161953	196048	230143	264238	298333			
2385U-S060 Series B/C Only	Start	132974	Start	-	98878	132974	167070	201166	235262	269358	303454	337550	Maximum Allowable Pressure		
	Mid	64441	Mid	-	45688	64441	83194	101947	120700	139453	158206	176959	120 psig		
	End	71601	End	-	37505	71601	105697	139793	173889	207985	242081	276177			
2385U-S070 Series B/C Only	Start	155136	Start	-	-	121041	155136	189231	223326	257421	291516	325611	Maximum Allowable Pressure		
	Mid	75182	Mid	-	-	56429	75182	93935	112688	131441	150194	168947	120 psig		
	End	83535	End	-	-	49440	83535	117630	151725	185820	219915	254010			
2385U-S080 Series B/C Only	Start	177299	Start	-	-	-	143203	177299	211395	245491	279587	313683	Maximum Allowable Pressure		
	Mid	85922	Mid	-	-	-	67169	85922	104675	123428	142181	160934	120 psig		
	End	95469	End	-	-	-	61373	95469	129565	163661	197757	231853			
2385U-S090 Series B/C Only	Start	199461	Start	-	-	-	-	165366	199461	233556	267651	301746	Maximum Allowable Pressure		
	Mid	96662	Mid	-	-	-	-	77909	96662	115415	134168	152921	120 psig		
	End	107402	End	-	-	-	-	73307	107402	141497	175592	209687			
2385U-S100 Series B/C Only	Start	221623	Start	-	-	-	-	-	187527	221623	255719	289815	Maximum Allowable Pressure		
	Mid	107402	Mid	-	-	-	-	-	88649	107402	126155	144908	120 psig		
	End	119336	End	-	-	-	-	-	85240	119336	153432	187528			
3071U-S040 Series C Only	Start	110812	Start	110812	154223	197634	241045	284456	327867	371278	414689	458100	Maximum Allowable Pressure		
	Mid	53701	Mid	53701	77577	101453	125329	149205	173081	196957	220833	244709	120 psig		
	End	59668	End	59668	103079	146490	189901	233312	276723	320134	363545	406956			
3071U-S050 Series C Only	Start	132974	Start	89563	132974	176385	219796	263207	306618	350029	393440	436851	Maximum Allowable Pressure		
	Mid	64441	Mid	40565	64441	88317	112193	136069	159945	183821	207697	231573	120 psig		
	End	71601	End	28190	71601	115012	158423	201834	245245	288656	332067	375478			
3071U-S060 Series C Only	Start	155136	Start	-	111725	155136	198547	241958	285369	328780	372191	415602	Maximum Allowable Pressure		
	Mid	75182	Mid	-	51306	75182	99058	122934	146810	170686	194562	218438	120 psig		
	End	83535	End	-	40124	83535	126946	170357	213768	257179	300590	344001			
3071U-S070 Series C Only	Start	199461	Start	-	-	156050	199461	242872	286283	329694	373105	416516	Maximum Allowable Pressure		
	Mid	96662	Mid	-	-	72786	96662	120538	144414	168290	192166	216042	120 psig		
	End	107402	End	-	-	63991	107402	150813	194224	237635	281046	324457			
3071U-S080 Series C Only	Start	221623	Start	-	-	-	178212	221623	265034	308445	351856	395267	Maximum Allowable Pressure		
	Mid	107402	Mid	-	-	-	83526	107402	131278	155154	179030	202906	120 psig		
	End	119336	End	-	-	-	75925	119336	162747	206158	249569	292980			
3072U-S090 Series C Only	Start	239941	Start	-	-	-	-	196530	239941	283352	326763	370174	Maximum Allowable Pressure		
	Mid	116279	Mid	-	-	-	-	92403	116279	140155	164031	187907	120 psig		
	End	129199	End	-	-	-	-	85788	129199	172610	216021	259432			
3072U-S100 Series C Only	Start	274218	Start	-	-	-	-	-	230807	274218	317629	361040	Maximum Allowable Pressure		
	Mid	132890	Mid	-	-	-	-	-	109014	132890	156766	180642	120 psig		
	End	147656	End	-	-	-	-	-	104245	147656	191067	234478			
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig												
			40	50	60	70	80	90	100	110	120	130	140	150	160
Air torques lb. in.															

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114

Spring Return Fail Closed and Fail Open

Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
3072U-S110 Series C Only	Start 308496	Start	-	-	-	-	-	-	265085	308496	351907	Maximum Allowable Pressure				
	Mid 149502	Mid	-	-	-	-	-	-	125626	149502	173378	120 psig				
	End 166113	End	-	-	-	-	-	-	122702	166113	209524					
3072U-S120 Series C Only	Start 308496	Start	-	-	-	-	-	-	-	265085	308496	Maximum Allowable Pressure				
	Mid 149502	Mid	-	-	-	-	-	-	-	125626	149502	120 psig				
	End 166113	End	-	-	-	-	-	-	-	122702	166113					
3731U-S040 Series C Only	Start 137109	Start	137109	189843	242577	295311	348045	400779	453513	506247	558981	Maximum Allowable Pressure				
	Mid 66445	Mid	66445	95449	124453	153457	182461	211465	240469	269473	298477	120 psig				
	End 73828	End	73828	126562	179296	232030	284764	337498	390232	442966	495700					
3731U-S050 Series C Only	Start 171386	Start	118652	171386	224120	276854	329588	382322	435056	487790	540524	Maximum Allowable Pressure				
	Mid 83057	Mid	54053	83057	112061	141065	170069	199073	228077	257081	286085	120 psig				
	End 92285	End	39551	92285	145019	197753	250487	303221	355955	408689	461423					
3731U-S060 Series C Only	Start 205664	Start	-	152930	205664	258398	311132	363866	416600	469334	522068	Maximum Allowable Pressure				
	Mid 99668	Mid	-	70664	99668	128672	157676	186680	215684	244688	273692	120 psig				
	End 110742	End	-	58008	110742	163476	216210	268944	321678	374412	427146					
3731U-S070 Series C Only	Start 239941	Start	-	-	187207	239941	292675	345409	398143	450877	503611	Maximum Allowable Pressure				
	Mid 116279	Mid	-	-	87275	116279	145283	174287	203291	232295	261299	120 psig				
	End 129199	End	-	-	76465	129199	181933	234667	287401	340135	392869					
3731U-S080 Series C Only	Start 274218	Start	-	-	-	221484	274218	326952	379686	432420	485154	Maximum Allowable Pressure				
	Mid 132890	Mid	-	-	-	103886	132890	161894	190898	219902	248906	120 psig				
	End 147656	End	-	-	-	94922	147656	200390	253124	305858	358592					
3731U-S090 Series C Only	Start 308496	Start	-	-	-	-	255762	308496	361230	413964	466698	Maximum Allowable Pressure				
	Mid 149502	Mid	-	-	-	-	120498	149502	178506	207510	236514	120 psig				
	End 166113	End	-	-	-	-	113379	166113	218847	271581	324315					
3731U-S100 Series C Only	Start 342773	Start	-	-	-	-	-	290039	342773	395507	448241	Maximum Allowable Pressure				
	Mid 166113	Mid	-	-	-	-	-	137109	166113	195117	224121	120 psig				
	End 184570	End	-	-	-	-	-	131836	184570	237304	290038					
4534U-S040 Series C Only	Start 137109	Start	137109	201181	265253	329325	393397	457469	521541	585613	-	Maximum Allowable Pressure				
	Mid 66445	Mid	66445	101685	136925	172165	207405	242645	277885	313125	-	120 psig				
	End 73828	End	73828	137900	201972	266044	330116	394188	458260	522332	-					
4534U-S050 Series C Only	Start 205664	Start	141592	205664	269736	333808	397880	461952	526024	590096	-	Maximum Allowable Pressure				
	Mid 99668	Mid	64428	99668	134908	170148	205388	240628	275868	311108	-	120 psig				
	End 110742	End	46670	110742	174814	238886	302958	367030	431102	495174	-					
4534U-S060 Series C Only	Start 239941	Start	-	175869	239941	304013	368085	432157	496229	560301	-	Maximum Allowable Pressure				
	Mid 116279	Mid	-	81039	116279	151519	186759	221999	257239	292479	-	120 psig				
	End 129199	End	-	65127	129199	193271	257343	321415	385487	449559	-					
4534U-S070 Series C Only	Start 274218	Start	-	-	210146	274218	338290	402362	466434	530506	594578	Maximum Allowable Pressure				
	Mid 132890	Mid	-	-	97650	132890	168130	203370	238610	273850	309090	120 psig				
	End 147656	End	-	-	83584	147656	211728	275800	339872	403944	468016					
4534U-S080 Series C Only	Start 308496	Start	-	-	-	244424	308496	372568	436640	500712	564784	Maximum Allowable Pressure				
	Mid 149502	Mid	-	-	-	114262	149502	184742	219982	255222	290462	120 psig				
	End 166113	End	-	-	-	102041	166113	230185	294257	358329	422401					
4534U-S090 Series C Only	Start 342773	Start	-	-	-	-	278701	342773	406845	470917	534989	Maximum Allowable Pressure				
	Mid 166113	Mid	-	-	-	-	130873	166113	201353	236593	271833	120 psig				
	End 184570	End	-	-	-	-	120498	184570	248642	312714	376786					
5336U-S040 Series C Only	Start 196067	Start	196067	271477	346887	422297	497707	573117	-	-	-	Maximum Allowable Pressure				
	Mid 95017	Mid	95017	136493	177969	219445	260921	302397	-	-	-	120 psig				
	End 105574	End	105574	180984	256394	331804	407214	482624	-	-	-					
5336U-S050 Series C Only	Start 245083	Start	169673	245083	320493	395903	471313	546723	-	-	-	Maximum Allowable Pressure				
	Mid 118771	Mid	77295	118771	160247	201723	243199	284675	-	-	-	120 psig				
	End 131968	End	56558	131968	207378	282788	358198	433608	-	-	-					
5336U-S060 Series C Only	Start 294100	Start	-	218690	294100	369510	444920	520330	595740	-	-	Maximum Allowable Pressure				
	Mid 142525	Mid	-	101049	142525	184001	225477	266953	308429	-	-	120 psig				
	End 158361	End	-	82951	158361	233771	309181	384591	460001	-	-					
5336U-S070 Series C Only	Start 343117	Start	-	-	267707	343117	418527	493937	569347	-	-	Maximum Allowable Pressure				
	Mid 166280	Mid	-	-	124804	166280	207756	249232	290708	-	-	120 psig				
	End 184755	End	-	-	109345	184755	260165	335575	410985	-	-					
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



Series A/ B/ C/ S: Models 003 - 7114
Spring Return Fail Closed and Fail Open
Symmetrical Yoke Design

Model Number	Spring torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
5336U-S080 Series C Only	Start	392133	Start	-	-	-	316723	392133	467543	542953	-	-	Maximum Allowable Pressure			
	Mid	190034	Mid	-	-	-	148558	190034	231510	272986	-	-	120 psig			
	End	211149	End	-	-	-	135739	211149	286559	361969	-	-				
5336U-S090 Series C Only	Start	441150	Start	-	-	-	-	365740	441150	516560	591970	-	Maximum Allowable Pressure			
	Mid	213788	Mid	-	-	-	-	172312	213788	255264	296740	-	120 psig			
	End	237542	End	-	-	-	-	162132	237542	312952	388362	-	POA, Consult Factory			
5336U-S100 Series C Only	Start	490166	Start	-	-	-	-	414756	490166	565576	-	-	Maximum Allowable Pressure			
	Mid	237542	Mid	-	-	-	-	196066	237542	279018	-	-	120 psig			
	End	263936	End	-	-	-	-	188526	263936	339346	-	-	POA, Consult Factory			
5336U-S110 Series C Only	Start	539183	Start	-	-	-	-	-	463773	539183	614593	-	Maximum Allowable Pressure			
	Mid	261296	Mid	-	-	-	-	-	219820	261296	302772	-	120 psig			
	End	290329	End	-	-	-	-	-	214919	290329	365739	-	POA, Consult Factory			
5336U-S120 Series C Only	Start	588200	Start	-	-	-	-	-	-	512790	588200	-	Maximum Allowable Pressure			
	Mid	285051	Mid	-	-	-	-	-	-	209641	251117	-	120 psig			
	End	316723	End	-	-	-	-	-	-	241313	316723	-	POA, Consult Factory			
6044U-S040 Series C Only	Start	219139	Start	219139	303423	387707	471991	556275	640559	724843	809127	893411	Maximum Allowable Pressure			
	Mid	106198	Mid	106198	152554	198910	245266	291622	337978	384334	430690	477046	120 psig			
	End	117998	End	117998	202282	286566	370850	455134	539418	623702	707986	792270				
6044U-S050 Series C Only	Start	273923	Start	189639	273923	358207	442491	526775	611059	695343	779627	863911	Maximum Allowable Pressure			
	Mid	132747	Mid	86391	132747	179103	225459	271815	318171	364527	410883	457239	120 psig			
	End	147497	End	63213	147497	231781	316065	400349	484633	568917	653201	737485				
6044U-S060 Series C Only	Start	328708	Start	-	244424	328708	412992	497276	581560	665844	750128	834412	Maximum Allowable Pressure			
	Mid	159297	Mid	-	112941	159297	205653	252009	298365	344721	391077	437433	120 psig			
	End	176997	End	-	92713	176997	261281	345565	429849	514133	598417	682701				
6044U-S070 Series C Only	Start	383493	Start	-	-	299209	383493	467777	552061	636345	720629	804913	Maximum Allowable Pressure			
	Mid	185846	Mid	-	-	139490	185846	232202	278558	324914	371270	417626	120 psig			
	End	206496	End	-	-	122212	206496	290780	375064	459348	543632	627916				
6044U-S080 Series C Only	Start	438277	Start	-	-	-	353993	438277	522561	606845	691129	775413	Maximum Allowable Pressure			
	Mid	212396	Mid	-	-	-	166040	212396	258752	305108	351464	397820	120 psig			
	End	235995	End	-	-	-	151711	235995	320279	404563	488847	573131				
7114U-S040 Series C Only	Start	257916	Start	257916	357114	456312	555510	654708	753906	853104	952302	1051501	Maximum Allowable Pressure			
	Mid	124990	Mid	124990	179549	234108	288667	343226	397785	452344	506903	561462	120 psig			
	End	138878	End	138878	238076	337274	436472	535670	634868	734066	833264	932463				
7114U-S050 Series C Only	Start	322396	Start	223197	322396	421595	520794	619993	719192	818391	917590	1016789	Maximum Allowable Pressure			
	Mid	156238	Mid	101679	156238	210797	265356	319915	374474	429033	483592	538151	120 psig			
	End	173588	End	74389	173588	272787	371986	471185	570384	669583	768782	867981				
7114U-S060 Series C Only	Start	386875	Start	-	287677	386875	486073	585271	684469	783667	882865	982063	Maximum Allowable Pressure			
	Mid	187485	Mid	-	132926	187485	242044	296603	351162	405721	460280	514839	120 psig			
	End	208317	End	-	109119	208317	307515	406713	505911	605109	704307	803505				
7114U-S070 Series C Only	Start	451354	Start	-	-	352155	451354	550553	649752	748951	848150	947349	Maximum Allowable Pressure			
	Mid	218733	Mid	-	-	164174	218733	273292	327851	382410	436969	491528	120 psig			
	End	243037	End	-	-	143838	243037	342236	441435	540634	639833	739032				
7114U-S080 Series C Only	Start	515833	Start	-	-	-	416635	515833	615031	714229	813427	912625	Maximum Allowable Pressure			
	Mid	249981	Mid	-	-	-	195422	249981	304540	359099	413658	468217	120 psig			
	End	277756	End	-	-	-	178558	277756	376954	476152	575350	674548				
7114U-S090 Series C Only	Start	580312	Start	-	-	-	-	481113	580312	679511	778710	877909	Maximum Allowable Pressure			
	Mid	281228	Mid	-	-	-	-	226669	281228	335787	390346	444905	120 psig			
	End	312476	End	-	-	-	-	213277	312476	411675	510874	610073	POA, Consult Factory			
7114U-S100 Series C Only	Start	644791	Start	-	-	-	-	-	545593	644791	743989	843187	Maximum Allowable Pressure			
	Mid	312476	Mid	-	-	-	-	-	257917	312476	367035	421594	120 psig			
	End	347195	End	-	-	-	-	-	247997	347195	446393	545591	POA, Consult Factory			
7114U-S110 Series C Only	Start	709270	Start	-	-	-	-	-	-	610071	709270	808469	Maximum Allowable Pressure			
	Mid	343723	Mid	-	-	-	-	-	-	289164	343723	398282	120 psig			
	End	381915	End	-	-	-	-	-	-	282716	381915	481114	POA, Consult Factory			
7114U-S120 Series C Only	Start	773749	Start	-	-	-	-	-	-	-	674550	773749	Maximum Allowable Pressure			
	Mid	374971	Mid	-	-	-	-	-	-	-	320412	374971	120 psig			
	End	416634	End	-	-	-	-	-	-	-	317435	416634	POA, Consult Factory			
Model Number	Spring torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
#REF!																

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)



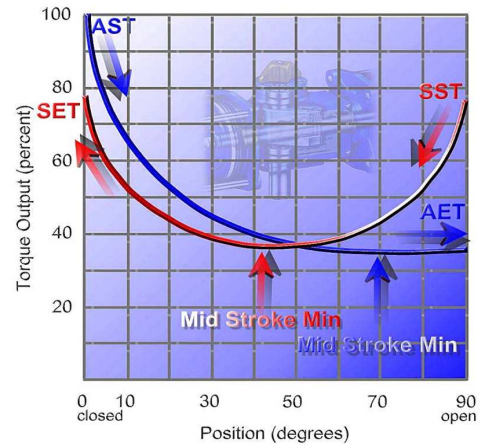
Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

The chart to the right shows the torque curve of the Morin canted yoke spring return for fail closed(fail clockwise) operation.

Proper selection of the actuator is critical to the successful operation of your automated package.

Note: Air torque curve shown is with air pressure equal to spring code, i.e. - S060 at 60 psig. Curve will vary for pressures used not equal to spring code.

AST = Air Start Torque SST = Spring Start Torque
AET = Air End Torque SET = Spring End Torque



Model Number	Spring Torques lb. in.	Torque at	Air torques lb. in.													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
023UC-S040 Series A/B/S Only	SST	687	AST	842	1230	1618	2006	2394	2783	3171	3559	3947	4335	4723	5111	5499
	Mid Stroke Min	276	Mid Stroke Min	276	506	736	966	1196	1426	1656	1886	2116	2346	2576	2806	3036
	SET	560	AET	276	506	736	966	1196	1426	1656	1886	2116	2346	2576	2806	3036
023UC-S050 Series A/B/S Only	SST	866	AST	-	1061	1449	1837	2225	2613	3002	3390	3778	4166	4554	4942	5330
	Mid Stroke Min	352	Mid Stroke Min	-	352	582	812	1042	1272	1502	1732	1962	2192	2422	2652	2882
	SET	714	AET	-	352	582	812	1042	1272	1502	1732	1962	2192	2422	2652	2882
023UC-S060 Series A/B/S Only	SST	1031	AST	-	-	1263	1651	2039	2427	2815	3204	3592	3980	4368	4756	5144
	Mid Stroke Min	414	Mid Stroke Min	-	-	414	644	874	1104	1334	1564	1794	2024	2254	2484	2714
	SET	840	AET	-	-	414	644	874	1104	1334	1564	1794	2024	2254	2484	2714
023UC-S070 Series A/B/S Only	SST	1195	AST	-	-	-	1466	1854	2242	2630	3018	3407	3795	4183	4571	4959
	Mid Stroke Min	486	Mid Stroke Min	-	-	-	486	716	946	1176	1406	1636	1866	2096	2326	2556
	SET	987	AET	-	-	-	486	716	946	1176	1406	1636	1866	2096	2326	2556
023UC-S080 Series A/B/S Only	SST	1374	AST	-	-	-	-	1685	2073	2461	2849	3237	3626	4014	4402	4790
	Mid Stroke Min	552	Mid Stroke Min	-	-	-	-	552	782	1012	1242	1472	1702	1932	2162	2392
	SET	1120	AET	-	-	-	-	552	782	1012	1242	1472	1702	1932	2162	2392
023UC-S090 Series A/B/S Only	SST	1539	AST	-	-	-	-	-	1887	2275	2663	3051	3439	3828	4216	4604
	Mid Stroke Min	624	Mid Stroke Min	-	-	-	-	-	624	854	1084	1314	1544	1774	2004	2234
	SET	1267	AET	-	-	-	-	-	624	854	1084	1314	1544	1774	2004	2234
023UC-S100 Series A/B/S Only	SST	1713	AST	-	-	-	-	-	-	2100	2488	2876	3264	3652	4041	4429
	Mid Stroke Min	693	Mid Stroke Min	-	-	-	-	-	-	693	923	1153	1383	1613	1843	2073
	SET	1407	AET	-	-	-	-	-	-	693	923	1153	1383	1613	1843	2073
023UC-S120 Series A/B/S Only	SST	2061	AST	-	-	-	-	-	-	-	-	2527	2915	3303	3691	4079
	Mid Stroke Min	828	Mid Stroke Min	-	-	-	-	-	-	-	-	828	1058	1288	1518	1748
	SET	1680	AET	-	-	-	-	-	-	-	-	828	1058	1288	1518	1748
023UC-S140 Series A/B/S Only	SST	2395	AST	-	-	-	-	-	-	-	-	-	-	2937	3325	3713
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	973	1203	1433
	SET	1974	AET	-	-	-	-	-	-	-	-	-	-	973	1203	1433
023UC-S160 Series A/B/S Only	SST	2748	AST	-	-	-	-	-	-	-	-	-	-	-	-	3369
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1104
	SET	2240	AET	-	-	-	-	-	-	-	-	-	-	-	-	1104
036UC-S040 Series A/B/S Only	SST	1072	AST	-	1314	1982	2651	3319	3987	4656	5324	5992	6660	7329	7997	8665
	Mid Stroke Min	435	Mid Stroke Min	435	831	1227	1623	2019	2415	2811	3207	3603	3999	4395	4791	5187
	SET	883	AET	435	831	1227	1623	2019	2415	2811	3207	3603	3999	4395	4791	5187
036UC-S050 Series A/B/S Only	SST	1337	AST	-	1640	2308	2977	3645	4313	4982	5650	6318	6986	7655	8323	8991
	Mid Stroke Min	545	Mid Stroke Min	-	545	941	1337	1733	2129	2525	2921	3317	3713	4109	4505	4901
	SET	1106	AET	-	545	941	1337	1733	2129	2525	2921	3317	3713	4109	4505	4901
036UC-S060 Series A/B/S Only	SST	1608	AST	-	-	1971	2639	3308	3976	4644	5313	5981	6649	7317	7986	8654
	Mid Stroke Min	656	Mid Stroke Min	-	-	656	1052	1448	1844	2240	2636	3032	3428	3824	4220	4616
	SET	1330	AET	-	-	656	1052	1448	1844	2240	2636	3032	3428	3824	4220	4616
036UC-S070 Series A/B/S Only	SST	1878	AST	-	-	-	2302	2970	3639	4307	4975	5644	6312	6980	7648	8317
	Mid Stroke Min	759	Mid Stroke Min	-	-	-	759	1155	1551	1947	2343	2739	3135	3531	3927	4323
	SET	1540	AET	-	-	-	759	1155	1551	1947	2343	2739	3135	3531	3927	4323
036UC-S080 Series A/B/S Only	SST	2143	AST	-	-	-	-	2628	3296	3965	4633	5301	5970	6638	7306	7974
	Mid Stroke Min	869	Mid Stroke Min	-	-	-	-	869	1265	1661	2057	2453	2849	3245	3641	4037
	SET	1764	AET	-	-	-	-	869	1265	1661	2057	2453	2849	3245	3641	4037
Model Number	Spring Torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
			Air torques lb. in.													



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Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
036UC-S090 Series A/B/S Only	SST	2409	AST	-	-	-	-	-	2953	3621	4290	4958	5626	6295	6963	7631
	Mid Stroke Min	976	Mid Stroke Min	-	-	-	-	-	976	1372	1768	2164	2560	2956	3352	3748
	SET	1981	AET	-	-	-	-	-	976	1372	1768	2164	2560	2956	3352	3748
036UC-S100 Series A/B/S Only	SST	2679	AST	-	-	-	-	-	-	3285	3953	4622	5290	5958	6627	7295
	Mid Stroke Min	1087	Mid Stroke Min	-	-	-	-	-	-	1087	1483	1879	2275	2671	3067	3463
	SET	2205	AET	-	-	-	-	-	-	1087	1483	1879	2275	2671	3067	3463
036UC-S120 Series A/B/S Only	SST	3215	AST	-	-	-	-	-	-	-	-	3942	4610	5279	5947	6615
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	-	-	-	-	1304	1700	2096	2492	2888
	SET	2646	AET	-	-	-	-	-	-	-	-	1304	1700	2096	2492	2888
036UC-S140 Series A/B/S Only	SST	3751	AST	-	-	-	-	-	-	-	-	-	-	4599	5267	5936
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	1521	1917	2313
	SET	3087	AET	-	-	-	-	-	-	-	-	-	-	1521	1917	2313
036UC-S160 Series A/B/S Only	SST	4305	AST	-	-	-	-	-	-	-	-	-	-	-	-	5278
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1725
	SET	3500	AET	-	-	-	-	-	-	-	-	-	-	-	-	1725
046UC-S040 Series A/B/S Only	SST	1374	AST	1685	2461	3237	4013	4789	5565	6341	7117	7893	8669	9445	10221	-
	Mid Stroke Min	552	Mid Stroke Min	552	1012	1472	1932	2392	2852	3312	3772	4232	4692	5152	5612	-
	SET	1120	AET	552	1012	1472	1932	2392	2852	3312	3772	4232	4692	5152	5612	-
046UC-S050 Series A/B/S Only	SST	1713	AST	-	2100	2876	3652	4428	5204	5980	6756	7532	8308	9084	9860	-
	Mid Stroke Min	693	Mid Stroke Min	-	693	1153	1613	2073	2533	2993	3453	3913	4373	4833	5293	-
	SET	1407	AET	-	693	1153	1613	2073	2533	2993	3453	3913	4373	4833	5293	-
046UC-S060 Series A/B/S Only	SST	2061	AST	-	-	2527	3303	4079	4855	5631	6407	7183	7959	8735	9511	10287
	Mid Stroke Min	828	Mid Stroke Min	-	-	828	1288	1748	2208	2668	3128	3588	4048	4508	4968	5428
	SET	1680	AET	-	-	828	1288	1748	2208	2668	3128	3588	4048	4508	4968	5428
046UC-S070 Series A/B/S Only	SST	2395	AST	-	-	-	2937	3713	4489	5265	6041	6817	7593	8369	9145	9921
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	973	1433	1893	2353	2813	3273	3733	4193	4653	5113
	SET	1974	AET	-	-	-	973	1433	1893	2353	2813	3273	3733	4193	4653	5113
046UC-S080 Series A/B/S Only	SST	2556	AST	-	-	-	-	3369	4145	4921	5697	6473	7249	8025	8801	9577
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	1104	1564	2024	2484	2944	3404	3864	4324	4784
	SET	2083	AET	-	-	-	-	1104	1564	2024	2484	2944	3404	3864	4324	4784
058UC-S040 Series A/B/S Only	SST	1713	AST	2100	3096	4091	5087	6082	7078	8074	9069	10065	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	693	Mid Stroke Min	693	1283	1873	2463	3053	3643	4233	4823	5413				
	SET	1407	AET	693	1283	1873	2463	3053	3643	4233	4823	5413				
058UC-S050 Series A/B/S Only	SST	2061	AST	-	2527	3523	4518	5514	6509	7505	8501	9496	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	828	Mid Stroke Min	-	828	1418	2008	2598	3188	3778	4368	4958				
	SET	1680	AET	-	828	1418	2008	2598	3188	3778	4368	4958				
058UC-S060 Series A/B/S Only	SST	2395	AST	-	-	2937	3933	4928	5924	6919	7915	8911	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	973	Mid Stroke Min	-	-	973	1563	2153	2743	3333	3923	4513				
	SET	1974	AET	-	-	973	1563	2153	2743	3333	3923	4513				
058UC-S070 Series A/B/S Only	SST	2748	AST	-	-	-	3369	4365	5360	6356	7351	8347	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	1104	1694	2284	2874	3464	4054				
	SET	2240	AET	-	-	-	1104	1694	2284	2874	3464	4054				
059UC-S080 Series A/B/S Only	SST	3215	AST	-	-	-	-	3942	4938	5933	6929	7924	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	1304	1894	2484	3074	3664				
	SET	2646	AET	-	-	-	-	1304	1894	2484	3074	3664				
059UC-S090 Series A/B/S Only	SST	3751	AST	-	-	-	-	4599	5595	6590	7586	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)				
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	1521	2111	2701	3291					
	SET	3087	AET	-	-	-	-	1521	2111	2701	3291					
059UC-S100 Series A/B/S Only	SST	4305	AST	-	-	-	-	-	5278	6274	7269	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)				
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	1725	2315	2905					
	SET	3500	AET	-	-	-	-	-	1725	2315	2905					
072UC-S040 Series A/B/S Only	SST	2143	AST	2628	3965	5301	6638	7974	9311	-	-	-	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	869	Mid Stroke Min	869	1661	2453	3245	4037	4829	-	-	-				
	SET	1764	AET	869	1661	2453	3245	4037	4829	-	-	-				
072UC-S050 Series A/B/S Only	SST	2679	AST	-	3285	4622	5958	7295	8631	9968	-	-	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1087	Mid Stroke Min	-	1087	1879	2671	3463	4255	5047	-	-				
	SET	2205	AET	-	1087	1879	2671	3463	4255	5047	-	-				
072UC-S060 Series A/B/S Only	SST	3215	AST	-	-	3942	5279	6615	7952	9288	-	-	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1304	Mid Stroke Min	-	-	1304	2096	2888	3680	4472	-	-				
	SET	2646	AET	-	-	1304	2096	2888	3680	4472	-	-				
072UC-S070 Series A/B/S Only	SST	3751	AST	-	-	-	4599	5936	7272	8609	-	-	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	1521	2313	3105	3897	-	-				
	SET	3087	AET	-	-	-	1521	2313	3105	3897	-	-				
072UC-S080 Series A/B/S Only	SST	4305	AST	-	-	-	-	5278	6615	7951	-	-	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	1725	2517	3309	-	-				
	SET	3500	AET	-	-	-	-	1725	2517	3309	-	-				
100UC-S040 Series B/S Only	SST	2977	AST	3650	5338	7025	8713	-	-	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	1208	Mid Stroke Min	1208	2208	3208	4208	-	-	-	-	-				
	SET	2450	AET	1208	2208	3208	4208	-	-	-	-	-				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
	lb. in.			Air torques lb. in.												



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Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
100UC-S050 Series B/S Only	SST	3719	AST	-	4559	6247	7934	9622	-	-	Maximum Allowable Pressure					
	Mid Stroke Min	1511	Mid Stroke Min	-	1511	2511	3511	4511	-	-	100 psig					
	SET	3066	AET	-	1511	2511	3511	4511	-	-						
100UC-S060 Series B/S Only	SST	4470	AST	-	-	5480	7168	8855	-	-	Maximum Allowable Pressure					
	Mid Stroke Min	1808	Mid Stroke Min	-	-	1808	2808	3808	-	-	100 psig					
	SET	3668	AET	-	-	1808	2808	3808	-	-						
100UC-S070 Series B/S Only	SST	5212	AST	-	-	-	6390	8078	9765	-	Maximum Allowable Pressure					
	Mid Stroke Min	2111	Mid Stroke Min	-	-	-	2111	3111	4111	-	100 psig					
	SET	4284	AET	-	-	-	2111	3111	4111	-						
100UC-S080 Series B/S Only	SST	5954	AST	-	-	-	-	7300	8988	-	Maximum Allowable Pressure					
	Mid Stroke Min	2415	Mid Stroke Min	-	-	-	-	2415	3415	-	100 psig					
	SET	4900	AET	-	-	-	-	2415	3415	-						
135UC-S040	SST	4019	AST	4927	7209	9491	11773	14055	16337	18619	20901	23183	25465	27747	30029	32311
	Mid Stroke Min	1472	Mid Stroke Min	1472	2824	4176	5528	6880	8232	9584	10936	12288	13640	14992	16344	17696
	SET	2986	AET	1472	2824	4176	5528	6880	8232	9584	10936	12288	13640	14992	16344	17696
135UC-S050	SST	5025	AST	-	6161	8443	10725	13007	15289	17571	19853	22135	24417	26699	28981	31263
	Mid Stroke Min	1840	Mid Stroke Min	-	1840	3192	4544	5896	7248	8600	9952	11304	12656	14008	15360	16712
	SET	3734	AET	-	1840	3192	4544	5896	7248	8600	9952	11304	12656	14008	15360	16712
135UC-S060	SST	6028	AST	-	-	7391	9673	11955	14237	16519	18801	21083	23365	25647	27929	30211
	Mid Stroke Min	2208	Mid Stroke Min	-	-	2208	3560	4912	6264	7616	8968	10320	11672	13024	14376	15728
	SET	4479	AET	-	-	2208	3560	4912	6264	7616	8968	10320	11672	13024	14376	15728
135UC-S070	SST	7035	AST	-	-	-	8624	10906	13188	15470	17752	20034	22316	24598	26880	29162
	Mid Stroke Min	2576	Mid Stroke Min	-	-	-	2576	3928	5280	6632	7984	9336	10688	12040	13392	14744
	SET	5227	AET	-	-	-	2576	3928	5280	6632	7984	9336	10688	12040	13392	14744
135UC-S080	SST	8038	AST	-	-	-	-	9854	12136	14418	16700	18982	21264	23546	25828	28110
	Mid Stroke Min	2944	Mid Stroke Min	-	-	-	-	2944	4296	5648	7000	8352	9704	11056	12408	13760
	SET	5972	AET	-	-	-	-	2944	4296	5648	7000	8352	9704	11056	12408	13760
135UC-S090	SST	9044	AST	-	-	-	-	8806	11088	13370	15652	17934	20216	22498	24780	27062
	Mid Stroke Min	3312	Mid Stroke Min	-	-	-	-	1960	3312	4664	6016	7368	8720	10072	11424	12776
	SET	6720	AET	-	-	-	-	1960	3312	4664	6016	7368	8720	10072	11424	12776
135UC-S100	SST	10050	AST	-	-	-	-	-	10040	12322	14604	16886	19168	21450	23732	26014
	Mid Stroke Min	3681	Mid Stroke Min	-	-	-	-	-	2329	3681	5033	6385	7737	9089	10441	11793
	SET	7468	AET	-	-	-	-	-	2329	3681	5033	6385	7737	9089	10441	11793
135UC-S120	SST	12057	AST	-	-	-	-	-	-	-	12499	14781	17063	19345	21627	23909
	Mid Stroke Min	4415	Mid Stroke Min	-	-	-	-	-	-	-	3063	4415	5767	7119	8471	9823
	SET	8959	AET	-	-	-	-	-	-	-	3063	4415	5767	7119	8471	9823
135UC-S140	SST	14069	AST	-	-	-	-	-	-	-	-	-	14967	17249	19531	21813
	Mid Stroke Min	5152	Mid Stroke Min	-	-	-	-	-	-	-	-	-	3800	5152	6504	7856
	SET	10454	AET	-	-	-	-	-	-	-	-	-	3800	5152	6504	7856
135UC-S160	SST	16076	AST	-	-	-	-	-	-	-	-	-	-	-	17427	19709
	Mid Stroke Min	5887	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	4535	5887
	SET	11945	AET	-	-	-	-	-	-	-	-	-	-	-	4535	5887
210UC-S040	SST	6252	AST	7664	11562	15460	19358	23256	27154	31052	34950	38848	42746	-	-	-
	Mid Stroke Min	2391	Mid Stroke Min	2391	4701	7011	9321	11631	13941	16251	18561	20871	23181	-	-	-
	SET	4851	AET	2391	4701	7011	9321	11631	13941	16251	18561	20871	23181	-	-	-
210UC-S050	SST	7813	AST	-	9579	13477	17375	21273	25171	29069	32967	36865	40763	-	-	-
	Mid Stroke Min	2989	Mid Stroke Min	-	2989	5299	7609	9919	12229	14539	16849	19159	21469	-	-	-
	SET	6064	AET	-	2989	5299	7609	9919	12229	14539	16849	19159	21469	-	-	-
210UC-S060	SST	9380	AST	-	-	11500	15398	19296	23194	27092	30990	34888	38786	42684	-	-
	Mid Stroke Min	3586	Mid Stroke Min	-	-	3586	5896	8206	10516	12826	15136	17446	19756	22066	-	-
	SET	7277	AET	-	-	3586	5896	8206	10516	12826	15136	17446	19756	22066	-	-
210UC-S070	SST	10937	AST	-	-	9511	13409	17307	21205	25103	29001	32899	36797	40695	-	-
	Mid Stroke Min	4184	Mid Stroke Min	-	-	1874	4184	6494	8804	11114	13424	15734	18044	20354	-	-
	SET	8489	AET	-	-	1874	4184	6494	8804	11114	13424	15734	18044	20354	-	-
210UC-S080	SST	12503	AST	-	-	-	11431	15329	19227	23125	27023	30921	34819	38717	42615	-
	Mid Stroke Min	4782	Mid Stroke Min	-	-	-	2472	4782	7092	9402	11712	14022	16332	18642	20952	-
	SET	9702	AET	-	-	-	2472	4782	7092	9402	11712	14022	16332	18642	20952	-
210UC-S090	SST	14061	AST	-	-	-	-	13340	17238	21136	25034	28932	32830	36728	40626	-
	Mid Stroke Min	5380	Mid Stroke Min	-	-	-	-	3070	5380	7690	10000	12310	14620	16930	19240	-
	SET	10915	AET	-	-	-	-	3070	5380	7690	10000	12310	14620	16930	19240	-
210UC-S100	SST	15627	AST	-	-	-	-	-	15260	19158	23056	26954	30852	34750	38648	42546
	Mid Stroke Min	5977	Mid Stroke Min	-	-	-	-	-	3667	5977	8287	10597	12907	15217	17527	19837
	SET	12128	AET	-	-	-	-	-	3667	5977	8287	10597	12907	15217	17527	19837
210UC-S120	SST	18755	AST	-	-	-	-	-	-	-	19095	22993	26891	30789	34687	38585
	Mid Stroke Min	7173	Mid Stroke Min	-	-	-	-	-	-	-	4863	7173	9483	11793	14103	16413
	SET	14553	AET	-	-	-	-	-	-	-	4863	7173	9483	11793	14103	16413
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				Air torques lb. in.												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	40	50		60	70	80	90	100	110	120	130	140	150	160		
210UC-S140	SST	21883	AST	-	-	-	-	-	-	-	-	-	22930	26828	30726	34624
	Mid Stroke Min	8368	Mid Stroke Min	-	-	-	-	-	-	-	-	-	6058	8368	10678	12988
	SET	16979	AET	-	-	-	-	-	-	-	-	-	6058	8368	10678	12988
210UC-S160	SST	25007	AST	-	-	-	-	-	-	-	-	-	-	-	26760	30658
	Mid Stroke Min	9563	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	7253	9563
	SET	19404	AET	-	-	-	-	-	-	-	-	-	-	-	7253	9563
270UC-S040	SST	8042	AST	9860	14644	19428	24212	28996	33780	38564	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	3590	Mid Stroke Min	3590	6425	9260	12095	14930	17765	20600	-	-				
	SET	7284	AET	3590	6425	9260	12095	14930	17765	20600	-	-				
270UC-S050	SST	10049	AST	-	12319	17103	21887	26671	31455	36239	41023	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	4482	Mid Stroke Min	-	4482	7317	10152	12987	15822	18657	21492	-				
	SET	9094	AET	-	4482	7317	10152	12987	15822	18657	21492	-				
270UC-S060	SST	12055	AST	-	-	14779	19563	24347	29131	33915	38699	43483	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	5381	Mid Stroke Min	-	-	5381	8216	11051	13886	16721	19556	22391				
	SET	10919	AET	-	-	5381	8216	11051	13886	16721	19556	22391				
270UC-S070	SST	14065	AST	-	-	12460	17244	22028	26812	31596	36380	41164	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	6277	Mid Stroke Min	-	-	3442	6277	9112	11947	14782	17617	20452				
	SET	12736	AET	-	-	3442	6277	9112	11947	14782	17617	20452				
270UC-S080	SST	16076	AST	-	-	-	14925	19709	24493	29277	34061	38845	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	7173	Mid Stroke Min	-	-	-	4338	7173	10008	12843	15678	18513				
	SET	14553	AET	-	-	-	4338	7173	10008	12843	15678	18513				
270UC-S090	SST	18087	AST	-	-	-	-	17391	22175	26959	31743	36527	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8068	Mid Stroke Min	-	-	-	-	5233	8068	10903	13738	16573				
	SET	16370	AET	-	-	-	-	5233	8068	10903	13738	16573				
270UC-S100	SST	20097	AST	-	-	-	-	-	19855	24639	29423	34207	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8964	Mid Stroke Min	-	-	-	-	-	6129	8964	11799	14634				
	SET	18189	AET	-	-	-	-	-	6129	8964	11799	14634				
344UC-S040	SST	10049	AST	12319	18432	24545	30658	36771	42884	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	4359	Mid Stroke Min	4359	7982	11605	15228	18851	22474	-	-	-				
	SET	8845	AET	4359	7982	11605	15228	18851	22474	-	-	-				
344UC-S050	SST	12055	AST	-	14779	20892	27005	33118	39231	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	5234	Mid Stroke Min	-	5234	8857	12480	16103	19726	-	-	-				
	SET	10620	AET	-	5234	8857	12480	16103	19726	-	-	-				
344UC-S060	SST	14065	AST	-	-	17244	23357	29470	35583	41696	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	6106	Mid Stroke Min	-	-	6106	9729	13352	16975	20598	-	-				
	SET	12389	AET	-	-	6106	9729	13352	16975	20598	-	-				
344UC-S070	SST	18087	AST	-	-	16062	22175	28288	34401	40514	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	7847	Mid Stroke Min	-	-	4224	7847	11470	15093	18716	-	-				
	SET	15922	AET	-	-	4224	7847	11470	15093	18716	-	-				
344UC-S080	SST	20097	AST	-	-	-	18526	24639	30752	36865	42978	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8720	Mid Stroke Min	-	-	-	5097	8720	12343	15966	19589	-				
	SET	17692	AET	-	-	-	5097	8720	12343	15966	19589	-				
345UC-S090	SST	21883	AST	-	-	-	-	20715	26828	32941	39054	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	9494	Mid Stroke Min	-	-	-	-	5871	9494	13117	16740	-				
	SET	19264	AET	-	-	-	-	5871	9494	13117	16740	-				
345UC-S100	SST	25007	AST	-	-	-	-	-	24545	30658	36771	42884	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	10853	Mid Stroke Min	-	-	-	-	-	7230	10853	14476	18099				
	SET	22021	AET	-	-	-	-	-	7230	10853	14476	18099				
345UC-S110	SST	28126	AST	-	-	-	-	-	-	28369	34482	40595	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8589	12212	15835				
	SET	24777	AET	-	-	-	-	-	-	8589	12212	15835				
345UC-S120	SST	28126	AST	-	-	-	-	-	-	28369	34482	40595	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8589	12212	15835				
	SET	24777	AET	-	-	-	-	-	-	8589	12212	15835				
370UC-S040	SST	11015	AST	13504	20185	26866	33547	40228	46909	53590	60271	66952	73633	80314	86995	93676
	Mid Stroke Min	5138	Mid Stroke Min	5138	9097	13056	17015	20974	24933	28892	32851	36810	40769	44728	48687	52646
	SET	10424	AET	5138	9097	13056	17015	20974	24933	28892	32851	36810	40769	44728	48687	52646
370UC-S050	SST	13767	AST	-	16879	23560	30241	36922	43603	50284	56965	63646	70327	77008	83689	90370
	Mid Stroke Min	7209	Mid Stroke Min	-	7209	11168	15127	19086	23045	27004	30963	34922	38881	42840	46799	50758
	SET	13033	AET	-	7209	11168	15127	19086	23045	27004	30963	34922	38881	42840	46799	50758
370UC-S060	SST	16525	AST	-	-	20259	26940	33621	40302	46983	53664	60345	67026	73707	80388	87069
	Mid Stroke Min	7705	Mid Stroke Min	-	-	7705	11664	15623	19582	23541	27500	31459	35418	39377	43336	47295
	SET	15634	AET	-	-	7705	11664	15623	19582	23541	27500	31459	35418	39377	43336	47295
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				Air torques lb. in.												
	40	50		60	70	80	90	100	110	120	130	140	150	160		



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
370UC-S070	SST	19277	AST	-	-	16953	23634	30315	36996	43677	50358	57039	63720	70401	77082	83763
	Mid Stroke Min	8991	Mid Stroke Min	-	-	5032	8991	12950	16909	20868	24827	28786	32745	36704	40663	44622
	SET	18242	AET	-	-	5032	8991	12950	16909	20868	24827	28786	32745	36704	40663	44622
370UC-S080	SST	22030	AST	-	-	-	20327	27008	33689	40370	47051	53732	60413	67094	73775	80456
	Mid Stroke Min	10276	Mid Stroke Min	-	-	-	6317	10276	14235	18194	22153	26112	30071	34030	37989	41948
	SET	20850	AET	-	-	-	6317	10276	14235	18194	22153	26112	30071	34030	37989	41948
370UC-S090	SST	24782	AST	-	-	-	-	23702	30383	37064	43745	50426	57107	63788	70469	77150
	Mid Stroke Min	11562	Mid Stroke Min	-	-	-	-	7603	11562	15521	19480	23439	27398	31357	35316	39275
	SET	23458	AET	-	-	-	-	7603	11562	15521	19480	23439	27398	31357	35316	39275
370UC-S100	SST	27535	AST	-	-	-	-	-	27076	33757	40438	47119	53800	60481	67162	73843
	Mid Stroke Min	12847	Mid Stroke Min	-	-	-	-	-	8888	12847	16806	20765	24724	28683	32642	36601
	SET	26067	AET	-	-	-	-	-	8888	12847	16806	20765	24724	28683	32642	36601
370UC-S120	SST	33045	AST	-	-	-	-	-	-	-	33831	40512	47193	53874	60555	67236
	Mid Stroke Min	15414	Mid Stroke Min	-	-	-	-	-	-	-	11455	15414	19373	23332	27291	31250
	SET	31275	AET	-	-	-	-	-	-	-	11455	15414	19373	23332	27291	31250
370UC-S140	SST	38554	AST	-	-	-	-	-	-	-	-	-	-	40586	47267	53948
	Mid Stroke Min	17981	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	14022	17981	21940
	SET	36483	AET	-	-	-	-	-	-	-	-	-	-	14022	17981	21940
370UC-S160	SST	44060	AST	-	-	-	-	-	-	-	-	-	-	-	-	47335
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	16593
	SET	41699	AET	-	-	-	-	-	-	-	-	-	-	-	-	16593
420UC-S040	SST	12503	AST	15329	22417	29505	36593	43681	-	-	-	-	-	-	-	-
	Mid Stroke Min	5325	Mid Stroke Min	5325	9525	13725	17925	22125	-	-	-	-	-	-	-	-
	SET	10805	AET	5325	9525	13725	17925	22125	-	-	-	-	-	-	-	-
420UC-S050	SST	15627	AST	-	19158	26246	33334	40422	-	-	-	-	-	-	-	-
	Mid Stroke Min	6659	Mid Stroke Min	-	6659	10859	15059	19259	-	-	-	-	-	-	-	-
	SET	13510	AET	-	6659	10859	15059	19259	-	-	-	-	-	-	-	-
420UC-S060	SST	18755	AST	-	-	22993	30081	37169	44257	-	-	-	-	-	-	-
	Mid Stroke Min	7987	Mid Stroke Min	-	-	7987	12187	16387	20587	-	-	-	-	-	-	-
	SET	16206	AET	-	-	7987	12187	16387	20587	-	-	-	-	-	-	-
420UC-S070	SST	21883	AST	-	-	19740	26828	33916	41004	-	-	-	-	-	-	-
	Mid Stroke Min	9317	Mid Stroke Min	-	-	5117	9317	13517	17717	-	-	-	-	-	-	-
	SET	18904	AET	-	-	5117	9317	13517	17717	-	-	-	-	-	-	-
420UC-S080	SST	25007	AST	-	-	-	23570	30658	37746	-	-	-	-	-	-	-
	Mid Stroke Min	10650	Mid Stroke Min	-	-	-	6450	10650	14850	-	-	-	-	-	-	-
	SET	21609	AET	-	-	-	6450	10650	14850	-	-	-	-	-	-	-
420UC-S090	SST	28126	AST	-	-	-	-	27394	34482	41570	-	-	-	-	-	-
	Mid Stroke Min	11983	Mid Stroke Min	-	-	-	-	7783	11983	16183	-	-	-	-	-	-
	SET	24314	AET	-	-	-	-	7783	11983	16183	-	-	-	-	-	-
420UC-S100	SST	31254	AST	-	-	-	-	-	31229	38317	45405	-	-	-	-	-
	Mid Stroke Min	13316	Mid Stroke Min	-	-	-	-	-	9116	13316	17516	-	-	-	-	-
	SET	27019	AET	-	-	-	-	-	9116	13316	17516	-	-	-	-	-
575UC-S040	SST	17120	AST	20989	31759	42529	53299	64069	74839	85609	96379	107149	117919	-	-	-
	Mid Stroke Min	7288	Mid Stroke Min	7288	13671	20054	26437	32820	39203	45586	51969	58352	64735	-	-	-
	SET	14788	AET	7288	13671	20054	26437	32820	39203	45586	51969	58352	64735	-	-	-
575UC-S050	SST	21398	AST	-	26233	37003	47773	58543	69313	80083	90853	101623	112393	-	-	-
	Mid Stroke Min	9114	Mid Stroke Min	-	9114	15497	21880	28263	34646	41029	47412	53795	60178	-	-	-
	SET	18493	AET	-	9114	15497	21880	28263	34646	41029	47412	53795	60178	-	-	-
575UC-S060	SST	25675	AST	-	-	31478	42248	53018	63788	74558	85328	96098	106868	117638	-	-
	Mid Stroke Min	10933	Mid Stroke Min	-	-	10933	17316	23699	30082	36465	42848	49231	55614	61997	-	-
	SET	22183	AET	-	-	10933	17316	23699	30082	36465	42848	49231	55614	61997	-	-
575UC-S070	SST	29953	AST	-	-	25952	36722	47492	58262	69032	79802	90572	101342	112112	-	-
	Mid Stroke Min	12759	Mid Stroke Min	-	-	6376	12759	19142	25525	31908	38291	44674	51057	57440	-	-
	SET	25887	AET	-	-	6376	12759	19142	25525	31908	38291	44674	51057	57440	-	-
575UC-S080	SST	31839	AST	-	-	-	31202	41972	52742	63512	74282	85052	95822	106592	117362	-
	Mid Stroke Min	14580	Mid Stroke Min	-	-	-	8197	14580	20963	27346	33729	40112	46495	52878	59261	-
	SET	27512	AET	-	-	-	8197	14580	20963	27346	33729	40112	46495	52878	59261	-
575UC-S090	SST	38513	AST	-	-	-	-	36447	47217	57987	68757	79527	90297	101067	111837	-
	Mid Stroke Min	16399	Mid Stroke Min	-	-	-	-	10016	16399	22782	29165	35548	41931	48314	54697	-
	SET	33274	AET	-	-	-	-	10016	16399	22782	29165	35548	41931	48314	54697	-
575UC-S100	SST	42796	AST	-	-	-	-	-	41697	52467	63237	74007	84777	95547	106317	117087
	Mid Stroke Min	18222	Mid Stroke Min	-	-	-	-	-	11839	18222	24605	30988	37371	43754	50137	56520
	SET	36971	AET	-	-	-	-	-	11839	18222	24605	30988	37371	43754	50137	56520
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				Air torques lb. in.												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
575UC-S120 Series B/C/S only	SST	51351	AST	-	-	-	-	-	-	-	52185	62955	73725	84495	95265	106035
	Mid Stroke Min	21873	Mid Stroke Min	-	-	-	-	-	-	-	15490	21873	28256	34639	41022	47405
	SET	44380	AET	-	-	-	-	-	-	-	15490	21873	28256	34639	41022	47405
575UC-S140 Series B/C/S only	SST	59906	AST	-	-	-	-	-	-	-	-	-	62674	73444	84214	94984
	Mid Stroke Min	25517	Mid Stroke Min	-	-	-	-	-	-	-	-	-	19134	25517	31900	38283
	SET	51773	AET	-	-	-	-	-	-	-	-	-	19134	25517	31900	38283
575UC-S160 Series B/C/S only	SST	68471	AST	-	-	-	-	-	-	-	-	-	-	-	73174	83944
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	22778	29161
	SET	59168	AET	-	-	-	-	-	-	-	-	-	-	-	22778	29161
740UC-S040 Series B/C/S only	SST	22030	AST	27008	40120	53232	66344	79456	92568	105680	118792	-	Maximum Allowable Pressure			
	Mid Stroke Min	10276	Mid Stroke Min	10276	18046	25816	33586	41356	49126	56896	64666	-	120 psig			
	SET	20850	AET	10276	18046	25816	33586	41356	49126	56896	64666	-				
740UC-S050 Series B/C/S only	SST	27535	AST	-	33757	46869	59981	73093	86205	99317	112429	-	Maximum Allowable Pressure			
	Mid Stroke Min	12847	Mid Stroke Min	-	12847	20617	28387	36157	43927	51697	59467	-	120 psig			
	SET	26067	AET	-	12847	20617	28387	36157	43927	51697	59467	-				
740UC-S060 Series B/C/S only	SST	33045	AST	-	-	40512	53624	66736	79848	92960	106072	-	Maximum Allowable Pressure			
	Mid Stroke Min	15414	Mid Stroke Min	-	-	15414	23184	30954	38724	46494	54264	-	120 psig			
	SET	31275	AET	-	-	15414	23184	30954	38724	46494	54264	-				
740UC-S070 Series B/C/S only	SST	38554	AST	-	-	34155	47267	60379	73491	86603	99715	112827	Maximum Allowable Pressure			
	Mid Stroke Min	17981	Mid Stroke Min	-	-	10211	17981	25751	33521	41291	49061	56831	120 psig			
	SET	36483	AET	-	-	10211	17981	25751	33521	41291	49061	56831				
740UC-S080 Series B/C/S only	SST	44060	AST	-	-	-	40904	54016	67128	80240	93352	106464	Maximum Allowable Pressure			
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	12782	20552	28322	36092	43862	51632	120 psig			
	SET	41699	AET	-	-	-	12782	20552	28322	36092	43862	51632				
740UC-S090 Series B/C/S only	SST	49563	AST	-	-	-	-	47651	60763	73875	86987	100099	Maximum Allowable Pressure			
	Mid Stroke Min	23125	Mid Stroke Min	-	-	-	-	15355	23125	30895	38665	46435	120 psig			
	SET	46920	AET	-	-	-	-	15355	23125	30895	38665	46435				
740UC-S100 Series B/C/S only	SST	55070	AST	-	-	-	-	-	54403	67515	80627	93739	Maximum Allowable Pressure			
	Mid Stroke Min	25694	Mid Stroke Min	-	-	-	-	-	17924	25694	33464	41234	120 psig			
	SET	52133	AET	-	-	-	-	-	17924	25694	33464	41234				
944UC-S040 Series B/C/S only	SST	27535	AST	33757	50820	67883	84946	102009	119072	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	11953	Mid Stroke Min	11953	22065	32177	42289	52401	62513	-	-	-	120 psig			
	SET	24252	AET	11953	22065	32177	42289	52401	62513	-	-	-				
944UC-S050 Series B/C/S only	SST	33045	AST	-	40512	57575	74638	91701	108764	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	14342	Mid Stroke Min	-	14342	24454	34566	44678	54790	-	-	-	120 psig			
	SET	29099	AET	-	14342	24454	34566	44678	54790	-	-	-				
944UC-S060 Series B/C/S only	SST	38554	AST	-	-	47267	64330	81393	98456	115519	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	16730	Mid Stroke Min	-	-	16730	26842	36954	47066	57178	-	-	120 psig			
	SET	33944	AET	-	-	16730	26842	36954	47066	57178	-	-				
944UC-S070 Series B/C/S only	SST	44060	AST	-	-	36953	54016	71079	88142	105205	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	19122	Mid Stroke Min	-	-	9010	19122	29234	39346	49458	-	-	120 psig			
	SET	38798	AET	-	-	9010	19122	29234	39346	49458	-	-				
945UC-S080 Series B/C/S only	SST	51351	AST	-	-	-	45892	62955	80018	97081	114144	-	Maximum Allowable Pressure			
	Mid Stroke Min	22289	Mid Stroke Min	-	-	-	12177	22289	32401	42513	52625	-	120 psig			
	SET	45224	AET	-	-	-	12177	22289	32401	42513	52625	-				
945UC-S090 Series B/C/S only	SST	59906	AST	-	-	-	-	56381	73444	90507	107570	-	Maximum Allowable Pressure			
	Mid Stroke Min	26003	Mid Stroke Min	-	-	-	-	15891	26003	36115	46227	-	120 psig			
	SET	52759	AET	-	-	-	-	15891	26003	36115	46227	-				
945UC-S100 Series B/C/S only	SST	68471	AST	-	-	-	-	-	66881	83944	101007	-	Maximum Allowable Pressure			
	Mid Stroke Min	29717	Mid Stroke Min	-	-	-	-	-	19605	29717	39829	-	120 psig			
	SET	60295	AET	-	-	-	-	-	19605	29717	39829	-				
945UC-S110 Series B/C/S only	SST	77026	AST	-	-	-	-	-	-	77370	94433	111496	Maximum Allowable Pressure			
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	23319	33431	43543	120 psig			
	SET	67830	AET	-	-	-	-	-	-	23319	33431	43543				
945UC-S120 Series B/C/S only	SST	77026	AST	-	-	-	-	-	-	77370	94433	111496	Maximum Allowable Pressure			
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	23319	33431	43543	120 psig			
	SET	67830	AET	-	-	-	-	-	-	23319	33431	43543				
1150UC-S040 Series B/C/S only	SST	34236	AST	41972	62349	82726	103103	-	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	14580	Mid Stroke Min	14580	26655	38730	50805	-	-	-	-	-	120 psig			
	SET	29583	AET	14580	26655	38730	50805	-	-	-	-	-				
1150UC-S050 Series B/C/S only	SST	42796	AST	-	52467	72844	93221	113598	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	18222	Mid Stroke Min	-	18222	30297	42372	54447	-	-	-	-	120 psig			
	SET	36971	AET	-	18222	30297	42372	54447	-	-	-	-				
1150UC-S060 Series B/C/S only	SST	51351	AST	-	-	62955	83332	103709	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	21873	Mid Stroke Min	-	-	21873	33948	46023	-	-	-	-	120 psig			
	SET	44380	AET	-	-	21873	33948	46023	-	-	-	-				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																



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Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	40	50		60	70	80	90	100	110	120	130	140	150	160		
1150UC-S070 Series B/C/S only	SST	59906	AST	-	-	53067	73444	93821	114198	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	25517	Mid Stroke Min	-	-	13442	25517	37592	49667	-	-	-	120 psig			
	SET	51773	AET	-	-	13442	25517	37592	49667	-	-	-				
1150UC-S080 Series B/C/S only	SST	68471	AST	-	-	-	63567	83944	104321	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	17086	29161	41236	-	-	-	120 psig			
	SET	59168	AET	-	-	-	17086	29161	41236	-	-	-				
1150UC-S090 Series B/C/S only	SST	77026	AST	-	-	-	-	74056	94433	114810	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	32805	Mid Stroke Min	-	-	-	-	20730	32805	44880	-	-	120 psig			
	SET	66562	AET	-	-	-	-	20730	32805	44880	-	-				
1150UC-S100 Series B/C/S only	SST	85591	AST	-	-	-	-	-	84556	104933	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	36442	Mid Stroke Min	-	-	-	-	-	24367	36442	-	-	120 psig			
	SET	73941	AET	-	-	-	-	-	24367	36442	-	-				
1480UC-S040 Series S Only	SST	44060	AST	54016	78991	103966	128941	153916	178891	203866	228841	-	MAXIMUM Allowable			
	Mid Stroke Min	17871	Mid Stroke Min	17871	32671	47471	62271	77071	91871	106671	121471	-	PRESSURE = 120 PSI			
	SET	36260	AET	17871	32671	47471	62271	77071	91871	106671	121471	-				
1480UC-S050 Series S Only	SST	55075	AST	-	67520	92495	117470	142445	167420	192395	217370	-	MAXIMUM Allowable			
	Mid Stroke Min	22339	Mid Stroke Min	-	22339	37139	51939	66739	81539	96339	111139	-	PRESSURE = 120 PSI			
	SET	45325	AET	-	22339	37139	51939	66739	81539	96339	111139	-				
1480UC-S060 Series S Only	SST	66089	AST	-	-	81024	105999	130974	155949	180924	205899	230874	MAXIMUM Allowable			
	Mid Stroke Min	26807	Mid Stroke Min	-	-	26807	41607	56407	71207	86007	100807	115607	PRESSURE = 120 PSI			
	SET	54390	AET	-	-	26807	41607	56407	71207	86007	100807	115607				
1480UC-S070 Series S Only	SST	77104	AST	-	-	69554	94529	119504	144479	169454	194429	219404	MAXIMUM Allowable			
	Mid Stroke Min	31212	Mid Stroke Min	-	-	16412	31212	46012	60812	75612	90412	105212	PRESSURE = 120 PSI			
	SET	63329	AET	-	-	16412	31212	46012	60812	75612	90412	105212				
1480UC-S080 Series S Only	SST	88119	AST	-	-	-	83058	108033	133008	157983	182958	207933	MAXIMUM Allowable			
	Mid Stroke Min	35742	Mid Stroke Min	-	-	-	20942	35742	50542	65342	80142	94942	PRESSURE = 120 PSI			
	SET	72520	AET	-	-	-	20942	35742	50542	65342	80142	94942				
1480UC-S090 Series S Only	SST	99134	AST	-	-	-	-	96562	121537	146512	171487	196462	MAXIMUM Allowable			
	Mid Stroke Min	40210	Mid Stroke Min	-	-	-	-	25410	40210	55010	69810	84610	PRESSURE = 120 PSI			
	SET	81585	AET	-	-	-	-	25410	40210	55010	69810	84610				
1480UC-S100 Series S Only	SST	110149	AST	-	-	-	-	-	110066	135041	160016	184991	MAXIMUM Allowable			
	Mid Stroke Min	44678	Mid Stroke Min	-	-	-	-	-	29878	44678	59478	74278	PRESSURE = 120 PSI			
	SET	90650	AET	-	-	-	-	-	29878	44678	59478	74278				
1485UC-S040 Series B/C Only	SST	49690	AST	60920	91865	122810	153755	184700	215645	246590	277535	308480	Maximum Allowable Pressure			
	Mid Stroke Min	20470	Mid Stroke Min	20470	37180	53890	70600	87310	104020	120730	137440	154150	120 psig			
	SET	41533	AET	20470	37180	53890	70600	87310	104020	120730	137440	154150				
1485UC-S050 Series B/C Only	SST	62113	AST	-	76150	107095	138040	168985	199930	230875	261820	292765	Maximum Allowable Pressure			
	Mid Stroke Min	25587	Mid Stroke Min	-	25587	42297	59007	75717	92427	109137	125847	142557	120 psig			
	SET	51916	AET	-	25587	42297	59007	75717	92427	109137	125847	142557				
1485UC-S060 Series B/C Only	SST	74536	AST	-	60434	91379	122324	153269	184214	215159	246104	277049	Maximum Allowable Pressure			
	Mid Stroke Min	30705	Mid Stroke Min	-	13995	30705	47415	64125	80835	97545	114255	130965	120 psig			
	SET	62300	AET	-	13995	30705	47415	64125	80835	97545	114255	130965				
1485UC-S070 Series B/C Only	SST	86958	AST	-	-	75664	106609	137554	168499	199444	230389	261334	Maximum Allowable Pressure			
	Mid Stroke Min	35822	Mid Stroke Min	-	-	19112	35822	52532	69242	85952	102662	119372	120 psig			
	SET	72683	AET	-	-	19112	35822	52532	69242	85952	102662	119372				
1485UC-S080 Series B/C Only	SST	99381	AST	-	-	-	90894	121839	152784	183729	214674	245619	Maximum Allowable Pressure			
	Mid Stroke Min	40940	Mid Stroke Min	-	-	-	24230	40940	57650	74360	91070	107780	120 psig			
	SET	83066	AET	-	-	-	24230	40940	57650	74360	91070	107780				
1485UC-S090 Series B/C Only	SST	111804	AST	-	-	-	-	96701	137069	177437	217805	258173	Maximum Allowable Pressure			
	Mid Stroke Min	46057	Mid Stroke Min	-	-	-	-	24258	46057	67856	89655	111454	120 psig			
	SET	93449	AET	-	-	-	-	24258	46057	67856	89655	111454				
1485UC-S100 Series B/C Only	SST	124226	AST	-	-	-	-	-	121354	152299	183244	214189	Maximum Allowable Pressure			
	Mid Stroke Min	51175	Mid Stroke Min	-	-	-	-	-	34465	51175	67885	84595	120 psig			
	SET	103833	AET	-	-	-	-	-	34465	51175	67885	84595				
1934UC-S040 Series B/C Only	SST	62113	AST	76150	116518	156886	197254	211300	277990	318358	358726	399094	Maximum Allowable Pressure			
	Mid Stroke Min	25587	Mid Stroke Min	25587	47386	69185	90984	104007	134582	156381	178180	199979	120 psig			
	SET	51916	AET	25587	47386	69185	90984	104007	134582	156381	178180	199979				
1934UC-S050 Series B/C Only	SST	74536	AST	51011	91379	131747	172115	212483	252851	293219	333587	373955	Maximum Allowable Pressure			
	Mid Stroke Min	30705	Mid Stroke Min	8906	30705	52504	74303	96102	117901	139700	161499	183298	120 psig			
	SET	62300	AET	8906	30705	52504	74303	96102	117901	139700	161499	183298				
1934UC-S060 Series B/C Only	SST	86958	AST	-	66241	106609	146977	187345	227713	268081	308449	348817	Maximum Allowable Pressure			
	Mid Stroke Min	35822	Mid Stroke Min	-	14023	35822	57621	79420	101219	123018	144817	166616	120 psig			
	SET	72683	AET	-	14023	35822	57621	79420	101219	123018	144817	166616				
1934UC-S070 Series B/C Only	SST	111804	AST	-	-	96700	137069	177438	217807	258176	298545	338914	Maximum Allowable Pressure			
	Mid Stroke Min	46057	Mid Stroke Min	-	-	24258	46057	67856	89655	111454	133253	155052	120 psig			
	SET	93449	AET	-	-	24258	46057	67856	89655	111454	133253	155052				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
	lb. in.			Air torques lb. in.												



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Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
1935UC-S080 Series B/C Only	SST	124226	AST	-	-	-	111931	152299	192667	233035	273403	313771	Maximum Allowable Pressure			
	Mid Stroke Min	51175	Mid Stroke Min	-	-	-	29376	51175	72974	94773	116572	138371	120 psig			
	SET	103833	AET	-	-	-	29376	51175	72974	94773	116572	138371				
1935UC-S090 Series B/C Only	SST	142105	AST	-	-	-	-	133849	174218	214587	254956	295325	Maximum Allowable Pressure			
	Mid Stroke Min	57639	Mid Stroke Min	-	-	-	-	35840	57639	79438	101237	123036	120 psig			
	SET	116949	AET	-	-	-	-	35840	57639	79438	101237	123036				
1935UC-S100 Series B/C Only	SST	162406	AST	-	-	-	-	-	158739	199107	239475	279843	Maximum Allowable Pressure			
	Mid Stroke Min	65873	Mid Stroke Min	-	-	-	-	-	44074	65873	87672	109471	120 psig			
	SET	133656	AET	-	-	-	-	-	44074	65873	87672	109471				
1935UC-S110 Series B/C Only	SST	182706	AST	-	-	-	-	-	-	183626	223995	264364	Maximum Allowable Pressure			
	Mid Stroke Min	74107	Mid Stroke Min	-	-	-	-	-	-	52308	74107	95906	120 psig			
	SET	150363	AET	-	-	-	-	-	-	52308	74107	95906				
1935UC-S120 Series B/C Only	SST	203007	AST	-	-	-	-	-	-	-	208514	248883	Maximum Allowable Pressure			
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	-	-	-	-	60543	82342	120 psig			
	SET	167070	AET	-	-	-	-	-	-	-	60543	82342				
2380UC-S040 Series S Only	SST	70853	AST	86864	127027	167190	207353	-	-	-	-	-	MAXIMUM Allowable			
	Mid Stroke Min	28739	Mid Stroke Min	28739	52539	76339	100139	-	-	-	-	-	PRESSURE = 120 PSI			
	SET	58310	AET	28739	52539	76339	100139	-	-	-	-	-				
2380UC-S050 Series S Only	SST	88566	AST	-	108581	148744	188907	229070	-	-	-	-	MAXIMUM Allowable			
	Mid Stroke Min	35923	Mid Stroke Min	-	35923	59723	83523	107323	-	-	-	-	PRESSURE = 120 PSI			
	SET	72888	AET	-	35923	59723	83523	107323	-	-	-	-				
2380UC-S060 Series S Only	SST	106279	AST	-	-	130296	170459	210622	-	-	-	-	MAXIMUM Allowable			
	Mid Stroke Min	43108	Mid Stroke Min	-	-	43108	66908	90708	-	-	-	-	PRESSURE = 120 PSI			
	SET	87465	AET	-	-	43108	66908	90708	-	-	-	-				
2380UC-S070 Series S Only	SST	123993	AST	-	-	111850	152013	192176	232339	-	-	-	MAXIMUM Allowable			
	Mid Stroke Min	50293	Mid Stroke Min	-	-	26493	50293	74093	97893	-	-	-	PRESSURE = 120 PSI			
	SET	102043	AET	-	-	26493	50293	74093	97893	-	-	-				
2380UC-S080 Series S Only	SST	141705	AST	-	-	-	133565	173728	213891	-	-	-	MAXIMUM Allowable			
	Mid Stroke Min	57477	Mid Stroke Min	-	-	-	33677	57477	81277	-	-	-	PRESSURE = 120 PSI			
	SET	116620	AET	-	-	-	33677	57477	81277	-	-	-				
2380UC-S090 Series S Only	SST	159419	AST	-	-	-	-	155282	195445	235608	-	-	MAXIMUM Allowable			
	Mid Stroke Min	64662	Mid Stroke Min	-	-	-	-	40862	64662	88462	-	-	PRESSURE = 120 PSI			
	SET	131198	AET	-	-	-	-	40862	64662	88462	-	-				
2380UC-S100 Series S Only	SST	177132	AST	-	-	-	-	-	176997	217160	-	-	MAXIMUM Allowable			
	Mid Stroke Min	71846	Mid Stroke Min	-	-	-	-	-	48046	71846	-	-	PRESSURE = 120 PSI			
	SET	145775	AET	-	-	-	-	-	48046	71846	-	-				
2385UC-S040 Series B/C Only	SST	81203	AST	99553	149345	199137	248929	298721	348513	398305	448097	497889	Maximum Allowable Pressure			
	Mid Stroke Min	32937	Mid Stroke Min	32937	59824	86711	113598	140485	167372	194259	221146	248033	120 psig			
	SET	66828	AET	32937	59824	86711	113598	140485	167372	194259	221146	248033				
2385UC-S050 Series B/C Only	SST	101504	AST	74650	124442	174234	224026	273818	323610	373402	423194	472986	Maximum Allowable Pressure			
	Mid Stroke Min	41171	Mid Stroke Min	14284	41171	68058	94945	121832	148719	175606	202493	229380	120 psig			
	SET	83535	AET	14284	41171	68058	94945	121832	148719	175606	202493	229380				
2385UC-S060 Series B/C Only	SST	121804	AST	-	99538	149330	199122	248914	298706	348498	398290	448082	Maximum Allowable Pressure			
	Mid Stroke Min	49405	Mid Stroke Min	-	22518	49405	76292	103179	130066	156953	183840	210727	120 psig			
	SET	100242	AET	-	22518	49405	76292	103179	130066	156953	183840	210727				
2385UC-S070 Series B/C Only	SST	142105	AST	-	-	124426	174218	224010	273802	323594	373386	423178	Maximum Allowable Pressure			
	Mid Stroke Min	57639	Mid Stroke Min	-	-	30752	57639	84526	111413	138300	165187	192074	120 psig			
	SET	116949	AET	-	-	30752	57639	84526	111413	138300	165187	192074				
2385UC-S080 Series B/C Only	SST	162406	AST	-	-	-	149315	199107	248899	298691	348483	398275	Maximum Allowable Pressure			
	Mid Stroke Min	65873	Mid Stroke Min	-	-	-	38986	65873	92760	119647	146534	173421	120 psig			
	SET	133656	AET	-	-	-	38986	65873	92760	119647	146534	173421				
2385UC-S090 Series B/C Only	SST	182706	AST	-	-	-	-	174203	223995	273787	323579	373371	Maximum Allowable Pressure			
	Mid Stroke Min	74107	Mid Stroke Min	-	-	-	-	47220	74107	100994	127881	154768	120 psig			
	SET	150363	AET	-	-	-	-	47220	74107	100994	127881	154768				
2385UC-S100 Series B/C Only	SST	203007	AST	-	-	-	-	-	199091	248883	298675	348467	Maximum Allowable Pressure			
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	-	-	55455	82342	109229	136116	120 psig			
	SET	167070	AET	-	-	-	-	-	55455	82342	109229	136116				
3071UC-S040 Series C Only	SST	101504	AST	124442	187837	251232	314627	378022	441417	504812	568207	-	Maximum Allowable Pressure			
	Mid Stroke Min	41171	Mid Stroke Min	41171	75404	109637	143870	178103	212336	246569	280802	-	120 psig			
	SET	83535	AET	41171	75404	109637	143870	178103	212336	246569	280802	-				
3071UC-S050 Series C Only	SST	121804	AST	85936	149330	212724	276118	339512	402906	466300	529694	593088	Maximum Allowable Pressure			
	Mid Stroke Min	49405	Mid Stroke Min	15172	49405	83638	117871	152104	186337	220570	254803	289036	120 psig			
	SET	100242	AET	15172	49405	83638	117871	152104	186337	220570	254803	289036				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				Air torques lb. in.												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
3071UC-S060 Series C Only	SST	142105	AST	-	110823	174218	237613	301008	364403	427798	491193	554588	Maximum Allowable Pressure			
	Mid Stroke Min	57639	Mid Stroke Min	-	23406	57639	91872	126105	160338	194571	228804	263037	120 psig			
	SET	116949	AET	-	23406	57639	91872	126105	160338	194571	228804	263037				
3071UC-S070 Series C Only	SST	182706	AST	-	-	160601	223995	287389	350783	414177	477571	540965	Maximum Allowable Pressure			
	Mid Stroke Min	74107	Mid Stroke Min	-	-	39874	74107	108340	142573	176806	211039	245272	120 psig			
	SET	150363	AET	-	-	39874	74107	108340	142573	176806	211039	245272				
3071UC-S080 Series C Only	SST	203007	AST	-	-	-	185488	248883	312278	375673	439067	502461	Maximum Allowable Pressure			
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	48109	82342	116575	150808	185041	219274	120 psig			
	SET	167070	AET	-	-	-	48109	82342	116575	150808	185041	219274				
3072UC-S090 Series C Only	SST	219786	AST	-	-	-	-	206060	269454	332848	396242	459636	Maximum Allowable Pressure			
	Mid Stroke Min	89147	Mid Stroke Min	-	-	-	-	54914	89147	123380	157613	191846	120 psig			
	SET	180879	AET	-	-	-	-	54914	89147	123380	157613	191846				
3072UC-S100 Series C Only	SST	251184	AST	-	-	-	-	-	244552	307947	371341	434735	Maximum Allowable Pressure			
	Mid Stroke Min	101883	Mid Stroke Min	-	-	-	-	-	67650	101883	136116	170349	120 psig			
	SET	206718	AET	-	-	-	-	-	67650	101883	136116	170349				
3072UC-S110 Series C Only	SST	282582	AST	-	-	-	-	-	-	283047	346441	409835	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	-	-	80385	114618	148851	120 psig			
	SET	232558	AET	-	-	-	-	-	-	80385	114618	148851				
3072UC-S120 Series C Only	SST	282582	AST	-	-	-	-	-	-	-	-	346441	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	-	-	-	-	114618	120 psig			
	SET	232558	AET	-	-	-	-	-	-	-	-	114618				
3731UC-S040 Series C Only	SST	125592	AST	153974	230985	307996	385007	462018	539029	616040	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	50941	Mid Stroke Min	50941	92527	134113	175699	217285	258871	300457	-	-	120 psig			
	SET	103359	AET	50941	92527	134113	175699	217285	258871	300457	-	-				
3731UC-S050 Series C Only	SST	156990	AST	115457	192467	269477	346487	423497	500507	577517	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	63677	Mid Stroke Min	22091	63677	105263	146849	188435	230021	271607	-	-	120 psig			
	SET	129199	AET	22091	63677	105263	146849	188435	230021	271607	-	-				
3731UC-S060 Series C Only	SST	188388	AST	-	153949	230960	307971	384982	461993	539004	616014	-	Maximum Allowable Pressure			
	Mid Stroke Min	76412	Mid Stroke Min	-	34826	76412	117988	159584	201170	242756	284342	-	120 psig			
	SET	155039	AET	-	34826	76412	117988	159584	201170	242756	284342	-				
3731UC-S070 Series C Only	SST	219786	AST	-	-	192444	269454	346464	423474	500484	577494	-	Maximum Allowable Pressure			
	Mid Stroke Min	89147	Mid Stroke Min	-	-	47561	89147	130733	172319	213905	255491	-	120 psig			
	SET	180879	AET	-	-	47561	89147	130733	172319	213905	255491	-				
3731UC-S080 Series C Only	SST	251184	AST	-	-	-	230936	307947	384958	461969	538979	615989	Maximum Allowable Pressure			
	Mid Stroke Min	101883	Mid Stroke Min	-	-	-	60297	101883	143469	185055	226641	268227	120 psig			
	SET	206718	AET	-	-	-	60297	101883	143469	185055	226641	268227				
3731UC-S090 Series C Only	SST	282582	AST	-	-	-	-	269431	346441	423451	500461	577471	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	73032	114618	156204	197790	239376	120 psig			
	SET	232558	AET	-	-	-	-	73032	114618	156204	197790	239376				
3731UC-S100 Series C Only	SST	313980	AST	-	-	-	-	-	307923	384934	461944	538954	Maximum Allowable Pressure			
	Mid Stroke Min	127353	Mid Stroke Min	-	-	-	-	-	85767	127353	168939	210525	120 psig			
	SET	258398	AET	-	-	-	-	-	85767	127353	168939	210525				
4534UC-S040 Series C Only	SST	125592	AST	153974	247542	341110	434678	528246	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	50941	Mid Stroke Min	50941	101468	151995	202522	253049	-	-	-	-	120 psig			
	SET	103359	AET	50941	101468	151995	202522	253049	-	-	-	-				
4534UC-S050 Series C Only	SST	188388	AST	137392	230960	324528	418096	511664	605232	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	76412	Mid Stroke Min	25886	76412	126938	177464	227990	278516	-	-	-	120 psig			
	SET	155039	AET	25886	76412	126938	177464	227990	278516	-	-	-				
4534UC-S060 Series C Only	SST	219786	AST	-	175886	269454	363022	456590	550158	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	89147	Mid Stroke Min	-	38620	89147	139674	190201	240728	-	-	-	120 psig			
	SET	180879	AET	-	38620	89147	139674	190201	240728	-	-	-				
4534UC-S070 Series C Only	SST	251184	AST	-	-	214379	307947	401515	495083	588651	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	101883	Mid Stroke Min	-	-	51357	101883	152409	202935	253461	-	-	120 psig			
	SET	206718	AET	-	-	51357	101883	152409	202935	253461	-	-				
4534UC-S080 Series C Only	SST	282582	AST	-	-	-	252873	346441	440009	533577	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	64091	114618	165145	215672	-	-	120 psig			
	SET	232558	AET	-	-	-	64091	114618	195145	245672	-	-				
4534UC-S090 Series C Only	SST	313980	AST	-	-	-	-	291366	384934	478502	572070	-	Maximum Allowable Pressure			
	Mid Stroke Min	127353	Mid Stroke Min	-	-	-	-	76827	127353	177879	228405	-	120 psig			
	SET	258398	AET	-	-	-	-	76827	127353	177879	228405	-				
5336UC-S040 Series C Only	SST	179597	AST	220183	330308	440433	550558	-	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	72846	Mid Stroke Min	72846	132313	191780	251247	-	-	-	-	-	120 psig			
	SET	147804	AET	72846	132313	191780	251247	-	-	-	-	-				
5336UC-S050 Series C Only	SST	224496	AST	165104	275228	385352	495476	605600	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	91058	Mid Stroke Min	31592	91058	150524	209990	269456	-	-	-	-	120 psig			
	SET	184755	AET	31592	91058	150524	209990	269456	-	-	-	-				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
				Air torques lb. in.												



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Closed (CW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.													
				Supply Pressure psig													
	40	50		60	70	80	90	100	110	120	130	140	150	160			
5336UC-S060 Series C Only	SST	269396	AST	-	220149	330274	440399	550524	-	-	-	-	Maximum Allowable Pressure				
	Mid Stroke Min	109269	Mid Stroke Min	-	49802	109269	168736	228203	-	-	-	-	120 psig				
	SET	221706	AET	-	49802	109269	168736	228203	-	-	-	-					
5336UC-S070 Series C Only	SST	314925	AST	-	-	275196	385320	495444	605568	-	-	-	Maximum Allowable Pressure				
	Mid Stroke Min	127481	Mid Stroke Min	-	-	68015	127481	186947	246413	-	-	-	120 psig				
	SET	258657	AET	-	-	68015	127481	186947	246413	-	-	-					
5336UC-S080 Series C Only	SST	359194	AST	-	-	-	330241	440366	550491	-	-	-	Maximum Allowable Pressure				
	Mid Stroke Min	145693	Mid Stroke Min	-	-	-	86226	145693	205160	-	-	-	120 psig				
	SET	295608	AET	-	-	-	86226	145693	205160	-	-	-					
5336UC-S090 Series C Only	SST	404093	AST	-	-	-	-	385287	495411	605535	-	-	Maximum Allowable Pressure				
	Mid Stroke Min	163904	Mid Stroke Min	-	-	-	-	104438	163904	223370	-	-	120 psig				
	SET	332559	AET	-	-	-	-	104438	163904	223370	-	-	POA, Consult Factory				
5336UC-S100 Series C Only	SST	448993	AST	-	-	-	-	-	440332	550457	-	-	Maximum Allowable Pressure				
	Mid Stroke Min	182116	Mid Stroke Min	-	-	-	-	-	122649	182116	-	-	120 psig				
	SET	369510	AET	-	-	-	-	-	122649	182116	-	-	POA, Consult Factory				
5336UC-S110 Series C Only	SST	493892	AST	-	-	-	-	-	-	495379	605503	-	Maximum Allowable Pressure				
	Mid Stroke Min	200327	Mid Stroke Min	-	-	-	-	-	-	140861	200327	-	120 psig				
	SET	406461	AET	-	-	-	-	-	-	140861	200327	-	POA, Consult Factory				
5336UC-S120 Series C Only	SST	538791	AST	-	-	-	-	-	-	-	550424	-	Maximum Allowable Pressure				
	Mid Stroke Min	218539	Mid Stroke Min	-	-	-	-	-	-	-	159073	-	120 psig				
	SET	443412	AET	-	-	-	-	-	-	-	159073	-	POA, Consult Factory				
6044UC-S040 Series C Only	SST	200731	AST	246093	362894	479695	596496	713297	830098	946899	1063700	1180501	Maximum Allowable Pressure				
	Mid Stroke Min	81418	Mid Stroke Min	81418	147472	213526	279580	345634	411688	477742	543796	609850	120 psig				
	SET	165197	AET	81418	147472	213526	279580	345634	411688	477742	543796	609850					
6044UC-S050 Series C Only	SST	250914	AST	190815	307616	424417	541218	658019	774820	891621	1008422	1125223	Maximum Allowable Pressure				
	Mid Stroke Min	101773	Mid Stroke Min	35719	101773	167827	233881	299935	365989	432043	498097	564151	120 psig				
	SET	206496	AET	35719	101773	167827	233881	299935	365989	432043	498097	564151					
6044UC-S060 Series C Only	SST	301096	AST	-	252338	369139	485940	602741	719542	836343	953144	1069945	Maximum Allowable Pressure				
	Mid Stroke Min	122128	Mid Stroke Min	-	56074	122128	188182	254236	320290	386344	452398	518452	120 psig				
	SET	247795	AET	-	56074	122128	188182	254236	320290	386344	452398	518452					
6044UC-S070 Series C Only	SST	351279	AST	-	-	313861	430662	547463	664264	781065	897866	1014667	Maximum Allowable Pressure				
	Mid Stroke Min	142482	Mid Stroke Min	-	-	76428	142482	208536	274590	340644	406698	472752	120 psig				
	SET	289183	AET	-	-	76428	142482	208536	274590	340644	406698	472752					
6044UC-S080 Series C Only	SST	401462	AST	-	-	-	375384	492185	608986	725787	842588	959389	Maximum Allowable Pressure				
	Mid Stroke Min	162837	Mid Stroke Min	-	-	-	96783	162837	228891	294945	360999	427053	120 psig				
	SET	330394	AET	-	-	-	96783	162837	228891	294945	360999	427053					
7114UC-S040 Series C Only	SST	236251	AST	289640	427111	564582	702053	839524	976995	1114466	1251937	1389408	Maximum Allowable Pressure				
	Mid Stroke Min	95826	Mid Stroke Min	95826	173569	251312	329055	406798	484541	562284	640027	717770	120 psig				
	SET	194429	AET	95826	173569	251312	329055	406798	484541	562284	640027	717770					
7114UC-S050 Series C Only	SST	295314	AST	224579	362050	499521	636992	774463	911934	1049405	1186876	1324347	Maximum Allowable Pressure				
	Mid Stroke Min	119782	Mid Stroke Min	42039	119782	197525	275268	353011	430754	508497	586240	663983	120 psig				
	SET	243037	AET	42039	119782	197525	275268	353011	430754	508497	586240	663983					
7114UC-S060 Series C Only	SST	354377	AST	-	296989	434460	571931	709402	846873	984344	1121815	1259286	Maximum Allowable Pressure				
	Mid Stroke Min	143739	Mid Stroke Min	-	65996	143739	221482	299225	376968	454711	532454	610197	120 psig				
	SET	291644	AET	-	65996	143739	221482	299225	376968	454711	532454	610197					
7114UC-S070 Series C Only	SST	413440	AST	-	-	369399	506870	644341	781812	919283	1056754	1194225	Maximum Allowable Pressure				
	Mid Stroke Min	167695	Mid Stroke Min	-	-	89952	167695	245438	323181	400924	478667	556410	120 psig				
	SET	340251	AET	-	-	89952	167695	245438	323181	400924	478667	556410					
7114UC-S080 Series C Only	SST	472503	AST	-	-	-	441809	579280	716751	854222	991693	1129164	Maximum Allowable Pressure				
	Mid Stroke Min	191652	Mid Stroke Min	-	-	-	113909	191652	269395	347138	424881	502624	120 psig				
	SET	388859	AET	-	-	-	113909	191652	269395	347138	424881	502624					
7114UC-S090 Series C Only	SST	531566	AST	-	-	-	-	514219	651690	789161	926632	1064103	Maximum Allowable Pressure				
	Mid Stroke Min	215608	Mid Stroke Min	-	-	-	-	137865	215608	293351	371094	448837	120 psig				
	SET	437466	AET	-	-	-	-	137865	215608	293351	371094	448837	POA, Consult Factory				
7114UC-S100 Series C Only	SST	590629	AST	-	-	-	-	-	586629	724100	861571	999042	Maximum Allowable Pressure				
	Mid Stroke Min	239565	Mid Stroke Min	-	-	-	-	-	161822	239565	317308	395051	120 psig				
	SET	486073	AET	-	-	-	-	-	161822	239565	317308	395051	POA, Consult Factory				
7114UC-S110 Series C Only	SST	649692	AST	-	-	-	-	-	-	659040	796511	933982	Maximum Allowable Pressure				
	Mid Stroke Min	263521	Mid Stroke Min	-	-	-	-	-	-	185778	263521	341264	120 psig				
	SET	534681	AET	-	-	-	-	-	-	185778	263521	341264	POA, Consult Factory				
7114UC-S120 Series C Only	SST	708754	AST	-	-	-	-	-	-	-	731450	868921	Maximum Allowable Pressure				
	Mid Stroke Min	287478	Mid Stroke Min	-	-	-	-	-	-	-	209735	287478	120 psig				
	SET	583288	AET	-	-	-	-	-	-	-	209735	287478	POA, Consult Factory				
Model Number	Spring Torques		Torque at	Supply Pressure psig													
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																	

Model Number	Spring Torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
			Air torques lb. in.													



Series A/B/C/S: Models 023 - 7114

Spring Return - Fail Open (CCW)

Canted Yoke Design

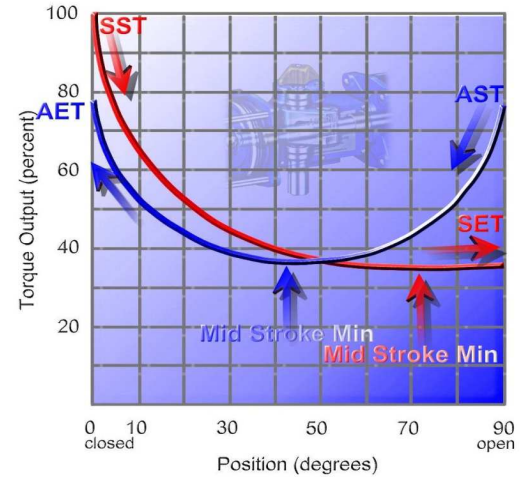
The chart to the right shows the torque curve of the Morin canted yoke spring return for fail open (fail counter-clockwise) operation.

Proper selection of the actuator is critical to the successful operation of your automated package.

Note: Air torque curve shown is with air pressure equal to spring code, i.e. - S061at 60 psig. Curve will vary for pressures used not equal to spring code.

AST = Air Start Torque
AET = Air End Torque

SST = Spring Start Torque
SET = Spring End Torque



Model Number	Spring Torques lb. in.	Torque at	#REF!													
			Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
023UC-S041 Series A/B/S Only	SST	842	AST	687	923	1159	1394	1630	1866	2102	2338	2573	2809	3045	3281	3517
	Mid Stroke Min	276	Mid Stroke Min	276	650	1024	1397	1771	2145	2519	2893	3266	3640	4014	4388	4762
	SET	276	AET	560	934	1308	1681	2055	2429	2803	3177	3550	3924	4298	4672	5046
023UC-S051 Series A/B/S Only	SST	1061	AST	-	866	1102	1338	1573	1809	2045	2281	2517	2752	2988	3224	3460
	Mid Stroke Min	352	Mid Stroke Min	-	352	726	1100	1473	1847	2221	2595	2969	3342	3716	4090	4464
	SET	352	AET	-	714	1088	1462	1835	2209	2583	2957	3331	3704	4078	4452	4826
023UC-S061 Series A/B/S Only	SST	1263	AST	-	-	1031	1267	1503	1738	1974	2210	2446	2682	2917	3153	3389
	Mid Stroke Min	414	Mid Stroke Min	-	-	414	788	1162	1535	1909	2283	2657	3031	3404	3778	4152
	SET	414	AET	-	-	840	1214	1588	1961	2335	2709	3083	3457	3830	4204	4578
023UC-S071 Series A/B/S Only	SST	1466	AST	-	-	-	1195	1431	1667	1902	2138	2374	2610	2846	3081	3317
	Mid Stroke Min	486	Mid Stroke Min	-	-	-	486	860	1234	1607	1981	2355	2729	3103	3476	3850
	SET	486	AET	-	-	-	987	1361	1735	2108	2482	2856	3230	3604	3977	4351
023UC-S081 Series A/B/S Only	SST	1685	AST	-	-	-	-	1374	1610	1846	2081	2317	2553	2789	3025	3260
	Mid Stroke Min	552	Mid Stroke Min	-	-	-	-	552	926	1300	1673	2047	2421	2795	3169	3542
	SET	552	AET	-	-	-	-	1120	1494	1868	2241	2615	2989	3363	3737	4110
023UC-S091 Series A/B/S Only	SST	1887	AST	-	-	-	-	-	1539	1775	2011	2246	2482	2718	2954	3190
	Mid Stroke Min	624	Mid Stroke Min	-	-	-	-	-	624	998	1372	1745	2119	2493	2867	3241
	SET	624	AET	-	-	-	-	-	1267	1641	2015	2388	2762	3136	3510	3884
023UC-S101 Series A/B/S Only	SST	2100	AST	-	-	-	-	-	-	1713	1949	2185	2420	2656	2892	3128
	Mid Stroke Min	693	Mid Stroke Min	-	-	-	-	-	-	693	1067	1441	1814	2188	2562	2936
	SET	693	AET	-	-	-	-	-	-	1407	1781	2155	2528	2902	3276	3650
023UC-S121 Series A/B/S Only	SST	2527	AST	-	-	-	-	-	-	-	-	2061	2297	2533	2768	3004
	Mid Stroke Min	828	Mid Stroke Min	-	-	-	-	-	-	-	-	828	1202	1576	1949	2323
	SET	828	AET	-	-	-	-	-	-	-	-	1680	2054	2428	2801	3175
023UC-S141 Series A/B/S Only	SST	2937	AST	-	-	-	-	-	-	-	-	-	-	2395	2631	2867
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	973	1347	1721
	SET	973	AET	-	-	-	-	-	-	-	-	-	-	1974	2348	2722
023UC-S161 Series A/B/S Only	SST	3369	AST	-	-	-	-	-	-	-	-	-	-	-	-	2748
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1104
	SET	1104	AET	-	-	-	-	-	-	-	-	-	-	-	-	2240
036UC-S041 Series A/B/S Only	SST	1314	AST	1072	1478	1884	2290	2696	3102	3507	3913	4319	4725	5131	5537	5943
	Mid Stroke Min	435	Mid Stroke Min	435	1079	1722	2366	3009	3653	4296	4940	5583	6227	6870	7514	8157
	SET	435	AET	882	1526	2169	2813	3456	4100	4743	5387	6030	6674	7317	7961	8604
036UC-S051 Series A/B/S Only	SST	1640	AST	-	1337	1743	2149	2555	2961	3367	3772	4178	4584	4990	5396	5802
	Mid Stroke Min	545	Mid Stroke Min	-	545	1189	1832	2476	3119	3763	4406	5050	5693	6337	6980	7624
	SET	545	AET	-	1106	1750	2393	3037	3680	4324	4967	5611	6254	6898	7541	8185
036UC-S061 Series A/B/S Only	SST	1971	AST	-	-	1608	2014	2420	2826	3232	3638	4043	4449	4855	5261	5667
	Mid Stroke Min	656	Mid Stroke Min	-	-	656	1300	1943	2587	3230	3874	4517	5161	5804	6448	7091
	SET	656	AET	-	-	1330	1974	2617	3261	3904	4548	5191	5835	6478	7122	7765
036UC-S071 Series A/B/S Only	SST	2302	AST	-	-	-	1878	2284	2690	3096	3502	3908	4313	4719	5125	5531
	Mid Stroke Min	759	Mid Stroke Min	-	-	-	759	1403	2046	2690	3333	3977	4620	5264	5907	6551
	SET	759	AET	-	-	-	1540	2184	2827	3471	4114	4758	5401	6045	6688	7332
036UC-S081 Series A/B/S Only	SST	2628	AST	-	-	-	-	2143	2549	2955	3361	3767	4173	4578	4984	5390
	Mid Stroke Min	869	Mid Stroke Min	-	-	-	-	869	1513	2156	2800	3443	4087	4730	5374	6017
	SET	869	AET	-	-	-	-	1764	2408	3051	3695	4338	4982	5625	6269	6912
Model Number	Spring Torques lb. in.	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
Air torques lb. in.																



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Spring Return - Fail Open (CCW)

Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
036UC-S091 Series A/B/S Only	SST	2953	AST	-	-	-	-	-	2409	2815	3221	3627	4033	4439	4844	5250
	Mid Stroke Min	976	Mid Stroke Min	-	-	-	-	-	976	1620	2263	2907	3550	4194	4837	5481
	SET	976	AET	-	-	-	-	-	1981	2625	3268	3912	4555	5199	5842	6486
036UC-S101 Series A/B/S Only	SST	3285	AST	-	-	-	-	-	-	2679	3085	3491	3897	4303	4709	5114
	Mid Stroke Min	1087	Mid Stroke Min	-	-	-	-	-	-	1087	1731	2374	3018	3661	4305	4948
	SET	1087	AET	-	-	-	-	-	-	2205	2849	3492	4136	4779	5423	6066
036UC-S121 Series A/B/S Only	SST	3942	AST	-	-	-	-	-	-	-	-	3215	3621	4027	4433	4839
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	-	-	-	-	1304	1948	2591	3235	3878
	SET	1304	AET	-	-	-	-	-	-	-	-	2646	3290	3933	4577	5220
036UC-S141 Series A/B/S Only	SST	4599	AST	-	-	-	-	-	-	-	-	-	-	3751	4157	4563
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	1521	2165	2808
	SET	1521	AET	-	-	-	-	-	-	-	-	-	-	3087	3731	4374
036UC-S161 Series A/B/S Only	SST	5278	AST	-	-	-	-	-	-	-	-	-	-	-	-	4305
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1725
	SET	1725	AET	-	-	-	-	-	-	-	-	-	-	-	-	3500
046UC-S041 Series A/B/S Only	SST	1685	AST	1374	1845.6	2317.2	2788.8	3260.4	3732	4204	4675	5147	5618	6090	6562	7033
	Mid Stroke Min	552	Mid Stroke Min	552	1299.6	2047.2	2794.8	3542.4	4290	5038	5785	6533	7280	8028	8776	9523
	SET	552	AET	1120	1867.6	2615.2	3362.8	4110.4	4858	5606	6353	7101	7848	8596	9344	10091
046UC-S051 Series A/B/S Only	SST	2100	AST	-	1713	2184.6	2656.2	3127.8	3599	4071	4543	5014	5486	5957	6429	6901
	Mid Stroke Min	693	Mid Stroke Min	-	693	1440.6	2188.2	2935.8	3683	4431	5179	5926	6674	7421	8169	8917
	SET	693	AET	-	1407	2154.6	2902.2	3649.8	4397	5145	5893	6640	7388	8135	8883	9631
046UC-S061 Series A/B/S Only	SST	2527	AST	-	-	2061	2532.6	3004.2	3475.8	3947	4419	4891	5362	5834	6305	6777
	Mid Stroke Min	828	Mid Stroke Min	-	-	828	1575.6	2323.2	3070.8	3818	4566	5314	6061	6809	7556	8304
	SET	828	AET	-	-	1680	2427.6	3175.2	3922.8	4670	5418	6166	6913	7661	8408	9156
046UC-S071 Series A/B/S Only	SST	2937	AST	-	-	-	2395	2866.6	3338	3810	4281	4753	5225	5696	6168	6639
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	973	1720.6	2468	3216	3963	4711	5459	6206	6954	7701
	SET	973	AET	-	-	-	1974	2721.6	3469	4217	4964	5712	6460	7207	7955	8702
046UC-S081 Series A/B/S Only	SST	3369	AST	-	-	-	-	2748	3219.6	3691	4163	4634	5106	5578	6049	6521
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	1104	1851.6	2599	3347	4094	4842	5590	6337	7085
	SET	1104	AET	-	-	-	-	2240	2987.6	3735	4483	5230	5978	6726	7473	8221
058UC-S041 Series A/B/S Only	SST	2100	AST	1713	2318	2923	3527	4132	4737	5342	5947	6551	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	693	Mid Stroke Min	693	1652	2611	3569	4528	5487	6446	7405	8363				
	SET	693	AET	1407	2366	3325	4283	5242	6201	7160	8119	9077				
058UC-S051 Series A/B/S Only	SST	2527	AST	-	2061	2666	3271	3875	4480	5085	5690	6295	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	828	Mid Stroke Min	-	828	1787	2746	3704	4663	5622	6581	7540				
	SET	828	AET	-	1680	2639	3598	4556	5515	6474	7433	8392				
058UC-S061 Series A/B/S Only	SST	2937	AST	-	-	2395	3000	3605	4209	4814	5419	6024	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	973	Mid Stroke Min	-	-	973	1932	2891	3849	4808	5767	6726				
	SET	973	AET	-	-	1974	2933	3892	4850	5809	6768	7727				
058UC-S071 Series A/B/S Only	SST	3369	AST	-	-	-	2748	3353	3958	4562	5167	5772	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	1104	2063	3022	3980	4939	5898				
	SET	1104	AET	-	-	-	2240	3199	4158	5116	6075	7034				
059UC-S081 Series A/B/S Only	SST	3942	AST	-	-	-	-	3215	3820	4425	5029	5634	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	1304	2263	3222	4180	5139				
	SET	1304	AET	-	-	-	-	2646	3605	4564	5522	6481				
059UC-S091 Series A/B/S Only	SST	4599	AST	-	-	-	-	-	3751	4356	4961	5565	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	1521	2480	3439	4397				
	SET	1521	AET	-	-	-	-	-	3087	4046	5005	5963				
059UC-S101 Series A/B/S Only	SST	5278	AST	-	-	-	-	-	-	4305	4910	5515	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	1725	2684	3643				
	SET	1725	AET	-	-	-	-	-	-	3500	4459	5418				
072UC-S041 Series A/B/S Only	SST	2628	AST	2143	2955	3767	4578	5390	6202	7014	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)					
	Mid Stroke Min	869	Mid Stroke Min	869	2156	3443	4730	6017	7304	8591						
	SET	869	AET	1764	3051	4338	5625	6912	8199	9486						
072UC-S051 Series A/B/S Only	SST	3285	AST	-	2679	3491	4303	5114	5926	6738	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)					
	Mid Stroke Min	1087	Mid Stroke Min	-	1087	2374	3661	4948	6235	7522						
	SET	1087	AET	-	2205	3492	4779	6066	7353	8640						
072UC-S061 Series A/B/S Only	SST	3942	AST	-	-	3215	4027	4839	5650	6462	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)					
	Mid Stroke Min	1304	Mid Stroke Min	-	-	1304	2591	3878	5165	6452						
	SET	1304	AET	-	-	2646	3933	5220	6507	7794						
072UC-S071 Series A/B/S Only	SST	4599	AST	-	-	-	3751	4563	5375	6186	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)					
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	1521	2808	4095	5382						
	SET	1521	AET	-	-	-	3087	4374	5661	6948						
072UC-S081 Series A/B/S Only	SST	5278	AST	-	-	-	-	4305	5117	5929	Maximum Allowable Pressure 100 psig (Series A / Max Shell Pressure 175 psig)					
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	1725	3012	4299						
	SET	1725	AET	-	-	-	-	3500	4787	6074						
100UC-S041 Series B/S Only	SST	3650	AST	2977	4002	5027	6052	7077	8102	-	Maximum Allowable Pressure 100 psig					
	Mid Stroke Min	1208	Mid Stroke Min	1208	2833	4458	6083	7708	9333	-						
	SET	1208	AET	2450	4075	5700	7325	8950	10575	-						
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
Air torques lb. in.																



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Spring Return - Fail Open (CCW)

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Model Number	Spring Torques		Torque at	Air torques lb. in.												
	lb. in.			Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
100UC-S051 Series B/S Only	SST	4559	AST	-	3719	4744	5769	6794	7819	-	Maximum Allowable Pressure					
	Mid Stroke Min	1511	Mid Stroke Min	-	1511	3136	4761	6386	8011	-	100 psig					
	SET	1511	AET	-	3066	4691	6316	7941	9566	-						
100UC-S061 Series B/S Only	SST	5480	AST	-	-	4470	5495	6520	7545	8570	Maximum Allowable Pressure					
	Mid Stroke Min	1808	Mid Stroke Min	-	-	1808	3433	5058	6683	8308	100 psig					
	SET	1808	AET	-	-	3668	5293	6918	8543	10168						
100UC-S071 Series B/S Only	SST	6390	AST	-	-	-	5212	6237	7262	8287	Maximum Allowable Pressure					
	Mid Stroke Min	2111	Mid Stroke Min	-	-	-	2111	3736	5361	6986	100 psig					
	SET	2111	AET	-	-	-	4284	5909	7534	9159						
100UC-S081 Series B/S Only	SST	7300	AST	-	-	-	-	5954	6979	8004	Maximum Allowable Pressure					
	Mid Stroke Min	2415	Mid Stroke Min	-	-	-	-	2415	4040	5665	100 psig					
	SET	2415	AET	-	-	-	-	4900	6525	8150						
135UC-S041	SST	4927	AST	4019	5405	6791	8177	9563	10949	12335	13721	15107	16493	17879	19265	20651
	Mid Stroke Min	1472	Mid Stroke Min	1472	2317	3162	4007	4852	5697	6542	7387	8232	9077	9922	10767	11612
	SET	1472	AET	2986	5183	7380	9577	11774	13971	16168	18365	20562	22759	24956	27153	29350
135UC-S051	SST	6161	AST	-	5025	6411	7797	9183	10569	11955	13341	14727	16113	17499	18885	20271
	Mid Stroke Min	1840	Mid Stroke Min	-	1840	2685	3530	4375	5220	6065	6910	7755	8600	9445	10290	11135
	SET	1840	AET	-	3734	5931	8128	10325	12522	14719	16916	19113	21310	23507	25704	27901
135UC-S061	SST	7391	AST	-	-	6028	7414	8800	10186	11572	12958	14344	15730	17116	18502	19888
	Mid Stroke Min	2208	Mid Stroke Min	-	-	2208	3053	3898	4743	5588	6433	7278	8123	8968	9813	10658
	SET	2208	AET	-	-	4479	6676	8873	11070	13267	15464	17661	19858	22055	24252	26449
135UC-S071	SST	8624	AST	-	-	-	7035	8421	9807	11193	12579	13965	15351	16737	18123	19509
	Mid Stroke Min	2576	Mid Stroke Min	-	-	-	2576	3421	4266	5111	5956	6801	7646	8491	9336	10181
	SET	2576	AET	-	-	-	5227	7424	9621	11818	14015	16212	18409	20606	22803	25000
135UC-S081	SST	9854	AST	-	-	-	-	8038	9424	10810	12196	13582	14968	16354	17740	19126
	Mid Stroke Min	2944	Mid Stroke Min	-	-	-	-	2944	3789	4634	5479	6324	7169	8014	8859	9704
	SET	2944	AET	-	-	-	-	5972	8169	10366	12563	14760	16957	19154	21351	23548
135UC-S091	SST	11088	AST	-	-	-	-	7658	9044	10430	11816	13202	14588	15974	17360	18746
	Mid Stroke Min	3312	Mid Stroke Min	-	-	-	-	2467	3312	4157	5002	5847	6692	7537	8382	9227
	SET	3312	AET	-	-	-	-	4523	6720	8917	11114	13311	15508	17705	19902	22099
135UC-S101	SST	12322	AST	-	-	-	-	-	8664	10050	11436	12822	14208	15594	16980	18366
	Mid Stroke Min	3681	Mid Stroke Min	-	-	-	-	-	2836	3681	4526	5371	6216	7061	7906	8751
	SET	3681	AET	-	-	-	-	-	5271	7468	9665	11862	14059	16256	18453	20650
135UC-S121	SST	14781	AST	-	-	-	-	-	-	-	10671	12057	13443	14829	16215	17601
	Mid Stroke Min	4415	Mid Stroke Min	-	-	-	-	-	-	-	3570	4415	5260	6105	6950	7795
	SET	4415	AET	-	-	-	-	-	-	-	6762	8959	11156	13353	15550	17747
135UC-S141	SST	17249	AST	-	-	-	-	-	-	-	-	-	12683	14069	15455	16841
	Mid Stroke Min	5152	Mid Stroke Min	-	-	-	-	-	-	-	-	-	4307	5152	5997	6842
	SET	5152	AET	-	-	-	-	-	-	-	-	-	8257	10454	12651	14848
135UC-S161	SST	19709	AST	-	-	-	-	-	-	-	-	-	-	-	14690	16076
	Mid Stroke Min	5887	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	5042	5887
	SET	5887	AET	-	-	-	-	-	-	-	-	-	-	-	9748	11945
210UC-S041	SST	7664	AST	6252	8620	10988	13356	15724	18092	20460	22828	25196	27564	-	-	-
	Mid Stroke Min	2391	Mid Stroke Min	2391	3835	5279	6723	8167	9611	11055	12499	13943	15387	-	-	-
	SET	2391	AET	4851	8605	12359	16113	19867	23621	27375	31129	34883	38637	-	-	-
210UC-S051	SST	9579	AST	-	7813	10181	12549	14917	17285	19653	22021	24389	26757	-	-	-
	Mid Stroke Min	2989	Mid Stroke Min	-	2989	4433	5877	7321	8765	10209	11653	13097	14541	-	-	-
	SET	2989	AET	-	6064	9818	13572	17326	21080	24834	28588	32342	36096	-	-	-
210UC-S061	SST	11500	AST	-	-	9380	11748	14116	16484	18852	21220	23588	25956	28324	-	-
	Mid Stroke Min	3586	Mid Stroke Min	-	-	3586	5030	6474	7918	9362	10806	12250	13694	15138	-	-
	SET	3586	AET	-	-	7277	11031	14785	18539	22293	26047	29801	33555	37309	-	-
210UC-S071	SST	13409	AST	-	-	-	10937	13305	15673	18041	20409	22777	25145	27513	-	-
	Mid Stroke Min	4184	Mid Stroke Min	-	-	-	4184	5628	7072	8516	9960	11404	12848	14292	-	-
	SET	4184	AET	-	-	-	8489	12243	15997	19751	23505	27259	31013	34767	-	-
210UC-S081	SST	15329	AST	-	-	-	10135	12503	14871	17239	19607	21975	24343	26711	29079	-
	Mid Stroke Min	4782	Mid Stroke Min	-	-	-	3338	4782	6226	7670	9114	10558	12002	13446	14890	-
	SET	4782	AET	-	-	-	5948	9702	13456	17210	20964	24718	28472	32226	35980	-
210UC-S091	SST	17238	AST	-	-	-	-	11693	14061	16429	18797	21165	23533	25901	28269	-
	Mid Stroke Min	5380	Mid Stroke Min	-	-	-	-	3936	5380	6824	8268	9712	11156	12600	14044	-
	SET	5380	AET	-	-	-	-	7161	10915	14669	18423	22177	25931	29685	33439	-
210UC-S101	SST	19158	AST	-	-	-	-	-	13259	15627	17995	20363	22731	25099	27467	29835
	Mid Stroke Min	5977	Mid Stroke Min	-	-	-	-	-	4533	5977	7421	8865	10309	11753	13197	14641
	SET	5977	AET	-	-	-	-	-	8374	12128	15882	19636	23390	27144	30898	34652
210UC-S121	SST	22993	AST	-	-	-	-	-	-	-	16387	18755	21123	23491	25859	28227
	Mid Stroke Min	7173	Mid Stroke Min	-	-	-	-	-	-	-	5729	7173	8617	10061	11505	12949
	SET	7173	AET	-	-	-	-	-	-	-	10799	14553	18307	22061	25815	29569
210UC-S141	SST	26828	AST	-	-	-	-	-	-	-	-	-	19515	21883	24251	26619
	Mid Stroke Min	8368	Mid Stroke Min	-	-	-	-	-	-	-	-	-	6924	8368	9812	11256
	SET	8368	AET	-	-	-	-	-	-	-	-	-	13225	16979	20733	24487
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
Air torques lb. in.																



Series A/B/C/S: Models 023 - 7114

Spring Return - Fail Open (CCW)

Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
210UC-S161	SST	30658	AST	-	-	-	-	-	-	-	-	-	-	-	22639	25007
	Mid Stroke Min	9563	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	8119	9563
	SET	9563	AET	-	-	-	-	-	-	-	-	-	-	-	15650	19404
270UC-S041	SST	9860	AST	8042	10948	13854	16760	19666	22572	25478	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	3590	Mid Stroke Min	3590	6215	8840	11465	14090	16715	19340	-	-				
	SET	3590	AET	7284	11891	16498	21105	25712	30319	34926	-	-				
270UC-S051	SST	12319	AST	-	10049	12955	15861	18767	21673	24579	27485	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	4482	Mid Stroke Min	-	4482	7107	9732	12357	14982	17607	20232	-				
	SET	4482	AET	-	9094	13701	18308	22915	27522	32129	36736	-				
270UC-S061	SST	14779	AST	-	-	12055	14961	17867	20773	23679	26585	29491	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	5381	Mid Stroke Min	-	-	5381	8006	10631	13256	15881	18506	21131				
	SET	5381	AET	-	-	10919	15526	20133	24740	29347	33954	38561				
270UC-S071	SST	17244	AST	-	-	11159	14065	16971	19877	22783	25689	28595	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	6277	Mid Stroke Min	-	-	3652	6277	8902	11527	14152	16777	19402				
	SET	6277	AET	-	-	8129	12736	17343	21950	26557	31164	35771				
270UC-S081	SST	19709	AST	-	-	-	13170	16076	18982	21888	24794	27700	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	7173	Mid Stroke Min	-	-	-	4548	7173	9798	12423	15048	17673				
	SET	7173	AET	-	-	-	9946	14553	19160	23767	28374	32981				
270UC-S091	SST	22175	AST	-	-	-	-	15181	18087	20993	23899	26805	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8068	Mid Stroke Min	-	-	-	-	5443	8068	10693	13318	15943				
	SET	8068	AET	-	-	-	-	11763	16370	20977	25584	30191				
270UC-S101	SST	24639	AST	-	-	-	-	-	17191	20097	23003	25909	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8964	Mid Stroke Min	-	-	-	-	-	6339	8964	11589	14214				
	SET	8964	AET	-	-	-	-	-	13582	18189	22796	27403				
344UC-S041	SST	12319	AST	10049	13762	17475	21189	24902	28615	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	4359	Mid Stroke Min	4359	7713	11067	14420	17774	21128	-	-	-				
	SET	4359	AET	8845	14732	20618	26505	32391	38278	-	-	-				
344UC-S051	SST	14779	AST	-	12055	15768	19481	23195	26908	-	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	5234	Mid Stroke Min	-	5234	8588	11942	15295	18649	-	-	-				
	SET	5234	AET	-	10620	16507	22393	28280	34166	-	-	-				
344UC-S061	SST	17244	AST	-	-	14065	17778	21491	25205	28918	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	6106	Mid Stroke Min	-	-	6106	9460	12814	16167	19521	-	-				
	SET	6106	AET	-	-	12389	18276	24162	30049	35935	-	-				
344UC-S071	SST	22175	AST	-	-	14374	18087	21800	25513	29227	-	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	7847	Mid Stroke Min	-	-	4493	7847	11201	14555	17908	-	-				
	SET	7847	AET	-	-	10035	15922	21809	27695	33582	-	-				
344UC-S081	SST	24639	AST	-	-	-	16384	20097	23810	27523	31237	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	8720	Mid Stroke Min	-	-	-	5366	8720	12074	15428	18781	-				
	SET	8720	AET	-	-	-	11805	17692	23579	29465	35352	-				
345UC-S091	SST	26828	AST	-	-	-	-	18170	21883	25596	29309	-	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	9494	Mid Stroke Min	-	-	-	-	6140	9494	12848	16202	-				
	SET	9494	AET	-	-	-	-	13377	19264	25151	31037	-				
345UC-S101	SST	30658	AST	-	-	-	-	-	21294	25007	28720	32433	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	10853	Mid Stroke Min	-	-	-	-	-	7499	10853	14207	17561				
	SET	10853	AET	-	-	-	-	-	16134	22021	27908	33794				
345UC-S111	SST	34482	AST	-	-	-	-	-	-	24413	28126	31839	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8858	12212	15566				
	SET	12212	AET	-	-	-	-	-	-	18890	24777	30664				
345UC-S121	SST	34482	AST	-	-	-	-	-	-	24413	28126	31839	Maximum Allowable Pressure 120 psig (Series A / Max Shell Pressure 175 psig)			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8858	12212	15566				
	SET	12212	AET	-	-	-	-	-	-	18890	24777	30664				
370UC-S041 Series B,C,S only	SST	13504	AST	11015	15073	19131	23189	27247	31305	35363	39421	43479	47537	51595	55653	59711
	Mid Stroke Min	5138	Mid Stroke Min	5138	8408	11678	14948	18218	21488	24758	28028	31298	34568	37838	41108	44378
	SET	5138	AET	10424	16857	23291	29724	36158	42591	49024	55458	61891	68325	74758	81191	87625
370UC-S051 Series B,C,S only	SST	16879	AST	-	13767	17825	21883	25941	29999	34057	38115	42173	46231	50289	54347	58405
	Mid Stroke Min	7209	Mid Stroke Min	-	7209	10479	13749	17019	20289	23559	26829	30099	33369	36639	39909	43179
	SET	7209	AET	-	13033	21060	27494	33927	40361	46794	53227	59661	66094	72528	78961	85394
370UC-S061 Series B,C,S only	SST	20259	AST	-	-	16525	20583	24641	28699	32757	36815	40873	44931	48989	53047	57105
	Mid Stroke Min	7705	Mid Stroke Min	-	-	7705	10975	14245	17515	20785	24055	27325	30595	33865	37135	40405
	SET	7705	AET	-	-	15634	22067	28501	34934	41368	47801	54234	60668	67101	73535	79968
370UC-S071 Series B,C,S only	SST	23634	AST	-	-	15219	19277	23335	27393	31451	35509	39567	43625	47683	51741	55799
	Mid Stroke Min	8991	Mid Stroke Min	-	-	5721	8991	12261	15531	18801	22071	25341	28611	31881	35151	38421
	SET	8991	AET	-	-	11809	18242	24675	31109	37542	43976	50409	56842	63276	69709	76143
370UC-S081 Series B,C,S only	SST	27008	AST	-	-	-	17972	22030	26088	30146	34204	38262	42320	46378	50436	54494
	Mid Stroke Min	10276	Mid Stroke Min	-	-	-	7006	10276	13546	16816	20086	23356	26626	29896	33166	36436
	SET	10276	AET	-	-	-	14417	20850	27283	33717	40150	46584	53017	59450	65884	72317
370UC-S091 Series B,C,S only	SST	30383	AST	-	-	-	-	20724	24782	28840	32898	36956	41014	45072	49130	53188
	Mid Stroke Min	11562	Mid Stroke Min	-	-	-	-	8292	11562	14832	18102	21372	24642	27912	31182	34452
	SET	11562	AET	-	-	-	-	17025	23458	29891	36325	42758	49192	55625	62058	68492
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				Air torques lb. in.												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	



Series A/B/C/S: Models 023 - 7114

Spring Return - Fail Open (CCW)

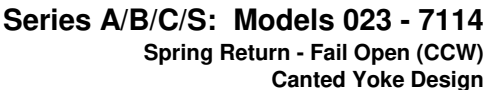
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
370UC-S101 Series B,C,S only	SST	33757	AST	-	-	-	-	-	23477	27535	31593	35651	39709	43767	47825	51883
	Mid Stroke Min	12847	Mid Stroke Min	-	-	-	-	-	9577	12847	16117	19387	22657	25927	29197	32467
	SET	12847	AET	-	-	-	-	-	19634	26067	32500	38934	45367	51801	58234	64667
370UC-S121 Series B,C,S only	SST	40512	AST	-	-	-	-	-	-	-	28987	33045	37103	41161	45219	49277
	Mid Stroke Min	15414	Mid Stroke Min	-	-	-	-	-	-	-	12144	15414	18684	21954	25224	28494
	SET	15414	AET	-	-	-	-	-	-	-	24842	31275	37708	44142	50575	57009
370UC-S141 Series B,C,S only	SST	47267	AST	-	-	-	-	-	-	-	-	-	34496	38554	42612	46670
	Mid Stroke Min	17981	Mid Stroke Min	-	-	-	-	-	-	-	-	-	14711	17981	21251	24521
	SET	17981	AET	-	-	-	-	-	-	-	-	-	30050	36483	42916	49350
370UC-S161 Series B,C,S only	SST	54016	AST	-	-	-	-	-	-	-	-	-	-	-	40002	44060
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	17282	20552
	SET	20552	AET	-	-	-	-	-	-	-	-	-	-	-	35266	41699
420UC-S041	SST	15329	AST	12503	16808	21113	25418	29723	34028	-	-	-	-	-	-	-
	Mid Stroke Min	5325	Mid Stroke Min	5325	9405	13485	17565	21645	25725	-	-	-	-	-	-	-
	SET	5325	AET	10805	17630	24455	31280	38105	44930	-	-	-	-	-	-	-
420UC-S051	SST	19158	AST	-	15627	19932	24237	28542	32847	-	-	-	-	-	-	-
	Mid Stroke Min	6659	Mid Stroke Min	-	6659	10739	14819	18899	22979	-	-	-	-	-	-	-
	SET	6659	AET	-	13510	20335	27160	33985	40810	-	-	-	-	-	-	-
420UC-S061	SST	22993	AST	-	-	18755	23060	27365	31670	-	-	-	-	-	-	-
	Mid Stroke Min	7987	Mid Stroke Min	-	-	7987	12067	16147	20227	-	-	-	-	-	-	-
	SET	7987	AET	-	-	16206	23031	29856	36681	-	-	-	-	-	-	-
420UC-S071	SST	26828	AST	-	-	17578	21883	26188	30493	-	-	-	-	-	-	-
	Mid Stroke Min	9317	Mid Stroke Min	-	-	5237	9317	13397	17477	-	-	-	-	-	-	-
	SET	9317	AET	-	-	12079	18904	25729	32554	-	-	-	-	-	-	-
420UC-S081	SST	30658	AST	-	-	-	20702	25007	29312	-	-	-	-	-	-	-
	Mid Stroke Min	10650	Mid Stroke Min	-	-	-	6570	10650	14730	-	-	-	-	-	-	-
	SET	10650	AET	-	-	-	14784	21609	28434	-	-	-	-	-	-	-
420UC-S091	SST	34482	AST	-	-	-	-	23821	28126	32431	-	-	-	-	-	-
	Mid Stroke Min	11983	Mid Stroke Min	-	-	-	-	7903	11983	16063	-	-	-	-	-	-
	SET	11983	AET	-	-	-	-	17489	24314	31139	-	-	-	-	-	-
420UC-S101	SST	38317	AST	-	-	-	-	-	26949	31254	35559	-	-	-	-	-
	Mid Stroke Min	13316	Mid Stroke Min	-	-	-	-	-	9236	13316	17396	-	-	-	-	-
	SET	13316	AET	-	-	-	-	-	20194	27019	33844	-	-	-	-	-
575UC-S041 Series B,C,S only	SST	20989	AST	17120	23662	30204	36746	43288	49830	56372	62914	69456	75998	-	-	-
	Mid Stroke Min	7288	Mid Stroke Min	7288	12898	18508	24118	29728	35338	40948	46558	52168	57778	-	-	-
	SET	7288	AET	14788	25160	35531	45903	56274	66646	77017	87389	97760	108132	-	-	-
575UC-S051 Series B,C,S only	SST	26233	AST	-	21398	27940	34482	41024	47566	54108	60650	67192	73734	-	-	-
	Mid Stroke Min	9114	Mid Stroke Min	-	9114	14724	20334	25944	31554	37164	42774	48384	53994	-	-	-
	SET	9114	AET	-	18493	28865	39236	49608	59979	70351	80722	91094	101465	-	-	-
575UC-S061 Series B,C,S only	SST	31478	AST	-	-	25675	32217	38759	45301	51843	58385	64927	71469	78011	-	-
	Mid Stroke Min	10933	Mid Stroke Min	-	-	10933	16543	22153	27763	33373	38983	44593	50203	55813	-	-
	SET	10933	AET	-	-	22183	32555	42926	53298	63669	74041	84412	94784	105155	-	-
575UC-S071 Series B,C,S only	SST	36722	AST	-	-	23411	29953	36495	43037	49579	56121	62663	69205	75747	-	-
	Mid Stroke Min	12759	Mid Stroke Min	-	-	7149	12759	18369	23979	29589	35199	40809	46419	52029	-	-
	SET	12759	AET	-	-	15516	25887	36259	46630	57002	67373	77745	88116	98488	-	-
575UC-S081 Series B,C,S only	SST	41972	AST	-	-	-	27694	34236	40778	47320	53862	60404	66946	73488	80030	-
	Mid Stroke Min	14580	Mid Stroke Min	-	-	-	8970	14580	20190	25800	31410	37020	42630	48240	53850	-
	SET	14580	AET	-	-	-	19212	29583	39955	50326	60698	71069	81441	91812	102184	-
575UC-S091 Series B,C,S only	SST	47217	AST	-	-	-	-	31971	38513	45055	51597	58139	64681	71223	77765	84307
	Mid Stroke Min	16399	Mid Stroke Min	-	-	-	-	10789	16399	22009	27619	33229	38839	44449	50059	55669
	SET	16399	AET	-	-	-	-	22903	33274	43646	54017	64389	74760	85132	95503	105875
575UC-S101 Series B,C,S only	SST	52467	AST	-	-	-	-	-	36254	42796	49338	55880	62422	68964	75506	82048
	Mid Stroke Min	18222	Mid Stroke Min	-	-	-	-	-	12612	18222	23832	29442	35052	40662	46272	51882
	SET	18222	AET	-	-	-	-	-	26600	36971	47343	57714	68086	78457	88829	99200
575UC-S121 Series B,C,S only	SST	62955	AST	-	-	-	-	-	-	-	44809	51351	57893	64435	70977	77519
	Mid Stroke Min	21873	Mid Stroke Min	-	-	-	-	-	-	-	16263	21873	27483	33093	38703	44313
	SET	21873	AET	-	-	-	-	-	-	-	34009	44380	54752	65123	75495	85866
575UC-S141 Series B,C,S only	SST	73444	AST	-	-	-	-	-	-	-	-	-	53364	59906	66448	72990
	Mid Stroke Min	25517	Mid Stroke Min	-	-	-	-	-	-	-	-	-	19907	25517	31127	36737
	SET	25517	AET	-	-	-	-	-	-	-	-	-	41402	51773	62145	72516
575UC-S161 Series B,C,S only	SST	83944	AST	-	-	-	-	-	-	-	-	-	-	-	61929	68471
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	23551	29161
	SET	29161	AET	-	-	-	-	-	-	-	-	-	-	-	48797	59168
740UC-S041 Series B,C,S only	SST	27008	AST	22030	29994	37959	45923	53888	61852	69816	77781	-	Maximum Allowable Pressure			
	Mid Stroke Min	10276	Mid Stroke Min	10276	16816	23356	29896	36436	42976	49516	56056	-	120 psig			
	SET	10276	AET	20850	33476	46103	58729	71356	83982	96608	109235	-				
740UC-S051 Series B,C,S only	SST	33757	AST	-	27535	35499	43464	51428	59393	67357	75321	-	Maximum Allowable Pressure			
	Mid Stroke Min	12847	Mid Stroke Min	-	12847	19387	25927	32467	39007	45547	52087	-	120 psig			
	SET	12847	AET	-	26067	38693	51320	63946	76573	89199	101825	-				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
	lb. in.			Air torques lb. in.												



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Open (CCW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.											
				Supply Pressure psig											
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160
740UC-S061 Series B,C,S only	SST	40512	AST	-	-	33045	41009	48974	56938	64903	72867	-	Maximum Allowable Pressure		
	Mid Stroke Min	15414	Mid Stroke Min	-	-	15414	21954	28494	35034	41574	48114	-	120 psig		
	SET	15414	AET	-	-	31275	43901	56528	69154	81781	94407	-			
740UC-S071 Series B,C,S only	SST	47267	AST	-	-	30590	38554	46518	54483	62447	70412	78376	Maximum Allowable Pressure		
	Mid Stroke Min	17981	Mid Stroke Min	-	-	11441	17981	24521	31061	37601	44141	50681	120 psig		
	SET	17981	AET	-	-	23857	36483	49109	61736	74362	86989	99615			
740UC-S081 Series B,C,S only	SST	54016	AST	-	-	-	36096	44060	52024	59989	67953	75918	Maximum Allowable Pressure		
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	14012	20552	27092	33632	40172	46712	120 psig		
	SET	20552	AET	-	-	-	29073	41699	54325	66952	79578	92205			
740UC-S091 Series B,C,S only	SST	60763	AST	-	-	-	-	41599	49563	57527	65492	73456	Maximum Allowable Pressure		
	Mid Stroke Min	23125	Mid Stroke Min	-	-	-	-	16585	23125	29665	36205	42745	120 psig		
	SET	23125	AET	-	-	-	-	34294	46920	59546	72173	84799			
740UC-S101 Series B,C,S only	SST	67515	AST	-	-	-	-	-	47106	55070	63034	70999	Maximum Allowable Pressure		
	Mid Stroke Min	25694	Mid Stroke Min	-	-	-	-	-	19154	25694	32234	38774	120 psig		
	SET	25694	AET	-	-	-	-	-	39507	52133	64759	77386			
944UC-S041 Series B,C,S only	SST	33757	AST	27535	37899	48264	58628	68993	79357	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	11953	Mid Stroke Min	11953	21051	30148	39246	48343	57441	-	-	-	120 psig		
	SET	11953	AET	24252	40683	57114	73546	89977	106408	-	-	-			
944UC-S051 Series B,C,S only	SST	40512	AST	-	33045	43409	53774	64138	74503	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	14342	Mid Stroke Min	-	14342	23440	32537	41635	50732	-	-	-	120 psig		
	SET	14342	AET	-	29099	45530	61961	78393	94824	-	-	-			
944UC-S061 Series B,C,S only	SST	47267	AST	-	-	38554	48918	59283	69647	80012	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	16730	Mid Stroke Min	-	-	16730	25828	34925	44023	53120	-	-	120 psig		
	SET	16730	AET	-	-	33944	50375	66806	83238	99669	-	-			
944UC-S071 Series B,C,S only	SST	54016	AST	-	-	33696	44060	54424	64789	75153	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	19122	Mid Stroke Min	-	-	10024	19122	28220	37317	46415	-	-	120 psig		
	SET	19122	AET	-	-	22367	38798	55229	71660	88092	-	-			
945UC-S081 Series B,C,S only	SST	62955	AST	-	-	-	40987	51351	61715	72080	82444	-	Maximum Allowable Pressure		
	Mid Stroke Min	22289	Mid Stroke Min	-	-	-	13191	22289	31387	40484	49582	-	120 psig		
	SET	22289	AET	-	-	-	28793	45224	61655	78086	94518	-			
945UC-S091 Series B,C,S only	SST	73444	AST	-	-	-	-	49542	59906	70270	80635	-	Maximum Allowable Pressure		
	Mid Stroke Min	26003	Mid Stroke Min	-	-	-	-	16905	26003	35101	44198	-	120 psig		
	SET	26003	AET	-	-	-	-	36328	52759	69190	85621	-			
945UC-S101 Series B,C,S only	SST	83944	AST	-	-	-	-	-	58107	68471	78835	-	Maximum Allowable Pressure		
	Mid Stroke Min	29717	Mid Stroke Min	-	-	-	-	-	20619	29717	38815	-	120 psig		
	SET	29717	AET	-	-	-	-	-	43864	60295	76726	-			
945UC-S111 Series B,C,S only	SST	94433	AST	-	-	-	-	-	-	66662	77026	87390	Maximum Allowable Pressure		
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	24333	33431	42529	120 psig		
	SET	33431	AET	-	-	-	-	-	-	51399	67830	84261			
945UC-S121 Series B,C,S only	SST	94433	AST	-	-	-	-	-	-	-	66662	77026	Maximum Allowable Pressure		
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	-	24333	33431	120 psig		
	SET	33431	AET	-	-	-	-	-	-	-	51399	67830			
1150UC-S041 Series B,C,S only	SST	41972	AST	34236	46613	58990	71367	-	-	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	14580	Mid Stroke Min	14580	25800	37020	48240	-	-	-	-	-	120 psig		
	SET	14580	AET	29583	49205	68827	88449	-	-	-	-	-			
1150UC-S051 Series B,C,S only	SST	52467	AST	-	42796	55173	67550	79927	-	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	18222	Mid Stroke Min	-	18222	29442	40662	51882	-	-	-	-	120 psig		
	SET	18222	AET	-	36971	56593	76215	95837	-	-	-	-			
1150UC-S061 Series B,C,S only	SST	62955	AST	-	-	51351	63728	76105	-	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	21873	Mid Stroke Min	-	-	21873	33093	44313	-	-	-	-	120 psig		
	SET	21873	AET	-	-	44380	64002	83624	-	-	-	-			
1150UC-S071 Series B,C,S only	SST	73444	AST	-	-	47529	59906	72283	84660	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	25517	Mid Stroke Min	-	-	14297	25517	36737	47957	-	-	-	120 psig		
	SET	25517	AET	-	-	32151	51773	71395	91017	-	-	-			
1150UC-S081 Series B,C,S only	SST	83944	AST	-	-	-	56094	68471	80848	-	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	17941	29161	40381	-	-	-	120 psig		
	SET	29161	AET	-	-	-	39546	59168	78790	-	-	-			
1150UC-S091 Series B,C,S only	SST	94433	AST	-	-	-	-	64649	77026	89403	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	32805	Mid Stroke Min	-	-	-	-	21585	32805	44025	-	-	120 psig		
	SET	32805	AET	-	-	-	-	46940	66562	86184	-	-			
1150UC-S101 Series B,C,S only	SST	104933	AST	-	-	-	-	-	73214	85591	-	-	Maximum Allowable Pressure		
	Mid Stroke Min	36442	Mid Stroke Min	-	-	-	-	-	25222	36442	-	-	120 psig		
	SET	36442	AET	-	-	-	-	-	54319	73941	-	-			
Model Number	Spring Torques		Torque at	Supply Pressure psig											
				Air torques lb. in.											
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160



Model Number	Spring Torques		Torque at	Air torques lb. in.												
				Supply Pressure psig												
	lb. in.	40		50	60	70	80	90	100	110	120	130	140	150	160	
1480UC-S041 Series S Only	SST	54016	AST	44060	59230	74400	89570	104740	119910	135080	150250	-				
	Mid Stroke Min	17871	Mid Stroke Min	17871	29526	41181	52837	64492	76147	87802	99457	-		MAXIMUM Allowable		
	SET	17871	AET	36260	60310	84360	108410	132460	156510	180560	204610	-		PRESSURE = 120 PSI		
1480UC-S051 Series S Only	SST	67520	AST	-	55075	70245	85415	100585	115755	130925	146095	-				
	Mid Stroke Min	22339	Mid Stroke Min	-	22339	33994	45649	57305	68960	80615	92270	-		MAXIMUM Allowable		
	SET	22339	AET	-	45325	69375	93425	117475	141525	165575	189625	-		PRESSURE = 120 PSI		
1480UC-S061 Series S Only	SST	81024	AST	-	-	66089	81259	96429	111599	126769	141939	157109				
	Mid Stroke Min	26807	Mid Stroke Min	-	-	26807	38462	50117	61773	73428	85083	96738		MAXIMUM Allowable		
	SET	26807	AET	-	-	54390	78440	102490	126540	150590	174640	198690		PRESSURE = 120 PSI		
1480UC-S071 Series S Only	SST	94529	AST	-	-	61934	77104	92274	107444	122614	137784	152954				
	Mid Stroke Min	31212	Mid Stroke Min	-	-	19557	31212	42867	54522	66178	77833	89488		MAXIMUM Allowable		
	SET	31212	AET	-	-	39279	63329	87379	111429	135479	159529	183579		PRESSURE = 120 PSI		
1480UC-S081 Series S Only	SST	108033	AST	-	-	-	72949	88119	103289	118459	133629	148799				
	Mid Stroke Min	35742	Mid Stroke Min	-	-	-	24087	35742	47397	59052	70708	82363		MAXIMUM Allowable		
	SET	35742	AET	-	-	-	48470	72520	96570	120620	144670	168720		PRESSURE = 120 PSI		
1480UC-S091 Series S Only	SST	121537	AST	-	-	-	-	83964	99134	114304	129474	144644				
	Mid Stroke Min	40210	Mid Stroke Min	-	-	-	-	28555	40210	51865	63520	75176		MAXIMUM Allowable		
	SET	40210	AET	-	-	-	-	57535	81585	105635	129685	153735		PRESSURE = 120 PSI		
1480UC-S101 Series S Only	SST	135041	AST	-	-	-	-	-	94979	110149	125319	140489				
	Mid Stroke Min	44678	Mid Stroke Min	-	-	-	-	-	33023	44678	56333	67988		MAXIMUM Allowable		
	SET	44678	AET	-	-	-	-	-	66600	90650	114700	138750		PRESSURE = 120 PSI		
1485UC-S041 Series B/C Only	SST	60920	AST	49690	66400	83110	99820	116530	133240	149950	166660	183370		Maximum Allowable Pressure		
	Mid Stroke Min	20470	Mid Stroke Min	20470	30991	41512	52033	62554	73075	83596	94117	104638		120 psig		
	SET	20470	AET	41533	72478	103423	134368	165313	196258	227203	258148	289093				
1485UC-S051 Series B/C Only	SST	76150	AST	45403	62113	78823	95533	112243	128953	145663	162373	179083		Maximum Allowable Pressure		
	Mid Stroke Min	25587	Mid Stroke Min	15066	25587	36108	46629	57150	67671	78192	88713	99234		120 psig		
	SET	25587	AET	20971	51916	82861	113806	144751	175696	206641	237586	268531				
1485UC-S061 Series B/C Only	SST	91379	AST	-	57826	74536	91246	107956	124666	141376	158086	174796		Maximum Allowable Pressure		
	Mid Stroke Min	30705	Mid Stroke Min	-	20184	30705	41226	51747	62268	72789	83310	93831		120 psig		
	SET	30705	AET	-	31355	62300	93245	124190	155135	186080	217025	247970				
1485UC-S071 Series B/C Only	SST	106609	AST	-	-	70248	86958	103668	120378	137088	153798	170508		Maximum Allowable Pressure		
	Mid Stroke Min	35822	Mid Stroke Min	-	-	25301	35822	46343	56864	67385	77906	88427		120 psig		
	SET	35822	AET	-	-	41738	72683	103628	134573	165518	196463	227408				
1485UC-S081 Series B/C Only	SST	121839	AST	-	-	-	82671	99381	116091	132801	149511	166221		Maximum Allowable Pressure		
	Mid Stroke Min	40940	Mid Stroke Min	-	-	-	30419	40940	51461	61982	72503	83024		120 psig		
	SET	40940	AET	-	-	-	52121	83066	114011	144956	175901	206846				
1485UC-S091 Series B/C Only	SST	137069	AST	-	-	-	-	95094	111804	128514	145224	161934		Maximum Allowable Pressure		
	Mid Stroke Min	46057	Mid Stroke Min	-	-	-	-	35536	46057	56578	67099	77620		120 psig		
	SET	46057	AET	-	-	-	-	62504	93449	124394	155339	186284				
1485UC-S101 Series B/C Only	SST	152299	AST	-	-	-	-	-	107516	124226	140936	157646		Maximum Allowable Pressure		
	Mid Stroke Min	51175	Mid Stroke Min	-	-	-	-	-	40654	51175	61696	72217		120 psig		
	SET	51175	AET	-	-	-	-	-	72888	103833	134778	165723				
1934UC-S041 Series B/C Only	SST	76150	AST	62113	83912	105711	127510	149309	171108	192907	214706	236505		Maximum Allowable Pressure		
	Mid Stroke Min	25587	Mid Stroke Min	25587	39312	53037	66762	80487	94212	107937	121662	135387		120 psig		
	SET	25587	AET	51916	92284	132652	173020	213388	253756	294124	334492	374860				
1934UC-S051 Series B/C Only	SST	91379	AST	52737	74536	96335	118134	139933	161732	183531	205330	227129		Maximum Allowable Pressure		
	Mid Stroke Min	30705	Mid Stroke Min	16980	30705	44430	58155	71880	85605	99330	113055	126780		120 psig		
	SET	30705	AET	21931	62300	102669	143038	183407	223776	264145	304514	344883				
1934UC-S061 Series B/C Only	SST	106609	AST	-	65159	86958	108757	130556	152355	174154	195953	217752		Maximum Allowable Pressure		
	Mid Stroke Min	35822	Mid Stroke Min	-	22097	35822	49547	63272	76997	90722	104447	118172		120 psig		
	SET	35822	AET	-	32315	72683	113051	153419	193787	234155	274523	314891				
1934UC-S071 Series B/C Only	SST	137069	AST	-	-	90005	111804	133603	155402	177201	199000	220799		Maximum Allowable Pressure		
	Mid Stroke Min	46057	Mid Stroke Min	-	-	32332	46057	59782	73507	87232	100957	114682		120 psig		
	SET	46057	AET	-	-	53080	93449	133818	174187	214556	254925	295294				
1935UC-S081 Series B/C Only	SST	152299	AST	-	-	-	102427	124226	146025	167824	189623	211422		Maximum Allowable Pressure		
	Mid Stroke Min	51175	Mid Stroke Min	-	-	-	37450	51175	64900	78625	92350	106075		120 psig		
	SET	51175	AET	-	-	-	63465	103833	144201	184569	224937	265305				
1935UC-S091 Series B/C Only	SST	174218	AST	-	-	-	-	120306	142105	163904	185703	207502		Maximum Allowable Pressure		
	Mid Stroke Min	57639	Mid Stroke Min	-	-	-	-	43914	57639	71364	85089	98814		120 psig		
	SET	57639	AET	-	-	-	-	76580	116949	157318	197687	238056				
1935UC-S101 Series B/C Only	SST	199107	AST	-	-	-	-	-	140607	162406	184205	206004		Maximum Allowable Pressure		
	Mid Stroke Min	65873	Mid Stroke Min	-	-	-	-	-	52148	65873	79598	93323		120 psig		
	SET	65873	AET	-	-	-	-	-	93288	133656	174024	214392				
1935UC-S111 Series B/C Only	SST	223995	AST	-	-	-	-	-	-	160907	182706	204505		Maximum Allowable Pressure		
	Mid Stroke Min	74107	Mid Stroke Min	-	-	-	-	-	-	60382	74107	87832		120 psig		
	SET	74107	AET	-	-	-	-	-	-	109994	150363	190731				
1935UC-S121 Series B/C Only	SST	248883	AST	-	-	-	-	-	-	-	181208	203007		Maximum Allowable Pressure		
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	-	-	-	-	68617	82342		120 psig		
	SET	82342	AET	-	-	-	-	-	-	-	126701	167070				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
				Air torques lb. in.												



Series A/B/C/S: Models 023 - 7114

Spring Return - Fail Open (CCW)

Canted Yoke Design

Model Number	Spring Torques	Torque at	Air torques lb. in.													
			Supply Pressure psig													
	lb. in.		40	50	60	70	80	90	100	110	120	130	140	150	160	
2380UC-S041 Series S Only	SST	86864	AST	70853	95248	119643	144038	168433	-	-	-	-	-	-	-	
	Mid Stroke Min	28739	Mid Stroke Min	28739	47616	66492	85369	104245	-	-	-	-	-	-	-	
	SET	28739	AET	58310	96985	135660	174335	213010	-	-	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
2380UC-S051 Series S Only	SST	108581	AST	-	88566	112961	137356	161751	-	-	-	-	-	-	-	
	Mid Stroke Min	35923	Mid Stroke Min	-	35923	54800	73676	92553	-	-	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	35923	AET	-	72888	111563	150238	188913	-	-	-	-	-	-	-	
2380UC-S061 Series S Only	SST	130296	AST	-	-	106279	130674	155069	-	-	-	-	-	-	-	
	Mid Stroke Min	43108	Mid Stroke Min	-	-	43108	61985	80861	-	-	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	43108	AET	-	-	87465	126140	164815	-	-	-	-	-	-	-	
2380UC-S071 Series S Only	SST	152013	AST	-	-	99598	123993	148388	172783	-	-	-	-	-	-	
	Mid Stroke Min	50293	Mid Stroke Min	-	-	31416	50293	69170	88046	-	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	50293	AET	-	-	63368	102043	140718	179393	-	-	-	-	-	-	
2380UC-S081 Series S Only	SST	173728	AST	-	-	-	117310	141705	166100	-	-	-	-	-	-	
	Mid Stroke Min	57477	Mid Stroke Min	-	-	-	38600	57477	76354	-	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	57477	AET	-	-	-	77945	116620	155295	-	-	-	-	-	-	
2380UC-S091 Series S Only	SST	195445	AST	-	-	-	-	135024	159419	183814	-	-	-	-	-	
	Mid Stroke Min	64662	Mid Stroke Min	-	-	-	-	45785	64662	83539	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	64662	AET	-	-	-	-	92523	131198	169873	-	-	-	-	-	
2380UC-S101 Series S Only	SST	217160	AST	-	-	-	-	-	152737	177132	-	-	-	-	-	
	Mid Stroke Min	71846	Mid Stroke Min	-	-	-	-	-	52969	71846	-	-	-	-	MAXIMUM Allowable PRESSURE = 120 PSI	
	SET	71846	AET	-	-	-	-	-	107100	145775	-	-	-	-	-	
2385UC-S041 Series B/C Only	SST	99553	AST	81203	108090	134977	161864	188751	215638	242525	269412	296299	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	32937	Mid Stroke Min	32937	49867	66797	83727	100657	117587	134517	151447	168377	-	-	-	
	SET	32937	AET	66828	116620	166412	216204	265996	315788	365580	415372	465164	-	-	-	
2385UC-S051 Series B/C Only	SST	124442	AST	74617	101504	128391	155278	182165	209052	235939	262826	289713	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	41171	Mid Stroke Min	24242	41171	58100	75029	91958	108887	125816	142745	159674	-	-	-	
	SET	41171	AET	33743	83535	133327	183119	232911	282703	332495	382287	432079	-	-	-	
2385UC-S061 Series B/C Only	SST	149330	AST	-	94917	121804	148691	175578	202465	229352	256239	283126	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	49405	Mid Stroke Min	-	32475	49405	66335	83265	100195	117125	134055	150985	-	-	-	
	SET	49405	AET	-	50450	100242	150034	199826	249618	299410	349202	398994	-	-	-	
2385UC-S071 Series B/C Only	SST	174218	AST	-	-	115218	142105	168992	195879	222766	249653	276540	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	57639	Mid Stroke Min	-	-	40710	57639	74568	91497	108426	125355	142284	-	-	-	
	SET	57639	AET	-	-	67157	116949	166741	216533	266325	316117	365909	-	-	-	
2385UC-S081 Series B/C Only	SST	199107	AST	-	-	-	135519	162406	189293	216180	243067	269954	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	65873	Mid Stroke Min	-	-	-	48943	65873	82803	99733	116663	133593	-	-	-	
	SET	65873	AET	-	-	-	83864	133656	183448	233240	283032	332824	-	-	-	
2385UC-S091 Series B/C Only	SST	223995	AST	-	-	-	-	155819	182706	209593	236480	263367	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	74107	Mid Stroke Min	-	-	-	-	57178	74107	91036	107965	124894	-	-	-	
	SET	74107	AET	-	-	-	-	100571	150363	200155	249947	299739	-	-	-	
2385UC-S101 Series B/C Only	SST	248883	AST	-	-	-	-	-	176120	203007	229894	256781	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	-	-	65412	82342	99272	116202	-	-	-	
	SET	82342	AET	-	-	-	-	-	117278	167070	216862	266654	-	-	-	
3071UC-S041 Series C Only	SST	124442	AST	101504	135737	169970	204203	238436	272669	306902	341135	375368	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	41171	Mid Stroke Min	41171	62725	84279	105833	127387	148941	170495	192049	213603	-	-	-	
	SET	41171	AET	83535	146930	210325	273720	337115	400510	463905	527300	590695	-	-	-	
3071UC-S051 Series C Only	SST	149330	AST	87572	121804	156036	190268	224500	258732	292964	327196	361428	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	49405	Mid Stroke Min	27851	49405	70959	92513	114067	135621	157175	178729	200283	-	-	-	
	SET	49405	AET	36848	100242	163636	227030	290424	353818	417212	480606	544000	-	-	-	
3071UC-S061 Series C Only	SST	174218	AST	-	107872	142105	176338	210571	244804	279037	313270	347503	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	57639	Mid Stroke Min	-	36085	57639	79193	100747	122301	143855	165409	186963	-	-	-	
	SET	57639	AET	-	53554	116949	180344	243739	307134	370529	433924	497319	-	-	-	
3071UC-S071 Series C Only	SST	223995	AST	-	-	148474	182706	216938	251170	285402	319634	353866	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	74107	Mid Stroke Min	-	-	52553	74107	95661	117215	138769	160323	181877	-	-	-	
	SET	74107	AET	-	-	86969	150363	213757	277151	340545	403939	467333	-	-	-	
3071UC-S081 Series C Only	SST	248883	AST	-	-	-	168774	203007	237240	271473	305706	339939	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	82342	Mid Stroke Min	-	-	-	60788	82342	103896	125450	147004	168558	-	-	-	
	SET	82342	AET	-	-	-	103675	167070	230465	293860	357255	420650	-	-	-	
3072UC-S091 Series C Only	SST	269454	AST	-	-	-	-	185554	219786	254018	288250	322482	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	89147	Mid Stroke Min	-	-	-	-	67593	89147	110701	132255	153809	-	-	-	
	SET	89147	AET	-	-	-	-	117485	180879	244273	307667	371061	-	-	-	
3072UC-S101 Series C Only	SST	307947	AST	-	-	-	-	-	216951	251184	285417	319650	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	101883	Mid Stroke Min	-	-	-	-	-	80329	101883	123437	144991	-	-	-	
	SET	101883	AET	-	-	-	-	-	143323	206718	270113	333508	-	-	-	
3072UC-S111 Series C Only	SST	346441	AST	-	-	-	-	-	-	248350	282582	316814	-	-	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	-	-	93064	114618	136172	-	-	-	
	SET	114618	AET	-	-	-	-	-	-	169164	232558	295952	-	-	-	
Model Number	Spring Torques	Torque at	Supply Pressure psig													
			40	50	60	70	80	90	100	110	120	130	140	150	160	
	lb. in.		Air torques lb. in.													



Series A/B/C/S: Models 023 - 7114
Spring Return - Fail Open (CCW)
Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
	lb. in.			Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
3072UC-S121 Series C Only	SST	346441	AST	-	-	-	-	-	-	-	248350	282582	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	-	-	-	93064	114618	120 psig			
	SET	114618	AET	-	-	-	-	-	-	-	169164	232558				
3731UC-S041 Series C Only	SST	153974	AST	125592	167178	208764	250350	291936	333522	375108	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	50941	Mid Stroke Min	50941	77125	103309	129493	155677	181861	208045	-	-	120 psig			
	SET	50941	AET	103359	180370	257381	334392	411403	488414	565425	-	-				
3731UC-S051 Series C Only	SST	192467	AST	115404	156990	198576	240162	281748	323334	364920	406506	-	Maximum Allowable Pressure			
	Mid Stroke Min	63677	Mid Stroke Min	37493	63677	89861	116045	142229	168413	194597	220781	-	120 psig			
	SET	63677	AET	52189	129199	206209	283219	360229	437239	514249	591259	-				
3731UC-S061 Series C Only	SST	230960	AST	-	146802	188388	229974	271560	313146	354732	396318	437904	Maximum Allowable Pressure			
	Mid Stroke Min	76412	Mid Stroke Min	-	50228	76412	102596	128780	154964	181148	207332	233516	120 psig			
	SET	76412	AET	-	78028	155039	232050	309061	386072	463083	540094	617105				
3731UC-S071 Series C Only	SST	269454	AST	-	-	178200	219786	261372	302958	344544	386130	427716	Maximum Allowable Pressure			
	Mid Stroke Min	89147	Mid Stroke Min	-	-	62963	89147	115331	141515	167699	193883	220067	120 psig			
	SET	89147	AET	-	-	103869	180879	257889	334899	411909	488919	565929				
3731UC-S081 Series C Only	SST	307947	AST	-	-	-	209598	251184	292770	334356	375942	417528	Maximum Allowable Pressure			
	Mid Stroke Min	101883	Mid Stroke Min	-	-	-	75699	101883	128067	154251	180435	206619	120 psig			
	SET	101883	AET	-	-	-	129707	206718	283729	360740	437751	514762				
3731UC-S091 Series C Only	SST	346441	AST	-	-	-	-	240996	282582	324168	365754	407340	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	-	88434	114618	140802	166986	193170	120 psig			
	SET	114618	AET	-	-	-	-	155548	232558	309568	386578	463588				
3731UC-S101 Series C Only	SST	384934	AST	-	-	-	-	-	272394	313980	355566	397152	Maximum Allowable Pressure			
	Mid Stroke Min	127353	Mid Stroke Min	-	-	-	-	-	101169	127353	153537	179721	120 psig			
	SET	127353	AET	-	-	-	-	-	181387	258398	335409	412420				
3731UC-S111 Series C Only	SST	423427	AST	-	-	-	-	-	-	303792	345378	386964	Maximum Allowable Pressure			
	Mid Stroke Min	140089	Mid Stroke Min	-	-	-	-	-	-	113905	140089	166273	120 psig			
	SET	140089	AET	-	-	-	-	-	-	207228	284238	361248				
3731UC-S121 Series C Only	SST	461921	AST	-	-	-	-	-	-	-	335190	376776	Maximum Allowable Pressure			
	Mid Stroke Min	152824	Mid Stroke Min	-	-	-	-	-	-	-	126640	152824	120 psig			
	SET	152824	AET	-	-	-	-	-	-	-	233068	310078				
4534UC-S041 Series C Only	SST	153974	AST	125592	176119	226646	277173	327700	378227	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	50941	Mid Stroke Min	50941	82754	114567	146380	178193	210006	-	-	-	120 psig			
	SET	50941	AET	103359	196927	290495	384063	477631	571199	-	-	-				
4534UC-S051 Series C Only	SST	230960	AST	137862	188388	238914	289440	339966	390492	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	76412	Mid Stroke Min	44598	76412	108226	140040	171854	203668	-	-	-	120 psig			
	SET	76412	AET	61471	155039	248607	342175	435743	529311	-	-	-				
4534UC-S061 Series C Only	SST	269454	AST	-	169259	219786	270313	320840	371367	421894	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	89147	Mid Stroke Min	-	57334	89147	120960	152773	184586	216399	-	-	120 psig			
	SET	89147	AET	-	87311	180879	274447	368015	461583	555151	-	-				
4534UC-S071 Series C Only	SST	307947	AST	-	-	200658	251184	301710	352236	402762	453288	-	Maximum Allowable Pressure			
	Mid Stroke Min	101883	Mid Stroke Min	-	-	70069	101883	133697	165511	197325	229139	-	120 psig			
	SET	101883	AET	-	-	113150	206718	300286	393854	487422	580990	-				
4534UC-S081 Series C Only	SST	346441	AST	-	-	-	232055	282582	333109	383636	434163	484690	Maximum Allowable Pressure			
	Mid Stroke Min	114618	Mid Stroke Min	-	-	-	82805	114618	146431	178244	210057	241870	120 psig			
	SET	114618	AET	-	-	-	138990	232558	326126	419694	513262	606830				
4534UC-S091 Series C Only	SST	384934	AST	-	-	-	-	263454	313980	364506	415032	465558	Maximum Allowable Pressure			
	Mid Stroke Min	127353	Mid Stroke Min	-	-	-	-	95539	127353	159167	190981	222795	120 psig			
	SET	127353	AET	-	-	-	-	164830	258398	351966	445534	539102				
5336UC-S041 Series C Only	SST	220183	AST	179597	239064	298531	357998	417465	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	72846	Mid Stroke Min	72846	110288	147730	185172	222614	-	-	-	-	120 psig			
	SET	72846	AET	147804	257929	368054	478179	588304	-	-	-	-				
5336UC-S051 Series C Only	SST	275228	AST	165028	224496	283964	343432	402900	-	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	91058	Mid Stroke Min	53616	91058	128500	165942	203384	-	-	-	-	120 psig			
	SET	91058	AET	74629	184755	294881	405007	515133	-	-	-	-				
5336UC-S061 Series C Only	SST	330274	AST	-	209929	269396	328863	388330	447797	-	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	109269	Mid Stroke Min	-	71827	109269	146711	184153	221595	-	-	-	120 psig			
	SET	109269	AET	-	111581	221706	331831	441956	552081	-	-	-				
5336UC-S071 Series C Only	SST	385320	AST	-	-	254827	314295	373763	433231	492699	-	-	Maximum Allowable Pressure			
	Mid Stroke Min	127481	Mid Stroke Min	-	-	90039	127481	164923	202365	239807	-	-	120 psig			
	SET	127481	AET	-	-	148531	258657	368783	478909	589035	-	-				
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
Air torques lb. in.																



Series A/B/C/S: Models 023 - 7114

Spring Return - Fail Open (CCW)

Canted Yoke Design

Model Number	Spring Torques		Torque at	Air torques lb. in.												
	lb. in.			Supply Pressure psig												
				40	50	60	70	80	90	100	110	120	130	140	150	160
5336UC-S081 Series C Only	SST	440366	AST	-	-	-	299727	359194	418661	478128	537595	-	Maximum Allowable Pressure			
	Mid Stroke Min	145693	Mid Stroke Min	-	-	-	108251	145693	183135	220577	258019	-	120 psig			
	SET	145693	AET	-	-	-	185483	295608	405733	515858	625983	-				
5336UC-S091 Series C Only	SST	495411	AST	-	-	-	-	344625	404093	463561	523029	-	Maximum Allowable Pressure			
	Mid Stroke Min	163904	Mid Stroke Min	-	-	-	-	126462	163904	201346	238788	-	120 psig			
	SET	163904	AET	-	-	-	-	222433	332559	442685	552811	-	POA, Consult Factory			
5336UC-S101 Series C Only	SST	550457	AST	-	-	-	-	-	389526	448993	508460	567927	Maximum Allowable Pressure			
	Mid Stroke Min	182116	Mid Stroke Min	-	-	-	-	-	144674	182116	219558	257000	120 psig			
	SET	182116	AET	-	-	-	-	-	259385	369510	479635	589760	POA, Consult Factory			
5336UC-S111 Series C Only	SST	605503	AST	-	-	-	-	-	-	434424	493892	553360	Maximum Allowable Pressure			
	Mid Stroke Min	200237	Mid Stroke Min	-	-	-	-	-	-	162885	200327	237769	120 psig			
	SET	200237	AET	-	-	-	-	-	-	296335	406461	516587	POA, Consult Factory			
5336UC-S121 Series C Only	SST	660548	AST	-	-	-	-	-	-	-	479323	538791	Maximum Allowable Pressure			
	Mid Stroke Min	218539	Mid Stroke Min	-	-	-	-	-	-	-	181097	218539	120 psig			
	SET	218539	AET	-	-	-	-	-	-	-	333286	443412	POA, Consult Factory			
6044UC-S041 Series C Only	SST	246093	AST	200731	266784	332837	398890	464943	530996	597049	663102	729155	Maximum Allowable Pressure			
	Mid Stroke Min	81418	Mid Stroke Min	81418	129307	177196	225085	272974	320863	368752	416641	464529	120 psig			
	SET	81418	AET	165197	281999	398801	515603	632405	749207	866009	982811	1099612				
6044UC-S051 Series C Only	SST	307616	AST	184861	250914	316967	383020	449073	515126	581179	647232	713285	Maximum Allowable Pressure			
	Mid Stroke Min	101773	Mid Stroke Min	53885	101773	149661	197549	245437	293325	341213	389101	436989	120 psig			
	SET	101773	AET	89695	206496	323297	440098	556899	673700	790501	907302	1024103				
6044UC-S061 Series C Only	SST	369139	AST	-	235043	301096	367149	433202	499255	565308	631361	697414	Maximum Allowable Pressure			
	Mid Stroke Min	122128	Mid Stroke Min	-	74239	122128	170017	217906	265795	313684	361573	409462	120 psig			
	SET	122128	AET	-	130993	247795	364597	481399	598201	715003	831805	948607				
6044UC-S071 Series C Only	SST	430662	AST	-	-	285226	351279	417332	483385	549438	615491	681544	Maximum Allowable Pressure			
	Mid Stroke Min	142482	Mid Stroke Min	-	-	94594	142482	190370	238258	286146	334034	381922	120 psig			
	SET	142482	AET	-	-	172293	289094	405895	522696	639497	756298	873099				
6044UC-S081 Series C Only	SST	492185	AST	-	-	-	335409	401462	467515	533568	599621	665674	Maximum Allowable Pressure			
	Mid Stroke Min	162837	Mid Stroke Min	-	-	-	114948	162837	210726	258615	306504	354393	120 psig			
	SET	162837	AET	-	-	-	213592	330394	447196	563998	680800	797602				
7114UC-S041 Series C Only	SST	289640	AST	236251	313994	391737	469480	547223	624966	702708	780450	858192	Maximum Allowable Pressure			
	Mid Stroke Min	95826	Mid Stroke Min	95826	152188	208550	264912	321274	377636	433998	490360	546722	120 psig			
	SET	95826	AET	194429	331900	469371	606842	744313	881784	1019254	1156724	1294194				
7114UC-S051 Series C Only	SST	362050	AST	217572	295314	373056	450798	528540	606282	684024	761766	839508	Maximum Allowable Pressure			
	Mid Stroke Min	119782	Mid Stroke Min	63420	119782	176144	232506	288868	345230	401592	457954	514316	120 psig			
	SET	119782	AET	105567	243037	380507	517977	655447	792917	930387	1067857	1205327				
7114UC-S061 Series C Only	SST	434460	AST	-	276634	354377	432120	509863	587606	665349	743092	820834	Maximum Allowable Pressure			
	Mid Stroke Min	143739	Mid Stroke Min	-	87377	143739	200101	256463	312825	369187	425549	481911	120 psig			
	SET	143739	AET	-	154173	291644	429115	566586	704057	841528	978999	1116469				
7114UC-S071 Series C Only	SST	506870	AST	-	-	335698	413440	491182	568924	646666	724408	802150	Maximum Allowable Pressure			
	Mid Stroke Min	167695	Mid Stroke Min	-	-	111333	167695	224057	280419	336781	393143	449505	120 psig			
	SET	167695	AET	-	-	202781	340251	477721	615191	752661	890131	1027601				
7114UC-S081 Series C Only	SST	579280	AST	-	-	-	394760	472503	550246	627989	705732	783475	Maximum Allowable Pressure			
	Mid Stroke Min	191652	Mid Stroke Min	-	-	-	135290	191652	248014	304376	360738	417100	120 psig			
	SET	191652	AET	-	-	-	251388	388859	526330	663801	801272	938743				
7114UC-S091 Series C Only	SST	651690	AST	-	-	-	-	453824	531566	609308	687050	764792	Maximum Allowable Pressure			
	Mid Stroke Min	215608	Mid Stroke Min	-	-	-	-	159246	215608	271970	328332	384694	120 psig			
	SET	215608	AET	-	-	-	-	299996	437466	574936	712406	849876	POA, Consult Factory			
7114UC-S101 Series C Only	SST	724100	AST	-	-	-	-	-	512886	590629	668372	746115	Maximum Allowable Pressure			
	Mid Stroke Min	239565	Mid Stroke Min	-	-	-	-	-	183203	239565	295927	352289	120 psig			
	SET	239565	AET	-	-	-	-	-	348602	486073	623544	761015	POA, Consult Factory			
7114UC-S111 Series C Only	SST	796511	AST	-	-	-	-	-	-	571950	649692	727434	Maximum Allowable Pressure			
	Mid Stroke Min	263521	Mid Stroke Min	-	-	-	-	-	-	207159	263521	319883	120 psig			
	SET	263521	AET	-	-	-	-	-	-	397211	534681	672151	POA, Consult Factory			
7114UC-S121 Series C Only	SST	868921	AST	-	-	-	-	-	-	-	631012	708754	Maximum Allowable Pressure			
	Mid Stroke Min	287478	Mid Stroke Min	-	-	-	-	-	-	-	231116	287478	120 psig			
	SET	287478	AET	-	-	-	-	-	-	-	445818	583288	POA, Consult Factory			
Model Number	Spring Torques		Torque at	Supply Pressure psig												
	lb. in.			40	50	60	70	80	90	100	110	120	130	140	150	160
#REF!																

Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP15U-2-1DA	Start/End	2,100	2,625	3,150	3,675	4,200	4,725	5,250	6,299	7,874	9,449	-	-	MOP = 1900 psi MAP = 2250 psi
	Minimum	1,663	2,078	2,494	2,910	3,325	3,741	4,157	4,988	6,235	7,482	-	-	
HP15U-3-1DA	Start/End	5,735	7,169	8,603	10,037	-	-	-	-	-				MOP = 700 psi MAP = 1500 psi
	Minimum	4,506	5,633	6,759	7,886	-	-	-	-	-				
HP15U-2-2DA	Start/End	2,701	3,376	4,051	4,727	5,402	6,077	6,752	8,103	10,129	-	-	-	MOP = 1500 psi MAP = 2250 psi
	Minimum	2,134	2,667	3,201	3,734	4,268	4,801	5,335	6,402	8,002	-	-	-	
HP15U-3-2DA	Start/End	6,300	7,875	9,450	-	-	-	-	-	-				MOP = 600 psi MAP = 1500 psi
	Minimum	4,977	6,222	7,466	-	-	-	-	-	-				
HP25U-3-1DA	Start/End	8,300	10,375	12,451	14,526	16,601	18,676	20,751	24,901	31,126	37,352	41,502	-	MOP = 2000 psi MAP = 2250 psi
	Minimum	6,529	8,161	9,793	11,425	13,057	14,689	16,322	19,586	24,482	29,379	32,643	-	
HP25U-4-1DA	Start/End	15,800	19,750	23,700	27,650	31,600	35,550	39,500	-	-	-	-	-	MOP = 1100 psi MAP = 2250 psi
	Minimum	12,419	15,524	18,629	21,733	24,838	27,943	31,048	-	-	-	-	-	
HP25U-3-2DA	Start/End	10,850	13,562	16,275	18,987	21,699	24,412	27,124	32,549	40,687	-	-	-	MOP = 1600 psi MAP = 2250 psi
	Minimum	8,296	10,370	12,444	14,518	16,592	18,665	20,739	24,887	31,109	-	-	-	
HP25U-4-2DA	Start/End	18,554	23,192	27,831	32,469	37,107	41,746	-	-	-	-	-	-	MOP = 900 psi MAP = 2250 psi
	Minimum	14,186	17,733	21,279	24,826	28,373	31,919	-	-	-	-	-	-	
HP30U-4-1DA	Start/End	16,860	21,075	25,290	29,504	33,719	37,934	42,149	50,579	63,224	75,869	84,298	94,836	MOP = 2250 psi MAP = 2250 psi
	Minimum	13,254	16,567	19,880	23,194	26,507	29,821	33,134	39,761	49,701	59,641	66,268	74,551	
HP30U-6-1DA	Start/End	42,032	52,540	63,048	73,556	84,064	94,572	105,080	-	-	-	-	-	MOP = 1100 psi MAP = 2250 psi
	Minimum	33,046	41,307	49,568	57,830	66,091	74,353	82,614	-	-	-	-	-	
HP30U-8-1DA	Start/End	76,796	95,995	115,194	-	-	-	-	-	-	-	-	-	MOP = 600 psi MAP = 2000psi
	Minimum	60,471	75,589	90,706	-	-	-	-	-	-	-	-	-	
HP30U-4-2DA	Start/End	21,350	26,687	32,024	37,362	42,699	48,037	53,374	64,049	80,061	96,073	106,748	-	MOP = 2000 psi MAP = 2250 psi
	Minimum	17,024	21,279	25,535	29,791	34,047	38,303	42,559	51,071	63,838	76,606	85,118	-	
HP30U-6-2DA	Start/End	46,171	57,714	69,257	80,800	92,343	103,885	115,428	-	-	-	-	-	MOP = 1000 psi MAP = 2250 psi
	Minimum	36,816	46,019	55,223	64,427	73,631	82,835	92,039	-	-	-	-	-	
HP30U-8-2DA	Start/End	80,566	100,707	-	-	-	-	-	-	-	-	-	-	MOP = 500 psi MAP = 2000 psi
	Minimum	64,241	80,301	-	-	-	-	-	-	-	-	-	-	
HP65U-4-1DA	Start/End	33,363	41,704	50,045	58,386	66,727	75,067	83,408	100,090	125,112	150,135	166,816	187,668	MOP = 2250 psi MAP = 2250 psi
	Minimum	26,507	33,134	39,761	46,388	53,014	59,641	66,268	79,522	99,402	119,282	132,536	149,103	
HP65U-6-1DA	Start/End	83,186	103,982	124,779	145,575	166,372	187,168	207,964	249,557	311,947	374,336	415,929	467,920	MOP = 2250 psi MAP = 2250 psi
	Minimum	66,091	82,614	99,137	115,660	132,183	148,705	165,228	198,274	247,842	297,411	330,456	371,763	
HP65U-8-1DA	Start/End	152,223	190,279	228,335	266,391	304,446	342,502	380,558	456,670	-	-	-	-	MOP = 1300 psi MAP = 2000 psi
	Minimum	120,942	151,177	181,412	211,648	241,883	272,119	302,354	362,825	-	-	-	-	
HP65U-4-2DA	Start/End	42,853	53,567	64,280	74,993	85,707	96,420	107,133	128,560	160,700	192,840	214,266	241,050	MOP = 2250 psi MAP = 2250 psi
	Minimum	34,047	42,559	51,071	59,582	68,094	76,606	85,118	102,141	127,676	153,212	170,235	191,514	
HP65U-6-2DA	Start/End	92,676	115,845	139,014	162,183	185,352	208,520	231,689	278,027	347,534	417,041	463,379	521,301	MOP = 2250 psi MAP = 2250 psi
	Minimum	73,631	92,039	110,447	128,854	147,262	165,670	184,078	220,893	276,117	331,340	368,155	414,175	
HP65U-8-2DA	Start/End	161,713	202,142	242,570	282,998	323,426	363,855	404,283	485,140	-	-	-	-	MOP = 1200 psi MAP = 2000 psi
	Minimum	128,481	160,602	192,722	224,843	256,963	289,083	321,204	385,444	-	-	-	-	
HP80U-4-1DA	Start/End	44,484	55,605	66,727	77,848	88,969	100,090	111,211	133,453	166,816	200,180	222,422	250,225	MOP = 2250 psi MAP = 2250 psi
	Minimum	35,343	44,179	53,014	61,850	70,686	79,522	88,357	106,029	132,536	159,043	176,715	198,804	
HP80U-6-1DA	Start/End	110,914	138,643	166,372	194,100	221,829	249,557	277,286	332,743	415,929	499,115	554,572	623,893	MOP = 2250 psi MAP = 2250 psi
	Minimum	88,122	110,152	132,183	154,213	176,243	198,274	220,304	264,365	330,456	396,548	440,608	495,684	
HP80U-8-1DA	Start/End	202,964	253,705	304,446	355,187	405,929	456,670	507,411	608,893	761,116	-	-	-	MOP = 1500 psi MAP = 2000 psi
	Minimum	161,256	201,569	241,883	282,197	322,511	362,825	403,139	483,767	604,708	-	-	-	
HP80U-4-2DA	Start/End	57,138	71,422	85,707	99,991	114,275	128,560	142,844	171,413	214,266	257,120	285,688	321,400	MOP = 2250 psi MAP = 2250 psi
	Minimum	45,396	56,745	68,094	79,443	90,792	102,141	113,490	136,188	170,235	204,282	226,980	255,353	
HP80U-6-2DA	Start/End	123,568	154,460	185,352	216,243	247,135	278,027	308,919	370,703	463,379	556,055	617,838	695,068	MOP = 2250 psi MAP = 2250 psi
	Minimum	98,175	122,718	147,262	171,806	196,350	220,893	245,437	294,524	368,155	441,786	490,874	552,233	
HP80U-8-2DA	Start/End	215,618	269,522	323,426	377,331	431,235	485,140	539,044	646,853	808,566	-	-	-	MOP = 1500 psi MAP = 2000 psi
	Minimum	171,309	214,136	256,963	299,790	342,617	385,444	428,272	513,926	642,407	-	-	-	
Model Number	Torque at	400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	Max Pressures

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque
Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.



Models HP25 - HP80
Double Acting
Canted Yoke Design

Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP25UC-3-1DA	Start (CCW)	11,205	14,007	16,808	19,610	22,411	25,212	28,014	33,616	42,021	-	-	-	MOP = 1500 psi MAP = 2250 psi
	END (CCW)	6,640	8,300	9,960	11,620	13,281	14,941	16,601	19,921	24,901	-	-	-	
	Start (CW)	6,806	8,508	10,209	11,911	13,613	15,314	17,016	20,419	25,524	-	-	-	
	END (CW)	10,790	13,488	16,186	18,883	21,581	24,279	26,976	32,371	40,464	-	-	-	
	MINIMUM	6,529	8,161	9,793	11,425	13,057	14,689	16,322	19,586	24,482	-	-	-	
HP25UC-4-1DA	Start (CCW)	21,330	26,662	31,995	37,327	42,660	-	-	-	-	-	-	-	MOP = 800 psi MAP = 2250 psi
	END (CCW)	12,640	15,800	18,960	22,120	25,280	-	-	-	-	-	-	-	
	Start (CW)	12,956	16,195	19,434	22,673	25,912	-	-	-	-	-	-	-	
	END (CW)	20,540	25,675	30,810	35,945	41,080	-	-	-	-	-	-	-	
	MINIMUM	12,419	15,524	18,629	21,733	24,838	-	-	-	-	-	-	-	
HP25UC-3-2DA	Start (CCW)	14,647	18,309	21,971	25,633	29,294	32,956	36,618	-	-	-	-	-	MOP = 1100 psi MAP = 2250 psi
	END (CCW)	8,680	10,850	13,020	15,190	17,360	19,530	21,699	-	-	-	-	-	
	Start (CW)	8,897	11,121	13,345	15,569	17,794	20,018	22,242	-	-	-	-	-	
	END (CW)	14,105	17,631	21,157	24,683	28,209	31,735	35,262	-	-	-	-	-	
	MINIMUM	8,296	10,370	12,444	14,518	16,592	18,665	20,739	-	-	-	-	-	
HP25UC-4-2DA	Start (CCW)	25,047	31,309	37,571	-	-	-	-	-	-	-	-	-	MOP = 600 psi MAP = 2250 psi
	END (CCW)	14,843	18,554	22,264	-	-	-	-	-	-	-	-	-	
	Start (CW)	15,214	19,018	22,821	-	-	-	-	-	-	-	-	-	
	END (CW)	24,120	30,150	36,180	-	-	-	-	-	-	-	-	-	
	MINIMUM	14,186	17,733	21,279	-	-	-	-	-	-	-	-	-	
HP30UC-4-1DA	Start (CCW)	22,761	28,451	34,141	39,831	45,521	51,211	56,901	68,282	85,352	102,423	113,803	-	MOP = 2000 psi MAP = 2250 psi
	END (CCW)	13,488	16,860	20,232	23,604	26,976	30,347	33,719	40,463	50,579	60,695	67,439	-	
	Start (CW)	13,825	17,281	20,737	24,194	27,650	31,106	34,562	41,475	51,844	62,212	69,125	-	
	END (CW)	21,918	27,397	32,876	38,356	43,835	49,315	54,794	65,753	82,191	98,629	109,588	-	
	MINIMUM	13,254	16,567	19,880	23,194	26,507	29,821	33,134	39,761	49,701	59,641	66,268	-	
HP30UC-6-1DA	Start (CCW)	56,743	70,929	85,115	99,301	113,487	-	-	-	-	-	-	-	MOP = 800 psi MAP = 2250 psi
	END (CCW)	33,626	42,032	50,439	58,845	67,251	-	-	-	-	-	-	-	
	Start (CW)	34,466	43,083	51,700	60,316	68,933	-	-	-	-	-	-	-	
	END (CW)	54,642	68,302	81,963	95,623	109,284	-	-	-	-	-	-	-	
	MINIMUM	33,046	41,307	49,568	57,830	66,091	-	-	-	-	-	-	-	
HP30UC-8-1DA	Start (CCW)	103,674	-	-	-	-	-	-	-	-	-	-	-	MOP = 400 psi MAP = 2000 psi
	END (CCW)	61,437	-	-	-	-	-	-	-	-	-	-	-	
	Start (CW)	62,973	-	-	-	-	-	-	-	-	-	-	-	
	END (CW)	99,834	-	-	-	-	-	-	-	-	-	-	-	
	MINIMUM	60,471	-	-	-	-	-	-	-	-	-	-	-	
HP30UC-4-2DA	Start (CCW)	28,822	36,027	43,233	50,438	57,644	64,849	72,055	86,466	108,082	-	-	-	MOP = 1600 psi MAP = 2250 psi
	END (CCW)	17,080	21,350	25,620	29,889	34,159	38,429	42,699	51,239	64,049	-	-	-	
	Start (CW)	17,507	21,883	26,260	30,637	35,013	39,390	43,767	52,520	65,650	-	-	-	
	END (CW)	27,754	34,693	41,632	48,570	55,509	62,448	69,386	83,263	104,079	-	-	-	
	MINIMUM	17,024	21,279	25,535	29,791	34,047	38,303	42,559	51,071	63,838	-	-	-	
HP30UC-6-2DA	Start (CCW)	62,331	77,914	93,497	109,080	-	-	-	-	-	-	-	-	MOP = 700 psi MAP = 2250 psi
	END (CCW)	36,937	46,171	55,406	64,640	-	-	-	-	-	-	-	-	
	Start (CW)	37,860	47,326	56,791	66,256	-	-	-	-	-	-	-	-	
	END (CW)	60,023	75,028	90,034	105,040	-	-	-	-	-	-	-	-	
	MINIMUM	36,816	46,019	55,223	64,427	-	-	-	-	-	-	-	-	
HP30UC-8-2DA	Start (CCW)	108,764	-	-	-	-	-	-	-	-	-	-	-	MOP = 400 psi MAP = 2000 psi
	END (CCW)	64,453	-	-	-	-	-	-	-	-	-	-	-	
	Start (CW)	66,064	-	-	-	-	-	-	-	-	-	-	-	
	END (CW)	104,736	-	-	-	-	-	-	-	-	-	-	-	
	MINIMUM	64,241	-	-	-	-	-	-	-	-	-	-	-	
HP65UC-4-1DA	Start (CCW)	45,040	56,301	67,561	78,821	90,081	101,341	112,601	135,121	168,902	202,682	225,202	253,352	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	26,691	33,363	40,036	46,709	53,381	60,054	66,727	80,072	100,090	120,108	133,453	150,135	
	Start (CW)	27,358	34,197	41,037	47,876	54,716	61,555	68,395	82,074	102,592	123,110	136,789	153,888	
	END (CW)	43,372	54,215	65,058	75,901	86,745	97,588	108,431	130,117	162,646	195,175	216,861	243,969	
	MINIMUM	26,507	33,134	39,761	46,388	53,014	59,641	66,268	79,522	99,402	119,282	132,536	149,103	
HP65UC-6-1DA	Start (CCW)	112,301	140,376	168,451	196,526	224,602	252,677	280,752	336,902	421,128	505,354	-	-	MOP = 1800 psi MAP = 2250 psi
	END (CCW)	66,549	83,186	99,823	116,460	133,097	149,734	166,372	199,646	249,557	299,469	-	-	
	Start (CW)	68,212	85,265	102,318	119,372	136,425	153,478	170,531	204,637	255,796	306,955	-	-	
	END (CW)	108,141	135,177	162,212	189,248	216,283	243,318	270,354	324,424	405,531	486,637	-	-	
	MINIMUM	66,091	82,614	99,137	115,660	132,183	148,705	165,228	198,274	247,842	297,411	-	-	
HP65UC-8-1DA	Start (CCW)	205,501	256,877	308,252	359,627	411,003	462,378	-	-	-	-	-	-	MOP = 900 psi MAP = 2000 psi
	END (CCW)	121,779	152,223	182,668	213,112	243,557	274,002	-	-	-	-	-	-	
	Start (CW)	124,823	156,029	187,235	218,440	249,646	280,852	-	-	-	-	-	-	
	END (CW)	197,890	247,363	296,835	346,308	395,780	445,253	-	-	-	-	-	-	
	MINIMUM	120,942	151,177	181,412	211,648	241,883	272,119	-	-	-	-	-	-	
Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque
Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.



Models HP25 - HP80
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Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP65UC-4-2DA	Start (CCW)	57,852	72,315	86,778	101,241	115,704	130,167	144,630	173,556	216,945	260,334	289,260	325,417	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	34,283	42,853	51,424	59,995	68,565	77,136	85,707	102,848	128,560	154,272	171,413	192,840	
	Start (CW)	35,140	43,925	52,710	61,494	70,279	79,064	87,849	105,419	131,774	158,129	175,698	197,661	
	END (CW)	55,709	69,637	83,564	97,491	111,419	125,346	139,273	167,128	208,910	250,692	278,546	313,365	
	MINIMUM	34,047	42,559	51,071	59,582	68,094	76,606	85,118	102,141	127,676	153,212	170,235	191,514	
HP65UC-6-2DA	Start (CCW)	125,112	156,390	187,668	218,946	250,225	281,503	312,781	375,337	469,171	-	-	-	MOP = 1600 psi MAP = 2250 psi
	END (CCW)	74,141	92,676	111,211	129,746	148,281	166,816	185,352	222,422	278,027	-	-	-	
	Start (CW)	75,994	94,993	113,991	132,990	151,988	170,987	189,985	227,982	284,978	-	-	-	
	END (CW)	120,478	150,598	180,718	210,837	240,957	271,077	301,196	361,435	451,794	-	-	-	
	MINIMUM	73,631	92,039	110,447	128,854	147,262	165,670	184,078	220,893	276,117	-	-	-	
HP65UC-8-2DA	Start (CCW)	218,313	272,891	327,469	382,047	436,626	491,204	-	-	-	-	-	-	MOP = 900 psi MAP = 2000 psi
	END (CCW)	129,371	161,713	194,056	226,398	258,741	291,084	-	-	-	-	-	-	
	Start (CW)	132,605	165,756	198,907	232,058	265,210	298,361	-	-	-	-	-	-	
	END (CW)	210,227	262,784	315,341	367,898	420,454	473,011	-	-	-	-	-	-	
	MINIMUM	128,481	160,602	192,722	224,843	256,963	289,083	-	-	-	-	-	-	
HP80UC-4-1DA	Start (CCW)	60,054	75,067	90,081	105,094	120,108	135,121	150,135	180,162	225,202	270,243	300,269	337,803	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	35,587	44,484	53,381	62,278	71,175	80,072	88,969	106,762	133,453	160,144	177,937	200,180	
	Start (CW)	36,477	45,596	54,716	63,835	72,954	82,074	91,193	109,432	136,789	164,147	182,386	205,184	
	END (CW)	57,830	72,287	86,745	101,202	115,659	130,117	144,574	173,489	216,861	260,234	289,148	325,292	
	MINIMUM	35,343	44,179	53,014	61,850	70,686	79,522	88,357	106,029	132,536	159,043	176,715	198,804	
HP80UC-6-1DA	Start (CCW)	149,734	187,168	224,602	262,035	299,469	336,902	374,336	449,203	561,504	673,805	748,672	842,256	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	88,731	110,914	133,097	155,280	177,463	199,646	221,829	266,194	332,743	399,292	443,657	499,115	
	Start (CW)	90,950	113,687	136,425	159,162	181,900	204,637	227,374	272,849	341,062	409,274	454,749	511,592	
	END (CW)	144,189	180,236	216,283	252,330	288,377	324,424	360,472	432,566	540,707	648,849	720,943	811,061	
	MINIMUM	88,122	110,152	132,183	154,213	176,243	198,274	220,304	264,365	330,456	396,548	440,608	495,684	
HP80UC-8-1DA	Start (CCW)	274,002	342,502	411,003	479,503	548,004	616,504	685,004	822,005	1,027,507	-	-	-	MOP = 1500 psi MAP = 2000 psi
	END (CCW)	162,371	202,964	243,557	284,150	324,743	365,336	405,929	487,114	608,893	-	-	-	
	Start (CW)	166,431	208,038	249,646	291,254	332,861	374,469	416,077	499,292	624,115	-	-	-	
	END (CW)	263,854	329,817	395,780	461,744	527,707	593,671	659,634	791,561	989,451	-	-	-	
	MINIMUM	161,256	201,569	241,883	282,197	322,511	362,825	403,139	483,767	604,708	-	-	-	
HP80UC-4-2DA	Start (CCW)	77,136	96,420	115,704	134,988	154,272	173,556	192,840	231,408	289,260	347,112	385,679	433,889	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	45,710	57,138	68,565	79,993	91,420	102,848	114,275	137,130	171,413	205,696	228,551	257,120	
	Start (CW)	46,853	58,566	70,279	81,993	93,706	105,419	117,132	140,559	175,698	210,838	234,265	263,548	
	END (CW)	74,279	92,849	111,419	129,988	148,558	167,128	185,698	222,837	278,546	334,256	371,395	417,819	
	MINIMUM	45,396	56,745	68,094	79,443	90,792	102,141	113,490	136,188	170,235	204,282	226,980	255,353	
HP80UC-6-2DA	Start (CCW)	166,816	208,520	250,225	291,929	333,633	375,337	417,041	500,449	625,561	750,674	834,082	938,342	MOP = 2250 psi MAP = 2250 psi
	END (CCW)	98,854	123,568	148,281	172,995	197,708	222,422	247,135	296,562	370,703	444,844	494,271	556,055	
	Start (CW)	101,325	126,657	151,988	177,320	202,651	227,982	253,314	303,976	379,971	455,965	506,627	569,956	
	END (CW)	160,638	200,797	240,957	281,116	321,276	361,435	401,595	481,914	602,392	722,871	803,190	903,589	
	MINIMUM	98,175	122,718	147,262	171,806	196,350	220,893	245,437	294,524	368,155	441,786	490,874	552,233	
HP80UC-8-2DA	Start (CCW)	291,084	363,855	436,626	509,397	582,168	654,938	727,709	873,251	1,091,564	-	-	-	MOP = 1500 psi MAP = 2000 psi
	END (CCW)	172,494	215,618	258,741	301,865	344,988	388,112	431,235	517,482	646,853	-	-	-	
	Start (CW)	176,806	221,008	265,210	309,411	353,613	397,814	442,016	530,419	663,024	-	-	-	
	END (CW)	280,303	350,379	420,454	490,530	560,606	630,682	700,757	840,909	1,051,136	-	-	-	
	MINIMUM	171,309	214,136	256,963	299,790	342,617	385,444	428,272	513,926	642,407	-	-	-	
Model Number	Torque at	Supply Pressure (psig)												Max Pressures
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
		Output Torques (lb. in.)												

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque
Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.



Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP15U-2-1-XXXX	Break	1,680	2,250	2,615	3,000	3,510	4,095	4,095	4,880	6,500	6,500	6,500	6,500	MOP = 2250 psi MAP = 2250 psi
	End	905	1,200	1,410	1,600	1,890	2,205	2,205	2,620	3,500	3,500	3,500	3,500	
	Minimum	815	1,080	1,269	1,440	1,701	1,985	1,985	2,358	3,150	3,150	3,150	3,150	
	Spring Pack	23S090	046S060	046S070	046S080	072S060	072S070	072S070	100S060	100S080	100S080	100S080	100S080	
HP15U-3-1-XXXX	Break	4,060	4,880	5,690	6,500	6,500	6,500	-	-	-				MOP = 900 psi MAP = 1500 psi
	End	2,190	2,620	3,060	3,500	3,500	3,500	-	-	-				
	Minimum	1,971	2,358	2,754	3,150	3,150	3,150	-	-	-				
	Spring Pack	100S050	100S060	100S070	100S080	100S080	100S080							
HP25U-3-1-XXXX	Break	6,825	8,530	10,240	11,940	13,650	15,350	17,060	20,475	23,890	30,705	30,705	34,120	MOP = 2250 psi MAP = 2250 psi
	End	4,043	5,049	6,061	7,073	8,085	9,097	9,650	11,576	13,503	17,367	17,367	19,299	
	Minimum	3,639	4,544	5,455	6,366	7,277	8,187	8,685	10,418	12,153	15,630	15,630	17,369	
	Spring Pack	210S040	210S050	210S060	210S070	210S080	210S090	420S050	420S060	420S070	420S090	420S090	420S100	
HP25U-4-1-XXXX	Break	10,240	13,650	17,060	20,475	23,890	23,890	27,300	34,120	-	-	-	-	MOP = 1400 psi MAP = 2250 psi
	End	6,061	7,718	9,650	11,576	13,503	13,503	15,435	19,299	-	-	-	-	
	Minimum	5,455	6,946	8,685	10,418	12,153	12,153	13,892	17,369	-	-	-	-	
	Spring Pack	210S060	420S040	420S050	420S060	420S070	420S070	420S080	420S100					
HP30U-4-1-XXXX	Break	12,025	15,030	21,045	24,050	27,055	30,060	30,060	42,090	48,100	54,108	60,120	60,120	MOP = 2250 psi MAP = 2250 psi
	End	7,446	10,448	13,030	14,893	16,756	18,619	18,619	26,059	29,785	33,514	37,238	37,238	
	Minimum	6,701	9,403	11,727	13,404	15,080	16,757	16,757	23,453	26,807	30,163	33,514	33,514	
	Spring Pack	370S040	370S050	370S070	370S080	370S090	740S050	740S050	740S070	740S080	740S090	740S100	740S100	
HP30U-6-1-XXXX	Break	30,060	37,375	42,090	48,100	56,060	65,400	74,750	84,090	93,440	-	-	-	MOP = 1500 psi MAP = 2250 psi
	End	18,619	21,131	26,059	29,785	31,700	36,981	42,263	47,544	52,815	-	-	-	
	Minimum	16,757	19,018	23,453	26,807	28,530	33,283	38,037	42,790	47,534	-	-	-	
	Spring Pack	740S050	575S080	740S070	740S080	1150S060	1150S070	1150S080	1150S090	1150S100				
HP30U-8-1-XXXX	Break	48,100	65,400	74,750	84,090	93,440	93,440	-	-	-	-	-	MOP = 900 psi MAP = 2000 psi	
	End	29,785	36,981	42,263	47,544	52,815	52,815	-	-	-	-	-		
	Minimum	26,807	33,283	38,037	42,790	47,534	47,534	-	-	-	-	-		
	Spring Pack	740S080	1150S070	1150S080	1150S090	1150S100	1150S100							
HP65U-6-1-XXXX	Break	54,247	67,809	81,371	94,933	108,494	122,056	135,618	177,299	221,623	239,941	274,218	308,496	MOP = 2250 psi MAP = 2250 psi
	End	29,666	37,083	44,500	51,916	59,333	66,750	74,166	95,469	119,336	129,199	147,656	166,113	
	Minimum	26,700	33,375	40,050	46,725	53,400	60,075	66,750	85,922	107,402	116,279	132,890	149,502	
	Spring Pack	1485S040	1485S050	1485S060	1485S070	1485S080	1485S090	1485S100	2385S080	2385S100	3731S070	3731S080	3731S090	
HP65U-8-1-XXXX	Break	94,933	122,056	137,109	171,386	205,664	205,664	239,941	308,496	392,133	-	-	MOP = 1500 psi MAP = 2000 psi	
	End	51,916	66,750	73,828	92,285	110,742	110,742	129,199	166,113	211,149	-	-		
	Minimum	46,725	60,075	66,445	83,057	99,668	99,668	116,279	149,502	190,034	-	-		
	Spring Pack	1485S070	1485S090	3731S040	3731S050	3731S060	3731S060	3731S070	3731S090	5336S080				
HP80U-6-1-XXXX	Break	-	-	-	-	-	-	-	219,139	273,923	322,396	386,875	451,354	MOP = 2250 psi MAP = 2250 psi
	End	-	-	-	-	-	-	-	117,998	147,497	173,588	208,317	243,037	
	Minimum	-	-	-	-	-	-	-	106,198	132,747	156,238	187,485	218,733	
	Spring Pack	-	-	-	-	-	-	-	6044S040	6044S050	7114S050	7114S060	7114S070	
HP80U-8-1-XXXX	Break	-	-	-	219,139	273,923	273,923	328,708	386,875	515,833	-	-	MOP = 1500 psi MAP = 2000 psi	
	End	-	-	-	117,998	147,497	147,497	176,997	208,317	277,756	-	-		
	Minimum	-	-	-	106,198	132,747	132,747	159,297	187,485	249,981	-	-		
	Spring Pack				6044S040	6044S050	6044S050	6044S060	7114S060	7114S080				
Model Number	Torque at	400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	Max Pressures

Note: For Fail Open operation replace last "0" of spring code with "1" (i.e. -S040 becomes S041)

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque

Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.



Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP25UC-3-1-XXXX	SST (CW)	6,252	7,813	9,380	10,937	12,503	14,061	15,627	18,755	21,883	28,126	28,126	31,254	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	5,660	7,069	8,485	9,902	11,319	12,736	13,510	16,206	18,904	24,314	24,314	27,019	
	AST (CCW)	7,664	9,579	11,500	13,409	15,329	17,238	19,158	22,993	26,828	34,482	34,482	38,317	
	AET (CCW)	2,790	3,484	4,182	4,880	5,579	6,277	6,659	7,987	9,317	11,983	11,983	13,316	
	MINIMUM	2,790	3,484	4,182	4,880	5,579	6,277	6,659	7,987	9,317	11,983	11,983	13,316	
	Spring Pack	210S040	210S050	210S060	210S070	210S080	210S090	420S050	420S060	420S070	420S090	420S090	420S100	
HP25UC-4-1-XXXX	SST (CW)	9,380	12,503	15,627	18,755	21,883	21,883	25,007	31,254	-	-	-	-	MOP = 1400 psi MAP = 2250 psi
	SET (CW)	8,485	10,805	13,510	16,206	18,904	18,904	21,609	27,019	-	-	-	-	
	AST (CCW)	11,500	15,329	19,158	22,993	26,828	26,828	30,658	38,317	-	-	-	-	
	AET (CCW)	4,182	5,325	6,659	7,987	9,317	9,317	10,650	13,316	-	-	-	-	
	MINIMUM	4,182	5,325	6,659	7,987	9,317	9,317	10,650	13,316	-	-	-	-	
	Spring Pack	210S060	420S040	420S050	420S060	420S070	420S070	420S080	420S100	-	-	-	-	
HP30UC-4-1-XXXX	SST (CW)	11,015	13,767	19,277	22,030	24,782	27,535	27,535	38,554	44,060	49,563	55,070	55,070	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	10,424	13,033	18,242	20,850	23,458	26,067	26,067	36,483	41,699	46,920	52,133	52,133	
	AST (CCW)	13,504	16,879	23,634	27,008	30,383	33,757	33,757	47,267	54,016	60,763	67,515	67,515	
	AET (CCW)	5,138	7,209	8,991	10,276	11,562	12,847	12,847	17,981	20,552	23,125	23,125	25,694	
	MINIMUM	5,138	7,209	8,991	10,276	11,562	12,847	12,847	17,981	20,552	23,125	23,125	25,694	
	Spring Pack	370S040	370S050	370S070	370S080	370S090	740S050	740S050	740S070	740S080	740S090	740S100	740S100	
HP30UC-6-1-XXXX	SST (CW)	27,535	34,236	38,554	44,060	51,351	59,906	68,471	77,026	85,591	-	-	-	MOP = 1500 psi MAP = 2250 psi
	SET (CW)	26,067	29,583	36,483	41,699	44,380	51,773	59,168	66,562	73,941	-	-	-	
	AST (CCW)	33,757	41,972	47,267	54,016	62,955	73,444	83,944	94,433	104,933	-	-	-	
	AET (CCW)	12,847	14,580	17,981	20,552	21,873	25,517	29,161	32,805	36,442	-	-	-	
	MINIMUM	12,847	14,580	17,981	20,552	21,873	25,517	29,161	32,805	36,442	-	-	-	
	Spring Pack	740S050	575S080	740S070	740S080	1150S060	1150S070	1150S080	1150S090	1150S100	-	-	-	
HP30UC-8-1-XXXX	SST (CW)	44,060	59,906	68,471	77,026	85,591	85,591	-	-	-	-	-	-	MOP = 900 psi MAP = 2000 psi
	SET (CW)	41,699	51,773	59,168	66,562	73,941	73,941	-	-	-	-	-	-	
	AST (CCW)	54,016	73,444	83,944	94,433	104,933	104,933	-	-	-	-	-	-	
	AET (CCW)	20,552	25,517	29,161	32,805	36,442	36,442	-	-	-	-	-	-	
	MINIMUM	20,552	25,517	29,161	32,805	36,442	36,442	-	-	-	-	-	-	
	Spring Pack	740S080	1150S070	1150S080	1150S090	1150S100	1150S100	-	-	-	-	-	-	
HP65UC-6-1-XXXX	SST (CW)	49,690	62,113	74,536	86,958	99,381	111,804	124,226	162,406	203,007	251,184	251,184	282,582	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	41,533	51,916	62,300	72,683	83,066	93,449	103,833	133,656	167,070	206,718	206,718	232,558	
	AST (CCW)	60,920	76,150	91,379	106,609	121,839	137,069	152,299	199,107	248,883	307,947	307,947	346,441	
	AET (CCW)	20,470	25,587	30,705	35,822	40,940	46,057	51,175	65,873	82,342	101,883	101,883	114,618	
	MINIMUM	20,470	25,587	30,705	35,822	40,940	46,057	51,175	65,873	82,342	101,883	101,883	114,618	
	Spring Pack	1485S040	1485S050	1485S060	1485S070	1485S080	1485S090	1485S100	2385S080	2385S100	3731S080	3731S080	3731S090	
HP65UC-8-1-XXXX	SST (CW)	86,958	111,804	125,592	156,990	188,388	188,388	219,786	282,582	359,194	-	-	-	MOP = 1500 psi MAP = 1500 psi
	SET (CW)	72,683	93,449	103,359	129,199	155,039	155,039	180,879	232,558	295,608	-	-	-	
	AST (CCW)	106,609	137,069	153,974	192,467	230,960	230,960	269,454	346,441	440,366	-	-	-	
	AET (CCW)	35,822	46,057	50,941	63,677	76,412	76,412	89,147	114,618	145,693	-	-	-	
	MINIMUM	35,822	46,057	50,941	63,677	76,412	76,412	89,147	114,618	145,693	-	-	-	
	Spring Pack	1485S070	1485S090	3731S040	3731S050	3731S060	3731S060	3731S070	3731S090	5336S080	-	-	-	
HP80UC-6-1-XXXX	SST (CW)	-	-	-	-	-	-	-	200,731	250,914	295,314	354,377	413,440	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	-	-	-	-	-	-	-	165,197	206,496	243,037	291,664	340,251	
	AST (CCW)	-	-	-	-	-	-	-	246,093	307,616	362,050	434,460	506,870	
	AET (CCW)	-	-	-	-	-	-	-	81,418	101,773	119,782	143,739	167,695	
	MINIMUM	-	-	-	-	-	-	-	81,418	101,773	119,782	143,739	167,695	
	Spring Pack	-	-	-	-	-	-	-	6044S040	6044S050	7114S050	7114S060	7114S070	
HP80UC-8-1-XXXX	SST (CW)	-	-	-	200,731	250,914	250,914	301,096	354,377	472,503	-	-	-	MOP = 1500 psi MAP = 2000 psi
	SET (CW)	-	-	-	165,197	206,496	206,496	247,795	291,664	388,859	-	-	-	
	AST (CCW)	-	-	-	246,093	307,616	307,616	369,139	434,460	579,280	-	-	-	
	AET (CCW)	-	-	-	81,418	101,773	101,773	122,128	143,739	191,652	-	-	-	
	MINIMUM	-	-	-	81,418	101,773	101,773	122,128	143,739	191,652	-	-	-	
	Spring Pack	-	-	-	6044S040	6044S050	6044S050	6044S060	7114S060	7114S080	-	-	-	
Model Number	Torque at	400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	Max Pressures
Supply Pressure (psig)														
Output Torques (lb. in.)														

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque
Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.



Direct Gas / Hydraulic Actuators

Model Number	Torque at	Output Torques (lb. in.)												Max Pressures
		Supply Pressure (psig)												
		400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	
HP25UC-3-1-XXXX	SST (CW)	7,664	9,579	11,500	13,409	15,329	17,238	19,158	22,993	26,828	34,482	34,482	38,317	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	2,790	3,484	4,182	4,880	5,579	6,277	6,659	7,987	9,317	11,983	11,983	13,316	
	AST (CCW)	6,252	7,813	9,380	10,937	12,503	14,061	15,627	18,755	21,883	28,126	28,126	31,254	
	AET (CCW)	5,660	7,069	8,485	9,902	11,319	12,736	13,510	16,206	18,904	24,314	24,314	27,019	
	MINIMUM	2,790	3,484	4,182	4,880	5,579	6,277	6,659	7,987	9,317	11,983	11,983	13,316	
	Spring Pack	210S041	210S051	210S061	210S071	210S081	210S091	420S051	420S061	420S071	420S091	420S091	420S101	
HP25UC-4-1-XXXX	SST (CW)	11,500	15,329	19,158	22,993	26,828	26,828	30,658	38,317	-	-	-	-	MOP = 1400 psi MAP = 2250 psi
	SET (CW)	4,182	5,325	6,659	7,987	9,317	9,317	10,650	13,316	-	-	-	-	
	AST (CCW)	9,380	12,503	15,627	18,755	21,883	21,883	25,007	31,254	-	-	-	-	
	AET (CCW)	8,485	10,805	13,510	16,206	18,904	18,904	21,609	27,019	-	-	-	-	
	MINIMUM	4,182	5,325	6,659	7,987	9,317	9,317	10,650	13,316	-	-	-	-	
	Spring Pack	210S061	420S041	420S051	420S061	420S071	420S071	420S081	420S101	-	-	-	-	
HP30UC-4-1-XXXX	SST (CW)	13,504	16,879	23,634	27,008	30,383	33,757	33,757	47,267	54,016	60,763	67,515	67,515	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	5,138	7,209	8,991	10,276	11,562	12,847	12,847	17,981	20,552	23,125	23,125	25,694	
	AST (CCW)	11,015	13,767	19,277	22,030	24,782	27,535	27,535	38,554	44,060	49,563	55,070	55,070	
	AET (CCW)	10,424	13,033	18,242	20,850	23,458	26,067	26,067	36,483	41,699	46,920	52,133	52,133	
	MINIMUM	5,138	7,209	8,991	10,276	11,562	12,847	12,847	17,981	20,552	23,125	23,125	25,694	
	Spring Pack	370S041	370S051	370S071	370S081	370S091	740S051	740S051	740S071	740S081	740S091	740S101	740S101	
HP30UC-6-1-XXXX	SST (CW)	33,757	41,972	47,267	54,016	62,955	73,444	83,944	94,433	104,933	-	-	-	MOP = 1500 psi MAP = 2250 psi
	SET (CW)	12,847	14,580	17,981	20,552	21,873	25,517	29,161	32,805	36,442	-	-	-	
	AST (CCW)	27,535	34,236	38,554	44,060	51,351	59,906	68,471	77,026	85,591	-	-	-	
	AET (CCW)	26,067	29,583	36,483	41,699	44,380	51,773	59,168	66,562	73,941	-	-	-	
	MINIMUM	12,847	14,580	17,981	20,552	21,873	25,517	29,161	32,805	36,442	-	-	-	
	Spring Pack	740S051	575S081	740S071	740S081	1150S061	1150S071	1150S081	1150S091	1150S101	-	-	-	
HP30UC-8-1-XXXX	SST (CW)	54,016	73,444	83,944	94,433	104,933	104,933	-	-	-	-	-	-	MOP = 900 psi MAP = 2000 psi
	SET (CW)	20,552	25,517	29,161	32,805	36,442	36,442	-	-	-	-	-	-	
	AST (CCW)	44,060	59,906	68,471	77,026	85,591	85,591	-	-	-	-	-	-	
	AET (CCW)	41,699	51,773	59,168	66,562	73,941	73,941	-	-	-	-	-	-	
	MINIMUM	20,552	25,517	29,161	32,805	36,442	36,442	-	-	-	-	-	-	
	Spring Pack	740S081	1150S071	1150S081	1150S091	1150S101	1150S101	-	-	-	-	-	-	
HP65UC-6-1-XXXX	SST (CW)	60,920	76,150	91,379	106,609	121,839	137,069	152,299	199,107	248,883	307,947	307,947	346,441	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	20,470	25,587	30,705	35,822	40,940	46,057	51,175	65,873	82,342	101,883	101,883	114,618	
	AST (CCW)	49,690	62,113	74,536	86,958	99,381	111,804	124,226	162,406	203,007	251,184	251,184	282,582	
	AET (CCW)	41,533	51,916	62,300	72,683	83,066	93,449	103,833	133,656	167,070	206,718	206,718	232,558	
	MINIMUM	20,470	25,587	30,705	35,822	40,940	46,057	51,175	65,873	82,342	101,883	101,883	114,618	
	Spring Pack	1485S041	1485S051	1485S061	1485S071	1485S081	1485S091	1485S101	2385S081	2385S101	3731S081	3731S081	3731S091	
HP65UC-8-1-XXXX	SST (CW)	106,609	137,069	153,974	192,467	230,960	230,960	269,454	346,441	440,366	-	-	-	MOP = 1500 psi MAP = 2000 psi
	SET (CW)	35,822	46,057	50,941	63,677	76,412	76,412	89,147	114,618	145,693	-	-	-	
	AST (CCW)	86,958	111,804	125,592	156,990	188,388	188,388	219,786	282,582	359,194	-	-	-	
	AET (CCW)	72,683	93,449	103,359	129,199	155,039	155,039	180,879	232,558	295,608	-	-	-	
	MINIMUM	35,822	46,057	50,941	63,677	76,412	76,412	89,147	114,618	145,693	-	-	-	
	Spring Pack	1485S071	1485S091	3731S041	3731S051	3731S061	3731S061	3731S071	3731S091	5336S081	-	-	-	
HP80UC-6-1-XXXX	SST (CW)	-	-	-	-	-	-	-	246,093	307,616	362,050	434,460	506,870	MOP = 2250 psi MAP = 2250 psi
	SET (CW)	-	-	-	-	-	-	-	81,418	101,773	119,782	143,739	167,695	
	AST (CCW)	-	-	-	-	-	-	-	200,731	250,914	295,314	354,377	413,440	
	AET (CCW)	-	-	-	-	-	-	-	165,197	206,496	243,037	291,664	340,251	
	MINIMUM	-	-	-	-	-	-	-	81,418	101,773	119,782	143,739	167,695	
	Spring Pack	-	-	-	-	-	-	-	6044S041	6044S051	7114S051	7114S061	7114S071	
HP80UC-8-1-XXXX	SST (CW)	-	-	-	246,093	307,616	307,616	369,139	434,460	579,280	-	-	-	MOP = 1500 psi MAP = 2000 psi
	SET (CW)	-	-	-	81,418	101,773	101,773	122,128	143,739	191,652	-	-	-	
	AST (CCW)	-	-	-	200,731	250,914	250,914	301,096	354,377	472,503	-	-	-	
	AET (CCW)	-	-	-	165,197	206,496	206,496	247,795	291,664	388,859	-	-	-	
	MINIMUM	-	-	-	81,418	101,773	101,773	122,128	143,739	191,652	-	-	-	
	Spring Pack	-	-	-	6044S041	6044S051	6044S051	6044S061	7114S061	7114S081	-	-	-	
Model Number	Torque at	400	500	600	700	800	900	1000	1200	1500	1800	2000	2250	Max Pressures

Maximum Operating Pressure (MOP) = The Maximum pressure under normal operation producing the maximum allowable output torque
Maximum Allowable Pressure (MAP) = The Static pressure allowed under normal operating conditions for a fully stroked actuator against the travel stop.