

# Bettis M Series

## Stainless Steel Actuator Torque Ratings (Imperial)

**BETTIS™**



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## Models 003 - 1150 Double-Acting and Symmetrical Yoke Design

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	Start/End	173	219	259	305	345	391	431	472	518	-	-	-	-
	Minimum	110	140	165	190	220	250	280	310	330	-	-	-	-
006U-D000	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	Start/End	690	863	1035	1208	1380	1553	1725	1898	2070	-	-	-	-
	Minimum	470	580	700	810	940	1050	1170	1275	1405	-	-	-	-
023U-D000	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	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	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	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	Start/End	3960	4950	5940	6930	7920	8910	9900	10780	-	Maximum Allowable Pressure 120 psig			
	Minimum	2740	3425	4110	4790	5480	6160	6850	7540	-				
100U-D000	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

Model Number	Torque at	Output torques (lb-in)												
		Supply Pressure (psig)												
		40	50	60	70	80	90	100	110	120	130	140	150	160
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	-	-				
370U-D000	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	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	Start/End	38850	48563	58275	67988	77700	87413	97125	106838	116550	Maximum Allowable Pressure 120 psig			
	Minimum	26160	32700	39240	45780	52320	58860	65400	71940	78480				
945U-D000	Start/End	50558	63197	75836	88476	101115	113755	-	-	-	Maximum Allowable Pressure 120 psig			
	Minimum	36390	45488	54585	63683	72780	81878	-	-	-				
1150U-D000	Start/End	60375	75469	90563	105656	120750	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Minimum	44880	56100	67320	78540	89760	-	-	-	-				

## Models 023 - 1150

### Double-Acting and Symmetrical Yoke Design

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° position and less torque at the 90° 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	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	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	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	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	-	-	-	-	-	-

Model Number	Torque at	Output torques (lb-in)												
		Supply Pressure (psig)												
		40	50	60	70	80	90	100	110	120	130	140	150	160
072UC-D000	Start(CCW)	5346	6683	8019	9356	-	-	-	-	-	Maximum Allowable Pressure 120 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	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	329003	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	-	-	-	-	-	-	-
345UC-D000	Start(CCW)	24453	30565	36678	42791	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	End (CCW)	14490	18113	21735	25358	-	-	-	-	-				
	Start (CW)	14853	18566	22279	25992	-	-	-	-	-				
	End (CW)	23547	29433	35320	41206	-	-	-	-	-				
	Minimum	13415	16769	20123	23476	-	-	-	-	-				

Model Number	Torque at	Output torques (lb-in)												
		Supply Pressure (psig)												
		40	50	60	70	80	90	100	110	120	130	140	150	160
370UC-D000	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	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	Start(CCW)	52448	65560	78671	91784	104895	118008	-	-	-	Maximum Allowable Pressure 120 psig			
	End (CCW)	31080	38850	46620	54390	62160	69930	-	-	-				
	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	Start(CCW)	68253	85316	102379	-	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	End (CCW)	40446	50558	60669	-	-	-	-	-	-				
	Start (CW)	41458	51822	62186	-	-	-	-	-	-				
	End (CW)	65725	82156	98587	-	-	-	-	-	-				
	Minimum	36390	45488	54585	-	-	-	-	-	-				
1150UC-D000	Start(CCW)	81506	101883	-	-	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	End (CCW)	48300	60375	-	-	-	-	-	-	-				
	Start (CW)	49508	61885	-	-	-	-	-	-	-				
	End (CW)	78488	98110	-	-	-	-	-	-	-				
	Minimum	44880	56100	-	-	-	-	-	-	-				

# Models 023 - 1150

## Spring-Return Fail Closed and Fail Open Symmetrical Yoke Design

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° position and AST is at 100% at the 90° 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° during the spring stroke or during the air stroke

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
003U-S040	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	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	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	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	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	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



Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
006U-S050	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	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	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	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	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	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	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	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	-	-
012U-S080	Start	780	Start	-	-	-	608	780	953	1125	1298	1470	1643	1815	-	-
	Mid	416	Mid	-	-	-	306	416	526	636	746	856	966	1076	-	-
	End	462	End	-	-	-	290	462	635	807	980	1152	1325	1497	-	-
023U-S040	Start	750	Start	750	1038	1325	1613	1900	2188	2475	2763	3050	3338	3625	3913	4200
	Mid	360	Mid	360	575	790	1005	1220	1435	1650	1865	2080	2295	2510	2725	2940
	End	400	End	400	688	975	1263	1550	1838	2125	2413	2700	2988	3275	3563	3850

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
023U-S050	Start	945	Start	-	945	1233	1520	1808	2095	2383	2670	2958	3245	3533	3820	4108	
	Mid	459	Mid	-	459	674	889	1104	1319	1534	1749	1964	2179	2394	2609	2824	
	End	510	End	-	510	798	1085	1373	1660	1948	2235	2523	2810	3098	3385	3673	
023U-S060	Start	1125	Start	-	-	1125	1413	1700	1988	2275	2563	2850	3138	3425	3713	4000	
	Mid	540	Mid	-	-	540	755	970	1185	1400	1615	1830	2045	2260	2475	2690	
	End	600	End	-	-	600	888	1175	1463	1750	2038	2325	2613	2900	3188	3475	
023U-S070	Start	1305	Start	-	-	1018	1305	1593	1880	2168	2455	2743	3030	3318	3605	3893	
	Mid	635	Mid	-	-	420	635	850	1065	1280	1495	1710	1925	2140	2355	2570	
	End	705	End	-	-	418	705	993	1280	1568	1855	2143	2430	2718	3005	3293	
023U-S080	Start	1500	Start	-	-	-	1213	1500	1788	2075	2363	2650	2938	3225	3513	3800	
	Mid	720	Mid	-	-	-	505	720	935	1150	1365	1580	1795	2010	2225	2440	
	End	800	End	-	-	-	513	800	1088	1375	1663	1950	2238	2525	2813	3100	
023U-S090	Start	1680	Start	-	-	-	-	1393	1680	1968	2255	2543	2830	3118	3405	3693	
	Mid	815	Mid	-	-	-	-	600	815	1030	1245	1460	1675	1890	2105	2320	
	End	905	End	-	-	-	-	618	905	1193	1480	1768	2055	2343	2630	2918	
023U-S100	Start	1870	Start	-	-	-	-	-	1583	1870	2158	2445	2733	3020	3308	3595	
	Mid	905	Mid	-	-	-	-	-	690	905	1120	1335	1550	1765	1980	2195	
	End	1005	End	-	-	-	-	-	718	1005	1293	1580	1868	2155	2443	2730	
023U-S120	Start	2250	Start	-	-	-	-	-	-	-	1963	2250	2538	2825	3113	3400	
	Mid	1080	Mid	-	-	-	-	-	-	-	865	1080	1295	1510	1725	1940	
	End	1200	End	-	-	-	-	-	-	-	913	1200	1488	1775	2063	2350	
023U-S140	Start	2615	Start	-	-	-	-	-	-	-	-	-	-	2328	2615	2903	3190
	Mid	1269	Mid	-	-	-	-	-	-	-	-	-	-	1054	1269	1484	1699
	End	1410	End	-	-	-	-	-	-	-	-	-	-	1123	1410	1698	1985
023U-S160	Start	3000	Start	-	-	-	-	-	-	-	-	-	-	-	-	2713	3000
	Mid	1440	Mid	-	-	-	-	-	-	-	-	-	-	-	-	1225	1440
	End	1600	End	-	-	-	-	-	-	-	-	-	-	-	-	1313	1600
036U-S040	Start	1170	Start	1170	1665	2160	2655	3150	3645	4140	4635	5130	5625	6120	6615	7110	
	Mid	567	Mid	567	907	1247	1587	1927	2267	2607	2947	3287	3627	3967	4307	4647	
	End	630	End	630	1125	1620	2115	2610	3105	3600	4095	4590	5085	5580	6075	6570	
036U-S050	Start	1460	Start	-	1460	1955	2450	2945	3440	3935	4430	4925	5420	5915	6410	6905	
	Mid	711	Mid	-	711	1051	1391	1731	2071	2411	2751	3091	3431	3771	4111	4451	
	End	790	End	-	790	1285	1780	2275	2770	3265	3760	4255	4750	5245	5740	6235	

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
036U-S060	Start	1755	Start	-	-	1755	2250	2745	3240	3735	4230	4725	5220	5715	6210	6705	
	Mid	855	Mid	-	-	855	1195	1535	1875	2215	2555	2895	3235	3575	3915	4255	
	End	950	End	-	-	950	1445	1940	2435	2930	3425	3920	4415	4910	5405	5900	
036U-S070	Start	2050	Start	-	-	1555	2050	2545	3040	3535	4030	4525	5020	5515	6010	6505	
	Mid	990	Mid	-	-	650	990	1330	1670	2010	2350	2690	3030	3370	3710	4050	
	End	1100	End	-	-	605	1100	1595	2090	2585	3080	3575	4070	4565	5060	5555	
036U-S080	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	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	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	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	Start	4095	Start	-	-	-	-	-	-	-	-	-	-	3600	4095	4590	5085
	Mid	1985	Mid	-	-	-	-	-	-	-	-	-	-	1645	1985	2325	2665
	End	2205	End	-	-	-	-	-	-	-	-	-	-	1710	2205	2700	3195
036U-S160	Start	4700	Start	-	-	-	-	-	-	-	-	-	-	-	-	4205	4700
	Mid	2250	Mid	-	-	-	-	-	-	-	-	-	-	-	-	1910	2250
	End	2500	End	-	-	-	-	-	-	-	-	-	-	-	-	2005	2500
046U-S040	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	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	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	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	-	-	-	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
046U-S080	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	Start	1870	Start	1870	2608	3345	4083	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid	905	Mid	905	1458	2011	2564	-	-	-	-	-				
	End	1005	End	1005	1743	2480	3218	-	-	-	-	-				
058U-S050	Start	2250	Start	-	2250	2988	3725	4463	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid	1080	Mid	-	1080	1633	2186	2739	-	-	-	-				
	End	1200	End	-	1200	1938	2675	3413	-	-	-	-				
058U-S060	Start	2615	Start	-	-	2615	3353	4090	4828	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid	1269	Mid	-	-	1269	1822	2375	2928	-	-	-				
	End	1410	End	-	-	1410	2148	2885	3623	-	-	-				
058U-S070	Start	3000	Start	-	-	2263	3000	3738	4475	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid	1440	Mid	-	-	887	1440	1993	2546	-	-	-				
	End	1600	End	-	-	863	1600	2338	3075	-	-	-				
059U-S080	Start	3510	Start	-	-	-	-	3510	4248	4985	5723	6460	Maximum Allowable Pressure 120 psig			
	Mid	1701	Mid	-	-	-	-	1701	2254	2807	3360	3913				
	End	1890	End	-	-	-	-	1890	2628	3365	4103	4840				
059U-S090	Start	4095	Start	-	-	-	-	-	4095	4833	5570	6308	Maximum Allowable Pressure 120 psig			
	Mid	1985	Mid	-	-	-	-	-	1985	2538	3091	3644				
	End	2205	End	-	-	-	-	-	2205	2943	3680	4418				
059U-S100	Start	4700	Start	-	-	-	-	-	-	4700	5438	6175	Maximum Allowable Pressure 120 psig			
	Mid	2250	Mid	-	-	-	-	-	-	2250	2803	3356				
	End	2500	End	-	-	-	-	-	-	2500	3238	3975				
072U-S040	Start	2340	Start	2340	3330	4320	5310	6300	7290	8280	Maximum Allowable Pressure 100 psig					
	Mid	1134	Mid	1134	1819	2504	3189	3874	4559	5244						
	End	1260	End	1260	2250	3240	4230	5220	6210	7200						
072U-S050	Start	2925	Start	-	2925	3915	4905	5895	6885	7875	Maximum Allowable Pressure 100 psig					
	Mid	1418	Mid	-	1418	2103	2788	3473	4158	4843						
	End	1575	End	-	1575	2565	3555	4545	5535	6525						
072U-S060	Start	3510	Start	-	-	3510	4500	5490	6480	7470	Maximum Allowable Pressure 100 psig					
	Mid	1701	Mid	-	-	1701	2386	3071	3756	4441						
	End	1890	End	-	-	1890	2880	3870	4860	5850						

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
072U-S070	Start	4095	Start	-	-	3105	4095	5085	6075	7065	Maximum Allowable Pressure 100 psig					
	Mid	1985	Mid	-	-	1300	1985	2670	3355	4040						
	End	2205	End	-	-	1215	2205	3195	4185	5175						
072U-S080	Start	4700	Start	-	-	-	3710	4700	5690	6680	Maximum Allowable Pressure 100 psig					
	Mid	2250	Mid	-	-	-	1565	2250	2935	3620						
	End	2500	End	-	-	-	1510	2500	3490	4480						
100U-S040	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	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	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	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	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
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	18740
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
210U-S060	Start	10242	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
210U-S120	Start	20475	Start	-	-	-	-	-	-	-	-	17587	250475	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	13960	End	-	-	-	-	-	-	-	-	-	-	-	-	10972	13860
270U-S040	Start	8780	Start	8780	12324	15868	19411	22955	26499	30043	33587	37130	Maximum Allowable Pressure 120 psig				
	Mid	4683	Mid	4683	7308	9933	12558	15183	17808	20433	23058	25683					
	End	5203	End	5203	8747	12291	15834	19378	22922	26466	30010	33553					
270U-S050	Start	10970	Start	-	10970	14514	18058	21601	25145	28689	32233	35777	Maximum Allowable Pressure 120 psig				
	Mid	5846	Mid	-	5846	8471	11096	13721	16346	18971	21596	24221					
	End	6496	End	-	6496	10040	13584	17127	20671	24215	27759	31303					
270U-S060	Start	13160	Start	-	-	13160	16704	20248	23791	27335	30879	34423	Maximum Allowable Pressure 120 psig				
	Mid	7019	Mid	-	-	7019	9644	12269	14894	17519	20144	22769					
	End	7799	End	-	-	7799	11343	14887	18430	21974	25518	29062					
270U-S070	Start	15355	Start	-	-	11811	15355	18899	22443	25986	29530	33074	Maximum Allowable Pressure 120 psig				
	Mid	8187	Mid	-	-	5562	8187	10812	13437	16062	18687	21312					
	End	9097	End	-	-	5553	9097	12641	16185	19728	23272	26816					
270U-S080	Start	17550	Start	-	-	-	14006	17550	21094	24638	28181	31725	Maximum Allowable Pressure 120 psig				
	Mid	9356	Mid	-	-	-	6731	9356	11981	14606	17231	19856					
	End	10395	End	-	-	-	6851	10395	13939	17483	21026	24570					
270U-S090	Start	19746	Start	-	-	-	-	16202	19746	23290	26834	30377	Maximum Allowable Pressure 120 psig				
	Mid	10524	Mid	-	-	-	-	7899	10524	13149	15774	18399					
	End	11693	End	-	-	-	-	8149	11693	15237	18781	22324					
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					
	End	6318	End	6318	10846	15374	19902	24430	28959	33487	38015	42543					
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					
	End	7586	End	-	7586	12114	16642	21170	25698	30227	34755	39283					
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					
	End	8849	End	-	-	8849	13377	17905	22433	26961	31490	36018					

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
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				
	End	11373	End	-	-	6845	11373	15901	20429	24957	29485	34014				
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				
	End	12637	End	-	-	-	8109	12637	17165	21693	26221	30749				
345U-S090	Start	23890	Start	-	-	-	-	19362	23890	28418	32946	37474	Maximum Allowable Pressure 120 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			
	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			
	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			
	Mid	15928	Mid	-	-	-	-	-	-	11400	15928	19282				
	End	17698	End	-	-	-	-	-	-	13170	17698	22226				
345U-S130	Start	34120	Start	-	-	-	-	-	-	-	-	29592	Maximum Allowable Pressure 120 psig			
	Mid	17700	Mid	-	-	-	-	-	-	-	-	13172				
	End	19667	End	-	-	-	-	-	-	-	-	15139				
370U-S040	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	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	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	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	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



Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
370U-S090	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	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	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	Start	42090	Start	-	-	-	-	-	-	-	-	-	37141	42090	47039	51988
	Mid	23453	Mid	-	-	-	-	-	-	-	-	-	20183	23453	26723	29993
	End	26059	End	-	-	-	-	-	-	-	-	-	21110	26059	31008	35957
370U-S160	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	-	-	-	-	-	-
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	-	-	-	-	-

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
575U-S040	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	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	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	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	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	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	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	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	Start	65400	Start	-	-	-	-	-	-	-	-	-	57422	65400	73378	81356
	Mid	33283	Mid	-	-	-	-	-	-	-	-	-	27673	33283	38893	44503
	End	36981	End	-	-	-	-	-	-	-	-	-	29003	36981	44959	52937
575U-S160	Start	74750	Start	-	-	-	-	-	-	-	-	-	-	-	66772	74750
	Mid	38037	Mid	-	-	-	-	-	-	-	-	-	-	-	32427	38037
	End	42263	End	-	-	-	-	-	-	-	-	-	-	-	34285	42263
740U-S040	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	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				

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
740U-S060	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	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	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	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	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	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	-				
944U-S050	Start	36075	Start	-	36075	48714	61354	73993	86633	99272	111911	-	Maximum Allowable Pressure 120 psig			
	Mid	18707	Mid	-	18707	27805	36903	46001	55099	64197	73295	-				
	End	20785	End	-	20785	33424	46064	58703	71343	83982	96621	-				
944U-S060	Start	42090	Start	-	-	42090	54729	67369	80008	92648	105287	117926	Maximum Allowable Pressure 120 psig			
	Mid	21821	Mid	-	-	21821	30919	40017	49115	58213	67311	76409				
	End	24246	End	-	-	24246	36885	49525	62164	74804	87443	100082				
944U-S070	Start	48100	Start	-	-	35461	48100	60739	73379	86018	98658	111297	Maximum Allowable Pressure 120 psig			
	Mid	24942	Mid	-	-	15844	24942	34040	43138	52236	61334	70432				
	End	27713	End	-	-	15074	27713	40352	52992	65631	78271	90910				
945U-S080	Start	56060	Start	-	-	-	43421	56060	68699	81339	93978	106618	Maximum Allowable Pressure 120 psig			
	Mid	29073	Mid	-	-	-	19975	29073	38171	47269	56367	65465				
	End	32303	End	-	-	-	19664	32303	44942	57582	70221	82861				
945U-S090	Start	65400	Start	-	-	-	-	52761	65400	78039	90679	103318	Maximum Allowable Pressure 120 psig			
	Mid	33917	Mid	-	-	-	-	24819	33917	43015	52113	61211				
	End	37685	End	-	-	-	-	25046	37685	50324	62964	75603				
945U-S100	Start	74750	Start	-	-	-	-	-	62111	74750	87389	100029	Maximum Allowable Pressure 120 psig			
	Mid	38761	Mid	-	-	-	-	-	29663	38761	47859	56957				
	End	43068	End	-	-	-	-	-	30429	43068	55707	68347				

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
945U-S110	Start	84090	Start	-	-	-	-	-	-	-	71451	84090	96729	Maximum Allowable Pressure 120 psig			
	Mid	43605	Mid	-	-	-	-	-	-	-	34507	43605	52703				
	End	48450	End	-	-	-	-	-	-	-	35811	48450	61089				
945U-S120	Start	84090	Start	-	-	-	-	-	-	-	71451	84090	96729	Maximum Allowable Pressure 120 psig			
	Mid	43605	Mid	-	-	-	-	-	-	-	34507	43605	52703				
	End	48450	End	-	-	-	-	-	-	-	35811	48450	61089				
945U-S130	Start	80801	Start	-	-	-	-	-	-	-	-	-	80801	Maximum Allowable Pressure 120 psig			
	Mid	51130	Mid	-	-	-	-	-	-	-	-	-	38491				
	End	41182	End	-	-	-	-	-	-	-	-	-	41182				
1150U-S040	Start	37375	Start	37375	53331	69287	85244	101200	117156	-	-	-	Maximum Allowable Pressure 120 psig				
	Mid	19018	Mid	19018	30238	41458	52678	63898	75118	-	-	-					
	End	21131	End	21131	37087	53043	69000	84956	100912	-	-	-					
1150U-S050	Start	46720	Start	-	46720	62676	78632	94589	110545	-	-	-	Maximum Allowable Pressure 120 psig				
	Mid	23767	Mid	-	23767	34987	46207	57427	68647	-	-	-					
	End	26408	End	-	26408	42364	58320	74277	90233	-	-	-					
1150U-S060	Start	56060	Start	-	-	56060	72016	87972	103929	119885	-	-	Maximum Allowable Pressure 120 psig				
	Mid	28530	Mid	-	-	28530	39750	50970	62190	73410	-	-					
	End	31700	End	-	-	31700	47656	63612	79569	95525	-	-					
1150U-S070	Start	65400	Start	-	-	49444	65400	81356	97312	113269	-	-	Maximum Allowable Pressure 120 psig				
	Mid	33283	Mid	-	-	22063	33283	44503	55723	66943	-	-					
	End	36981	End	-	-	21025	36981	52937	68893	84850	-	-					
1150U-S080	Start	74750	Start	-	-	-	58794	74750	90706	106662	-	-	Maximum Allowable Pressure 120 psig				
	Mid	38037	Mid	-	-	-	26817	38037	49257	60477	-	-					
	End	42263	End	-	-	-	26307	42263	58219	74175	-	-					
1150U-S090	Start	84090	Start	-	-	-	-	68134	84090	100046	116002	-	Maximum Allowable Pressure 120 psig				
	Mid	42790	Mid	-	-	-	-	31570	42790	54010	65230	-					
	End	47544	End	-	-	-	-	31588	47544	63500	79456	-					
1150U-S100	Start	93440	Start	-	-	-	-	-	77484	93440	109396	-	Maximum Allowable Pressure 120 psig				
	Mid	47534	Mid	-	-	-	-	-	-	36314	47534	58754					-
	End	52815	End	-	-	-	-	-	-	36859	52815	68771					-

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

## Models 023 - 1150 Spring-Return Fail Closed (CW) Canted Yoke Design

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)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
023UC-S040	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	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	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	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	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	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
023UC-S100	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	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	SST	2395	AST	-	-	-	-	-	-	-	-	-	-	2937	3325	3713
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	973	1203	1433
	SET	1974	AET	-	-	-	-	-	-	-	-	-	-	973	1203	1433
023UC-S160	SST	2748	AST	-	-	-	-	-	-	-	-	-	-	-	-	3369
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1104
	SET	2240	AET	-	-	-	-	-	-	-	-	-	-	-	-	1104
036UC-S040	SST	1072	AST	1314	1982	2651	3319	3987	4656	5324	5992	6660	7329	7997	8665	9334
	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	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	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	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
036UC-S080	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
036UC-S090	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	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	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	SST	3751	AST	-	-	-	-	-	-	-	-	-	-	4599	5267	5936
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	1521	1917	2313
	SET	3087	AET	-	-	-	-	-	-	-	-	-	-	1521	1917	2313
036UC-S160	SST	4305	AST	-	-	-	-	-	-	-	-	-	-	-	-	5278
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1725
	SET	3500	AET	-	-	-	-	-	-	-	-	-	-	-	-	1725
046UC-S040	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	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	-

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
046UC-S060	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	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	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	SST	1713	AST	2100	3096	4091	5087	6082	7078	8074	9069	10065	Maximum Allowable Pressure 120 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	SST	2061	AST	-	2527	3523	4518	5514	6509	7505	8501	9496	Maximum Allowable Pressure 120 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	SST	2395	AST	-	-	2937	3933	4928	5924	6919	7915	8911	Maximum Allowable Pressure 120 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	SST	2748	AST	-	-	-	3369	4365	5360	6356	7351	8347	Maximum Allowable Pressure 120 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	SST	3215	AST	-	-	-	-	3942	4938	5933	6929	7924	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	1304	1894	2484	3074	3664				
	SET	2646	AET	-	-	-	-	1304	1894	2484	3074	3664				



Model Number	Spring torques (lb-in)		Output torques (lb-in)												
			Supply Pressure (psig)												
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150
059UC-S090	SST	3751	AST	-	-	-	-	-	-	4599	5595	6590	7586	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	1521	2111	2701	3291		
	SET	3087	AET	-	-	-	-	-	-	1521	2111	2701	3291		
059UC-S100	SST	4305	AST	-	-	-	-	-	-	-	5278	6274	7269	Maximum Allowable Pressure 120 psig	
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	1725	2315	2905		
	SET	3500	AET	-	-	-	-	-	-	-	1725	2315	2905		
072UC-S040	SST	2143	AST	2628	3965	5301	6638	7974	9311	-	-	-	Maximum Allowable Pressure 120 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	SST	2679	AST	-	3285	4622	5958	7295	8631	9968	-	-	Maximum Allowable Pressure 120 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	SST	3215	AST	-	-	3942	5279	6615	7952	9288	-	-	Maximum Allowable Pressure 120 psig		
	Mid Stroke Min	1304	Mid Stroke Min	-	-	1304	2096	2888	3680	4472	-	-			
	SET	2646	AET	-	-	1304	2096	2888	3680	4472	-	-			
072UC-S070	SST	3751	AST	-	-	-	4599	5936	7272	8609	-	-	Maximum Allowable Pressure 120 psig		
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	1521	2313	3105	3897	-	-			
	SET	3087	AET	-	-	-	1521	2313	3105	3897	-	-			
072UC-S080	SST	4305	AST	-	-	-	-	5278	6615	7951	-	-	Maximum Allowable Pressure 120 psig		
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	1725	2517	3309	-	-			
	SET	3500	AET	-	-	-	-	1725	2517	3309	-	-			
100UC-S040	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 (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
100UC-S050	SST	3719	AST	-	4559	6247	7934	9622	-	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	1511	Mid Stroke Min	-	1511	2511	3511	4511	-	-	-	-				
	SET	3066	AET	-	1511	2511	3511	4511	-	-	-	-				
100UC-S060	SST	4470	AST	-	-	5480	7168	8855	-	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	1808	Mid Stroke Min	-	-	1808	2808	3808	-	-	-	-				
	SET	3668	AET	-	-	1808	2808	3808	-	-	-	-				
100UC-S070	SST	5212	AST	-	-	-	6390	8078	9765	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	2111	Mid Stroke Min	-	-	-	2111	3111	4111	-	-	-				
	SET	4284	AET	-	-	-	2111	3111	4111	-	-	-				
100UC-S080	SST	5954	AST	-	-	-	-	7300	8988	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	2415	Mid Stroke Min	-	-	-	-	2415	3415	-	-	-				
	SET	4900	AET	-	-	-	-	2415	3415	-	-	-				
135UC-S040	SST	4019	SST	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	SET	1472	2824	4176	5528	6880	8232	9584	10936	12288	13640	14992	16344	17696
135UC-S050	SST	5025	SST	-	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	SET	-	1840	3192	4544	5896	7248	8600	9952	11304	12656	14008	15360	16712
135UC-S060	SST	6028	SST	-	-	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	SET	-	-	2208	3560	4912	6264	7616	8968	10320	11672	13024	14376	15728
135UC-S070	SST	7035	SST	-	-	-	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	SET	-	-	-	2576	3928	5280	6632	7984	9336	10688	12040	13392	14744

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
135UC-S080	SST	8038	SST	-	-	-	-	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	9623	
	SET	8959	AET	-	-	-	-	-	-	-	3063	4415	5767	7119	8471	9623	
135UC-S140	SST	14069	SST	-	-	-	-	-	-	-	-	-	-	14967	17249	19531	23909
	Mid Stroke Min	5152	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	3800	5152	6504	7856
	SET	10454	SET	-	-	-	-	-	-	-	-	-	-	3800	5152	6504	7856
135UC-S160	SST	16076	SST	-	-	-	-	-	-	-	-	-	-	-	-	17427	19709
	Mid Stroke Min	5887	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	4535	5887
	SET	11945	SET	-	-	-	-	-	-	-	-	-	-	-	-	4535	5887
210UC-S040	SST	6252	SST	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	SET	2391	4701	7011	9321	11631	13941	16251	18561	20871	23181	-	-	-	
210UC-S050	SST	7813	SST	-	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	SET	-	2989	5299	7609	9919	12229	14539	16849	19159	21469	-	-	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
210UC-S060	SST	9380	SST	-	-	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	SST	-	-	-	-	-	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	SET	-	-	-	-	-	3667	5977	8287	10597	12907	15217	17527	19837
210UC-S120	SST	18755	SST	-	-	-	-	-	-	-	19095	22993	25891	30789	34687	38585
	Mid Stroke Min	7173	Mid Stroke Min	-	-	-	-	-	-	-	4863	7173	9483	11793	14103	16413
	SET	14553	SET	-	-	-	-	-	-	-	4863	7173	9483	11793	14103	16413
210UC-S140	SST	21883	SST	-	-	-	-	-	-	-	-	-	22930	26828	30726	34624
	Mid Stroke Min	8368	Mid Stroke Min	-	-	-	-	-	-	-	-	-	6058	8368	10678	12988
	SET	16979	SET	-	-	-	-	-	-	-	-	-	6058	8368	10678	12988
210UC-S160	SST	25007	SST	-	-	-	-	-	-	-	-	-	-	-	26760	30658
	Mid Stroke Min	9563	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	7523	9563
	SET	19404	SET	-	-	-	-	-	-	-	-	-	-	-	7523	9563

Model Number	Spring torques (lb-in)		Output torques (lb-in)										
			Supply Pressure (psig)										
			Torque at	40	50	60	70	80	90	100	110	120	130
270UC-S040	SST	8042	AST	9860	14644	19428	24212	28996	33780	38564	-	-	Maximum Allowable Pressure 120 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
	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
	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
	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
	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
	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
	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
	Mid Stroke Min	4359	Mid Stroke Min	4359	7982	11605	15228	18851	22474	-	-	-	
	SET	8845	AET	4359	7982	11605	15228	18851	22474	-	-	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
344UC-S050	SST	12055	AST	-	14779	20892	27005	33118	39231	-	-	-	Maximum Allowable Pressure 120 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			
	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			
	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			
	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			
	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			
	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			
	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			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8589	12212	15835				
	SET	24777	AET	-	-	-	-	-	-	8589	12212	15835				

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

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
370UC-S140	SST	38554	AST	-	-	-	-	-	-	-	-	-	-	40586	47267	53948	60629
	Mid Stroke Min	17981	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	14022	17981	21940	25899
	SET	36483	AET	-	-	-	-	-	-	-	-	-	-	14022	17981	21940	25899
370UC-S160	SST	44060	AST	-	-	-	-	-	-	-	-	-	-	-	-	47335	54016
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	16593	20552
	SET	41699	AET	-	-	-	-	-	-	-	-	-	-	-	-	16593	20552
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	-	-	-	-	-	-	-



Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160			
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 (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
575UC-S120	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	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	SST	68471	AST	-	-	-	-	-	-	-	-	-	-	-	-	73174	83944
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	22778	83944
	SET	59168	AET	-	-	-	-	-	-	-	-	-	-	-	-	22778	83944
740UC-S040	SST	22030	AST	27008	40120	53232	66344	79456	92568	105680	118792	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	10276	Mid Stroke Min	10276	18046	25816	33586	41356	49126	56896	64666	-					
	SET	20850	AET	10276	18046	25816	33586	41356	49126	56896	64666	-					
740UC-S050	SST	27535	AST	-	33757	46869	59981	73093	86205	99317	112429	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	12847	Mid Stroke Min	-	12847	20617	28387	36157	43927	51697	59467	-					
	SET	26067	AET	-	12847	20617	28387	36157	43927	51697	59467	-					
740UC-S060	SST	33045	AST	-	-	40512	53624	66736	79848	92960	106072	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	15414	Mid Stroke Min	-	-	15414	23184	30954	38724	46494	54264	-					
	SET	31275	AET	-	-	15414	23184	30954	38724	46494	54264	-					
740UC-S070	SST	38554	AST	-	-	34155	47267	60379	73491	86603	99715	112827	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	17981	Mid Stroke Min	-	-	10211	17981	25751	33521	41291	49061	56831					
	SET	36483	AET	-	-	10211	17981	25751	33521	41291	49061	56831					
740UC-S080	SST	44060	AST	-	-	-	40904	54016	67128	80240	93352	106464	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	12782	20552	28322	36092	43862	51632					
	SET	41699	AET	-	-	-	12782	20552	28322	36092	43862	51632					

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
740UC-S090	SST	49563	AST	-	-	-	-	47651	60763	73875	86987	100099	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	23125	Mid Stroke Min	-	-	-	-	15355	23125	30895	38665	46435				
	SET	46920	AET	-	-	-	-	15355	23125	30895	38665	46435				
740UC-S100	SST	55070	AST	-	-	-	-	-	54403	67515	80627	93739	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	25694	Mid Stroke Min	-	-	-	-	-	17924	25694	33464	41234				
	SET	52133	AET	-	-	-	-	-	17924	25694	33464	41234				
944UC-S040	SST	27535	AST	33757	50820	67883	84946	102009	119072	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	11953	Mid Stroke Min	11953	22065	32177	42289	52401	62513	-	-	-				
	SET	24252	AET	11953	22065	32177	42289	52401	62513	-	-	-				
944UC-S050	SST	33045	AST	-	40512	57575	74638	91701	108764	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	14342	Mid Stroke Min	-	14342	24454	34566	44678	54790	-	-	-				
	SET	29099	AET	-	14342	24454	34566	44678	54790	-	-	-				
944UC-S060	SST	38554	AST	-	-	47267	64330	81393	98456	115519	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	16730	Mid Stroke Min	-	-	16730	26842	36954	47066	57178	-	-				
	SET	33944	AET	-	-	16730	26842	36954	47066	57178	-	-				
944UC-S070	SST	44060	AST	-	-	36953	54016	71079	88142	105205	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	19122	Mid Stroke Min	-	-	9010	19122	29234	39346	49458	-	-				
	SET	38798	AET	-	-	9010	19122	29234	39346	49458	-	-				

Model Number	Spring torques (lb-in)		Output torques (lb-in)										
			Supply Pressure (psig)										
			Torque at	40	50	60	70	80	90	100	110	120	130
945UC-S080	SST	51351	AST	-	-	-	45892	62955	80018	97081	114144	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	22289	Mid Stroke Min	-	-	-	12177	22289	32401	42513	52625	-	
	SET	45224	AET	-	-	-	12177	22289	32401	42513	52625	-	
945UC-S090	SST	59906	AST	-	-	-	-	56381	73444	90507	107570	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	26003	Mid Stroke Min	-	-	-	-	15891	26003	36115	46227	-	
	SET	52759	AET	-	-	-	-	15891	26003	36115	46227	-	
945UC-S100	SST	68471	AST	-	-	-	-	-	66881	83944	101007	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	29717	Mid Stroke Min	-	-	-	-	-	19605	29717	39829	-	
	SET	60295	AET	-	-	-	-	-	19605	29717	39829	-	
945UC-S110	SST	77026	AST	-	-	-	-	-	-	77370	94433	111496	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	23319	33431	43543	
	SET	67830	AET	-	-	-	-	-	-	23319	33431	43543	
945UC-S120	SST	77026	AST	-	-	-	-	-	-	77370	94433	111496	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	23319	33431	43543	
	SET	67830	AET	-	-	-	-	-	-	23319	33431	43543	
1150UC-S040	SST	34236	AST	41972	62349	82726	103103	-	-	-	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	14580	Mid Stroke Min	14580	26655	38730	50805	-	-	-	-	-	
	SET	29583	AET	14580	26655	38730	50805	-	-	-	-	-	
1150UC-S050	SST	42796	AST	-	52467	72844	93221	113598	-	-	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	18222	Mid Stroke Min	-	18222	30297	42372	54447	-	-	-	-	
	SET	36971	AET	-	18222	30297	42372	54447	-	-	-	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
1150UC-S060	SST	51351	AST	-	-	62955	83332	103709	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	21873	Mid Stroke Min	-	-	21873	33948	46023	-	-	-	-				
	SET	44380	AET	-	-	21873	33948	46023	-	-	-	-				
1150UC-S070	SST	59906	AST	-	-	53067	73444	93821	114198	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	25517	Mid Stroke Min	-	-	13442	25517	37592	49667	-	-	-				
	SET	51773	AET	-	-	13442	25517	37592	49667	-	-	-				
1150UC-S080	SST	68471	AST	-	-	-	63567	83944	104321	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	17086	29161	41236	-	-	-				
	SET	59168	AET	-	-	-	17086	29161	41236	-	-	-				
1150UC-S090	SST	77026	AST	-	-	-	-	74056	94433	114810	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	32805	Mid Stroke Min	-	-	-	-	20730	32805	44880	-	-				
	SET	66562	AET	-	-	-	-	20730	32805	44880	-	-				
1150UC-S100	SST	85591	AST	-	-	-	-	-	84556	104933	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	36442	Mid Stroke Min	-	-	-	-	-	24367	36442	-	-				
	SET	73941	AET	-	-	-	-	-	24367	36442	-	-				

## Models 023 -1150 Spring-Return Fail Open (CCW) Canted Yoke Design

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. - S061 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)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
023UC-S041	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	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	4590	4464
	SET	352	AET	-	714	1088	1462	1835	2209	2583	2957	3331	3704	4078	4452	4826
023UC-S061	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	1809	2283	2657	3031	3404	3778	4152
	SET	414	AET	-	-	840	1214	1588	1961	2335	2709	3083	3457	3830	4204	4578
023UC-S071	SST	1466	AST	-	-	-	1195	1431	1667	1902	2138	2374	2610	2846	3081	3317
	Mid Stroke Min	486	Mid Stroke Min	-	-	-	486	860	1234	1687	1981	2355	2729	3103	3476	3850
	SET	486	AET	-	-	-	987	1361	1735	2108	2482	2856	3230	3604	3977	4351
023UC-S081	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	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
023UC-S101	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	SST	2527	AST	-	-	-	-	-	-	-	-	2061	2297	2533	2768	3004
	Mid Stroke Min		Mid Stroke Min	-	-	-	-	-	-	-	-	828	1202	1576	1949	2323
	SET	828	AET	-	-	-	-	-	-	-	-	1680	2054	2428	2801	3175
023UC-S141	SST	2937	AST	-	-	-	-	-	-	-	-	-	-	2395	2631	2867
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	9731	347	1721
	SET	973	AET	-	-	-	-	-	-	-	-	-	-	1974	2348	2722
023UC-S161	SST	3369	AST	-	-	-	-	-	-	-	-	-	-	-	-	2748
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	1104
	SET	1104	AET	-	-	-	-	-	-	-	-	-	-	-	-	2240
036UC-S041	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	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	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	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
036UC-S081	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	
036UC-S091	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	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	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	SST	4599	AST	-	-	-	-	-	-	-	-	-	-	-	3751	4157	4563
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	1521	2165	2808
	SET	1521	AET	-	-	-	-	-	-	-	-	-	-	-	3087	3731	4374
036UC-S161	SST	5278	AST	-	-	-	-	-	-	-	-	-	-	-	-	-	4305
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	-	1725
	SET	1725	AET	-	-	-	-	-	-	-	-	-	-	-	-	-	3500
046UC-S041	SST	1685	AST	1374	1846	2317	2789	3260	3732	4204	4675	5147	5618	6090	6562	7033	
	Mid Stroke Min	552	Mid Stroke Min	552	1300	2047	2795	3542	4290	5038	5785	6533	7280	8028	8776	9523	
	SET	552	AET	1120	1868	2615	3363	4110	4858	5606	6353	7101	7848	8596	9344	10091	
046UC-S051	SST	2100	AST	-	1713	2185	2656	3128	3599	4071	4543	5014	5486	5957	6429	6901	
	Mid Stroke Min	693	Mid Stroke Min	-	693	1441	2188	2936	3683	4431	5179	5926	6674	7421	8169	8917	
	SET	693	AET	-	1407	2155	2902	3650	4397	5145	5893	6640	7388	8135	8883	9631	



Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
046UC-S061	SST	2527	AST	-	-	2061	2533	3004	3476	3947	4419	4891	5362	5834	6305	6777
	Mid Stroke Min	828	Mid Stroke Min	-	-	828	1576	2323	3071	3818	4566	5314	6061	6809	7556	8304
	SET	828	AET	-	-	1680	2428	3175	3923	4670	5418	6166	6913	7661	8408	9156
046UC-S071	SST	2937	AST	-	-	-	2395	2867	3338	3810	4281	4753	5225	5696	6168	6639
	Mid Stroke Min	973	Mid Stroke Min	-	-	-	973	1721	2468	3216	3963	4711	5459	6206	6954	7701
	SET	973	AET	-	-	-	1974	2722	3469	4217	4964	5712	6460	7207	7955	8702
046UC-S081	SST	3369	AST	-	-	-	-	2748	3220	3691	4163	4634	5106	5578	6050	6521
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	-	1104	1852	2599	3347	4094	4842	5590	6338	7085
	SET	1104	AET	-	-	-	-	2240	2988	3735	4483	5230	5978	6726	7474	8221
058UC-S041	SST	2100	AST	1713	2318	2923	3527	4132	4737	5342	5947	6551	Maximum Allowable Pressure 120 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	SST	2527	AST	-	2061	2666	3271	3875	4480	5085	5690	6295	Maximum Allowable Pressure 120 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	SST	2937	AST	-	-	2395	3000	3605	4209	4814	5419	6024	Maximum Allowable Pressure 120 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	SST	3369	AST	-	-	-	2748	3353	3958	4562	5167	5772	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	1104	Mid Stroke Min	-	-	-	1104	2063	3022	3980	4939	5898				
	SET	1104	AET	-	-	-	2240	3199	4158	5116	6075	7034				
059UC-S091	SST	3942	AST	-	-	-	-	3215	3820	4425	5029	5634	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	1304	Mid Stroke Min	-	-	-	-	1304	2263	3222	4180	5139				
	SET	1304	AET	-	-	-	-	2646	3605	4564	5522	6481				

Model Number	Spring torques (lb-in)		Output torques (lb-in)											
			Supply Pressure (psig)											
			Torque at	40	50	60	70	80	90	100	110	120	130	140
059UC-S091	SST	4599	AST	-	-	-	-	-	-	3751	4356	4961	5565	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	-	-	-	1521	2480	3439	4397	
	SET	1521	AET	-	-	-	-	-	-	3087	4046	5005	5963	
059UC-S101	SST	5278	AST	-	-	-	-	-	-	-	4305	4910	5515	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	-	-	-	1725	2684	3643	
	SET	1725	AET	-	-	-	-	-	-	-	3500	4459	5418	
072UC-S041	SST	2628	AST	2143	2955	3767	4578	5390	6202	7014	-	-	Maximum Allowable Pressure 100 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	SST	3285	AST	-	2679	3491	4303	5114	5926	6738	-	-	Maximum Allowable Pressure 100 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	SST	3942	AST	-	-	3215	4027	4839	5650	6462	-	-	Maximum Allowable Pressure 100 psig	
	Mid Stroke Min	1304	Mid Stroke Min	-	-	1304	2591	3878	5165	6452	-	-		
	SET	1304	AET	-	-	2646	3933	5220	6507	7794	-	-		
072UC-S071	SST	4599	AST	-	-	-	3751	4563	5375	6186	-	-	Maximum Allowable Pressure 100 psig	
	Mid Stroke Min	1521	Mid Stroke Min	-	-	-	1521	2808	4095	5382	-	-		
	SET	1521	AET	-	-	-	3087	4374	5661	6948	-	-		
072UC-S081	SST	5278	AST	-	-	-	-	4305	5117	5929	-	-	Maximum Allowable Pressure 100 psig	
	Mid Stroke Min	1725	Mid Stroke Min	-	-	-	-	1725	3012	4299	-	-		
	SET	1725	AET	-	-	-	-	3500	4787	6074	-	-		
100UC-S041	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 (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160		
100UC-S051	SST	4559	AST	-	3719	4744	5769	6794	7819	-	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	1511	Mid Stroke Min	-	1511	3136	4761	6386	8011	-	-	-				
	SET	1511	AET	-	3066	4691	6316	7941	9566	-	-	-				
100UC-S061	SST	5480	AST	-	-	4470	5495	6520	7545	8570	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	1808	Mid Stroke Min	-	-	1808	3433	5058	6683	8308	-	-				
	SET	1808	AET	-	-	3668	5293	6918	8543	10168	-	-				
100UC-S071	SST	6390	AST	-	-	-	5212	6237	7262	8287	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	2111	Mid Stroke Min	-	-	-	2111	3736	5361	6986	-	-				
	SET	2111	AET	-	-	-	4284	5909	7534	9159	-	-				
100UC-S081	SST	7300	AST	-	-	-	-	5954	6979	8004	-	-	Maximum Allowable Pressure 100 psig			
	Mid Stroke Min	2415	Mid Stroke Min	-	-	-	-	2415	4040	5665	-	-				
	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

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
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	20548
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	-	-	-

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160		
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	12529	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
210UC-S161	SST	30658	AST	-	-	-	-	-	-	-	-	-	-	-	22639	25007
	Mid Stroke Min	9563	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	8119	9563
	SET	9563	AET	-	-	-	-	-	-	-	-	-	-	-	15650	19404

Model Number	Spring torques (lb-in)		Output torques (lb-in)										
			Supply Pressure (psig)										
			Torque at	40	50	60	70	80	90	100	110	120	130
270UC-S041	SST	9860	AST	8042	10948	13854	16760	19666	22572	25478	-	-	Maximum Allowable Pressure 120 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
	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
	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
	Mid Stroke Min	6277	Mid Stroke Min	-	-	6277	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
	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
	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
	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
	Mid Stroke Min	4359	Mid Stroke Min	4359	7713	11067	14420	17774	21128	-	-	-	
	SET	4359	AET	8845	14732	20618	26505	32391	38278	-	-	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
344UC-S051	SST	14779	AST	-	12055	15768	19481	23195	26908	-	-	-	Maximum Allowable Pressure 120 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			
	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			
	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			
	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			
	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			
	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			
	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			
	Mid Stroke Min	12212	Mid Stroke Min	-	-	-	-	-	-	8858	12212	15566				
	SET	12212	AET	-	-	-	-	-	-	18890	24777	30664				

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
	Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160		
370UC-S041	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	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	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	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	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	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
370UC-S101	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	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



Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
370UC-S141	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	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	-	-	-	-	-	-

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

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
575UC-S121	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	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	SST	83944	AST	-	-	-	-	-	-	-	-	-	-	-	-	61929	68471
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	-	-	-	-	-	-	-	-	-	23551	29161
	SET	29161	AET	-	-	-	-	-	-	-	-	-	-	-	-	48797	59168
740UC-S041	SST	27008	AST	22030	29994	37959	45923	53888	61852	69816	77781	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	10276	Mid Stroke Min	10276	16816	23356	29896	36436	42976	49516	56056	-					
	SET	10276	AET	20850	33476	46103	58729	71356	83982	96608	109235	-					
740UC-S051	SST	33757	AST	-	27535	35499	43464	51428	59393	67357	75321	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	12847	Mid Stroke Min	-	12847	19387	25927	32467	39007	45547	52087	-					
	SET	12847	AET	-	26067	38693	51320	63946	76573	89199	101825	-					
740UC-S061	SST	40512	AST	-	-	33045	41009	48974	56938	64903	72867	-	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	15414	Mid Stroke Min	-	-	15414	21954	28494	35034	41574	48114	-					
	SET	15414	AET	-	-	31275	43901	56528	69154	81781	94407	-					
740UC-S071	SST	47267	AST	-	-	30590	38554	46518	54483	62447	70412	78376	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	17981	Mid Stroke Min	-	-	11441	17981	24521	31061	37601	44141	50681					
	SET	17981	AET	-	-	23857	36483	49109	61736	74362	86989	99615					
740UC-S081	SST	54016	AST	-	-	-	36096	44060	52024	59989	67953	75918	Maximum Allowable Pressure 120 psig				
	Mid Stroke Min	20552	Mid Stroke Min	-	-	-	14012	20552	27092	33632	40172	46712					
	SET	20552	AET	-	-	-	29073	41699	54325	66952	79578	92205					

Model Number	Spring torques (lb-in)		Output torques (lb-in)										
			Supply Pressure (psig)										
			Torque at	40	50	60	70	80	90	100	110	120	130
740UC-S091	SST	60763	AST	-	-	-	-	41599	49563	57527	65492	73456	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	23125	Mid Stroke Min	-	-	-	-	16585	23125	29665	36205	42745	
	SET	23125	AET	-	-	-	-	34294	46920	59546	72173	84799	
740UC-S101	SST	67515	AST	-	-	-	-	-	47106	55070	63034	70999	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	25694	Mid Stroke Min	-	-	-	-	-	19154	25694	32234	38774	
	SET	25694	AET	-	-	-	-	-	39507	52133	64759	77386	
944UC-S041	SST	33757	AST	27535	37899	48264	58628	68993	79357	-	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	11953	Mid Stroke Min	11953	21051	30148	39246	48343	57441	-	-	-	
	SET	11953	AET	24252	40683	57114	73546	89977	106408	-	-	-	
944UC-S051	SST	40512	AST	-	33045	43409	53774	64138	74503	-	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	14342	Mid Stroke Min	-	14342	23440	32537	41635	50732	-	-	-	
	SET	14342	AET	-	29099	45530	61961	78393	94824	-	-	-	
944UC-S061	SST	47267	AST	-	-	38554	48918	59283	69647	80012	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	16730	Mid Stroke Min	-	-	16730	25828	34925	44023	53120	-	-	
	SET	16730	AET	-	-	33944	50375	66806	83238	99669	-	-	
944UC-S071	SST	54016	AST	-	-	33696	44060	54424	64789	75153	-	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	19122	Mid Stroke Min	-	-	10024	19122	28220	37317	46415	-	-	
	SET	19122	AET	-	-	22367	38798	55229	71660	88092	-	-	
945UC-S081	SST	62955	AST	-	-	-	40987	51351	61715	72080	82444	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	22289	Mid Stroke Min	-	-	-	13191	22289	31387	40484	49582	-	
	SET	22289	AET	-	-	-	28793	45224	61655	78086	94518	-	
945UC-S091	SST	73444	AST	-	-	-	-	49542	59906	70270	80635	-	Maximum Allowable Pressure 120 psig
	Mid Stroke Min	26003	Mid Stroke Min	-	-	-	-	16905	26003	35101	44198	-	
	SET	26003	AET	-	-	-	-	36328	52759	69190	85621	-	

Model Number	Spring torques (lb-in)		Output torques (lb-in)														
			Supply Pressure (psig)														
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160	
945UC-S101	SST	83944	AST	-	-	-	-	-	-	58107	68471	78835	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	29717	Mid Stroke Min	-	-	-	-	-	-	20619	29717	38815	-				
	SET	29717	AET	-	-	-	-	-	-	43864	60295	76726	-				
945UC-S111	SST	94433	AST	-	-	-	-	-	-	-	66662	77026	87390	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	-	24333	33431	42529				
	SET	33431	AET	-	-	-	-	-	-	-	51399	67830	84261				
945UC-S121	SST	94433	AST	-	-	-	-	-	-	-	-	66662	77026	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	33431	Mid Stroke Min	-	-	-	-	-	-	-	-	24333	33431				
	SET	33431	AET	-	-	-	-	-	-	-	-	51399	67830				
1150UC-S041	SST	41972	AST	34236	46613	58990	71367	-	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	14580	Mid Stroke Min	14580	25800	37020	48240	-	-	-	-	-	-				
	SET	14580	AET	29583	49205	68827	88449	-	-	-	-	-	-				
1150UC-S051	SST	52467	AST	-	42796	55173	67550	79927	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	18222	Mid Stroke Min	-	18222	29442	40662	51882	-	-	-	-	-				
	SET	18222	AET	-	36971	56593	76215	95837	-	-	-	-	-				
1150UC-S061	SST	62955	AST	-	-	51351	63728	76105	-	-	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	21873	Mid Stroke Min	-	-	21873	33093	44313	-	-	-	-	-				
	SET	21873	AET	-	-	44380	64002	83624	-	-	-	-	-				

Model Number	Spring torques (lb-in)		Output torques (lb-in)													
			Supply Pressure (psig)													
			Torque at	40	50	60	70	80	90	100	110	120	130	140	150	160
1150UC-S071	SST	73444	AST	-	-	47529	59906	72283	84660	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	25517	Mid Stroke Min	-	-	14297	25517	36737	47957	-	-	-				
	SET	25517	AET	-	-	32151	51773	71395	91017	-	-	-				
1150UC-S081	SST	83944	AST	-	-	-	56094	68471	80848	-	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	29161	Mid Stroke Min	-	-	-	17941	29161	40381	-	-	-				
	SET	29161	AET	-	-	-	39546	59168	78790	-	-	-				
1150UC-S091	SST	94433	AST	-	-	-	-	64649	77026	89403	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	32805	Mid Stroke Min	-	-	-	-	21585	32805	44025	-	-				
	SET	32805	AET	-	-	-	-	46940	66562	86184	-	-				
1150UC-S101	SST	104933	AST	-	-	-	-	-	73214	85591	-	-	Maximum Allowable Pressure 120 psig			
	Mid Stroke Min	36442	Mid Stroke Min	-	-	-	-	-	25222	36442	-	-				
	SET	36442	AET	-	-	-	-	-	54319	73941	-	-				

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