



# **SYM-H Torque Tables**

# Double Acting Symmetric Yoke

## Table Directions

Step 1: Find supply pressure column.

Step 2: Find torque rating that will overcome the max torque required for the valve.

Step 3: Ensure the minimum torque of the actuator is greater than the minimum of the valve.

Model Number	Torque at	Operating Pressure (PSI)											
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
SYM1-H03	Start/End	12,080	15,102	18,124	21,146	24,167	27,189	30,211	33,233	36,255	39,277	42,298	45,320
	Minimum	6,694	8,369	10,044	11,718	13,393	15,067	16,742	18,416	20,091	21,766	23,440	25,115
SYM1-H04	Start/End	19,379	24,227	29,074	33,922	38,769	43,617	48,464	53,312	58,159	63,007	67,854	72,702
	Minimum	10,739	13,426	16,112	18,798	21,484	24,171	26,857	29,543	32,230	34,916	37,602	40,289
SYM1-H05	Start/End	31,460	39,330	47,199	55,068	62,938	70,807	78,676	-	-	-	-	-
	Minimum	17,434	21,795	26,156	30,517	34,878	39,239	43,599	-	-	-	-	-
SYM1-H06	Start/End	46,226	57,789	69,352	80,914	-	-	-	-	-	-	-	-
	Minimum	25,617	32,025	38,432	44,840	-	-	-	-	-	-	-	-
SYM1-H07	Start/End	63,677	79,605	-	-	-	-	-	-	-	-	-	-
	Minimum	35,287	44,114	-	-	-	-	-	-	-	-	-	-
SYM2-H03	Start/End	18,120	22,653	27,186	31,718	36,251	40,784	45,317	49,849	54,382	58,915	63,448	67,980
	Minimum	10,042	12,553	15,065	17,577	20,089	22,601	25,113	27,625	30,136	32,648	35,160	37,672
SYM2-H04	Start/End	29,069	36,340	43,611	50,883	58,154	65,425	72,696	79,968	87,239	94,510	101,781	109,053
	Minimum	16,109	20,138	24,168	28,197	32,227	36,256	40,286	44,315	48,344	52,374	56,403	60,433
SYM2-H05	Start/End	47,191	58,995	70,799	82,603	94,407	106,211	118,015	129,819	141,623	153,427	165,231	177,035
	Minimum	26,151	32,693	39,234	45,775	52,317	58,858	65,399	71,941	78,482	85,023	91,564	98,106
SYM2-H06	Start/End	69,340	86,684	104,028	121,372	138,716	156,060	173,404	190,748	-	-	-	-
	Minimum	38,425	48,037	57,648	67,260	76,871	86,482	96,094	105,705	-	-	-	-
SYM2-H07	Start/End	95,516	119,407	143,298	167,189	191,081	-	-	-	-	-	-	-
	Minimum	52,931	66,171	79,410	92,650	105,890	-	-	-	-	-	-	-
SYM2-H08	Start/End	125,719	157,165	188,610	-	-	-	-	-	-	-	-	-
	Minimum	69,669	87,095	104,521	-	-	-	-	-	-	-	-	-
SYM3-H03	Start/End	20,131	25,168	30,204	35,240	40,277	45,313	50,349	55,386	60,422	65,459	70,495	75,531
	Minimum	11,156	13,947	16,738	19,529	22,320	25,111	27,902	30,693	33,484	36,275	39,066	41,857
SYM3-H04	Start/End	34,729	43,417	52,105	60,793	69,480	78,168	86,856	95,544	104,231	112,919	121,607	130,294
	Minimum	19,246	24,060	28,875	33,689	38,503	43,318	48,132	52,947	57,761	62,575	67,390	72,204
SYM3-H05	Start/End	58,892	73,623	88,355	103,086	117,817	132,549	147,280	162,011	176,743	191,474	206,206	220,937
	Minimum	32,636	40,799	48,963	57,126	65,290	73,453	81,617	89,781	97,944	106,108	114,271	122,435
SYM3-H06	Start/End	88,424	110,542	132,660	154,778	176,896	199,014	221,132	243,250	265,368	287,486	309,604	331,722
	Minimum	49,001	61,258	73,515	85,772	98,029	110,286	122,543	134,800	147,057	159,314	171,571	183,828
SYM3-H07	Start/End	123,325	154,173	185,021	215,868	246,716	277,564	308,412	339,259	370,107	400,955	-	-
	Minimum	68,342	85,437	102,531	119,626	136,721	153,815	170,910	188,005	205,099	222,194	-	-
SYM3-H08	Start/End	163,596	204,516	245,437	286,357	327,278	368,198	409,119	-	-	-	-	-
	Minimum	90,659	113,335	136,012	158,688	181,365	204,041	226,718	-	-	-	-	-
SYM3-H10	Start/End	260,246	325,341	390,436	-	-	-	-	-	-	-	-	-
	Minimum	144,218	180,291	216,365	-	-	-	-	-	-	-	-	-
SYM3-H12	Start/End	378,373	-	-	-	-	-	-	-	-	-	-	-
	Minimum	209,680	-	-	-	-	-	-	-	-	-	-	-
SYM4-H03	Start/End	28,184	35,235	42,286	49,337	56,387	63,438	70,489	77,540	84,591	91,642	98,693	105,744
	Minimum	15,618	19,526	23,433	27,340	31,248	35,155	39,062	42,970	46,877	50,785	54,692	58,599
SYM4-H04	Start/End	48,621	60,784	72,947	85,110	97,273	109,435	121,598	133,761	145,924	158,087	170,249	182,412
	Minimum	26,944	33,684	40,424	47,165	53,905	60,645	67,385	74,125	80,865	87,606	94,346	101,086
SYM4-H05	Start/End	82,449	103,073	123,696	144,320	164,944	185,568	206,192	226,816	247,440	268,064	288,688	309,312
	Minimum	45,690	57,119	68,548	79,977	91,406	102,835	114,264	125,693	137,122	148,551	159,980	171,409
SYM4-H06	Start/End	123,793	154,759	185,724	216,689	247,654	278,620	309,585	340,550	371,515	402,481	433,446	464,411
	Minimum	68,602	85,761	102,921	120,081	137,241	154,400	171,560	188,720	205,880	223,039	240,199	257,359
SYM4-H07	Start/End	172,655	215,842	259,029	302,216	345,403	388,589	431,776	474,963	518,150	561,337	604,524	647,710
	Minimum	95,679	119,611	143,544	167,476	191,409	215,341	239,274	263,206	287,139	311,071	335,004	358,936
SYM4-H08	Start/End	229,034	286,323	343,612	400,900	458,189	515,478	572,766	630,055	687,344	744,632	-	-
	Minimum	126,922	158,669	190,416	222,164	253,911	285,658	317,405	349,152	380,900	412,647	-	-
SYM4-H10	Start/End	364,344	455,477	546,610	637,743	728,876	-	-	-	-	-	-	-
	Minimum	201,906	252,408	302,911	353,413	403,915	-	-	-	-	-	-	-
SYM4-H12	Start/End	529,723	662,221	-	-	-	-	-	-	-	-	-	-
	Minimum	293,552	366,978	-	-	-	-	-	-	-	-	-	-



Model Number	Torque at	Operating Pressure (PSI)											
		400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
		Torque lb.in											
SYM5-H03	Start/End	22,139	27,679	33,219	38,759	44,299	49,839	55,379	60,919	66,459	71,999	77,539	83,079
	Minimum	12,268	15,338	18,409	21,479	24,549	27,619	30,689	33,759	36,829	39,899	42,969	46,039
SYM5-H04	Start/End	44,036	55,053	66,070	77,087	88,104	99,121	110,138	121,155	132,172	143,189	154,206	165,224
	Minimum	24,403	30,508	36,614	42,719	48,824	54,929	61,034	67,140	73,245	79,350	85,455	91,561
SYM5-H05	Start/End	80,280	100,362	120,445	140,527	160,610	180,692	200,775	220,857	240,940	261,022	281,105	301,187
	Minimum	44,488	55,617	66,746	77,875	89,004	100,133	111,262	122,391	133,520	144,649	155,778	166,907
SYM5-H06	Start/End	124,578	155,740	186,903	218,065	249,228	280,390	311,553	342,715	373,878	405,040	436,203	467,365
	Minimum	69,036	86,305	103,574	120,843	138,112	155,382	172,651	189,920	207,189	224,458	241,727	258,996
SYM5-H07	Start/End	176,930	221,187	265,444	309,701	353,958	398,215	442,472	486,729	530,986	575,243	619,500	663,757
	Minimum	98,048	122,573	147,099	171,624	196,150	220,676	245,201	269,727	294,252	318,778	343,303	367,829
SYM5-H08	Start/End	237,336	296,702	356,068	415,434	474,800	534,167	593,533	652,899	712,265	771,631	830,997	890,363
	Minimum	131,522	164,421	197,319	230,218	263,116	296,015	328,913	361,812	394,710	427,609	460,507	493,406
SYM5-H10	Start/End	382,311	477,939	573,567	669,195	764,822	860,450	956,078	1,051,706	1,147,334	1,242,962	-	-
	Minimum	211,862	264,855	317,849	370,842	423,835	476,829	529,822	582,816	635,809	688,802	-	-
SYM5-H12	Start/End	559,502	699,450	839,398	979,346	1,119,294	1,259,242	-	-	-	-	-	-
	Minimum	310,055	387,609	465,162	542,716	620,270	697,824	-	-	-	-	-	-



# Spring Return Symmetric Yoke

## Table Directions

Step 1 : Find an End spring value that exceeds the valve End To Close (ETC).

Step 2: Find supply pressure column to match minimum supply.

Step 3: Ensure air to start is greater than valve Break To Open (BTO).

Step 4: Ensure the minimum actuator torque is greater than the run of the valve (RUN).

Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM1-H03-SR1008	Start	17,619	-	-	-	-	20,357	23,904	27,450	30,997	34,543	38,090	41,636	45,182
	Miniumum	6,675	-	-	-	-	8,253	10,266	12,263	14,250	16,231	18,208	20,184	22,158
	End	8,000	-	-	-	-	10,739	14,285	17,831	21,378	24,924	28,471	32,017	35,564
SYM1-H04-SR1008	Start	17,619	-	-	24,211	29,583	34,955	40,328	45,700	51,072	56,444	61,816	67,188	72,560
	Miniumum	6,675	-	-	10,440	13,458	16,461	19,455	22,445	25,431	28,417	31,400	34,381	37,362
	End	8,000	-	-	14,593	19,965	25,337	30,709	36,081	41,453	46,825	52,197	57,569	62,942
SYM1-H05-SR1008	Start	17,619	25,542	33,936	42,330	50,724	59,118	67,512	75,906	-	-	-	-	-
	Miniumum	6,675	11,190	15,892	20,570	25,238	29,903	34,561	39,219	-	-	-	-	-
	End	8,000	15,923	24,317	32,711	41,105	49,499	57,893	66,287	-	-	-	-	-
SYM1-H06-SR1008	Start	17,619	40,301	52,388	64,475	76,563	-	-	-	-	-	-	-	-
	Miniumum	6,675	19,440	26,163	32,876	39,583	-	-	-	-	-	-	-	-
	End	8,000	30,682	42,769	54,857	66,944	-	-	-	-	-	-	-	-
SYM1-H07-SR1008	Start	17,619	57,743	74,195	-	-	-	-	-	-	-	-	-	-
	Miniumum	6,675	29,139	38,269	-	-	-	-	-	-	-	-	-	-
	End	8,000	48,124	64,576	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1008	Start	17,619	77,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	6,675	40,308	-	-	-	-	-	-	-	-	-	-	-
	End	8,000	68,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1010	Start	19,619	-	-	-	-	21,904	25,450	28,997	32,543	36,090	39,636	43,182	
	Miniumum	7,831	-	-	-	-	9,134	11,138	13,129	15,114	17,094	19,070	21,045	
	End	10,000	-	-	-	-	12,285	15,831	19,378	22,924	26,471	30,017	33,564	
SYM1-H04-SR1010	Start	19,619	-	-	22,211	27,583	32,955	38,328	43,700	49,072	54,444	59,816	65,188	70,560
	Miniumum	7,831	-	-	9,309	12,337	15,344	18,341	21,333	24,320	27,305	30,290	33,271	36,252
	End	10,000	-	-	12,593	17,965	23,337	28,709	34,081	39,453	44,825	50,197	55,569	60,942
SYM1-H06-SR1010	Start	19,619	38,301	50,388	62,475	74,563	-	-	-	-	-	-	-	-
	Miniumum	7,831	18,326	25,051	31,766	38,473	-	-	-	-	-	-	-	-
	End	10,000	28,682	40,769	52,857	64,944	-	-	-	-	-	-	-	-
SYM1-H07-SR1010	Start	19,619	55,743	72,195	-	-	-	-	-	-	-	-	-	-
	Miniumum	7,831	28,027	37,159	-	-	-	-	-	-	-	-	-	-
	End	10,000	46,124	62,576	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1010	Start	19,619	75,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	7,831	39,198	-	-	-	-	-	-	-	-	-	-	-
	End	10,000	66,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1012	Start	21,619	-	-	-	-	19,904	23,450	26,997	30,543	34,090	37,636	41,182	
	Miniumum	8,972	-	-	-	-	7,994	10,010	12,008	13,996	15,977	17,956	19,931	
	End	12,000	-	-	-	-	10,285	13,831	17,378	20,924	24,471	28,017	31,564	
SYM1-H04-SR1012	Start	21,619	-	-	20,211	25,583	30,955	36,328	41,700	47,072	52,444	57,816	63,188	68,560
	Miniumum	8,972	-	-	8,170	11,213	14,227	17,227	20,219	23,208	26,194	29,180	32,162	35,143
	End	12,000	-	-	10,593	15,965	21,337	26,709	32,081	37,453	42,825	48,197	53,569	58,942
SYM1-H06-SR1012	Start	21,619	36,301	48,388	60,475	72,563	-	-	-	-	-	-	-	-
	Miniumum	8,972	17,212	23,940	30,656	37,363	-	-	-	-	-	-	-	-
	End	12,000	26,682	38,769	50,857	62,944	-	-	-	-	-	-	-	-
SYM1-H07-SR1012	Start	21,619	53,743	70,195	-	-	-	-	-	-	-	-	-	-
	Miniumum	8,972	26,916	36,050	-	-	-	-	-	-	-	-	-	-
	End	12,000	44,124	60,576	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1012	Start	21,619	73,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	8,972	38,088	-	-	-	-	-	-	-	-	-	-	-
	End	12,000	64,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1014	Start	23,619	-	-	-	-	-	21,450	24,997	28,543	32,090	35,636	39,182	
	Miniumum	10,105	-	-	-	-	-	8,876	10,883	12,875	14,860	16,841	18,817	
	End	14,000	-	-	-	-	-	11,831	15,378	18,924	22,471	26,017	29,564	



Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM1-H04-SR1014	Start	23,619	-	-	-	23,583	28,955	34,328	39,700	45,072	50,444	55,816	61,188	66,560
	Miniumum	10,105	-	-	-	10,085	13,106	16,110	19,105	22,097	25,082	28,068	31,052	34,033
	End	14,000	-	-	-	13,965	19,337	24,709	30,081	35,453	40,825	46,197	51,569	56,942
SYM1-H06-SR1014	Start	23,619	34,301	46,388	58,475	70,563	-	-	-	-	-	-	-	-
	Miniumum	10,105	16,095	22,828	29,546	36,254	-	-	-	-	-	-	-	-
	End	14,000	24,682	36,769	48,857	60,944	-	-	-	-	-	-	-	-
SYM1-H07-SR1014	Start	23,619	51,743	68,195	-	-	-	-	-	-	-	-	-	-
	Miniumum	10,105	25,804	34,940	-	-	-	-	-	-	-	-	-	-
	End	14,000	42,124	58,576	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1014	Start	23,619	71,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	10,105	36,978	-	-	-	-	-	-	-	-	-	-	-
	End	14,000	62,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1016	Start	25,619	-	-	-	-	-	-	22,997	26,543	30,090	33,636	37,182	
	Miniumum	11,233	-	-	-	-	-	-	9,753	11,753	13,742	15,724	17,703	
	End	16,000	-	-	-	-	-	-	13,378	16,924	20,471	24,017	27,564	
SYM1-H04-SR1016	Start	25,619	-	-	-	21,583	26,955	32,328	37,700	43,072	48,444	53,816	59,188	64,560
	Miniumum	11,233	-	-	-	8,952	11,985	14,993	17,991	20,984	23,971	26,956	29,942	32,923
	End	16,000	-	-	-	11,965	17,337	22,709	28,081	33,453	38,825	44,197	49,569	54,942
SYM1-H06-SR1016	Start	25,619	32,301	44,388	56,475	68,563	80,650	-	-	-	-	-	-	-
	Miniumum	11,233	14,978	21,716	28,434	35,144	41,851	-	-	-	-	-	-	-
	End	16,000	22,682	34,769	46,857	58,944	71,031	-	-	-	-	-	-	-
SYM1-H07-SR1016	Start	25,619	49,743	66,195	-	-	-	-	-	-	-	-	-	-
	Miniumum	11,233	24,693	33,830	-	-	-	-	-	-	-	-	-	-
	End	16,000	40,124	56,576	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1016	Start	25,619	69,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	11,233	35,868	-	-	-	-	-	-	-	-	-	-	-
	End	16,000	60,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1018	Start	27,619	-	-	-	-	-	-	20,997	24,543	28,090	31,636	35,182	
	Miniumum	12,357	-	-	-	-	-	-	8,618	10,628	12,621	14,607	16,588	
	End	18,000	-	-	-	-	-	-	11,378	14,924	18,471	22,017	25,564	
SYM1-H04-SR1018	Start	27,619	-	-	-	-	24,955	30,328	35,700	41,072	46,444	51,816	57,188	62,560
	Miniumum	12,357	-	-	-	-	10,860	13,875	16,877	19,870	22,859	25,845	28,831	31,813
	End	18,000	-	-	-	-	15,337	20,709	26,081	31,453	36,825	42,197	47,569	52,942
SYM1-H06-SR1018	Start	27,619	30,301	42,388	54,475	66,563	78,650	-	-	-	-	-	-	-
	Miniumum	12,357	13,860	20,603	27,323	34,034	40,741	-	-	-	-	-	-	-
	End	18,000	20,682	32,769	44,857	56,944	69,031	-	-	-	-	-	-	-
SYM1-H07-SR1018	Start	27,619	47,743	64,195	80,647	-	-	-	-	-	-	-	-	-
	Miniumum	12,357	23,581	32,720	41,850	-	-	-	-	-	-	-	-	-
	End	18,000	38,124	54,576	71,028	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1018	Start	27,619	67,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	12,357	34,758	-	-	-	-	-	-	-	-	-	-	-
	End	18,000	58,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1020	Start	29,619	-	-	-	-	-	-	-	22,543	26,090	29,636	33,182	
	Miniumum	13,478	-	-	-	-	-	-	-	9,497	11,498	13,488	15,471	
	End	20,000	-	-	-	-	-	-	-	12,924	16,471	20,017	23,564	
SYM1-H04-SR1020	Start	29,619	-	-	-	-	22,955	28,328	33,700	39,072	44,444	49,816	55,188	60,560
	Miniumum	13,478	-	-	-	-	9,730	12,754	15,760	18,756	21,748	24,733	27,719	30,703
	End	20,000	-	-	-	-	13,337	18,709	24,081	29,453	34,825	40,197	45,569	50,942
SYM1-H06-SR1020	Start	29,619	28,301	40,388	52,475	64,563	76,650	-	-	-	-	-	-	-
	Miniumum	13,478	12,739	19,489	26,211	32,924	39,632	-	-	-	-	-	-	-
	End	20,000	18,682	30,769	42,857	54,944	67,031	-	-	-	-	-	-	-
SYM1-H07-SR1020	Start	29,619	45,743	62,195	78,647	-	-	-	-	-	-	-	-	-
	Miniumum	13,478	22,469	31,610	40,740	-	-	-	-	-	-	-	-	-
	End	20,000	36,124	52,576	69,028	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1020	Start	29,619	65,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	13,478	33,649	-	-	-	-	-	-	-	-	-	-	-
	End	20,000	56,249	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1022	Start	31,619	-	-	-	-	-	-	-	-	20,543	24,090	27,636	31,182
	Miniumum	14,597	-	-	-	-	-	-	-	-	8,360	10,371	12,367	14,354
	End	22,000	-	-	-	-	-	-	-	-	10,924	14,471	18,017	21,564
SYM1-H04-SR1022	Start	31,619	-	-	-	-	20,955	26,328	31,700	37,072	42,444	47,816	53,188	58,560
	Miniumum	14,597	-	-	-	-	8,595	11,632	14,643	17,642	20,634	23,622	26,608	29,593
	End	22,000	-	-	-	-	11,337	16,709	22,081	27,453	32,825	38,197	43,569	48,942
SYM1-H06-SR1022	Start	31,619	26,301	38,388	50,475	62,563	74,650	-	-	-	-	-	-	-
	Miniumum	14,597	11,617	18,375	25,100	31,814	38,522	-	-	-	-	-	-	-
	End	22,000	16,682	28,769	40,857	52,944	65,031	-	-	-	-	-	-	-
SYM1-H07-SR1022	Start	31,619	43,743	60,195	76,647	-	-	-	-	-	-	-	-	-
	Miniumum	14,597	21,357	30,500	39,630	-	-	-	-	-	-	-	-	-
	End	22,000	34,124	50,576	67,028	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1022	Start	31,619	63,868	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	14,597	32,539	-	-	-	-	-	-	-	-	-	-	-
	End	22,000	54,249	-	-	-	-	-	-	-	-	-	-	-



Model Number	Spring Torque		Operating Pressure (PSI)												
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
			Pressure Torque Output Start,Min,End lb.in												
SYM1-H03-SR1024	Start	33,619	-	-	-	-	-	-	-	-	-	-	22,090	25,636	29,182
	Miniumum	15,714	-	-	-	-	-	-	-	-	-	-	9,240	11,243	13,233
	End	24,000	-	-	-	-	-	-	-	-	-	-	12,471	16,017	19,564
SYM1-H04-SR1024	Start	33,619	-	-	-	-	-	24,328	29,700	35,072	40,444	45,816	51,188	56,560	
	Miniumum	15,714	-	-	-	-	-	10,506	13,523	16,526	19,520	22,510	25,496	28,482	
	End	24,000	-	-	-	-	-	14,709	20,081	25,453	30,825	36,197	41,569	46,942	
SYM1-H06-SR1024	Start	33,619	24,301	36,388	48,475	60,563	72,650	-	-	-	-	-	-	-	-
	Miniumum	15,714	10,491	17,261	23,988	30,705	37,412	-	-	-	-	-	-	-	-
	End	24,000	14,682	26,769	38,857	50,944	63,031	-	-	-	-	-	-	-	-
SYM1-H07-SR1024	Start	33,619	41,743	58,195	74,647	-	-	-	-	-	-	-	-	-	-
	Miniumum	15,714	20,243	29,390	38,520	-	-	-	-	-	-	-	-	-	-
	End	24,000	32,124	48,576	65,028	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1024	Start	33,619	61,868	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	15,714	31,429	-	-	-	-	-	-	-	-	-	-	-	-
	End	24,000	52,249	-	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1026	Start	35,619	-	-	-	-	-	-	-	-	-	-	20,090	23,636	27,182
	Miniumum	16,832	-	-	-	-	-	-	-	-	-	-	8,100	10,115	12,113
	End	26,000	-	-	-	-	-	-	-	-	-	-	10,471	14,017	17,564
SYM1-H04-SR1026	Start	35,619	-	-	-	-	-	22,328	27,700	33,072	38,444	43,816	49,188	54,560	
	Miniumum	16,832	-	-	-	-	-	9,375	12,402	15,409	18,406	21,398	24,384	27,370	
	End	26,000	-	-	-	-	-	12,709	18,081	23,453	28,825	34,197	39,569	44,942	
SYM1-H06-SR1026	Start	35,619	22,301	34,388	46,475	58,563	70,650	-	-	-	-	-	-	-	-
	Miniumum	16,832	9,360	16,144	22,877	29,595	36,302	-	-	-	-	-	-	-	-
	End	26,000	12,682	24,769	36,857	48,944	61,031	-	-	-	-	-	-	-	-
SYM1-H07-SR1026	Start	35,619	39,743	56,195	72,647	-	-	-	-	-	-	-	-	-	-
	Miniumum	16,832	19,129	28,279	37,410	-	-	-	-	-	-	-	-	-	-
	End	26,000	30,124	46,576	63,028	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1026	Start	35,619	59,868	81,357	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	16,832	30,319	42,243	-	-	-	-	-	-	-	-	-	-	-
	End	26,000	50,249	71,738	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1028	Start	37,619	-	-	-	-	-	-	-	-	-	-	-	21,636	25,182
	Miniumum	17,946	-	-	-	-	-	-	-	-	-	-	-	8,982	10,987
	End	28,000	-	-	-	-	-	-	-	-	-	-	-	12,017	15,564
SYM1-H04-SR1028	Start	37,619	-	-	-	-	-	20,328	25,700	31,072	36,444	41,816	47,188	52,560	
	Miniumum	17,946	-	-	-	-	-	8,236	11,278	14,292	17,292	20,284	23,273	26,259	
	End	28,000	-	-	-	-	-	10,709	16,081	21,453	26,825	32,197	37,569	42,942	
SYM1-H06-SR1028	Start	37,619	20,301	32,388	44,475	56,563	68,650	80,737	-	-	-	-	-	-	-
	Miniumum	17,946	8,221	15,027	21,765	28,483	35,192	41,900	-	-	-	-	-	-	-
	End	28,000	10,682	22,769	34,857	46,944	59,031	71,118	-	-	-	-	-	-	-
SYM1-H07-SR1028	Start	37,619	37,743	54,195	70,647	-	-	-	-	-	-	-	-	-	-
	Miniumum	17,946	18,015	27,167	36,300	-	-	-	-	-	-	-	-	-	-
	End	28,000	28,124	44,576	61,028	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1028	Start	37,619	57,868	79,357	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	17,946	29,208	41,133	-	-	-	-	-	-	-	-	-	-	-
	End	28,000	48,249	69,738	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1030	Start	39,619	-	-	-	-	-	-	-	-	-	-	-	-	23,182
	Miniumum	19,060	-	-	-	-	-	-	-	-	-	-	-	-	9,859
	End	30,000	-	-	-	-	-	-	-	-	-	-	-	-	13,564
SYM1-H04-SR1030	Start	39,619	-	-	-	-	-	-	23,700	29,072	34,444	39,816	45,188	50,560	
	Miniumum	19,060	-	-	-	-	-	-	10,151	13,172	16,175	19,170	22,161	25,147	
	End	30,000	-	-	-	-	-	-	14,081	19,453	24,825	30,197	35,569	40,942	
SYM1-H06-SR1030	Start	39,619	-	30,388	42,475	54,563	66,650	78,737	-	-	-	-	-	-	-
	Miniumum	19,060	-	13,909	20,651	27,371	34,082	40,790	-	-	-	-	-	-	-
	End	30,000	-	20,769	32,857	44,944	57,031	69,118	-	-	-	-	-	-	-
SYM1-H07-SR1030	Start	39,619	35,743	52,195	68,647	-	-	-	-	-	-	-	-	-	-
	Miniumum	19,060	16,901	26,055	35,191	-	-	-	-	-	-	-	-	-	-
	End	30,000	26,124	42,576	59,028	-	-	-	-	-	-	-	-	-	-
SYM1-H08-SR1030	Start	39,619	55,868	77,357	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	19,060	28,097	40,024	-	-	-	-	-	-	-	-	-	-	-
	End	30,000	46,249	67,738	-	-	-	-	-	-	-	-	-	-	-
SYM1-H03-SR1032	Start	41,619	-	-	-	-	-	-	-	-	-	-	-	-	21,182
	Miniumum	20,174	-	-	-	-	-	-	-	-	-	-	-	-	8,724
	End	32,000	-	-	-	-	-	-	-	-	-	-	-	-	11,564
SYM1-H04-SR1032	Start	41,619	-	-	-	-	-	-	21,700	27,072	32,444	37,816	43,188	48,560	
	Miniumum	20,174	-	-	-	-	-	-	9,018	12,051	15,058	18,056	21,048	24,035	
	End	32,000	-	-	-	-	-	-	12,081	17,453	22,825	28,197	33,569	38,942	
SYM1-H06-SR1032	Start	41,619	-	28,388	40,475	52,563	64,650	76,737	-	-	-	-	-	-	-
	Miniumum	20,174	-	12,788	19,537	26,260	32,973	39,680	-	-	-	-	-	-	-
	End	32,000	-	18,769	30,857	42,944	55,031	67,118	-	-	-	-	-	-	-
SYM1-H07-SR1032	Start	41,619	33,743	50,195	66,647	-	-	-	-	-	-	-	-	-	-
	Miniumum	20,174	15,784	24,944	34,081	-	-	-	-	-	-	-	-	-	-
	End	32,000	24,124	40,576	57,028	-	-	-	-	-	-	-	-	-	-



Model Number	Spring Torque		Operating Pressure (PSI)													
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500		
			Pressure Torque Output Start,Min,End lb.in													
SYM1-H08-SR1032	Start	41,619	53,868	75,357	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	20,174	26,985	38,914	-	-	-	-	-	-	-	-	-	-	-	-
	End	32,000	44,249	65,738	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H04-SR2040	Start	76,070	-	-	-	-	-	-	-	-	-	-	-	-	-	80,841
	Miniumum	30,796	-	-	-	-	-	-	-	-	-	-	-	-	-	33,515
	End	40,000	-	-	-	-	-	-	-	-	-	-	-	-	-	44,770
SYM2-H05-SR2040	Start	76,070	-	-	-	-	-	-	85,859	98,450	111,041	123,632	136,222	148,813	-	-
	Miniumum	30,796	-	-	-	-	-	-	36,361	43,462	50,526	57,567	64,598	71,611	-	-
	End	40,000	-	-	-	-	-	-	49,788	62,379	74,970	87,561	100,152	112,743	-	-
SYM2-H06-SR2040	Start	76,070	-	-	-	86,844	104,975	123,106	141,237	159,368	177,498	-	-	-	-	-
	Miniumum	30,796	-	-	-	36,918	47,126	57,273	67,391	77,490	87,574	-	-	-	-	-
	End	40,000	-	-	-	50,774	68,904	87,035	105,166	123,297	141,428	-	-	-	-	-
SYM2-H07-SR2040	Start	76,070	-	83,292	107,970	132,649	157,327	182,005	-	-	-	-	-	-	-	-
	Miniumum	30,796	-	34,908	48,805	62,603	76,353	90,079	-	-	-	-	-	-	-	-
	End	40,000	-	47,222	71,900	96,578	121,257	145,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2040	Start	76,070	88,802	121,035	153,268	185,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	30,796	38,025	56,116	74,092	92,022	-	-	-	-	-	-	-	-	-	-
	End	40,000	52,732	84,964	117,197	149,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2040	Start	76,070	161,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	30,796	78,540	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	40,000	125,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H04-SR2042	Start	78,070	-	-	-	-	-	-	-	-	-	-	-	-	-	78,841
	Miniumum	31,939	-	-	-	-	-	-	-	-	-	-	-	-	-	32,378
	End	42,000	-	-	-	-	-	-	-	-	-	-	-	-	-	42,770
SYM2-H05-SR2042	Start	78,070	-	-	-	-	-	-	83,859	96,450	109,041	121,632	134,222	146,813	-	-
	Miniumum	31,939	-	-	-	-	-	-	35,230	42,337	49,405	56,450	63,483	70,497	-	-
	End	42,000	-	-	-	-	-	-	47,788	60,379	72,970	85,561	98,152	110,743	-	-
SYM2-H06-SR2042	Start	78,070	-	-	-	84,844	102,975	121,106	139,237	157,368	175,498	-	-	-	-	-
	Miniumum	31,939	-	-	-	35,788	46,005	56,156	66,277	76,376	86,463	-	-	-	-	-
	End	42,000	-	-	-	48,774	66,904	85,035	103,166	121,297	139,428	-	-	-	-	-
SYM2-H07-SR2042	Start	78,070	-	81,292	105,970	130,649	155,327	180,005	-	-	-	-	-	-	-	-
	Miniumum	31,939	-	33,771	47,684	61,486	75,239	88,968	-	-	-	-	-	-	-	-
	End	42,000	-	45,222	69,900	94,578	119,257	143,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2042	Start	78,070	86,802	119,035	151,268	183,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	31,939	36,895	54,999	72,978	90,910	-	-	-	-	-	-	-	-	-	-
	End	42,000	50,732	82,964	115,197	147,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2042	Start	78,070	159,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	31,939	77,426	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	42,000	123,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H04-SR2044	Start	80,070	-	-	-	-	-	-	-	-	-	-	-	-	-	76,841
	Miniumum	33,077	-	-	-	-	-	-	-	-	-	-	-	-	-	31,236
	End	44,000	-	-	-	-	-	-	-	-	-	-	-	-	-	40,770
SYM2-H05-SR2044	Start	80,070	-	-	-	-	-	-	81,859	94,450	107,041	119,632	132,222	144,813	-	-
	Miniumum	33,077	-	-	-	-	-	-	34,093	41,211	48,284	55,333	62,365	69,383	-	-
	End	44,000	-	-	-	-	-	-	45,788	58,379	70,970	83,561	96,152	108,743	-	-
SYM2-H06-SR2044	Start	80,070	-	-	-	82,844	100,975	119,106	137,237	155,368	173,498	191,629	-	-	-	-
	Miniumum	33,077	-	-	-	34,653	44,883	55,039	65,163	75,262	85,351	95,428	-	-	-	-
	End	44,000	-	-	-	46,774	64,904	83,035	101,166	119,297	137,428	155,559	-	-	-	-
SYM2-H07-SR2044	Start	80,070	-	79,292	103,970	128,649	153,327	178,005	-	-	-	-	-	-	-	-
	Miniumum	33,077	-	32,635	46,563	60,369	74,125	87,856	-	-	-	-	-	-	-	-
	End	44,000	-	43,222	67,900	92,578	117,257	141,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2044	Start	80,070	84,802	117,035	149,268	181,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	33,077	35,764	53,882	71,864	89,799	-	-	-	-	-	-	-	-	-	-
	End	44,000	48,732	80,964	113,197	145,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2044	Start	80,070	157,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	33,077	76,312	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	44,000	121,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H04-SR2046	Start	82,070	-	-	-	-	-	-	-	-	-	-	-	-	-	74,841
	Miniumum	34,213	-	-	-	-	-	-	-	-	-	-	-	-	-	30,093
	End	46,000	-	-	-	-	-	-	-	-	-	-	-	-	-	38,770
SYM2-H05-SR2046	Start	82,070	-	-	-	-	-	-	79,859	92,450	105,041	117,632	130,222	142,813	-	-
	Miniumum	34,213	-	-	-	-	-	-	32,957	40,086	47,163	54,215	61,248	68,269	-	-
	End	46,000	-	-	-	-	-	-	43,788	56,379	68,970	81,561	94,152	106,743	-	-
SYM2-H06-SR2046	Start	82,070	-	-	-	80,844	98,975	117,106	135,237	153,368	171,498	189,629	-	-	-	-
	Miniumum	34,213	-	-	-	33,516	43,757	53,922	64,049	74,148	84,240	94,317	-	-	-	-
	End	46,000	-	-	-	44,774	62,904	81,035	99,166	117,297	135,428	153,559	-	-	-	-
SYM2-H07-SR2046	Start	82,070	-	77,292	101,970	126,649	151,327	176,005	-	-	-	-	-	-	-	-
	Miniumum	34,213	-	31,495	45,442	59,252	73,011	86,744	-	-	-	-	-	-	-	-
	End	46,000	-	41,222	65,900	90,578	115,257	139,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2046	Start	82,070	82,802	115,035	147,268	179,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	34,213	34,629	52,765	70,750	88,687	-	-	-	-	-	-	-	-	-	-
	End	46,000	46,732	78,964	111,197	143,430	-	-	-	-	-	-	-	-	-	-



Model Number	Spring Torque		Operating Pressure (PSI)													
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500		
			Pressure Torque Output Start,Min,End lb.in													
SYM2-H10-SR2046	Start	82,070	155,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	34,213	75,198	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	46,000	119,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2048	Start	84,070	-	-	-	-	-	-	77,859	90,450	103,041	115,632	128,222	140,813	-	-
	Miniumum	35,350	-	-	-	-	-	-	31,818	38,957	46,042	53,098	60,131	67,155	-	-
	End	48,000	-	-	-	-	-	-	41,788	54,379	66,970	79,561	92,152	104,743	-	-
SYM2-H06-SR2048	Start	84,070	-	-	-	78,844	96,975	115,106	133,237	151,368	169,498	187,629	-	-	-	-
	Miniumum	35,350	-	-	-	32,380	42,632	52,804	62,932	73,034	83,128	93,205	-	-	-	-
	End	48,000	-	-	-	42,774	60,904	79,035	97,166	115,297	133,428	151,559	-	-	-	-
SYM2-H07-SR2048	Start	84,070	-	75,292	99,970	124,649	149,327	174,005	-	-	-	-	-	-	-	-
	Miniumum	35,350	-	30,351	44,318	58,135	71,897	85,633	-	-	-	-	-	-	-	-
	End	48,000	-	39,222	63,900	88,578	113,257	137,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2048	Start	84,070	80,802	113,035	145,268	177,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	35,350	33,493	51,644	69,636	87,575	-	-	-	-	-	-	-	-	-	-
	End	48,000	44,732	76,964	109,197	141,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2048	Start	84,070	153,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	35,350	74,084	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	48,000	117,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2050	Start	86,070	-	-	-	-	-	-	75,859	88,450	101,041	113,632	126,222	138,813	-	-
	Miniumum	36,481	-	-	-	-	-	-	30,675	37,826	44,920	51,978	59,014	66,041	-	-
	End	50,000	-	-	-	-	-	-	39,788	52,379	64,970	77,561	90,152	102,743	-	-
SYM2-H06-SR2050	Start	86,070	-	-	-	76,844	94,975	113,106	131,237	149,368	167,498	185,629	-	-	-	-
	Miniumum	36,481	-	-	-	31,238	41,507	51,683	61,815	71,920	82,017	92,094	-	-	-	-
	End	50,000	-	-	-	40,774	58,904	77,035	95,166	113,297	131,428	149,559	-	-	-	-
SYM2-H07-SR2050	Start	86,070	-	-	97,970	122,649	147,327	172,005	-	-	-	-	-	-	-	-
	Miniumum	36,481	-	-	43,192	57,018	70,783	84,521	-	-	-	-	-	-	-	-
	End	50,000	-	-	61,900	86,578	111,257	135,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2050	Start	86,070	78,802	111,035	143,268	175,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	36,481	32,356	50,523	68,522	86,464	-	-	-	-	-	-	-	-	-	-
	End	50,000	42,732	74,964	107,197	139,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2050	Start	86,070	151,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	36,481	72,970	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	50,000	115,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2052	Start	88,070	-	-	-	-	-	-	-	86,450	99,041	111,632	124,222	136,813	-	-
	Miniumum	37,612	-	-	-	-	-	-	-	36,696	43,795	50,857	57,897	64,927	-	-
	End	52,000	-	-	-	-	-	-	-	50,379	62,970	75,561	88,152	100,743	-	-
SYM2-H06-SR2052	Start	88,070	-	-	-	74,844	92,975	111,106	129,237	147,368	165,498	183,629	-	-	-	-
	Miniumum	37,612	-	-	-	30,095	40,381	50,562	60,698	70,806	80,905	90,982	-	-	-	-
	End	52,000	-	-	-	38,774	56,904	75,035	93,166	111,297	129,428	147,559	-	-	-	-
SYM2-H07-SR2052	Start	88,070	-	-	95,970	120,649	145,327	170,005	-	-	-	-	-	-	-	-
	Miniumum	37,612	-	-	42,067	55,901	69,669	83,410	-	-	-	-	-	-	-	-
	End	52,000	-	-	59,900	84,578	109,257	133,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2052	Start	88,070	76,802	109,035	141,268	173,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	37,612	31,214	49,402	67,408	85,352	-	-	-	-	-	-	-	-	-	-
	End	52,000	40,732	72,964	105,197	137,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2052	Start	88,070	149,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	37,612	71,856	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	52,000	113,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2054	Start	90,070	-	-	-	-	-	-	-	84,450	97,041	109,632	122,222	134,813	-	-
	Miniumum	38,742	-	-	-	-	-	-	-	35,565	42,669	49,736	56,780	63,813	-	-
	End	54,000	-	-	-	-	-	-	-	48,379	60,970	73,561	86,152	98,743	-	-
SYM2-H06-SR2054	Start	90,070	-	-	-	-	90,975	109,106	127,237	145,368	163,498	181,629	-	-	-	-
	Miniumum	38,742	-	-	-	-	39,254	49,442	59,581	69,692	79,791	89,870	-	-	-	-
	End	54,000	-	-	-	-	54,904	73,035	91,166	109,297	127,428	145,559	-	-	-	-
SYM2-H07-SR2054	Start	90,070	-	-	93,970	118,649	143,327	168,005	-	-	-	-	-	-	-	-
	Miniumum	38,742	-	-	40,941	54,784	68,555	82,298	-	-	-	-	-	-	-	-
	End	54,000	-	-	57,900	82,578	107,257	131,935	-	-	-	-	-	-	-	-
SYM2-H08-SR2054	Start	90,070	74,802	107,035	139,268	171,500	-	-	-	-	-	-	-	-	-	-
	Miniumum	38,742	30,071	48,281	66,294	84,241	-	-	-	-	-	-	-	-	-	-
	End	54,000	38,732	70,964	103,197	135,430	-	-	-	-	-	-	-	-	-	-
SYM2-H10-SR2054	Start	90,070	147,253	-	-	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	38,742	70,742	-	-	-	-	-	-	-	-	-	-	-	-	-
	End	54,000	111,183	-	-	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2056	Start	92,070	-	-	-	-	-	-	-	82,450	95,041	107,632	120,222	132,813	-	-
	Miniumum	39,872	-	-	-	-	-	-	-	34,429	41,544	48,615	55,663	62,695	-	-
	End	56,000	-	-	-	-	-	-	-	46,379	58,970	71,561	84,152	96,743	-	-
SYM2-H06-SR2056	Start	92,070	-	-	-	-	88,975	107,106	125,237	143,368	161,498	179,629	-	-	-	-
	Miniumum	39,872	-	-	-	-	38,123	48,321	58,463	68,578	78,677	88,759	-	-	-	-
	End	56,000	-	-	-	-	52,904	71,035	89,166	107,297	125,428	143,559	-	-	-	-
SYM2-H07-SR2056	Start	92,070	-	-	91,970	116,649	141,327	166,005	190,683	-	-	-	-	-	-	-
	Miniumum	39,872	-	-	39,816	53,666	67,441	81,186	94,902	-	-	-	-	-	-	-
	End	56,000	-	-	55,900	80,578	105,257	129,935	154,613	-	-	-	-	-	-	-





Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM2-H08-SR2056	Start	92,070	-	105,035	137,268	169,500	-	-	-	-	-	-	-	-
	Miniumum	39,872	-	47,160	65,180	83,129	-	-	-	-	-	-	-	-
	End	56,000	-	68,964	101,197	133,430	-	-	-	-	-	-	-	-
SYM2-H10-SR2056	Start	92,070	145,253	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	39,872	69,628	-	-	-	-	-	-	-	-	-	-	-
	End	56,000	109,183	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2058	Start	94,070	-	-	-	-	-	-	-	80,450	93,041	105,632	118,222	130,813
	Miniumum	40,998	-	-	-	-	-	-	-	33,292	40,418	47,494	54,545	61,578
	End	58,000	-	-	-	-	-	-	-	44,379	56,970	69,561	82,152	94,743
SYM2-H06-SR2058	Start	94,070	-	-	-	-	86,975	105,106	123,237	141,368	159,498	177,629	-	-
	Miniumum	40,998	-	-	-	-	36,992	47,200	57,346	67,464	77,563	87,647	-	-
	End	58,000	-	-	-	-	50,904	69,035	87,166	105,297	123,428	141,559	-	-
SYM2-H07-SR2058	Start	94,070	-	-	89,970	114,649	139,327	164,005	188,683	-	-	-	-	-
	Miniumum	40,998	-	-	38,686	52,548	66,327	80,073	93,791	-	-	-	-	-
	End	58,000	-	-	53,900	78,578	103,257	127,935	152,613	-	-	-	-	-
SYM2-H08-SR2058	Start	94,070	-	103,035	135,268	167,500	-	-	-	-	-	-	-	-
	Miniumum	40,998	-	46,039	64,066	82,018	-	-	-	-	-	-	-	-
	End	58,000	-	66,964	99,197	131,430	-	-	-	-	-	-	-	-
SYM2-H10-SR2058	Start	94,070	143,253	-	-	-	-	-	-	-	-	-	-	-
	Miniumum	40,998	68,514	-	-	-	-	-	-	-	-	-	-	-
	End	58,000	107,183	-	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2060	Start	96,070	-	-	-	-	-	-	-	78,450	91,041	103,632	116,222	128,813
	Miniumum	42,123	-	-	-	-	-	-	-	32,156	39,291	46,373	53,428	60,461
	End	60,000	-	-	-	-	-	-	-	42,379	54,970	67,561	80,152	92,743
SYM2-H06-SR2060	Start	96,070	-	-	-	-	84,975	103,106	121,237	139,368	157,498	175,629	-	-
	Miniumum	42,123	-	-	-	-	35,862	46,079	56,229	66,350	76,449	86,536	-	-
	End	60,000	-	-	-	-	48,904	67,035	85,166	103,297	121,428	139,559	-	-
SYM2-H07-SR2060	Start	96,070	-	-	87,970	112,649	137,327	162,005	186,683	-	-	-	-	-
	Miniumum	42,123	-	-	37,555	51,427	65,213	78,959	92,679	-	-	-	-	-
	End	60,000	-	-	51,900	76,578	101,257	125,935	150,613	-	-	-	-	-
SYM2-H08-SR2060	Start	96,070	-	101,035	133,268	165,500	-	-	-	-	-	-	-	-
	Miniumum	42,123	-	44,917	62,949	80,906	-	-	-	-	-	-	-	-
	End	60,000	-	64,964	97,197	129,430	-	-	-	-	-	-	-	-
SYM2-H10-SR2060	Start	96,070	141,253	191,617	-	-	-	-	-	-	-	-	-	-
	Miniumum	42,123	67,400	95,421	-	-	-	-	-	-	-	-	-	-
	End	60,000	105,183	155,547	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2062	Start	98,070	-	-	-	-	-	-	-	76,450	89,041	101,632	114,222	126,813
	Miniumum	43,248	-	-	-	-	-	-	-	31,013	38,160	45,252	52,309	59,344
	End	62,000	-	-	-	-	-	-	-	40,379	52,970	65,561	78,152	90,743
SYM2-H06-SR2062	Start	98,070	-	-	-	-	82,975	101,106	119,237	137,368	155,498	173,629	191,760	-
	Miniumum	43,248	-	-	-	-	34,727	44,957	55,112	65,236	75,335	85,424	95,501	-
	End	62,000	-	-	-	-	46,904	65,035	83,166	101,297	119,428	137,559	155,690	-
SYM2-H07-SR2062	Start	98,070	-	-	85,970	110,649	135,327	160,005	184,683	-	-	-	-	-
	Miniumum	43,248	-	-	36,425	50,306	64,099	77,845	91,568	-	-	-	-	-
	End	62,000	-	-	49,900	74,578	99,257	123,935	148,613	-	-	-	-	-
SYM2-H08-SR2062	Start	98,070	-	99,035	131,268	163,500	-	-	-	-	-	-	-	-
	Miniumum	43,248	-	43,791	61,832	79,792	-	-	-	-	-	-	-	-
	End	62,000	-	62,964	95,197	127,430	-	-	-	-	-	-	-	-
SYM2-H10-SR2062	Start	98,070	139,253	189,617	-	-	-	-	-	-	-	-	-	-
	Miniumum	43,248	66,286	94,310	-	-	-	-	-	-	-	-	-	-
	End	62,000	103,183	153,547	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2064	Start	100,070	-	-	-	-	-	-	-	74,450	87,041	99,632	112,222	124,813
	Miniumum	44,374	-	-	-	-	-	-	-	29,870	37,030	44,127	51,188	58,227
	End	64,000	-	-	-	-	-	-	-	38,379	50,970	63,561	76,152	88,743
SYM2-H06-SR2064	Start	100,070	-	-	-	-	80,975	99,106	117,237	135,368	153,498	171,629	189,760	-
	Miniumum	44,374	-	-	-	-	33,591	43,831	53,995	64,122	74,221	84,312	94,389	-
	End	64,000	-	-	-	-	44,904	63,035	81,166	99,297	117,428	135,559	153,690	-
SYM2-H07-SR2064	Start	100,070	-	-	83,970	108,649	133,327	158,005	182,683	-	-	-	-	-
	Miniumum	44,374	-	-	35,293	49,185	62,982	76,731	90,456	-	-	-	-	-
	End	64,000	-	-	47,900	72,578	97,257	121,935	146,613	-	-	-	-	-
SYM2-H08-SR2064	Start	100,070	-	97,035	129,268	161,500	-	-	-	-	-	-	-	-
	Miniumum	44,374	-	42,666	60,715	78,678	-	-	-	-	-	-	-	-
	End	64,000	-	60,964	93,197	125,430	-	-	-	-	-	-	-	-
SYM2-H10-SR2064	Start	100,070	137,253	187,617	-	-	-	-	-	-	-	-	-	-
	Miniumum	44,374	65,172	93,198	-	-	-	-	-	-	-	-	-	-
	End	64,000	101,183	151,547	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2066	Start	102,070	-	-	-	-	-	-	-	-	85,041	97,632	110,222	122,813
	Miniumum	45,498	-	-	-	-	-	-	-	-	35,899	43,002	50,067	57,110
	End	66,000	-	-	-	-	-	-	-	-	48,970	61,561	74,152	86,743
SYM2-H06-SR2066	Start	102,070	-	-	-	-	78,975	97,106	115,237	133,368	151,498	169,629	187,760	-
	Miniumum	45,498	-	-	-	-	32,454	42,706	52,878	63,005	73,107	83,201	93,278	-
	End	66,000	-	-	-	-	42,904	61,035	79,166	97,297	115,428	133,559	151,690	-



Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM2-H07-SR2066	Start	102,070	-	-	81,970	106,649	131,327	156,005	180,683	-	-	-	-	-
	Minimum	45,498	-	-	34,157	48,064	61,865	75,617	89,344	-	-	-	-	-
	End	66,000	-	-	45,900	70,578	95,257	119,935	144,613	-	-	-	-	-
SYM2-H08-SR2066	Start	102,070	-	95,035	127,268	159,500	191,733	-	-	-	-	-	-	-
	Minimum	45,498	-	41,540	59,598	77,564	95,486	-	-	-	-	-	-	-
	End	66,000	-	58,964	91,197	123,430	155,663	-	-	-	-	-	-	-
SYM2-H10-SR2066	Start	102,070	135,253	185,617	-	-	-	-	-	-	-	-	-	-
	Minimum	45,498	64,058	92,087	-	-	-	-	-	-	-	-	-	-
	End	66,000	99,183	149,547	-	-	-	-	-	-	-	-	-	-
SYM2-H05-SR2068	Start	104,070	-	-	-	-	-	-	-	83,041	95,632	108,222	120,813	
	Minimum	46,619	-	-	-	-	-	-	-	34,765	41,876	48,946	55,993	
	End	68,000	-	-	-	-	-	-	-	46,970	59,561	72,152	84,743	
SYM2-H06-SR2068	Start	104,070	-	-	-	76,975	95,106	113,237	131,368	149,498	167,629	185,760	-	
	Minimum	46,619	-	-	-	31,313	41,580	51,757	61,888	71,993	82,089	92,166	-	
	End	68,000	-	-	-	40,904	59,035	77,166	95,297	113,428	131,559	149,690	-	
SYM2-H07-SR2068	Start	104,070	-	-	79,970	104,649	129,327	154,005	178,683	-	-	-	-	
	Minimum	46,619	-	-	33,020	46,943	60,748	74,503	88,233	-	-	-	-	
	End	68,000	-	-	43,900	68,578	93,257	117,935	142,613	-	-	-	-	
SYM2-H08-SR2068	Start	104,070	-	93,035	125,268	157,500	189,733	-	-	-	-	-	-	
	Minimum	46,619	-	40,415	58,481	76,450	94,374	-	-	-	-	-	-	
	End	68,000	-	56,964	89,197	121,430	153,663	-	-	-	-	-	-	
SYM2-H10-SR2068	Start	104,070	133,253	183,617	-	-	-	-	-	-	-	-	-	
	Minimum	46,619	62,941	90,975	-	-	-	-	-	-	-	-	-	
	End	68,000	97,183	147,547	-	-	-	-	-	-	-	-	-	
SYM2-H05-SR2070	Start	106,070	-	-	-	-	-	-	-	81,041	93,632	106,222	118,813	
	Minimum	47,740	-	-	-	-	-	-	-	33,628	40,751	47,826	54,876	
	End	70,000	-	-	-	-	-	-	-	44,970	57,561	70,152	82,743	
SYM2-H06-SR2070	Start	106,070	-	-	-	74,975	93,106	111,237	129,368	147,498	165,629	183,760	-	
	Minimum	47,740	-	-	-	30,170	40,455	50,636	60,771	70,879	80,978	91,055	-	
	End	70,000	-	-	-	38,904	57,035	75,166	93,297	111,428	129,559	147,690	-	
SYM2-H07-SR2070	Start	106,070	-	-	77,970	102,649	127,327	152,005	176,683	-	-	-	-	
	Minimum	47,740	-	-	31,882	45,823	59,631	73,389	87,121	-	-	-	-	
	End	70,000	-	-	41,900	66,578	91,257	115,935	140,613	-	-	-	-	
SYM2-H08-SR2070	Start	106,070	-	91,035	123,268	155,500	187,733	-	-	-	-	-	-	
	Minimum	47,740	-	39,288	57,364	75,336	93,263	-	-	-	-	-	-	
	End	70,000	-	54,964	87,197	119,430	151,663	-	-	-	-	-	-	
SYM2-H10-SR2070	Start	106,070	131,253	181,617	-	-	-	-	-	-	-	-	-	
	Minimum	47,740	61,824	89,863	-	-	-	-	-	-	-	-	-	
	End	70,000	95,183	145,547	-	-	-	-	-	-	-	-	-	
SYM2-H05-SR2072	Start	108,070	-	-	-	-	-	-	-	79,041	91,632	104,222	116,813	
	Minimum	48,861	-	-	-	-	-	-	-	32,492	39,625	46,705	53,758	
	End	72,000	-	-	-	-	-	-	-	42,970	55,561	68,152	80,743	
SYM2-H06-SR2072	Start	108,070	-	-	-	-	91,106	109,237	127,368	145,498	163,629	181,760	-	
	Minimum	48,861	-	-	-	-	39,328	49,515	59,654	69,764	79,864	89,943	-	
	End	72,000	-	-	-	-	55,035	73,166	91,297	109,428	127,559	145,690	-	
SYM2-H07-SR2072	Start	108,070	-	-	75,970	100,649	125,327	150,005	174,683	-	-	-	-	
	Minimum	48,861	-	-	30,739	44,699	58,514	72,275	86,010	-	-	-	-	
	End	72,000	-	-	39,900	64,578	89,257	113,935	138,613	-	-	-	-	
SYM2-H08-SR2072	Start	108,070	-	89,035	121,268	153,500	185,733	-	-	-	-	-	-	
	Minimum	48,861	-	38,157	56,246	74,222	92,151	-	-	-	-	-	-	
	End	72,000	-	52,964	85,197	117,430	149,663	-	-	-	-	-	-	
SYM2-H10-SR2072	Start	108,070	129,253	179,617	-	-	-	-	-	-	-	-	-	
	Minimum	48,861	60,707	88,752	-	-	-	-	-	-	-	-	-	
	End	72,000	93,183	143,547	-	-	-	-	-	-	-	-	-	
SYM2-H05-SR2074	Start	110,070	-	-	-	-	-	-	-	77,041	89,632	102,222	114,813	
	Minimum	49,982	-	-	-	-	-	-	-	31,351	38,494	45,584	52,641	
	End	74,000	-	-	-	-	-	-	-	40,970	53,561	66,152	78,743	
SYM2-H06-SR2074	Start	110,070	-	-	-	-	89,106	107,237	125,368	143,498	161,629	179,760	-	
	Minimum	49,982	-	-	-	-	38,197	48,394	58,537	68,650	78,750	88,832	-	
	End	74,000	-	-	-	-	53,035	71,166	89,297	107,428	125,559	143,690	-	
SYM2-H07-SR2074	Start	110,070	-	-	73,970	98,649	123,327	148,005	172,683	-	-	-	-	
	Minimum	49,982	-	-	29,596	43,574	57,397	71,161	84,898	-	-	-	-	
	End	74,000	-	-	37,900	62,578	87,257	111,935	136,613	-	-	-	-	
SYM2-H08-SR2074	Start	110,070	-	87,035	119,268	151,500	183,733	-	-	-	-	-	-	
	Minimum	49,982	-	37,026	55,129	73,108	91,040	-	-	-	-	-	-	
	End	74,000	-	50,964	83,197	115,430	147,663	-	-	-	-	-	-	
SYM2-H10-SR2074	Start	110,070	127,253	177,617	-	-	-	-	-	-	-	-	-	
	Minimum	49,982	59,590	87,640	-	-	-	-	-	-	-	-	-	
	End	74,000	91,183	141,547	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3072	Start	136,125	-	-	-	-	-	-	-	-	146,175	162,963	179,751	
	Minimum	55,257	-	-	-	-	-	-	-	-	60,979	70,480	79,927	
	End	72,000	-	-	-	-	-	-	-	-	82,050	98,838	115,626	



Model Number	Spring Torque		Operating Pressure (PSI)												
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
			Pressure Torque Output Start,Min,End lb.in												
SYM3-H06-SR3072	Start	136,125	-	-	-	-	-	-	145,474	169,649	193,823	217,998	242,173	266,347	290,522
	Minimum	55,257	-	-	-	-	-	-	60,580	74,242	87,816	101,340	114,840	128,305	141,771
	End	72,000	-	-	-	-	-	-	81,349	105,524	129,698	153,873	178,048	202,222	226,397
SYM3-H07-SR3072	Start	136,125	-	-	-	158,198	191,102	224,007	256,911	289,815	322,719	355,624	388,528	421,432	
	Minimum	55,257	-	-	-	67,786	86,291	104,697	123,049	141,377	159,671	177,959	196,247	214,509	
	End	72,000	-	-	-	94,073	126,977	159,882	192,786	225,690	258,594	291,499	324,403	357,307	
SYM3-H08-SR3072	Start	136,125	-	142,713	185,690	228,667	271,644	314,621	357,598	400,575	-	-	-	-	
	Minimum	55,257	-	59,011	83,258	107,300	131,256	155,170	179,056	202,935	-	-	-	-	
	End	72,000	-	78,588	121,565	164,542	207,519	250,496	293,473	336,450	-	-	-	-	
SYM3-H10-SR3072	Start	136,125	196,338	263,489	330,641	397,792	-	-	-	-	-	-	-	-	
	Minimum	55,257	89,225	126,713	164,074	201,391	-	-	-	-	-	-	-	-	
	End	72,000	132,213	199,364	266,516	333,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3072	Start	136,125	314,406	411,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	55,257	155,051	208,778	-	-	-	-	-	-	-	-	-	-	
	End	72,000	250,281	346,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3076	Start	140,125	-	-	-	-	-	-	-	-	-	142,175	158,963	175,751	
	Minimum	57,540	-	-	-	-	-	-	-	-	-	58,706	68,219	77,676	
	End	76,000	-	-	-	-	-	-	-	-	-	78,050	94,838	111,626	
SYM3-H06-SR3076	Start	140,125	-	-	-	-	-	141,474	165,649	189,823	213,998	238,173	262,347	286,522	
	Minimum	57,540	-	-	-	-	-	58,307	71,991	85,574	99,106	112,609	126,077	139,543	
	End	76,000	-	-	-	-	-	77,349	101,524	125,698	149,873	174,048	198,222	222,397	
SYM3-H07-SR3076	Start	140,125	-	-	-	154,198	187,102	220,007	252,911	285,815	318,719	351,624	384,528	417,432	
	Minimum	57,540	-	-	-	65,525	84,049	102,462	120,821	139,149	157,448	175,736	194,024	212,289	
	End	76,000	-	-	-	90,073	122,977	155,882	188,786	221,690	254,594	287,499	320,403	353,307	
SYM3-H08-SR3076	Start	140,125	-	138,713	181,690	224,667	267,644	310,621	353,598	396,575	-	-	-	-	
	Minimum	57,540	-	56,736	81,016	105,066	129,028	152,947	176,833	200,715	-	-	-	-	
	End	76,000	-	74,588	117,565	160,542	203,519	246,496	289,473	332,450	-	-	-	-	
SYM3-H10-SR3076	Start	140,125	192,338	259,489	326,641	393,792	-	-	-	-	-	-	-	-	
	Minimum	57,540	86,984	124,485	161,850	199,171	-	-	-	-	-	-	-	-	
	End	76,000	128,213	195,364	262,516	329,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3076	Start	140,125	310,406	407,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	57,540	152,827	206,558	-	-	-	-	-	-	-	-	-	-	
	End	76,000	246,281	342,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3080	Start	144,125	-	-	-	-	-	-	-	-	-	-	138,175	154,963	171,751
	Minimum	59,814	-	-	-	-	-	-	-	-	-	-	56,429	65,957	75,425
	End	80,000	-	-	-	-	-	-	-	-	-	-	74,050	90,838	107,626
SYM3-H06-SR3080	Start	144,125	-	-	-	-	-	137,474	161,649	185,823	209,998	234,173	258,347	282,522	
	Minimum	59,814	-	-	-	-	-	56,028	69,737	83,333	96,872	110,375	123,849	137,315	
	End	80,000	-	-	-	-	-	73,349	97,524	121,698	145,873	170,048	194,222	218,397	
SYM3-H07-SR3080	Start	144,125	-	-	-	150,198	183,102	216,007	248,911	281,815	314,719	347,624	380,528	413,432	
	Minimum	59,814	-	-	-	63,263	81,807	100,228	118,593	136,921	155,225	173,513	191,800	210,069	
	End	80,000	-	-	-	86,073	118,977	151,882	184,786	217,690	250,594	283,499	316,403	349,307	
SYM3-H08-SR3080	Start	144,125	-	134,713	177,690	220,667	263,644	306,621	349,598	392,575	-	-	-	-	
	Minimum	59,814	-	54,449	78,767	102,831	126,800	150,724	174,610	198,495	-	-	-	-	
	End	80,000	-	70,588	113,565	156,542	199,519	242,496	285,473	328,450	-	-	-	-	
SYM3-H10-SR3080	Start	144,125	188,338	255,489	322,641	389,792	-	-	-	-	-	-	-	-	
	Minimum	59,814	84,742	122,257	159,627	196,949	-	-	-	-	-	-	-	-	
	End	80,000	124,213	191,364	258,516	325,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3080	Start	144,125	306,406	403,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	59,814	150,604	204,338	-	-	-	-	-	-	-	-	-	-	
	End	80,000	242,281	338,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3084	Start	148,125	-	-	-	-	-	-	-	-	-	-	134,175	150,963	167,751
	Minimum	62,087	-	-	-	-	-	-	-	-	-	-	54,142	63,696	73,174
	End	84,000	-	-	-	-	-	-	-	-	-	-	70,050	86,838	103,626
SYM3-H06-SR3084	Start	148,125	-	-	-	-	-	133,474	157,649	181,823	205,998	230,173	254,347	278,522	
	Minimum	62,087	-	-	-	-	-	53,741	67,476	81,091	94,638	108,141	121,621	135,087	
	End	84,000	-	-	-	-	-	69,349	93,524	117,698	141,873	166,048	190,222	214,397	
SYM3-H07-SR3084	Start	148,125	-	-	-	146,198	179,102	212,007	244,911	277,815	310,719	343,624	376,528	409,432	
	Minimum	62,087	-	-	-	60,992	79,562	97,994	116,365	134,693	153,002	171,289	189,577	207,850	
	End	84,000	-	-	-	82,073	114,977	147,882	180,786	213,690	246,594	279,499	312,403	345,307	
SYM3-H08-SR3084	Start	148,125	-	-	173,690	216,667	259,644	302,621	345,598	388,575	-	-	-	-	
	Minimum	62,087	-	-	76,516	100,597	124,572	148,500	172,387	196,273	-	-	-	-	
	End	84,000	-	-	109,565	152,542	195,519	238,496	281,473	324,450	-	-	-	-	
SYM3-H10-SR3084	Start	148,125	184,338	251,489	318,641	385,792	-	-	-	-	-	-	-	-	
	Minimum	62,087	82,500	120,029	157,404	194,726	-	-	-	-	-	-	-	-	
	End	84,000	120,213	187,364	254,516	321,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3084	Start	148,125	302,406	399,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	62,087	148,381	202,119	-	-	-	-	-	-	-	-	-	-	
	End	84,000	238,281	334,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3088	Start	152,125	-	-	-	-	-	-	-	-	-	-	-	146,963	163,751
	Minimum	64,353	-	-	-	-	-	-	-	-	-	-	-	61,427	70,924
	End	88,000	-	-	-	-	-	-	-	-	-	-	-	82,838	99,626



Model Number	Spring Torque		Operating Pressure (PSI)												
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	
			Pressure Torque Output Start,Min,End lb.in												
SYM3-H06-SR3088	Start	152,125	-	-	-	-	-	-	-	153,649	177,823	201,998	226,173	250,347	274,522
	Minimum	64,353	-	-	-	-	-	-	-	65,214	78,842	92,398	105,906	119,393	132,859
	End	88,000	-	-	-	-	-	-	-	89,524	113,698	137,873	162,048	186,222	210,397
SYM3-H07-SR3088	Start	152,125	-	-	-	142,198	175,102	208,007	240,911	273,815	306,719	339,624	372,528	405,432	
	Minimum	64,353	-	-	-	58,718	77,311	95,760	114,137	132,465	150,778	169,066	187,354	205,630	
	End	88,000	-	-	-	78,073	110,977	143,882	176,786	209,690	242,594	275,499	308,403	341,307	
SYM3-H08-SR3088	Start	152,125	-	-	169,690	212,667	255,644	298,621	341,598	384,575	-	-	-	-	
	Minimum	64,353	-	-	74,265	98,363	122,344	146,277	170,163	194,050	-	-	-	-	
	End	88,000	-	-	105,565	148,542	191,519	234,496	277,473	320,450	-	-	-	-	
SYM3-H10-SR3088	Start	152,125	180,338	247,489	314,641	381,792	-	-	-	-	-	-	-	-	
	Minimum	64,353	80,257	117,801	155,181	192,503	-	-	-	-	-	-	-	-	
	End	88,000	116,213	183,364	250,516	317,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3088	Start	152,125	298,406	395,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	64,353	146,158	199,899	-	-	-	-	-	-	-	-	-	-	
	End	88,000	234,281	330,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3092	Start	156,125	-	-	-	-	-	-	-	-	-	-	142,963	159,751	
	Minimum	66,614	-	-	-	-	-	-	-	-	-	-	59,153	68,664	
	End	92,000	-	-	-	-	-	-	-	-	-	-	78,838	95,626	
SYM3-H06-SR3092	Start	156,125	-	-	-	-	-	-	149,649	173,823	197,998	222,173	246,347	270,522	
	Minimum	66,614	-	-	-	-	-	-	62,953	76,591	90,156	103,672	117,165	130,631	
	End	92,000	-	-	-	-	-	-	85,524	109,698	133,873	158,048	182,222	206,397	
SYM3-H07-SR3092	Start	156,125	-	-	-	138,198	171,102	204,007	236,911	269,815	302,719	335,624	368,528	401,432	
	Minimum	66,614	-	-	-	56,442	75,060	93,524	111,905	130,237	148,555	166,843	185,131	203,410	
	End	92,000	-	-	-	74,073	106,977	139,882	172,786	205,690	238,594	271,499	304,403	337,307	
SYM3-H08-SR3092	Start	156,125	-	-	165,690	208,667	251,644	294,621	337,598	380,575	423,552	-	-	-	
	Minimum	66,614	-	-	72,015	96,128	120,116	144,054	167,940	191,826	215,685	-	-	-	
	End	92,000	-	-	101,565	144,542	187,519	230,496	273,473	316,450	359,427	-	-	-	
SYM3-H10-SR3092	Start	156,125	176,338	243,489	310,641	377,792	-	-	-	-	-	-	-	-	
	Minimum	66,614	78,006	115,573	152,958	190,280	-	-	-	-	-	-	-	-	
	End	92,000	112,213	179,364	246,516	313,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3092	Start	156,125	294,406	391,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	66,614	143,934	197,679	-	-	-	-	-	-	-	-	-	-	
	End	92,000	230,281	326,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H05-SR3096	Start	160,125	-	-	-	-	-	-	-	-	-	-	138,963	155,751	
	Minimum	68,875	-	-	-	-	-	-	-	-	-	-	56,879	66,403	
	End	96,000	-	-	-	-	-	-	-	-	-	-	74,838	91,626	
SYM3-H06-SR3096	Start	160,125	-	-	-	-	-	-	145,649	169,823	193,998	218,173	242,347	266,522	
	Minimum	68,875	-	-	-	-	-	-	60,680	74,341	87,914	101,438	114,937	128,403	
	End	96,000	-	-	-	-	-	-	81,524	105,698	129,873	154,048	178,222	202,397	
SYM3-H07-SR3096	Start	160,125	-	-	-	134,198	167,102	200,007	232,911	265,815	298,719	331,624	364,528	397,432	
	Minimum	68,875	-	-	-	54,155	72,809	91,282	109,670	128,009	146,332	164,620	182,908	201,191	
	End	96,000	-	-	-	70,073	102,977	135,882	168,786	201,690	234,594	267,499	300,403	333,307	
SYM3-H08-SR3096	Start	160,125	-	-	161,690	204,667	247,644	290,621	333,598	376,575	419,552	-	-	-	
	Minimum	68,875	-	-	69,760	93,894	117,888	141,826	165,717	189,603	213,465	-	-	-	
	End	96,000	-	-	97,565	140,542	183,519	226,496	269,473	312,450	355,427	-	-	-	
SYM3-H10-SR3096	Start	160,125	172,338	239,489	306,641	373,792	-	-	-	-	-	-	-	-	
	Minimum	68,875	75,755	113,345	150,735	188,057	-	-	-	-	-	-	-	-	
	End	96,000	108,213	175,364	242,516	309,667	-	-	-	-	-	-	-	-	
SYM3-H12-SR3096	Start	160,125	290,406	387,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	68,875	141,706	195,455	-	-	-	-	-	-	-	-	-	-	
	End	96,000	226,281	322,979	-	-	-	-	-	-	-	-	-	-	
SYM3-H06-SR3100	Start	185,500	-	-	-	-	-	-	-	-	189,998	214,173	238,347	262,522	
	Minimum	75,962	-	-	-	-	-	-	-	-	78,519	92,214	105,826	119,381	
	End	100,000	-	-	-	-	-	-	-	-	104,498	128,673	152,847	177,022	
SYM3-H07-SR3100	Start	185,500	-	-	-	-	-	196,007	228,911	261,815	294,719	327,624	360,528	393,432	
	Minimum	75,962	-	-	-	-	-	81,934	100,516	118,985	137,386	155,753	174,081	192,408	
	End	100,000	-	-	-	-	-	110,507	143,411	176,315	209,219	242,124	275,028	307,932	
SYM3-H08-SR3100	Start	185,500	-	-	-	200,667	243,644	286,621	329,598	372,575	415,552	-	-	-	
	Minimum	75,962	-	-	-	84,579	108,801	132,862	156,853	180,791	204,702	-	-	-	
	End	100,000	-	-	-	115,167	158,144	201,121	244,098	287,075	330,052	-	-	-	
SYM3-H10-SR3100	Start	185,500	-	235,489	302,641	369,792	-	-	-	-	-	-	-	-	
	Minimum	75,962	-	104,218	141,810	179,241	-	-	-	-	-	-	-	-	
	End	100,000	-	149,989	217,141	284,292	-	-	-	-	-	-	-	-	
SYM3-H12-SR3100	Start	185,500	286,406	383,104	-	-	-	-	-	-	-	-	-	-	
	Minimum	75,962	132,742	186,656	-	-	-	-	-	-	-	-	-	-	
	End	100,000	200,906	297,604	-	-	-	-	-	-	-	-	-	-	
SYM3-H06-SR3104	Start	189,500	-	-	-	-	-	-	-	-	185,998	210,173	234,347	258,522	
	Minimum	78,236	-	-	-	-	-	-	-	-	76,246	89,953	103,575	117,139	
	End	104,000	-	-	-	-	-	-	-	-	100,498	124,673	148,847	173,022	
SYM3-H07-SR3104	Start	189,500	-	-	-	-	-	192,007	224,911	257,815	290,719	323,624	356,528	389,432	
	Minimum	78,236	-	-	-	-	-	79,660	98,265	116,743	135,152	153,525	171,853	190,181	
	End	104,000	-	-	-	-	-	106,507	139,411	172,315	205,219	238,124	271,028	303,932	



Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM3-H08-SR3104	Start	189,500	-	-	-	196,667	239,644	282,621	325,598	368,575	411,552	-	-	-
	Miniumum	78,236	-	-	-	82,309	106,556	130,628	154,625	178,563	202,479	-	-	-
	End	104,000	-	-	-	111,167	154,144	197,121	240,098	283,075	326,052	-	-	-
SYM3-H10-SR3104	Start	189,500	-	231,489	298,641	365,792	-	-	-	-	-	-	-	-
	Miniumum	78,236	-	101,967	139,576	177,013	-	-	-	-	-	-	-	-
	End	104,000	-	145,989	213,141	280,292	-	-	-	-	-	-	-	-
SYM3-H12-SR3104	Start	189,500	282,406	379,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	78,236	130,508	184,428	-	-	-	-	-	-	-	-	-	-
	End	104,000	196,906	293,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3108	Start	193,500	-	-	-	-	-	-	-	-	181,998	206,173	230,347	254,522
	Miniumum	80,509	-	-	-	-	-	-	-	-	73,960	87,691	101,324	114,897
	End	108,000	-	-	-	-	-	-	-	-	96,498	120,673	144,847	169,022
SYM3-H07-SR3108	Start	193,500	-	-	-	-	-	188,007	220,911	253,815	286,719	319,624	352,528	385,432
	Miniumum	80,509	-	-	-	-	-	77,387	96,014	114,501	132,917	151,296	169,625	187,953
	End	108,000	-	-	-	-	-	102,507	135,411	168,315	201,219	234,124	267,028	299,932
SYM3-H08-SR3108	Start	193,500	-	-	-	192,667	235,644	278,621	321,598	364,575	407,552	-	-	-
	Miniumum	80,509	-	-	-	80,036	104,305	128,394	152,396	176,335	200,256	-	-	-
	End	108,000	-	-	-	107,167	150,144	193,121	236,098	279,075	322,052	-	-	-
SYM3-H10-SR3108	Start	193,500	-	227,489	294,641	361,792	-	-	-	-	-	-	-	-
	Miniumum	80,509	-	99,716	137,342	174,785	-	-	-	-	-	-	-	-
	End	108,000	-	141,989	209,141	276,292	-	-	-	-	-	-	-	-
SYM3-H12-SR3108	Start	193,500	278,406	375,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	80,509	128,274	182,200	-	-	-	-	-	-	-	-	-	-
	End	108,000	192,906	289,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3112	Start	197,500	-	-	-	-	-	-	-	-	177,998	202,173	226,347	250,522
	Miniumum	82,782	-	-	-	-	-	-	-	-	71,673	85,430	99,073	112,655
	End	112,000	-	-	-	-	-	-	-	-	92,498	116,673	140,847	165,022
SYM3-H07-SR3112	Start	197,500	-	-	-	-	-	184,007	216,911	249,815	282,719	315,624	348,528	381,432
	Miniumum	82,782	-	-	-	-	-	75,108	93,762	112,259	130,683	149,062	167,397	185,725
	End	112,000	-	-	-	-	-	98,507	131,411	164,315	197,219	230,124	263,028	295,932
SYM3-H08-SR3112	Start	197,500	-	-	-	188,667	231,644	274,621	317,598	360,575	403,552	-	-	-
	Miniumum	82,782	-	-	-	77,762	102,054	126,159	150,165	174,107	198,033	-	-	-
	End	112,000	-	-	-	103,167	146,144	189,121	232,098	275,075	318,052	-	-	-
SYM3-H10-SR3112	Start	197,500	-	223,489	290,641	357,792	424,944	-	-	-	-	-	-	-
	Miniumum	82,782	-	97,465	135,108	172,557	209,922	-	-	-	-	-	-	-
	End	112,000	-	137,989	205,141	272,292	339,444	-	-	-	-	-	-	-
SYM3-H12-SR3112	Start	197,500	274,406	371,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	82,782	126,039	179,972	-	-	-	-	-	-	-	-	-	-
	End	112,000	188,906	285,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3116	Start	201,500	-	-	-	-	-	-	-	-	-	198,173	222,347	246,522
	Miniumum	85,050	-	-	-	-	-	-	-	-	-	83,165	96,822	110,413
	End	116,000	-	-	-	-	-	-	-	-	-	112,673	136,847	161,022
SYM3-H07-SR3116	Start	201,500	-	-	-	-	-	180,007	212,911	245,815	278,719	311,624	344,528	377,432
	Miniumum	85,050	-	-	-	-	-	72,822	91,501	110,017	128,449	146,828	165,169	183,497
	End	116,000	-	-	-	-	-	94,507	127,411	160,315	193,219	226,124	259,028	291,932
SYM3-H08-SR3116	Start	201,500	-	-	-	184,667	227,644	270,621	313,598	356,575	399,552	-	-	-
	Miniumum	85,050	-	-	-	75,486	99,803	123,920	147,931	171,879	195,809	-	-	-
	End	116,000	-	-	-	99,167	142,144	185,121	228,098	271,075	314,052	-	-	-
SYM3-H10-SR3116	Start	201,500	-	219,489	286,641	353,792	420,944	-	-	-	-	-	-	-
	Miniumum	85,050	-	95,214	132,873	170,329	207,699	-	-	-	-	-	-	-
	End	116,000	-	133,989	201,141	268,292	335,444	-	-	-	-	-	-	-
SYM3-H12-SR3116	Start	201,500	270,406	367,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	85,050	123,800	177,744	-	-	-	-	-	-	-	-	-	-
	End	116,000	184,906	281,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3120	Start	205,500	-	-	-	-	-	-	-	-	-	194,173	218,347	242,522
	Miniumum	87,311	-	-	-	-	-	-	-	-	-	80,891	94,572	108,172
	End	120,000	-	-	-	-	-	-	-	-	-	108,673	132,847	157,022
SYM3-H07-SR3120	Start	205,500	-	-	-	-	-	176,007	208,911	241,815	274,719	307,624	340,528	373,432
	Miniumum	87,311	-	-	-	-	-	70,535	89,240	107,776	126,214	144,594	162,941	181,269
	End	120,000	-	-	-	-	-	90,507	123,411	156,315	189,219	222,124	255,028	287,932
SYM3-H08-SR3120	Start	205,500	-	-	-	180,667	223,644	266,621	309,598	352,575	395,552	-	-	-
	Miniumum	87,311	-	-	-	73,199	97,552	121,679	145,696	169,651	193,586	-	-	-
	End	120,000	-	-	-	95,167	138,144	181,121	224,098	267,075	310,052	-	-	-
SYM3-H10-SR3120	Start	205,500	-	215,489	282,641	349,792	416,944	-	-	-	-	-	-	-
	Miniumum	87,311	-	92,958	130,639	168,101	205,476	-	-	-	-	-	-	-
	End	120,000	-	129,989	197,141	264,292	331,444	-	-	-	-	-	-	-
SYM3-H12-SR3120	Start	205,500	266,406	363,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	87,311	121,558	175,516	-	-	-	-	-	-	-	-	-	-
	End	120,000	180,906	277,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3124	Start	209,500	-	-	-	-	-	-	-	-	-	190,173	214,347	238,522
	Miniumum	89,573	-	-	-	-	-	-	-	-	-	78,618	92,313	105,924
	End	124,000	-	-	-	-	-	-	-	-	-	104,673	128,847	153,022



Model Number	Spring Torque		Operating Pressure (PSI)											
			400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
			Pressure Torque Output Start,Min,End lb.in											
SYM3-H07-SR3124	Start	209,500	-	-	-	-	-	-	204,911	237,815	270,719	303,624	336,528	369,432
	Miniumum	89,573	-	-	-	-	-	-	86,978	105,527	123,976	142,359	160,713	179,041
	End	124,000	-	-	-	-	-	-	119,411	152,315	185,219	218,124	251,028	283,932
SYM3-H08-SR3124	Start	209,500	-	-	-	176,667	219,644	262,621	305,598	348,575	391,552	-	-	-
	Miniumum	89,573	-	-	-	70,913	95,301	119,437	143,462	167,423	191,361	-	-	-
	End	124,000	-	-	-	91,167	134,144	177,121	220,098	263,075	306,052	-	-	-
SYM3-H10-SR3124	Start	209,500	-	211,489	278,641	345,792	412,944	-	-	-	-	-	-	-
	Miniumum	89,573	-	90,697	128,405	165,873	203,252	-	-	-	-	-	-	-
	End	124,000	-	125,989	193,141	260,292	327,444	-	-	-	-	-	-	-
SYM3-H12-SR3124	Start	209,500	262,406	359,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	89,573	119,316	173,288	-	-	-	-	-	-	-	-	-	-
	End	124,000	176,906	273,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3128	Start	213,500	-	-	-	-	-	-	-	-	-	186,173	210,347	234,522
	Miniumum	91,834	-	-	-	-	-	-	-	-	-	76,345	90,051	103,673
	End	128,000	-	-	-	-	-	-	-	-	-	100,673	124,847	149,022
SYM3-H07-SR3128	Start	213,500	-	-	-	-	-	200,911	233,815	266,719	299,624	332,528	365,432	
	Miniumum	91,834	-	-	-	-	-	84,717	103,276	121,734	140,125	158,485	176,812	
	End	128,000	-	-	-	-	-	115,411	148,315	181,219	214,124	247,028	279,932	
SYM3-H08-SR3128	Start	213,500	-	-	-	-	215,644	258,621	301,598	344,575	387,552	-	-	-
	Miniumum	91,834	-	-	-	-	93,046	117,195	141,228	165,195	189,133	-	-	-
	End	128,000	-	-	-	-	130,144	173,121	216,098	259,075	302,052	-	-	-
SYM3-H10-SR3128	Start	213,500	-	207,489	274,641	341,792	408,944	-	-	-	-	-	-	-
	Miniumum	91,834	-	88,436	126,170	163,645	201,029	-	-	-	-	-	-	-
	End	128,000	-	121,989	189,141	256,292	323,444	-	-	-	-	-	-	-
SYM3-H12-SR3128	Start	213,500	258,406	355,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	91,834	117,074	171,060	-	-	-	-	-	-	-	-	-	-
	End	128,000	172,906	269,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3132	Start	217,500	-	-	-	-	-	-	-	-	-	182,173	206,347	230,522
	Miniumum	94,095	-	-	-	-	-	-	-	-	-	74,060	87,790	101,423
	End	132,000	-	-	-	-	-	-	-	-	-	96,673	120,847	145,022
SYM3-H07-SR3132	Start	217,500	-	-	-	-	-	-	196,911	229,815	262,719	295,624	328,528	361,432
	Miniumum	94,095	-	-	-	-	-	-	82,448	101,025	119,492	137,891	156,257	174,584
	End	132,000	-	-	-	-	-	-	111,411	144,315	177,219	210,124	243,028	275,932
SYM3-H08-SR3132	Start	217,500	-	-	-	-	211,644	254,621	297,598	340,575	383,552	-	-	-
	Miniumum	94,095	-	-	-	-	90,785	114,953	138,994	162,967	186,905	-	-	-
	End	132,000	-	-	-	-	126,144	169,121	212,098	255,075	298,052	-	-	-
SYM3-H10-SR3132	Start	217,500	-	203,489	270,641	337,792	404,944	-	-	-	-	-	-	-
	Miniumum	94,095	-	86,174	123,931	161,417	198,806	-	-	-	-	-	-	-
	End	132,000	-	117,989	185,141	252,292	319,444	-	-	-	-	-	-	-
SYM3-H12-SR3132	Start	217,500	254,406	351,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	94,095	114,832	168,832	-	-	-	-	-	-	-	-	-	-
	End	132,000	168,906	265,604	-	-	-	-	-	-	-	-	-	-
SYM3-H06-SR3136	Start	221,500	-	-	-	-	-	-	-	-	-	178,173	202,347	226,522
	Miniumum	96,346	-	-	-	-	-	-	-	-	-	71,773	85,529	99,172
	End	136,000	-	-	-	-	-	-	-	-	-	92,673	116,847	141,022
SYM3-H07-SR3136	Start	221,500	-	-	-	-	-	-	192,911	225,815	258,719	291,624	324,528	357,432
	Miniumum	96,346	-	-	-	-	-	-	80,174	98,774	117,250	135,657	154,029	172,356
	End	136,000	-	-	-	-	-	-	107,411	140,315	173,219	206,124	239,028	271,932
SYM3-H08-SR3136	Start	221,500	-	-	-	-	207,644	250,621	293,598	336,575	379,552	422,529	-	-
	Miniumum	96,346	-	-	-	-	88,523	112,711	136,759	160,739	184,677	208,580	-	-
	End	136,000	-	-	-	-	122,144	165,121	208,098	251,075	294,052	337,029	-	-
SYM3-H10-SR3136	Start	221,500	-	199,489	266,641	333,792	400,944	-	-	-	-	-	-	-
	Miniumum	96,346	-	83,913	121,690	159,189	196,583	-	-	-	-	-	-	-
	End	136,000	-	113,989	181,141	248,292	315,444	-	-	-	-	-	-	-
SYM3-H12-SR3136	Start	221,500	250,406	347,104	-	-	-	-	-	-	-	-	-	-
	Miniumum	96,346	112,591	166,604	-	-	-	-	-	-	-	-	-	-
	End	136,000	164,906	261,604	-	-	-	-	-	-	-	-	-	-

