



SCOTCH YOKE PNEUMATIC DOUBLE ACTING TORQUES

KSY-100

Model	Max. Operating Torque	Max Allowable Pressure	Position of Stroke	Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)				
				40	60	80	100	120
KSY-100-160	10621	131	0°	3310	5036	6753	8479	10063
			45°	1991	3027	4063	5089	6063
			90°	3310	5036	6753	8479	10063
KSY-100-180	10621	102	0°	4195	6373	8541	10727	
			45°	2523	3832	5133	6452	
			90°	4195	6373	8541	10727	
KSY-100-235	10621	58	0°	7143	10860			
			45°	4302	6532			
			90°	7143	10860			

KSY-400

Model	Max. Operating Torque	Max Allowable Pressure	Position of Stroke	Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)				
				40	60	80	100	120
KSY-400-235	35403	131	0°		16648	22322	28013	33288
			45°		8267	11081	13905	16524
			90°		12604	16905	21198	25198
KSY-400-280	35403	87	0°	15560	23623	31695		
			45°	7727	11727	15746		
			90°	11780	17879	23986		
KSY-400-335	35403	58	0°	22269	33819			
			45°	11055	16790			
			90°	16861	25605			
KSY-400-385	35403	44	0°	29420				
			45°	14613				
			90°	22269				

KSY-900

Model	Max. Operating Torque	Max Allowable Pressure	Position of Stroke	Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)				
				40	60	80	100	120
KSY-900-235	79657	145	0°			28703	36014	42802
			45°			14250	17887	21251
			90°			21729	27260	32394
KSY-900-280	79657	145	0°		30376	40749	51113	60743
			45°		15091	20233	25384	30172
			90°		22994	30845	38696	45989
KSY-900-335	79657	102	0°	28641	43484	58326	73169	
			45°	14223	21596	28969	36341	
			90°	21676	32916	44156	55388	
KSY-900-385	79657	87	0°	36624	55609	74603		
			45°	17586	26703	35819		
			90°	27437	41652	55875		
KSY-900-435	79657	58	0°	48281	73311			
			45°	23977	36403			
			90°	36545	55494			



SCOTCH YOKE PNEUMATIC DOUBLE ACTING TORQUES

KSY-1600								
Model	Max. Operating Torque	Max Allowable Pressure	Position of Stroke	Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)				
				40	60	80	100	120
KSY-1600-335	141612	145	0°			75824	95128	113051
			45°			42669	53529	63619
			90°			57397	72001	85569
KSY-1600-385	141612	102	0°		74656	100155	125645	
			45°		42015	56362	70709	
			90°		56512	75816	95110	
KSY-1600-435	141612	87	0°	62761	95305	127849		
			45°	35323	53636	71948		
			90°	47511	72142	96774		
KSY-1600-485	141612	58	0°	78028	118467			
			45°	43909	66673			
			90°	59061	89676			
KSY-1600-535	141612	58	0°	94933	144161			
			45°	53423	81135			
			90°	71868	109130			

KSY-3500										
Model	Max. Operating Torque	Max Allowable Pressure	Position of Stroke	Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)						
				40	60	80	100	120	140	160
KSY-3500-335	309776	145	0°					135275	158366	181467
			45°					76125	89118	102120
			90°					102394	119875	137355
KSY-3500-385	309776	145	0°				150348	178670	209179	239678
			45°				84604	100536	117697	134868
			90°				113803	135248	158340	181431
KSY-3500-435	309776	145	0°			152976	191920	228084	267027	305970
			45°			86091	108006	128354	150268	172182
			90°			115794	145276	172652	202125	231606
KSY-3500-485	309776	131	0°		141771	190167	238581	283534		
			45°		79781	107023	134266	159561		
			90°		107315	143957	180591	214622		
KSY-3500-535	309776	102	0°	113599	172501	231403	290305			
			45°	63929	97084	130230	163376			
			90°	85994	130575	175165	219755			



SCOTCH YOKE PNEUMATIC SPRING RETURN TORQUES

Spring Return Torques - KSYM-100

Model	Spring Torque			Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)																				
				40			60			80			100			120			140					
	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'			
KSYM-100-160-046	4071	2947	5895							2682	1115	859	4408	2142	2584	5992	3116	4169	7718	4142	5895			
KSYM-100-180-046	4071	2947	5895				2301	885	478	4470	2186	2646	6656	3505	4833	8674	4717	6851						
KSYM-100-235-046	4071	2947	5895	3071	1354	1248	6789	3585	4965	10497	5815	8674												
KSYM-100-160-078	6921	5027	10125																			4868	2062	1664
KSYM-100-180-078	6921	5027	10125													5824	2638	2620	7992	3939	4788			
KSYM-100-235-078	6921	5027	10125				3939	1505	735	7647	3735	4443	11347	5965	8143									

Spring Return Torques - KSYM-400

Model	Spring Torque			Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)																										
				40			60			80			100			120			140			160								
	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'						
KSYM-400-235-110	10108	6585	12435							12214	4496	4470	17905	7320	8762	23180	9939	12763	28862	12763	17064									
KSYM-400-280-110	10108	6585	12435				13515	5142	5443	21587	9161	11550	29650	13161	17666															
KSYM-400-335-110	10108	6585	12435	12161	4470	4425	23711	10205	13170	35261	15931	21914																		
KSYM-400-235-160	14347	9346	17648							17348	6399	6337	25411	10400	12453	32898	14117	18118				18941	7178	7550	24623	10001	11851	30305	12825	16153
KSYM-400-280-160	14347	9346	17648							31022	13170	16701	42572	18905	25437															
KSYM-400-335-160	14347	9346	17648				19472	7444	7957																					
KSYM-400-385-160	14347	9346	17648	15073	5266	4620	30314	12834	16162																					
KSYM-400-280-220	20224	13179	24871																27021	10285	10895	35084	14294	17002	43156	18295	23109			
KSYM-400-335-220	20224	13179	24871							25145	9338	9479	36695	15073	18215															
KSYM-400-385-220	20224	13179	24871				24437	9001	8939	39687	16577	20481																		
KSYM-400-435-220	20224	13179	24871	17330	5461	3558	36793	15135	18295																					

Spring Return Torques - KSYM-900

Model	Spring Torque			Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)																									
				40			60			80			100			120			140			160							
	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'					
KSYM-900-235-140	12993	8470	15984							15710	5780	5744	23021	9417	11276	29809	12781	16409	37120	16409	21941	44422	20038	27473					
KSYM-900-280-140	12993	8470	15984				17383	6620	7010	27756	11763	14860																	
KSYM-900-335-140	12993	8470	15984	15648	5753	5691	30491	13126	16932																				
KSYM-900-235-200	18445	12019	22684																24357	9231	9709	31668	12860	15241	38970	16489	20773		
KSYM-900-280-200	18445	12019	22684							22304	8214	8160	32668	13365	16011	42298	18153	23304											
KSYM-900-335-200	18445	12019	22684				25039	9577	10232	39882	16949	21472																	
KSYM-900-385-200	18445	12019	22684	18179	5567	4753	37164	14683	18967																				
KSYM-900-435-200	18445	12019	22684	29836	11957	13860																							
KSYM-900-280-290	26003	16940	31978													34739	13232	14011	45112	18383	21861	55477	23534	29712					
KSYM-900-335-290	26003	16940	31978							32323	12028	12179	47166	19401	23410	60955	26243	33845											
KSYM-900-385-290	26003	16940	31978				29606	9762	9674	48599	18879	23897																	
KSYM-900-435-290	26003	16940	31978	22277	7036	4567	47307	19463	23516																				
KSYM-900-485-290	26003	16940	31978	34013	12860	13453	67788	28314	37005																				
KSYM-900-335-390	35014	22817	43059										38156	13524	12329	51945	20366	22764	66788	27738	34005								
KSYM-900-385-390	35014	22817	43059							39589	13002	12816	58574	22118	27039	76214	30588	40244											
KSYM-900-435-390	35014	22817	43059				38297	13586	12435	63336	26021	31394																	
KSYM-900-485-390	35014	22817	43059				56123	22437	25924																				



SCOTCH YOKE PNEUMATIC SPRING RETURN TORQUES

Spring Return Torques - KSYM-1600

Model	Spring Torque			Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)																				
				40			60			80			100			120			140			160		
	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'			
KSYM-1600-335-450	39881	27508	43802										55246	26021	28199	73169	36111	41767	92473	46971	56379			
KSYM-1600-385-450	39881	27508	43802										60274	28853	32013	85764	43201	51308						
KSYM-1600-435-450	39881	27508	43802				55423	26127	28340	87968	44440	52972												
KSYM-1600-485-450	39881	27508	43802	38147	16400	15259	78586	39165	45873															
KSYM-1600-535-450	39881	27508	43802	55052	25915	28066																		
KSYM-1600-335-510	45519	33934	56831													67531	29685	28738	86835	40546	43351	106138	51405	57955
KSYM-1600-385-510	45519	33934	56831							54636	22428	18985	80126	36775	38280	103793	50095	56193	129283	64442	75488			
KSYM-1600-435-510	45519	33934	56831				49785	19702	15312	82330	38014	39943	114874	56326	64575									
KSYM-1600-485-510	45519	33934	56831				72948	32739	32845	113405	55512	63478												
KSYM-1600-535-510	45519	33934	56831	49414	19489	15037	98642	47201	52299															
KSYM-1600-385-650	57875	43130	72222										67770	27579	22888	91437	40899	40802	116927	55246	60097	142417	69593	79391
KSYM-1600-435-650	57875	43130	72222							69974	28818	24552	102518	47130	49184	132735	64141	72063						
KSYM-1600-485-650	57875	43130	72222				60592	23543	17454	101049	46316	48086	141506	69080	78701									
KSYM-1600-535-650	57875	43130	72222				86286	38005	36908	135514	65708	74169												

Spring Return Torques - KSYM-3500

Model	Spring Torque			Pneumatic Stroke (in. lbs) at Operating Pressure (PSI)																				
				40			60			80			100			120			140			160		
	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'	0'	45'	90'			
KSYM-3500-485-610	54467	40598	68000				87304	39182	39315	135700	66425	75957												
KSYM-3500-535-610	54467	40598	68000	59132	23331	17994	118034	56486	62575															
KSYM-3500-385-782	69248	51609	86419										81099	32996	27384	109422	48927	48830	139930	66089	71921	170430	83259	95013
KSYM-3500-435-782	69248	51609	86419							83728	34483	29376	122671	56397	58858									
KSYM-3500-485-782	69248	51609	86419							120919	55415	57539	169333	82657	94172									
KSYM-3500-535-782	69248	51609	86419				103253	45475	44156	162155	78621	88746												
KSYM-3500-385-1057	93579	69779	116874																115600	47918	41466	146099	65088	64557
KSYM-3500-435-1057	93579	69779	116874										98341	38226	28402	134505	58574	55777	173448	80489	85250			
KSYM-3500-485-1057	93579	69779	116874										145002	64487	63717	189955	89782	97748						
KSYM-3500-535-1057	93579	69779	116874							137824	60451	58291	196726	93597	102881									
KSYM-3500-585-1057	93579	69779	116874				112670	46289	39244	183104	85923	92561												
KSYM-3500-635-1057	93579	69779	116874				149436	66974	67080	232421	113679	129885												
KSYM-3500-685-1057	93579	69779	116874	92650	35022	24092	189211	89366	97181															



SCOTCH YOKE HYDRAULIC DOUBLE ACTING TORQUES

Double Acting Torques - KSYH-100

Model	Max. Operating Torque		Position of Stroke	Hydraulic Stroke (in. lbs) at Operating Pressure (PSI)							
				1000	1250	1500	1750	2000	2250	2500	3000
KSYH-100-35	13276	TO OPEN	0°	3434	4284	5133	6027	6877	7727	8568	10311
			45°	1983	2469	2956	3478	3965	4452	4948	5948
			90°	3434	4284	5133	6027	6877	7727	8568	10311
		TO CLOSE	90°	566	699	841	991	1124	1266	1407	1690
			45°	327	407	487	566	655	735	814	974
			0°	566	699	841	991	1124	1266	1407	1690
KSYH-100-40	13276	TO OPEN	0°	4487	5594	6700	7877	8984	10090	11196	
			45°	2593	3231	3868	4540	5178	5815	6452	
			90°	4487	5594	6700	7877	8984	10090	11196	
		TO CLOSE	90°	1620	2018	2416	2832	3231	3629	4027	
			45°	929	1159	1390	1637	1868	2098	2328	
			0°	1620	2018	2416	2832	3231	3629	4027	
KSYH-100-45	13276	TO OPEN	0°	5682	7081	8488	9966	11364	12772		
			45°	3275	4089	4894	5744	6558	7364		
			90°	5682	7081	8488	9966	11364	12772		
		TO CLOSE	90°	2806	3505	4195	4930	5620	6311		
			45°	1620	2018	2416	2841	3239	3638		
			0°	2806	3505	4195	4930	5620	6311		
KSYH-100-50	13276	TO OPEN	0°	7019	8745	10470	12303	14037			
			45°	4045	5045	6045	7098	8090			
			90°	7019	8745	10470	12303	14037			
		TO CLOSE	90°	4142	5160	6187	7266	8284			
			45°	2390	2974	3567	4186	4779			
			0°	4142	5160	6187	7266	8284			
KSYH-100-55	13276	TO OPEN	0°	8488	10585	12674	14887				
			45°	4894	6107	7311	8585				
			90°	8488	10585	12674	14887				
		TO CLOSE	90°	5620	7001	8382	9851				
			45°	3239	4036	4833	5682				
			0°	5620	7001	8382	9851				
KSYH-100-60	13276	TO OPEN	0°	10108	12595						
			45°	5824	7266						
			90°	10108	12595						
		TO CLOSE	90°	7231	9010						
			45°	4169	5195						
			0°	7231	9010						



SCOTCH YOKE HYDRAULIC DOUBLE ACTING TORQUES

Double Acting Torques - KSYH-400

Model	Max. Operating Torque		Position of Stroke	Hydraulic Stroke (in. lbs) at Operating Pressure (PSI)							
				1000	1250	1500	1750	2000	2250	2500	3000
KSYH-400-45		TO OPEN	0°	10270	12800	15329	18009	20539	23069	25599	30809
			45°	5099	6356	7612	8942	10199	11455	12711	15298
			90°	7774	9689	11604	13632	15547	17462	19377	23320
		TO CLOSE	90°	3843	4789	5736	6738	7685	8632	9578	11528
			45°	2521	3142	3762	4420	5041	5663	6283	7562
			0°	5077	6327	7578	8902	10153	11403	12654	15229
KSYH-400-50	35403	TO OPEN	0°	12679	15802	18926	22233	25357	28480	31604	
			45°	6296	7846	9398	11040	12591	14142	15692	
			90°	9597	11961	14326	16829	19194	21558	23923	
		TO CLOSE	90°	5666	7062	8458	9936	11332	12728	14124	
			45°	3716	4632	5549	6518	7434	8349	9265	
			0°	7485	9330	11174	13127	14971	16815	18659	
KSYH-400-55	35403	TO OPEN	0°	15341	19120	22900	26902	30682	34461		
			45°	7617	9494	11371	13358	15235	17111		
			90°	11612	14473	17334	20363	23224	26085		
		TO CLOSE	90°	7682	9574	11466	13470	15362	17255		
			45°	5039	6280	7521	8837	10077	11319		
			0°	10147	12648	15148	17795	20296	22796		
KSYH-400-60	35403	TO OPEN	0°	18256	22755	27253	32016	36514			
			45°	9065	11299	13532	15897	18131			
			90°	13820	17224	20629	24234	27639			
		TO CLOSE	90°	9889	12325	14761	17341	19777			
			45°	6487	8085	9683	11375	12973			
			0°	13064	16283	19501	22909	26127			
KSYH-400-65	35403	TO OPEN	0°	21427	26705	31984	37574				
			45°	10639	13260	15882	18657				
			90°	16219	20214	24210	28441				
		TO CLOSE	90°	12287	15315	18342	21548				
			45°	8060	10046	12033	14136				
			0°	16233	20233	24232	28468				
KSYH-400-70	35403	TO OPEN	0°	24849	30972	37094					
			45°	12339	15379	18418					
			90°	18810	23444	28078					
		TO CLOSE	90°	14879	18545	22211					
			45°	9761	12165	14570					
			0°	19657	24500	29342					
KSYH-400-75	35403	TO OPEN	0°	28526	35554						
			45°	14165	17655						
			90°	21593	26912						
		TO CLOSE	90°	17662	22014						
			45°	11586	14441						
			0°	23333	29082						
KSYH-400-80	35403	TO OPEN	0°	32457							
			45°	16116							
			90°	24568							
		TO CLOSE	90°	20637							
			45°	13537							
			0°	27264							



SCOTCH YOKE HYDRAULIC DOUBLE ACTING TORQUES

Double Acting Torques - KSYH-900

Model	Max. Operating Torque	Position of Stroke	Hydraulic Stroke (in. lbs) at Operating Pressure (PSI)								
			1000	1250	1500	1750	2000	2250	2500	3000	
KSYH-900-65	79657	TO OPEN	0°	27548	34336	41122	48309	55097	61884	68671	82645
			45°	13679	17049	20420	23987	27358	30728	34098	41036
			90°	20852	25990	31128	36568	41705	46843	51980	62558
		TO CLOSE	90°	15799	19691	23584	27705	31597	35490	39382	47396
			45°	10363	12917	15470	18174	20728	23280	25834	31091
			0°	20872	26014	31156	36600	41743	46885	52027	62615
KSYH-900-70	79657	TO OPEN	0°	31949	39821	47692	56027	63899	71771	79642	
			45°	15864	19773	23681	27820	31728	35637	39545	
			90°	24184	30142	36100	42409	48368	54327	60285	
		TO CLOSE	90°	19130	23843	28557	33547	38260	42973	47687	
			45°	12549	15641	18733	22006	25098	28190	31281	
			0°	25272	31499	37726	44319	50546	56772	62999	
KSYH-900-75	79657	TO OPEN	0°	36677	45713	54749	64317	73353	82390		
			45°	18211	22699	27185	31936	36423	40910		
			90°	27762	34602	41442	48684	55524	62364		
		TO CLOSE	90°	22708	28303	33898	39822	45417	51011		
			45°	14896	18566	22237	26122	29792	33463		
			0°	30000	37391	44782	52609	60000	67391		
KSYH-900-80	79657	TO OPEN	0°	41729	52011	62292	73178	83460			
			45°	20720	25826	30931	36336	41441			
			90°	31587	39370	47152	55392	63175			
		TO CLOSE	90°	26534	33071	39608	46529	53066			
			45°	17405	21694	25982	30523	34811			
			0°	35053	43689	52326	61470	70107			
KSYH-900-85	79657	TO OPEN	0°	47109	58716	70322	82612				
			45°	23392	29154	34918	41020				
			90°	35659	44445	53230	62532				
		TO CLOSE	90°	30605	38146	45686	53670				
			45°	20076	25023	29970	35206				
			0°	40433	50394	60356	70903				
KSYH-900-90	79657	TO OPEN	0°	52814	65827	78839					
			45°	26225	32686	39147					
			90°	39978	49827	59677					
		TO CLOSE	90°	34924	43528	52133					
			45°	22909	28553	34198					
			0°	46138	57505	68872					
KSYH-900-100	79657	TO OPEN	0°	65203	81268						
			45°	32376	40352						
			90°	49355	61515						
		TO CLOSE	90°	44302	55216						
			45°	29061	36221						
			0°	58526	72946						
KSYH-900-110	79657	TO OPEN	0°	78896							
			45°	39175							
			90°	59720							
		TO CLOSE	90°	54666							
			45°	35860							
			0°	72219							



SCOTCH YOKE HYDRAULIC DOUBLE ACTING TORQUES

Double Acting Torques - KSYH-1600

Model	Max. Operating Torque	Position of Stroke	Hydraulic Stroke (in. lbs) at Operating Pressure (PSI)									
			1000	1250	1500	1750	2000	2250	2500	3000		
KSYH-1600-75	14161	TO OPEN	0°	47680	59427	71174	83612	95359	107106	118853	143039	
			45°	23675	29508	35341	41517	47350	53182	59016	71025	
			90°	36091	44983	53874	63290	72181	81074	89966	108273	
		TO CLOSE	90°	29521	36794	44067	51769	59042	66315	73589	88562	
			45°	19365	24136	28907	33959	38730	43501	48272	58095	
			0°	39000	48608	58218	68391	78000	87608	97217	117000	
KSYH-1600-80		14161	TO OPEN	0°	54249	67614	80980	95132	108498	121863	135229	
				45°	26936	33574	40210	47237	53874	60510	67147	
				90°	41063	51180	61298	72010	82127	92244	102361	
			TO CLOSE	90°	34493	42992	51490	60489	68987	77485	85983	
				45°	22627	28202	33776	39679	45254	50829	56403	
				0°	45569	56796	68023	79911	91138	102365	113592	
KSYH-1600-85	14161		TO OPEN	0°	61242	76331	91418	107395	122484	137572		
				45°	30409	37902	45394	53326	60818	68310		
				90°	46357	57778	69200	81292	92713	104134		
			TO CLOSE	90°	39787	49589	59392	69771	79574	89376		
				45°	26099	32529	38960	45768	52199	58629		
				0°	52562	65512	78463	92174	105125	118074		
KSYH-1600-90		14161	TO OPEN	0°	68659	85574	102491	120401	137318			
				45°	34092	42492	50891	59784	68183			
				90°	51971	64775	77579	91137	103941			
			TO CLOSE	90°	45401	56586	67772	79616	90802			
				45°	29782	37120	44457	52226	59564			
				0°	59979	74756	89534	105180	119958			
KSYH-1600-95	14161		TO OPEN	0°	76500	95347	114195	134151				
				45°	37985	47344	56702	66612				
				90°	57906	72173	86439	101545				
			TO CLOSE	90°	51336	63984	76632	90024				
				45°	33675	41972	50269	59054				
				0°	67820	84529	101238	118930				
KSYH-1600-105		14161	TO OPEN	0°	93452	116477	139501					
				45°	46403	57835	69268					
				90°	70738	88167	105595					
			TO CLOSE	90°	64168	79978	95787					
				45°	42093	52464	62835					
				0°	84772	105658	126544					
KSYH-1600-115	14161		TO OPEN	0°	112100	139719						
				45°	55662	69377						
				90°	84854	105759						
			TO CLOSE	90°	78284	97572						
				45°	51353	64005						
				0°	103421	128901						
KSYH-1600-130		14161	TO OPEN	0°	143251							
				45°	71130							
				90°	108433							
			TO CLOSE	90°	101863							
				45°	66820							
				0°	134571							



SCOTCH YOKE HYDRAULIC DOUBLE ACTING TORQUES

Double Acting Torques - KSYH-3500

Model	Max. Operating Torque	Position of Stroke	Hydraulic Stroke (in. lbs) at Operating Pressure (PSI)									
			1000	1250	1500	1750	2000	2250	2500	3000		
KSYH-3500-100	30978	TO OPEN	0°	101427	126416	151405	177865	202854	227842	252831	304280	
			45°	50363	62770	74383	88317	100725	113133	125542	151088	
			90°	76775	95690	114606	134634	153549	172465	191380	230324	
		TO CLOSE	90°	68913	85892	102870	120847	137826	154805	171783	206739	
			45°	45205	56343	67481	79273	90411	101549	112687	135616	
			0°	91041	113471	135901	159652	182082	204512	226943	273123	
KSYH-3500-110		30978	TO OPEN	0°	122726	152963	183200	215216	245452	275689	305926	
				45°	60938	75953	90966	106864	121877	136891	151905	
				90°	92897	115785	138673	162907	185794	208682	231570	
			TO CLOSE	90°	85036	105987	126937	149121	170072	191022	211974	
				45°	55782	69525	83269	97820	111564	125307	139051	
				0°	112341	140019	167697	197003	224681	252360	280038	
KSYH-3500-115	30978		TO OPEN	0°	134137	167185	200233	235225	268273	301322		
				45°	66605	83015	99424	116799	133209	149619		
				90°	101534	126550	151565	178053	203069	228085		
			TO CLOSE	90°	93673	116752	139830	164267	187346	210425		
				45°	61447	76586	91726	107756	122895	138034		
				0°	123751	154240	184730	217013	247502	277991		
KSYH-3500-125		30978	TO OPEN	0°	158479	197525	236571	277913	316958			
				45°	78691	98080	117467	137996	157383			
				90°	119960	149516	179071	210365	239921			
			TO CLOSE	90°	112099	139718	167336	196579	224197			
				45°	73535	91652	109769	128952	147069			
				0°	148093	184581	221067	259700	296188			
KSYH-3500-135	30978		TO OPEN	0°	184850	230393	275935	324158				
				45°	91786	114399	137013	160958				
				90°	139921	174395	208869	245370				
			TO CLOSE	90°	132060	164597	197134	231584				
				45°	86629	107972	129316	151914				
				0°	174465	217449	260432	305945				
KSYH-3500-140		30978	TO OPEN	0°	198797	247775	296754					
				45°	98711	123031	147351					
				90°	150478	187553	224627					
			TO CLOSE	90°	142616	177754	212891					
				45°	93554	116603	139652					
				0°	188411	234831	281251					
KSYH-3500-160	30978		TO OPEN	0°	259653	323625						
				45°	128928	160693						
				90°	196543	244967						
			TO CLOSE	90°	188682	235169						
				45°	123771	154266						
				0°	249267	310681						
KSYH-3500-175		30978	TO OPEN	0°	310620							
				45°	154236							
				90°	235122							
			TO CLOSE	90°	227261							
				45°	149078							
				0°	300234							