

Selection of Wedges for Torque Rating

For each size of Sheargard clutch a selection of Standard wedge pins are available, which can be combined together to provide the desired torque setting. Standard Howdon wedges are coloured coded for identification. Sizes 350SG to 900SG use brass pins as standard (steel optional), other clutches use steel as standard pin material.

A representative selection of standard torque settings possible with standard wedges is shown in the table below, all torque ratings being accurate within $\pm 10\%$. Additional torque settings can be provided with standard or special wedge pins. To avoid unnecessary tripping of the clutch the design torque should be at least 15% above max. starting torque of the drive. To minimise downtime and costs, use selections with

minimum number of wedges, for simplicity of maintenance and stock control use selections with wedges one colour, as shown in the table. If torque setting is critical, intermediate ratings can be obtained by mixing colours. For drives with shaft speed above 120 rpm, or for improved protection of drive and machinery, use optional monitor plate with a limit switch or proximity sensor to switch off motor on overload.

Torque Ratings - Nm

Number of Wedges Used													Clutch Size								
Orange	Orange/White	Gold	White	White/Yellow	Yellow	Yellow/Blue	Blue	Blue/Green	Green	Green/Red	Red	Black	250SG	350SG	500SG	700SG	900SG	1000SG	1200SG	1400SG	1600SG
1	1	1												33 46 62	45 62 84						
2	2		1										27	66 86 92	90 116 124	251	788	3468	3982		
3		2		1										99 124 125	135 168 167	341	1105	5160	5926		
	3		2		1								82 54	138 165 172	186 221 232	446 502	1400 1576	6942 6936	7972 7964	12240	15300
		3		2		1								186 199 250	252 267 334	652 682	1908 2210	8718 10320	10012 11852		
			3				1						107	257 258 300	345 348 402	896 753 1119	2285 2364 2700	9824 10404 11607	11282 11946 13330	17632	22040
					2				1				164 136	330 370 375	442 497 501	892 1368 1023	2800 3386 3315	13884 13875 15480	15944 15935 17778	24480 20240	30600 25300
						2				1				398 447 503	534 600 676	1304 1727 1785	3816 3974 4562	17436 15980	20024		
							2					1	214	514 597	690 801	1860 1792 1956	5293 4570 5724	16922 19648 26154	19434 22564 30036	31344 35264	39180 44080
					4			2	2				272	600 740	804 994	2238 2736	5400 6772	23214 27750 27768	26660 31870 31888	40480 48960	50600 61200
							3			2				771 894 900	1035 1200 1206	2688 3454 3357	6855 7948 8100	29472 34821	33846 39990	52896	66120
						4					2	2	336	1006	1352	3570 3720	9124 10586	31960 33844 34872	36704 38868 40048	49984 62688	62480 78360
							4			3				1110 1341	1491 1800	4104 5181	10158 11922	39296 41625	45128 47805	70528 60720	88160 75900
								4			3	3		1509	2028	5355 5580	13686	46428 47940 50766	53320 55056 58302	74976 94032	93720 117540
									4		4							55500 63920	63740 73408	80960 99968	101200 124960

Note:- Torque capacity of size 250SG controlled by unit size, and not wedge capacity. Sizes 1000SG and above are designed to accept up to four wedges, size 250SG only has two wedge slots.

Wedge Replacement following Overload:

To return Sheargard to service after overload, first remove all broken halves of wedges by removing their locking screws. Rotate hub on body until wedge grooves are in line (for drives where synchronisation is essential rotate until alignment marks on body and hub flanges are in line). Ensure wedge grooves are clean. Fit new wedges of same colour identification as parts removed and fix firmly into place by tightening locating screws.

Servicing Sheargard Clutches

Sheargard units require minimal servicing. Routine checks that wedge locating screws and monitor plate screws are securely locked down is generally all that is required. If the clutch has suffered a number of overloads, or at major maintenance shutdowns disassembly of the clutch, cleaning with paraffin and light greasing of bearing surfaces will ensure long service life.