

QUICK SELECTION GUIDE

PATENT # 7,244,186

- 1) Determine service factor (SF)
 $SF = F1 \times F2$ (not to exceed 4)

DRIVER F1	SF
ELECTRIC MOTOR	1.0
GAS OR STEAM TURBINE	1.0
GEAR BOX INCREASER / REDUCER	1.0
GAS OR DIESEL ENGINE 4+ CYL	3.0
GAS OR DIESEL ENGINE 1-3 CYL	4.0

- 2) Calculate required coupling continuous torque rating (lb-in)
 using the formula: $HP \times SF \times 63025 \div RPM = \text{Torque (lb-in)}$

DRIVEN F2	SF
GENERATORS, GEAR BOXES, LIGHT DUTY AGITATORS & CONVEYERS, STOKERS	1.0
CENTRIFUGAL PUMPS, COMPRESSORS, BLOWERS, FANS, ETC.	1.0
RECIPROCATING PUMPS, COMPRESSORS, FEEDERS, FREQUENT STOPS/STARTS, ETC.	2.0
PULP & PAPER MILL EQUIPMENT (REFER TO MILL STANDARD COUPLING SF GUIDE)	1-3
STEEL MILL EQUIPMENT (REFER TO MILL STANDARD COUPLING SF GUIDE)	1-3

- 3) Determine suitable coupling insert type for application using the Insert Color Chart below

INSERT TYPE	DESCRIPTION	USE	MAX TEMP °F	MIN TEMP °F	DUROMETER
YELLOW	GENERAL USE, HIGH DAMPEN	GENERAL APPLICATIONS (STANDARD)	250	-60	60D
RED	HIGH TEMPERATURE, HIGH DAMPEN	HIGH TEMPERATURE RUNNING APPLICATIONS	350	20	90A
ORANGE	HIGH TORQUE, MEDIUM DAMPEN	HIGH TORQUE, LOW SPEED APPLICATIONS	250	-20	70D
GREEN	EXTRA HIGH DAMPENING	ENGINE OR RECIPROCATING WITH HIGH VIBRATORY TORQUES	250	-20	90A

- 4) Choose the coupling size that meets or exceeds the calculated required continuous torque rating using the color coded tables below.
 Intermittent (peak) ratings are reserved for system torque spikes, starts/stops, reversing etc.

Insert Tables: Torque ratings (lb-in) - HP ratings @ various RPMs - Max RPM's based on insert types

INSERT YELLOW	T-0	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12
CONTINUOUS (LB-IN)	1000	1600	3800	6000	12000	35000	64700	120000	202000	304000	540000	720000	950000
INTERMITTENT (LB-IN)	1800	2500	7000	9600	19200	60000	103600	200000	269600	500000	860000	1050000	1380000
HP @ 100 RPM (SF1)	1.59 2.86	2.54 3.97	6.03 11.11	9.52 15.23	19.04 30.46	56 95	103 164	190 317	321 428	482 793	857 1365	1142 1666	1507 2190
HP @ 1200 RPM (SF1)	19.04 34.27	30.46 48	72.35 133	114 183	228 366	666 1142	1232 1973	2285 3808	3850 5133	5788 9520	10282 16374	13709 19992	18088 26275
HP @ 1750 RPM (SF1)	27.77 49.98	44 69	106 194	167 267	333 533	972 1666	1795 2877	3332 5553	5614 7486	8441 13883	14994 23879	19992 29155	26378 38318
HP @ 3600 RPM (SF1)	57.12 103	91 143	217 400	343 548	685 1095	1999 3427	3696 5918	6854 11424					
MAX RPM UNBALANCED	12000	10000	8000	6000	4500	3600	2800	2300	1750	1450	1300	1200	1000
MAX RPM BALANCED G2.5	18000	16000	14000	12000	10500	8500	5500	3600	2400	2100	1750	1750	1400

INSERT RED	T-0	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12
CONTINUOUS (LB-IN)	850	1360	3230	5100	10200	29750	54995	102000	171700	258400	459000	612000	807500
INTERMITTENT (LB-IN)	1530	2125	5950	8160	16320	51000	88060	170000	229160	425000	731000	892500	1173000
HP @ 100 RPM (SF1)	1.35 2.43	2.16 3.37	5.13 9.44	8.09 12.95	16.18 25.89	48 81	88 139	162 269	273 364	410 674	728 1160	971 1416	1281 1862
HP @ 1200 RPM (SF1)	16.18 29.13	25.89 41	61.50 113	97 156	194 311	566 971	1047 1677	1942 3237	3273 4363	4920 8092	8740 13918	11653 16993	15375 22334
HP @ 1750 RPM (SF1)	23.60 42.48	37 59	90 165	142 227	283 453	826 1416	1526 2445	2832 4720	4772 6363	7175 11801	12745 20297	16993 24782	22421 32570
HP @ 3600 RPM (SF1)	48.55 88	77 122	184 340	292 466	582 931	1699 2913	3142 5030	5826 9710					
MAX RPM UNBALANCED	12000	10000	8000	6000	4500	3600	2800	2300	1750	1450	1300	1200	1000
MAX RPM BALANCED G2.5	18000	16000	14000	12000	10500	8500	5500	3600	2400	2100	1750	1750	1400

INSERT ORANGE	T-0	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12
CONTINUOUS (LB-IN)	1130	3000	6000	9000	18600	60000	106800	200000	333600	452000	890000	1100000	1570000
INTERMITTENT (LB-IN)	2260	4000	9000	12600	24000	80000	170900	300000	444900	603000	1400000	1650000	2280000
HP @ 100 RPM (SF1)	1.79 3.59	4.76 6.35	9.52 14.28	14.28 19.99	24.75 38.08	95 127	169 271	335 557	529 706	717 957	1412 2221	1745 2618	2491 3618
HP @ 1200 RPM (SF1)	21.52 43.03	57.12 76	114 171	171 240	297 457	1142 1523	2033 3254	4017 6683	6352 8471	8606 11481	16946 26656	20944 31416	29893 43411
HP @ 1750 RPM (SF1)	31.38 62.75	83 111	167 250	250 350	433 666	1666 2221	2965 4745	5859 9746	9263 12353	12551 16743	24712 38873	30543 45815	43594 63308
HP @ 3600 RPM (SF1)	64.55 130	171 228	343 514	514 720	891 1371	3427 4570	6100 9762	12052 20049					
MAX RPM UNBALANCED	12000	10000	8000	6000	4500	3600	2800	2300	1750	1450	1300	1200	1000
MAX RPM BALANCED G2.5	16000	16000	12000	10000	8000	6500	4200	3600	2400	2100	1750	1750	1400

INSERT GREEN	T-0	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	T-12
CONTINUOUS (LB-IN)	413	450	1598	2700	5400	14438	26689	54000	83408	125250	202500	294000	356250
INTERMITTENT (LB-IN)	743	900	3150	4500	9000	24750	42735	75000	111210	206250	322500	412500	517500
HP @ 100 RPM (SF1)	0.65 1.18	0.71 1.43	2.54 5.00	4.28 7.14	8.57 14.28	23 39	42 68	86 119	132 176	199 327	321 512	467 655	566 821
HP @ 1200 RPM (SF1)	7.85 14.14	8.57 17	30.42 59.98	51.75 85.50	103 171	275 471	509 814	1028 1428	1588 2117	2385 3927	3854 6140	5598 7854	6783 9854
HP @ 1750 RPM (SF1)	11.45 20.62	13 25	44 88	75 125	150 250	401 687	741 1187	1499 2083	2316 3088	3478 5727	5623 8955	8164 11454	9892 14369
HP @ 3600 RPM (SF1)	24 42	26 52	92 180	155 257	308 514	825 1414	1525 2441	3085 4284					
MAX RPM UNBALANCED	12000	10000	8000	6000	4500	3600	2800	2300	1750	1450	1300	1200	1000
MAX RPM BALANCED G2.5	18000	16000	14000	12000	10500	8500	5500	3600	2400	2100	1750	1750	1400

- 5) Determine coupling type required for the application. Check dimensions/max bore tables to confirm the coupling sized will accommodate shafts and physically fit the application. Determine if the couplings hubs will be bored to size, or used with Taper Lock Bushings, QD Bushings, or other type of locking device. Standard couplings are machined carbon steel. Specify if stainless steel or Melonite Process is required based on atmosphere conditions, etc.

Listed service factors are intended as a general guide, and are typical of usual service requirements. Please refer to AGMA 922-A96: Load Classification and Service Factors for Flexible Couplings for a complete list.