

SERVICE FACTORS

TYPES OF DRIVEN MACHINES		TYPES OF DRIVING UNITS					
Special cases	For speed-up drives 1.00 to 1.24 ratio multiply the factor by 1.00 1.25 to 1.74 " " " " " " 1.05 1.75 to 2.49 " " " " " " 1.11 2.50 to 3.49 " " " " " " 1.18 3.50 and over " " " " " " 1.25 Use of idler pulley multiply the factor by 1.11 Intermittent or seasonal operation multiply the factor by 0.9	A.C. motors, star-delta start, normal torque squirrel cage, except direct on line start synchronous and split phase. D.C. motors, shunt wound. Internal combustion engines over 600 rev/min. Centrifugal clutches limited to 150% F.L.T.			A.C. motors direct on line start, high torque, high slip, repulsion induction, single phase, series wound and slip ring. D.C. motors, series wound and compound wound. Single-cylinder engines and internal combustion engines under 600 rev/min. Line shafts, operated clutches, brakes		
		Operational hours per day					
		10 and under	Over 10 to 16 inclusive	Over 16 and continuous service	10 and under	Over 10 to 16 inclusive	Over 16 and continuous service
Light Duty	Agitators for liquids, blowers and exhausters Centrifugal pumps and compressors Fans up to 7.5 kW Light duty conveyors	1.0	1.1	1.2	1.1	1.2	1.3
Medium Duty	Belt conveyors for sand, grain, etc. Dough mixers Fans over 7.5 kW Generators Line shafts Laundry machinery Machine tools Punches, presses, shears Printing machinery Positive displacement rotary pumps Revolving and vibrating screens	1.1	1.2	1.3	1.2	1.3	1.4
Heavy Duty	Brick machinery Bucket elevators Exciters Piston compressors Conveyors (drag-pan-screw) Hammer mills Paper mill beaters Piston pumps Positive displacement blowers Pulverisers Sawmill and woodworking machinery Textile machinery	1.2	1.3	1.4	1.4	1.5	1.6
Extra Heavy Duty	Crushers (gyratory-jaw-roll) Mills (ball-rod-tube) Hoists Rubber calenders, extruders, mills	1.3	1.4	1.5	1.5	1.6	1.8

BELT LENGTH CORRECTION FACTORS

FACTOR	BELT DESIGNATION						FACTOR	
	WEDGE BELTS			V-BELTS				
	SPZ	SPA	SPB	SPC	A	B		C
0.80	—	—	—	—	630	930	—	0.80
0.81	—	—	—	—	700	1000	—	0.81
0.82	—	800	—	—	—	—	—	0.82
0.83	630	—	—	—	790	1100	1560	0.83
0.84	—	900	—	—	—	—	—	0.84
0.85	710	—	1260	—	—	1210	1760	0.85
0.86	—	1000	—	2000	890	—	—	0.86
0.87	800	—	1410	—	—	1370	—	0.87
0.88	—	1120	—	2240	990	—	1950	0.88
0.89	900	—	1600	—	—	—	—	0.89
0.90	—	1250	—	2500	1100	1560	2190	0.90
0.91	—	—	1800	2800	—	—	—	0.91
0.92	1010	1400	—	—	—	—	—	0.92
0.93	—	—	2020	3150	1250	1760	2490	0.93
0.94	1140	1600	—	—	—	—	2720	0.94
0.95	—	—	2280	3550	—	—	—	0.95
0.96	1270	1800	2530	—	1430	2070	—	0.96
0.97	—	—	—	4000	1550	—	3080	0.97
0.98	1420	2000	2840	4500	—	2300	—	0.98
0.99	—	—	—	—	—	—	3310	0.99
1.00	1600	2240	3170	5000	1750	2500	3520	1.00
1.01	—	—	—	—	—	—	3710	1.01
1.02	1800	2500	3550	5600	1940	—	—	1.02
1.03	—	—	—	6300	—	2870	4060	1.03
1.04	2030	2800	4060	—	—	—	—	1.04
1.05	—	—	—	7100	2200	3200	—	1.05
1.06	2280	3150	4560	—	—	—	4600	1.06
1.07	—	—	—	8000	—	3500	—	1.07
1.08	2540	3550	5070	—	2480	—	5010	1.08
1.09	—	—	—	9000	—	—	5380	1.09
1.10	2840	4000	5680	10000	2700	—	—	1.10
1.11	—	—	6340	—	—	4060	—	1.11
1.12	3170	4500	—	11200	—	—	6100	1.12
1.13	—	—	7100	—	3080	—	—	1.13
1.14	—	—	—	12500	—	4510	—	1.14
1.15	3550	—	6000	—	—	5000	6860	1.15
1.16	—	—	—	—	3540	—	—	1.16
1.17	—	—	—	—	—	—	7600	1.17

ARC OF CONTACT CORRECTION FACTORS

D - d C	Correction Factor	Arc of Contact on smaller pulley in degrees	D - d C	Correction Factor	Arc of Contact on smaller pulley in degrees	D - d C	Correction Factor	Arc of Contact on smaller pulley in degrees
0.00	1.00	180	0.50	0.93	151	1.00	0.82	120
0.05	0.99	177	0.55	0.92	148	1.05	0.81	117
0.10	0.99	174	0.60	0.91	145	1.10	0.80	113
0.15	0.98	171	0.65	0.90	142	1.15	0.78	110
0.20	0.97	169	0.70	0.89	139	1.20	0.77	106
0.25	0.97	166	0.75	0.88	136	1.25	0.75	103
0.30	0.96	163	0.80	0.87	133	1.30	0.73	99
0.35	0.95	160	0.85	0.86	130	1.35	0.72	95
0.40	0.94	157	0.90	0.85	127	1.40	0.70	91
0.45	0.93	154	0.95	0.83	123	1.45	0.68	87

D = diameter of larger pulley d = diameter of smaller pulley C = shaft centre distance

