

Electric Motors

Frame Assignments and Minimum Sheave Diameters

The table below lists recommendations for the minimum diameter of sheaves to be used on general purpose electric motors. The purpose of these recommendations is to prevent the use of sub-minimum diameter sheaves. Shaft or bearing damage can occur (due to increased belt pull)

when a sheave that is too small in diameter is used. In the table below, NEMA frame assignments and minimum diameter recommendations are listed. For special applications other than general purpose AC motors not covered by NEMA standards, consult the motor manufacturer.

Table 35 Electric Motor Frames and Minimum Diameters

Frame No.	Shaft Diameter (inches)	Horsepower at Synchronous Speed (rpm)				Super Power-Wedge®	Super II® Super Blue Ribbon®
		3600 (3450)*	1800 (1750)*	1200(1160)*	900 (870)*		
143T	0.875	1½	1	¾	½	2.2	2.2
145T	0.875	2-3	1½-2	1	¾	2.4	2.4
182T	1.125	3	3	1½	1	2.4	2.4
182T		5	—	—	—	2.4	2.6
184T	1.125	—	—	2	1½	2.4	2.4
184T		5	—	—	—	2.4	2.6
184T		7½	5	—	—	3.0	3.0
213T	1.375	7½-10	7½	3	2	3.0	3.0
215T	1.375	10	—	5	3	3.0	3.0
215T		15	10	—	—	3.8	3.8
254T	1.625	15	—	7½	5	3.8	3.8
254T		20	15	—	—	4.4	4.4
256T	1.625	20-25	—	10	7½	4.4	4.4
256T		—	20	—	—	4.4	4.6
284T	1.875	—	—	15	10	4.4	4.6
284T		—	25	—	—	4.4	5.0
286T	1.875	—	30	20	15	5.2	5.4
324T	2.125	—	40	25	20	6.0	6.0
326T	2.125	—	50	30	25	6.8	6.8
364T	2.375	—	—	40	30	6.8	6.8
364T		—	60	—	—	7.4	7.4
365T	2.375	—	—	50	40	8.2	8.2
365T		—	75	—	—	8.6	9.0
404T	2.875	—	—	60	—	8.0	9.0
404T		—	—	—	50	8.4	9.0
404T		—	100	—	—	8.6	10.0

Table continued on reverse

Table 35 Electric Motor Frames and Minimum Diameters – Continued

Frame No.	Shaft Diameter (inches)	Horsepower at Synchronous Speed (rpm)				Super Power-Wedge®	Super II® Super Blue Ribbon®
		3600 (3450)*	1800 (1750)*	1200(1160)*	900 (870)*	Minimum Outside Diameter	Minimum Datum Diameter
405T	2.875	—	—	75	60	10.0	10.0
405T		—	100	—	—	8.6	10.0
405T		—	125	—	—	10.5	11.5
444T	3.375	—	—	100	—	10.0	11.0
444T		—	—	—	75	9.5	10.5
444T		—	125	—	—	9.5	11.0
444T		—	150	—	—	10.5	—
445T	3.375	—	—	125	—	12.0	12.5
445T		—	—	—	100	12.0	12.5
445T		—	150	—	—	10.5	—
445T		—	200	—	—	13.2	—



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