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ENGINEERING SUPPLEMENT
ES-251
June 2007

SERIES 20 & 30 GI FANS
V-BELT DRIVE

Minimum-Maximum Center-to-Center Distances [in inches]

- All belt center distances shown are in inches.
- For belt center distances or specific drive information for motor frame sizes not shown below, consult **nyb**.
- Consult **nyb** for assistance calculating minimum Arrangement 1 belt center distances.
- Consult the appropriate product bulletin to determine minimum/maximum motor size capability.

ARRANGEMENT 9

Size	Motor Frame Size†						
	56 143T & 145T	182T 184T	213T 215T	254T 256T	284T 286T	324T 326T	364T 365T
144	13.2* - 14.2	15.3 - 16.0†	--	--	--	--	--
174	14.5 - 16.0	15.5* - 16.3	16.9* - 17.6	--	--	--	--
194	15.5 - 18.0	17.0 - 18.5	17.4 - 18.8	19.0 - 20.3	--	--	--
224	16.4 - 22.5	18.2 - 22.6	19.6 - 22.1	20.4* - 22.0	20.7 - 22.7†	--	--
264	17.7 - 25.2	19.4 - 25.2	20.9 - 24.7	21.6* - 23.0	22.5 - 25.5	25.0 - 27.0	--
294	18.3 - 29.3	20.1 - 29.3	21.5 - 28.5	23.3 - 28.1	24.4 - 28.0	24.8* - 28.0	--
334	20.2 - 30.6	21.9 - 30.6	23.3 - 29.9	25.1 - 29.6	26.2 - 29.4	26.7 - 28.2	--
364	20.6 - 34.0	22.3 - 34.0	23.7 - 33.3	25.5 - 32.8	26.6 - 32.7	28.6 - 32.5	29.2* - 31.5
404	--	17.5 - 36.6	19.0 - 35.6	20.8 - 34.3	22.2 - 34.0	24.2 - 33.0	26.0 - 31.0
454	--	17.8 - 41.7	19.3 - 40.6	21.2 - 39.2	22.5 - 38.8	24.5 - 37.8	26.4 - 35.4
504	--	17.8 - 46.8	19.2 - 40.6	21.2 - 44.2	22.2 - 43.6	24.5 - 42.5	26.2 - 40.2
574	--	18.6 - 54.0	21.0 - 42.0	22.7 - 40.6	24.0 - 40.7	26.2 - 39.1	27.5 - 37.0
644	--	18.6 - 43.3	21.0 - 42.0	22.7 - 40.6	24.0 - 40.7	26.2 - 39.1	27.5 - 37.0
714	--	21.8 - 51.1	24.0 - 49.8	26.0 - 48.5	28.2 - 48.6	29.2 - 47.0	31.0 - 43.8
784	--	23.2 - 54.3	24.8 - 52.8	26.6 - 51.5	27.9 - 51.0	30.0 - 50.0	31.5 - 47.3
854	--	23.2 - 60.0	24.7 - 57.0	25.5 - 57.1	27.8 - 56.5	29.8 - 55.3	31.6 - 52.6

‡ The centers shown are correct for TEFC and ODP motors...when using explosion proof or severe duty motors, the centers are correct for Arrangement 9R (motor right...conduit box up) only...consult **nyb** on Arrangement 9L.

* Slide base may extend 2-inches above bearing pedestal top.

† Arrangement 9R (motor right...conduit box up) only...consult **nyb** on Arrangement 9L.

ARRANGEMENT 10

Size	Motor Frame Size							Maximum Sheave Size	
	48	56 143T - 145T	182T 184T	213T 215T	254T 256T	284T 286T	324T	O.D.	Width
144	8.5 - 10.5	8.0 - 10.0	8.0 - 9.3	--	--	--	--	5.5	3.0
174	10.6 - 12.6	10.1 - 12.1	9.1 - 11.1	9.4 - 10.7	--	--	--	7.0	3.0
194	14.1 - 16.2	13.7 - 15.7	12.7 - 14.7	12.0 - 14.0	--	--	--	9.0	3.25
224	15.6 - 19.7	15.1 - 19.2	14.1 - 18.2	13.4 - 17.5	12.4 - 16.6	--	--	9.8	3.75
264	18.0 - 22.2	17.5 - 21.7	16.5 - 20.7	15.8 - 20.0	14.8 - 19.0	--	--	11.4	4.125
294	--	22.0 - 26.2	21.0 - 25.2	20.3 - 24.5	19.3 - 23.5	18.5 - 22.7	--	9.8	5.25
334	--	29.6 - 33.3	28.6 - 32.2	27.9 - 31.5	26.9 - 30.5	25.9 - 29.7	24.9 - 28.7	14.0	6.0625
364	--	29.6 - 33.3	28.6 - 32.2	27.9 - 31.5	26.9 - 30.5	25.9 - 29.7	24.9 - 28.7	12.8	6.0625

- When selecting belt centers, avoid minimum and maximum extremes to assure ease of mounting and tension.

ARRANGEMENT 9F LEFT

Size	Series 20				Size	Series 30				
	Motor Frame Size					Motor Frame Size				
	286T	324T-326T	364T-365T	404T-405T		254T-256T	284T-286T	324T-326T	364T-365T	404T-405T
404	35.9 - 39.9	34.8 - 39.6	34.0 - 39.5	--	334	32.6 - 36.2	32.0 - 36.2	31.1 - 36.1	30.4 - 36.1	29.9 - 36.1
454	--	37.6 - 42.2	36.8 - 42.1	--	364	34.4 - 38.0	33.8 - 37.9	32.8 - 37.7	32.1 - 37.7	31.0 - 37.7
504	--	--	40.7 - 45.8	39.4 - 45.6	404	--	38.1 - 42.1	37.1 - 40.9	35.4 - 40.9	34.3 - 40.9
574	--	--	45.0 - 49.9	44.1 - 49.6	454	--	--	38.9 - 43.6	38.6 - 43.4	37.4 - 43.3

- Contact **nyb** for Arrangement 9F RIGHT because of potential interference between conduit box and pedestal.