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**ENGINEERING SUPPLEMENT**  
**ES-242**  
**June 2016**

**PLUG FAN V-BELT DRIVE**  
**Minimum - Maximum Center-to-Center Distances (in inches)**

1. All belt center distances shown are in inches.
2. For belt center distances or specific drive information for motor frame sizes not shown below, consult nyb.
3. Consult the Plug Fan bulletin to determine minimum/maximum motor size capability, especially for motor frame sizes larger than listed in the bulletin. In all cases, maximum motor frame size is limited to maximum C-NW dimension. For small motors, be sure to check starting torque (WR<sup>2</sup>) requirements.
4. When selecting belt centers, avoid minimum and maximum extremes to assure ease of mounting and tension. Also minimum and maximum are total adjustment. Some allowance for installation and stretch must be included when selecting drive.

**CLASS II - 200°F AND 450°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
12	8.6	11.5	9.6	12.5	10.4	13.2	--	--	--	--
15	8.9	11.7	9.9	12.7	10.6	13.4	--	--	--	--
18	9.3	13.5	11.0	14.5	11.0	15.3	12.0	16.3	12.8	17.0
20	9.3	13.5	10.3	14.5	11.0	15.3	12.0	16.3	12.8	17.0
22	9.3	13.5	10.3	14.5	11.0	15.3	12.0	16.3	12.8	17.0

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	9.0	14.1	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6
27	9.8	14.1	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6
33	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T		444 - 445T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6	--	--	--	--
40	11.8	16.1	12.8	17.1	13.6	17.9	14.6	18.9	15.6	19.9	--	--	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6	--	--
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6	--	--
54	--	--	--	--	--	--	29.6	37.6	30.9	37.6	32.7	38.0	34.4	39.7
60	--	--	--	--	--	--	30.1	38.9	31.4	38.8	33.3	39.1	34.9	40.8

**CLASS II - 800°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
12	9.0	11.8	10.0	12.8	10.7	13.6	--	--	--	--
15	9.0	11.8	10.0	12.8	10.7	13.6	--	--	--	--
18	9.5	13.8	10.5	14.8	11.3	15.5	12.3	16.5	13.0	17.3
20	9.8	14	10.8	15	11.5	15.8	12.5	16.8	13.3	17.5
22	9.8	14	10.8	15	11.5	15.8	12.5	16.8	13.3	17.5

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	10.1	14.4	11.1	15.4	11.8	16.1	12.8	17.1	13.6	17.9	14.6	18.9
27	10.1	14.4	11.1	15.4	11.8	16.1	12.8	17.1	13.6	17.9	14.6	18.9

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	11.0	15.3	11.8	16.0	12.8	17.0	13.5	17.8	14.5	18.8	15.5	19.8
33	11.0	15.3	11.8	16.0	12.8	17.0	13.5	17.8	14.5	18.8	15.5	19.8

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T		444 - 445T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	12.3	16.6	13.3	17.6	14.1	18.4	15.1	19.4	16.1	20.4	--	--	--	--
40	12.3	16.6	13.3	17.6	14.1	18.4	15.1	19.4	16.1	20.4	--	--	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6	--	--
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6	--	--
54	--	--	--	--	--	--	29.6	37.6	30.9	37.6	32.7	38.0	34.4	39.7
60	--	--	--	--	--	--	30.1	38.9	31.4	38.8	33.3	39.1	34.9	40.8

**PLUG FAN V-BELT DRIVE**  
**Minimum - Maximum Center-to-Center Distances (in inches)**

**CLASS II - 1000°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
18	9.3	13.5	10.3	14.5	11.0	15.3	12.0	16.3	12.8	17.0
20	9.3	13.5	10.3	14.5	11.0	15.3	12.0	16.3	12.8	17.0
22	9.3	13.5	10.3	14.5	11.0	15.3	12.0	16.3	12.8	17.0

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	10.2	14.5	11.2	15.5	12.0	16.2	13.0	17.2	13.7	18.0	14.7	19.0
27	10.2	14.5	11.2	15.5	12.0	16.2	13.0	17.2	13.7	18.0	14.7	19.0

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6
33	10.8	15.1	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	11.6	15.9	12.6	16.9	13.3	17.6	14.3	18.6	15.3	19.6	--	--
40	11.8	16.1	12.8	17.1	13.6	17.9	14.6	18.9	15.6	19.9	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6

Size	324 - 326T		364 - 365T		404 - 405T		444 - 445T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
54	29.6	37.6	30.9	37.6	32.7	38.0	34.4	39.7
60	30.1	38.9	31.4	38.8	33.3	39.1	34.9	40.8

**CLASS III - 200°F AND 450°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
18	13.8	15.5	14.8	16.5	15.5	17.3	16.5	18.3	17.3	19.0
22	14.0	15.8	15.0	16.8	15.8	17.5	16.8	18.5	17.5	19.3

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	14.4	16.2	15.4	17.2	16.2	17.9	17.2	18.9	17.9	19.7	18.9	20.7
27	14.4	16.2	15.4	17.2	16.2	17.9	17.2	18.9	17.9	19.7	18.9	20.7

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	16.4	18.2	17.2	18.9	18.2	19.9	18.9	20.7	19.9	21.7	20.9	22.7
33	16.4	18.2	17.2	18.9	18.2	19.9	18.9	20.7	19.9	21.7	20.9	22.7

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	17.2	18.9	18.2	19.9	18.9	20.7	19.9	21.7	20.9	22.7	--	--
40	17.2	18.9	18.2	19.9	18.9	20.7	19.9	21.7	20.9	22.7	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6

Size	324 - 326T		364 - 365T		404 - 405T		444 - 445T		447T		449T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
54	29.3	37.5	30.6	37.5	32.4	37.8	34.1	39.6	34.1	39.6	--	--
60	29.8	38.7	31.1	38.6	33.0	38.8	34.6	40.5	34.3	40.5	34.3	40.5

**PLUG FAN V-BELT DRIVE**  
**Minimum - Maximum Center-to-Center Distances (in inches)**

**CLASS III - 800°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
18	14.0	15.8	15.0	16.8	15.8	17.5	16.8	18.5	17.5	19.3
22	14.8	16.6	15.8	17.6	16.5	18.3	17.5	19.3	18.3	20.1

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	14.9	16.7	15.9	17.7	16.7	18.4	17.7	19.4	18.4	20.2	19.4	21.2
27	14.9	16.7	15.9	17.7	16.7	18.4	17.7	19.4	18.4	20.2	19.4	21.2

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	16.6	18.4	17.3	19.1	18.3	20.1	19.1	20.9	20.1	21.9	21.1	22.9
33	16.6	18.4	17.3	19.1	18.3	20.1	19.1	20.9	20.1	21.9	21.1	22.9

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	17.4	19.2	18.4	20.2	19.2	20.9	20.2	21.9	21.2	22.9	--	--
40	17.4	19.2	18.4	20.2	19.2	20.9	20.2	21.9	21.2	22.9	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6

Size	324 - 326T		364 - 365T		404 - 405T		444 - 445T		447T		449T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
54	29.3	37.5	30.6	37.5	32.4	37.8	34.1	39.6	34.1	39.6	--	--
60	29.8	38.7	31.1	38.6	33.0	38.8	34.6	40.5	34.3	40.5	34.3	40.5

**CLASS III - 1000°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
18	13.9	15.8	14.9	16.8	15.6	17.5	16.6	18.5	17.4	19.3
22	14.7	16.6	15.7	17.6	16.4	18.3	17.4	19.3	18.2	20.1

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	14.8	16.7	15.8	17.7	16.5	18.4	17.5	19.4	18.3	20.2	19.3	21.2
27	14.8	16.7	15.8	17.7	16.5	18.4	17.5	19.4	18.3	20.2	19.3	21.2

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	16.5	18.4	17.2	19.1	18.2	20.1	19.0	20.9	20.0	21.9	21.0	22.9
33	16.5	18.4	17.2	19.1	18.2	20.1	19.0	20.9	20.0	21.9	21.0	22.9

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	17.3	19.2	18.3	20.2	19.0	20.9	20.0	21.9	21.0	22.9	--	--
40	17.3	19.2	18.3	20.2	19.0	20.9	20.0	21.9	21.0	22.9	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6

Size	324 - 326T		364 - 365T		404 - 405T		444 - 445T		447T		449T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
54	29.3	37.5	30.6	37.5	32.4	37.8	34.1	39.6	34.1	39.6	--	--
60	29.8	38.7	31.1	38.6	33.0	38.8	34.6	40.5	34.3	40.5	34.3	40.5

**PLUG FAN V-BELT DRIVE**  
**Minimum - Maximum Center-to-Center Distances (in inches)**

**CLASS III - 1300°F PLUG FANS**

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
18	14.8	16.7	15.8	17.7	16.5	18.4	17.5	19.4	18.3	20.2
22	15.2	17.1	16.2	18.1	16.9	18.8	17.9	19.8	18.7	20.6

Size	143 - 145T		182 - 184T		213 - 215T		254 - 256T		284 - 286T		324T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
24	15.3	17.2	16.3	18.2	17.0	18.9	18.0	19.9	18.8	20.7	19.8	21.7
27	15.3	17.2	16.3	18.2	17.0	18.9	18.0	19.9	18.8	20.7	19.8	21.7

Size	182 - 184T		213 - 215T		254 - 256T		284 - 286T		324 - 326T		364T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
30	16.5	18.4	17.2	19.1	18.2	20.1	19.0	20.9	20.0	21.9	21.0	22.9
33	16.5	18.4	17.2	19.1	18.2	20.1	19.0	20.9	20.0	21.9	21.0	22.9

Size	213 - 215T		254 - 256T		284 - 286T		324 - 326T		364 - 365T		404 - 405T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
36	17.3	19.2	18.3	20.2	19.0	20.9	20.0	21.9	21.0	22.9	--	--
40	17.3	19.2	18.3	20.2	19.0	20.9	20.0	21.9	21.0	22.9	--	--
44	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6
49	22.7	25.5	23.7	26.5	24.2	27.2	25.3	28.7	26.0	29.8	27.8	30.6

Size	324 - 326T		364 - 365T		404 - 405T		444 - 445T		447T		449T	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
54	29.3	37.5	30.6	37.5	32.4	37.8	34.1	39.6	34.1	39.6	--	--
60	29.8	38.7	31.1	38.6	33.0	38.8	34.6	40.5	34.3	40.5	34.3	40.5