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ENGINEERING SUPPLEMENT  
ES-572  
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## ARRANGEMENT 9/9E/9F FRP 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**.
- The centers shown are correct for Arr. 9R (motor right...conduit box up) only. Consult **nyb** on Arr. 9L.
- When selecting belt centers, avoid min. and max. extremes to assure ease of mounting and tension. Also, min. and max. are total adjustment. Some allowance for installation and stretch must be included when selecting drives.
- Consult the FRP Fume Exhauster or General-Purpose Fume Exhauster bulletin to determine maximum motor frame size capability for each fan size. In all cases, maximum motor frame size is limited to maximum C-NW dimension. For small motors, be sure to check starting torque ( $WR^2$ ) requirements.
- Consult **nyb** for assistance calculating minimum Arr. 1 belt center distances.

### FRP FUME EXHAUSTERS ARRANGEMENT 9/9E (Motor Position Right Only)

Fan Size	Motor Frame Size							
	56 143T & 145T	182T 184T	213T 215T	254T 256T	284T 286T	324T 326T	364T 365T	364T 365T
181	14.3 - 17.3	16.0 - 18.6	17.0 - 19.0	18.8 - 21.8	--	--	--	<b>Heavy Duty Slide Rails</b>
241	17.3 - 20.3	19.0 - 22.0	20.0 - 23.0	22.0 - 25.0	23.0 - 27.0	24.8 - 28.8	--	
301	20.0 - 23.0	21.5 - 24.5	23.0 - 26.0	24.0 - 28.0	25.5 - 29.5	27.5 - 31.5	28.5 - 33.5	30.0 - 34.0
361	16.0 - 19.0	18.0 - 21.0	20.0 - 23.0	21.0 - 25.0	23.0 - 27.0	25.0 - 29.0	26.0 - 31.0	28.0 - 31.0
421	18.0 - 21.0	20.0 - 23.0	22.0 - 25.0	23.0 - 27.0	25.0 - 29.0	27.0 - 31.0	28.0 - 33.0	29.0 - 34.0
481	20.0 - 23.0	21.0 - 24.0	23.0 - 26.0	25.0 - 29.0	26.0 - 30.0	28.0 - 32.0	30.0 - 35.0	29.0 - 34.0
541	21.0 - 24.0	22.0 - 25.0	24.0 - 27.0	26.0 - 30.0	27.0 - 31.0	29.0 - 33.0	31.0 - 36.0	31.0 - 36.0
601	18.0 - 21.0	20.0 - 23.0	22.0 - 25.0	24.0 - 28.0	25.0 - 29.0	27.0 - 31.0	29.0 - 34.0	31.0 - 36.0

### FRP FUME EXHAUSTERS AND GENERAL-PURPOSE FUME EXHAUSTERS ARRANGEMENT 9F Sizes 36 through 60

Size	Discharge	Motor Frame Size	Belt Centers
361	TH	364T - 365T	34.6 - 38.5
		404T - 405T	35.2 - 40.0
	BH/BAU	364T - 365T	39.1 - 42.5
421	TH	404T - 405T	39.2 - 43.6
		444T - 445T	36.9 - 40.5
	BH/BAU	364T - 365T	37.2 - 41.8
481	TH	404T - 405T	38.2 - 42.0
		444T - 445T	38.7 - 43.5
	BH/BAU	364T - 365T	39.4 - 44.8
421	TH	404T - 405T	43.6 - 47.0
		444T - 445T	43.7 - 48.0
	BH/BAU	364T - 365T	44.0 - 48.9
361	TH	404T - 405T	41.1 - 44.6
		444T - 445T	41.3 - 45.8
	BH/BAU	364T - 365T	41.7 - 46.8
481	TH	404T - 405T	43.1 - 46.8
		444T - 445T	43.4 - 48.1
	BH/BAU	364T - 365T	44.0 - 49.2
421	TH	404T - 405T	50.1 - 53.3
		444T - 445T	50.0 - 54.1
	BH/BAU	364T - 365T	50.2 - 54.9
361	TH	404T - 405T	46.9 - 50.3
		444T - 445T	47.0 - 51.3
	BH/BAU	364T - 365T	47.3 - 52.2

Size	Discharge	Motor Frame Size	Belt Centers
541	TH	364T - 365T	47.3 - 51.0
		404T - 405T	47.6 - 52.3
	BH/BAU	444T - 445T	48.2 - 53.3
421	TH	364T - 365T	55.7 - 58.8
		404T - 405T	55.5 - 59.5
	BH/BAU	444T - 445T	55.7 - 60.2
361	TH	364T - 365T	52.0 - 55.4
		404T - 405T	52.0 - 56.3
	BH/BAU	444T - 445T	52.4 - 57.2
601	TH	364T - 365T	52.4 - 55.9
		404T - 405T	52.5 - 57.1
	BH/BAU	444T - 445T	53.0 - 58.0
421	TH	364T - 365T	62.3 - 65.3
		404T - 405T	62.0 - 65.9
	BH/BAU	444T - 445T	62.2 - 66.5
361	TH	364T - 365T	57.8 - 61.0
		404T - 405T	57.7 - 61.9
	BH/BAU	444T - 445T	58.0 - 62.6

**FRP GENERAL-PURPOSE FUME EXHAUSTERS  
ARRANGEMENT 9 (Motor Position Right Only)\*  
Sizes 12 through 60**

Fan Size	Motor Frame Size								
	56	143T 145T	182T 184T	213T 215T	254T 256T	284T 286T	324T 326T	364T 365T	364T 365T
12	12.1 - 13.2	12.0 - 13.2	13.7 - 14.3	--	--	--	--	--	Heavy Duty Slide Rails
15	13.5 - 16.4	13.5 - 16.4	15.1 - 16.6	--	--	--	--	--	
18	14.3 - 18.9	14.3 - 18.8	15.9 - 18.9	17.0 - 19.0	18.8 - 19.8	--	--	--	--
24	17.3 - 25.9	17.3 - 25.9	22.3 - 25.8	21.6 - 25.8	21.8 - 25.8	--	--	--	--
30	24.0 - 32.2	24.0 - 32.2	25.8 - 32.0	24.8 - 31.9	24.9 - 31.8	24.8 - 31.8	--	--	--
36	28.2 - 39.8	28.1 - 39.9	30.6 - 39.7	30.6 - 39.5	29.4 - 39.3	29.4 - 39.2	30.8 - 39.3	--	--
42	--	16.2 - 36.9	19.6 - 36.3	19.6 - 35.8	21.2 - 35.3	22.3 - 35.0	24.4 - 34.7	25.8 - 34.4	26.1 - 34.7
48	--	16.2 - 42.4	19.6 - 41.8	19.6 - 41.3	21.2 - 40.7	22.3 - 40.2	24.4 - 39.8	25.8 - 39.4	26.4 - 39.6
54	--	17.3 - 48.0	21.4 - 47.3	20.7 - 46.8	22.4 - 46.2	23.4 - 45.7	25.5 - 45.3	26.9 - 44.5	27.2 - 44.8
60	--	17.3 - 52.8	21.4 - 52.1	20.7 - 51.5	22.4 - 50.8	23.4 - 50.3	25.5 - 49.8	26.9 - 49.3	27.3 - 49.5

\* Note: Allowances already included for installation and stretch.

**ARRANGEMENT 10 FRP 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**.
- 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 drives.
- Consult the appropriate product bulletin to determine maximum motor frame size capability for each fan size. 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.

**FRP RADIAL FUME EXHAUSTERS  
AND FRP PRESSURE BLOWERS  
ARRANGEMENT 10**

Fan Size	Motor Frame Size					Maximum Sheave Size	
	48	56	182T	213T	254T	O.D.	Width
		143T & 145T	184T	215T	256T		
RFE 160	8.5 - 10.5	8.0 - 10.0	8.0 - 9.3	--	--	5.5	3.0
RFE 200	8.5 - 10.5	8.0 - 10.0	8.0 - 9.3	--	--	5.5	3.0
RFE 315	14.1 - 16.2	13.7 - 15.7	12.7 - 14.7	12.0 - 14.0	--	9.0	3.25
RFE 400	15.6 - 19.7	15.1 - 19.2	14.1 - 18.2	13.4 - 17.5	12.4 - 16.6	9.8	3.75
RFE 500	18.0 - 22.2	17.5 - 21.7	16.5 - 20.7	15.8 - 20.0	14.8 - 19.0	11.4	4.125
FPB 18	--	10.5 - 12.0	9.5 - 11.0	9.5 - 10.5	--	7.0	3.0
FPB 22	--	16.0 - 12.0	15.0 - 18.0	14.0 - 17.0	13.0 - 16.0	11.0	3.75
FPB 28	--	18.0 - 21.0	17.0 - 20.0	16.0 - 19.0	15.0 - 18.0	11.5	4.125

**FRP FUME EXHAUSTERS AND  
FRP GENERAL - PURPOSE FUME EXHAUSTERS  
ARRANGEMENT 10**

Fan Size	Motor Frame Size							Maximum Sheave Size	
	48	56	182T	213T	254T	284T	324T	O.D.	Width
		143T & 145T	184T	215T	256T	286T			
12	8.5 - 10.5	8.0 - 10.0	8.0 - 9.3	--	--	--	--	5.5	3.0
15	10.6 - 12.6	10.1 - 12.1	9.1 - 11.1	9.4 - 10.7	--	--	--	7.0	3.0
18	14.1 - 16.2	13.7 - 15.7	12.7 - 14.7	12.0 - 14.0	--	--	--	9.0	3.25
24	18.0 - 22.2	17.5 - 21.7	16.5 - 20.7	15.8 - 20.0	14.8 - 19.0	--	--	11.4	4.125
60	--	22.0 - 26.2	21.0 - 25.2	20.3 - 24.5	19.3 - 23.5	18.5 - 22.7	--	9.8	5.25
36	--	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