

FRP FUME EXHAUSTERS

- Capacities to 84,000 CFM
- Two wheel choices
- Static pressures to 25"WG
- Temperatures to 250°F.



Fiberglass-reinforced-plastic fans for handling corrosive gas streams in a wide variety of process applications...



THE NEW YORK BLOWER COMPANY
7660 Quincy Street
Willowbrook, IL 60527-5530

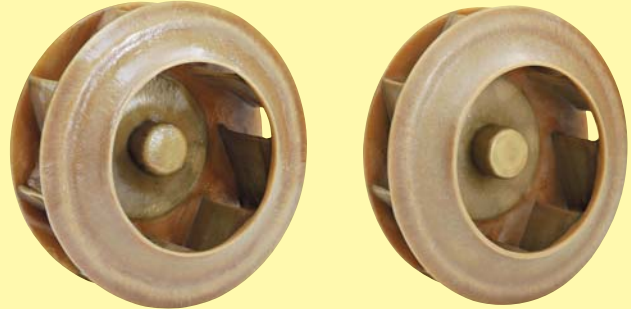
Visit us on the Web: <http://www.nyb.com>
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FRP FUME EXHAUSTERS



Size 182
Arrangement 1
FRP Fume Exhauster,
counterclockwise, Bottom Angular Up,
with optional unitary base, inspection
port, outlet damper, inlet box.

BACKWARDLY INCLINED WHEELS



MEDIUM PRESSURE [MP] HIGH PRESSURE [HP]

FRP Fume Exhauster backwardly inclined wheels provide high efficiency and quiet operation with a non-overloading horsepower characteristic. Made of premium-quality, corrosion-resistant vinyl ester resin. Metal hub, shaft, and stainless-steel fasteners are encapsulated in full-thickness FRP.

DESIGN FEATURES

The New York Blower Company's FRP Fume Exhauster [FE] is designed so that all parts exposed to the airstream are constructed of high-quality corrosion-resistant fiberglass reinforced plastic. The FE is resistant to attack from most chemicals and is ideally suited to applications in the chemical, pulp and paper, wastewater-treatment, fertilizer, pharmaceutical, and metals industries.

- Eight sizes: 18", 24", 30", 36", 42", 48", 54" and 60" wheel diameters.
- Capacities to 84,000 CFM.
- Static pressures to 25"WG.
- Temperatures to 250°F.
- Choice of arrangements: Sizes 182 through 362 [medium-pressure fans only] available in Arrangement 10. Sizes 182 through 602 available in Arrangements 1, 8, 9, and 9-E. Sizes 362 through 602 also available in Arrangement 9-F.

CONSTRUCTION FEATURES

- Housing is made of premium-quality, corrosion-resistant polyester resin. By using male molds, housing interior surfaces are smooth, improving efficiency and reducing the potential for material build-up.
- Flanged outlet for easy in-duct connection.
- Slip inlet suitable for flexible-sleeve inlet connection.
- All Arrangement 10 fans, and all other arrangements up to Size 302, are rotatable to any of five discharge positions.
- Lifting eyes on all fans for ease of handling.
- Welded steel base is constructed of heavy-gauge components for structural strength and durability. Arrangement 10 base features self-contained motor platform.
- Neoprene gasketing at all bolted FRP joints.
- Fan exterior is coated with gray epoxy enamel.
- Close-fitting, Teflon® shaft-hole closure limits the free exchange of gases through the shaft-hole opening. [Teflon is a registered trademark of DuPont.]
- FE wheels are dynamically balanced before final assembly. After assembly, all fans are given a final trim balance check at the specified running speed.
- Meets ASTM D 4167 when fan is purchased with surface veil.



AMCA SEAL

The New York Blower Company certifies that the FRP Fume Exhausters shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

ACCESSORIES/MODIFICATIONS

- **Parallel-blade outlet damper**—for flow control. All airstream parts are constructed of FRP.
- **Flanged outlet drilling**—for ease of direct connection; dimensions shown on page 12.
- **Unitary base**—available with spring or rubber-in-shear [R-I-S] isolators. Isolation rails are available for Arrangement 10 fans without inlet boxes.
- **Flanged inlet**—plain or drilled [see page 12 for drilling pattern].
- **Drain**—threaded FRP drain with PVC plug, 1" npt, at lowest point of housing scroll.
- **Inspection port**—allows examination of fan interior. Located on drive-side half of housing at 2 or 10 o'clock, opposite discharge. Opening is 6" diameter on Sizes 182 and 242, 8" on Sizes 302 through 422, and 12" on Sizes 482 through 602.
- **Positive screw adjustment**—two threaded rods provide easy motor platform/V-belt adjustment. [Arrangement 10 fans only].
- **Arrangement 10 weather cover/belt guard**—provides motor and drive protection, and can be easily removed for inspection and maintenance. Louvered side panels provide ample motor ventilation.
- **Safety equipment**—belt guards and shaft and bearing guards are available for Arrangements 1, 9, 9-E, and 9-F fans, and coupling guards for Arrangement 8 fans.
- **Inlet box** [includes support leg]—for Sizes 182 through 542. Minimizes losses at inlet. See pages 4 and 13 for details.
- **Cleanout door**—provides access for cleaning and inspecting fan interior.
- **Shaft seal**—Viton® elements in FRP casing. Type 316 SST sleeve covers shaft for use with seal. Teflon seal and Hastelloy C-276 sleeve available. [Viton is a registered trademark of DuPont Dow Elastomers.]
- **Surface veil**—for added protection against certain corrosives. Provides compliance to ASTM D 4167.
- **All-vinyl ester airstream**—provides additional protection from certain corrosives.
- **Graphite impregnation**—to control static electricity. The gas-stream surfaces are grounded to the fan base.
- **Narrow-width construction**—to optimize the point of operation. Available on all sizes to 75% of full width on medium pressure fans and 67% on high pressure fans. Maximum safe wheel speed increases as width decreases.



Size 182 Arrangement 1
FRP Fume Exhauster,
counterclockwise Bottom Angular Up,
with optional unitary base,
inspection port, inlet box,
outlet damper, motor,
drive, and guards.

Size 302
Arrangement 9
FRP Fume Exhauster,
clockwise
Top Horizontal, with
optional cleanout
door, inlet flange,
flange drilling,
graphite
impregnation,
and guards.



SAFETY EQUIPMENT

Safety accessories are available from **nyb**, but selection of the appropriate devices is the responsibility of the system-designer who is familiar with the particular installation, or application, and can provide for guards for all exposed moving parts as well as protection from access to high-velocity airstreams. Neither **nyb** nor its sales representatives is in a position to make such a determination. Users and/or installers should read "Recommended Safety Practices for Air Moving Devices" as published by the Air Movement and Control Association International, Arlington Heights, Illinois.

INLET BOXES

FOR FRP FUME EXHAUSTERS

Optimum fan performance requires straight airflow into the fan inlet. Due to space constraints, this is not always possible. Elbows are used to change airflow direction. However, when airflow is turned 90° at the fan inlet, there is a loss of fan performance due to eccentric loading of the fan wheel. **nyb's** aerodynamically designed inlet box minimizes the entry loss and allows accurate prediction of the loss so it can be included in overall system calculation. See page 13 for dimensions.

STANDARD FEATURES

FRP inlet boxes are offered for Sizes 182 through 542 FRP Fume Exhausters. The inlet box is designed to attach to the inlet flange of the fan. A support leg with mounting plate is standard on all inlet boxes. When furnished complete with a unitary base or isolation base, the base must be extended to meet the support leg. The inlet box/support leg assembly is not intended to support additional weight from ductwork or any other system components.

The use of male molds and smooth resin-rich surfaces ensures efficient performance and excellent corrosion resistance.

The resin system is the same high-quality, corrosion-resistant system used in **nyb** FRP Fume Exhauster housings.

FRP inlet boxes are made in two sections, gasketed and bolted together with 316 stainless-steel hardware. Boxes can be fitted with drains.

An epoxy-based coating is applied to the exterior surface to be consistent with the finish on the exterior surface of the fan.

FRP inlet boxes are normally shipped separately for ease of handling.

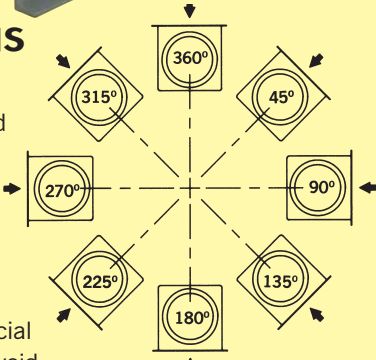


INLET BOX POSITIONS

Position of inlet box is determined from drive side of fan.

Inlet-box positions 135°, 180°, and 225° often require special construction to avoid interference with the fan support structure.

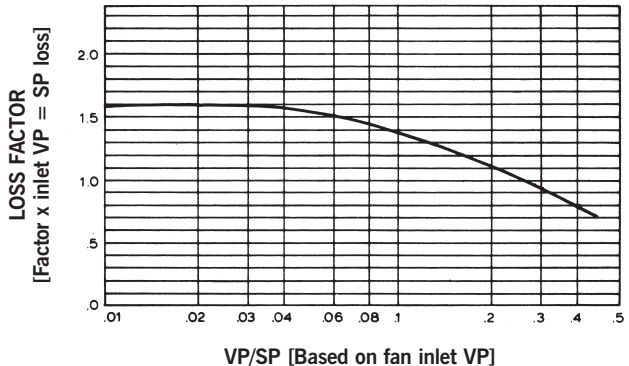
When other accessories such as unitary base are required, a special layout is necessary.



CORRECTION FACTORS FOR DETERMINING PERFORMANCE OF FRP FUME EXHAUSTERS WITH INLET BOXES

Fans equipped with inlet boxes require selection at a pressure that compensates for losses occurring as a result of the inlet-box configuration. The required steps for selection and an example are shown on the bottom of page 5.

CHART I



How to Use Performance Tables

For a given fan size, CFM, and static pressure, performance tables can be used to obtain outlet velocity, wheel RPM, and BHP. If capacities are at conditions other than 70°F, sea level, or standard density [.075 lbs./cu.ft.], correction factors must be applied to static pressure and BHP.

STEPS TO FOLLOW	STEPS	EXAMPLE:
		Size 242 Medium Pressure Fan, Arrangement 1, to handle 9000 CFM at 8" WG at 200°F. at sea level.
Determine fan static pressure at standard conditions. If temperature or altitude is involved, correct for air density [see Charts II and III].	1	Chart II shows 1.25 correction factor for 200°F. 8" WG x 1.25 = 10" WG at 70°F.
Select size, RPM, and BHP of fan from capacity tables.	2	Capacity table shows 2204 RPM, 19.6 BHP for Size 242 MP fan at 9000 CFM at 10" WG at 70°F.
Check the maximum safe speed of the fan shown below in Chart IV.	3	Maximum safe speed of Size 242 medium-pressure fan, Arrangement 1, is 2700 RPM at 70°F.
Apply temperature maximum safe speed factors from Chart V to maximum safe speed of fan from Step 3 to determine new maximum safe speed when temperature is involved.	4	Chart V shows .94 correction factor for 200°F. .94 x 2700 RPM = 2538 RPM at 200°F.
Determine actual performance by dividing static pressure and BHP* from Step 2 by the correction factor in Step 1.	5	Actual performance: 9000 CFM at 8" WG at 2204 RPM at 15.8 BHP at 200°F.

*NOTE: Motor should be selected for BHP @ 70°F. to insure proper operation during "cold starts."

CHART II CORRECTION FACTORS FOR TEMPERATURE [°F.]	
Temperature	Factor
-50	.77
-25	.82
0	.87
20	.91
40	.94
70	1.00
100	1.06
130	1.11
160	1.17
200	1.25
250	1.34

CHART III CORRECTION FACTORS FOR ALTITUDE [feet above sea level]	
Altitude	Factor
0	1.00
1000	1.04
2000	1.08
3000	1.12
4000	1.16
5000	1.20
6000	1.25
7000	1.30
8000	1.35
9000	1.40
10000	1.45

CHART IV MAXIMUM SAFE WHEEL SPEED AT 70°F. [RPM]		
Size	All arrangements	
	MP	HP
182	3710	4000
242	2700	3300
302	2155	2650
362	1725	2100
422	1475	1840
482	1250	1500
542	1045	1300
602	945	1170

CHART V TEMPERATURE [°F.] SAFE SPEED FACTORS	
Temperature	Factor
70-150	1.00
200	.94
225	.86
250	.73

Note: 250°F. is maximum allowable temperature.

NOTE: If correction for both temperature and altitude is required, multiply factors from Chart II and III together: 3000 ft. and 200°F. 1.12 x 1.25 = 1.40 [combined factor].

HOW TO CALCULATE PRESSURE LOSS WHEN USING AN INLET BOX

STEPS TO FOLLOW	STEPS	EXAMPLE:
		Required: Size 242 Medium Pressure Fan for 9000 CFM at 10" SP at 70°F.
Determine air velocity at fan inlet: CFM ÷ fan inlet area = air velocity (V)	1	9000 CFM ÷ 3.14 [fan inlet area, see page 13] = 2866 FPM.
Determine velocity pressure at fan inlet. VP = (V ÷ 4005) ² x (density ÷ .075)	2	(2866 ÷ 4005) ² = .51" VP
Determine VP/SP ratio at conditions.	3	.51 VP ÷ 10" SP = .05 VP/SP
Determine VP loss factor from Chart I [see page 4].	4	VP factor at .05 VP/SP = 1.55 [from Chart I]
Determine inlet-box loss by multiplying the VP factor from Step 4 times the velocity pressure from Step 2.	5	1.55 x .51" VP = .79" loss
Add the loss from Step 5 to the required system SP and select fan accordingly.	6	.79 + 10" = 10.79" SP. Select fan, motor, and drive for 9000 CFM at 10.79" SP at 70°F.

NOTE: The above procedure does not consider the slight change in efficiency. Actual operation will require slightly lower horsepower than that indicated.

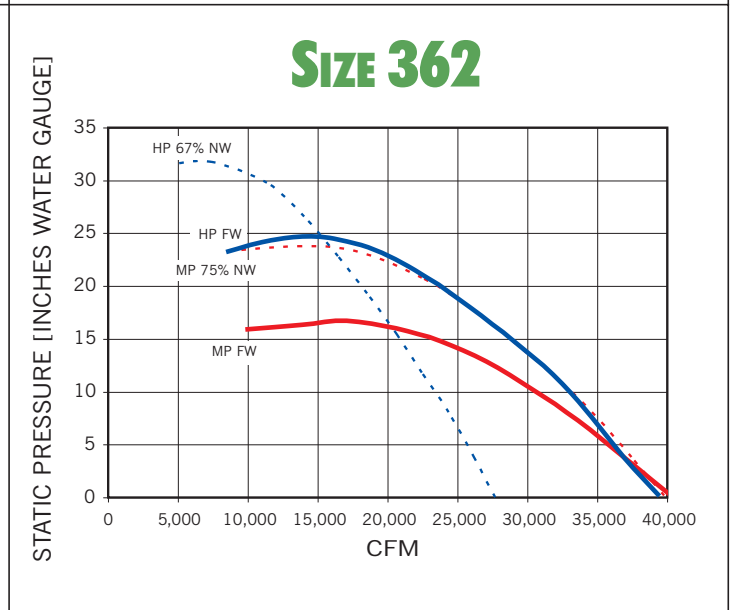
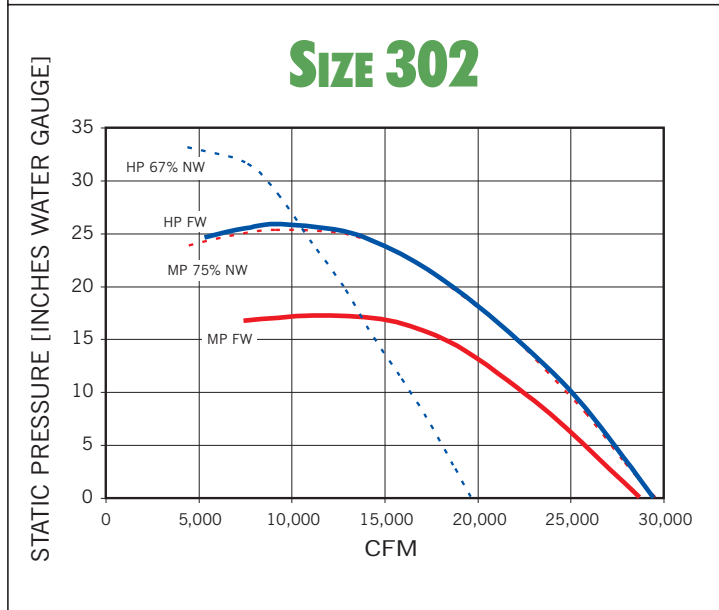
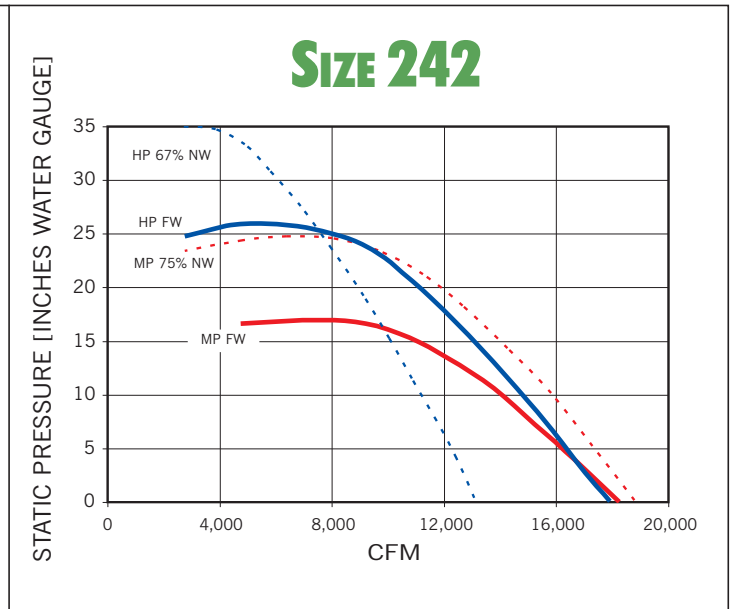
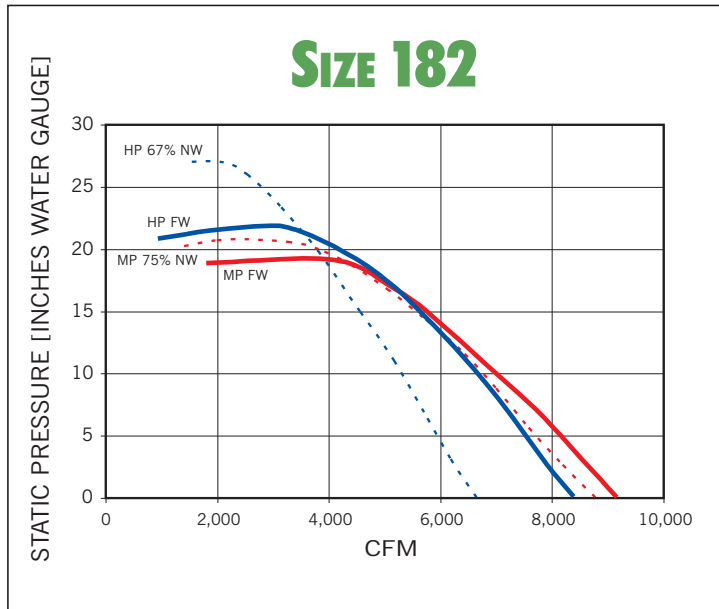
QUICK-SELECTION CURVES

The following charts show comparative performance curves for full-width and 75% narrow-width Medium Pressure [MP], and full-width and 67% narrow-width High Pressure [HP] FRP Fume Exhausters. These curves represent the maximum static pressure and capacity available at each fan's maximum safe operating speed. The charts are intended to assist in initially selecting the proper fan size and design.

Narrow-width fans can generate higher static pressures through higher operating speeds. Maximum safe fan

speeds increase as the wheel width decreases [see maximum safe wheel speed chart for narrow-width wheels on page 11].

For specific operating points of full-width Medium Pressure and High Pressure FRP Fume Exhausters, refer to the performance tables on pages 6 through 9. For points of operation not shown in those tables, or for performance of narrow-width fans, refer to The New York Blower Company Electronic Catalog for further details.



LEGEND

- MP full-width
- HP full-width
- - - MP 75% narrow-width
- - - HP 67% narrow-width

Performance certified is for installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

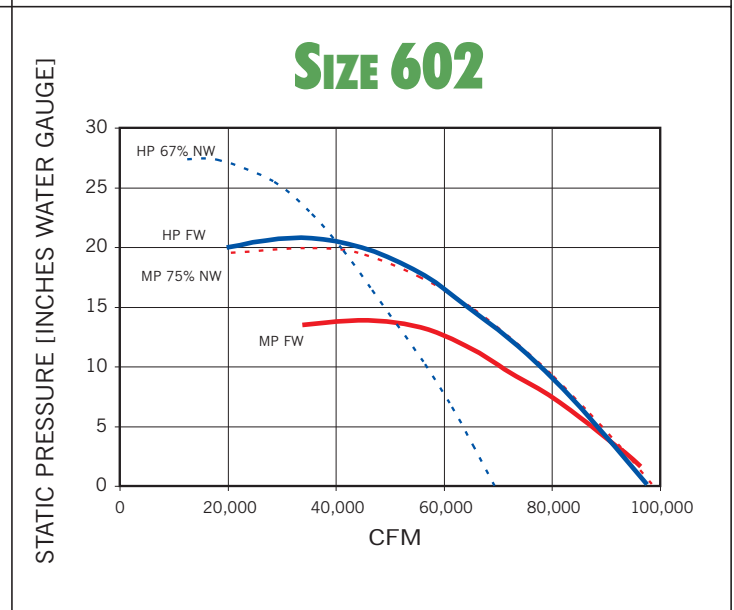
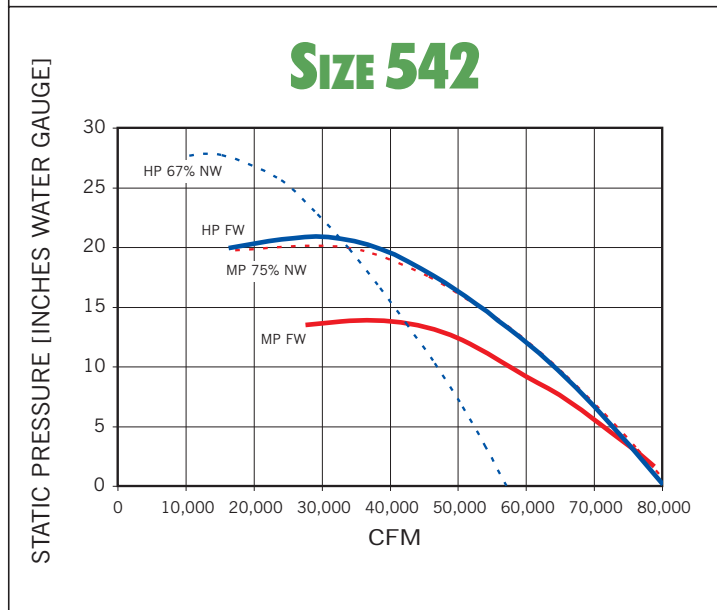
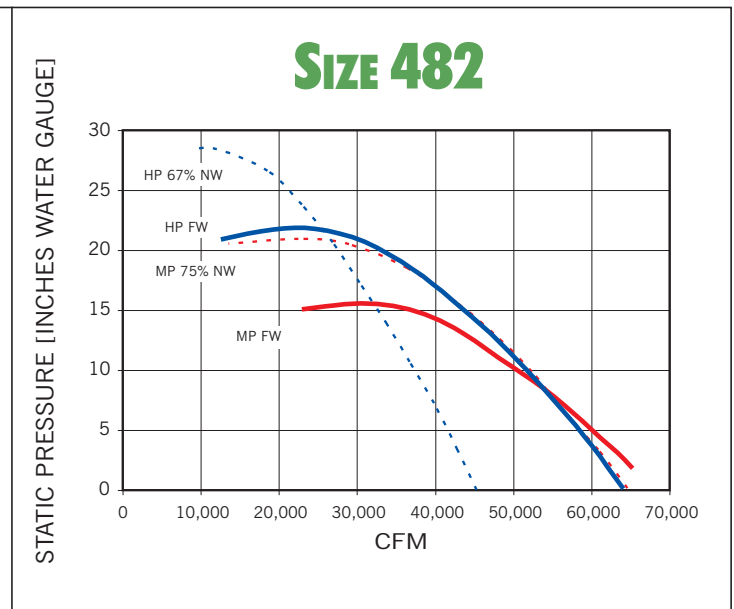
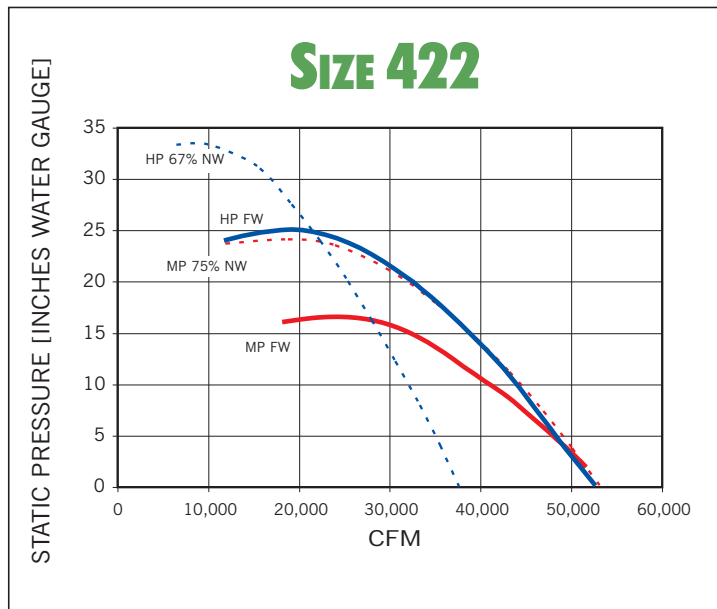
NARROW-WIDTH CONSTRUCTION

Narrow-width wheel construction is available on FRP Fume Exhausters to 75% of full-width on Medium Pressure Fans and to 67% of full-width on High Pressure Fans. Narrow-width construction permits “fine tuning” of fan performance, which is especially critical for Arrangement 8 fans.

Using state-of-the-art design software, narrow-width construction now also enables higher static pressures through higher operating speeds. Chart VI shows the maximum safe speed for narrow-width wheels. The maximum safe speed of wheels increases as the width decreases. Contact your New York Blower representative or refer to your **nyb** Electronic Catalog for additional information.

CHART VI MAXIMUM SAFE WHEEL SPEED FOR NARROW-WIDTH WHEELS AT 70°F

Size	RPM	
	75% NW-MP	67% NW-HP
182	4000	4600
242	3300	3900
302	2650	3145
362	2100	2475
422	1840	2205
482	1500	1780
542	1300	1555
602	1170	1400



LEGEND

- MP full-width
- HP full-width
- - - - MP 75% narrow-width
- - - - HP 67% narrow-width

Performance certified is for installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

SPECIFICATIONS

Size	Fan type	Shaft diameter [inches]					Bearings										
		Full-width fans			Narrow-width fans		Full-width fans					Narrow-width fans					
		Arr. 1, 8, 9	Arr. 9-E, 9-F	Arr. 10	Arr. 1, 8, 9	Arr. 9-E, 9-F	Arr. 1, 9		Arr. 8	Arr. 9-E, 9-F		Arr. 10	Arr. 1, 8, 9		Arr. 8	Arr. 9-E, 9-F	
							Inboard	Outboard	Inboard/Outboard	Inboard	Outboard	Inboard/Outboard	Inboard	Outboard	Inboard/Outboard	Inboard	Outboard
182	MP HP	17/16 17/16	17/16 17/16	11 1/16 —	17/16 11 1/16	11 1/16 11 1/16	A B	E E	A B	A B	E E	A —	A D	E D	A D	A D	E D
242	MP HP	17/16 1 11/16	11 1/16 1 11/16	1 15/16 —	1 15/16 1 15/16	1 15/16 2 3/16	A D	E E	A D	A D	E E	A —	E D	E D	D D	D D	E D
302	MP HP	1 11/16 1 15/16	1 11/16 1 15/16	2 3/16 —	2 3/16 2 3/16	2 3/16 2 7/16	A E	E E	A D	A E	E E	C —	D E	E E	D D	D D	E D
362	MP HP	1 15/16 2 3/16	2 3/16 2 7/16	2 3/16 —	2 7/16 2 11/16	2 11/16 2 15/16	D E	E E	D D	D E	E E	C —	D D	E D	D D	D D	E D
422	MP HP	2 7/16 2 1 1/16	2 1 1/16 2 1 1/16	— —	2 1 1/16 3 7/16	3 7/16 3 7/16	E E	E E	D D	E E	E E	— —	F F	F F	D D	E F	E F
482	MP HP	2 1 1/16 2 1 1/16	2 1 1/16 2 1 1/16	— —	3 7/16 3 7/16	3 7/16 3 15/16	E E	E E	D D	E E	E E	— —	E E	E E	E F	E F	E F
542	MP HP	2 1 1/16 3 7/16	3 7/16 3 7/16	— —	3 15/16 3 15/16	3 15/16 4 7/16	E E	E E	E F	E E	E E	— —	E E	E E	F F	E F	E F
602	MP HP	2 1 1/16 3 7/16	3 7/16 3 7/16	— —	3 15/16 3 15/16	3 15/16 4 7/16	E E	E E	E F	E E	E E	— —	E E	E E	F F	E F	E F

A—Link-Belt P3-U200 ball bearing. B—Sealmaster SPM ball bearing. C—Sealmaster MPD ball bearing. D—Link-Belt P-U300 ball bearing. E—Link-Belt P-B22400 spherical roller bearing. F—Link-Belt P-LB6800 spherical roller bearing. **nyb** reserves the right to substitute bearings of equal quality.

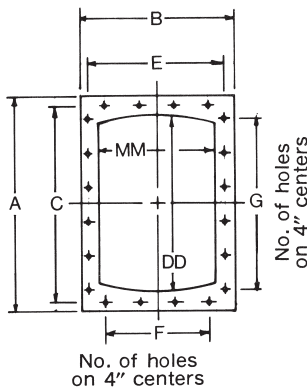
Size	Weights [lbs.]															Wheel WR ² [lb.-ft. ²]	
	Bare fan										Wheel and shaft assembly						
	Arr. 1, 9		Arr. 8		Arr. 9-E		Arr. 9-F		Arr. 10	Arr. 1, 8, 9		Arr. 9-E, 9-F		Arr. 10	MP	HP	
	MP	HP	MP	HP	MP	HP	MP	HP	MP	MP	HP	MP	HP	MP	MP	HP	
182	235	195	310	270	275	235	NA	NA	285	33	31	36	34	40	7	5	
242	430	395	615	585	530	490	NA	NA	450	56	58	67	64	70	23	21	
302	720	645	985	910	775	695	NA	NA	700	86	90	90	96	103	52	48	
362	1280	1400	OA	OA	1380	1540	1725	1885	1020	142	149	164	174	149	131	118	
422	1695	1870	OA	OA	1825	2000	2255	2430	NA	282	286	311	301	NA	369	345	
482	2150	2315	OA	OA	2225	2445	2695	2910	NA	369	355	380	386	NA	619	576	
542	3070	3285	OA	OA	3255	3450	3950	4140	NA	597	614	662	638	NA	1276	1188	
602	3495	3715	OA	OA	3695	3900	4385	4590	NA	660	675	726	699	NA	1886	1756	

NA—Not available. OA—On application.

FLANGED OUTLET DIMENSIONS [Inches]

Furnished as standard [without holes].

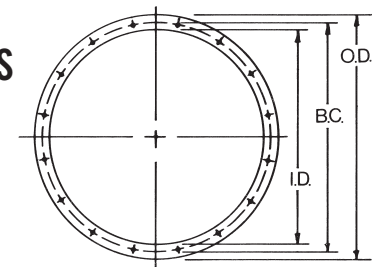
Available with holes drilled as shown.



FLANGED INLET DIMENSIONS [Inches]

Furnished as an option [without holes].

Available with holes drilled as shown.



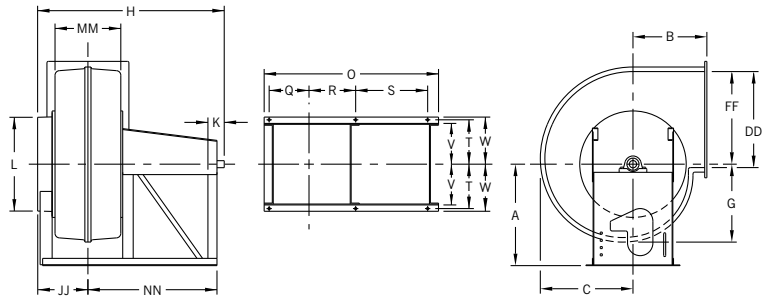
Size	A	B		C	DD	E		F		G	MM		Hole dia.	Flange thickness	Size	O.D.	B.C. [bolt circle]	I.D.	No. and size of holes	Flange thickness
		MP	HP			MP	HP	MP	HP		MP	HP								
182	25 1/8	18	16 1/4	23 3/4	20 3/4	16 5/8	14 7/8	4	2	6	13 5/8	11 7/8	7/16	1/2	182	22 3/8	21	18	16 - 7/16	1/2
242	32 1/8	22 5/8	20 3/8	30 3/4	27 3/4	21 1/4	19	4	4	8	18 1/4	16	7/16	1/2	242	28 3/8	27	24	20 - 7/16	1/2
302	38 3/8	26 3/4	24	37	34	25 3/8	22 5/8	6	4	10	22 3/8	19 5/8	7/16	1/2	302	34 3/8	33	30	28 - 7/16	1/2
362	45 7/8	31 5/8	28 1/2	44 1/2	41 1/2	30 3/4	27 1/8	6	6	12	27 1/4	24 1/8	7/16	5/8	362	40 3/8	39	36	32 - 7/16	1/2
422	54 1/8	37 3/4	34 3/8	51 3/4	47 3/4	35 3/8	31 3/4	8	6	12	31 3/8	27 3/4	9/16	5/8	422	46 3/8	45	42	36 - 7/16	5/8
482	60 7/8	42 1/4	38 1/8	58 1/2	54 1/2	39 7/8	35 3/4	10	8	14	35 7/8	31 3/4	9/16	5/8	482	54 3/8	52	48	44 - 9/16	5/8
542	68	46 7/8	42 1/8	65 5/8	61 5/8	44 1/2	39 3/4	10	8	16	40 1/2	35 3/4	9/16	5/8	542	60 3/8	58	54	44 - 9/16	5/8
602	74 1/2	51 1/4	46 1/8	72 1/8	68 1/8	48 7/8	43 3/4	12	10	18	44 7/8	39 3/4	9/16	5/8	602	66 3/8	64	60	52 - 9/16	5/8

Tolerance: ± 1/64"

ARRANGEMENT 10 FANS

L is OD of collar. DD, FF, and MM are inside dimensions. JJ is from centerline over inlet collar.
Dimensions not to be used for construction unless certified.

DIMENSIONS [INCHES] SIZES 182-362 ROTATABLE HOUSINGS

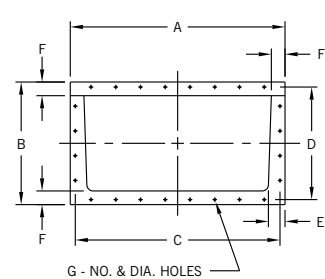
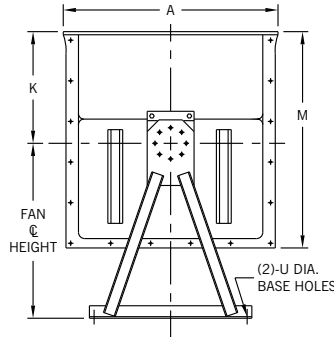
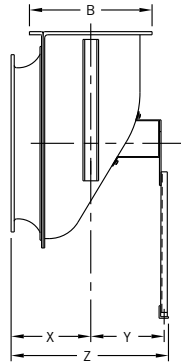
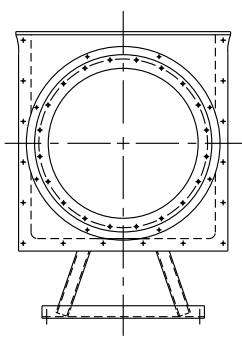


Size	A*	B	C	DD	FF	G	H	JJ	K	L	MM	NN	O
182	21 ¹ / ₄	16	20 ³ / ₈	20 ³ / ₄	19 ¹ / ₂	17 ³ / ₈	41 ¹ / ₈	10 ¹ / ₂	3 ¹ / ₂	18 ¹ / ₂	13 ⁵ / ₈	29	38 ³ / ₄
242	28	20	26 ³ / ₄	27 ³ / ₄	26 ¹ / ₄	22 ⁵ / ₈	50 ³ / ₈	12 ⁷ / ₈	4 ¹ / ₂	24 ¹ / ₂	18 ¹ / ₄	35 ³ / ₈	48 ¹ / ₈
302	32 ¹ / ₂	23 ¹ / ₂	32 ³ / ₈	34	32 ¹ / ₈	27 ³ / ₈	57 ¹ / ₂	16	5 ¹ / ₂	30 ⁵ / ₈	22 ³ / ₈	38 ³ / ₈	53 ¹ / ₄
362	39 ¹ / ₂	29	39 ¹ / ₄	41 ¹ / ₂	39 ¹ / ₈	33 ¹ / ₄	66 ¹ / ₂	19 ¹ / ₂	5 ¹ / ₂	36 ⁵ / ₈	27 ¹ / ₄	43 ⁷ / ₈	61 ¹ / ₄

Size	Q	R	S	T	V	W	a	b	c	d	Square key	Base hole dia.	Max. motor frame size		Max. motor limitation C-NW
													Open	TEFC	
182	8 ⁵ / ₈	9 ³ / ₈	17 ³ / ₈	9 ³ / ₈	8 ¹ / ₄	10 ¹ / ₄	19 ¹ / ₈	26 ³ / ₄	21	15 ³ / ₄	3/8	5/8	215T	215T	16 ⁵ / ₈
242	11 ³ / ₈	12 ¹ / ₂	19 ⁷ / ₈	12 ¹ / ₄	11	13	25	34 ¹ / ₄	27 ⁵ / ₈	20 ³ / ₈	1/2	5/8	256T	254T	18 ⁵ / ₈
302	13 ³ / ₈	14 ⁵ / ₈	20 ³ / ₄	13 ⁵ / ₈	11 ³ / ₄	14 ³ / ₄	30 ¹ / ₄	40 ⁷ / ₈	33 ¹ / ₄	24 ⁵ / ₈	1/2	5/8	284T	256T	19 ¹ / ₂
362	15 ⁷ / ₈	17 ¹ / ₈	23 ³ / ₄	16	14	17	36 ³ / ₄	49 ³ / ₄	40 ⁵ / ₈	29 ⁷ / ₈	1/2	5/8	284T	284T	22 ¹ / ₂

*Add 3" for Bottom Horizontal or Bottom Angular Up discharges. C-NW is maximum motor case length [NEMA C minus NEMA NW]. Tolerance: ± 1/16"

INLET BOXES FOR FRP FUME EXHAUSTERS



Dimensions not to be used for construction unless certified.

1. Rectangular flange is furnished without holes as standard...available with holes on 4" centers straddling centerlines.
2. Round flange is furnished with holes to match drilling pattern of flanged inlet.
3. Base-bar dimensions match fan base-bar dimensions.

DIMENSIONS [INCHES]

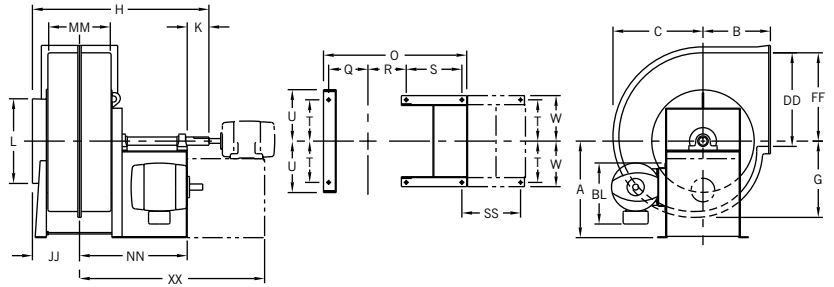
Size	Fan inlet area [ft. ²]	A	B	C	D	E	F	G		K	M	U		X	Y	Z	Wt. [lbs.]
								No.	Dia.			Base hole diameter					
												Arr. 1, 8, 9	Arr. 10				
182	1.76	26 ⁷ / ₈	15 ⁷ / ₈	25 ¹ / ₂	14 ¹ / ₂	29 ¹ / ₁₆	23 ¹ / ₁₆	16	7/16	13 ¹ / ₂	26 ¹ / ₂	9/16	5/8	10 ³ / ₄	9 ³ / ₄	21 ¹ / ₈	75
242	3.14	34 ³ / ₈	19 ⁵ / ₈	33	18 ¹ / ₄	21 ¹ / ₁₆	23 ¹ / ₁₆	24	7/16	17 ⁷ / ₈	34 ⁵ / ₈	3/4	5/8	12 ³ / ₄	11 ¹ / ₄	24 ⁵ / ₈	103
302	4.90	41 ⁷ / ₈	23 ¹ / ₂	40 ¹ / ₂	22 ¹ / ₈	27 ⁷ / ₈	23 ¹ / ₁₆	28	7/16	22 ³ / ₈	42 ⁷ / ₈	3/4	5/8	15 ³ / ₄	13 ³ / ₈	30	138
362	7.07	49 ³ / ₈	27 ¹ / ₄	48	25 ⁷ / ₈	3	23 ¹ / ₁₆	36	7/16	26 ⁷ / ₈	51 ¹ / ₈	7/8	5/8	18 ³ / ₄	14 ³ / ₄	34 ³ / ₈	184
422	9.62	56 ⁷ / ₈	31 ¹ / ₈	55 ¹ / ₂	29 ³ / ₄	3 ¹ / ₈	23 ¹ / ₁₆	44	7/16	31 ³ / ₈	59 ¹ / ₂	7/8	-	21 ³ / ₄	16 ¹ / ₂	39 ¹ / ₈	262
482	12.56	66 ⁵ / ₈	37 ¹ / ₈	64 ¹ / ₄	34 ³ / ₄	4 ¹ / ₄	33 ¹ / ₁₆	48	9/16	35 ⁷ / ₈	67 ³ / ₄	7/8	-	25 ¹ / ₈	21 ⁵ / ₈	48 ¹ / ₈	374
542	15.90	74 ¹ / ₈	40 ⁷ / ₈	71 ³ / ₄	38 ¹ / ₂	4 ³ / ₈	33 ¹ / ₁₆	56	9/16	40 ³ / ₈	76	1	-	28	23 ³ / ₈	52 ³ / ₄	575

Tolerance: ± 1/16"

ARRANGEMENTS 1, 8, 9, 9-E FANS

L is OD of collar. DD, FF, and MM are inside dimensions. JJ is from centerline over inlet collar.
Dimensions not to be used for construction unless certified.

DIMENSIONS [INCHES] SIZES 182-302 ROTATABLE HOUSINGS



ARRANGEMENTS 1, 8, 9, 9-E FANS

Size	A	B	C		DD	FF	G		JJ		K	L	MM	
			MP	HP			MP	HP	MP	HP			MP	HP
182	21 ³ / ₄	16	20 ³ / ₈	18 ³ / ₄	20 ³ / ₄	19 ¹ / ₂	17 ³ / ₈	15 ³ / ₄	10 ¹ / ₂	9 ⁵ / ₈	4	18 ¹ / ₂	13 ⁵ / ₈	11 ⁷ / ₈
242	28 ⁵ / ₈	20	26 ³ / ₄	25 ¹ / ₄	27 ³ / ₄	26 ¹ / ₄	22 ⁵ / ₈	21 ¹ / ₈	12 ⁷ / ₈	11 ³ / ₄	5	24 ¹ / ₂	18 ¹ / ₄	16
302	34 ³ / ₄	23 ¹ / ₂	32 ³ / ₈	30 ⁷ / ₈	34	32 ¹ / ₈	27 ³ / ₈	26	16	14 ⁵ / ₈	5 ¹ / ₂	30 ⁵ / ₈	22 ³ / ₈	19 ⁵ / ₈

Size	Q		R		T	U	W	a	b	c	d	BL†	Base hole diameter
	MP	HP	MP	HP									
182	8 ⁵ / ₈	7 ³ / ₄	8 ⁷ / ₈	8	9 ³ / ₈	10 ⁷ / ₈	10 ¹ / ₄	19 ¹ / ₈	26 ³ / ₄	21	15 ³ / ₄	17 ¹ / ₄	5 ⁸ / ₁₆
242	11 ¹ / ₂	10 ³ / ₈	11 ³ / ₄	10 ⁵ / ₈	12 ¹ / ₄	14 ³ / ₈	13 ¹ / ₂	25	34 ¹ / ₄	27 ⁵ / ₈	20 ³ / ₈	23 ¹ / ₄	3 ⁴ / ₁₆
302	13 ³ / ₄	12 ³ / ₈	13 ⁷ / ₈	12 ¹ / ₂	14 ⁷ / ₈	16 ⁷ / ₈	16 ¹ / ₈	30 ¹ / ₄	40 ⁷ / ₈	33 ¹ / ₄	24 ⁵ / ₈	28 ³ / ₄	3 ⁴ / ₁₆

† For Arrangement 9 and 9E fans only. BL = slide base (AL + BT) / 2 + motor AB.

Tolerance: ± 1/32"

ARRANGEMENTS 1, 8, 9 FANS

Size	H		NN		O		S	Max. motor limitation*	
	MP	HP	MP	HP	MP	HP		C-NW	Frame
	182	38 ⁵ / ₈	36 ⁷ / ₈	24 ¹ / ₈	23 ¹ / ₄	34 ¹ / ₄	32 ¹ / ₂	13 ³ / ₄	15 ¹ / ₂
242	46 ³ / ₄	44 ¹ / ₂	28 ⁷ / ₈	27 ³ / ₄	42 ¹ / ₂	40 ¹ / ₄	15 ¹ / ₄	18	215T
302	56 ¹ / ₂	53 ³ / ₄	35	33 ⁵ / ₈	50 ³ / ₄	48	19 ¹ / ₄	22	256T

* For Arrangement 9 fans only. C-NW is maximum motor case length [NEMA C minus NEMA NW].

Tolerance: ± 1/32"

ARRANGEMENT 8 FANS

Size	Motor frame	XX		SS
		MP	HP	
182	143T-145T	39	38 ¹ / ₈	15
	182T-184T	40 ¹ / ₂	39 ⁵ / ₈	16 ¹ / ₂
	213T-215T	43 ³ / ₈	42 ¹ / ₂	19 ³ / ₈
	254T-256T	47 ³ / ₄	46 ⁷ / ₈	23 ³ / ₄
242	182T-184T	46 ³ / ₈	45 ¹ / ₄	17 ¹ / ₂
	213T-215T	49 ¹ / ₄	48 ¹ / ₈	20 ³ / ₈
	254T-256T	53 ⁵ / ₈	52 ¹ / ₂	24 ³ / ₄
	284TS-286TS	55 ³ / ₈	54 ¹ / ₄	26 ¹ / ₂
302	324TS-326TS	57 ³ / ₈	56 ¹ / ₄	28 ¹ / ₂
	213T-215T	56 ³ / ₈	55	21 ³ / ₈
	254T-256T	60 ³ / ₄	59 ³ / ₈	25 ³ / ₄
	284TS-286TS	62 ¹ / ₂	61 ¹ / ₈	27 ¹ / ₂
302	324TS-326TS	64 ¹ / ₂	63 ¹ / ₈	29 ¹ / ₂

Tolerance: ± 1/32"

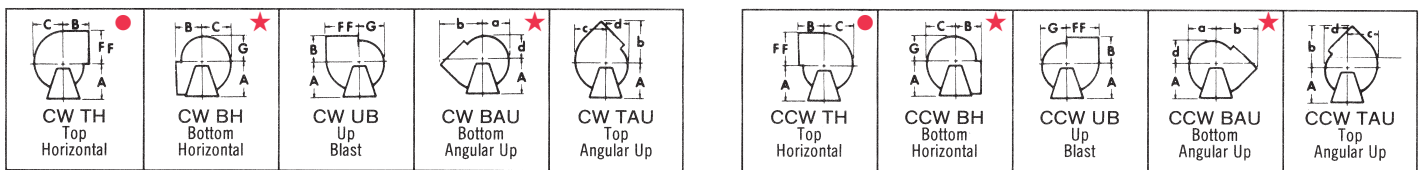
ARRANGEMENT 9-E FANS

Size	H		NN		O		S	Max. motor limitation	
	MP	HP	MP	HP	MP	HP		C-NW	Frame
	182	45 ¹ / ₈	43 ³ / ₈	30 ⁵ / ₈	29 ³ / ₄	40 ³ / ₄	39	20 ¹ / ₄	22
242	55 ³ / ₄	53 ¹ / ₂	37 ⁷ / ₈	36 ³ / ₄	51 ¹ / ₂	49 ¹ / ₄	24 ¹ / ₄	27	326T
302	63 ¹ / ₂	60 ³ / ₄	42	40 ⁵ / ₈	57 ³ / ₄	55	26 ¹ / ₄	29	365T

C-NW is maximum motor case length [NEMA C minus NEMA NW].

Tolerance: ± 1/32"

FAN DISCHARGES – VIEWED FROM DRIVE SIDE



Clockwise—angular discharges at 45°

Counterclockwise—angular discharges at 45°

★ If inlet box is furnished on Sizes 362 to 602 in Top Horizontal fan position, inlet box may extend below floor line.

★ Arrangement 10 fans with Bottom Horizontal or Bottom Angular Up discharges are equipped with a 3-inch channel sub-base...add 3" to the fan centerline height.

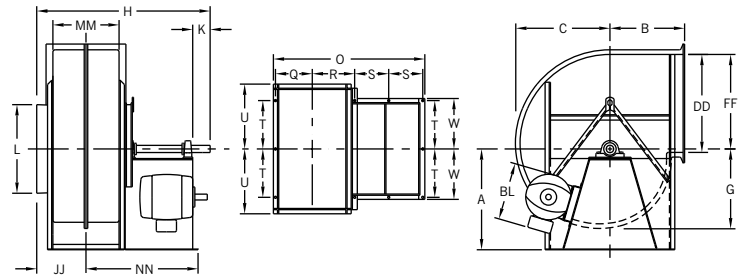
The New York Blower Company has a policy of continuous product development and reserves the right to change designs and specifications without notice.

ARRANGEMENTS 1, 9, 9-E, 9-F FANS

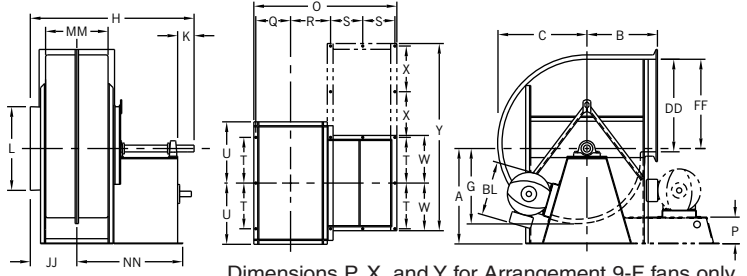
L is OD of collar. DD, FF, and MM are inside dimensions. JJ is from centerline over inlet collar.
Dimensions not to be used for construction unless certified.

DIMENSIONS [INCHES]
SIZES 362-602
NON-ROTATABLE
HOUSINGS

ARRANGEMENTS 1, 9 FANS



ARRANGEMENTS 9-E, 9-F FANS



Dimensions P, X, and Y for Arrangement 9-F fans only.

ARRANGEMENTS 1, 9 FANS

Size	H		NN		O		S	Max. motor limitation*	
	MP	HP	MP	HP	MP	HP		C-NW	Frame
362	69 ⁷ / ₈	66 ³ / ₄	46 ¹ / ₄	44 ⁵ / ₈	63 ¹ / ₈	60	13	22	256T
422	80 ¹ / ₄	76 ⁵ / ₈	53 ³ / ₈	51 ¹ / ₂	72 ³ / ₈	68 ³ / ₄	15 ¹ / ₂	27	326T
482	86 ³ / ₄	82 ⁵ / ₈	57 ⁵ / ₈	55 ¹ / ₂	78 ⁷ / ₈	74 ³ / ₄	16 ¹ / ₂	29	365T
542	94	89 ¹ / ₄	63	60 ⁵ / ₈	87 ⁵ / ₈	82 ⁷ / ₈	17	29	365T
602	98 ⁷ / ₈	93 ³ / ₄	65 ¹ / ₈	62 ⁵ / ₈	92	86 ⁷ / ₈	17	29	365T

* For Arrangement 9 fans only.
C-NW is maximum motor case length [NEMA C minus NEMA NW].
Tolerance: ± 1/16"

ARRANGEMENTS 1, 9, 9-E, 9-F FANS

Size	A				B	C		DD	FF	G		JJ		K	L	MM	
	TH	BH, BAU	UB, TAU			MP	HP			MP	HP	MP	HP			MP	HP
362	34	44 ¹ / ₂	40	29	39 ¹ / ₄	37 ⁵ / ₈	41 ¹ / ₂	39 ¹ / ₈	33 ¹ / ₄	31 ⁵ / ₈	19 ¹ / ₂	17 ⁷ / ₈	7	36 ⁵ / ₈	27 ¹ / ₄	24 ¹ / ₈	
422	39	51	46	32 ¹ / ₂	44 ⁷ / ₈	43 ¹ / ₄	47 ³ / ₄	44 ⁷ / ₈	38	36 ³ / ₈	21 ³ / ₄	19 ⁷ / ₈	8	42 ³ / ₄	31 ³ / ₈	27 ³ / ₄	
482	44	57 ¹ / ₂	52	36 ¹ / ₂	51	49 ³ / ₈	54 ¹ / ₂	51 ³ / ₈	43 ¹ / ₈	41 ¹ / ₂	24	21 ⁷ / ₈	8	48 ³ / ₄	35 ⁷ / ₈	31 ³ / ₄	
542	49 ¹ / ₂	65	59	42 ¹ / ₂	57 ⁵ / ₈	55 ⁷ / ₈	61 ⁵ / ₈	58 ¹ / ₈	48 ³ / ₄	46 ⁷ / ₈	26 ⁷ / ₈	24 ¹ / ₂	8	55	40 ¹ / ₂	35 ³ / ₄	
602	54 ¹ / ₂	71 ¹ / ₂	64 ¹ / ₂	46	63 ¹ / ₂	61 ³ / ₄	68 ¹ / ₈	64 ¹ / ₄	53 ⁵ / ₈	51 ⁷ / ₈	29 ¹ / ₂	27	8	61	44 ⁷ / ₈	39 ³ / ₄	

Size	Q		R		T	U	W	a	b	c	d	BL†	Base hole Dia.
	MP	HP	MP	HP									
362	15 ⁵ / ₈	14 ¹ / ₈	18 ³ / ₄	17 ¹ / ₈	17 ¹ / ₂	25	19	36 ³ / ₄	49 ³ / ₄	40 ⁵ / ₈	29 ⁷ / ₈	23 ¹ / ₂	7/8
422	17 ³ / ₄	16	20 ⁷ / ₈	19	20	28 ¹ / ₈	21 ¹ / ₂	41 ⁷ / ₈	57	46 ¹ / ₄	34	30 ¹ / ₄	7/8
482	20	18	23 ¹ / ₈	21	23	31 ³ / ₈	24 ¹ / ₂	47 ¹ / ₂	64 ¹ / ₂	56 ³ / ₄	38 ⁵ / ₈	31 ¹ / ₄	7/8
542	22 ⁷ / ₈	20 ¹ / ₂	27	24 ⁵ / ₈	25	35 ⁷ / ₈	26 ¹ / ₂	53 ⁷ / ₈	73 ³ / ₈	59 ¹ / ₂	43 ⁵ / ₈	35 ¹ / ₄	1
602	25 ¹ / ₈	22 ¹ / ₂	29 ¹ / ₈	26 ⁵ / ₈	26 ¹ / ₂	39	28 ¹ / ₂	59	80 ³ / ₈	62 ³ / ₈	45 ³ / ₄	39 ¹ / ₄	1

† For Arrangement 9 and 9E fans only. BL = slide base (AL + BT) / 2 + motor AB.

Tolerance: ± 1/16"

ARRANGEMENTS 9-E, 9-F FANS

Size	H		NN		O		S	Arrangement 9-F fans only			Maximum motor limitations			
	MP	HP	MP	HP	MP	HP		P	X	Y	Arrangement 9-E		Arrangement 9-F	
											C-NW	Motor frame	C-NW	Motor frame
362	79 ⁷ / ₈	76 ³ / ₄	56 ¹ / ₄	54 ⁵ / ₈	73 ¹ / ₈	70	18	19	76	32	404T	35	405T	
422	89 ¹ / ₄	85 ⁵ / ₈	62 ³ / ₈	60 ¹ / ₂	81 ³ / ₈	77 ³ / ₄	20	19	81	36	405T	39	445T	
482	93 ³ / ₄	89 ⁵ / ₈	64 ⁵ / ₈	62 ¹ / ₂	85 ⁷ / ₈	81 ³ / ₄	20	21	91	36	405T	39	445T	
542	103	98 ¹ / ₄	72	69 ⁵ / ₈	96 ⁵ / ₈	91 ⁷ / ₈	21 ¹ / ₂	25	104	38	405T	42	447TS	
602	107 ⁷ / ₈	102 ³ / ₄	74 ¹ / ₈	71 ⁵ / ₈	101	95 ⁷ / ₈	21 ¹ / ₂	25	107	38	405T	42	447TS	

NOTE: Sizes 362-602 Arrangement 8 pedestal dimensions are dependent on motor size.

Tolerance: ± 1/16"

IN CORROSION-RESISTANT

FRP FANS...

STANDARDS MAKE A DIFFERENCE!

In FRP Fans, construction quality and accurate air ratings are vital. That's where standards make a big difference.

The American Society for Testing and Materials [ASTM] developed a standard specification for FRP fans and blowers. ASTM D 4167, Standard Specification for FIBER-REINFORCED PLASTIC FANS AND BLOWERS, defines minimum specifications for construction of major fan elements. It is a concise, understandable, readily available standard.

The Air Movement and Control Association's [AMCA] Certified Ratings Program provides assurance of accurate ratings. AMCA Standard 210 describes how fans are to be tested for air performance. The AMCA Certified Ratings Program requires the fan manufacturer to guarantee aerodynamic performance within close tolerances of the manufacturer's published ratings.

The Society of the Plastic Industry's [SPI] Users Guide to RP Industrial Equipment, #2-Fans, Guide for Purchasing or Specifying Reinforced Plastic Fans and Blowers, recommends specification of both the ASTM and AMCA standards.

The New York Blower Company's complete line of FRP Fans—Fume Exhausters, Radial Fume Exhausters, Pressure Blowers, General-Purpose Fume Exhausters—meet these standards.



FRP PRESSURE BLOWERS

5,000 CFM
36" WG



FRP RADIAL FUME EXHAUSTERS

7,500 CFM
14" WG



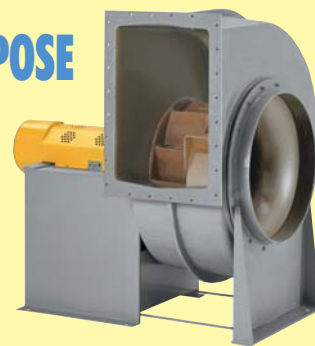
FRP FUME EXHAUSTERS

84,000 CFM
25" WG



FRP GENERAL-PURPOSE FUME EXHAUSTERS

73,000 CFM
17" WG



THE BEST FRP FANS STILL KEEP COMING FROM NEW YORK BLOWER!