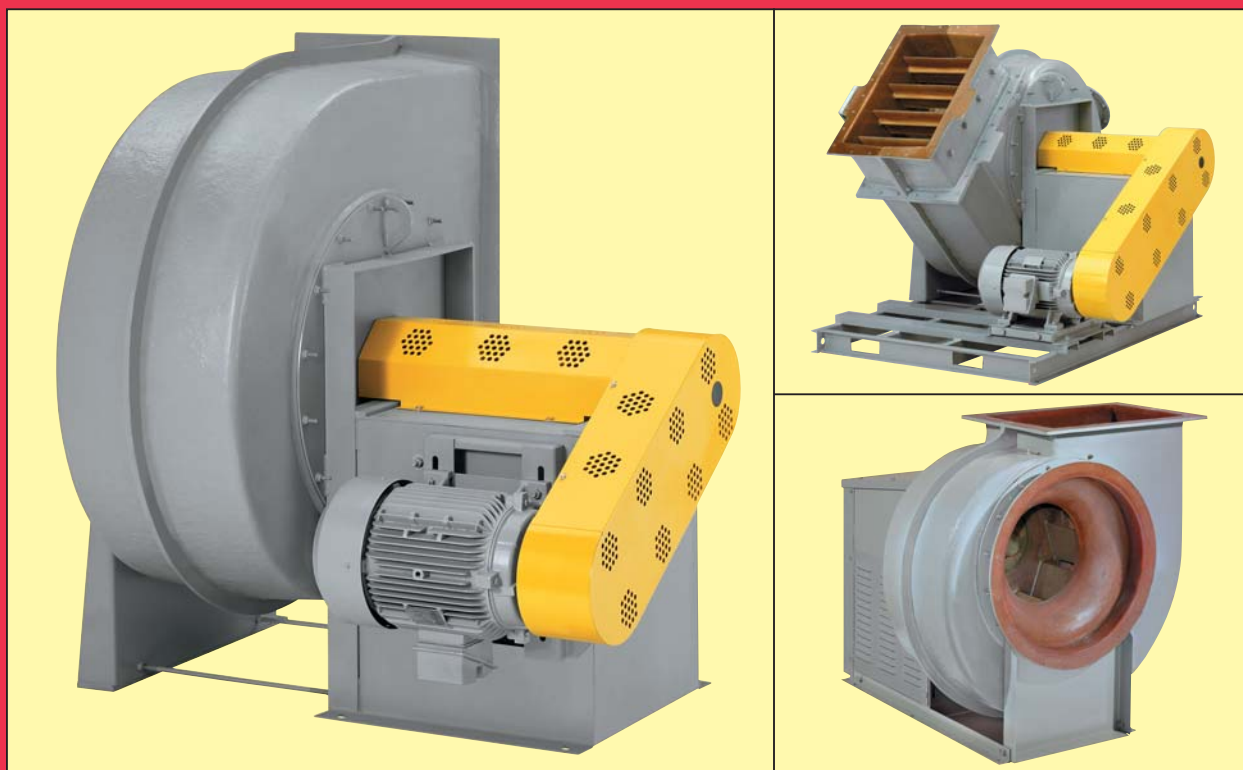


FRP GENERAL-PURPOSE FUME EXHAUSTERS

- Capacities to 73,000 CFM
- Two wheel choices
- Static pressures to 17"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>
Phone: (800) 208-7918 Email: nyb@nyb.com

FRP GENERAL-PURPOSE FUME EXHAUSTERS



Arrangement 9 GFE, counterclockwise, Top Horizontal, with outlet flange drilling, and guards.

BACKWARDLY INCLINED WHEELS



MEDIUM PRESSURE [MP] HIGH PRESSURE [HP]

FRP General-Purpose 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 General-Purpose Fume Exhauster [GFE] is designed so that all parts exposed to the airstream are constructed of high-quality corrosion-resistant fiberglass reinforced plastic. The GFE 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.

- Ten sizes: 12", 15", 18", 24", 30", 36", 42", 48", 54" and 60" wheel diameters.
- Capacities to 73,000 CFM.
- Static pressures to 17"WG.
- Temperatures to 250°F.
- Choice of arrangements: Sizes 121 and 151 available in Arrangements 1, 8, 9, and 10. Sizes 181 through 361 [medium pressure fans only] available in Arrangement 10. Sizes 181 through 601 available in Arrangements 1, 8, 9, and 9-E. Sizes 361 through 601 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 301, 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.]
- GFE wheels are dynamically balanced before final assembly. After assembly, all fans are given a final trim balance check at the specified running speed.
- Sizes 181 and larger meet ASTM D 4167 when fan is purchased with surface veil.



AMCA SEAL

The New York Blower Company certifies that the FRP General-Purpose 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 Sizes 181 and larger 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 4" diameter on Sizes 121 and 151, 6" diameter on Sizes 181 and 241, 8" on Sizes 301 through 421, and 12" on Sizes 481 through 601.
- **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 181 through 541. Minimizes losses at inlet. See pages 4 and 13 for details.
- **Cleanout door**—provides access for cleaning and inspecting fan interior for Sizes 181 and larger.
- **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 for Sizes 181 and larger.
- **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 Sizes 181 and larger to 75% of full width on medium pressure fans and 67% on high pressure fans. Maximum safe wheel speed increases as width decreases.



Arrangement 1 GFE, clockwise, Bottom Angular Up, with optional inspection port, unitary base, discharge damper, outlet flange drilling, motor, and guards.

Arrangement 10 GFE, clockwise, Up Blast, with optional weather cover/belt guard.



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 GENERAL-PURPOSE FUME EXHAUSTERS

When airflow is turned 90° to enter a fan, there is a loss of fan performance due to eccentric loading of the fan's inlet. Use of **nyb's** aerodynamically designed inlet box reduces the entry loss to a minimum and allows accurate prediction of the loss so it can be included in system calculations. See page 13 for dimensions. Refer to the FRP Fume Exhauster Bulletin 571, pages 4 and 5, or the **nyb** fan-selection program to determine inlet box entry losses.

STANDARD FEATURES

FRP inlet boxes are offered for Sizes 181 through 541 FRP General-Purpose 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 General-Purpose Fume Exhauster housings.

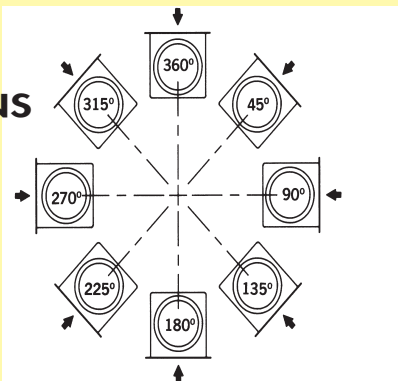
FRP inlet boxes are made in two sections, gasketed and bolted together with 316 stainless-steel hardware. Boxes can be fitted with drains.

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 will normally be shipped separately to prevent damage to inlet box or fan.



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.

CHART I 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 II 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 III MAXIMUM SAFE WHEEL SPEED AT 70°F. [RPM]		
Size	All Arrangements	
	MP	HP
121	3800	—
151	3315	—
181	2900	3570
241	2090	2470
301	1610	1985
361	1360	1680
421	1150	1420
481	975	1200
541	815	1000
601	735	905

CHART IV 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 factor for both temperature and altitude is required, multiply factors from Chart I and II together: 3000 and 200°F. 1.12 x 1.25 = 1.40 [combined factor].

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 121 fan to handle 1600 CFM at 4"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 I and II on page 4].	1	Chart I on page 4 shows 1.25 correction factor for 200°F. 4"WG x 1.25 = 5"WG at 70°F.
Select size, RPM, and BHP of fan from capacity tables.	2	Capacity table shows 3484 RPM, 1.9 BHP for Size 121 fan at 1600 CFM at 5"WG at 70°F.
Check the maximum safe speed of the fan shown in Chart III on page 4.	3	Maximum safe speed of Size 121 fan is 3800 RPM at 70°F.
Apply temperature maximum safe speed factors from Chart IV on page 4 to maximum safe speed of fan from Step 3 to determine new maximum safe speed when temperature is involved.	4	Chart IV on page 4 shows .94 correction factor for 200°F. .94 x 3800 RPM = 3572 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: 1600 CFM at 4"WG at 3484 RPM at 1.52 BHP at 200°F.

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

PERFORMANCE FOR FRP GENERAL-PURPOSE FUME EXHAUSTERS WITH WHEELS

SIZE 121		MP		Wheel diameter: 12½" Wheel circumference: 3.21'				Inlet diameter: 12½" I.D. Fan outlet area = 0.85 sq. ft.				Maximum BHP = .048 $\left[\frac{\text{RPM}}{1000}\right]^3$									
CFM	OV	1"SP		2"SP		3"SP		4"SP		4½"SP		5"SP		5½"SP		6"SP		6½"SP		7"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
800	941	1619	0.64	2068	0.79	2447	0.97	2778	1.17	2950	1.28	3109	1.39								
900	1059	1691	0.66	2126	0.82	2485	1.00	2812	1.21	2963	1.32	3117	1.44	3255	1.56	3406	1.69				
1000	1176	1766	0.69	2192	0.85	2540	1.04	2858	1.26	3006	1.38	3144	1.49	3281	1.62	3415	1.75	3544	1.88	3682	2.03
1100	1294	1848	0.71	2261	0.89	2601	1.09	2903	1.31	3049	1.43	3186	1.55	3323	1.68	3445	1.81	3575	1.95	3700	2.12
1200	1412	1934	0.74	2339	0.93	2667	1.14	2957	1.36	3102	1.49	3228	1.61	3365	1.74	3489	1.88	3608	2.02	3721	2.20
1300	1529	2024	0.77	2412	0.98	2737	1.19	3018	1.42	3153	1.54	3281	1.67	3408	1.81	3533	1.95	3655	2.12	3773	2.32
1400	1647	2111	0.80	2483	1.02	2811	1.25	3086	1.49	3222	1.62	3342	1.75	3471	1.89	3577	2.02	3701	2.23		
1500	1765	2202	0.84	2567	1.07	2883	1.31	3167	1.57	3288	1.70	3410	1.83	3531	1.97	3641	2.14	3758	2.35		
1600	1882	2299	0.88	2653	1.12	2959	1.38	3237	1.65	3360	1.78	3484	1.92	3591	2.07	3704	2.27				
1700	2000	2394	0.92	2742	1.18	3033	1.44	3305	1.73	3438	1.88	3548	2.01	3666	2.21	3773	2.41				
1800	2118	2494	0.97	2825	1.24	3117	1.52	3379	1.81	3506	1.96	3626	2.16	3739	2.36						

SIZE 151		MP		Wheel diameter: 15" Wheel circumference: 3.93'				Inlet diameter: 15½" I.D. Fan outlet area = 1.29 sq. ft.				Maximum BHP = .140 $\left[\frac{\text{RPM}}{1000}\right]^3$									
CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		6½"SP		7"SP		7½"SP		8"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	775	1309	0.72	1701	0.96	2009	1.24	2274	1.54	2512	1.88	2734	2.31	2842	2.57	2949	2.83	3053	3.11	3153	3.40
1100	853	1353	0.74	1738	1.00	2039	1.28	2303	1.60	2532	1.94	2749	2.41	2863	2.70	2960	2.95	3064	3.24	3154	3.50
1200	930	1400	0.77	1779	1.04	2068	1.33	2330	1.65	2566	2.02	2780	2.53	2877	2.79	2982	3.08	3067	3.33	3167	3.64
1300	1008	1452	0.81	1811	1.07	2111	1.39	2367	1.73	2598	2.12	2809	2.65	2907	2.92	2996	3.18	3091	3.47	3191	3.79
1400	1085	1509	0.84	1848	1.11	2152	1.45	2402	1.80	2629	2.22	2838	2.76	2929	3.02	3026	3.31	3114	3.59	3207	3.90
1500	1163	1566	0.88	1888	1.16	2191	1.51	2436	1.86	2659	2.33	2866	2.87	2964	3.16	3055	3.44	3152	3.76	3239	4.06
1600	1240	1624	0.93	1932	1.21	2222	1.56	2477	1.94	2698	2.45	2894	2.99	2998	3.30	3084	3.57	3174	3.88	3271	4.22
1700	1318	1680	0.97	1983	1.27	2258	1.62	2516	2.03	2736	2.58	2933	3.14	3031	3.44	3124	3.75	3210	4.05	3301	4.38
1800	1395	1738	1.02	2033	1.34	2293	1.68	2547	2.12	2772	2.70	2970	3.28	3063	3.59	3151	3.89	3245	4.22		
1900	1473	1795	1.07	2090	1.41	2340	1.76	2584	2.23	2808	2.82	3006	3.43	3105	3.76	3190	4.06	3279	4.39		
2000	1550	1853	1.13	2146	1.49	2385	1.84	2621	2.34	2844	2.94	3051	3.60	3146	3.93	3227	4.23	3312	4.55		

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).

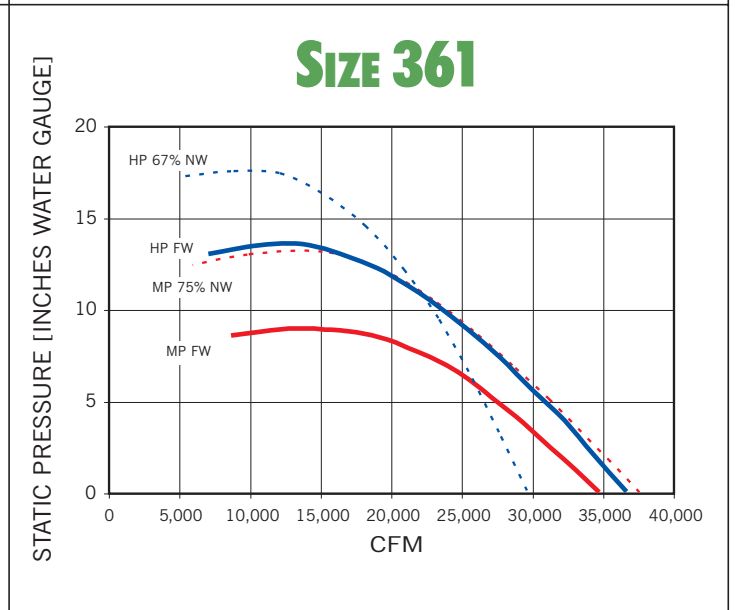
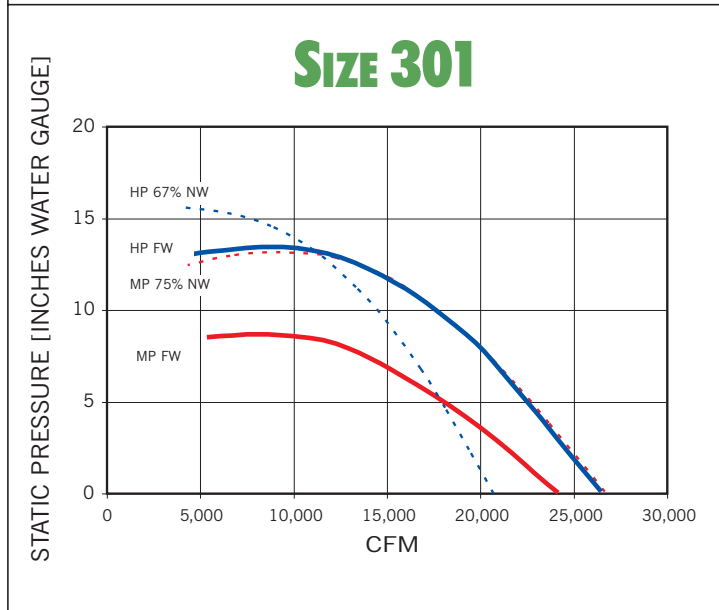
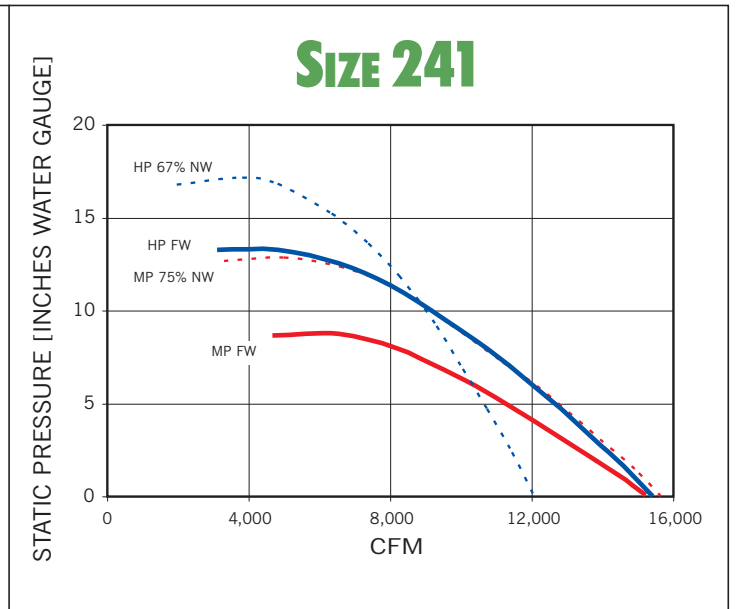
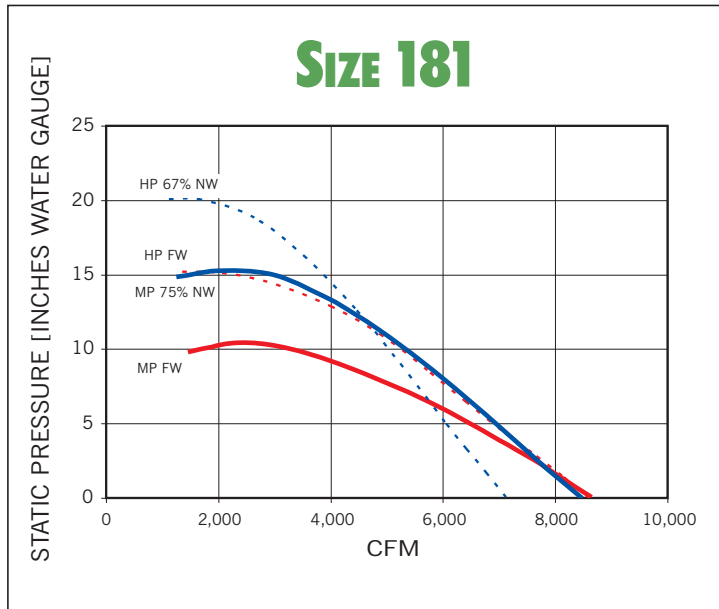
QUICK-SELECTION CURVES

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 General-Purpose 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 General-Purpose 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 shown is installation Type B: Free inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances in airstream.

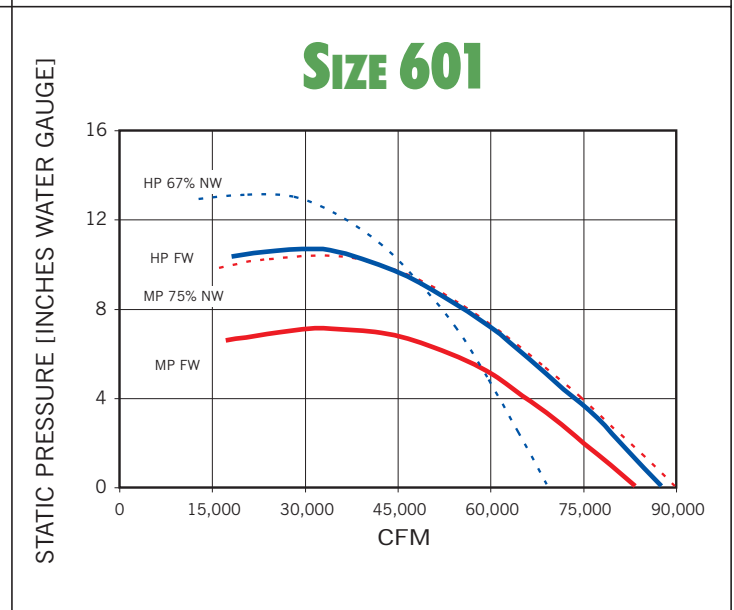
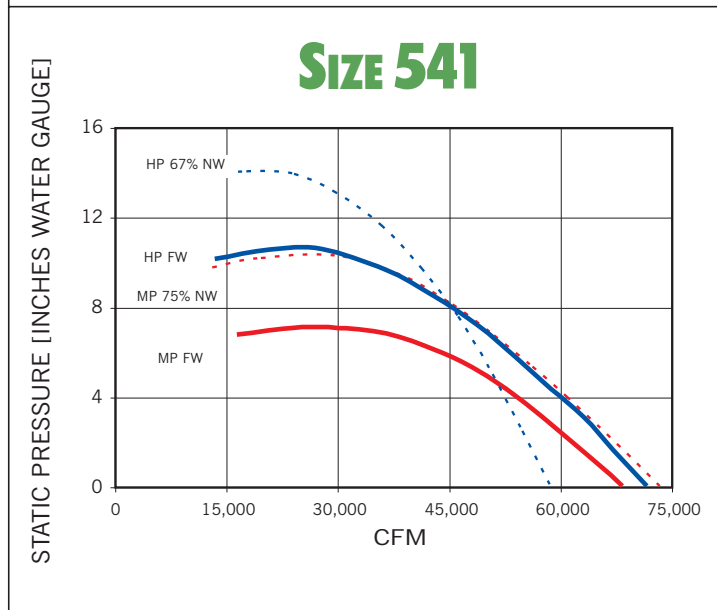
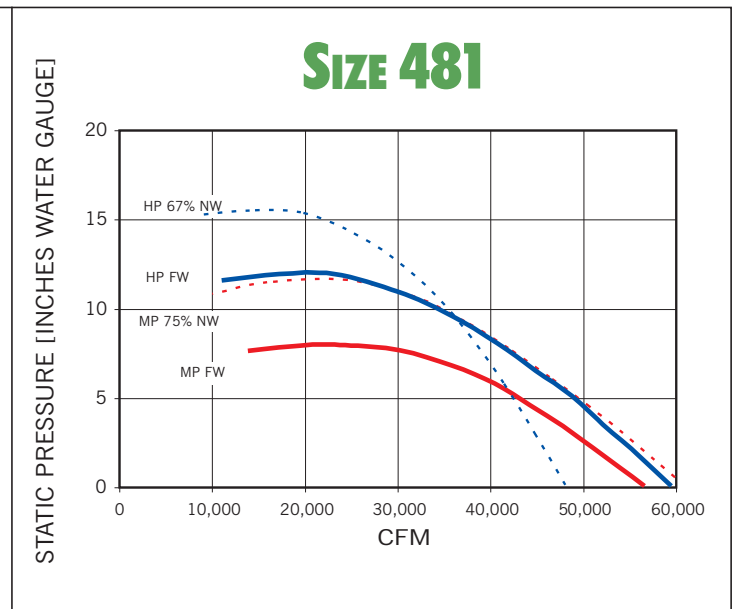
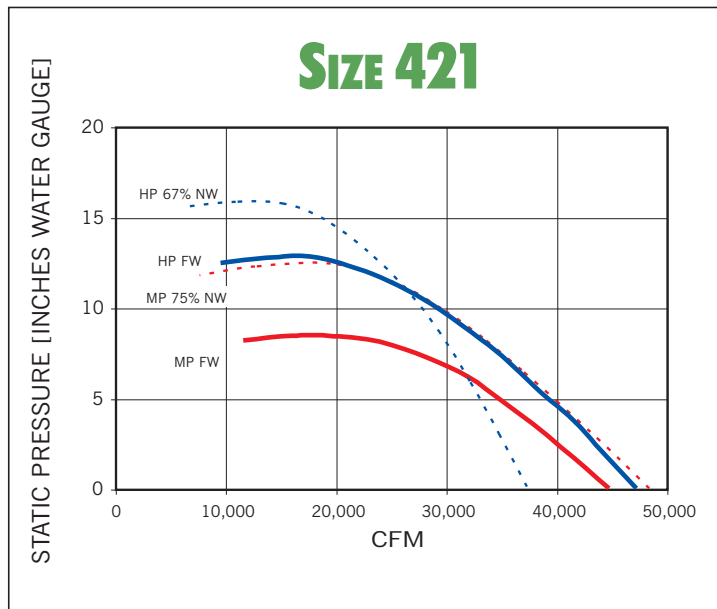
NARROW-WIDTH CONSTRUCTION

Narrow-width wheel construction is available on FRP General-Purpose Fume Exhausters, Sizes 181 to 601, 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 V 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 V MAXIMUM SAFE WHEEL SPEED FOR NARROW-WIDTH WHEELS AT 70°F

Size	RPM	
	75% NW-MP	67% NW-HP
181	3570	4200
241	2470	2920
301	1985	2320
361	1680	1960
421	1420	1620
481	1200	1400
541	1000	1180
601	905	1030



LEGEND


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

Performance shown is installation Type B: Free inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances in airstream.

SPECIFICATIONS

Size	Fan type	Shaft diameter [inches]			Bearings					
		Arr. 1, 8, 9	Arr. 9-E, 9-F	Arr. 10	Arr. 1, 9		Arr. 8	Arr. 9-E, 9-F		Arr. 10
					Inboard	Outboard	Inboard/outboard	Inboard	Outboard	Inboard/outboard
121	MP	1 ³ / ₁₆	—	1 ³ / ₁₆	A	A	A	—	—	A
151	MP	1 ⁷ / ₁₆	—	1 ⁷ / ₁₆	A	A	A	—	—	A
181	MP	1 ¹¹ / ₁₆	1 ¹¹ / ₁₆	1 ¹¹ / ₁₆	A	A	A	A	A	A
	HP	1 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	—	A	A	A	A	A	—
241	MP	1 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	A	A	A	A	A	A
	HP	1 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	—	A	E	A	A	E	—
301	MP	1 ¹⁵ / ₁₆	1 ¹⁵ / ₁₆	2 ³ / ₁₆	A	E	A	A	E	C
	HP	2 ³ / ₁₆	2 ³ / ₁₆	—	A	E	A	A	E	—
361	MP	1 ¹⁵ / ₁₆	2 ³ / ₁₆	2 ³ / ₁₆	A	E	A	A	E	C
	HP	2 ³ / ₁₆	2 ³ / ₁₆	—	E	E	C	E	E	—
421	MP	2 ¹¹ / ₁₆	2 ¹¹ / ₁₆	—	A	E	A	A	E	—
	HP	2 ¹¹ / ₁₆	2 ¹⁵ / ₁₆	—	E	E	C	E	E	—
481	MP	2 ¹¹ / ₁₆	2 ¹¹ / ₁₆	—	A	E	A	A	E	—
	HP	2 ¹⁵ / ₁₆	2 ¹⁵ / ₁₆	—	E	E	C	E	E	—
541	MP	3 ⁷ / ₁₆	3 ⁷ / ₁₆	—	A	E	C	A	E	—
	HP	3 ⁷ / ₁₆	3 ⁷ / ₁₆	—	E	E	C	E	E	—
601	MP	3 ⁷ / ₁₆	3 ⁷ / ₁₆	—	A	E	C	A	E	—
	HP	3 ⁷ / ₁₆	3 ¹⁵ / ₁₆	—	E	E	C	E	E	—

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



CORROSION-RESISTANT ALTERNATIVES

New York Blower metal fans can be constructed of various alloys including 304 and 316 stainless steel and aluminum. A wide range of corrosion-resistant coatings is also available.

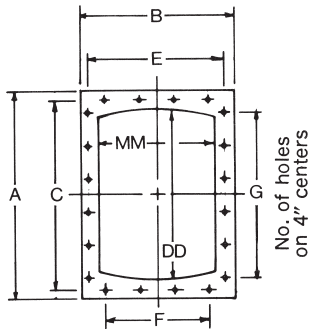
Size	Weights [lbs.]														Wheel WR ² [lb.-ft. ²]	
	Bare fan						Wheel and shaft assembly									
	Arr. 1, 9		Arr. 8		Arr. 9-E		Arr. 9-F		Arr. 10	Arr. 1, 8, 9		Arr. 9-E, 9-F		Arr. 10	MP	HP
MP	HP	MP	HP	MP	HP	MP	HP	MP	MP	HP	MP	HP	MP	MP	HP	
121	135	NA	175	NA	NA	NA	NA	NA	135	18	NA	NA	NA	18	2	NA
151	175	NA	230	NA	NA	NA	NA	NA	170	26	NA	NA	NA	26	4	NA
181	230	195	305	270	270	240	NA	NA	240	35	39	39	44	37	10	9
241	415	375	600	565	490	455	NA	NA	410	55	54	60	59	59	26	25
301	690	615	955	880	730	655	NA	NA	605	76	79	80	84	86	57	56
361	1180	1080	OA	OA	1220	1110	1535	1420	795	94	100	108	104	102	117	115
421	1525	1390	OA	OA	1555	1430	1920	1790	NA	192	186	198	207	NA	293	287
481	1875	1690	OA	OA	1910	1725	2295	2115	NA	233	239	239	246	NA	499	489
541	2765	2495	OA	OA	2805	2535	3370	3100	NA	378	366	388	377	NA	922	903
601	3195	2870	OA	OA	3240	3005	3800	3570	NA	461	445	471	505	NA	1445	1416

NA—Not available. OA—On application.

FLANGED OUTLET DIMENSIONS [Inches]

Furnished as standard [without holes].

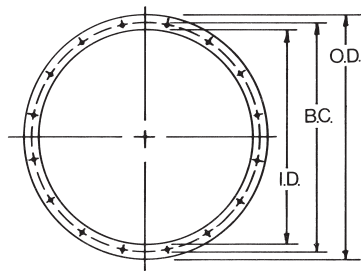
Available with holes drilled as shown.



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											
121	18 ¹ / ₈	13 ¹ / ₂	—	16 ⁵ / ₈	13 ³ / ₄	12	—	4	—	4	9 ¹ / ₈	—	7 ¹ / ₁₆	3 ⁸ / ₁₆	121	15 ³ / ₄	14 ⁵ / ₈	12 ¹ / ₂	8-7 ¹ / ₁₆	1 ¹ / ₄
151	21 ¹ / ₄	15 ¹ / ₂	—	19 ³ / ₄	16 ⁷ / ₈	14	—	4	—	4	11 ¹ / ₈	—	7 ¹ / ₁₆	3 ⁸ / ₁₆	151	19 ¹ / ₄	17 ⁷ / ₈	15 ¹ / ₂	8-7 ¹ / ₁₆	1 ¹ / ₄
181	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 ¹ / ₁₆	1 ¹ / ₂	181	23 ¹ / ₂	21 ³ / ₄	19	16-7 ¹ / ₁₆	1 ¹ / ₄
241	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 ¹ / ₁₆	1 ¹ / ₂	241	30 ⁷ / ₈	29 ¹ / ₈	26	16-7 ¹ / ₁₆	1 ¹ / ₄
301	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 ¹ / ₁₆	1 ¹ / ₂	301	37 ¹ / ₈	35 ¹ / ₈	32	16-7 ¹ / ₁₆	5 ¹ / ₁₆
361	45 ⁷ / ₈	31 ⁵ / ₈	28 ¹ / ₂	44 ¹ / ₂	41 ¹ / ₂	30 ¹ / ₄	27 ¹ / ₈	6	6	12	27 ¹ / ₄	24 ³ / ₈	7 ¹ / ₁₆	5 ⁸ / ₁₆	361	44 ³ / ₈	42 ³ / ₈	38	16-7 ¹ / ₁₆	5 ¹ / ₁₆
421	54 ¹ / ₈	37 ³ / ₄	34 ¹ / ₈	51 ³ / ₄	47 ³ / ₄	35 ³ / ₈	31 ³ / ₄	8	6	12	31 ³ / ₈	27 ³ / ₄	9 ¹ / ₁₆	5 ⁸ / ₁₆	421	50 ¹ / ₂	48 ¹ / ₂	44	24-9 ¹ / ₁₆	3 ⁸ / ₁₆
481	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 ¹ / ₁₆	5 ⁸ / ₁₆	481	57	55 ¹ / ₈	50	24-9 ¹ / ₁₆	3 ⁸ / ₁₆
541	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 ¹ / ₁₆	5 ⁸ / ₁₆	541	64	62 ¹ / ₈	56	24-9 ¹ / ₁₆	1 ¹ / ₂
601	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 ¹ / ₁₆	5 ⁸ / ₁₆	601	70 ¹ / ₂	68 ³ / ₈	62	32-9 ¹ / ₁₆	1 ¹ / ₂

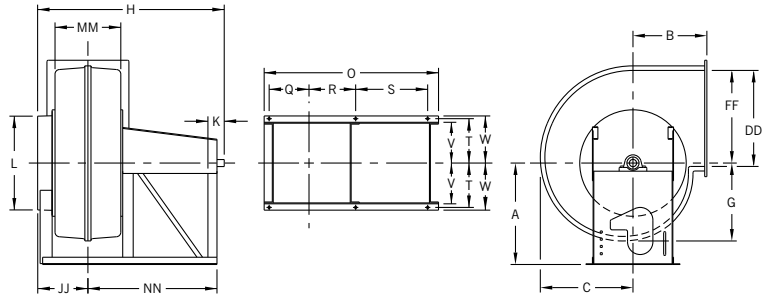
Tolerance: ± 1/32"

Tolerance: ± 1/32"

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 121-361 ROTATABLE HOUSINGS

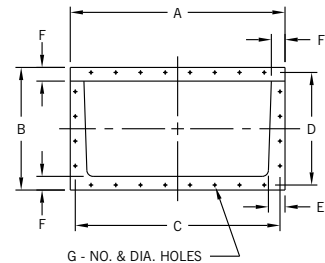
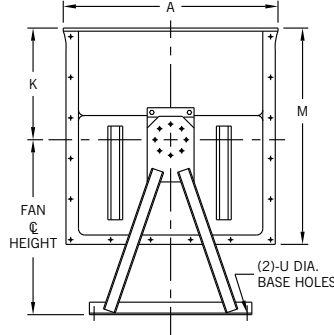
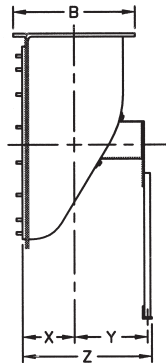
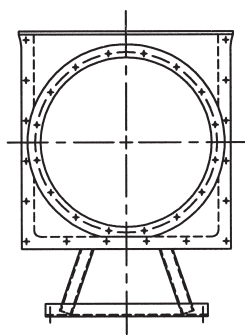


Size	A*	B	C	DD	FF	G	H	JJ	K	L	MM	NN	O
121	15 1/2	12	14 1/4	13 3/4	14 7/8	12 1/4	33 3/8	8 1/8	2 1/2	13	9 1/8	24 5/8	32 1/2
151	17 1/2	14 5/8	17 1/8	16 7/8	17 7/8	14 5/8	37 7/8	9 1/8	3	16	11 1/8	27 5/8	36 1/2
181	21 1/4	16	20 3/8	20 3/4	19 1/2	17 3/8	40 7/8	10 3/8	3 1/2	19 1/2	13 5/8	28 7/8	38 3/4
241	28	20	26 3/4	27 3/4	26 1/4	22 5/8	50 1/8	12 3/4	4 1/2	26 1/2	18 1/4	35 3/8	48 1/8
301	32 1/2	23 1/2	32 3/8	34	32 1/8	27 3/8	57 3/8	15 7/8	5 1/2	32 5/8	22 3/8	38 3/8	53 1/4
361	39 1/2	29	39 1/4	41 1/2	39 1/8	33 1/4	66 3/8	19 3/8	5 1/2	38 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	
121	6 1/8	6 1/2	16 3/8	7 3/8	6 1/2	8	13 1/2	19 3/8	14 3/4	11 1/8	1/4	5/8	215T	184T	14 1/2
151	7 1/8	8 5/8	17 3/8	8 7/8	8	9 1/2	16 1/8	23 1/4	17 5/8	13 3/8	3/8	5/8	215T	215T	16 5/8
181	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
241	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
301	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
361	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 GENERAL-PURPOSE 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]

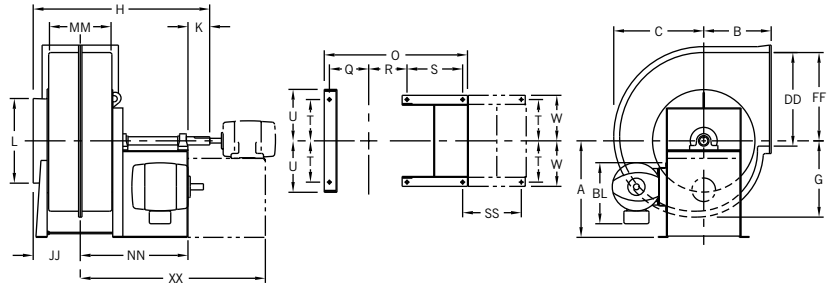
Size	Fan inlet area [ft.²]	A	B	C	D	E	F	G		K	M	U Base hole diameter	X	Y	Z	Wt. [lbs.]
								No.	Dia.							
181	1.97	26 7/8	15 7/8	25 1/2	14 1/2	29 1/16	23 1/16	16	7 1/16	13 1/2	26 1/2	5/8	6	9 3/4	16 3/8	69
241	3.69	34 3/8	19 5/8	33	18 1/4	21 1/16	23 1/16	24	7 1/16	17 7/8	34 5/8	5/8	7 7/8	11 1/4	19 3/4	95
301	5.59	41 7/8	23 1/2	40 1/2	22 1/8	27 7/8	23 1/16	28	7 1/16	22 3/8	42 7/8	5/8	9 7/8	13 3/8	24 1/8	128
361	7.88	49 3/8	27 1/4	48	25 7/8	3	23 1/16	36	7 1/16	26 7/8	51 1/8	5/8	11 3/4	14 3/4	27 3/8	170
421	10.56	56 7/8	31 1/8	55 1/2	29 3/4	3 1/8	23 1/16	44	7 1/16	31 3/8	59 1/2	7/8	13 5/8	16 1/2	31	262
481	13.64	66 5/8	37 1/8	64 1/4	34 3/4	4 1/4	33 1/16	48	9 1/16	35 7/8	67 3/4	7/8	15 3/4	21 5/8	38 3/4	374
541	17.10	74 1/8	40 7/8	71 3/4	38 1/2	4 3/8	33 1/16	56	9 1/16	40 3/8	76	1	18	23 3/8	42 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 121-301 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
121	16	12	14 ¹ / ₄	NA	13 ³ / ₄	14 ⁷ / ₈	12 ¹ / ₄	NA	8 ¹ / ₈	NA	2 ¹ / ₂	13	9 ¹ / ₈	NA
151	19	14 ⁵ / ₈	17 ¹ / ₈	NA	16 ⁷ / ₈	17 ⁷ / ₈	14 ⁵ / ₈	NA	9 ¹ / ₈	NA	3	16	11 ¹ / ₈	NA
181	21 ³ / ₄	16	20 ³ / ₈	18 ³ / ₄	20 ³ / ₄	19 ¹ / ₂	17 ³ / ₈	15 ³ / ₄	10 ³ / ₈	9 ¹ / ₂	4	19 ¹ / ₂	13 ⁵ / ₈	11 ⁷ / ₈
241	28 ⁵ / ₈	20	26 ³ / ₄	25 ¹ / ₄	27 ³ / ₄	26 ¹ / ₄	22 ⁵ / ₈	21 ¹ / ₈	12 ³ / ₄	11 ⁵ / ₈	4 ¹ / ₂	26 ¹ / ₂	18 ¹ / ₄	16
301	34 ³ / ₄	23 ¹ / ₂	32 ³ / ₈	30 ⁷ / ₈	34	32 ¹ / ₈	27 ³ / ₈	26	15 ⁷ / ₈	14 ¹ / ₂	5	32 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									
121	6 ³ / ₈	NA	6 ¹ / ₂	NA	7 ³ / ₈	8 ⁷ / ₈	8	13 ¹ / ₂	19 ³ / ₈	14 ³ / ₄	11 ¹ / ₈	16 ³ / ₈	5/8
151	7 ³ / ₈	NA	7 ¹ / ₂	NA	8 ⁷ / ₈	10 ³ / ₈	9 ¹ / ₂	16 ¹ / ₈	23 ¹ / ₄	17 ⁵ / ₈	13 ³ / ₈	16 ³ / ₈	5/8
181	8 ⁵ / ₈	7 ³ / ₄	8 ³ / ₄	7 ⁷ / ₈	9 ³ / ₈	10 ⁷ / ₈	10 ¹ / ₄	19 ¹ / ₈	26 ³ / ₄	21	15 ³ / ₄	22 ¹ / ₈	5/8
241	11 ¹ / ₂	10 ³ / ₈	11 ⁵ / ₈	10 ¹ / ₂	12 ¹ / ₄	14 ³ / ₈	13 ¹ / ₂	25	34 ¹ / ₄	27 ⁵ / ₈	20 ³ / ₈	26 ³ / ₈	3/4
301	13 ⁵ / ₈	12 ¹ / ₄	13 ³ / ₄	12 ³ / ₈	14 ⁷ / ₈	16 ⁷ / ₈	16 ¹ / ₈	30 ¹ / ₄	40 ⁷ / ₈	33 ¹ / ₄	24 ⁵ / ₈	29 ⁵ / ₈	3/4

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

Tolerance: ± 1/16"

ARRANGEMENTS 1, 8, 9 FANS

Size	H		NN		O		S	Max. motor limitation*	
	MP	HP	MP	HP	MP	HP		C-NW	Frame
151	34 ⁷ / ₈	NA	22 ³ / ₄	NA	31 ⁵ / ₈	NA	13 ³ / ₄	15 ¹ / ₂	184T
181	38 ³ / ₈	36 ⁵ / ₈	24	23 ¹ / ₈	34 ¹ / ₈	32 ³ / ₈	13 ³ / ₄	15 ¹ / ₂	184T
241	46	43 ³ / ₄	28 ⁷ / ₈	27 ³ / ₄	42 ¹ / ₄	40	15 ¹ / ₄	18	215T
301	55 ³ / ₄	53	35	33 ³ / ₈	50 ¹ / ₂	47 ³ / ₄	19 ¹ / ₄	22	256T

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

Tolerance: ± 1/16"

ARRANGEMENT 8 FANS

Size	Motor frame	XX		SS
		MP	HP	
121	143T-145T	35 ¹ / ₄	NA	13 ¹ / ₂
	182T-184T	36 ³ / ₄	NA	15
151	143T-145T	36 ³ / ₄	NA	14
	182T-184T	38 ¹ / ₄	NA	15 ¹ / ₂
181	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
241	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
	324TS-326TS	57 ³ / ₈	56 ¹ / ₄	28 ¹ / ₂
301	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
	324TS-326TS	64 ¹ / ₂	63 ¹ / ₈	29 ¹ / ₂

Tolerance: ± 1/16"

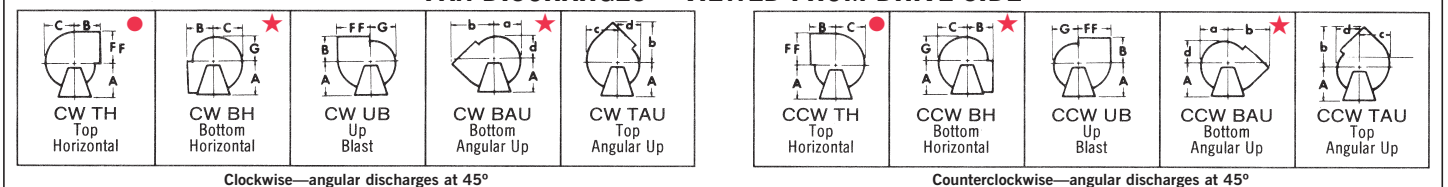
ARRANGEMENT 9-E FANS

Size	H		NN		O		S	Max. motor limitation		
	MP	HP	MP	HP	MP	HP		C-NW	Frame	
										181
241	52 ¹ / ₂	50 ¹ / ₄	35 ³ / ₈	34 ¹ / ₄	48 ³ / ₄	46 ¹ / ₂	21 ³ / ₄	24 ¹ / ₂	27	286T
301	60 ³ / ₄	58	40	38 ⁵ / ₈	55 ¹ / ₂	52 ³ / ₄	24 ¹ / ₄	27	326T	

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

Tolerance: ± 1/16"

FAN DISCHARGES – VIEWED FROM DRIVE SIDE



● If inlet box is furnished on Sizes 361 to 601 in Top Horizontal fan position, inlet box may extend below floor line.

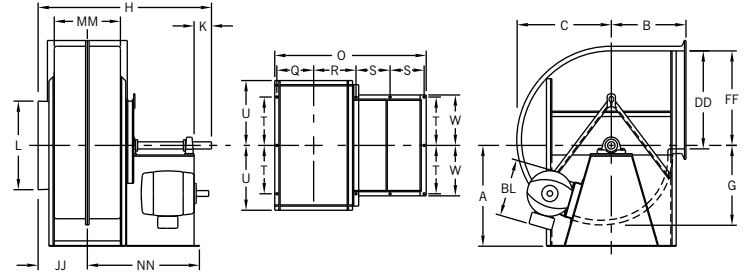
★ Arrangement 10 fans with Bottom Horizontal or Bottom Angular Up discharges are equipped with a 3-inch channel sub-base...add 3" to the fan centerline height.

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

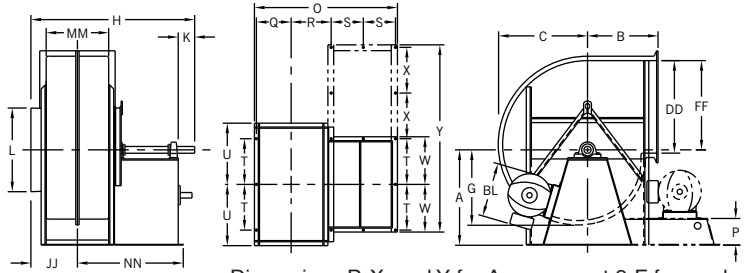
L is OD of collar. DD, FF, and MM are inside dimensions. JJ is from centerline over inlet collar.
Dimensions not to be used for construction unless certified.

DIMENSIONS [INCHES] SIZES 361-601 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
361	68 ¹ / ₄	65 ¹ / ₈	46 ¹ / ₈	44 ⁵ / ₈	63	59 ⁷ / ₈	13	22	256T
421	72 ³ / ₈	68 ³ / ₄	48 ¹ / ₄	46 ³ / ₈	67 ¹ / ₈	63 ¹ / ₂	13	22	256T
481	77	72 ⁷ / ₈	50 ¹ / ₂	48 ¹ / ₂	71 ³ / ₄	67 ⁵ / ₈	13	22	256T
541	91 ¹ / ₄	86 ¹ / ₂	60 ⁷ / ₈	58 ¹ / ₂	85 ¹ / ₂	80 ³ / ₄	16	27	326T
601	95 ⁵ / ₈	90 ¹ / ₂	63 ³ / ₈	60 ¹ / ₂	89 ⁷ / ₈	84 ³ / ₄	16	27	326T

* For Arrangement 9 fans only.

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

Tolerance: ± 1/32"

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
361	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 ³ / ₈	17 ³ / ₄	5 ¹ / ₂	38 ⁵ / ₈	27 ¹ / ₄	24 ¹ / ₈
421	39	51	46	32 ¹ / ₂	44 ⁷ / ₈	43 ¹ / ₄	47 ³ / ₄	44 ⁷ / ₈	38	36 ³ / ₈	21 ³ / ₈	19 ⁵ / ₈	5 ¹ / ₂	44 ³ / ₄	31 ³ / ₈	27 ³ / ₄
481	44	57 ¹ / ₂	52	36 ¹ / ₂	51	49 ³ / ₈	54 ¹ / ₂	51 ³ / ₈	43 ¹ / ₈	41 ¹ / ₂	23 ³ / ₄	21 ⁵ / ₈	5 ¹ / ₂	50 ³ / ₄	35 ⁷ / ₈	31 ³ / ₄
541	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	27 ¹ / ₈	24 ³ / ₄	7	57	40 ¹ / ₂	35 ³ / ₄
601	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 ³ / ₈	26 ³ / ₄	7	63	44 ⁷ / ₈	39 ³ / ₄

Size	Q		R		T	U	W	a	b	c	d	BL†	Base hole Dia.
	MP	HP	MP	HP									
361	15 ⁵ / ₈	14	18 ⁵ / ₈	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
421	17 ⁵ / ₈	15 ⁷ / ₈	20 ³ / ₄	18 ⁷ / ₈	20	28 ¹ / ₈	21 ¹ / ₂	41 ⁷ / ₈	57	46 ¹ / ₄	34	30 ¹ / ₄	7/8
481	20	17 ⁷ / ₈	23	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
541	22 ⁷ / ₈	20 ¹ / ₂	26 ⁷ / ₈	24 ¹ / ₂	25	35 ⁷ / ₈	26 ¹ / ₂	53 ⁷ / ₈	73 ³ / ₈	59 ¹ / ₂	43 ⁵ / ₈	35 ¹ / ₄	1
601	25	22 ¹ / ₂	29 ¹ / ₈	26 ¹ / ₂	26 ¹ / ₂	39	28 ¹ / ₂	59	80 ³ / ₈	62 ³ / ₈	45 ³ / ₄	39 ¹ / ₄	1

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

Tolerance: ± 1/32"

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
361	72 ¹ / ₄	69 ¹ / ₈	50 ¹ / ₈	48 ⁵ / ₈	67	63 ⁷ / ₈	15	12	19	76	26	326T	29	365T
421	76 ³ / ₈	72 ³ / ₄	52 ¹ / ₄	50 ³ / ₈	71 ¹ / ₈	67 ¹ / ₂	15	15	19	81	26	326T	29	365T
481	81	76 ⁷ / ₈	54 ¹ / ₂	52 ¹ / ₂	75 ³ / ₄	71 ⁵ / ₈	15	15	21	91	26	326T	29	365T
541	95 ¹ / ₄	90 ¹ / ₂	64 ⁷ / ₈	62 ¹ / ₂	89 ¹ / ₂	84 ³ / ₄	18	18	25	104	31	365T	35	405T
601	99 ⁵ / ₈	94 ¹ / ₂	67 ¹ / ₈	64 ¹ / ₂	93 ⁷ / ₈	88 ³ / ₄	18	18	25	107	31	365T	35	405T

NOTE: Sizes 361-601 Arrangement 8 pedestal dimensions are dependent on motor size.

Tolerance: ± 1/32"

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

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



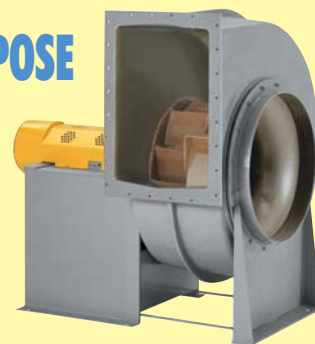
FRP FUME EXHAUSTERS

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!