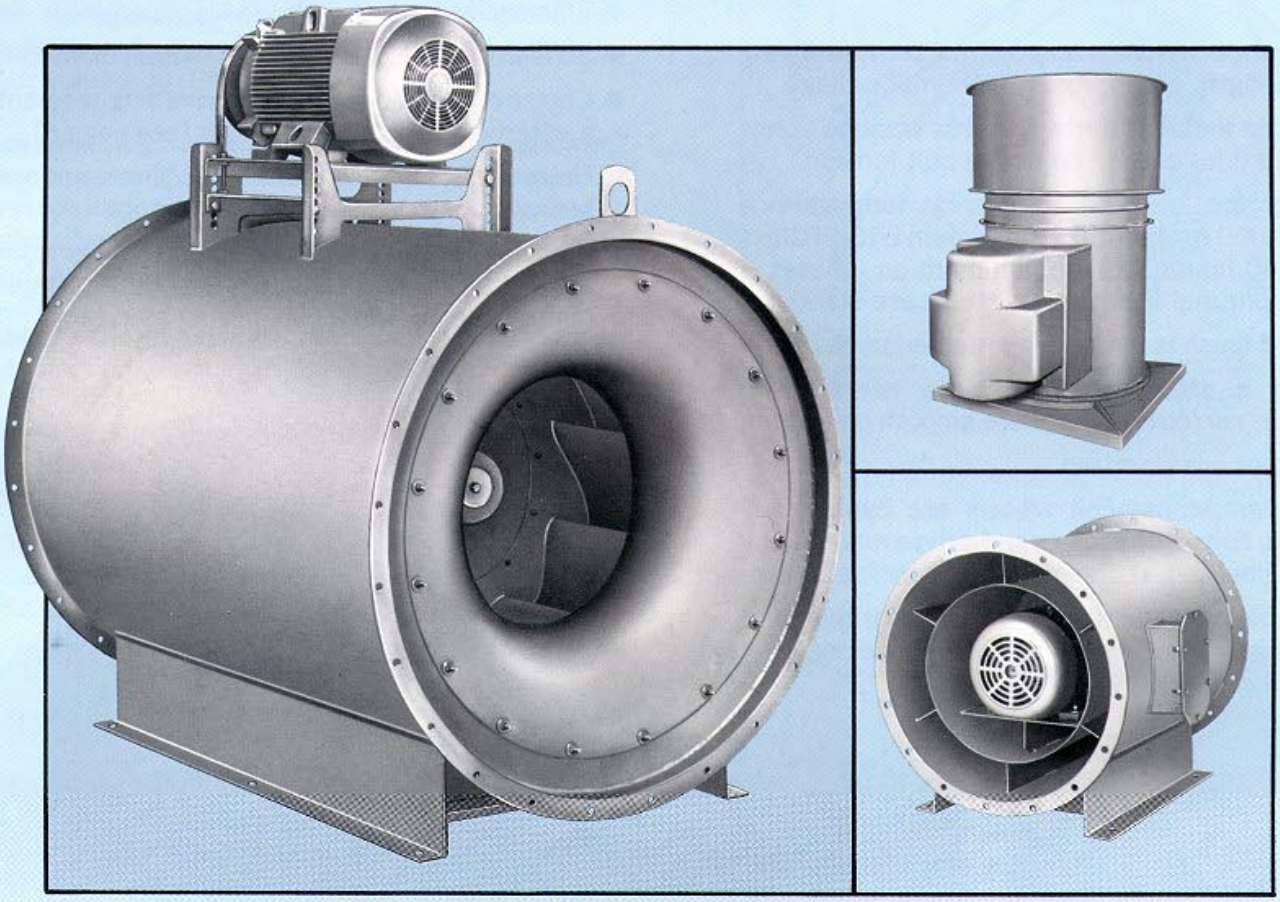
BULLETIN 171
JUNE, 1997

TUBULAR ACOUSTAFOIL® FANS



- Space-efficient, in-line flow design
- Capacities to 140,000 CFM
- Static pressures to 14"WG
- Quiet, efficient airfoil wheel

nyb | The New York Blower Company®

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TUBULAR ACOUSTAFOIL® FANS

The New York Blower Company's Tubular AcoustaFoil Fans combine the efficient performance of its airfoil wheels with the versatility and compactness of axial flow fan design. This combination is suited to industrial supply and exhaust systems as well as heating, ventilating, and air-conditioning applications. A wide range of accessories is available to tailor Tubular AcoustaFoil Fans to each unique application.

CONSTRUCTION FEATURES

- AcoustaFoil wheel—airfoil blades provide highly efficient, quiet operation for clean-air applications. Sizes 12 and 15 available in welded aluminum construction only; Sizes 18 through 73 are welded steel.
- Heavy-gauge welded components provide structural strength, durability, and minimal leakage.
- Adjustable motor mount—features positive screw adjustment for ease in adjusting belt tension.
- Bearings are selected to provide long service life...50,000 hours average minimum L-10 on Class I, 750,000 hours average minimum on Classes II and III. External lubrication fittings are standard.
- Standard finish is a medium-green enamel.
- Shafting is straightened to close tolerance to minimize "run out" and ensure smooth operation.
- Lifting eyes are standard.
- All Tubular AcoustaFoil wheels are dynamically balanced. Fans with motors and drives mounted by **nyb** are checked at the specified running speed.
- Inner-tube construction—isolates bearings and drive from airstream. Removable end cover allows access to bearings and drive.

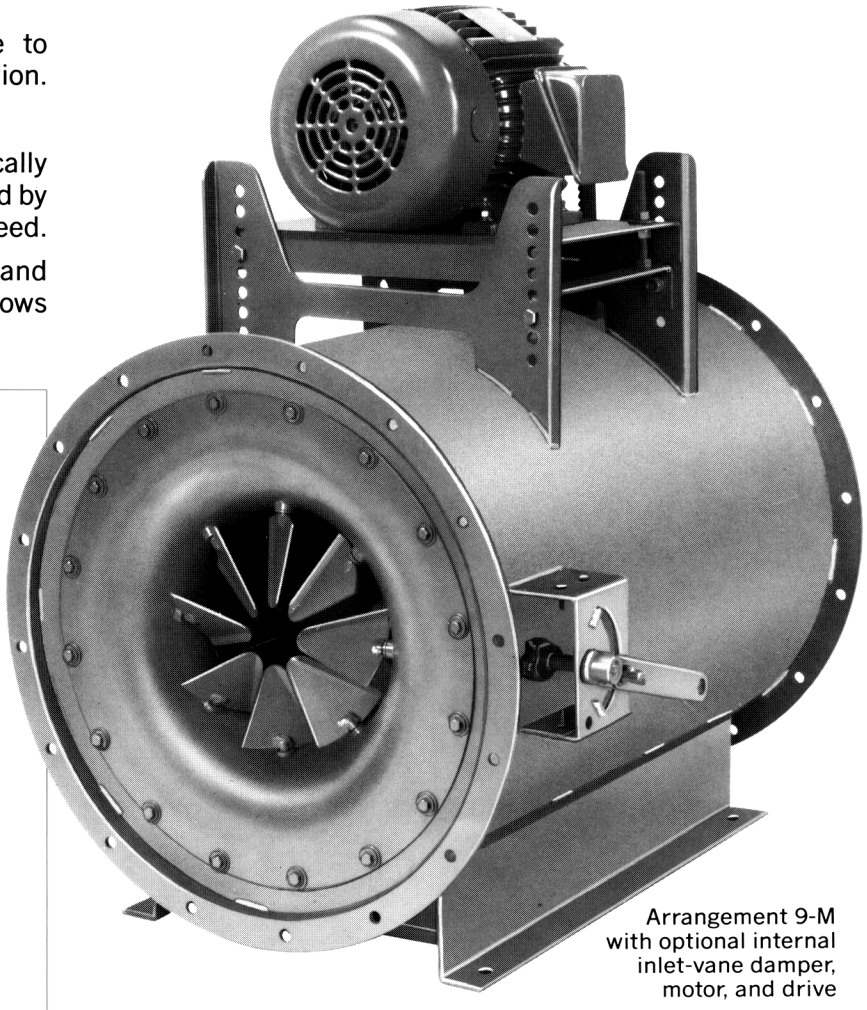
DESIGN FEATURES

- Complete AMCA Class I, II, III performance.
- Capacities to 140,000 CFM.
- Pressures to 14"WG.
- Efficiencies beyond 75%.
- Sixteen sizes: 12" through 73" wheel diameters.
- Choice of direct-drive or belt-drive arrangements in a variety of mounting positions [see page 6].
- Unique inlet cone with dual-airflow diverters improve fan efficiency.
- Precisely formed and positioned vanes convert angular airflow to axial flow in the housing, minimizing turbulence while maximizing efficiency.

AMCA SEAL

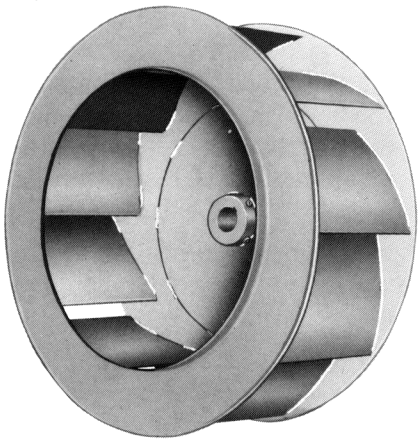
amca CERTIFIED RATINGS AIR PERFORMANCE AIR MOVEMENT AND CONTROL ASSOCIATION, INC. PRINTED IN THE UNITED STATE OF AMERICA

The New York Blower Company certifies that the Arrangement 9 Tubular AcoustaFoil Fans 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.



Arrangement 9-M with optional internal inlet-vane damper, motor, and drive

WITH ACOUSTAFOIL® WHEELS



Airfoil-blade design is the most efficient and quiet selection for clean-air environments due to aerodynamic superiority.

Stable performance—completely stable pressure curve from wide-open to closed-off...ideal for variable air volume systems.

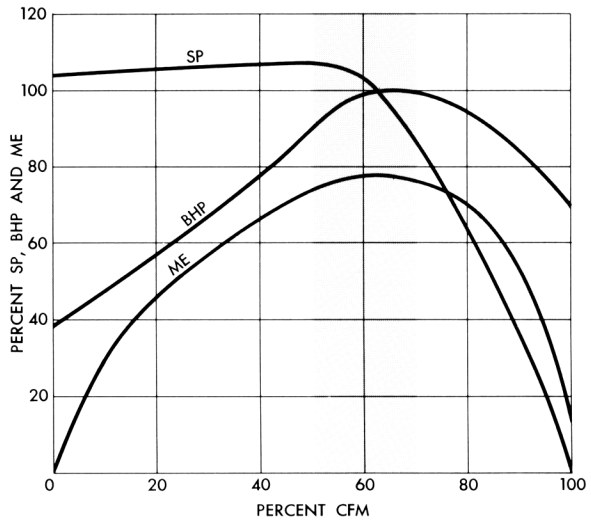
Non-overloading horsepower curve—horsepower reaches a peak and then decreases as flow increases... allows calculation of the maximum brake horsepower at a given fan speed so a motor can be selected that will not overload if system pressure changes.

Efficiency—the mechanical efficiency curve offers a broad selection range with little horsepower variation.

Sound—the superior efficiency of the AcoustaFoil wheel provides a low sound level over a wide performance range.

TYPICAL ACOUSTAFOIL PERFORMANCE

Tinted area provides quietest, most efficient performance.

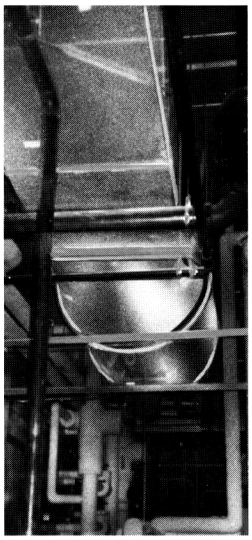


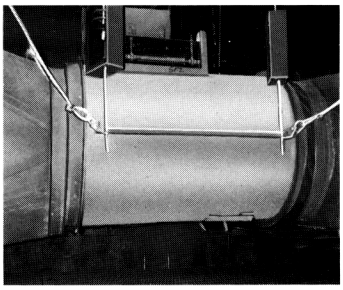
APPLICATION ADVANTAGES

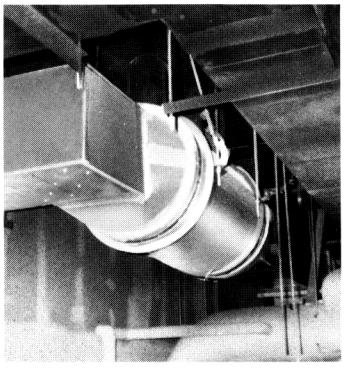
New York Blower's Tubular AcoustaFoil Fan combines the system simplicity and installed cost savings of axial-flow designs with the superior performance of airfoil centrifugal fans.

In applications where equipment space is at a premium, the compact Tubular AcoustaFoil Fan can reduce system space requirements by as much as 50% over conventional centrifugal fans. The straight, in-line design eliminates the need for space consuming and costly transitions, elbows, and inlet boxes. In addition, because of its superior design, the Tubular AcoustaFoil Fan is lighter than comparable centrifugal systems further reducing structural requirements and system costs.

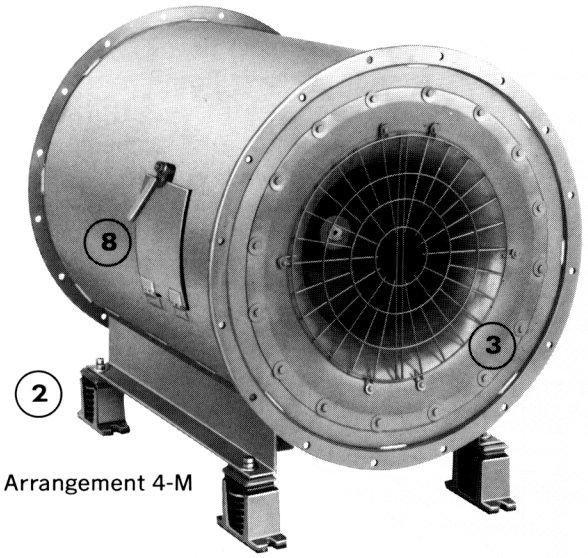
Sound is becoming increasingly important in the industrial and the commercial environments. Because the Tubular AcoustaFoil Fan is based on centrifugal fan principles and utilizes the highly efficient AcoustaFoil airfoil wheel, it is ideally suited to applications where sound is a concern. The Tubular AcoustaFoil Fan is significantly quieter than other axial fan alternatives. Sound levels are further reduced because of generally larger fan outlets and lower outlet velocities as compared to standard centrifugal fans.



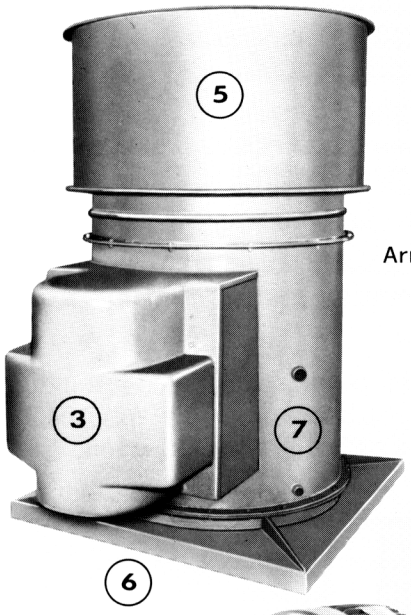




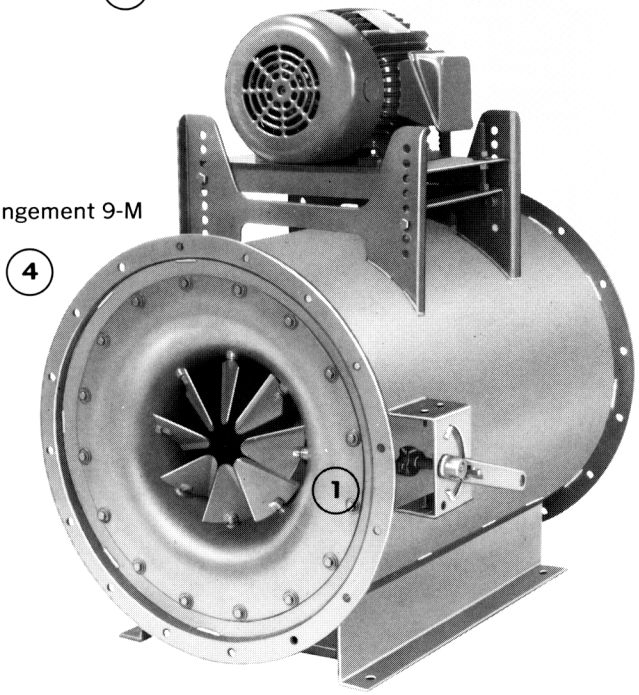
ACCESSORIES AND MODIFICATIONS



Arrangement 4-M



Arrangement 9-R



Arrangement 9-M

1. **INTERNAL INLET-VANE DAMPER**
   Compact damper/cone assembly provides smooth control in systems that require efficient dampering of airflow...electric and pneumatic damper operators also available. Available on Sizes 18 and larger.
2. **VIBRATION ISOLATION**
   Rubber-in-shear or spring-type isolation mounts are available to prevent the transmission of vibration to the mounting structure.
3. **SAFETY EQUIPMENT/WEATHER COVER**
   Belt guards, inlet guards, and weather covers are available. Selection of appropriate safety accessories is the responsibility of the system designer familiar with the specific installation.
4. **FLANGES**
   Rolled rings welded flush with fan inlet and outlet provided with holes...companion flanges with matching hole pattern also available.
5. **STACK HOOD**
   Stack hood with built-in back draft dampers available for outdoor exhaust applications.
6. **CURB CAP**
   Gussetted cover with nailer holes on perimeter includes flange for fan mounting.
7. **DRAINS**
   3-way for horizontal fans, **2-way** for vertical Up Blast units...provides positive drainage of inner-tube and housing.
8. **ACCESS DOOR**
   Gasketed, latch-type door swings open on hinges after turning cam levers. Provides easy access to wheel. Available in Sizes 18 and larger. Inspection hand hole with cover plate available on smaller sizes.
9. **SHAFT SEAL** [not shown]
   Ceramic-felt seal elements encased between metal backing plate and retaining disc...elements can be easily split for field installation and maintenance. Lubricated lip seals are also available.

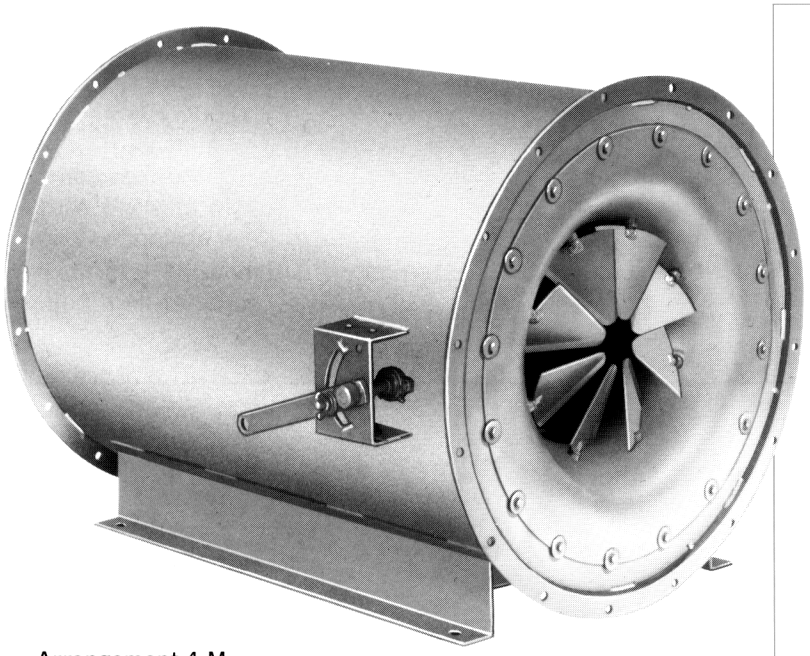
Protective coatings and special alloys are available to combat corrosion problems.

Thin film coatings [5 to 10 mil thickness]—special paints and spray coatings are available under a variety of trade names. **nyb** works with experienced coating applicators who can apply coatings to meet a wide range of requirements.

Alternate material construction—Tubular AcoustaFoil Fans can be constructed of aluminum or stainless steel.

PLR wheel—single-thickness blades handle airstreams not suited to the AcoustaFoil wheel's hollow airfoil shape.

VARIABLE AIRFLOW APPLICATIONS



Arrangement 4-M
with optional internal
inlet-vane damper

The rising cost of energy, the demand for more flexible systems, and new control technology have put greater emphasis on air-handling systems that can be operated efficiently at less than maximum design airflow. New York Blower's unique Tubular AcoustaFoil Fan with its stable AcoustaFoil wheel is particularly well-suited to variable airflow systems found in industrial process and commercial air-conditioning systems. The AcoustaFoil wheel design provides not only maximum operating efficiency at design CFM but also at reduced airflow, regardless of the control method applied. This higher efficiency also provides quieter operation throughout the system's entire range of operation.

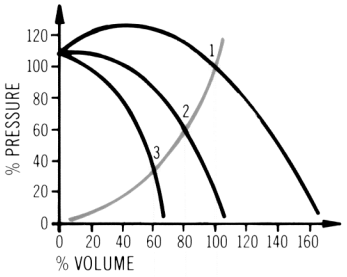
The decision to vary the fan CFM by inlet-vane damper or speed control should include the consideration of the fan's duty cycle. Extended operation at less than full performance favors speed control because of its superior energy savings potential despite its higher first cost. Infrequent operation at less than full performance favors inlet-vane damper control because of its lower first cost relative to its savings potential.

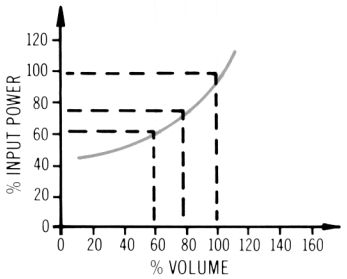
The New York Blower Company's nationwide network of trained sales engineers is familiar with these control alternatives and can assist in selecting the best control for a particular application. For single source responsibility, packages are available with pneumatic or electric actuators for inlet-vane damper control or variable frequency motor controllers for speed control.

INLET-VANE DAMPER CONTROL

New York Blower's internal inlet-vane damper is an integral part of the fan inlet cone assembly. The design does not compromise the Tubular AcoustaFoil Fan's compact design nor its simple, "in-line" installation.

Tubular AcoustaFoil inlet-vane dampers reduce airflow by spinning the air in the direction of wheel rotation as it enters the fan and by decreasing the fan's inlet area. The wheel cannot develop its full output, yielding reduced CFM at reduced horsepower. Each damper setting creates new pressure and horsepower curves. With inlet-vane dampers, reduced airflow always results in reduced horsepower.



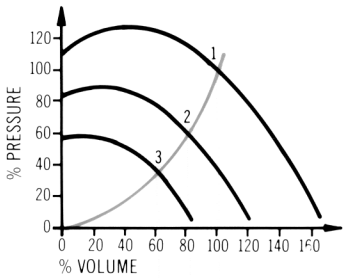


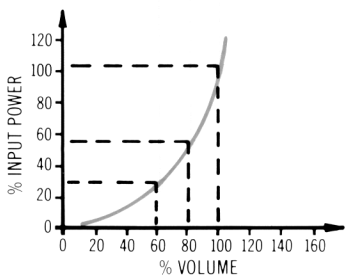
Electric and pneumatic actuator packages are available for Tubular AcoustaFoil Fans with inlet-vane damper control.

VARIABLE FREQUENCY MOTOR SPEED CONTROL

The Tubular AcoustaFoil Fan, especially the direct-drive arrangement, is ideal for variable frequency motor control. Variable frequency control eliminates damper mechanisms and allows installation of the control device away from the process environment.

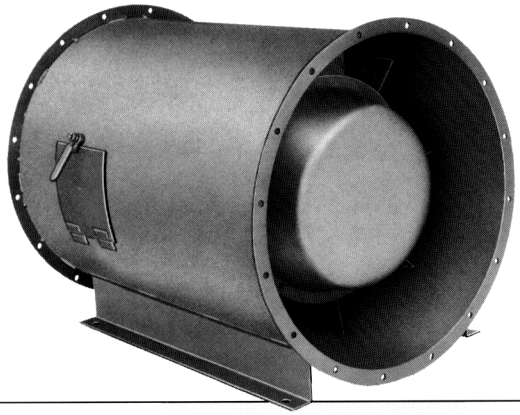
Variable frequency motor speed control provides energy savings by directly controlling fan speed. From the fan laws, CFM varies directly with the change in fan speed and horsepower varies by the change in fan speed cubed. For example, a 20% reduction in fan speed yields a 20% reduction in airflow and a 49% reduction in BHP. Though highest in first cost, variable frequency speed control provides the greatest potential for energy savings and flexible system control.

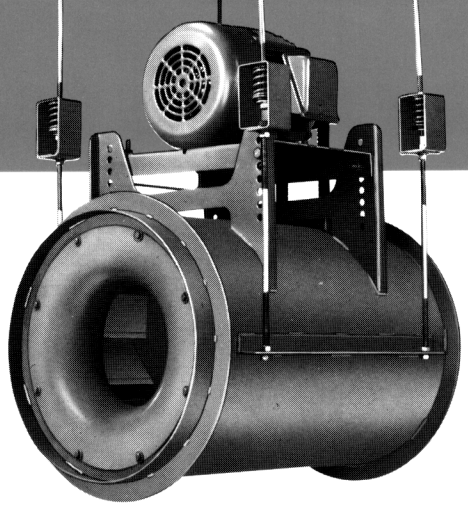




MOUNTING ARRANGEMENTS

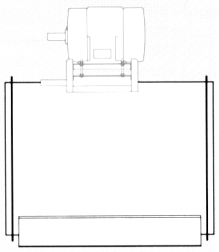
ARRANGEMENT
9-M
with optional flanged inlet and outlet and access door [motor mounting position 3]





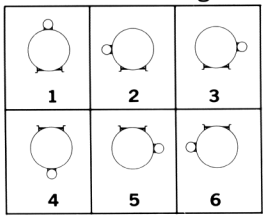
ARRANGEMENT
9-S
with optional motor, drive, and spring isolation

ARRANGEMENTS
4-M AND 9-M
WITH MOUNTING LEGS

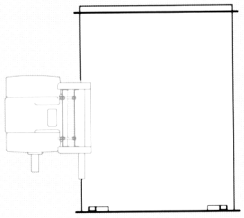


Fabricated mounting legs facilitate fan mounting on the floor, ceiling, or in a vertical position on a wall. Slip connections are standard; optional flanges are available.

9-M Mounting Positions viewed from discharge end

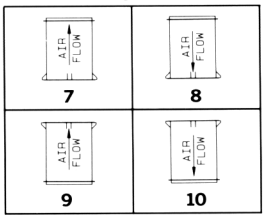


ARRANGEMENTS
4-V AND 9-V
FOR VERTICAL MOUNTING

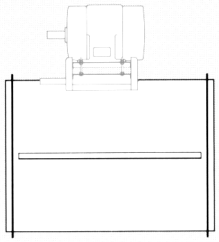


Fans are equipped with four mounting brackets suitable for floor, platform, or ceiling mounting. Motor is located on centerline between two of the four brackets on Arrangement 9. Slip connection opposite end from brackets is standard. Bracketed end has flanged connection.

Mounting Positions

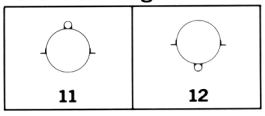


ARRANGEMENTS
4-S AND 9-S
FOR SUSPENDED MOUNTING

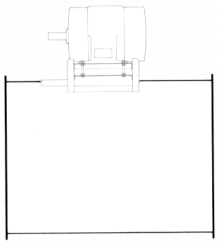


Fans for suspended mounting are equipped with side angle supports suitable for attachment to rods hung from the ceiling structure. Slip duct connections are standard; optional flanges are available.

9-S Mounting Positions

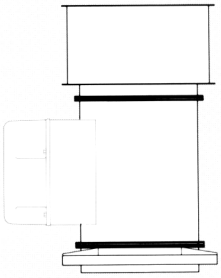


ARRANGEMENTS
4-D AND 9-D
FOR DUCT MOUNTING



Units feature drilled flanges on inlet and discharge for mounting to the duct work.

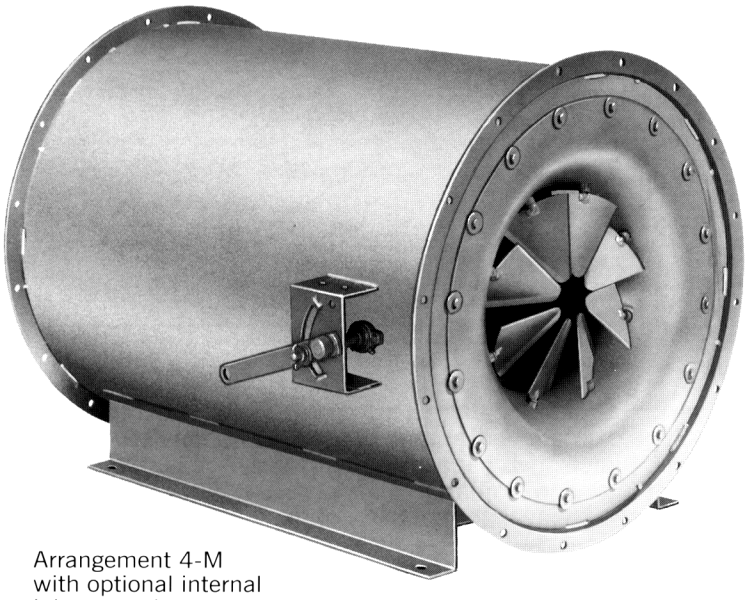
ARRANGEMENTS
4-R AND 9-R
FOR ROOF MOUNTING



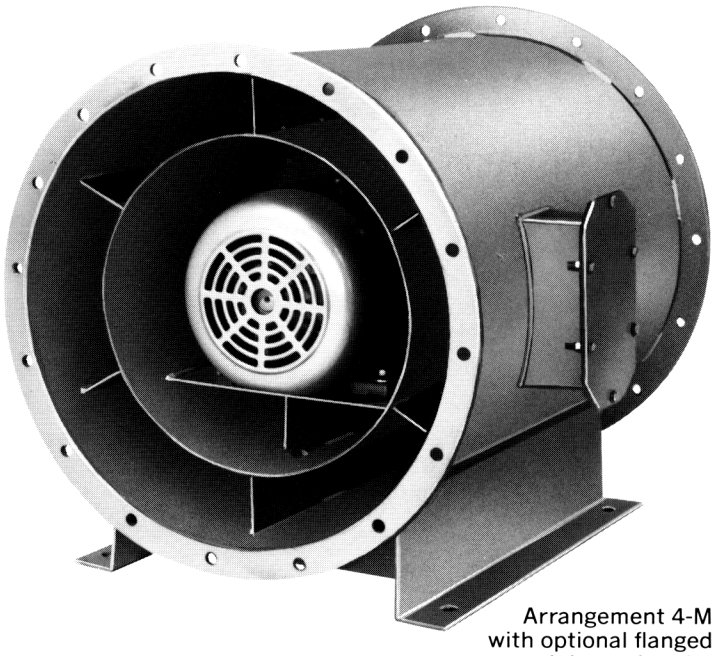
Tubular AcoustaFoil Fans are available packaged with stack hoods and curb caps for outdoor applications. Arrangement 9 units also feature weather covers. Roof-mounted units have round collars extending below the curb caps for easy connection to the duct system.

DIRECT-CONNECTED TUBULAR ACOUSTAFOIL FANS

The Direct-Connected Tubular AcoustaFoil Fan is ideally suited for clean-air applications at temperatures to 105°F. Available in Sizes 12 through 36, it is the most compact tubular arrangement, reducing fan length by as much as 15% over belt-drive configurations. Elimination of external motor mounting structure permits installation in extremely tight locations and reduction in overall unit weight. The Arrangement 4 configuration virtually eliminates all regularly scheduled maintenance.



Arrangement 4-M
with optional internal
inlet-vane damper



Arrangement 4-M
with optional flanged
inlet and outlet

Direct-Connected Tubular AcoustaFoil Fan performance is maximized by modifying wheel width to match specific performance requirements. By tailoring wheel width, the direct-connected Tubular AcoustaFoil Fan is selected and designed at its most efficient full load point of operation. The advent of economical, more capable variable frequency speed controls means direct-connected fan performance can now be easily modified when system requirements change or when used in variable airflow ventilation or process applications.

SAFETY EQUIPMENT

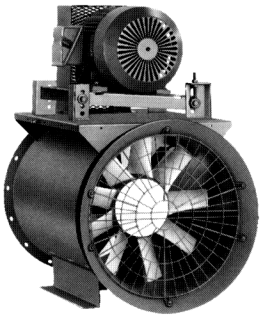
Safe operation of air-moving equipment is dependent on proper installation and maintenance. This includes selection and use of appropriate safety accessories for the specific installation. Such safety accessories are available from **nyb.** However, selection of the appropriate devices is the responsibility of the system designer who must be aware of the fan location, fan accessibility in the particular installation, and adjacent equipment. Neither **nyb** nor its sales representatives are in a position to make such a determination. The system designer must consider providing guards for all exposed moving parts as well as protection from access to high velocity airstreams. Improper application, installation, maintenance, or safety guard selection can create danger to life and limb of personnel. Users and/or installers should read "Recommended Safety Practices for Air Moving Devices" as published by the Air Movement and Control Association, 30 West University Drive, Arlington Heights, Illinois 60004, which is included with the packing slips for all shipments from **nyb** and is available on request.

VANEAXIAL FANS

Cast-aluminum wheels with airfoil blades for quiet operation at most operating points...available in horizontal, vertical, and roof-mounted.

DIRECT DRIVE
Capacities to 100,000 CFM
4" static pressure

Available in multiple-blade angles to provide maximum airflow at specific motor horsepower and speed ratings.

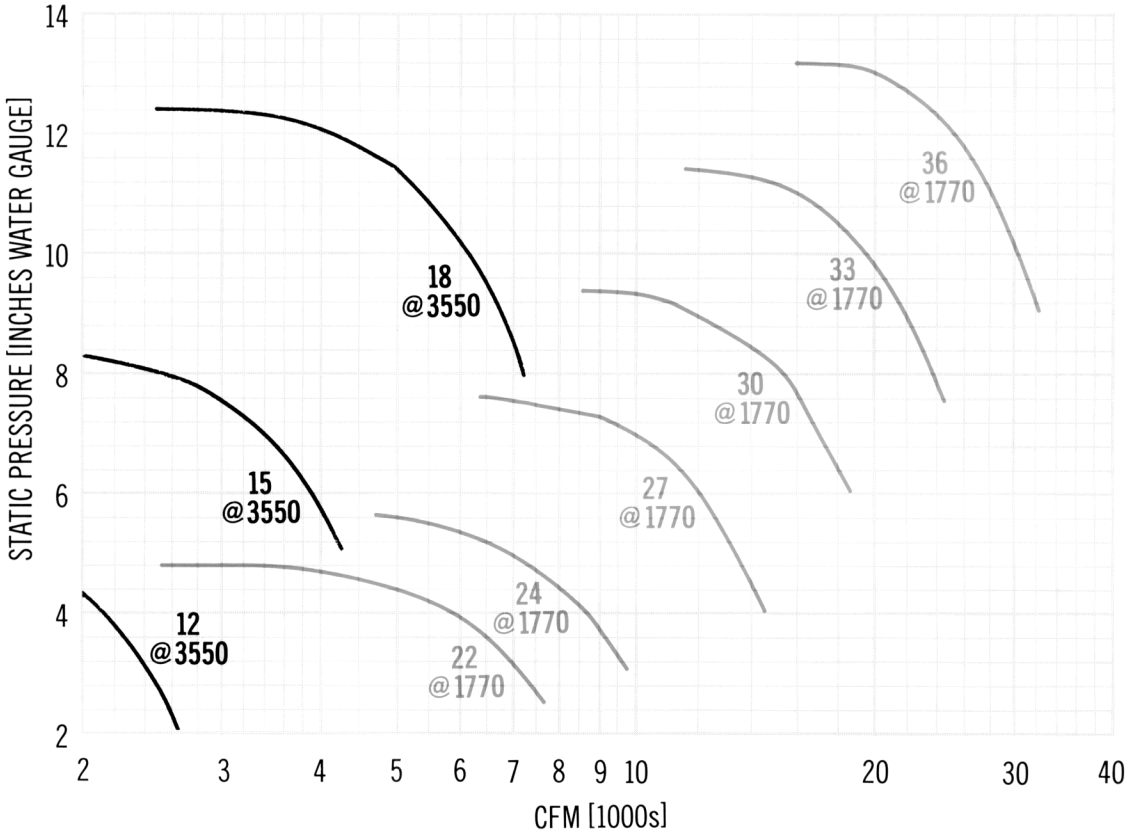


BELT DRIVE
Capacities to 92,000 CFM
5" static pressure

Allows flexibility of selection at wide variety of system requirements.

DIRECT DRIVE SELECTION CURVES

SIZES 12-36



SELECTING DIRECT-DRIVE FANS		
The curves above provide a means of quick selection of fan size, approximate width, and, using the capacity tables on pages 10-12, approximate brake horsepower. For more precise direct-drive capacity information, see separate Engineering Supplement. Tubular AcoustaFoil Fan wheels can be narrowed. Minimum blade-width requirements limit Size 12 fans to 47% of full width, Size 15 to 38%. All other sizes are available to 30% of full width.		
Fan performance with narrow-width Tubular Acousta-Foil wheels can be determined as follows. If conditions are at other than 70°F., sea level, or standard density [0.075 pounds per cubic foot], correction factors must be applied to SP and BHP. See Chart III on page 9.	**STEPS**	**EXAMPLE:** Select a duct-mounted Tubular AcoustaFoil Fan for 20,000 CFM at 8"WG at 70°F. and sea level.
Plot the desired CFM and SP on the direct-drive chart above and draw a horizontal line through the plotted point to the fan curve to the right.	1	The Size 33 at 1770 RPM is the most economical.
Draw a vertical line from where the horizontal line intersects the fan curve and read the CFM.	2	Approximately 24,000 CFM.
The approximate blade-width percentage is the desired CFM divided by the full-width CFM from Step 2.	3	% width = 20,000 CFM ÷ 24,000 CFM = 83%.
Turn to the appropriate capacity table, pages 10-12, and determine the BHP required by a full-width fan at the full-width CFM and desired SP.	4	From page 11, a Size 33 Fan would require approx-imately 49.3 BHP for 24,000 CFM at 8"WG.
The narrow-width fan will require the BHP from Step 4 times the percent width from Step 3.	5	83% of 49.3 BHP is 40.9 BHP.
The complete fan description includes fan size, class, arrangement, percent width, motor speed, CFM, SP, and BHP.	6	The fan is a Size 33 Class III Arrangement 4-D, 83% width, at 1770 RPM for 20,000 CFM at 8"WG at approximately 40.9 BHP.

How To Use Capacity Tables

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

PROCEDURES	STEPS	EXAMPLE: A fan is required for 14,000 CFM at 3"WG at 100°F. and 6000' elevation.
If conditions other than standard are involved, correct static pressure for actual altitude and temperature using Chart III.	1	Chart III gives a 1.33 factor for 100°F. and 6000'. Corrected SP is 3"WG x 1.33 = 4"WG at 70°F. Select fan from capacity tables for 14,000 CFM at 4"WG.
Select size, RPM, and BHP of fan from capacity table.	2	A Size 27 fan is selected for 14,000 CFM at 4"WG at 1763 RPM and 16.1 BHP.
Check maximum safe speed of fan at operating temperatures as shown in Charts I and II.	3	From Charts I and II, the maximum safe speed of a Size 27 fan, Class II construction, at 100°F. is 2019 RPM [2060 x .98]. Fan is satisfactory for operation at 100°F.
Determine actual performance at operating conditions by correcting SP and BHP.	4	Actual performance: 14,000 CFM at 3"WG [4" ÷ 1.33] at 1763 RPM at 12.1 BHP [16.1 ÷ 1.33] at 100°F. and 6000'.

In capacity tables, pages 10-13, Class I is to left of outline area, Class II is outline area, Class III is to right of outline area.

Maximum Safe Speed Information

Chart I details maximum safe speed of standard wheels at 70°F. When alloy construction is specified or when temperatures are involved, multiply the appropriate safe operating speed shown in Chart I by the factor shown in Chart II. Maximum operating temperature for standard Arrangement 4 fans is 105°F. and for standard Arrangement 9 fans is 120°F. For temperatures above 120°F. as indicated by tinted areas in Charts II and III, consult **nyb.**

Chart I

MAXIMUM SAFE SPEEDS† TUBULAR ACOUSTAFOIL FANS AT 70°F.

†Maximum safe speeds apply only to wheels operated at or below stated temperature and free of material build-up, corrosion, or wear.

*Sizes 12 and 15 AcoustaFoil wheels are aluminum.

NA—Not Available.

Size	Class I	Class II	Class III
12*	3840	5010	NA
15*	3140	4100	NA
18	2320	3025	3800
22	2090	2725	3185
24	1730	2260	2830
27	1580	2060	2595
30	1425	1855	2335
33	1293	1685	2120
36	1140	1490	1870
40	1027	1343	1685
44	935	1222	1534
49	849	1110	1393
54	753	985	1235
60	694	906	1138
66	630	824	1034
73	570	745	935

Chart II

TEMPERATURE CORRECTION FACTORS FOR WHEEL SAFE SPEEDS

Temp. °F.	Wheel material	
	Steel	Aluminum
−50	1.00	1.00
70	1.00	1.00
120	.98	.98
200	.97	.98

Chart III CORRECTION FACTORS FOR TEMPERATURE AND ALTITUDE

Temperature °F.	Altitude—feet above sea level												
	0	500	1000	1500	2000	3000	4000	5000	6000	7000	8000	9000	10000
−50	.77	.79	.80	.82	.83	.86	.89	.92	.96	1.00	1.04	1.08	1.12
−25	.82	.84	.85	.87	.89	.92	.95	.98	1.03	1.07	1.11	1.15	1.19
0	.87	.89	.91	.92	.94	.97	1.01	1.04	1.09	1.13	1.18	1.22	1.26
20	.91	.93	.95	.97	.98	1.02	1.06	1.09	1.14	1.18	1.23	1.27	1.32
40	.94	.96	.98	1.00	1.02	1.05	1.09	1.13	1.18	1.22	1.27	1.32	1.36
60	.98	1.00	1.02	1.04	1.06	1.10	1.14	1.18	1.23	1.27	1.32	1.37	1.42
70	1.00	1.02	1.04	1.06	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80	1.02	1.04	1.06	1.08	1.10	1.14	1.18	1.22	1.28	1.33	1.38	1.43	1.48
100	1.06	1.08	1.10	1.12	1.15	1.19	1.23	1.27	1.33	1.38	1.43	1.48	1.54
120	1.09	1.11	1.13	1.16	1.18	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.58
140	1.13	1.15	1.18	1.20	1.22	1.27	1.31	1.36	1.41	1.47	1.53	1.58	1.64
160	1.17	1.19	1.22	1.24	1.26	1.31	1.36	1.40	1.46	1.52	1.58	1.64	1.70
180	1.21	1.23	1.26	1.28	1.31	1.36	1.40	1.45	1.51	1.57	1.63	1.69	1.75
200	1.25	1.28	1.30	1.33	1.35	1.40	1.45	1.50	1.56	1.63	1.69	1.75	1.81

SIZE 12 TA

Wheel diameter: 12¼"
Wheel circumference: 3.21'
Fan outlet area: 1.53 sq. ft.
Maximum BHP = .076 $\left(\frac{RPM}{1000}\right)^3$
Class I = 3840 RPM
Class II = 5010 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	588	1665	0.60	2231	0.66	2693	1.14	3078	1.43	3430	1.74	3768	2.08	4057	2.40	4336	2.79	4598	3.20	4824	3.58
1200	784	1937	0.72	2333	0.99	2746	1.30	3137	1.66	3478	2.00	3797	2.37	4078	2.77	4345	3.22	4608	3.69	4855	4.17
1500	980	2224	0.88	2586	1.19	2878	1.53	3207	1.89	3543	2.29	3848	2.74	4126	3.22	4397	3.71	4639	4.19	4874	4.69
1800	1176	2533	1.09	2832	1.44	3110	1.81	3370	2.20	3632	2.62	3912	3.12	4189	3.85	4462	4.24	4693	4.78	4933	5.35
2000	1307	2751	1.26	3023	1.64	3287	2.05	3530	2.46	3756	2.93	3998	3.45	4239	3.97	4492	4.54	4756	5.18	4980	5.78
2200	1438	2972	1.46	3222	1.86	3463	2.29	3700	2.78	3909	3.28	4130	3.83	4331	4.35	4552	4.92	4798	5.57		
2400	1569	3196	1.69	3431	2.12	3653	2.59	3875	3.13	4080	3.67	4283	4.25	4479	4.84	4664	5.40	4865	6.01		
2600	1699	3420	1.98	3644	2.41	3851	2.95	4055	3.52	4255	4.10	4447	4.70	4632	5.32	4512	5.95	4993	6.59		
2800	1830	3647	2.26	3860	2.78	4058	3.38	4247	3.96	4437	4.57	4623	5.21	4798	5.85	4961	6.48				
3000	1961	3876	2.52	4079	3.19	4267	3.81	4448	4.45	4619	5.07	4803	5.78	4972	6.43						

SIZE 15 TA

Wheel diameter: 15"
Wheel circumference: 3.93'
Fan outlet area: 2.29 sq. ft.
Maximum BHP = .169 $\left(\frac{RPM}{1000}\right)^3$
Class I = 3140 RPM
Class II = 4100 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1900	829	1912	1.11	2188	1.57	2411	2.05	2623	2.56	2851	3.21	3123	4.00	3372	4.77	3611	5.60	3829	6.44	4026	7.29
2200	960	2115	1.33	2383	1.86	2597	2.39	2784	2.99	2970	3.66	3159	4.37	3365	5.15	3599	6.05	3821	6.95	4045	7.94
2500	1091	2322	1.60	2579	2.20	2791	2.83	2975	3.53	3137	4.21	3297	4.94	3465	5.74	3634	6.56	3820	7.46	4026	8.48
2800	1222	2531	1.90	2779	2.60	2989	3.36	3165	4.10	3325	4.87	3475	5.65	3624	6.48	3762	7.29	3911	8.18	4054	9.05
3100	1353	2745	2.27	2984	3.11	3183	3.93	3362	4.77	3520	5.60	3668	6.46	3801	7.30	3929	8.16	4067	9.12		
3400	1483	2960	2.73	3187	3.66	3384	4.60	3560	5.51	3716	6.41	3856	7.30	3994	8.26						
3700	1614	3178	3.29	3397	4.31	3587	5.33	3755	6.31	3913	7.31	4057	8.30								
4000	1745	3397	3.95	3610	5.04	3793	6.14	3957	7.22												
4300	1876	3617	4.69	3822	5.84	4000	7.03														
4600	2007	3840	5.53	4037	6.75																

SIZE 18 TA

Wheel diameter: 18¼"
Wheel circumference: 4.78'
Fan outlet area: 3.39 sq. ft.
Maximum BHP = .422 $\left(\frac{RPM}{1000}\right)^3$
Class I = 2320 RPM
Class II = 3025 RPM
Class III = 3800 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		10"SP		12"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	590	1136	0.82	1478	1.32	1799	1.87	2056	2.48	2296	3.24	2525	4.06	2741	4.95	2937	5.86	3271	7.71	3583	9.76
2800	826	1346	1.09	1601	1.66	1830	2.30	2087	3.09	2347	3.99	2543	4.85	2727	5.78	2914	6.81	3254	8.92	3582	11.2
3600	1062	1586	1.48	1801	2.17	1999	2.93	2183	3.81	2360	4.76	2560	5.82	2771	6.87	2968	8.00	3292	10.3	3574	12.7
4400	1298	1835	1.99	2034	2.84	2203	3.81	2367	4.79	2524	5.81	2672	6.89	2817	8.04	2963	9.22	3316	11.9	3633	14.5
5200	1534	2098	2.69	2275	3.76	2436	4.86	2574	5.97	2714	7.12	2853	8.30	2983	9.49	3111	10.8	3356	13.5	3607	16.3
6000	1770	2369	3.68	2525	4.90	2675	6.14	2813	7.42	2932	8.68	3051	9.98	3180	11.4	3297	12.7	3516	15.5	3735	18.5
6800	2006	2643	4.94	2784	6.28	2917	7.65	3049	9.06	3171	10.5	3280	12.0	3385	13.4	3492	14.9	3708	18.0		
7600	2242	2920	6.49	3051	7.94	3171	9.46	3294	11.1	3411	12.6	3517	14.2	3616	15.8	3710	17.4				
8400	2478	3200	8.36	3321	9.94	3434	11.6	3541	13.3	3651	15.0	3755	16.7								
9200	2714	3483	10.6	3594	12.3	3700	14.1														

SIZE 22 TA

Wheel diameter: 22¼"
Wheel circumference: 5.83'
Fan outlet area: 5.07 sq. ft.
Maximum BHP = 1.10 $\left(\frac{RPM}{1000}\right)^3$
Class I = 2090 RPM
Class II = 2725 RPM
Class III = 3185 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	789	1031	1.29	1242	2.07	1464	3.02	1684	4.11	1873	5.28	2034	6.43	2342	9.03	2614	11.9	2864	15.1	3091	18.4
5000	986	1180	1.67	1368	2.60	1534	3.71	1699	4.89	1886	6.19	2059	7.53	2359	10.4	2624	13.4	2870	16.6	3098	20.1
6000	1183	1335	2.15	1508	3.31	1660	4.58	1795	5.86	1928	7.25	2082	8.79	2383	11.9	2652	15.2	2895	18.8	3118	22.4
7000	1381	1499	2.82	1656	4.16	1798	5.62	1923	7.05	2044	8.55	2158	10.1	2405	13.5	2667	17.1	2913	20.9	3141	24.9
8000	1578	1668	3.71	1810	5.19	1944	6.80	2062	8.43	2173	10.1	2281	11.8	2486	15.4	2696	19.2	2929	23.3	3157	27.5
9000	1775	1843	4.81	1971	6.44	2096	8.20	2209	9.98	2316	11.9	2416	13.7	2604	17.5	2785	21.6	2973	25.9	3171	30.3
10000	1972	2022	6.13	2136	7.92	2249	9.76	2360	11.8	2461	13.8	2557	15.9	2737	20.0	2902	24.2	3063	28.6		
11000	2170	2202	7.69	2306	9.67	2411	11.7	2513	13.8	2612	16.0	2701	18.1	2869	22.6	3032	27.2				
12000	2367	2383	9.50	2479	11.7	2576	13.9	2670	16.1	2763	18.4	2854	20.8	3017	25.6	3167	30.5				
13000	2564	2566	11.6	2655	14.0	2744	16.4	2831	18.7	2919	21.1	3003	23.6	3165	28.8						

Performance shown is installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

SIZE 24 TA

Wheel diameter: 24½"
Wheel circumference: 6.41'

Fan outlet area: 6.17 sq. ft.
Maximum BHP = $1.75\left(\frac{RPM}{1000}\right)^3$

Class I = 1730 RPM
Class II = 2260 RPM
Class III = 2830 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		13"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	810	953	1.52	1141	2.48	1330	3.68	1530	5.03	1698	6.41	1857	7.94	2132	11.1	2375	14.5	2598	18.3	2698	20.2
6200	1005	1088	1.99	1257	3.20	1402	4.52	1548	5.98	1718	7.61	1874	9.25	2145	12.7	2385	16.3	2606	20.3	2711	22.4
7400	1199	1228	2.59	1383	4.06	1517	5.58	1642	7.18	1764	8.93	1891	10.7	2164	14.5	2408	18.5	2629	22.8	2727	24.9
8600	1394	1376	3.47	1518	5.10	1644	6.85	1760	8.66	1868	10.5	1970	12.4	2186	16.5	2419	20.8	2645	25.4	2755	27.9
9800	1588	1528	4.55	1658	6.36	1777	8.31	1884	10.3	1984	12.3	2080	14.4	2266	18.8	2455	23.5	2664	28.4	2758	30.7
11000	1783	1686	5.88	1800	7.84	1913	9.97	2015	12.2	2112	14.5	2201	16.7	2373	21.3	2532	26.2	2694	31.2	2790	34.1
12200	1977	1846	7.46	1950	9.67	2053	11.9	2151	14.3	2242	16.7	2329	19.3	2490	24.2	2641	29.3	2792	35.0		
13400	2172	2008	9.33	2103	11.8	2197	14.2	2289	16.7	2379	19.4	2464	22.2	2616	27.6	2760	33.1				
14600	2366	2171	11.5	2258	14.2	2345	16.8	2430	19.4	2515	22.3	2595	25.1	2746	31.1						
15800	2561	2336	14.1	2417	17.0	2496	19.8	2575	22.6	2656	25.6	2734	28.7								

SIZE 27 TA

Wheel diameter: 27"
Wheel circumference: 7.07'

Fan outlet area: 7.57 sq. ft.
Maximum BHP = $3.34\left(\frac{RPM}{1000}\right)^3$

Class I = 1580 RPM
Class II = 2060 RPM
Class III = 2595 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	793	805	1.75	9.70	2.90	1146	4.34	1341	6.22	1487	7.95	1622	9.79	1856	13.7	2065	17.9	2257	22.3	2452	27.2
7600	1004	930	2.40	1077	3.93	1206	5.53	1329	7.15	1485	9.19	1644	11.6	1881	16.0	2094	20.7	2276	25.5	2453	30.8
9200	1215	1062	3.35	1191	5.12	1312	7.05	1420	8.96	1521	11.0	1628	13.0	1889	18.2	2112	23.6	2306	29.1	2470	34.4
10800	1427	1198	4.53	1320	6.69	1423	8.77	1527	11.0	1622	13.3	1709	15.6	1887	20.3	2099	25.9	2316	32.5	2497	38.8
12400	1638	1341	6.04	1451	8.56	1548	10.9	1640	13.4	1729	16.0	1812	18.5	1969	23.8	2120	29.1	2298	35.1	2492	42.2
14000	1849	1487	7.91	1585	10.7	1678	13.5	1763	16.1	1843	18.9	1919	21.7	2073	27.6	2210	33.6	2344	39.6	2481	45.5
15600	2061	1636	10.3	1724	13.3	1812	16.5	1891	19.4	1968	22.4	2039	25.5	2179	31.8	2315	38.4	2436	44.9	2552	51.4
17200	2272	1788	13.1	1865	16.2	1946	19.7	2023	23.2	2094	26.4	2164	29.7	2293	36.6	2420	43.6	2545	50.9		
18800	2483	1940	16.5	2012	19.7	2084	23.4	2158	27.3	2227	31.0	2293	34.6	2416	41.8	2534	49.5				
20400	2695	2094	20.5	2159	23.8	2226	27.7	2294	31.9	2359	36.0	2425	40.1	2542	47.8						

SIZE 30 TA

Wheel diameter: 30"
Wheel circumference: 7.85'

Fan outlet area: 9.22 sq. ft.
Maximum BHP = $5.62\left(\frac{RPM}{1000}\right)^3$

Class I = 1425 RPM
Class II = 1855 RPM
Class III = 2335 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	759	704	1.94	858	3.35	1041	5.22	1203	7.32	1333	9.34	1456	11.6	1665	16.2	1855	21.2	2033	26.5	2216	32.4
9100	987	820	2.77	955	4.61	1070	6.50	1195	8.57	1342	11.2	1478	14.0	1688	19.1	1880	24.9	2046	30.8	2200	36.9
11200	1215	946	4.01	1063	6.15	1172	8.46	1271	10.8	1360	13.2	1464	15.7	1701	22.2	1903	28.8	2066	35.1	2228	42.2
13300	1443	1077	5.53	1186	8.18	1278	10.7	1371	13.5	1459	16.3	1535	19.0	1693	24.7	1888	31.7	2089	40.1	2248	47.6
15400	1670	1212	7.48	1310	10.6	1399	13.5	1481	16.6	1560	19.8	1636	22.9	1772	29.2	1907	35.8	2063	43.1	2247	52.3
17500	1898	1353	9.99	1440	13.5	1524	16.9	1599	20.2	1670	23.7	1740	27.2	1875	34.4	1997	41.7	2114	49.2	2241	56.9
19600	2126	1496	13.1	1573	16.8	1650	20.8	1722	24.6	1789	28.3	1855	32.2	1978	40.1	2100	48.3	2206	56.2	2313	64.7
21700	2354	1641	17.0	1710	20.8	1780	25.2	1848	29.5	1913	33.7	1975	37.9	2088	46.3	2201	55.2	2308	64.0		
23800	2581	1788	21.6	1849	25.6	1913	30.2	1978	35.2	2040	39.9	2096	44.3	2208	53.6	2311	63.0				
25900	2809	1935	27.1	1991	31.3	2049	36.1	2109	41.4	2168	46.7	2225	51.9	2328	61.5						

SIZE 33 TA

Wheel diameter: 33"
Wheel circumference: 8.64'

Fan outlet area: 11.2 sq. ft.
Maximum BHP = $8.98\left(\frac{RPM}{1000}\right)^3$

Class I = 1293 RPM
Class II = 1685 RPM
Class III = 2120 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	804	659	2.42	795	4.29	939	6.44	1097	9.22	1214	11.7	1326	14.5	1517	20.2	1684	26.3	1843	32.9	2005	40.2
11500	1027	767	3.58	887	5.89	992	8.30	1092	10.8	1213	13.7	1340	17.2	1542	24.0	1711	30.8	1862	38.0	2007	45.9
14000	1250	881	5.10	986	7.80	1081	10.6	1172	13.6	1250	16.5	1336	19.6	1542	27.2	1733	35.7	1886	43.6	2031	52.2
16500	1473	998	7.00	1095	10.3	1181	13.5	1261	16.8	1338	20.2	1411	23.8	1548	30.7	1715	38.9	1894	48.9	2052	59.0
19000	1696	1120	9.40	1209	13.3	1288	16.9	1360	20.5	1430	24.4	1500	28.3	1625	36.2	1745	44.3	1883	53.2	2038	63.7
21500	1920	1246	12.5	1325	16.7	1400	21.0	1469	25.1	1532	29.3	1594	33.6	1719	42.6	1829	51.5	1933	60.6	2044	69.9
24000	2143	1375	16.3	1443	20.8	1513	25.7	1579	30.4	1641	35.0	1696	39.4	1810	49.3	1920	59.3	2019	69.2	2114	79.4
26500	2366	1505	21.0	1566	25.6	1630	31.0	1692	36.4	1750	41.4	1805	46.4	1907	56.6	2010	67.5	2109	78.6		
29000	2589	1636	26.6	1691	31.4	1749	37.0	1808	43.1	1865	48.9	1916	54.4	2015	65.3	2107	76.6				
31500	2812	1768	33.1	1818	38.2	1871	44.0	1926	50.6	1979	57.0	2029	63.1								

Performance shown is installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

SIZE 36 TA

Wheel diameter: 36½"
Wheel circumference: 9.56'

Fan outlet area: 13.6 sq. ft.
Maximum BHP = 14.0 $\left(\frac{RPM}{1000}\right)^3$

Class I = 1140 RPM
Class II = 1490 RPM
Class III = 1870 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		13"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	807	605	2.95	735	5.23	872	7.93	1010	11.2	1122	14.4	1230	18.0	1424	25.7	1603	34.3	1754	42.4	1826	46.6
14200	1041	703	4.39	817	7.25	918	10.2	1014	13.3	1128	17.1	1237	21.1	1423	29.5	1585	38.3	1739	48.2	1818	53.7
17400	1276	805	6.30	909	9.70	1001	13.3	1085	16.9	1163	20.6	1242	24.4	1432	34.0	1597	43.9	1742	54.1	1813	59.6
20600	1511	917	8.84	1010	12.9	1092	16.9	1170	21.1	1245	25.5	1312	29.7	1443	38.5	1589	48.5	1748	60.4	1827	67.0
23800	1746	1034	12.2	1113	16.7	1192	21.3	1262	26.0	1329	30.8	1396	35.9	1513	45.6	1628	55.7	1751	66.9	1817	73.0
27000	1980	1154	16.4	1221	21.3	1294	26.6	1363	31.9	1423	37.2	1483	42.6	1599	53.9	1704	65.1	1804	76.4	1854	82.1
30200	2215	1275	21.6	1335	26.8	1396	32.5	1465	38.8	1523	44.5	1575	50.1	1685	62.6	1786	75.1				
33400	2450	1397	27.9	1453	33.6	1506	39.7	1565	46.3	1626	53.0	1679	59.4	1777	72.5						
36600	2684	1520	35.4	1573	41.6	1620	48.1	1671	55.0	1728	62.5	1781	69.6								
39800	2919	1643	44.4	1694	51.0	1739	58.0	1782	65.0	1831	72.8										

SIZE 40 TA

Wheel diameter: 40¼"
Wheel circumference: 10.54'

Fan outlet area: 16.5 sq. ft.
Maximum BHP = 22.7 $\left(\frac{RPM}{1000}\right)^3$

Class I = 1027 RPM
Class II = 1343 RPM
Class III = 1685 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	723	514	2.93	635	5.12	772	7.74	893	10.8	998	13.9	1088	16.9	1249	23.3	1398	30.3	1542	37.9	1675	46.1
16000	964	601	4.42	707	7.59	798	10.8	887	13.1	993	16.8	1092	20.9	1258	28.9	1405	37.2	1536	45.7	1651	54.1
20000	1205	699	6.56	792	10.3	874	14.3	950	18.6	1022	22.0	1092	24.8	1258	33.7	1411	44.1	1547	54.3	1669	64.5
24000	1446	804	9.46	881	13.7	959	18.3	1028	23.1	1093	28.1	1154	33.1	1271	40.5	1404	49.0	1545	61.5	1670	73.7
28000	1687	911	13.2	982	18.1	1047	23.1	1112	28.6	1176	34.3	1232	39.9	1338	51.6	1440	61.0	1543	68.9	1657	79.8
32000	1928	1018	17.8	1086	23.6	1144	29.2	1201	35.0	1259	41.2	1316	47.8	1416	60.7	1508	74.0	1600	86.1	1684	94.9
36000	2169	1129	23.7	1192	30.1	1248	36.6	1296	42.6	1347	49.2	1400	56.3	1497	70.5	1586	85.1	1670	100		
40000	2410	1241	30.9	1298	37.8	1351	45.0	1398	52.0	1444	59.0	1489	66.2	1582	81.8	1669	97.7				
44000	2651	1354	39.6	1406	47.1	1457	55.0	1503	62.9	1545	70.4	1586	78.0	1669	94.2						
48000	2892	1467	50.0	1516	57.9	1563	66.3	1608	75.0	1649	83.5										

SIZE 44 TA

Wheel diameter: 44½"
Wheel circumference: 11.65'

Fan outlet area: 20.3 sq. ft.
Maximum BHP = 37.5 $\left(\frac{RPM}{1000}\right)^3$

Class I = 935 RPM
Class II = 1222 RPM
Class III = 1534 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	690	455	3.36	569	5.78	699	9.16	807	12.7	899	16.2	982	19.9	1128	27.5	1271	36.2	1399	45.3	1521	55.6
18400	906	524	4.89	624	8.67	709	11.9	802	15.0	903	19.9	987	24.4	1139	33.8	1269	43.3	1383	53.0	1490	63.1
22800	1123	601	7.00	690	11.4	768	16.1	837	20.5	907	23.9	984	27.9	1144	39.9	1275	51.0	1395	62.6	1504	74.3
27200	1340	686	9.88	759	14.7	834	20.1	898	25.6	959	31.4	1016	36.1	1135	44.1	1275	57.6	1401	71.8	1507	84.7
31600	1557	772	13.5	838	19.0	904	25.0	967	31.3	1021	37.4	1075	44.3	1176	56.2	1277	65.2	1392	77.8	1506	93.9
36000	1773	859	18.0	923	24.4	977	30.6	1035	37.6	1091	44.9	1142	52.1	1235	67.1	1323	80.8	1411	91.4	1502	102
40400	1990	948	23.5	1007	30.7	1059	37.8	1107	44.8	1160	52.9	1210	61.0	1299	76.8	1383	94.1	1462	110		
44800	2207	1038	30.3	1094	38.2	1143	46.2	1187	53.8	1232	61.9	1279	70.7	1369	88.8	1448	107	1521	125		
49200	2424	1128	38.3	1181	46.9	1229	55.9	1271	64.2	1311	72.8	1352	81.7	1435	101	1516	121				
53600	2640	1220	47.9	1269	57.1	1314	66.7	1356	76.2	1395	85.6	1431	94.6	1507	115						

SIZE 49 TA

Wheel diameter: 49"
Wheel circumference: 12.83'

Fan outlet area: 24.6 sq. ft.
Maximum BHP = 60.9 $\left(\frac{RPM}{1000}\right)^3$

Class I = 849 RPM
Class II = 1110 RPM
Class III = 1393 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		8"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	650	402	3.78	516	6.56	634	10.6	733	14.7	815	18.7	890	23.0	1026	31.9	1161	42.4	1276	53.3	1383	65.6
22000	894	472	5.80	562	10.3	641	14.0	729	18.0	819	23.8	898	29.3	1034	40.3	1152	51.6	1258	63.5	1357	75.8
28000	1138	551	8.69	630	14.0	699	19.6	764	25.3	826	29.4	892	34.0	1037	48.3	1159	62.3	1268	76.3	1370	91.0
34000	1382	638	12.7	703	18.6	770	25.4	826	32.0	881	39.4	933	45.9	1034	55.5	1155	70.4	1271	88.2	1370	105
40000	1626	725	17.8	786	24.9	841	32.2	897	40.1	947	47.8	994	56.0	1085	72.6	1169	84.3	1262	96.9	1367	116
46000	1870	815	24.4	872	32.7	919	40.5	969	49.2	1018	58.3	1064	67.5	1147	86.1	1226	106	1298	120	1374	133
52000	2114	907	32.8	959	42.0	1004	51.0	1046	60.0	1090	69.7	1133	79.8	1214	100	1287	122	1359	144		
58000	2358	999	43.1	1048	53.3	1091	63.5	1131	73.7	1168	83.5	1207	94.2	1287	118	1356	140				
64000	2602	1093	55.6	1137	66.4	1179	77.9	1217	89.3	1252	100	1286	111	1358	136						
70000	2846	1187	70.5	1228	82.1	1267	94.5	1305	107	1338	119	1370	131								

Performance shown is installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

SIZE 54 TA

Wheel diameter: 54¼"
Wheel circumference: 14.20'

Fan outlet area: 30.2 sq. ft.
Maximum BHP = 101 $\left(\frac{RPM}{1000}\right)^3$

Class I = 753 RPM
Class II = 985 RPM
Class III = 1235 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	662	366	4.70	465	8.10	574	13.2	662	18.2	737	23.3	804	28.4	866	33.8	928	39.7	984	45.4	1043	51.9
26000	861	418	6.74	501	12.0	575	16.2	660	21.7	740	28.4	810	34.9	875	41.4	934	48.1	989	54.8	1037	61.3
32000	1060	474	9.32	550	15.6	615	22.3	674	27.6	734	32.2	807	39.7	877	48.4	934	56.0	991	64.0	1045	72.1
38000	1258	536	12.9	602	19.9	663	27.4	717	35.2	769	42.6	818	48.1	871	53.7	931	62.1	993	72.3	1045	81.7
44000	1457	601	17.4	658	25.0	715	33.6	767	42.4	813	51.1	860	60.6	904	68.4	946	74.5	990	80.6	1042	89.1
50000	1656	666	22.8	719	31.5	769	40.6	820	50.6	865	60.4	905	70.2	948	81.3	986	91.0	1023	99.6	1061	107
56000	1854	732	29.4	783	39.5	827	49.1	871	59.4	916	70.5	958	82.0	995	92.6	1031	104	1068	116	1104	128
62000	2053	799	37.5	848	48.6	889	59.3	928	70.2	969	82.0	1009	94.2	1047	107	1083	119	1116	131	1148	144
68000	2252	867	47.2	913	59.1	953	71.4	989	82.9	1024	94.7	1061	108	1099	121	1135	135	1167	148	1198	162
74000	2450	936	58.5	978	71.3	1017	84.4	1051	97.1	1085	110	1117	123	1152	138	1185	152	1220	167		

SIZE 60 TA

Wheel diameter: 60"
Wheel circumference: 15.71'

Fan outlet area: 36.9 sq. ft.
Maximum BHP = 166 $\left(\frac{RPM}{1000}\right)^3$

Class I = 694 RPM
Class II = 906 RPM
Class III = 1138 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	650	328	5.61	420	9.72	519	15.9	598	21.9	664	27.8	728	34.4	783	40.8	840	48.0	893	55.1	944	62.8
32000	867	379	8.28	454	14.9	520	19.9	596	26.6	669	34.8	732	42.8	792	51.1	844	59.0	893	67.2	937	75.0
40000	1084	435	11.8	503	19.6	560	27.8	613	35.0	668	40.7	730	49.3	792	59.9	847	70.0	898	79.8	946	89.8
48000	1301	497	16.8	554	25.4	609	35.0	657	44.6	703	54.6	748	62.3	793	69.0	840	77.4	894	89.4	948	103
56000	1518	561	23.1	610	32.6	661	43.4	707	54.5	749	65.7	789	77.5	828	88.8	864	97.2	903	105	942	113
64000	1734	625	30.8	673	42.1	714	53.2	759	66.0	800	78.7	837	91.2	873	105	907	118	941	131	975	142
72000	1951	691	40.5	736	53.4	774	65.6	811	78.4	850	92.5	889	107	922	121	955	136	986	151	1018	167
80000	2168	757	52.3	799	66.3	837	80.7	870	94.2	904	109	938	124	974	141	1004	156	1034	171	1063	187
88000	2385	825	66.5	864	81.7	900	97.6	931	113	962	128	993	144	1026	162	1056	178	1086	196	1114	213
96000	2602	893	83.3	929	99.5	963	117	995	134	1023	150	1051	167	1079	185	1107	202	1137	221		

SIZE 66 TA

Wheel diameter: 66"
Wheel circumference: 17.28'

Fan outlet area: 44.6 sq. ft.
Maximum BHP = 267 $\left(\frac{RPM}{1000}\right)^3$

Class I = 630 RPM
Class II = 824 RPM
Class III = 1034 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	673	304	7.09	383	12.1	472	19.7	544	27.1	606	34.6	662	42.5	712	50.5	760	58.8	809	67.8	858	77.5
40000	897	351	10.4	417	18.5	477	25.5	541	32.6	609	43.2	666	52.9	718	62.9	768	73.1	811	82.9	854	93.4
50000	1121	405	15.2	464	24.7	517	35.1	565	44.9	610	51.8	661	60.4	718	73.4	770	86.4	818	99.3	860	111
60000	1345	463	21.6	514	32.4	563	44.2	606	56.3	647	68.8	687	79.7	725	87.9	765	96.8	813	110	860	126
70000	1570	523	29.9	568	41.9	611	55.0	654	69.1	692	83.1	727	97.4	763	112	795	124	828	134	860	144
80000	1794	584	40.1	626	54.3	663	68.1	703	83.7	739	99.1	772	115	805	132	836	149	867	166	896	180
90000	2018	646	52.9	686	68.9	720	84.4	753	100	787	118	821	136	852	153	882	172	910	190	937	209
100000	2242	709	68.5	746	86.2	779	104	809	121	838	138	870	158	900	178	930	198	955	217	982	237
110000	2466	772	87.3	807	106	839	126	867	145	894	164	921	183	949	205	977	226	1004	248	1030	270
120000	2691	836	110	868	130	899	151	927	173	953	194	977	214	1001	235	1027	258				

SIZE 73 TA

Wheel diameter: 73"
Wheel circumference: 19.11'

Fan outlet area: 54.5 sq. ft.
Maximum BHP = 442 $\left(\frac{RPM}{1000}\right)^3$

Class I = 570 RPM
Class II = 745 RPM
Class III = 935 RPM

CFM	OV	1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40000	734	285	9.62	352	17.0	426	25.3	492	35.3	551	45.6	601	55.6	645	65.6	689	76.6	730	87.5	772	99.7
51000	936	325	13.6	385	23.9	436	38.3	489	41.1	550	54.2	602	66.6	651	79.6	694	92.0	735	105	773	118
62000	1138	369	19.0	423	30.9	470	43.4	513	56.0	554	64.9	600	75.3	649	90.4	695	106	738	122	779	138
73000	1339	417	26.1	463	39.2	508	53.7	547	68.5	584	83.8	619	96.3	654	106	690	117	734	134	777	153
84000	1541	466	34.9	507	49.6	546	65.2	585	82.1	620	99.1	651	116	684	134	714	147	744	159	777	171
95000	1743	515	45.9	554	62.5	588	79.3	625	98.0	658	116	689	135	719	155	747	176	774	194	802	210
106000	1945	565	59.0	602	78.1	634	96.3	665	116	697	136	727	157	755	177	783	200	809	222	834	244
117000	2147	616	75.0	651	95.8	681	116	709	136	737	158	766	180	796	205	822	228	845	249	869	274
128000	2349	667	94.0	700	116	730	139	756	161	780	183	807	207	834	232	861	259	884	283	909	309
139000	2569	724	119	754	142	782	167	808	192	832	216	855	241	879	267	903	293	928	322		

Performance shown is installation Type B: Free inlet, Ducted outlet. Power rating (BHP) does not include drive losses.
Performance ratings do not include the effects of appurtenances in the airstream.

MATERIAL SPECIFICATIONS

Dimensions in inches. Weights in pounds. WR^2 in lb.-ft.^{2}.

Size	Shaft diameter			Bearings			Wheel weight			Wheel WR^2		
	Class I	Class II	Class III	Class I	Class II	Class III	Class I	Class II	Class III	Class I	Class II	Class III
12	1	1 3/16	—	A	F	—	8	8	—	2	2	—
15	1 3/16	1 3/16	—	A	F	—	13	13	—	3	3	—
18	1 3/16	1 7/16	1 11/16	A	F	F	32	32	47	11	11	14
22	1 7/16	1 11/16	1 11/16	C	F	F	46	46	60	24	24	28
24	1 11/16	1 11/16	1 15/16	C	F	F	61	61	90	38	38	49
27	1 11/16	1 11/16	1 15/16	E	F	F	72	72	102	55	55	69
30	1 11/16	1 15/16	2 3/16	E	F	F	90	90	134	87	87	119
33	1 15/16	2 3/16	2 3/16	E	F	F	118	118	155	130	130	170
36	2 3/16	2 3/16	2 7/16	D	F	F	158	158	234	219	219	273
40	2 3/16	2 3/16	2 7/16	D	F	F	188	188	287	321	321	430
44	2 3/16	2 7/16	2 11/16	D	F	F	248	259	334	523	523	628
49	2 7/16	2 11/16	2 15/16	D	F	F	344	349	477	843	867	949
54	2 7/16	2 11/16	3 7/16	D	F	F	411	418	653	1252	1291	1799
60	2 7/16	2 15/16	3 7/16	D	F	F	523	539	804	1926	1986	2850
66	2 11/16	3 7/16	3 7/16	D	F	F	814	851	984	3715	3807	4271
73	2 15/16	3 7/16	3 15/16	D	F	F	1036	1069	1178	5872	5997	6310

Bearing types: A–Link-Belt P3-U200. C–Sealmaster SPM. D–Sealmaster MPD. E–Link-Belt P-U300. F–Link-Belt P-B22400. **nyb** reserves the right to substitute bearings of equal ratings.

APPROXIMATE BARE-FAN WEIGHT

Size	Class I			Class II			Class III			Arr. 4-M	Arr. 4-S, 4-V, 4-D	Arr. 4 Roof-mounted
	Arr. 9-M	Arr. 9-S, 9-V, 9-D	Arr. 9 Roof-mounted	Arr. 9-M	Arr. 9-S, 9-V, 9-D	Arr. 9 Roof-mounted	Arr. 9-M	Arr. 9-S, 9-V, 9-D	Arr. 9 Roof-mounted			
12	134	124	148	140	130	154	—	—	—	112	102	126
15	183	170	208	187	174	212	—	—	—	148	135	173
18	259	248	302	271	260	314	280	269	323	227	216	270
22	361	349	425	385	373	449	390	378	454	331	319	395
24	484	464	564	493	473	573	503	483	583	453	433	533
27	604	575	698	611	582	705	623	594	717	570	541	664
30	757	711	887	769	723	899	804	758	934	750	704	880
33	936	883	1102	953	900	1119	978	925	1144	914	861	1080
36	1158	1091	1367	1173	1106	1382	1209	1142	1418	1082	1015	1291
40	1470	1390	1721	1461	1381	1712	1542	1462	1793	—	—	—
44	1915	1818	2366	1931	1834	2382	2006	1909	2457	—	—	—
49	2372	2257	2813	2395	2280	2836	2412	2297	2853	—	—	—
54	3077	2928	3667	3104	2955	3694	3311	3162	3901	—	—	—
60	3722	3555	4471	3775	3608	4524	4065	3898	4814	—	—	—
66	4651	4436	5543	4762	4547	5654	4814	4599	5706	—	—	—
73	5746	5466	6819	5836	5556	6909	5953	5673	7026	—	—	—

MOTOR SIZE CAPABILITY

Size	Arrangement 9			Arrangement 4	
	Max. C-NW	Frame size		Min. frame size	Max. frame size
		Min.	Max.		
12	16.83	56	213T†	56	182T
15	16.83	56	215T	143T	184T
18	23.69	56	284T	143T	215T
22	25.95	56	324T	143T	256T
24	25.95	143T	326T	143T	286T
27	27.93	145T	364T	145T	326T
30	27.93	184T	365T	184T	365T
33	34.15	213T	405T	213T	405T
36	34.15	215T	405T	215T	405T
40	34.15	254T	405T	—	—
44	34.15	256T	405T	—	—
49	34.15	286T	405T	—	—
54	34.15	324T	405T	—	—
60	34.15	326T	405T	—	—
66	35.38	404T	445T	—	—
73	35.38	444T	445T	—	—

†184T max. explosion proof frame with weather cover.

FLANGE OPTION

Size	ID	BC	OD	Holes*	
				No.	Dia.
12	17	18 3/4	20	8	9/16
15	20 3/4	22 1/2	23 3/4	16	9/16
18	25 1/4	27	28 1/4	16	9/16
22	30 3/4	32 1/2	33 3/4	16	9/16
24	33 7/8	36 1/8	37 7/8	16	9/16
27	37 1/4	39 1/2	41 1/4	16	9/16
30	41 1/2	43 3/4	45 1/2	16	9/16
33	45 5/8	47 7/8	49 5/8	24	9/16
36	50 3/8	52 5/8	54 3/8	24	9/16
40	55 1/2	57 3/4	59 1/2	24	9/16
44	61 3/8	63 5/8	65 3/8	24	9/16
49	67 1/2	69 3/4	71 1/2	32	9/16
54	74 3/4	77	78 3/4	32	9/16
60	82 5/8	84 7/8	86 5/8	32	9/16
66	90 3/4	93	94 3/4	32	9/16
73	100 3/8	102 5/8	104 3/8	32	9/16

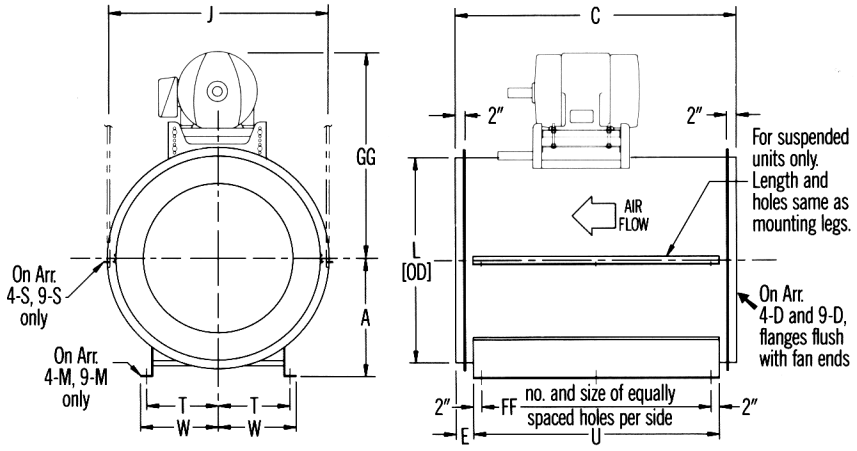
*Holes spaced equally straddling centerline. All flanges are 1/4" thick.

Tolerance: ±1/8"

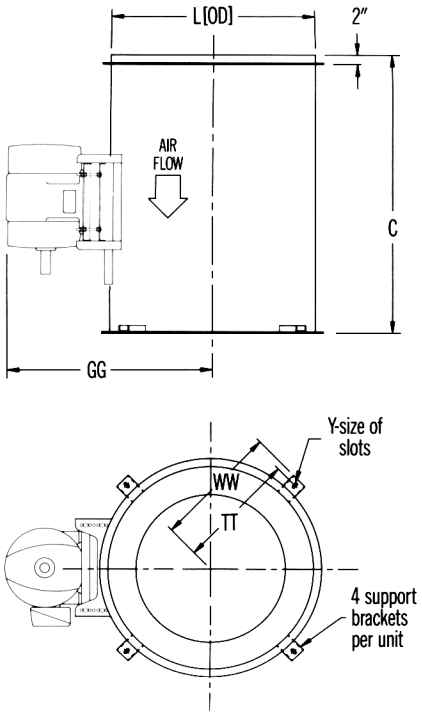
DIMENSIONS

Dimensions should not be used for construction unless certified. See page 6 for available mounting positions. Note motor size capability on page 14. Tolerance: ±1/8".

ARRANGEMENTS 4-M and 9-M, 4-S and 9-S, 4-D and 9-D

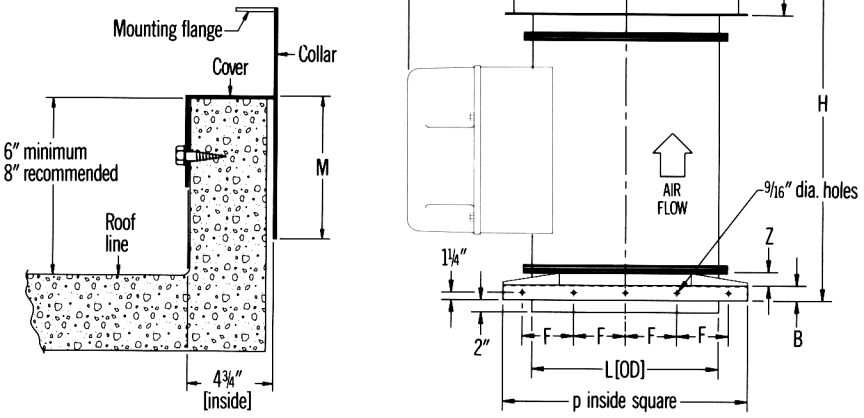


ARRANGEMENTS 4-V and 9-V



ARRANGEMENTS 4-R and 9-R

[roof-mounted] with exhaust-type stack hood



DIMENSIONS [Inches]

Size	A	B	C		E	F	FF	G	GG	H		J	L	M	P	R	S	T	TT	U		W	WW	Y	Z
			Arr. 4	Arr. 9					(max)	Arr. 4	Arr. 9									Arr. 4	Arr. 9				
12	11	2½	27	30¾	3½	5	2-9/16	28	25⅜	48¾	49⅞	18⅝	16⅞	4½	26½	14	26¼	7⅛	11½	20	23¾	8	12¾	9/16x1	2
15	13	2½	28⅛	33¾	3¾	6	2-9/16	32¾	31½	51⅞	55⅜	22⅜	20⅝	4½	30¼	16	30¼	8⅜	13½	20⅝	26¼	9¼	14⅝	9/16x1	2
18	15	2½	33⅛	36¾	3¾	6½	2-9/16	35	33⅝	58⅞	60⅞	27⅜	25⅛	4½	34¾	18	34½	9⅜	15⅝	25⅝	29¼	10¼	16⅞	9/16x1	2
22	17	2½	39¾	44¼	3¾	8½	2-9/16	40¼	37⅝	68½	70¼	32⅞	30⅝	4½	40¼	21	40	10⅞	18⅜	32¼	36¾	11¾	19⅝	9/16x1	2
24	19	3	44⅜	47	4¼	9	2-9/16	41½	40¼	85⅝	86⅛	36	33⅞	5	43⅜	23	43¼	12¼	20⅞	35⅞	38½	13½	22¼	¾x1½	3
27	22	3	49½	52½	4¼	10	2-9/16	49½	43	88¾	89⅛	39⅜	37¼	5	46¾	25	47¼	13⅝	22½	41	44	14⅞	24	¾x1½	3
30	24	3	55⅛	56¾	4¼	11	3-¾	52¼	45	100⅜	99¾	44⅞	41⅜	5	51	26	50¼	14⅞	24⅝	46⅝	48¼	16⅛	26⅛	¾x1½	3
33	26	3	61¼	62¼	4¼	12	3-¾	57⅞	49⅛	110½	108⅞	49	45½	5	55⅛	29	52⅜	16	26⅝	52¾	53¾	17¼	28⅛	¾x1½	3
36	29	3	63½	67½	4¼	13	3-¾	60⅞	51⅞	108¾	110½	53¾	50¼	5	59⅞	31	59⅛	17½	29	55	59	19	30½	¾x1½	3
40	32	3	—	75¾	4½	14	3-¾	63⅞	54⅛	—	122⅜	58⅞	55⅜	5	65	34	64⅝	19	31⅝	—	66¾	20⅛	33⅛	¾x1½	3
44	35	3	—	80⅝	5	15½	3-¾	57⅜	59⅛	—	130⅞	64¾	61¼	5	70⅞	36	70⅝	21	34½	—	70⅝	22½	36	¾x1½	3
49	38	3	—	87⅞	6	17	3-¾	62¼	62⅛	—	142⅛	70⅞	67⅜	5	77	40	76⅝	23	37⅝	—	75⅞	24½	39⅛	¾x1½	3
54	41	4	—	97	5¼	19	4-1	66⅝	65¾	—	155¼	79⅛	74⅝	6	84¼	43	84	25	41⅞	—	86½	27	43⅜	1x2	3
60	45	4	—	107	5¾	20½	4-1	71⅛	69¾	—	169¼	87	82½	6	92⅛	47	91⅞	26½	45¾	—	95½	28½	47¼	1x2	3
66	49	4	—	116¾	5¾	22½	4-1	79¾	73¾	—	183	95⅛	90⅝	6	100¼	51	100	29	49¾	—	105¼	31½	51⅜	1x2	3
73	54	4	—	129⅜	6⅝	25	4-1	85	79	—	200⅝	104¾	100¼	6	109⅝	56	109⅝	33½	54⅝	—	116⅛	36	56⅛	1x2	3

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