COMPACT PRESSURE BLOWERS

WITH RUGGED RADIAL-BLADE WHEELS



- Capacities to 4,000 CFM
- Static pressures to 23"WG
- Temperatures to 600°F.



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



COMPACT GI FANS

- Capacities to 2,200 CFM
- Static pressures to 14"WG



PRESSURE BLOWERS

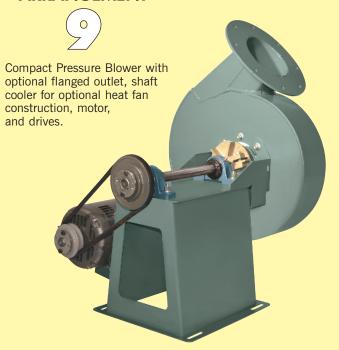
- Static pressures to 58"WG
- Capacities to 5,200 CFM



SERIES 20 GI FANS

- Capacities to 77,000 CFM
- Static pressures to 22"WG

ARRANGEMENT



ARRANGEMENT







The New York Blower Company certifies that the Compact Pressure Blowers with the maximum wheel per housing 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.

COMPACT PRESSURE BLOWER

...for process systems

DESIGN FEATURES

- Pressures to 23"WG.
- Capacities to 4,000 CFM.
- Temperatures to 600°F.
- Compact pressure blower fans offer stable pulsation free performance from wide-open to closed-off.
- Standard radial wheel for optimum efficiency.
- Efficiency . . . advanced wheel and aerodynamic housing design with round outlet combine for air-handling efficiency superior to conventional radial-wheel designs.
- Variable wheel widths/diameters and a choice of four outlet sizes and six inlet sizes enable efficient fan selection across a wide range of volumes and pressures.
- Choice of arrangements ... direct-drive and belt-drive.
- Wide application range . . . designed for continuous operation in combustion, cooling, conveying, drying, dust collection, grinding booth exhaust, scrubber/absorber exhaust, paper trim systems, sawdust and woodchip conveying.
- Base mounting slots for ease of retrofit applications.

CONSTRUCTION FEATURES

- All-welded steel housings . . . heavy-gauge housings are designed specifically to prevent "flexing" at high pressures.
- Balance . . . all wheels are precision-balanced prior to assembly . . . fans with motors and drives mounted by nyb are given a final trim balance check at the specified running speed.
- Shafting . . . straightened to close tolerance to minimize "run-out" and ensure smooth operation.
- Inlet configuration . . . a choice of two inlet types allows units to be tailored to specific application requirements.
- Lifting eyes . . . standard on all units for ease of handling and installation.
- Finish . . . medium-green industrial powder coating over an abrasive mechanical blast.

Accessories/Modifications

• CONTINUOUSLY WELDED FLANGES

Available in two flange patterns.

COMPANION FLANGES

Designed to fit flush with fan inlet and outlet flanges, provided with a matching hole pattern.

DRAINS

Pipe nipple (sizes 804-1206) or tank flange (sizes 1406-1808) welded to the lowest point of the housing scroll.

• INLET FILTER

Filters are available with a choice of three element types: wire mesh, hi-flow polyester, and ultra-synthetic. High-efficiency filter is flange-mounted. Furnished standard with outboard support bracket and available with or without protective hood.

SILENCERS

Available to match standard inlet or outlet flange sizes. Heavy-welded construction filled with high-density, acoustical absorption material.

• INLET/OUTLET DAMPERS

Available as either slide gate for fixed damper control (inlet) or as a separate wafer design (inlet or outlet) for variable-flow applications [shown].



SHAFT SEALS

Ceramic-felt shaft seals consist of compressed ceramic felt elements. Lubricated lip seals [Buna, Teflon®, and Viton®] and gas-purgeable, segmental bushing seals are also available. See your **nyb** representative for availability. [Teflon and Viton are registered trademarks of DuPont and DuPont Dow Elastomers, respectively.]

ACCESS DOOR

Gasketed, flush-bolted door opens to provide access to the wheel.

HEAT-FAN CONSTRUCTION

Available on Arrangements 1 and 9 steel wheel Compact Pressure Blowers up to 600°F. Modifications include shaft cooler and shaft-cooler guard.

LL-1 LOW LEAKAGE CONSTRUCTION

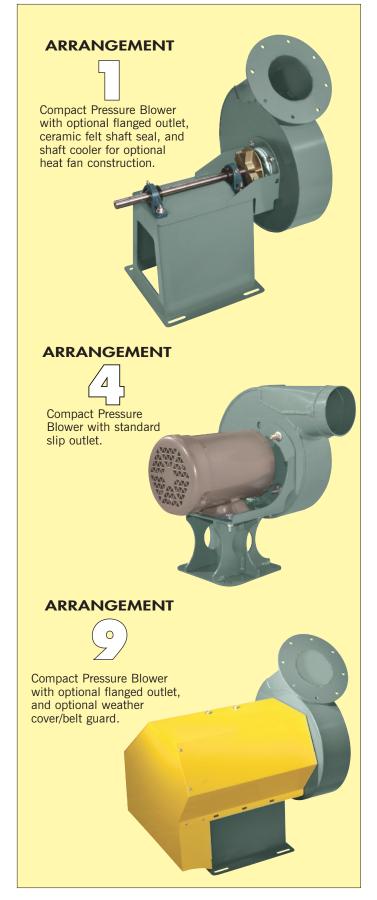
Special construction to minimize leakage includes liptype shaft seal, non-rotatable housing with solid drive side, and neoprene gasketing. Maximum temperature 200°F. due to gasketing limitations. Not available with heat-fan construction. Contact your **nyb** representative for other options.

SPECIAL ALLOY CONSTRUCTION

Airstream components can be constructed of a wide range of alternate alloys for corrosive applications.

UNITARY BASE

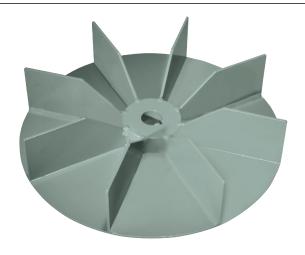
Fan, motor, and guards can be mounted and shipped on a rugged, structural-steel base. Factory-assembled and run-tested prior to shipment.



WHEELS

OPEN RADIAL WHEEL DESIGN

Either welded steel, aluminum or stainless steel wheel construction is available in straight radial wheel design. Open front-plate configuration makes this wheel ideally suited for both clean air and material handling applications.



WHEEL SPECIFICATIONS

Fan Size	Maximum* Blade O.D.	Maximum Safe Speed	Maximum*				
raii Size	Waxiiiiuiii biaue O.D.	Maximum Sale Speed	Weight	WR ²			
804	8	4000	5.1	0.22			
904	105/8	4000	7.2	0.57			
1005	12	4000	8.8	0.92			
1206	13	4000	11	1.3			
1406	143/4	3900	16	2.3			
1508	161/2	3900	19	3.5			
1806	18	3600	21	4.7			
1808	181/2	3600	29	6.3			

^{*} Largest wheel per housing

SPARK-RESISTANT CONSTRUCTION [SRC]

Intended to minimize the potential for any two or more fan components to generate sparks within the airstream by rubbing or striking during operation.

The following types are available:

AMCA A [AIRSTREAM] SRC

To include all airstream parts constructed of a spark-resistant alloy . . . maximum temperature: 200°F.

AMCA B [WHEEL] SRC

To include the fan wheel constructed of a spark-resistant alloy and a buffer plate around the housing shaft-hole opening . . . maximum temperature: $200^{\circ}F$.

AMCA C [BUFFER] SRC

To include buffer rings adjacent to the wheel front and back and a buffer plate around the shaft hole opening. . . maximum temperature: 600°F with heat fan construction.

SAFETY EQUIPMENT

Safety accessories are available from nyb, but selection of the appropriate devices is the responsibility of the systemdesigner 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.

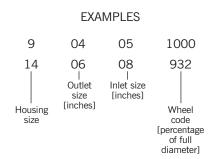
PERFORMANCE

Using Performance Curves

Direct-drive performance is shown for the maximum diameter and width wheel available (solid line), and the minimum wheel size available (dashed line) per housing and inlet size. Performance points can be selected in between these curves for a custom wheel size to match specific operating points. These selections can be made in Fan-to-Size to fine-tune the required wheel diameter and width required.

SIZING NOMENCLATURE

8, 9, or 10-digit model number designates the housing size, outlet size, inlet size, and wheel diameter code.



PROCEDURE	STEPS	EXAMPLE
Determine the appropriate outlet size.		The 06 outlet is selected for 1000 CFM at 12"SP.
Plot the CFM and SP [standard] and select a performance curve for the fan size that meets or slightly exceeds the required performance.	2	A Size 1406 will provide 1000 CFM at 12.5"SP.
Run selection in Fan-to-Size to find BHP. (Available on nyb.com)	3	A 5 HP motor will be required.

Note: The horsepower coverage of a given motor will increase 15% when a 1.15 service factor motor is utilized.

Correction Factors

Performance is based on actual cubic feet per minute [ACFM] at the blower inlet at standard density [.075 lbs./ft.³] and static pressure at the blower outlet. Static pressure capabilities are shown in inches water gauge ["WG].

Air density corrections are necessary for proper selection when air density varies from the standard .075 lbs./ft. 3 at 70°F. at sea level. This also occurs when negative static pressure exists [rarefication] on the inlet side of the fan. Multiply the required static pressure at conditions by the appropriate factors in Charts I, II, and III to obtain corrected pressure for blower selection. Pressure and BHP will be reduced at conditions by the inverse of these factors. Multiply one factor by the other if temperature, altitude, and rarefication are non-standard. For example: If the installation is located at an altitude of 4000 feet, the gas temperature is 300°F., and the inlet pressure is $-15^{\prime\prime}$ WG, the correction factor is 1.73 [1.16 x 1.43 x 1.04].

CHART I ALTITUDE [ft.] CORRECTIONS Alt. Factor

OOMA	0110110
Alt.	Factor
0	1.00
500	1.02
1000	1.04
1500	1.06
2000	1.08
2500	1.10
3000	1.12
3500	1.14
4000	1.16
4500	1.18
5000	1.20
6000	1.25
7000	1.30
8000	1.35
9000	1.40
10000	1.45

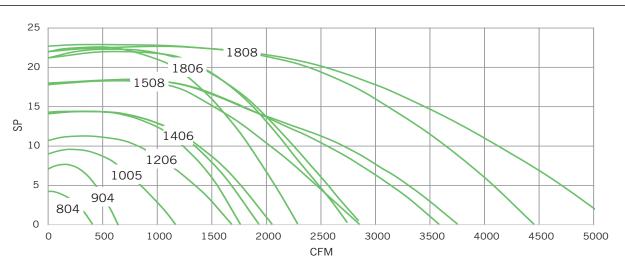
TEMPERATURE CORRECTIONS

COMME	0110110
Temp. °F.	Factor
0	.87
20	.91
40	.94
60	.98
70	1.00
80	1.02
100	1.06
120	1.09
140	1.13
160	1.17
180	1.21
200	1.25
300	1.43
400	1.62
500	1.81
600	2.00

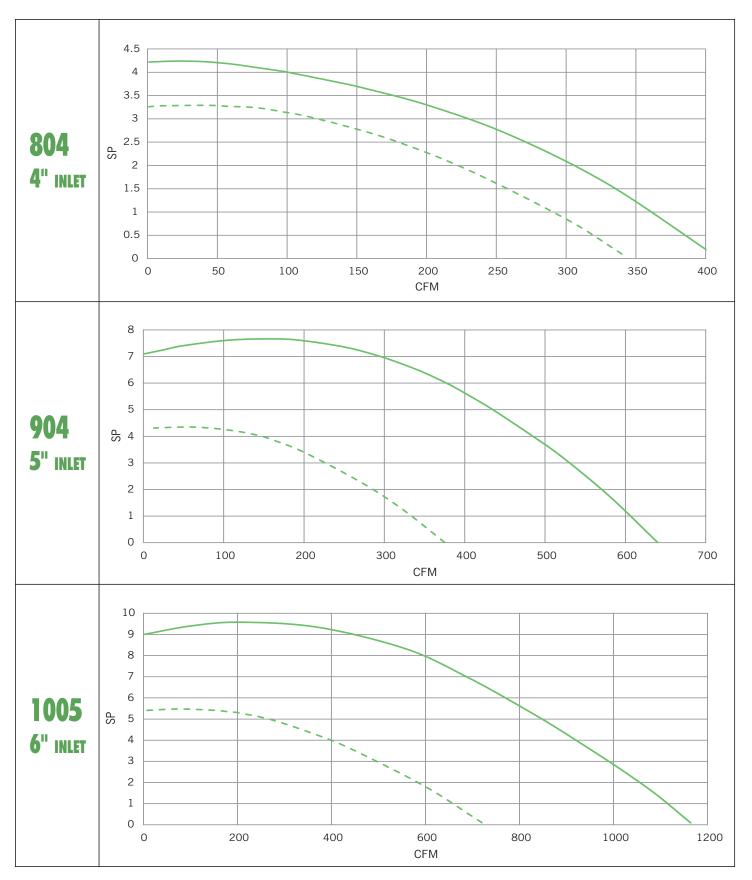
CHART III RAREFICATION CORRECTIONS

Neg. inlet pressure **Factor** "WG 15 1.04 20 1.05 25 1.07 30 1.08 35 1.09 40 1.11 45 1.12 50 1.14 55 1.16 60 1.17 65 1.19 70 1.21 75 1.23 85 1.26



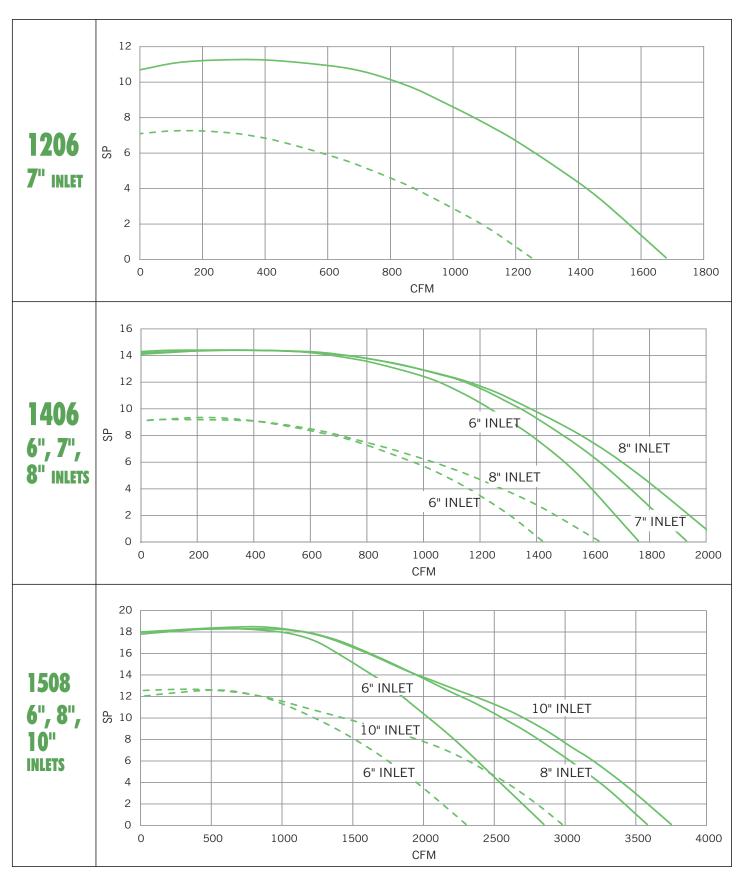


PERFORMANCE AT 3500 RPM



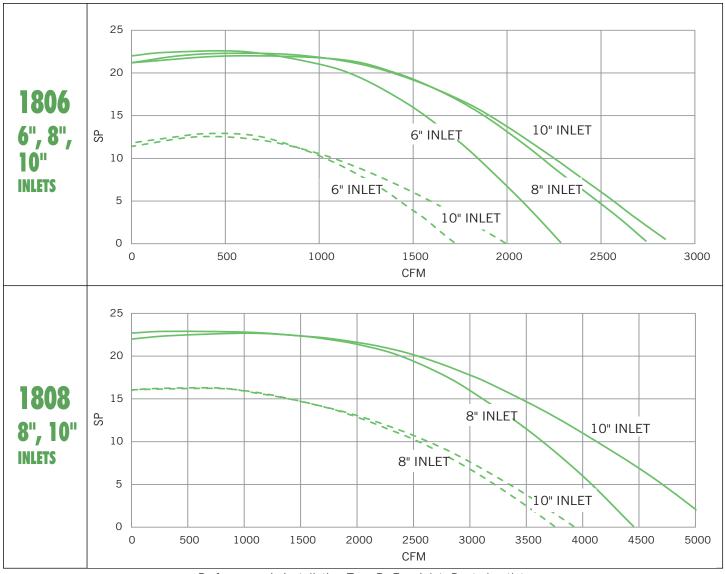
Performance is installation Type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

PERFORMANCE AT 3500 RPM



Performance is installation Type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

Performance at 3500 RPM



Performance is installation Type B: Free inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

MATERIAL SPECIFICATIONS

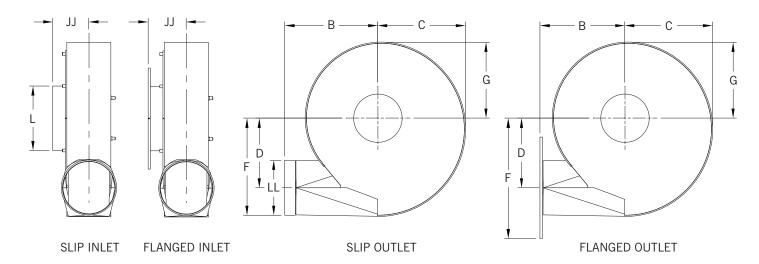
C:	Hou	sing	Side	Plates	Motor Frame	Arr. 1/9		
Size	Sides/Scroll Transition Drive Plate Inlet Plate		- Motor Frame	Shaft Dia.	Bearings			
804	10	12	10	10	56			
904	10	12	10	10	56, 143/5T	1		
1005	10	12	10	10	56, 143/5T	1		
1000	10	1.0	1.0	10	56, 143/5T		Standard	
1206	10	12	10	10	182/4T, 213/5T			
1406	10	12	10	10	56 - 215T	13/16	Duty Ball,	
1508	10	12	10	10	182/4T, 213/5T		Concentrio	
1306	10	12	10	10	254/6T	17/16	Locking	
1806	10	12	10	10	182/4T, 213/5T	13/16		
1000		12			254/6T	17/16		
1808	10	12	10	10	182/4T, 213/5T	13/16		
2000					254/6T, 284/6T	17/16		

Housing Dimensions Arr. 1, 4, 4H, 4V, 9

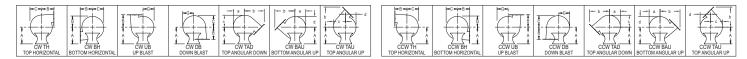
See page 11 for additional dimensional drawings.

Size	I	3	C	D	ı	F	G	J	J		- 11	М	•	b		С	d
3126	Slip	Flange	د	U	Slip	Flange	u	Slip	Flange	_ L	LL	IVI	а	Slip	Flange	· ·	u
804	7	61/16	511/16	41/8	61/4	85/8	51/16	3	33/16	4	4	39/32	51/4	93/8	103/8	61/8	5
904	811/16	75/8	73/8	55/8	73/4	105/8	611/16	33/16	33/8	5	4	325/32	7	115⁄8	129/16	711/16	65/16
1005	91/8	83/16	83/8	69/16	93/16	119/16	71/2	31/2	311/16	6	5	41/32	73/4	127/8	143/8	9	71/8
1206	101/16	93/16	99/16	79/16	1011/16	131/16	83/8	37/8	41/8	7	c	425/32	811/16	145/8	153/4	103/8	8
1406	11	10½	101/4	81/16	113/16	139/16	91/8	41/4	41/2	6, 7, 8	б	513/32	91/2	155/8	163/4	11	83/4
1508	12	111/8	107/16	77/8	11	145/8	95/16	47/8	51/8	6, 8, 10	8	71/32	10	17	181/4	107/8	911/16
1806	125/8	113/4	123/4	101/2	135/8	16	113/16	43/8	45/8	6, 8, 10	6	51/32	121/16	181/2	195⁄8	133/8	101/4
1808	131/16	123/16	133/16	97/8	14	165/8	1111/16	55/16	59/16	8, 10	8	79/32	129/16	191/8	203/8	1313/16	103/4

Note: "L" and "LL" dimensions are OD.



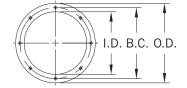
FAN DISCHARGES - VIEWED FROM DRIVE SIDE



Clockwise—angular discharges at 45°

Counterclockwise—angular discharges at 45°

OPTIONAL INLET AND OUTLET FLANGES



DIMENSIONS [INCHES]

Size	Usage	•	ID	OD	ВС	GA.	Std. Flang	ge Pattern	Optional (ANSI 150LB)		
Size	Inlet	Outlet	שו	OD	ВС	GA.	Qty. Holes	Hole Dia.	Qty. Holes	Hole Dia.	
4	804	804, 904	4	9	71/2		12			3/4	
5	904	1005	47/8	10	81/2	7					
6	1005	_	57/8		91/2		8	7/16	8		
0	1406, 1508, 1806	1206, 1406, 1806	57/8	11	3-72					7/8	
7	1206, 1406	_	67/8		9	1/4					
8	1406, 1508, 1806, 1808	1508, 1808	77/8	131/2	113/4	-/4					
10	1508, 1806, 1808	_	97/8	16	141/4				12	1	

Note: Inlet flange holes are on centerline and outlet flange holes straddle centerline.

ARRANGEMENTS 1/9 DIMENSIONS

Dimensions not to be used for construction unless certified. Note: See page 11 for dimensional drawings. Bare fan weights in lbs.

Size	Mtr.	Α		Н	K	N	R	S	т	U	w	Х	ХХ	YY	ZZ	Arr. 9 Bel	t Centers	Bare Fan
	Frame	А	Slip	Flange	N.	N		3	-	U	VV	^	^^	11	22	Min.	Max.	Weight
804	56		231/8	235/16			515/16											59
904	56 143/5T		239/16	233/4			63/16											66 69
1005	56 143/5T	14	24	243/16	21/4	155/8	65/16	105/16	511/16	67/16	25/16	111/16	141/2	43/4	203/16	11.2	11.6	72 75
1206	56 143/5T		243/4	25			611/16											82 85
1200	182/4T		287/8	291/8			65/8									13.8	14.3	107
	213/5T		20%	2J70			0%									14.4	15.2	109
	56															11.5	12.0	114
1406	143/5T	18	299/16	2913/16	33/8	185/8	7	133/8	8	83/4	23/16	15/8	191/4		243/16	11.6	12.1	117
1.00	182/4T	10	20710	20 /10	0,0	10,0	,	1070		0,1		1 -70	1071		21710	13.8	14.3	116
	213/5T															14.4	15.2	118
1500	182/4T		31	311/4			73/4									13.8	14.3	164
1508	213/5T				45./	0517	77.	105/	05/	00.1	415/	10/	0.411.7	83/4	000/	14.4	15.2	166
	254/6T	23	383/4	39	45/8	251/8	77/8	195/8	85/8	93/8	115/16	13/4	2411/16		323/16	16.9	18.2	170
1000	182/4T	18	291/2	293/4	33/8	185/8	63/4	133/8	8	83/4	23/16	15/8	191/4		243/16	13.8	14.3	169
1806	213/5T								05/							14.4	15.2	171
	254/6T	23	371/4	371/2	45/8	251/8	67/8	195/8	85/8	93/8	115/16	13/4	2411/16		323/16	16.9	18.2	175
	182/4T	18	319/16	3113/16	33/8	185/8	77/8	133/8	8	83/4	23/16	15/8	191/4		243/16	13.8	14.3	188
1808	213/5T		02/10	02 /10		10/0	, , , ,	2070		○ / 1	2,10	-/-	10/4		2.710	14.4	15.2	189
1300	254/6T	23	395/16	399/16	45/8	251/8	8	191/2	85/8	93/8	115/16	13/4	2411/16		323/16	16.9	18.2	194
	284/6T	20	00710	03710	770	2070	١	1372	070	370	1 710	174	2 T 710		02710	17.3	18.9	195

ARRANGEMENT 4 DIMENSIONS

Size	Mtr.	Α	I	Н	Н	IH	N	NN	0	R	S	т	U	w	v	Base	Bare Fan
3126	Frame		Slip	Flange	Slip	Flange	IN	ININ	U	, n	3	ı	U		^	Holes	Weight
804	56	89/16	113/4	1115/16	153/8	159/16	71/8	815/16	73/4	33/16	5	23/4	31/2	121/4	3/4		35
904	56	107/16	123/16	123/8	15 ¹³ / ₁₆	16	71/8	97/8	83/4	33/8	53/4	-7.		121/4			46
304	143/5T	1117/8	1315/16	141/8	18½16	181/4	87/8	1015/16	9	43/16	5	33/4	41/2	141/2	13/4		49
1005	56	107/16	125/8	1213/16	161/4	167/16	71/8	915/16	83/4	37/16	53/4	23/4	31/2	121/4	3/4		56
1003	143/5T	1117/8	143/8	149/16	18½	1811/16	87/8	11	91/4	41/4				141/2	13/4		59
	56		133/8	135/8	17	171/4	71/8	10	81/2		5	33/4	41/2	121/4	3/4		70
1206	143/5T	1111//8	15½	153/8	191/4	191/2	87/8	113/8	93/4	45/8				141/2	13/4		71
	182/4T		16½	16½	193/4	20	10	141/2	121/4	5				15			76
	56		14½16	145/16	1711/16	1715/16	71/8							121/4			90
1406	143/5T	153/16	15 ¹³ /16	16½16	1915/16	203/16	87/8	15	123/4	51/2	83/4			141/2			91
	182/4T		16 ¹⁵ /16	173/16	207/16	2011/16	10				074			15		7/16	93
	182/4T		183/8	185/8	217/8	221/8	10	155/8	131/4			415/16	511/16	15			111
1508	213/5T	153/16	201/2	203/4	2513/16	26½16	121/8		121/2	61/8		4-710	J-710	19			113
	254/6T		243/8	245/8	3011/16	3015/16	16	197/8	15½		13			237/8	3/4		118
	182/4T		167/8	171/8	203/8	205/8	10	15½	123/4		83/4			15	74		119
1806	213/5T	153/16	19	191/4	245/16	249/16	121/8		12	55/8				19			121
	254/6T		227/8	231/8	293/16	297/16	16	193/8	15½		13			237/8			126
	182/4T		18 ¹⁵ /16	193/16	227/16	2211/16	10	18	16		103/4			15			156
1808	213/5T	18	211/16	215/16	263/8	265/8	121/8	10	10	61/2	1094	61/4	7	19			153
1000	254/6T	10	24 ¹⁵ /16	253/16	311/4	31½	16	23	181/4	072	153/4	074	'	237/8			157
	284/6T		263/4	27	335/8	337/8	1713/16	23	10-74		1394			261/4			158

ARRANGEMENTS 4H/4V DIMENSIONS

Size	Mtr. Frame	НН	Bare Fan Weight		
804	56C	159/16	26		
904	56C	16	- 36		
304	143/5TC	181/4	30		
1005	56C	167/16	43		
1003	143/5TC	1811/16	43		
	56C	171/4			
1206	143/5TC	191/2	58		
	182/4TC	20			
	56C	1715/16			
1406	143/5TC	203/16	79		
	182/4TC	2011/16			

Size	Mtr. Frame	нн	Bare Fan Weight
	182/4TC	221/8	
1508	213/5TC	261/16	82
	254/6TC	3015/16	
	182/4TC	205/8	
1806	213/5TC	249/16	86
	254/6TC	297/16	
	182/4TC	2211/16	
1808	213/5TC	265/8	113
1000	254/6TC	311/2	113
	284/6TC	337/8	

Housings are rotatable in $22\frac{1}{2}$ ° increments except Bottom Angular Down which requires special construction.

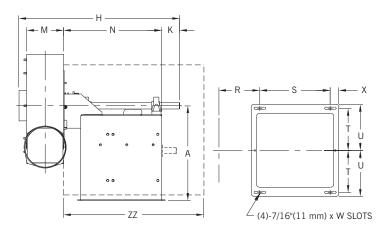
The New York Blower Company has a policy of continuous product development and reserves the right to change designs and specifications without notice.

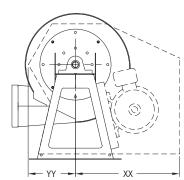
ARRANGEMENTS

PRESSURE BLOWERS

Maximum Airstream

Temperature:
200°F. – aluminum wheel.
300°F. – steel wheel.
600°F. – heat fan.



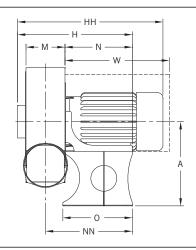


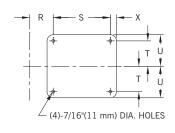
ARRANGEMENT

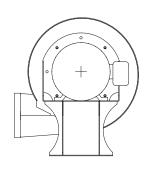


PRESSURE BLOWERS

Maximum Airstream Temperature: 180°F.





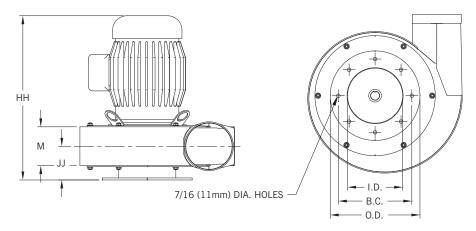


ARRANGEMENT



PRESSURE BLOWERS

Maximum Airstream Temperature: 120°F.

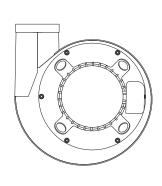


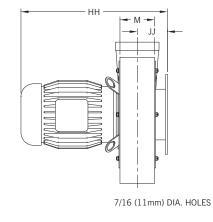
ARRANGEMENT

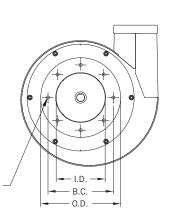


PRESSURE BLOWERS

Maximum Airstream Temperature: 120°F.







COMPLETE SELECTION OF AIR-MOVING EQUIPMENT

The New York Blower Company offers thousands of different types, models, and sizes of air-moving equipment. Contact your nyb representative for assistance in identifying the best fan for your application.



DUST/MATERIAL HANDLING

Wide range of duty available with unique fan lines capable of handling light dust to heavy material. Typical applications include dust-collection and high-pressure process along with material-conveying.



AIR-HANDLING [CENTRIFUGAL]

Designed for clean to moderately dirty gas streams. Commercial and industrial HVAC, process cooling, light material-conveying, heat removal, and dryer exhaust are just a few of the numerous sample applications



AIR-HANDLING [AXIAL]

For the ideal handling of clean to moderately dirty airstreams. Commercial and industrial HVAC. drying and cooling systems, fume extraction, and process-heat removal are typical applications.



FIBERGLASS REINFORCED PLASTIC [FRP]

Choice of performance and duty for corrosive gas streams. Applications include chemical process, wastewater treatment, laboratory hood exhaust, and tank aeration.

CUSTOM PRODUCTS

Designed for unique applications. Variety of configurations, temperatures, flows, and pressures. Wide range of modifications and accessories are available to meet the most



Leading the industry forward since 1889

demanding

specifications.



ROOF VENTILATORS

Including both hooded and upblast ventilators, propeller fans, and centrifugal roof exhausters. These units are ideal for industrial, commercial, and institutional applications.





PRODUCTS

Industrial-duty steam unit heaters with steam heating coils are available for facility heating and process-heat transfer.



COMPONENTS

Plug fans, plenum fans, wheels, inlet cones, and housings for a wide variety of OEM applications. Process/fan components are used in air-handling units, ovens, dryers, freezer tunnels, and filtration systems.