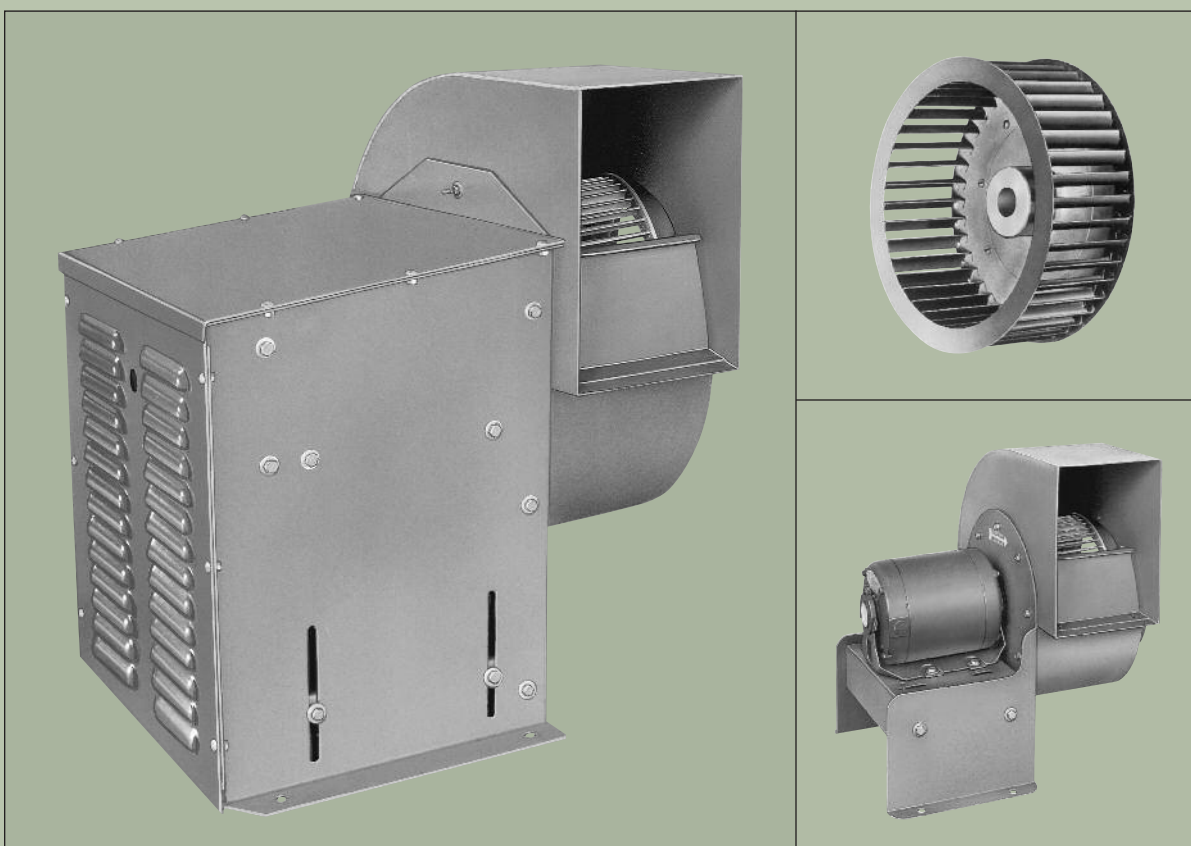


# JUNIOR FANS

## PACKAGED UNITS WITH FORWARD CURVED WHEELS



- Capacities—160 to 4600 CFM
- Static pressures to 2½"WG
- Temperatures to 450°F.
- Direct-Drive or Belt-Drive



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](mailto:nyb@nyb.com)

# JUNIOR FANS

. . . self-contained units of small and medium capacities for ventilation and process-air applications.

## DIRECT-DRIVE

### SIZE 53

195 to 500 CFM  
SP to 2" WG

Cast-aluminum housing and zinc-coated forward curved steel wheel . . . two motor sizes available . . . maximum temperature: 180°F.

See page 4.



### SIZES 75/90

300 to 1880 CFM  
SP to 2" WG

Direct-drive arrangement for maximum simplicity . . . maximum temperature: 180°F.

See page 5.



The New York Blower Company certifies that the Junior 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.

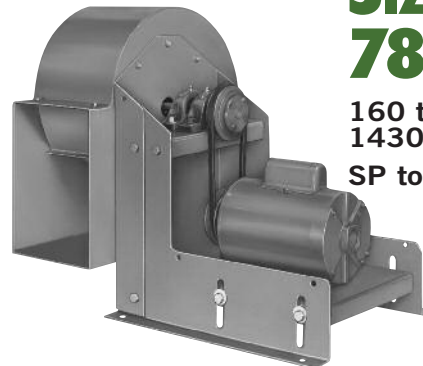
## GENERAL FEATURES

- **Rugged construction**—heavy-gauge [primarily 12 gauge] steel . . . housings are continuously welded [exception: Size 53 Junior Fan housing is cast-aluminum].
- **Small packaged design**—provides easy low-cost installation.
- **Baked enamel finish**—standard finish is baked green enamel [exception: Size 53 housing is unpainted] . . . shaft is coated with rust-preventative material.
- **Rotation and discharge**—Junior Fans are available in clockwise or counterclockwise rotation in any of seven discharge positions [see pages 4-5] . . . note: Size 53 available only in clockwise rotation.

## BELT-DRIVE

### SIZES 78/93

160 to 1430 CFM  
SP to 2½" WG

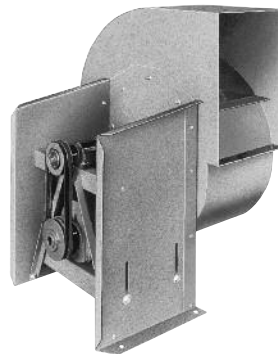


Adjustable V-belt drive provides a variety of fan speeds . . . maximum temperature: 200°F. Heat Fan available for 450°F.

See page 6.

### SIZES 125/155

1030 to 4640 CFM  
SP to 2½" WG

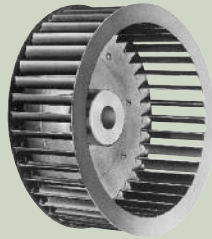


Compact base design provides for ease of installation and maintenance . . . adjustable V-belt drives . . . maximum temperature: 200°F. For higher temperatures or pressures, see either GPA Fans or General Purpose Fans bulletin.

See page 7.

# WHEELS

## FORWARD CURVED WHEEL

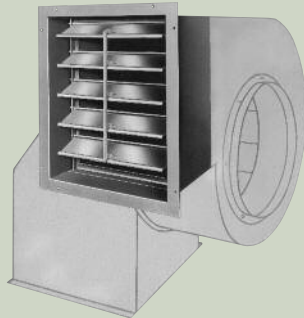


For slow speeds and quiet operation . . . choice of five wheel diameters: 5¼", 7½", 9", 12¼", and 15" . . . steel wheels are standard.

# ACCESSORIES

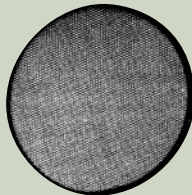
## OUTLET SHUTTER

For Horizontal,  
Angular Up, and  
Up Blast discharges



Outlet shutters feature steel casings with aluminum blades. Heavy-duty shutters available for outlet velocities to 3000 FPM. Air movement opens the shutters which are positively held in open position by external tie rod. When fan stops, shutters drop to a closed position. The die-formed edges overlap, keeping out drafts and protecting the fan against weather. Not available on Size 53. Maximum temperature: 200°F.

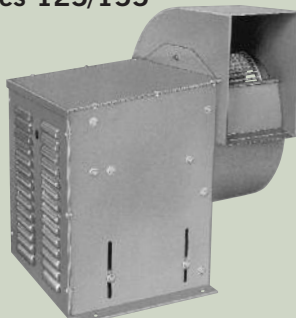
## INLET AND OUTLET GUARDS



Inlet and outlet guards are available for all Junior Fans except Size 53.

## WEATHER COVER/ BELT GUARD

Sizes 125/155



Junior Fans can be equipped with a weather cover/belt guard to completely enclose the drive assembly. The steel assembly can be easily removed for inspection and maintenance. The louvered end panel provides ample motor ventilation.



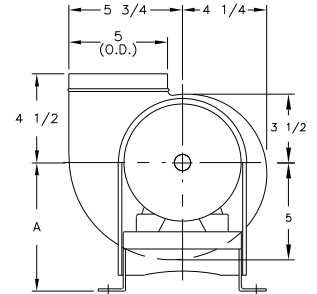
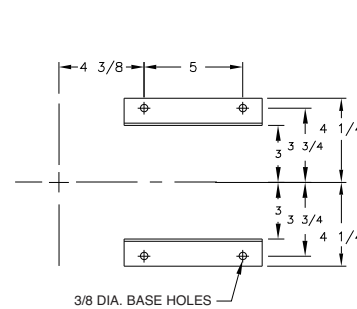
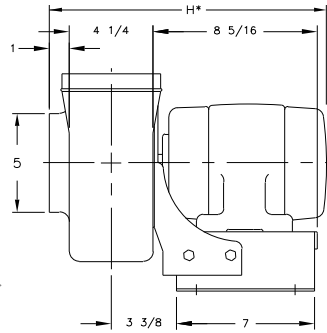
Sizes 78/93

The weather cover/belt guard cannot be used on Sizes 75/90 Junior Fans with integral horsepower motors. On Sizes 78/93 Junior Heat Fans, the weather cover/belt guard is moved back to leave a gap over the shaft cooler.

# SIZE 53—DIRECT-DRIVE

MAXIMUM TEMPERATURE: 180°F.

WITH 1/3 OR 1/2 HP MOTOR



AVAILABLE ONLY IN  
CLOCKWISE ROTATION

Inlet and outlet dimensions are OD.  
Dimensions not to be used for construction unless certified.

## DIMENSIONS [inches] AND WEIGHTS [lbs.]

Motor frame	A	H [minimum]	H [maximum]	Wheel weight	Fan weight†
48	6	13 1/4	14 7/8	1	9
56	6 1/2	14	15 1/4	1	9

† Fan weight does not include motor weight.

Tolerance: ± 1/8"

## SIZE 53

Capacities based on air density of .075 lbs. per cu. ft.  
Outlet area: .123 sq. ft.

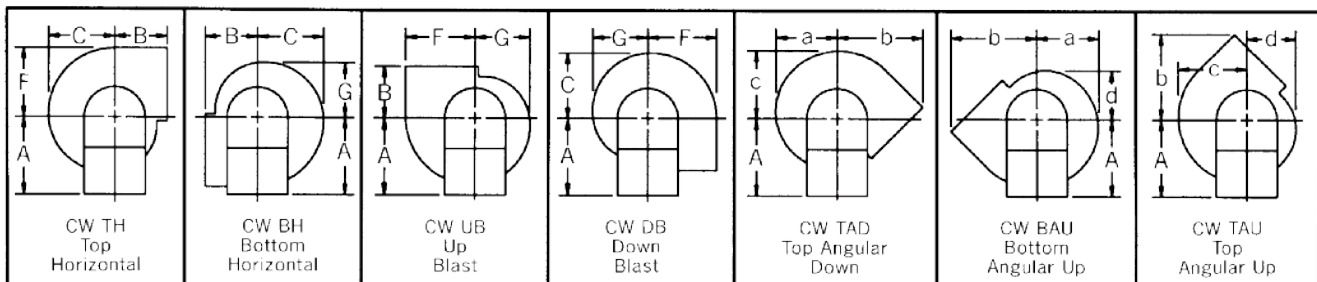
Fan size	Motor		CFM at various static pressures										Max. BHP*
	HP	RPM	0"SP	1/8"SP	1/4"SP	3/8"SP	1/2"SP	1"SP	1 1/4"SP	1 1/2"SP	1 3/4"SP	2"SP	
53	1/3	1725	286	261	236	218	198	—	—	—	—	—	.07
	1/2	3500	—	—	—	—	—	482	462	445	428	300	.47

Performance certified is for installation Type B: Free inlet, Ducted outlet.

Performance ratings do not include the effects of appurtenances [accessories].

\* Maximum BHP over cataloged range.

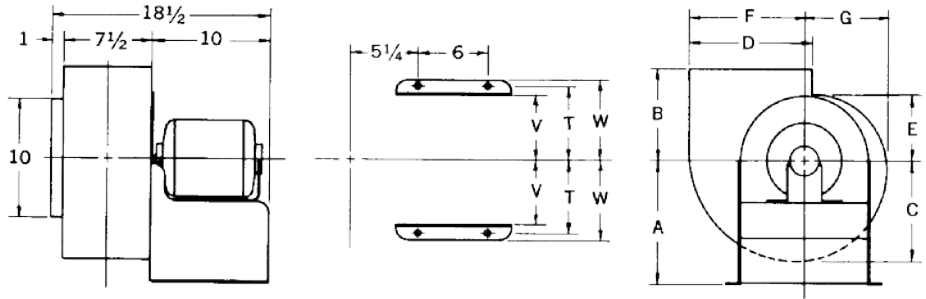
## FAN DISCHARGES—VIEWED FROM DRIVE SIDE | SIZES 75 THROUGH 155 DIRECT AND BELT-DRIVE



Clockwise—angular discharges at 45°

# SIZES 75/90—DIRECT-DRIVE

MAXIMUM TEMPERATURE: 180°F.



Inlet and outlet dimensions are outside.  
Dimensions not to be used for construction unless certified.

## DIMENSIONS [inches] AND WEIGHTS [lbs.]

Size	Wheel dia.	Outlet area sq. ft.	A	B	C	D	E	F	G	T	V	W	a	b	c	d	Base holes	Wheel wt.	Fan wt.†
75	7½	.40	10¾	6½	7⅛	8¼	5⅛	8⅛	6⅛	5¾	5	6½	6⅝	10½	7⅝	5⅝	⅜	3	31
90	9	.52	10½	7¾	8½	10½	5¾	9⅞	7⅛	6¼	5½	6¾	7⅞	12½	9¼	6½	½	5	37

† Fan weight does not include motor weight.

Tolerance: ± ⅛"

## SIZES 75/90

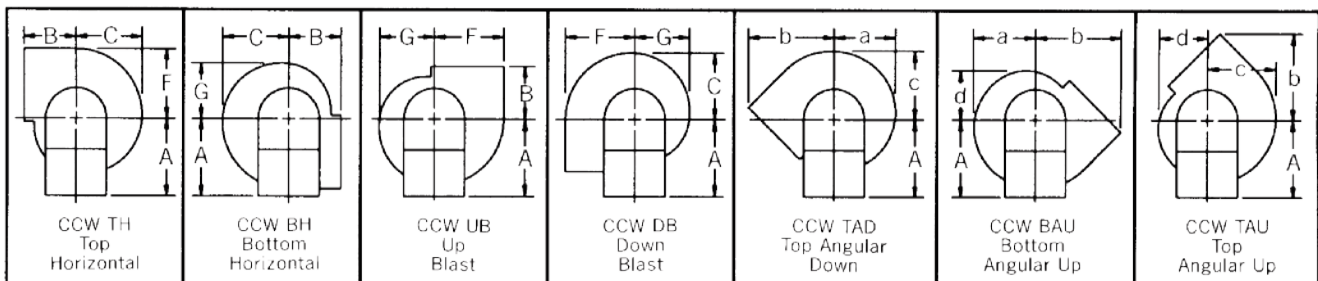
Capacities based on air density of .075 lbs. per cu. ft.

Fan size	Motor		CFM at various static pressures										Max. BHP*						
	HP	RPM	1/8"SP	1/4"SP	3/8"SP	1/2"SP	3/4"SP	1"SP	1¼"SP	1½"SP	1¾"SP	2"SP							
75	1/6	1150	651	589	510	411	—	—	—	—	—	—	—	—	—	—	—	—	—
	1/3	1725	—	—	—	905	808	685	—	—	—	—	—	—	—	—	—	—	.41
	1/2	1725	1026	988	948	905	808	685	—	—	—	—	—	—	—	—	—	—	.48
90	1/3	1150	1214	1143	1076	1004	805	—	—	—	—	—	—	—	—	—	—	—	.41
	¾	1750	—	—	—	—	—	—	—	—	—	—	—	—	—	1225	915	—	.83
	1	1750	—	—	—	—	—	—	1590	1490	1370	1225	915	—	—	—	—	—	1.15
	1½	1750	1915	1862	1815	1768	1677	1590	1490	1370	1225	915	—	—	—	—	—	—	1.50

Performance certified is for installation Type B: Free inlet, Ducted outlet.  
Performance ratings do not include the effects of appurtenances [accessories].

\* Maximum BHP over cataloged range.

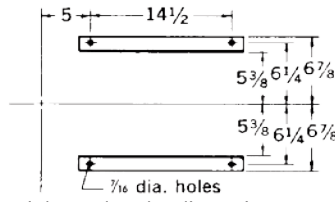
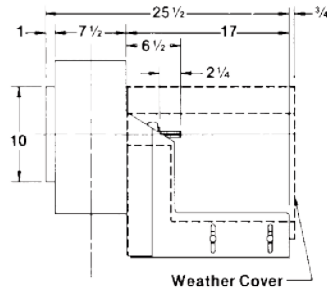
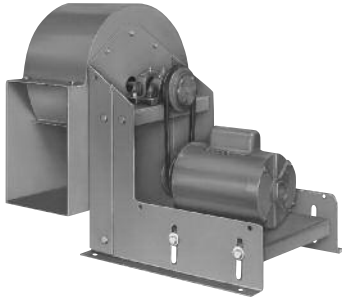
## FAN DISCHARGES—VIEWED FROM DRIVE SIDE | SIZES 75 THROUGH 155 DIRECT AND BELT-DRIVE



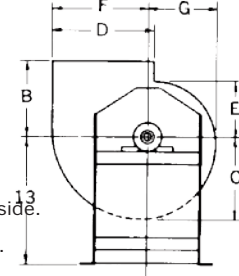
Counterclockwise—angular discharges at 45°

# SIZES 78/93—BELT-DRIVE

MAXIMUM TEMPERATURE: 200°F.—HEAT FAN CONSTRUCTION: 450°F.



Inlet and outlet dimensions are outside. Dimensions not to be used for construction unless certified.



## DIMENSIONS [inches] AND WEIGHTS [lbs.]

Size	Wheel dia.	Outlet area sq. ft.	B	C	D	E	F	G	a*	b*	c*	d*	Shaft dia.	Keyway	Wheel weight.	Fan weight. †
78	7 1/2	.40	6 1/2	7 1/8	8 1/4	5 1/8	8 1/8	6 1/8	6 5/8	10 1/2	7 5/8	5 5/8	5/8	3/16 x 3/32	3	42
93	9	.52	7 3/4	8 1/2	10 1/2	5 3/4	9 7/8	7 1/8	7 7/8	12 1/2	9 1/4	6 1/2	5/8	3/16 x 3/32	6	50

\*Discharge dimensions . . . see pages 4 and 5. †Fan weight does not include motor weight.

Tolerance: ± 1/8"

Bearings: Sealmaster NP Series ball bearings or equal.

## SIZE 78

Capacities based on air density of .075 lbs. per cu. ft.  
Maximum safe speed at 70°F.: 2800 RPM

CFM	OV	1/8"SP		1/4"SP		1/2"SP		3/4"SP		1"SP		1 1/2"SP		2"SP		2 1/2"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
159	400	549	.01	768	.03												
239	600	606	.02	784	.04	1087	.07	1332	.10								
319	800	693	.03	838	.05	1101	.08	1332	.12	1536	.15						
399	1000	792	.05	920	.07	1144	.10	1350	.14	1541	.18	1883	.28	2176	.37		
479	1200	900	.07	1014	.09	1212	.13	1394	.17	1567	.21	1886	.31	2173	.42	2431	.53
559	1400	1012	.10	1115	.13	1295	.16	1458	.21	1614	.26	1907	.36	2178	.46	2432	.58
639	1600	1130	.15	1220	.17	1387	.22	1537	.26	1678	.31	1945	.41	2201	.52	2439	.65
719	1800	1250	.20	1330	.23	1484	.27	1623	.33	1755	.37	2001	.48	2236	.59	2463	.72
799	2000	1371	.27	1445	.29	1587	.35	1716	.40	1841	.46	2070	.56	2288	.68	2499	.81
879	2200	1494	.34	1560	.36	1691	.43	1815	.48	1932	.54	2146	.66	2351	.79	2547	.92
959	2400	1619	.44	1679	.46	1801	.52	1917	.59	2026	.64	2233	.77	2423	.90	2611	1.05
1039	2600	1744	.54	1801	.57	1913	.64	2024	.70	2127	.77	2321	.91	2503	1.04	2632	1.18

## SIZE 93

Capacities based on air density of .075 lbs. per cu. ft.  
Maximum safe speed at 70°F.: 2200 RPM

CFM	OV	1/8"SP		1/4"SP		1/2"SP		3/4"SP		1"SP		1 1/2"SP		2"SP		2 1/2"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
207	400	434	.01	609	.02												
311	600	461	.02	616	.03	862	.06	1054	.10								
415	800	517	.03	642	.04	869	.08	1057	.12	1219	.16						
519	1000	587	.05	691	.06	887	.10	1065	.15	1223	.19	1493	.28	1721	.38		
623	1200	665	.07	754	.09	923	.13	1084	.18	1233	.22	1497	.32	1724	.43	1925	.55
727	1400	747	.10	826	.13	973	.17	1115	.22	1253	.26	1504	.37	1728	.49	1929	.62
831	1600	831	.16	902	.18	1034	.22	1161	.27	1285	.32	1521	.44	1738	.56	1934	.70
935	1800	917	.21	983	.23	1102	.29	1216	.33	1328	.39	1546	.51	1752	.64	1941	.78
1039	2000	1003	.28	1065	.31	1174	.36	1279	.41	1381	.47	1581	.59	1775	.73	1957	.88
1143	2200	1092	.37	1149	.40	1251	.45	1348	.51	1442	.57	1626	.70	1805	.84	1979	.99
1247	2400	1180	.46	1234	.50	1330	.56	1420	.62	1507	.68	1677	.82	1845	.97	2008	1.12
1351	2600	1268	.58	1320	.61	1412	.69	1496	.75	1578	.81	1737	.96	1893	1.11	2046	1.27

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].

Tinted capacities indicate BHP requirements which may exceed maximum motor limitations . . . see below.

NOTE: For calculating performance at elevated temperature or altitude, see performance correction factors in separate Engineering Letter.

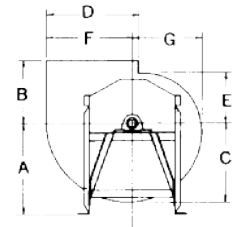
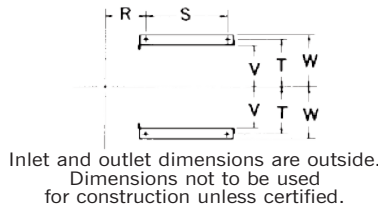
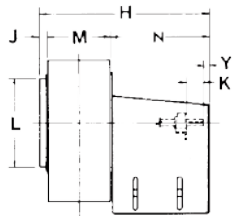
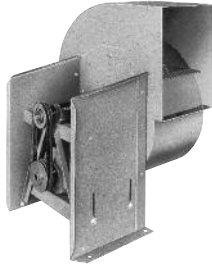
MAXIMUM MOTOR LIMITATIONS	Maximum motor frame*		Maximum C-NW dimension
	Open	TE	
	56	56	12 3/4"

\*Frame sizes vary in length with motor manufacturer. Check C-NW dimension above if specific make of motor is required.

MINIMUM/MAXIMUM V-BELT DRIVE CENTER DISTANCES	Motor frame size	Minimum/maximum centers in inches
	48	6.0/7.5
	56	6.0/7.0

# SIZES 125/155-BELT-DRIVE

MAXIMUM TEMPERATURE: 200°F.



Inlet and outlet dimensions are outside.  
Dimensions not to be used for construction unless certified.

DIMENSIONS [inches] AND WEIGHTS [lbs.]

Size	Wheel dia.	Outlet area sq. ft.	A	B	C	D	E	F	G	H	J	K	L	M	N
125	12 <sup>1</sup> / <sub>4</sub>	.86	17	10	12 <sup>3</sup> / <sub>8</sub>	13 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>	13	10 <sup>3</sup> / <sub>8</sub>	27 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>8</sub>	3	13 <sup>3</sup> / <sub>4</sub>	9 <sup>3</sup> / <sub>8</sub>	17
155	15	1.52	17	12	15 <sup>1</sup> / <sub>8</sub>	16 <sup>7</sup> / <sub>8</sub>	9 <sup>3</sup> / <sub>4</sub>	15 <sup>7</sup> / <sub>8</sub>	12 <sup>3</sup> / <sub>4</sub>	30	1 <sup>5</sup> / <sub>8</sub>	3	16 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>8</sub>	17

Size	R	S	T	V	W	Y	a*	b*	c*	d*	Shaft	Keyway	Base holes	Wheel weight.	Fan weight.†
125	6 <sup>1</sup> / <sub>8</sub>	12 <sup>7</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	5 <sup>8</sup> / <sub>8</sub>	11 <sup>5</sup> / <sub>8</sub>	16 <sup>1</sup> / <sub>4</sub>	12 <sup>7</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>4</sub>	1	1/4 x 1/8	9/16	11	88
155	7 <sup>1</sup> / <sub>8</sub>	12 <sup>7</sup> / <sub>8</sub>	9 <sup>1</sup> / <sub>4</sub>	8 <sup>1</sup> / <sub>8</sub>	10 <sup>1</sup> / <sub>8</sub>	5 <sup>8</sup> / <sub>8</sub>	14 <sup>1</sup> / <sub>8</sub>	19 <sup>3</sup> / <sub>4</sub>	15 <sup>3</sup> / <sub>4</sub>	11 <sup>3</sup> / <sub>8</sub>	1	1/4 x 1/8	9/16	14	133

\*Discharge dimensions . . . see pages 4 and 5. †Fan weight does not include motor weight.  
Bearings: Link-Belt P3-U200 Series ball bearings or equal.

Tolerance: ± 1/32"

## SIZE 125

Capacities based on air density of .075 lbs. per cu. ft.  
Maximum safe speed at 70°F.: 1715 RPM

CFM	OV	1/8"SP		1/4"SP		1/2"SP		3/4"SP		1"SP		1 1/2"SP		2"SP		2 1/2"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1031	1200	420	.09	498	.12	638	.20	772	.29	893	.44						
1203	1400	464	.13	535	.17	658	.25	777	.34	896	.51						
1375	1600	509	.19	575	.23	688	.31	793	.41	896	.51						
1547	1800	557	.26	616	.30	723	.39	818	.49	910	.59	1094	.84				
1719	2000	608	.34	660	.39	760	.48	850	.59	934	.70	1100	.95	1262	1.23		
1891	2200	658	.44	706	.49	801	.60	884	.71	963	.83	1116	1.08	1266	1.37	1412	1.68
2063	2400	711	.56	752	.61	842	.73	922	.85	997	.98	1137	1.23	1276	1.53	1413	1.85
2235	2600	764	.72	801	.76	884	.88	961	1.02	1032	1.14	1166	1.42	1293	1.71	1421	2.04
2407	2800	819	.88	852	.93	928	1.05	1002	1.20	1071	1.33	1197	1.62	1317	1.92	1436	2.25
2579	3000	873	1.07	903	1.12	972	1.26	1044	1.40	1109	1.54	1230	1.85	1345	2.17	1456	2.50
2751	3200	927	1.29	954	1.34	1019	1.48	1086	1.63	1150	1.79	1267	2.10	1375	2.43	1482	2.78
2923	3400	982	1.54	1007	1.59	1066	1.73	1130	1.88	1192	2.06	1305	2.39	1409	2.73	1511	3.09
3095	3600	1038	1.82	1060	1.87	1114	2.01	1174	2.18	1234	2.35	1343	2.70	1445	3.06	1542	3.43

## SIZE 155

Capacities based on air density of .075 lbs. per cu. ft.  
Maximum safe speed at 70°F.: 1400 RPM

CFM	OV	1/8"SP		1/4"SP		1/2"SP		3/4"SP		1"SP		1 1/2"SP		2"SP		2 1/2"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1535	1200	342	.13	401	.17	510	.26	609	.36	704	.56						
1791	1400	380	.19	433	.24	529	.33	619	.44	715	.67						
2047	1600	418	.27	467	.32	554	.44	637	.55	715	.67	858	.93				
2303	1800	459	.37	503	.43	584	.55	658	.67	731	.80	866	1.08	991	1.39		
2559	2000	500	.48	540	.55	615	.69	685	.82	751	.96	878	1.26	997	1.58	1106	1.92
2815	2200	542	.63	579	.71	649	.86	714	1.00	776	1.16	895	1.46	1007	1.80	1113	2.15
3071	2400	584	.81	620	.89	685	1.05	745	1.20	803	1.37	914	1.70	1020	2.05	1122	2.42
3327	2600	628	1.01	660	1.09	721	1.27	780	1.45	833	1.62	939	1.97	1039	2.34	1135	2.72
3583	2800	672	1.24	702	1.33	759	1.52	814	1.72	865	1.90	964	2.27	1060	2.66	1150	3.06
3839	3000	715	1.51	743	1.61	798	1.82	850	2.02	899	2.21	993	2.61	1083	3.01	1170	3.44
4095	3200	759	1.81	785	1.93	838	2.14	887	2.36	934	2.57	1023	2.99	1109	3.41		
4351	3400	804	2.16	828	2.28	877	2.51	924	2.73	970	2.97	1056	3.41				
4607	3600	848	2.55	872	2.67	918	2.91	963	3.16	1006	3.40						

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].

Tinted capacities indicate BHP requirements which may exceed maximum motor limitations . . . see below.

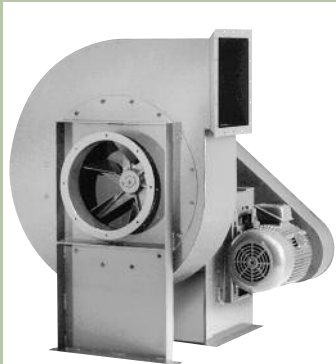
MAXIMUM MOTOR LIMITATIONS	Maximum motor frame*		Maximum C-NW dimension
	Open	TE	
	182T	182T	12"

\*Frame sizes vary in length with motor manufacturer. Check C-NW dimension above if specific make of motor is required.

MINIMUM/MAXIMUM V-BELT DRIVE CENTER DISTANCES	Motor frame size	Minimum/maximum centers in inches
	48	7.75/10.75
	56, 143T, 145T, 182T	7.25/10.25 8.25/9.75

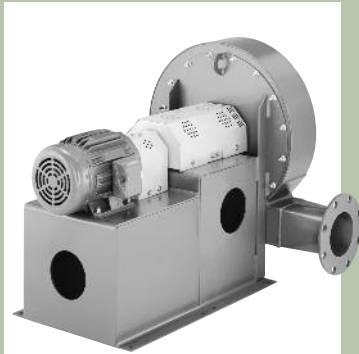
# COMPLETE SELECTION OF AIR-MOVING EQUIPMENT

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.



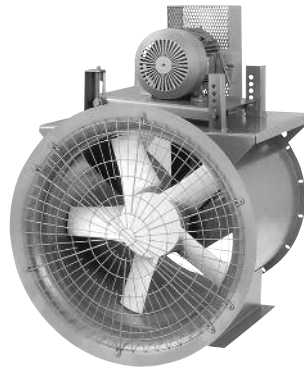
## DUST/MATERIAL HANDLING

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.

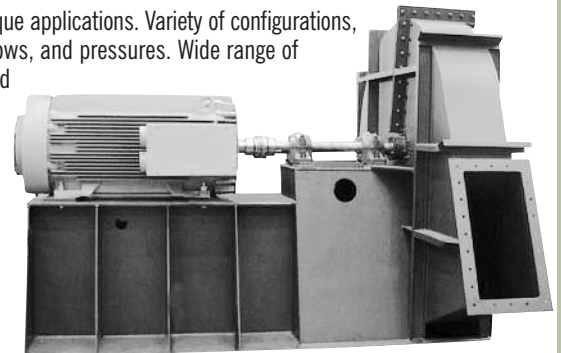


## FIBERGLASS REINFORCED PLASTIC [FRP]

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 demanding specifications.



# Leading the industry forward since 1889



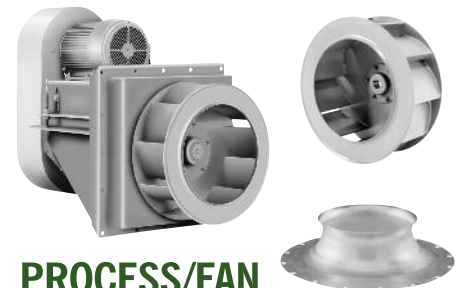
## ROOF VENTILATORS

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



## HEATING PRODUCTS

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



## PROCESS/FAN 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.