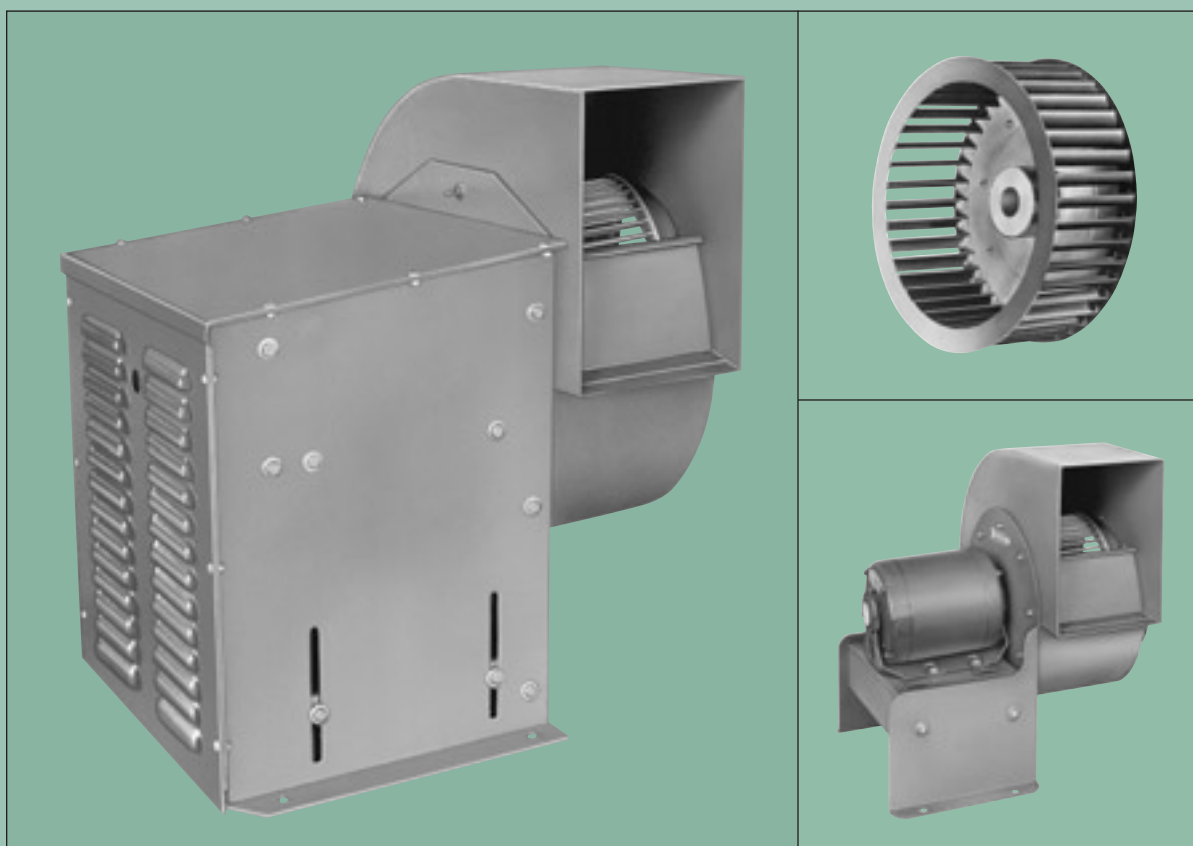


# JUNIOR FANS

## 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

**nyb**

The  
**New York Blower**  
Company®

7660 QUINCY STREET—WILLOWBROOK, ILLINOIS 60527-5530  
TEL: [630] 794-5700 • FAX: [630] 794-5776 • WEB: <http://www.nyb.com> • E-MAIL: [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.

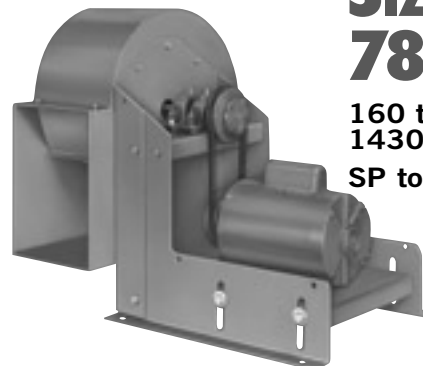


The New York Blower Company certifies that the Junior Fans shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

## 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

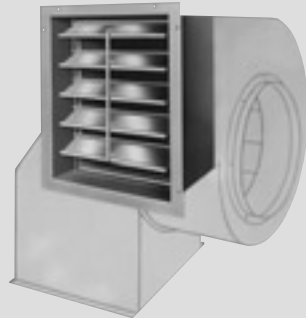


For slow speeds and quiet operation . . . choice of five wheel diameters: 5¼", 7½", 9", 12¼", and 15" . . . steel wheels are standard.

# ACCESSORIES

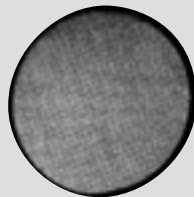
## OUTLET SHUTTER

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.

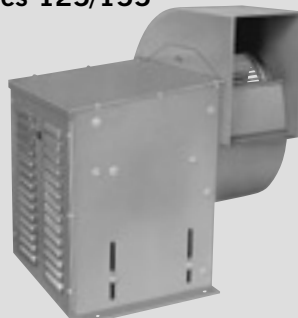
## INLET AND OUTLET GUARDS



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.



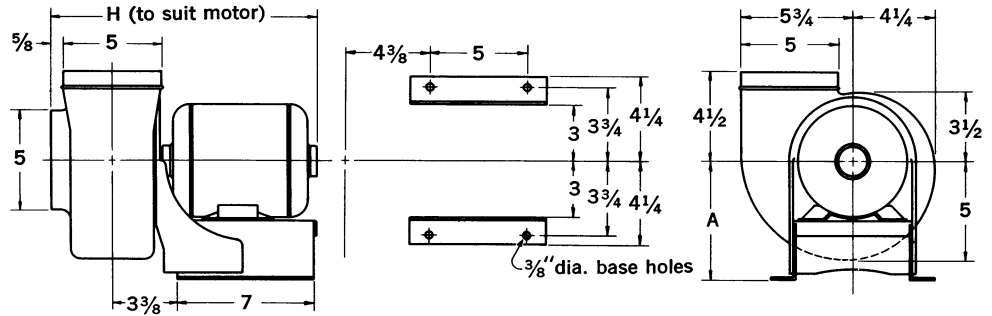
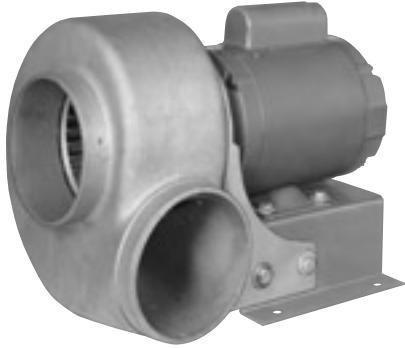
Sizes 78/93

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



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

AVAILABLE ONLY IN  
CLOCKWISE ROTATION

## 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

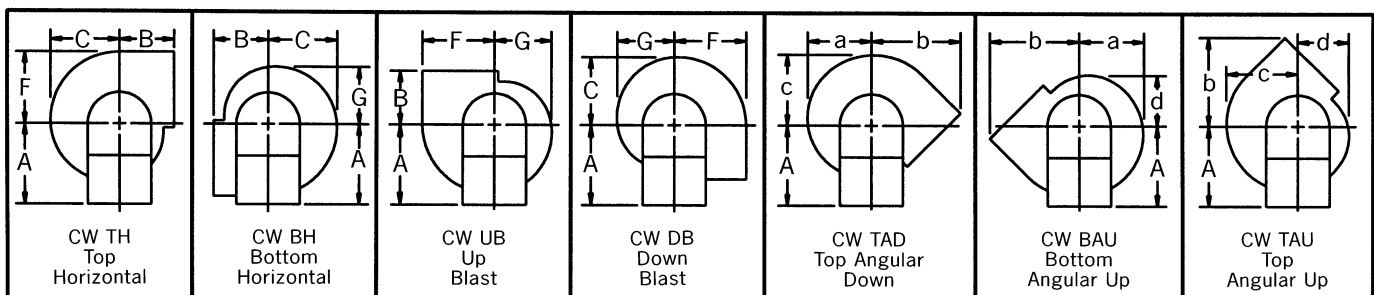
Capacities based on air density of .075 lbs. per cu. ft.  
Outlet area: .123 sq. ft.

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

\* Maximum BHP over cataloged range.

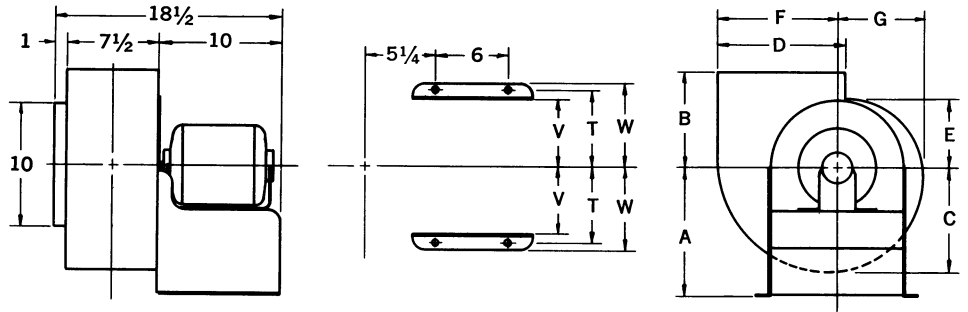
## FAN DISCHARGES—VIEWED FROM DRIVE SIDE | SIZES 75 THROUGH 155 DIRECT AND BELT-DRIVE



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

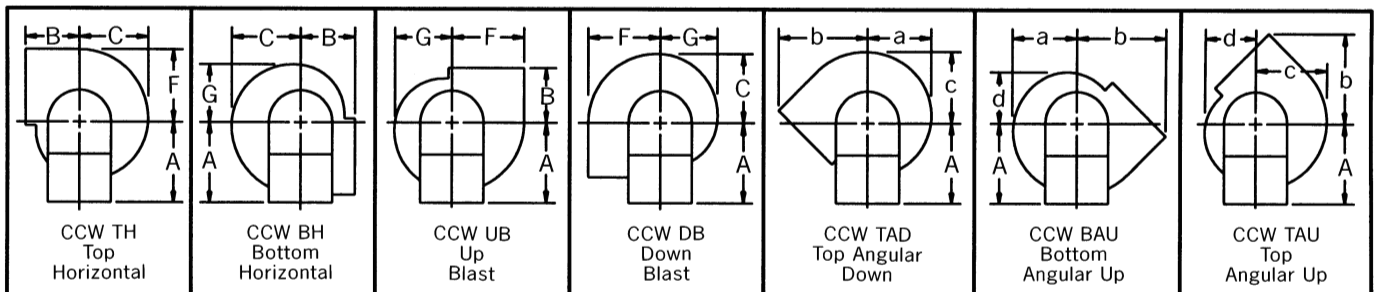
Capacities based on air density of .075 lbs. per cu. ft.

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

\* Maximum BHP over cataloged range.

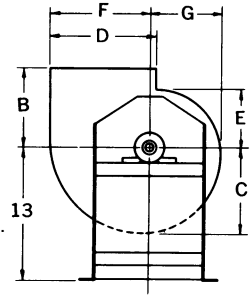
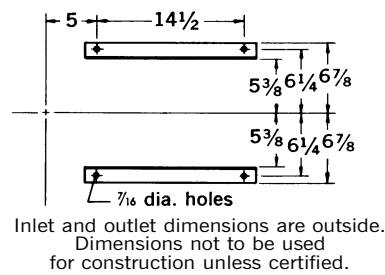
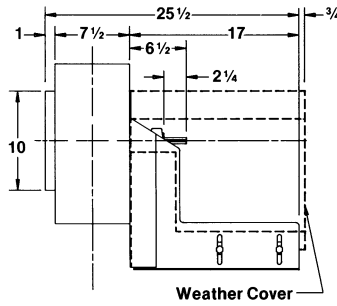
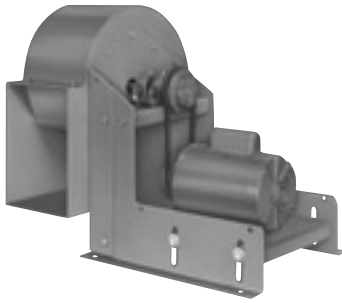
## FAN DISCHARGES—VIEWED FROM DRIVE SIDE | SIZES 75 THROUGH 155 DIRECT AND BELT-DRIVE



Counterclockwise—angular discharges at 45°

# SIZES 78/93—BELT-DRIVE

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



## 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"

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

CFM		OV	Capacities based on air density of .075 lbs. per cu. ft. Maximum safe speed at 70°F.: 2200 RPM															
			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 shown is for 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.  
 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"

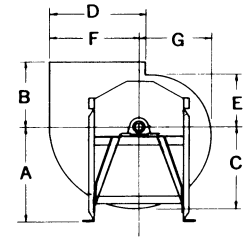
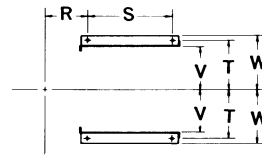
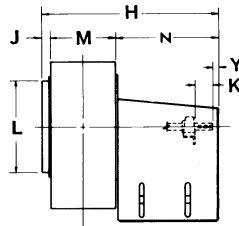
\*Frame sizes vary in length with motor manufacturer. Check C-NW dimension above if specific make of motor is required.

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.

Tolerance: ± 1/8"

## 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	858	.93				
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 shown is for 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.

■ 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