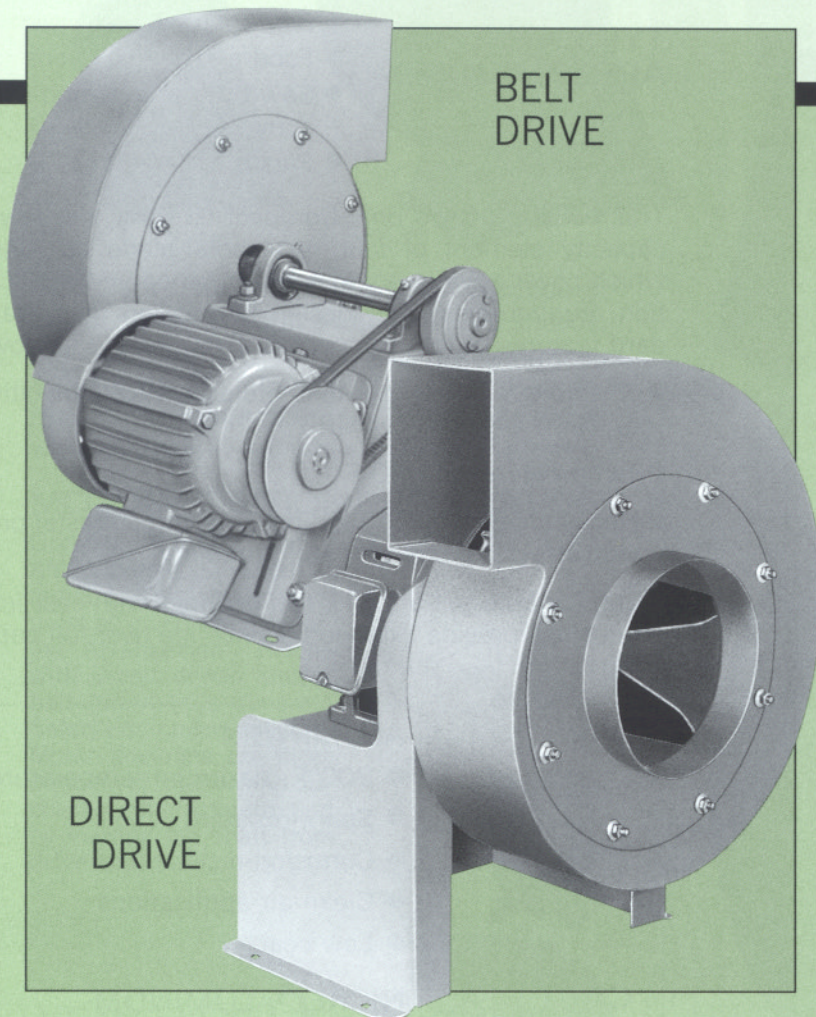
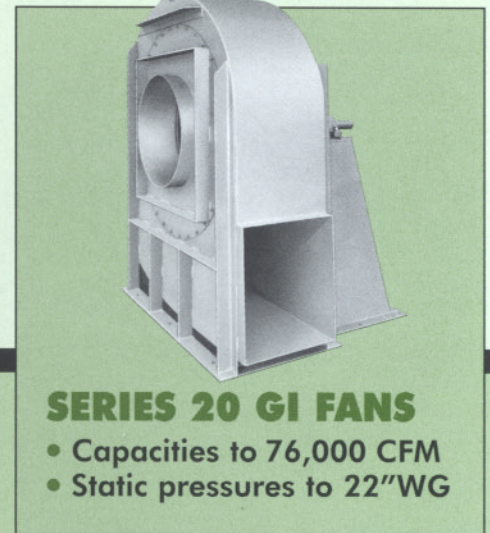


# COMPACT GI FANS

WITH RUGGED RADIAL-BLADE WHEELS

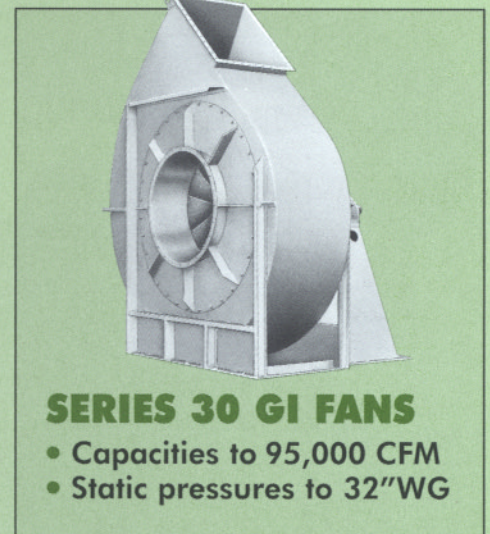


- Capacities to 2,400 CFM
- Static pressures to 14"WG
- Temperatures to 600°F.



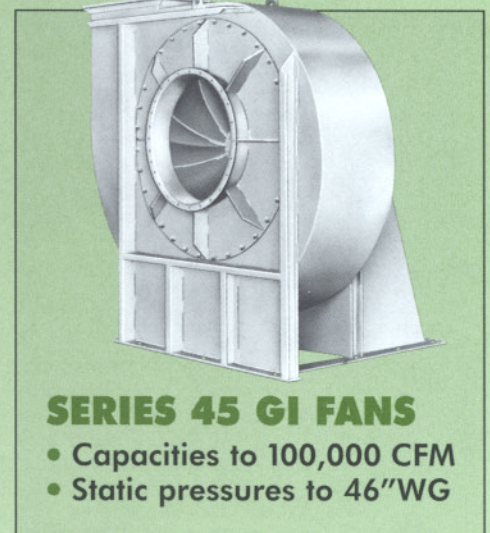
## SERIES 20 GI FANS

- Capacities to 76,000 CFM
- Static pressures to 22"WG



## SERIES 30 GI FANS

- Capacities to 95,000 CFM
- Static pressures to 32"WG



## SERIES 45 GI FANS

- Capacities to 100,000 CFM
- Static pressures to 46"WG

**nyb** | The  
New York Blower  
Company®



# Compact GI Fans

## ...for industrial air-handling processes

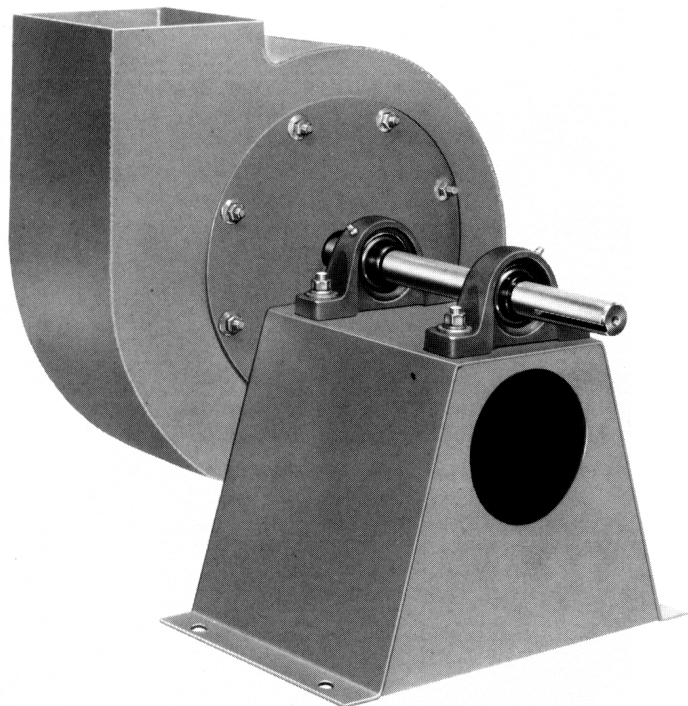
Compact GI Fans, sometimes referred to as pressure blowers, are ruggedly constructed for a wide variety of industrial air-handling processes.

- Grinding-booth exhaust
- Scrubber exhaust
- Food and drying ovens
- Sawdust and wood-chip conveying
- Paper-trim systems

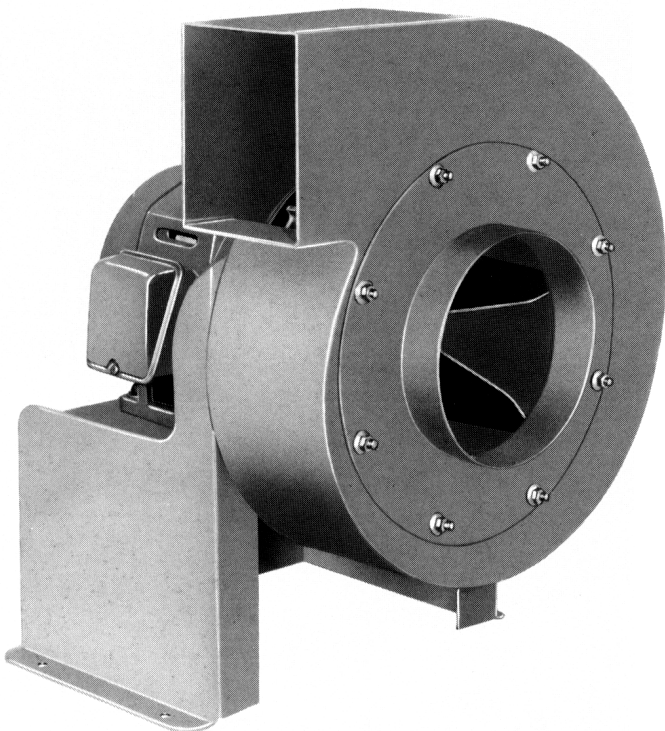
### TYPICAL APPLICATIONS

This bulletin covers only Compact GI Fans, the lower capacity element of four **nyb** radial-blade fan lines which cover a wide range of performance and application requirements. The design parameters and standard features of the Compact GI Fan are listed below.

- 8" through 14" wheel diameters provide capacities to 2000 CFM and 14"SP.
- Temperatures to 600°F.
- Heavy-gauge welded steel housing and pedestal provide structural strength and durability.
- Lubricatable self-aligning ball bearings with cast-iron housings provide extended service life over full catalog range.



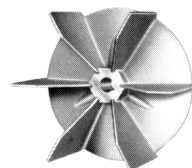
BELT DRIVE



DIRECT DRIVE

### CAST RADIAL-BLADE WHEEL

Cast nickel-aluminum-bronze wheel offers unique combination of spark, abrasion, and corrosion resistance. Rugged radial-blade design is well-suited to material conveying. All wheels are dynamically balanced for smooth operation. [Note: Though the wheel is spark-resistant, for hazardous applications one of three available spark-resistant-construction systems should be considered...see separate **nyb** Engineering Letter.]



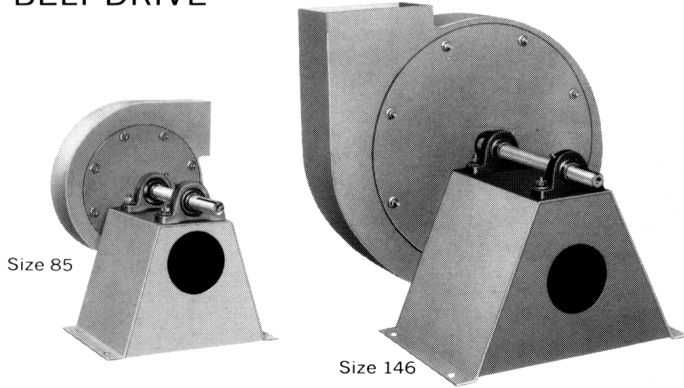
- Fan housing and pedestal are finished with a baked gray-green enamel.
- Most sizes are rotatable to any of seven standard discharges in the field.
- Compact GI Fans offer stable pulsation-free performance from wide-open to closed-off.



The New York Blower Company certifies that the Compact GI 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.

# ARRANGEMENTS

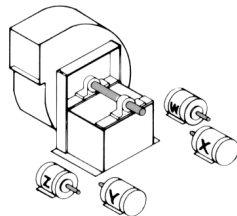
## ARRANGEMENT 1 BELT DRIVE



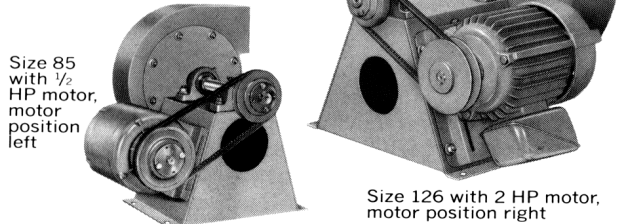
V-belt drive configuration allows selection of any of six fan sizes at a variety of fan speeds. Provides flexibility in performance simply by adjusting or changing drive sheaves. Maximum temperatures—standard fan: 300°F., heat fan: 600°F.

### MOTOR-POSITION DESIGNATION

Drawing at right shows AMCA motor-position designations. This designation must be given when ordering Arrangement 1 fans with V-belt drives and/or belt guard [see separate Safety Equipment bulletin]. Motor positions are independent of rotation and discharge and are determined by viewing fan shaft from drive end.



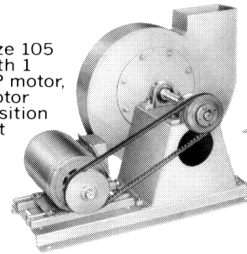
## ARRANGEMENT 9 BELT DRIVE



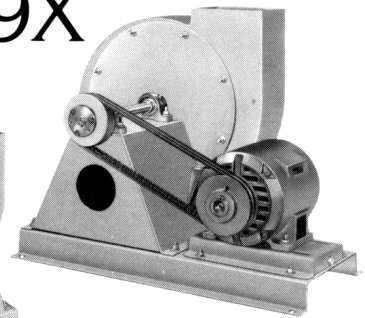
Compact V-belt drive configuration integrates motor and drive with fan in one assembly. Package allows factory assembly and testing, and minimizes costly field labor. Available in six sizes. Maximum temperature—300°F.

## ARRANGEMENT 9X BELT DRIVE

Size 105 with 1 HP motor, motor position left



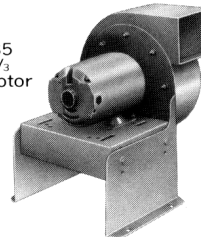
Size 146 with 5 HP motor, motor position right



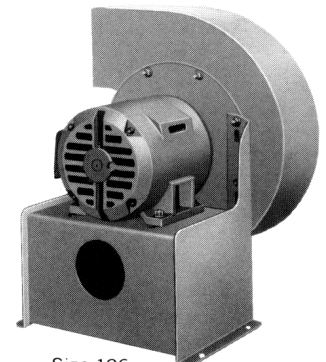
Used when motor is too large for Arrangement 9 or when a higher temperature package is desired. Maximum temperature—standard fan: 300°F., heat fan: 600°F. See page 11 for maximum motor sizes.

## ARRANGEMENT 4 DIRECT DRIVE

Size 85 with 1/3 HP motor



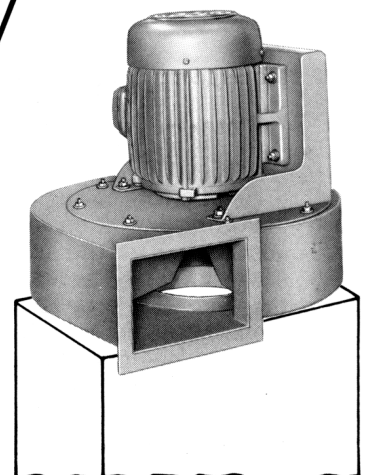
Size 126 with 5 HP motor



Direct-drive configuration available in nine sizes at 3500 RPM and 1750 RPM, provides simplest, most economical package. Fan wheel is mounted on motor shaft. Not recommended for heavy material-handling applications as material impact may damage motor. Maximum temperature—180°F.

## ARRANGEMENT 4V DIRECT DRIVE

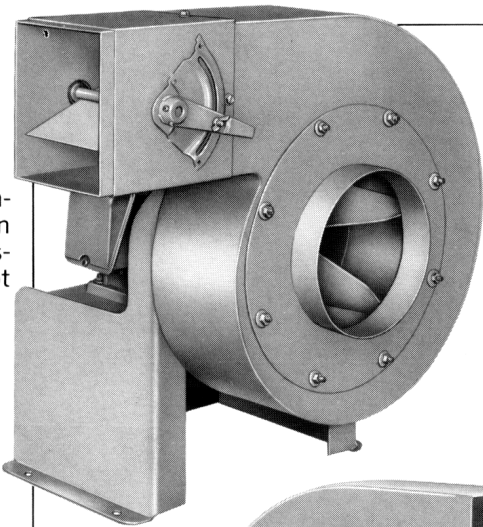
Similar to Arrangement 4, but designed for vertical mounting on fan inlet. Motor is mounted to support bracket on drive side, and inlet plate is reinforced for mounting direct to process. Contact your **nyb** representative for dimensions and available options.



# ACCESSORIES

## OUTLET DAMPER

Single-vane damper slips over fan outlet for all discharges except Down Blast.



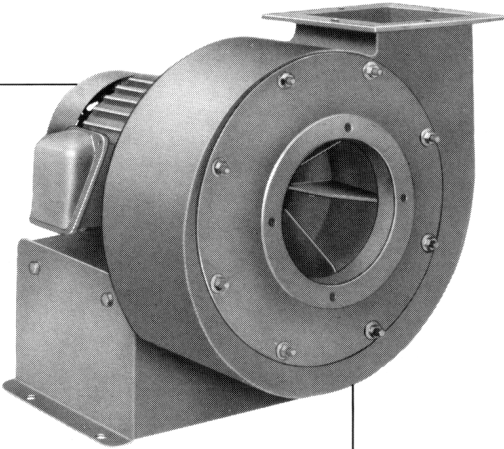
## FLANGED OUTLET

Flange is welded flush with fan outlet and provided with holes.

See page 10 for inlet and outlet flange dimensions.

## FLANGED INLET

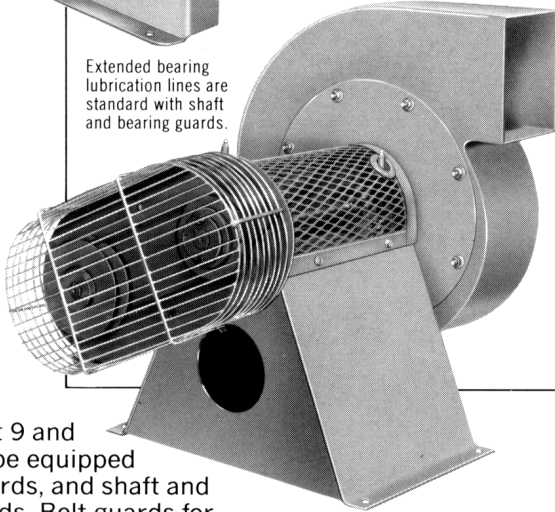
Flange ring with holes is welded flush to the outer edge of the inlet collar.



Extended bearing lubrication lines are standard with shaft and bearing guards.

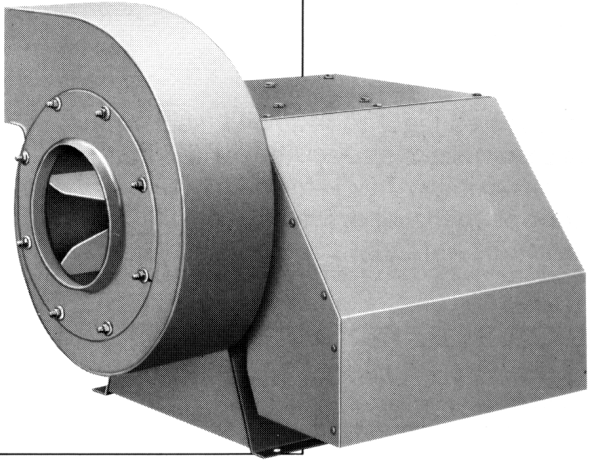
## SAFETY GUARDS

Arrangement 9 and 9X fans can be equipped with belt guards, and shaft and bearing guards. Belt guards for Arrangement 1 fans are available on application.



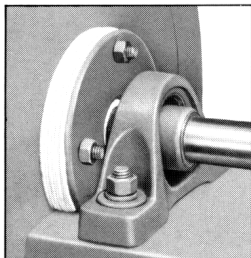
## WEATHER COVER

Available for Arrangement 9 [shown] and Arrangement 4 fans.



## CERAMIC-FELT SHAFT SEAL

Ceramic-felt seal elements compressed between housing drive-side plate and retaining disc... elements can be split for field replacement. Not available with heat-fan construction or Arrangement 4 fans.



## DRAIN

A 3/8" close pipe nipple located at the lowest point in the housing scroll.

## VIBRATION ISOLATION

Rubber-in-shear isolators... minimize the transmission of vibration and noise to surrounding structures from Arrangement 4, 9, and 9X fans.

# SAFETY EQUIPMENT

NOTE: Safe operation of air-moving equipment is dependent on proper installation and maintenance including selection and use of appropriate safety accessories for the specific installation. Such safety accessories are available from **nyb**, but selection of the appropriate devices is the responsibility of the system designer who must be aware of adjacent components, equipment location, and accessibility in the particular installation. 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 also available on request.



# MODIFICATIONS

## SPARK-RESISTANT CONSTRUCTION

Three types of spark-resistant construction are available. See separate **nyb** Engineering Letter and consult **nyb** sales representative.

## HANDLING CORROSIVES

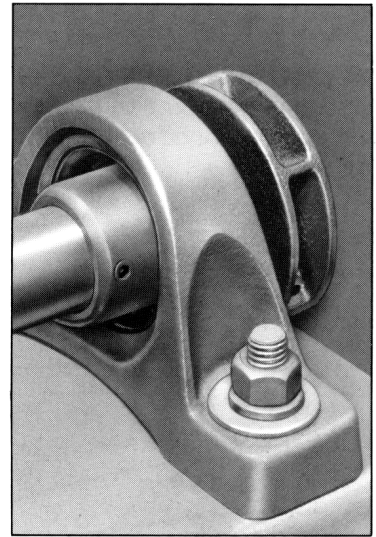
Protective coatings and special alloys are available to combat corrosion problems.

**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**—Compact GI Fans can be constructed of aluminum or various stainless steels.

## HEAT-FAN CONSTRUCTION

Arrangement 1 and 9X Compact GI Fans can be equipped with shaft coolers which make them suitable for airstream temperatures to 600°F., provided that ambient air temperature at the bearings does not exceed 120°F. The maximum allowable fan speed decreases as the airstream temperature increases. See Chart I [below].



# HOW TO USE PERFORMANCE DATA

## DIRECT DRIVE

The curves and capacity tables on pages 6 and 7 provide CFM, static pressure, BHP, and outlet velocity information for direct-drive Compact GI Fans [see page 10 for maximum motor frame sizes].

## BELT DRIVE

The capacity tables on pages 8 and 9 provide CFM, static pressure, BHP, and outlet velocity information for belt-drive Compact GI Fans. The dimension tables on page 11 provide V-belt drive center-distance information and maximum motor frames allowable on packaged units. Consult your **nyb** representative for standard complete package model numbers.

All performance data is based on standard air at .075 lb./cu. ft. density [70°F. at sea level]. If selections are to be based on other temperatures or altitudes, static pressure and brake horsepower must be corrected using the factors shown in Charts II and III. If temperature is a factor, speed must be checked against the safe operating speed in Chart I. Note: Arrangement 4 and 4V fans are not suitable for temperatures over 180°F.

## EXAMPLE

Select a Compact GI Fan for 600 CFM at 3000 FPM OV at 2"SP at 325°F. at sea level.

- Chart II shows a 1.48 correction factor for 325°F.
- 2"SP x 1.48 = 2.96"SP at 70°F. [round to 3"SP].
- A Size 106 Compact GI Fan belt drive at 2903 RPM will deliver 600 CFM and 3000 FPM outlet velocity at 3"SP, using 0.79 BHP.
- To determine static pressure and brake horsepower at conditions, divide the values in Step 3 by the correction factor identified in Step 1:  
 3"SP at 70°F. ÷ 1.48 = 2"SP at 325°F.  
 .79 BHP at 70°F. ÷ 1.48 = .53 BHP at 325°F.
- Actual performance of the Size 106 Compact GI Fan:  
 600 CFM at 3000 OV at 2"SP at 2903 RPM at .53 BHP at 325°F.
- Check the safe operating speed of a Size 106 Compact GI Fan at 325°F. Chart I shows a 4600 RPM safe speed at 325°F. which is greater than the 2903 RPM operating speed.

The method of correcting for altitude is the same as for temperature using the correction factors from Chart III.

CHART I  
MAXIMUM SAFE SPEEDS  
FOR BELT-DRIVE FANS  
AT VARIOUS TEMPERATURES

Temp.	Fan size			
	85	105-106	125-126	146
-50°	4800	4600	4000	3600
70°	4800	4600	4000	3600
200°	4800	4600	4000	3600
300°	4800	4600	3980	3570
400°	4800	4600	3960	3490
500°	4800	4600	3940	3410
600°	4800	4600	3860	3310

CHART II  
SP AND BHP  
CORRECTION  
FACTORS FOR  
TEMP. (°F.)

Temp.	Factor
-50°	.77
-25°	.82
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
225°	1.29
250°	1.34
275°	1.39
300°	1.43
325°	1.48
350°	1.53
375°	1.58
400°	1.62
450°	1.72
500°	1.81
550°	1.91
600°	2.00

CHART III  
SP AND BHP  
CORRECTION  
FACTORS FOR  
ALTITUDE [ft. above sea level]

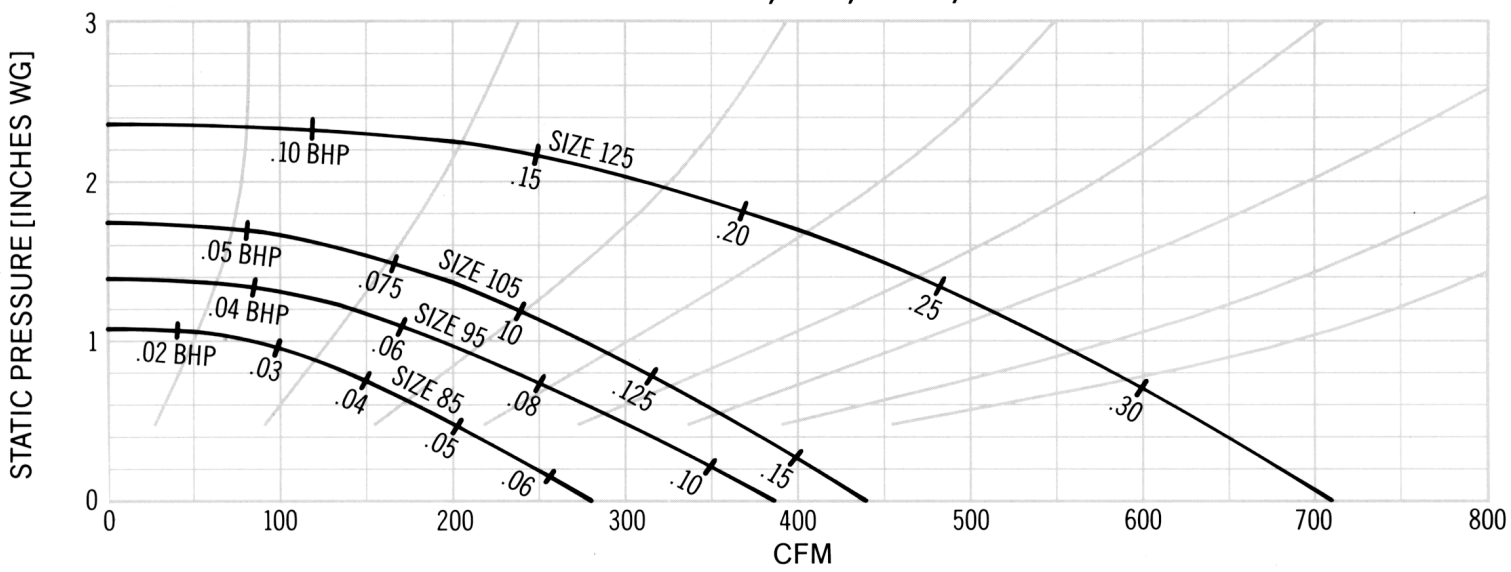
Altitude	Factor
0	1.00
500	1.02
1000	1.04
1500	1.06
2000	1.08
2500	1.10
3000	1.12
3500	1.14
4000	1.16
4500	1.18
5000	1.20
5500	1.22
6000	1.25
6500	1.27
7000	1.30
7500	1.32
8000	1.35
8500	1.37
9000	1.40
10000	1.45

NOTE: If correction factor for both temperature and altitude is required, multiply factors from Charts II and III together:  
 600°F and 3000'  
 2.00 x 1.12 = 2.24  
 [combined factor]

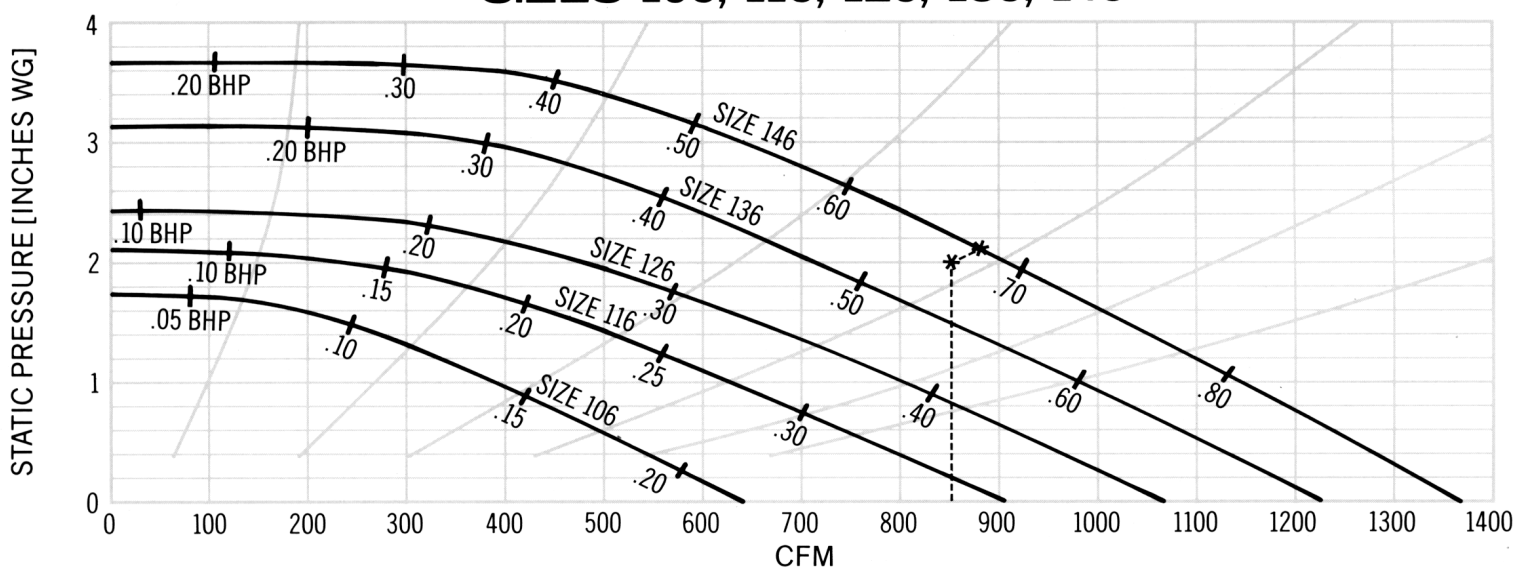
# DIRECT-DRIVE PERFORMANCE CURVES – 1750 RPM

CURVE SELECTION EXAMPLE: Select a fan for 850 CFM at 2"SP. See dotted lines on lower graph. After locating point on grid for 850 CFM at 2"SP, follow direction of background system curves to intersection with fan performance curve. In this system example, a Size 146 will deliver 875 CFM and 2.1"SP with approximately .67 BHP.

## SIZES 85, 95, 105, 125



## SIZES 106, 116, 126, 136, 146



## DIRECT-DRIVE CAPACITY TABLE AT 1750 RPM

Model No.	HP	Inlet dia. OD	Outlet area sq. ft.	¼"SP			½"SP			¾"SP			1"SP			1½"SP			2"SP			3"SP		
				CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP
85 FB	¼	5	103	243	2360	.06	197	1910	.05	148	1440	.04	86	840	.03									
95 FB	¼	6	126	342	2710	.10	296	2350	.09	247	1960	.08	192	1520	.07									
105 FB	¼	6	126	402	3190	.15	362	2870	.14	321	2550	.13	276	2190	.11	171	1360	.08						
106 HB	½	6	203	583	2870	.20	521	2570	.18	456	2250	.16	391	1930	.14	249	1230	.10						
125 HB	½	7	158	672	4250	.33	631	3990	.31	590	3730	.30	548	3470	.28	449	2840	.23	313	1980	.17			
116 HB	½	7	255	845	3310	.34	777	3050	.32	709	2780	.30	638	2500	.27	480	1880	.22	247	970	.14			
126 HB	½	8	255	1013	3970	.47	944	3700	.44	876	3440	.41	803	3150	.39	652	2560	.33	474	1860	.26			
136 IB	¾	8	293	1175	4010	.69	1114	3800	.66	1051	3590	.63	984	3360	.60	849	2900	.54	712	2430	.47	335	1140	.28
146 JB	1	8	293	1321	4510	.90	1263	4310	.87	1209	4130	.84	1152	3930	.81	1029	3510	.75	900	3070	.68	640	2180	.54

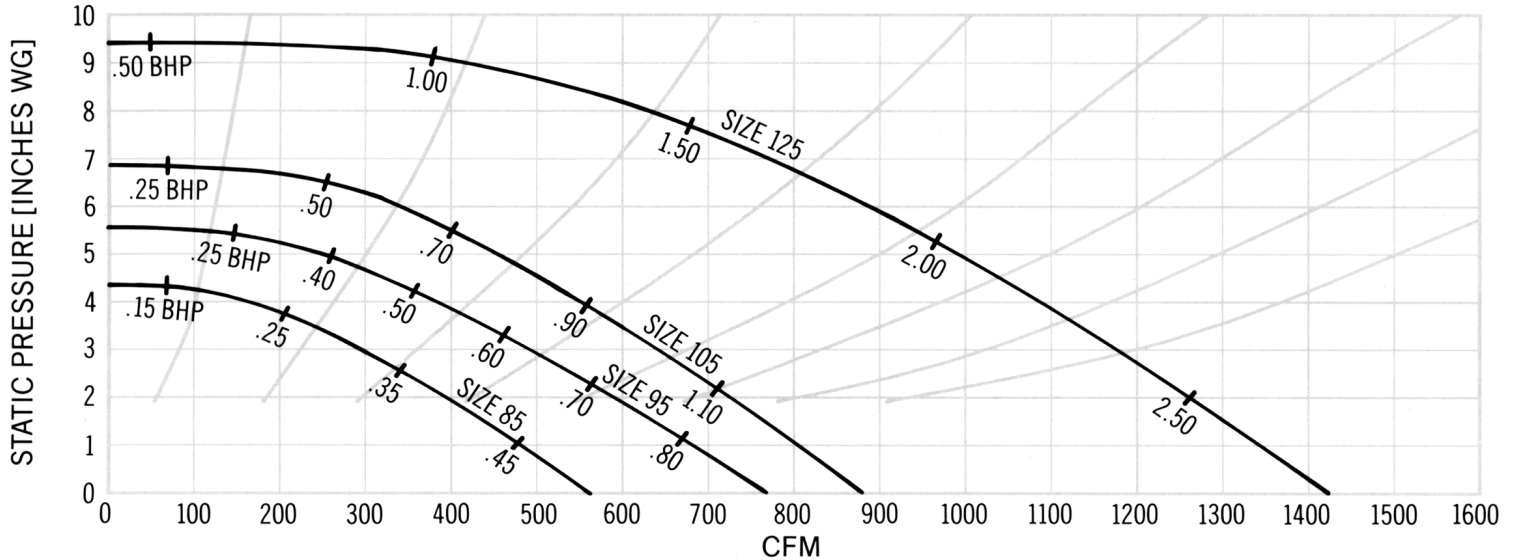
Performance shown is for Compact GI Fans with inlet and outlet ducts.



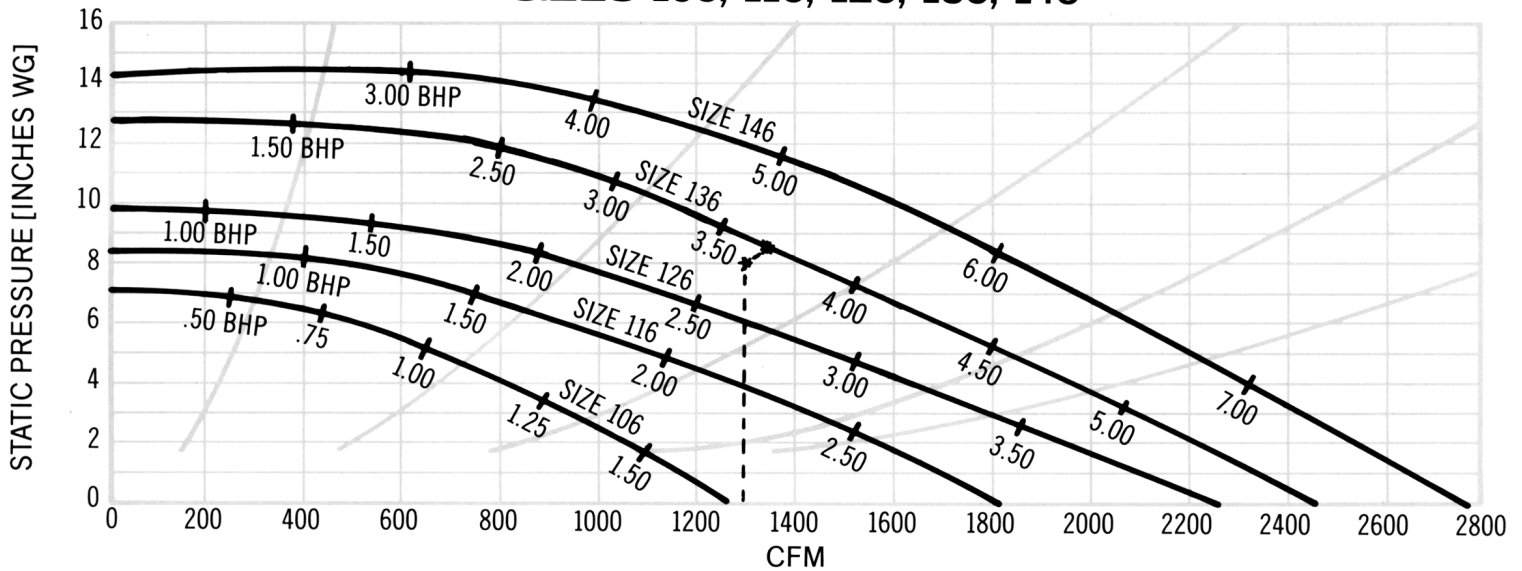
# DIRECT-DRIVE PERFORMANCE CURVES – 3500 RPM

CURVE SELECTION EXAMPLE: Select a fan for 1300 CFM at 8"SP. See dotted lines on lower graph. After locating point on grid for 1300 CFM at 8"SP, follow direction of background system curves to intersection with fan performance curve. In this system example, a Size 136 will deliver 1350 CFM and 8.3"SP with approximately 3.65 BHP.

## SIZES 85, 95, 105, 125



## SIZES 106, 116, 126, 136, 146



## DIRECT-DRIVE CAPACITY TABLE AT 3500 RPM

Model No.	HP	Inlet dia. OD	Outlet area sq. ft.	1"SP			2"SP			3"SP			4"SP			5"SP			6"SP			8"SP			10"SP		
				CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP	CFM	OV	BHP
85 HA	½	5	.103	485	4710	.45	394	3830	.38	297	2880	.31	173	1680	.22												
95 JA	1	6	.126	684	5430	.80	591	4690	.72	495	3930	.63	386	3060	.52	258	2050	.39									
105 JA	1	6	.126	—	—	—	—	—	—	643	5100	1.00	553	4390	.89	458	3640	.75	342	2710	.60						
105 KA	1½	6	.126	805	6390	1.20	726	5760	1.10	643	5100	1.00	553	4390	.89	458	3640	.75	342	2710	.60						
106 KA	1½	6	.203	—	—	—	1042	5130	1.44	912	4490	1.29	782	3850	1.13	652	3210	.98	496	2440	.80						
106 LA	2	6	.203	1167	5750	1.57	1042	5130	1.44	912	4490	1.29	782	3850	1.13	652	3210	.98	496	2440	.80						
125 LA	2	7	.158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	896	5670	1.86	624	3950	1.40			
125 MA	3	7	.158	1344	8510	2.66	1263	7990	2.51	1182	7480	2.36	1097	6940	2.21	1005	6360	2.06	896	5670	1.86	624	3950	1.40			
116 LA	2	7	.255	—	—	—	—	—	—	—	—	—	—	—	—	1122	4400	2.00	961	3770	1.77	493	1930	1.11			
116 MA	3	7	.255	1694	6640	2.70	1555	6100	2.53	1417	5560	2.37	1278	5010	2.19	1122	4400	2.00	961	3770	1.77	493	1930	1.11			
126 MA	3	8	.255	—	—	—	—	—	—	—	—	—	—	—	—	1459	5720	2.87	1305	5120	2.63	948	3720	2.10			
126 NA	5	8	.255	2025	7940	3.75	1889	7410	3.53	1751	6870	3.31	1608	6310	3.09	1459	5720	2.87	1305	5120	2.63	948	3720	2.10			
136 NA	5	8	.293	—	—	—	—	—	—	—	—	—	1968	6720	4.80	1839	6280	4.55	1701	5810	4.30	1426	4870	3.80	1137	3880	3.66
146 OA	7½	8	.293	—	—	—	—	—	—	2412	8230	7.18	2300	7850	6.95	2184	7455	6.71	2060	7030	6.45	1813	6190	5.93	1555	5310	5.34

Performance shown is for Compact GI Fans with inlet and outlet ducts.

# BELT-DRIVE CAPACITY TABLES

<b>SIZE 85</b>			Wheel diameter: 8"      Inlet: 5" OD      Outlet area: .103 sq. ft.																								
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		3"SP		4"SP		5"SP		6"SP		7"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
62	600	719	0.03	924	0.05	1238	0.07	1491	0.09	1709	0.11	2081	0.15	2401	0.19	2681	0.23	2940	0.27	3398	0.35	3798	0.43	4165	0.51	4501	0.59
103	1000	894	0.05	1079	0.06	1361	0.09	1589	0.11	1788	0.13	2134	0.17	2435	0.21	2707	0.25	2957	0.29	3401	0.38	3796	0.46	4153	0.55	4488	0.63
144	1400	1094	0.07	1258	0.08	1520	0.11	1732	0.13	1919	0.15	2242	0.20	2523	0.24	2781	0.28	3013	0.32	3440	0.41	3823	0.50	4173	0.59	4499	0.68
185	1800	1312	0.09	1454	0.11	1696	0.13	1898	0.16	2076	0.18	2382	0.23	2651	0.28	2891	0.32	3116	0.37	3520	0.46	3886	0.55	4224	0.65	4543	0.75
227	2200	1540	0.12	1665	0.14	1884	0.17	2075	0.19	2244	0.22	2540	0.27	2794	0.32	3026	0.37	3242	0.42	3629	0.52	3982	0.61	4309	0.72	4612	0.82
268	2600	1775	0.16	1885	0.18	2082	0.21	2263	0.24	2422	0.27	2706	0.32	2957	0.38	3178	0.43	3389	0.48	3764	0.59	4103	0.69	4416	0.80	4709	0.91
309	3000	2017	0.21	2113	0.22	2293	0.26	2459	0.29	2612	0.32	2881	0.38	3124	0.44	3341	0.50	3542	0.56	3911	0.67	4239	0.78	4540	0.89	4822	1.00
350	3400	2261	0.26	2347	0.28	2511	0.32	2664	0.35	2805	0.38	3066	0.45	3297	0.52	3515	0.58	3707	0.64	4064	0.76	4385	0.88	4682	1.00	4948	1.13
391	3800	2507	0.33	2585	0.35	2734	0.39	2877	0.42	3009	0.46	3256	0.53	3480	0.60	3687	0.67	3882	0.74	4227	0.87	4545	1.00	4822	1.13	5088	1.27
433	4200	2754	0.41	2827	0.43	2962	0.47	3093	0.51	3220	0.55	3452	0.62	3670	0.70	3870	0.77	4055	0.84	4397	0.99	4703	1.13	4978	1.27	5233	1.41
474	4600	3003	0.50	3068	0.52	3197	0.56	3318	0.61	3437	0.65	3656	0.73	3863	0.81	4055	0.89	4238	0.97	4572	1.12	4851	1.27	5126	1.41	5401	1.55
515	5000	3256	0.61	3312	0.63	3433	0.67	3545	0.72	3659	0.76	3865	0.85	4065	0.93	4297	1.02	4421	1.10	4751	1.27	5026	1.41	5301	1.55	5576	1.69
556	5400	3503	0.73	3559	0.75	3674	0.80	3781	0.85	3883	0.89	4077	0.98	4265	1.07	4444	1.16	4616	1.25	4946	1.41	5221	1.55	5501	1.69	5776	1.83

<b>SIZE 105</b>			Wheel diameter: 10"      Inlet: 6" OD      Outlet area: .126 sq. ft.																								
CFM	OV	1/4"SP		1/2"SP		3/4"SP		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	RPM	BHP	RPM	BHP	RPM	BHP
76	600	725	0.04	976	0.06	1179	0.07	1353	0.09	1905	0.16	2331	0.23	2696	0.31	3014	0.38	3304	0.46	3572	0.55	3817	0.63	4055	0.72	4274	0.81
126	1000	843	0.05	1064	0.07	1247	0.09	1407	0.11	1925	0.18	2341	0.26	2694	0.34	3008	0.42	3296	0.51	3560	0.59	3805	0.68	4035	0.78	4254	0.87
176	1400	983	0.07	1186	0.09	1354	0.11	1501	0.13	1986	0.21	2378	0.29	2720	0.38	3028	0.47	3305	0.56	3565	0.65	3806	0.75	4037	0.85	4254	0.95
227	1800	1140	0.09	1325	0.12	1481	0.14	1620	0.16	2076	0.25	2450	0.34	2774	0.43	3067	0.52	3336	0.62	3593	0.72	3826	0.82	4047	0.93	4262	1.03
277	2200	1307	0.12	1475	0.15	1620	0.18	1752	0.21	2186	0.30	2541	0.40	2854	0.50	3135	0.60	3394	0.70	3638	0.80	3868	0.91	4087	1.02	4295	1.14
328	2600	1482	0.16	1636	0.20	1769	0.23	1893	0.25	2307	0.36	2648	0.47	2948	0.58	3218	0.68	3474	0.79	3705	0.90	3929	1.02	4137	1.13	4337	1.25
378	3000	1663	0.22	1803	0.25	1927	0.28	2043	0.31	2438	0.44	2768	0.55	3059	0.67	3319	0.79	3562	0.90	3790	1.02	4006	1.14	4206	1.26	4403	1.39
428	3400	1847	0.28	1975	0.32	2091	0.35	2199	0.39	2575	0.52	2893	0.65	3173	0.78	3430	0.90	3664	1.03	3887	1.16	4092	1.28	4293	1.42	4483	1.55
479	3800	2032	0.35	2152	0.39	2261	0.43	2364	0.47	2722	0.62	3028	0.76	3302	0.90	3549	1.04	3776	1.17	3993	1.31	4197	1.45	4392	1.59	4572	1.72
529	4200	2219	0.44	2331	0.49	2433	0.53	2529	0.57	2872	0.73	3168	0.89	3433	1.04	3672	1.18	3899	1.33	4107	1.48	4303	1.63	4492	1.77	4678	1.91
580	4600	2410	0.55	2516	0.60	2610	0.64	2701	0.68	3029	0.86	3311	1.03	3566	1.19	3804	1.35	4022	1.51	4226	1.67	4422	1.83	4612	1.97	4801	2.11
630	5000	2602	0.67	2698	0.72	2790	0.77	2878	0.82	3188	1.00	3461	1.18	3708	1.36	3937	1.53	4155	1.71	4354	1.88	4541	2.04	4726	2.18	4911	2.32
680	5400	2791	0.81	2888	0.86	2975	0.92	3055	0.97	3350	1.17	3613	1.36	3855	1.55	4076	1.74	4286	1.92	4486	2.11	4686	2.25	4886	2.39	5086	2.53

<b>SIZE 106</b>			Wheel diameter: 10"      Inlet: 6" OD      Outlet area: .203 sq. ft.																								
CFM	OV	1/4"SP		1/2"SP		3/4"SP		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	RPM	BHP	RPM	BHP	RPM	BHP
122	600	746	0.04	988	0.06	1184	0.08	1356	0.10	1897	0.18	2320	0.25	2678	0.33	2993	0.41	3280	0.50	3543	0.58	3787	0.67	4023	0.76	4239	0.86
203	1000	890	0.06	1104	0.08	1280	0.11	1432	0.13	1935	0.21	2341	0.30	2690	0.39	2997	0.48	3279	0.58	3543	0.67	3785	0.77	4012	0.87	4232	0.98
284	1400	1055	0.09	1253	0.11	1415	0.14	1556	0.17	2023	0.26	2404	0.36	2737	0.46	3033	0.57	3305	0.67	3562	0.78	3798	0.89	4022	1.00	4235	1.12
365	1800	1234	0.12	1416	0.16	1568	0.19	1702	0.22	2140	0.33	2501	0.44	2815	0.56	3099	0.67	3360	0.79	3608	0.91	3836	1.03	4056	1.15	4260	1.26
447	2200	1422	0.17	1589	0.21	1732	0.25	1859	0.28	2279	0.41	2619	0.54	2921	0.67	3193	0.80	3445	0.92	3679	1.06	3902	1.19	4111	1.32	4315	1.47
528	2600	1617	0.24	1770	0.28	1907	0.32	2026	0.36	2427	0.51	2757	0.66	3045	0.80	3303	0.94	3546	1.08	3773	1.23	3991	1.38	4192	1.52	4387	1.67
609	3000	1818	0.32	1957	0.37	2082	0.42	2197	0.46	2585	0.63	2903	0.79	3179	0.95	3432	1.11	3664	1.27	3882	1.43	4095	1.59	4288	1.75	4476	1.91
690	3400	2020	0.42	2150	0.48	2266	0.53	2378	0.58	2751	0.77	3056	0.95	3327	1.13	3570	1.30	3798	1.48	4010	1.65	4212	1.83	4404	2.01	4587	2.18
771	3800	2227	0.55	2345	0.61	2457	0.66	2559	0.72	2916	0.93	3214	1.13	3479	1.33	3717	1.52	3937	1.72	4144	1.91	4337	2.10	4527	2.29	4717	2.48
853	4200	2437	0.70	2546	0.76	2649	0.82	2748	0.89	3091	1.12	3378	1.34	3638	1.56	3872	1.77	4085	1.98	4282	2.19	4478	2.40	4673	2.61	4868	2.82
934	4600	2649	0.88	2750	0.95	2847	1.01	2938	1.08	3267	1.33	3547	1.58	3801	1.82	4025	2.05	4237	2.28	4436	2.50	4634	2.72	4832	2.94	5030	3.16
1015	5000	2864	1.09	2955	1.16	3046	1.23	3136	1.31	3448	1.58	3719	1.84	3965	2.10	4185	2.35	4394	2.60	4584	2.85	4774	3.09	4964	3.33	5154	3.57
1096	5400	3078	1.33	3165	1.41	3251	1.49	3331	1.56	3630	1.86	3896	2.15	4133	2.42	4350	2.69	4554	2.96	4758	3.23	4952	3.47	5146	3.71	5340	3.95

<b>SIZE 125</b>			Wheel diameter: 12"      Inlet: 7" OD      Outlet area: .158 sq. ft.																								
CFM	OV	1/4"SP		1/2"SP		3/4"SP		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	RPM	BHP	RPM	BHP	RPM	BHP
95	600	603	0.03	825	0.05	1000	0.07	1151	0.09	1621																	

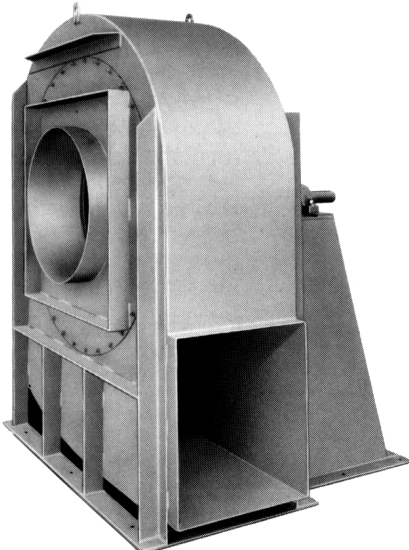


# BELT-DRIVE CAPACITY TABLES

<b>SIZE 126</b>		<b>Wheel diameter: 12" Inlet: 8" OD Outlet area: .255 sq. ft.</b>																									
CFM	OV	¼"SP		½"SP		¾"SP		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	RPM	BHP	RPM	BHP	RPM	BHP
153	600	606	0.04	817	0.06	987	0.08	1135	0.10	1595	0.19	1952	0.30	2256	0.41	2521	0.52	2764	0.65	2987	0.78	3191	0.91	3388	1.05	3573	1.20
255	1000	703	0.05	890	0.08	1043	0.10	1177	0.12	1616	0.23	1962	0.34	2258	0.47	2522	0.60	2763	0.73	2980	0.88	3190	1.03	3382	1.18	3564	1.34
357	1400	820	0.07	990	0.10	1130	0.13	1254	0.16	1663	0.28	1993	0.40	2280	0.54	2538	0.68	2771	0.83	2989	0.98	3191	1.14	3383	1.31	3562	1.48
459	1800	949	0.11	1105	0.14	1237	0.18	1352	0.21	1736	0.34	2049	0.48	2324	0.63	2573	0.78	2797	0.94	3013	1.11	3211	1.28	3393	1.45	3575	1.64
561	2200	1086	0.15	1229	0.19	1352	0.23	1461	0.27	1824	0.42	2122	0.57	2386	0.73	2624	0.90	2843	1.07	3047	1.25	3241	1.43	3425	1.63	3598	1.82
663	2600	1229	0.21	1360	0.26	1476	0.30	1580	0.35	1925	0.52	2212	0.69	2463	0.87	2694	1.05	2903	1.23	3101	1.42	3289	1.62	3467	1.82	3636	2.03
765	3000	1376	0.29	1497	0.34	1605	0.39	1704	0.44	2034	0.63	2311	0.83	2554	1.02	2775	1.22	2979	1.42	3168	1.62	3349	1.83	3525	2.05	3689	2.27
867	3400	1529	0.39	1638	0.44	1737	0.50	1832	0.56	2149	0.77	2415	0.98	2650	1.19	2864	1.41	3060	1.62	3247	1.85	3424	2.07	3589	2.30	3749	2.53
969	3800	1683	0.50	1782	0.57	1875	0.63	1966	0.69	2272	0.93	2526	1.16	2753	1.39	2960	1.63	3154	1.86	3332	2.10	3505	2.34	3668	2.59	3822	2.83
1071	4200	1839	0.65	1930	0.71	2018	0.78	2101	0.85	2395	1.11	2644	1.37	2863	1.62	3065	1.87	3254	2.13	3428	2.39	3595	2.64	3752	2.90	3907	3.17
1173	4600	1996	0.81	2083	0.89	2162	0.96	2242	1.03	2520	1.32	2762	1.60	2975	1.87	3173	2.15	3355	2.42	3527	2.70	3691	2.98	3844	3.25	3994	3.54
1275	5000	2157	1.01	2234	1.09	2310	1.17	2383	1.25	2650	1.56	2886	1.86	3097	2.16	3287	2.46	3463	2.75	3636	3.06	3793	3.35	3941	3.64		
1377	5400	2317	1.24	2388	1.33	2462	1.41	2530	1.49	2784	1.83	3014	2.16	3214	2.47	3403	2.80	3578	3.12	3739	3.43	3900	3.76				

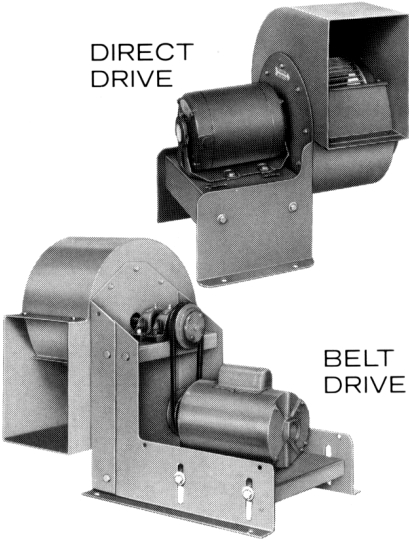
<b>SIZE 146</b>		<b>Wheel diameter: 14" Inlet: 8" OD Outlet area: .293 sq. ft.</b>																									
CFM	OV	½"SP		1"SP		2"SP		3"SP		4"SP		5"SP		6"SP		7"SP		8"SP		9"SP		10"SP		12"SP		14"SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
176	600	667	0.03	923	0.06	1299	0.13	1592	0.22	1840	0.33	2061	0.44	2260	0.56	2441	0.69	2610	0.83	2773	0.98	2923	1.13	3204	1.45	3459	1.79
293	1000	738	0.05	965	0.09	1313	0.18	1596	0.29	1838	0.41	2054	0.54	2250	0.68	2432	0.83	2600	0.99	2758	1.15	2907	1.32	3189	1.68	3449	2.07
410	1400	835	0.08	1041	0.13	1363	0.25	1627	0.37	1859	0.51	2065	0.66	2257	0.82	2435	0.98	2600	1.15	2756	1.34	2906	1.53	3184	1.92	3439	2.34
527	1800	945	0.12	1135	0.19	1433	0.33	1682	0.48	1899	0.64	2100	0.80	2282	0.98	2452	1.16	2613	1.35	2771	1.55	2913	1.75	3185	2.18	3438	2.63
645	2200	1062	0.19	1241	0.27	1522	0.44	1754	0.61	1963	0.79	2151	0.97	2327	1.17	2493	1.37	2647	1.58	2796	1.79	2935	2.01	3205	2.48	3451	2.96
762	2600	1182	0.27	1352	0.37	1620	0.56	1842	0.76	2039	0.96	2221	1.18	2387	1.39	2546	1.61	2696	1.84	2837	2.07	2974	2.31	3233	2.81	3474	3.33
879	3000	1309	0.37	1468	0.49	1726	0.72	1938	0.94	2127	1.17	2300	1.41	2459	1.64	2614	1.89	2756	2.14	2895	2.39	3025	2.65	3277	3.19	3513	3.75
996	3400	1438	0.50	1589	0.63	1834	0.89	2040	1.15	2222	1.41	2388	1.67	2543	1.93	2688	2.20	2827	2.47	2961	2.75	3090	3.03	3334	3.61	3560	4.20
1113	3800	1569	0.66	1711	0.81	1948	1.10	2146	1.39	2322	1.68	2484	1.97	2635	2.26	2777	2.56	2911	2.85	3039	3.15	3164	3.46	3395	4.07	3596	4.65
1231	4200	1703	0.86	1837	1.02	2063	1.35	2258	1.67	2427	1.98	2585	2.31	2730	2.62	2867	2.94	2999	3.27	3122	3.59	3243	3.92	3469	4.58	3597	4.98
1348	4600	1839	1.09	1966	1.27	2182	1.63	2372	1.98	2535	2.33	2689	2.68	2830	3.02	2965	3.38	3092	3.73	3212	4.08	3330	4.43	3550	5.15	3597	5.31
1465	5000	1976	1.37	2096	1.56	2306	1.95	2486	2.34	2648	2.72	2797	3.10	2937	3.48	3068	3.86	3189	4.23	3309	4.62	3423	5.00	3597	5.61	3597	5.61
1582	5400	2117	1.69	2227	1.90	2429	2.32	2604	2.74	2761	3.14	2909	3.56	3043	3.97	3169	4.37	3294	4.79	3410	5.20	3520	5.61	3596	5.90		

BHP shown does not include belt drive losses. Performance shown is for Compact GI Fans with inlet and outlet ducts.



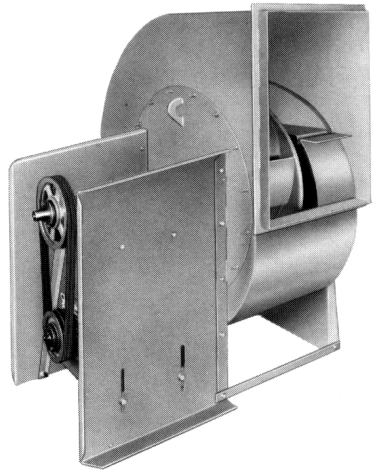
**SERIES 20 GI FANS**

The Series 20 GI Line extends radial-blade design performance beyond the Compact GI range to 76,000 CFM and 22"SP. Arrangement 10 packaged units are available to about 10,000 CFM and 15"SP.



**JUNIOR FANS**

Compact packages available in direct- or belt-drive arrangements. Forward-curve wheel design provides slow speed, quiet operation. Capacities to 4600 CFM and static pressures to 2½" WG. Heat fan available to 450°F.



**GPA FANS**

Available with airfoil or single-thickness, backwardly inclined wheels which provide efficient, quiet, packaged fans for capacities to 15,500 CFM and static pressures to 3" WG. Available with weather cover for outdoor mounting.

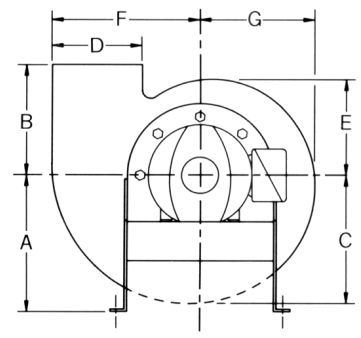
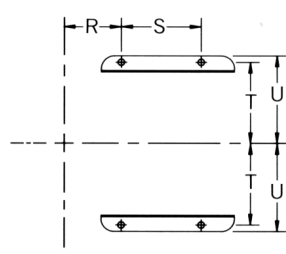
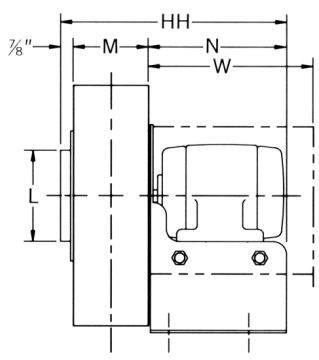
Refer to separate bulletin on each product line.

# DIRECT-DRIVE DIMENSIONS

## ARRANGEMENT 4

Arr. 4—Centerline heights [A]

Size	Motor frame	A
85, 95	48, 56	10½
105	48, 56, 143T, 145T	
106	56, 143T, 145T	
116, 125, 126	56, 143T, 145T	12½
	182T, 184T	13½
136	56	12½
	182T, 184T	13½
146	143T, 145T	12½
	182T, 184T	13½



DIMENSIONS [Inches]

Size	B	C	D	E	F	G	HH	L	M	N	R	S	T	U	W	a	b	c	d	Base holes	Maximum frame	Bare fan wt. [lbs.]*
85	6	6¾	4⅝	5⅜	6⅞	5⅞	14⅝	5	3⅝	10⅞	37/16	6	6¼	6¾	14¼	6¼	9⅞	6⅝	5⅝	½"	56	35
95	7½	7⅞	5⅝	6⅝	8½	7¼	14⅝	6	3⅝	10⅞	37/16	6	6¼	6¾	14¼	7¾	11¼	8	6¾	½"	56	39
105	7½	7⅞	5⅝	6⅝	8½	7¼	14⅝	6	3⅝	10⅞	37/16	6	6¼	6¾	14¼	7¾	11¼	8	6¾	½"	145T	40
106	7½	7⅞	5⅝	6⅝	8½	7¼	16⅝	6	5⅝	10⅞	47/16	6	6¼	6¾	14¼	7¾	11¼	8	6¾	½"	145T	45
116	8½	10	7	7½	11¼	8¾	17⅝	7	5⅝	11⅞	415/16	7	7¾	8¼	15	9⅞	13⅞	10⅝	8⅞	½"	184T	55
125	8½	10	7	7½	11¼	8¾	15⅝	7	3⅝	11⅞	315/16	7	7¾	8¼	15	9⅞	13⅞	10⅝	8⅞	½"	184T	55
126	8½	10	7	7½	11¼	8¾	17⅝	8	5⅝	11⅞	415/16	7	7¾	8¼	15	9⅞	13⅞	10⅝	8⅞	½"	184T	60
136	10½	11⅞	8¼	9⅜	12	10¼	17⅝	8	5⅝	11⅞	415/16	7	7¾	8¼	15	10¾	16	11½	9¾	½"	184T	70
146	10½	11⅞	8¼	9⅜	12	10¼	17⅝	8	5⅝	11⅞	415/16	7	7¾	8¼	15	10¾	16	11½	9¾	½"	184T	70

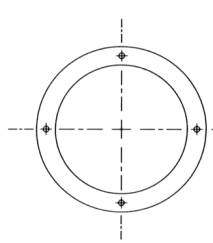
L is OD of collar. M and D are outside dimensions. W pertains to optional weather cover. \*Less motors.

MATERIAL SPECIFICATIONS	Housings	Pedestals and drive-side plates	Inlet plates	Bearings
	12 gauge	Sizes 85-106: 12 gauge Sizes 116-146: 10 gauge	14 gauge	Link-Belt P3-U200 Series ball bearings or equal.

### FLANGED INLET OPTION

Four 5/16" diameter holes furnished on centerlines.  
NOTE—Inlet flange: 10 gauge.

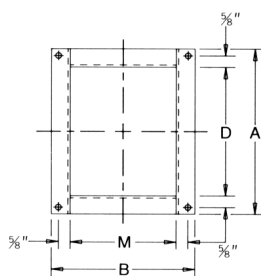
DIMENSIONS [Inches]



Size	ID	BC	OD
85	4⅞	6	7
95	5⅞	7	8
105	5⅞	7	8
106	5⅞	7	8
116	6⅞	8	9
125	6⅞	8	9
126	7⅞	9	10
136	7⅞	9	10
146	7⅞	9	10

### FLANGED OUTLET OPTION

1" x 1" x 1/8" angles mounted flush with outside edge of housing discharge. All sizes have 5/16" diameter corner holes. Sizes 136 and 146 have four additional holes on centerline. Not available on Size 85 Bottom Horizontal and all Down Blast discharge fans.



DIMENSIONS [Inches]

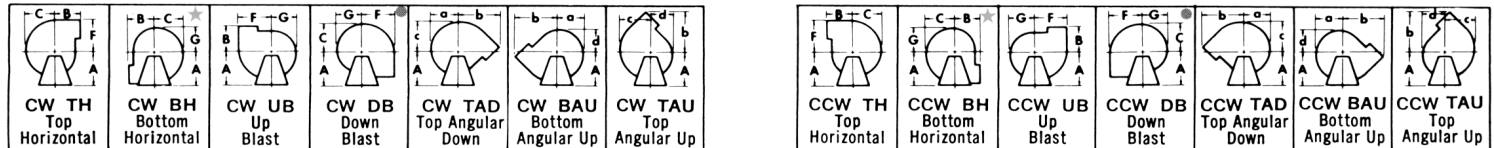
Size	A	B	D	M
85	6⅞	5⅞	4⅞	3⅞
95	7⅞	5⅞	5⅞	3⅞
105	7⅞	5⅞	5⅞	3⅞
106	7⅞	7⅞	5⅞	5⅞
116	9	7⅞	7	5⅞
125	9	5⅞	7	3⅞
126	9	7⅞	7	5⅞
136	10¼	7⅞	8¼	5⅞
146	10¼	7⅞	8¼	5⅞

### OUTLET DAMPER OPTION

When outlet damper is furnished, it has the effect of extending the fan B dimension per the chart below. Damper outlet dimensions are the same as fan outlet, D, and M.

Size	Damper extension
85	5⅜"
95	5⅞"
105	5⅞"
106	5⅞"
116	6½"
125	6½"
126	6½"
136	7¾"
146	7¾"

### FAN DISCHARGES—VIEWED FROM DRIVE SIDE



Clockwise—Angular discharges at 45°

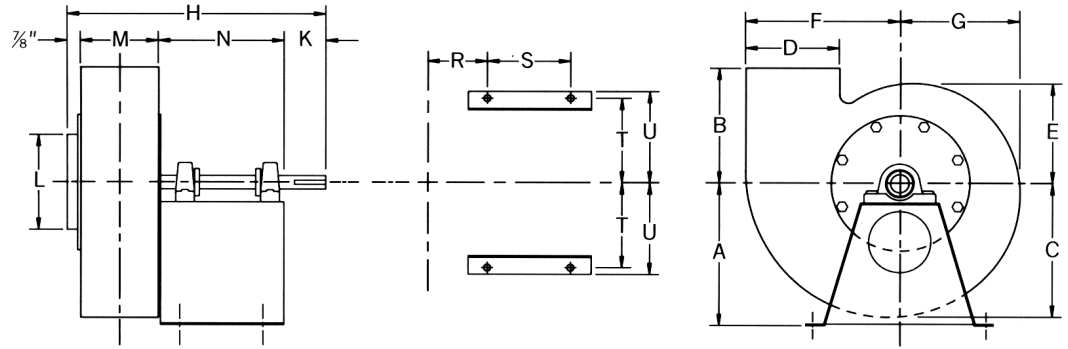
Counterclockwise—Angular discharges at 45°

★ On Size 146 in Bottom Horizontal discharge with optional flanged outlet, the flange extends below the Arrangement 1 or 9 baseline.  
● Down Blast discharge is not available in Arrangement 9X.



# BELT-DRIVE DIMENSIONS

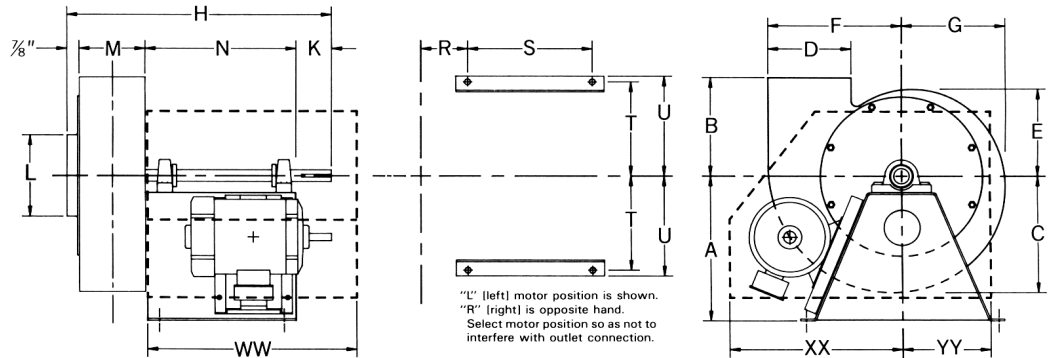
## ARRANGEMENT 1



## ARRANGEMENT 9

MINIMUM-MAXIMUM V-BELT DRIVE CENTERS [INCHES]

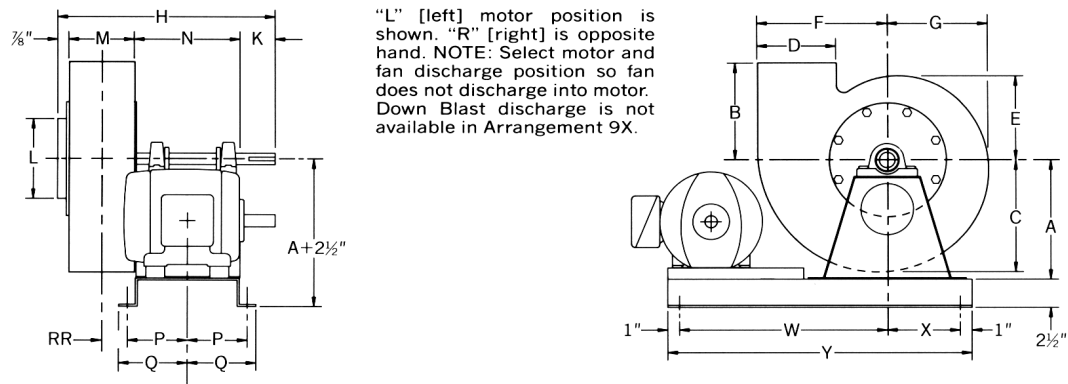
Size	Frame	Min.	Max.
85, 105, 106	48	8½	10¼
	56	8¾	10¾
125, 126, 146	48	9¾	11¾
	56/143/145	10	12¾



## ARRANGEMENT 9X

MINIMUM-MAXIMUM V-BELT DRIVE CENTERS [INCHES]

Size	Frame	Min.	Max.
85, 105, 106	48	14	17¼
	56/143/145	14½	16¾
125, 126, 146	56/143/145	16¾	18¾
	182/184	15½	18



### DIMENSIONS [Inches]

Size	A	B	C	D	E	F	G	H	K	L	M	N	P	Q	R	RR	S	T	U	W
85	10½	6	6¾	4¾	5¾	6¾	5¾	17	2¼	5	3¾	10¼	5½	5¾	3¾	1¼	6	6¼	6¾	17¾
105	10½	7½	7¾	5¾	6¾	8½	7¼	17	2¼	6	3¾	10¼	5½	5¾	3¾	1¼	6	6¼	6¾	17¾
106	10½	7½	7¾	5¾	6¾	8½	7¼	19	2¼	6	5¾	10¼	5½	5¾	4¾	2¼	6	6¼	6¾	17¾
125	12½	8½	10	7	7½	11¼	8¾	20¾	3	7	3¾	12¾	7½	7¾	3	1½	10½	8¾	8¾	20¾
126	12½	8½	10	7	7½	11¼	8¾	22¾	3	8	5¾	12¾	7½	7¾	4	2½	10½	8¾	8¾	20¾
146	12½	10½	11¾	8¼	9¾	12	10¼	22¾	3	8	5¾	12¾	7½	7¾	4	2½	10½	8¾	8¾	20¾

Size	WW	X	XX	Y	YY	a	b	c	d	Max. motor length★		Max. frame size		Shaft dia.	Keyway	Base holes	Bare fan weights [lbs.]†		
										Arr. 9	Arr. 9X	Arr. 9	Arr. 9X				Arr. 1	Arr. 9	Arr. 9X
85	14¾	6¼	13½	26	5½	6¼	9¾	6¾	5¾	9½	12¾	56	145T	1	¼ x ½	½	40	40	55
105	14¾	6¼	13½	26	5½	7¾	11¼	8	6¾	9½	12¾	56	145T	1	¼ x ½	½	45	45	60
106	14¾	6¼	13½	26	5½	7¾	11¼	8	6¾	9½	12¾	56	145T	1	¼ x ½	½	50	50	65
125	17¾	8¾	14¾	31	7¾	9¾	13¾	10¾	8¾	11¼	12¾	145T	184T	1	¼ x ½	½	60	60	85
126	17¾	8¾	14¾	31	7¾	9¾	13¾	10¾	8¾	11¼	12¾	145T	184T	1	¼ x ½	½	65	65	90
146	17¾	8¾	14¾	31	7¾	10¼	16	11½	9¾	11¼	12¾	145T	184T	1	¼ x ½	½	80	80	105

L is OD of collar. M and D are outside dimensions. ★ Maximum motor length is NEMA C—NW dimension. † Less motors and V-belt drives.