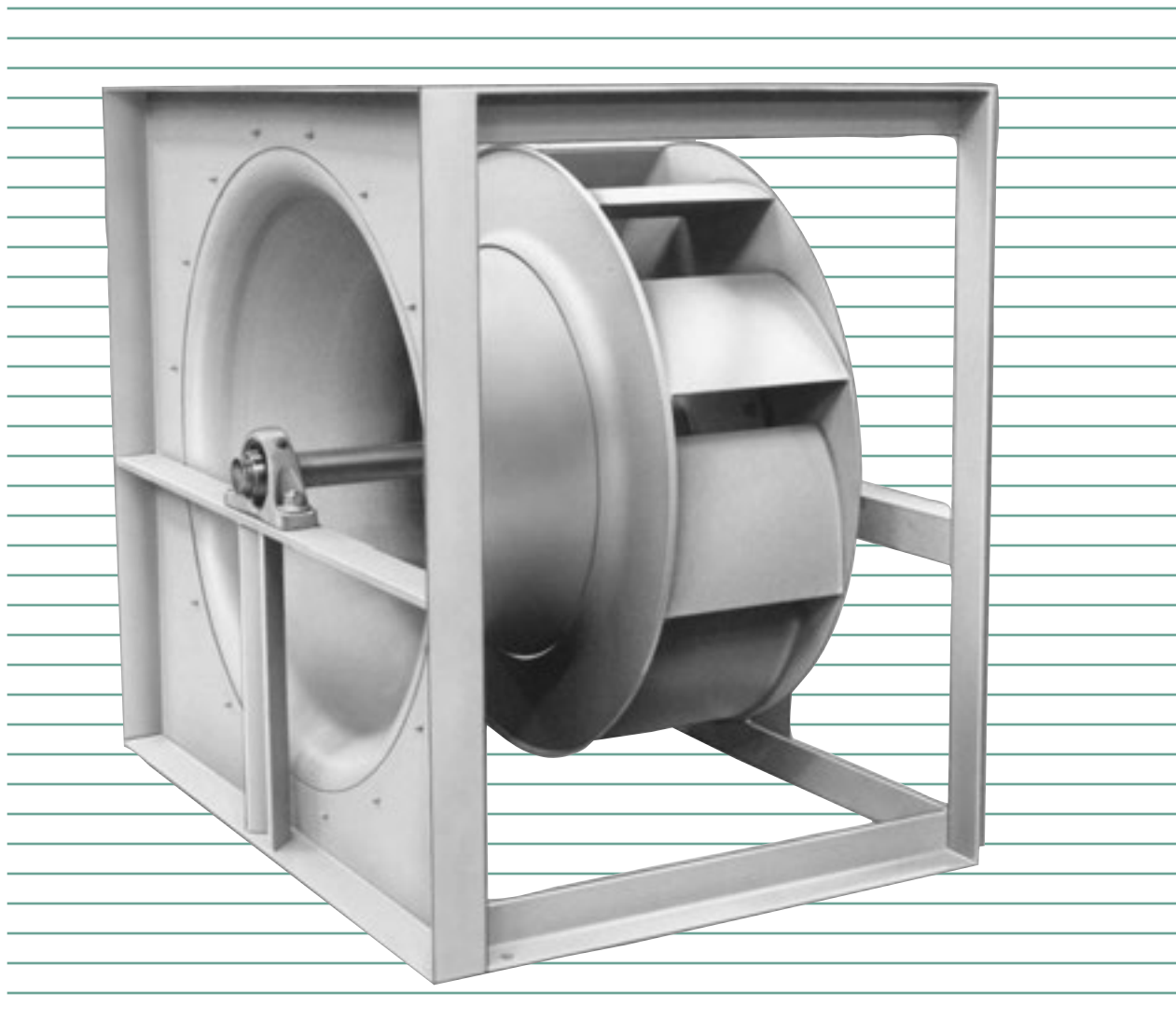


Series 9200 Airfoil Plenum Fans

Design 9240 • Class I & II



Series 9200 Airfoil Plenum Fans

The Design 9240 Airfoil Plenum fan is a quiet, highly efficient, and stable operating fan constructed specifically for use inside air-handling units. The fan has no housing so it will pressurize the entire air plenum in which it is installed. This feature offers several advantages to the air-handling unit manufacturer....space savings, multiple direction duct connection capability, ease of sound and vibration isolation, elimination of transitions, and reduced fan cost.

**Commercial air conditioning unit systems,
general supply and exhaust ventilation:**

Public Buildings
Hospitals
Warehouses
Offices
Department Stores
Schools

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Bearings

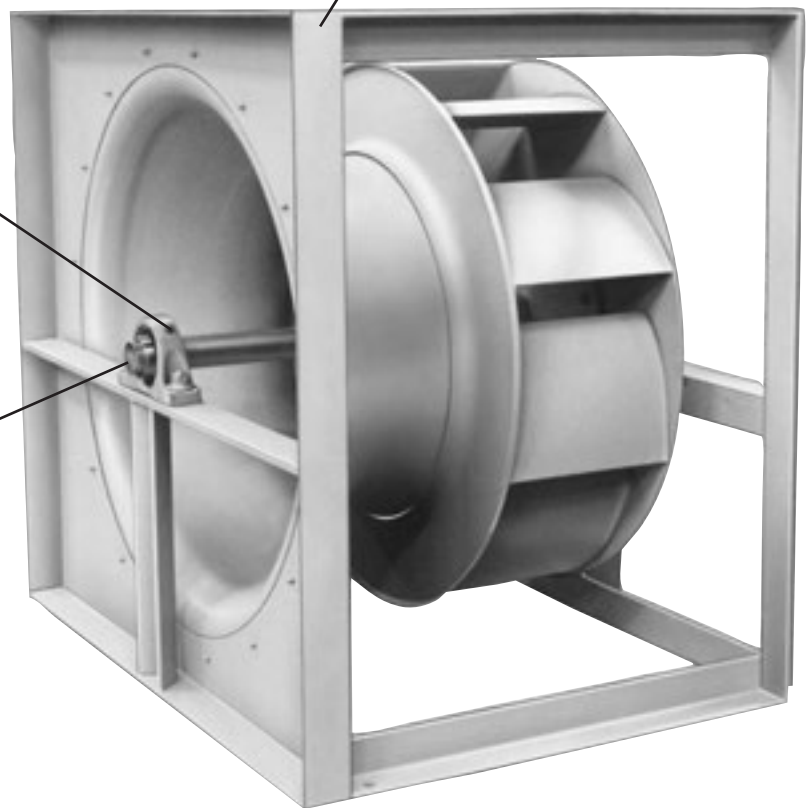
Heavy duty ball or roller bearings with an average bearing life (AFBM L-50) exceeding 200,000 hours at maximum class RPM.

Framing

Rugged heavy gauge all welded structural steel frame for maximum rigidity.

Shafts

Turned, ground and polished shafts are sized so that the maximum operating speed does not exceed 70% of the first critical speed.



Balance

Wheels are dynamically balanced to ISO 1940 specifications for smooth operation.

Design 9240 Airfoil Wheel

The Northern Blower design 9240 airfoil wheel is designed specifically for use in commercial and air handling unit applications. It offers a superior combination of high efficiency, stable operation, and low noise levels. Blades are hollow die-formed airfoil sections. Available in single-inlet-single-width sizes from 13-1/2" to 66" diameter.



Classes of Construction

Arrangement 3 SISW fans in the size range from 1350 to 6600 are available in Class I and Class II construction.

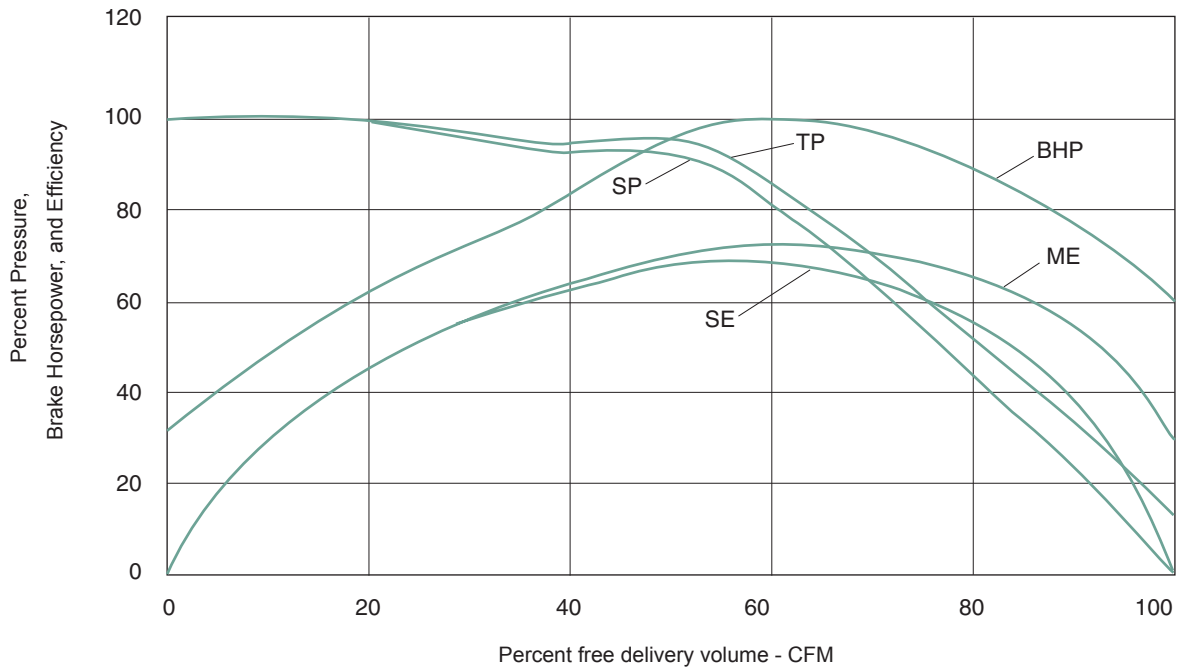
Capacities

1,000 CFM to 125,000 CFM

Pressures

Class I to 5" S.P.
Class II to 8" S.P.

Design 9240 Performance Curve



- High Efficiency
- Standard Operation

Square Flanged Inlet

Punched flange to facilitate the bolting of duct connections to the fan inlet.



Variable Inlet Vanes

Variable Inlet Vanes provide accurate volume control with minimal reduction in performance efficiency. Fan performance remains stable through fully open to fully closed positions. Available for both manual and automatic operation.



Unitary Fan and Motor Base

Rigid steel frame to provide a common mounting platform for fan and motor. May be ordered with spring or rubber-in-shear isolators and motor slide base.



Inlet Screen/Wheel Guard Screen Enclosure

Steel screen mounted to the inlet cone. Screens are split where required for easy removal. The Wheel Guard Screen Enclosure is an expanded mesh protective covering enclosing the fan wheel on all sides except the bottom.



Accessories

- Belt Guard
- Extended Grease Fittings
- Inlet Sleeve
- Motor and Drive Mounting
- Spring Isolators
- Protective Coatings
- Split Pillow Block Bearings
- Vertical Mounting

Due to the wide variety of airfoil fans available from Northern Blower we are unable to publish all information in one bulletin. Further information on custom fans is available from your Northern Blower sales representative.

Fan Selection at Elevated Temperature and Altitude

Fan Selection Tables

Ratings shown in the Performance Tables are based on standard air density of .075 pounds per cubic foot at the fan inlet. Standard air is dry air at 70°F and 29.92" Hg barometric pressure. When air density varies from standard, due to temperature or altitude changes, the Air Density Correction Factor from Table 1 is applied. Refer to the sample selection that follows.

Note that data in the selection tables does not include the effects of accessories such as inlet dampers, outlet dampers, screens, or other components in the air stream.

Table 1

Air Temp °F	Air Density Correction Factor						
	Elevation (Feet) above Sea Level						
	0	500	1000	2000	3000	4000	5000
-40°	.79	.81	.82	.85	.88	.92	.95
0°	.87	.88	.90	.93	.97	1.00	1.04
40°	.94	.96	.98	1.01	1.05	1.09	1.13
70°	1.00	1.02	1.04	1.08	1.12	1.16	1.20
100°	1.06	1.08	1.10	1.14	1.18	1.22	1.27
140°	1.13	1.15	1.17	1.22	1.26	1.31	1.36

Sample Selection of a Belt Drive Fan

Select a fan for the operating conditions of 5500 CFM at 5" SP, 70° F and 5000 feet elevation.

- 1) Multiply the Operating SP by the Air Density Correction Factor (Table 1) to obtain Equivalent SP:

$$\begin{aligned} \text{Equivalent SP} &= \text{Operating SP} \times \text{Air Density Corr. Factor} \\ &= 5" \times 1.20 = 6" \end{aligned}$$

- 2) From the Performance Table, select the fan size. For 5500 CFM at 6" SP an efficient selection would be a size 2000 fan. Interpolating from the Performance Table given on page 8, the selection fan performance is 2357 RPM and 7.87 BHP at standard temperature and pressure.

- 3) Divide the Equivalent BHP by the Air Density Correction Factor to obtain the Operating BHP:

$$\begin{aligned} \text{Operating BHP} &= \frac{\text{Equivalent BHP}}{\text{Air Density Correction Factor}} \\ &= \frac{7.87}{1.20} = 6.56 \text{ BHP} \end{aligned}$$

Wheel Diameter = 13.50 in.
 Maximum BHP = 0.091 x (RPM/1000)
 Tip Speed, fpm = 3.53 x RPM

Size

1350 sisw

Class I RPM 3254
 Class II RPM 4386

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	1458	0.28																			
1200	1566	0.35																			
1400	1685	0.43	2054	0.78																	
1600	1809	0.52	2158	0.92	2312	1.12															
1800	1934	0.62	2274	1.06	2419	1.29	2556	1.52	2692	1.76											
2000	2059	0.73	2394	1.22	2534	1.47	2664	1.72	2790	1.98	2912	2.24									
2200	2181	0.86	2517	1.40	2654	1.67	2781	1.95	2900	2.22	3015	2.50	3237	3.07							
2400	2298	0.99	2643	1.59	2777	1.89	2900	2.18	3016	2.48	3127	2.79	3337	3.39	3540	4.02					
2600	2416	1.14	2769	1.80	2901	2.12	3023	2.44	3136	2.76	3244	3.08	3447	3.74	3639	4.40	3825	5.07			
2800	2539	1.31	2893	2.03	3027	2.37	3148	2.72	3259	3.06	3365	3.40	3563	4.11	3747	4.81	3925	5.52	4097	6.25	
3000	2668	1.50	3016	2.28	3152	2.65	3274	3.02	3384	3.38	3488	3.75	3682	4.49	3861	5.24	4032	6.00	4197	6.76	
3200	2802	1.72	3135	2.54	3276	2.94	3399	3.34	3509	3.72	3612	4.11	3803	4.90	3979	5.69	4145	6.49	4305	7.30	
3400	2941	1.97	3252	2.81	3398	3.25	3524	3.68	3635	4.09	3737	4.50	3926	5.34	4099	6.17	4262	7.02			
3600	3083	2.24	3369	3.11	3517	3.58	3647	4.04	3759	4.48	3863	4.92	4051	5.80	4221	6.67	4382	7.57			
3800	3227	2.55	3489	3.43	3634	3.93	3767	4.42	3883	4.90	3987	5.36	4176	6.29	4345	7.21					
4000	3373	2.89	3614	3.78	3752	4.29	3885	4.82	4005	5.34	4112	5.83	4300	6.80							
4200	3521	3.26	3743	4.16	3871	4.68	4002	5.24	4126	5.79	4236	6.33									
4400	3669	3.66	3876	4.58	3994	5.11	4120	5.68	4242	6.26	4355	6.83									
4600	3818	4.09	4012	5.04	4121	5.58	4239	6.15	4358	6.76											
4800	3968	4.57	4152	5.54	4253	6.08	4362	6.66													
5000	4119	5.08	4293	6.08																	

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6" from the fan base. The performance shown is for Plenum Fan without ducts. Belt drive is not recommended above 3600 RPM.

Wheel Diameter = 15.00 in.
 Maximum BHP = 0.154 x (RPM/1000)
 Tip Speed, fpm = 3.93 x RPM

Size

1500 sisw

Class I RPM 2928
 Class II RPM 3947

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1300	0.34																			
1400	1375	0.40																			
1600	1460	0.47																			
1800	1548	0.56	1874	1.01																	
2000	1639	0.65	1952	1.15	2090	1.40															
2200	1730	0.75	2037	1.30	2168	1.57	2292	1.85													
2400	1822	0.86	2124	1.45	2251	1.75	2371	2.06	2484	2.36	2597	2.68									
2600	1912	0.98	2213	1.62	2338	1.95	2453	2.27	2563	2.60	2669	2.93									
2800	1999	1.11	2304	1.80	2426	2.15	2539	2.50	2645	2.85	2747	3.20	2942	3.92							
3000	2084	1.25	2396	2.00	2516	2.37	2627	2.74	2731	3.11	2830	3.49	3017	4.25	3198	5.03					
3200	2170	1.40	2487	2.22	2607	2.60	2716	3.00	2818	3.39	2915	3.79	3098	4.60	3272	5.41	3439	6.24			
3400	2259	1.57	2578	2.44	2699	2.86	2807	3.27	2907	3.69	3003	4.11	3182	4.96	3350	5.82	3510	6.68	3668	7.57	
3600	2351	1.75	2668	2.68	2791	3.13	2898	3.56	2998	4.00	3092	4.44	3268	5.34	3433	6.25	3587	7.15	3738	8.06	
3800	2448	1.96	2756	2.93	2881	3.41	2989	3.87	3089	4.33	3182	4.80	3355	5.73	3517	6.69	3668	7.64	3814	8.59	
4000	2547	2.18	2842	3.20	2971	3.71	3081	4.20	3181	4.69	3274	5.17	3444	6.15	3603	7.15	3751	8.14	3894	9.15	
4200	2648	2.43	2928	3.48	3059	4.02	3173	4.55	3272	5.06	3365	5.57	3535	6.59	3690	7.62	3837	8.67			
4400	2752	2.71	3013	3.77	3147	4.35	3262	4.91	3363	5.45	3456	5.98	3625	7.05	3779	8.12	3925	9.22			
4600	2856	3.00	3100	4.08	3232	4.69	3350	5.28	3454	5.86	3548	6.42	3716	7.53	3870	8.66					
4800	2962	3.32	3189	4.41	3317	5.04	3438	5.68	3544	6.29	3639	6.88	3808	8.04							
5000	3069	3.67	3281	4.78	3403	5.42	3523	6.08	3631	6.72	3728	7.35	3899	8.57							
5200	3176	4.05	3376	5.17	3490	5.81	3608	6.50	3719	7.19	3819	7.85									
5400	3284	4.45	3473	5.59	3580	6.24	3694	6.94	3804	7.65	3905	8.35									
5600	3393	4.88	3571	6.04	3672	6.70	3780	7.40	3889	8.14											
5800	3502	5.34	3672	6.52	3767	7.18	3869	7.90													
6000	3612	5.83	3775	7.04	3863	7.70															

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6-5/8" from the fan base. The performance shown is for Plenum Fan without ducts. Belt drive is not recommended above 3600 RPM.



Wheel Diameter = 16.50 in.
 Maximum BHP = 0.248 x (RPM/1000)
 Tip Speed, fpm = 4.32 x RPM

Size

1650 SISW

Class I RPM 2662
 Class II RPM 3588

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1194	0.42																		
1700	1252	0.49																		
1900	1316	0.56																		
2100	1381	0.64	1683	1.18																
2300	1449	0.73	1738	1.31	1869	1.61														
2500	1517	0.82	1800	1.45	1923	1.77	2042	2.09												
2700	1586	0.93	1864	1.60	1982	1.94	2095	2.28	2205	2.64										
2900	1655	1.04	1929	1.75	2045	2.12	2154	2.49	2257	2.85	2360	3.24								
3100	1723	1.16	1996	1.92	2110	2.31	2216	2.70	2316	3.09	2412	3.49								
3300	1789	1.29	2064	2.10	2176	2.51	2279	2.92	2378	3.34	2471	3.76	2652	4.61						
3500	1853	1.42	2133	2.29	2243	2.72	2345	3.16	2441	3.60	2532	4.04	2706	4.93	2876	5.85				
3700	1917	1.56	2202	2.49	2311	2.94	2412	3.40	2506	3.86	2595	4.33	2764	5.26	2926	6.21				
3900	1982	1.72	2271	2.71	2379	3.18	2479	3.66	2572	4.14	2660	4.63	2825	5.61	2982	6.60	3134	7.62		
4100	2049	1.88	2339	2.94	2449	3.44	2547	3.94	2638	4.44	2725	4.95	2888	5.97	3042	7.02	3187	8.05	3331	9.13
4300	2118	2.07	2406	3.18	2517	3.70	2615	4.22	2706	4.75	2792	5.28	2952	6.35	3103	7.44	3244	8.51	3383	9.62
4500	2189	2.26	2473	3.43	2585	3.98	2685	4.53	2775	5.08	2860	5.63	3018	6.75	3165	7.87	3305	9.00	3439	10.14
5000	2376	2.84	2636	4.09	2755	4.74	2856	5.36	2946	5.96	3030	6.57	3185	7.79	3328	9.02	3463	10.28		
5500	2571	3.53	2796	4.83	2917	5.56	3024	6.27	3119	6.96	3203	7.63	3355	8.95	3495	10.30				
6000	2770	4.35	2965	5.69	3078	6.46	3186	7.25	3285	8.02	3373	8.77	3527	10.23						
6500	2972	5.31	3144	6.69	3243	7.48	3347	8.32	3447	9.18	3539	10.02								
7000	3177	6.41	3332	7.85	3418	8.65	3511	9.52												
7500	3383	7.68	3525	9.18																

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 7-3/8" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 18.25 in.
 Maximum BHP = 0.383 x (RPM/1000)
 Tip Speed, fpm = 4.78 x RPM

Size

1825 SISW

Class I RPM 2407
 Class II RPM 3349

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1800	1044	0.43																			
2000	1083	0.48																			
2200	1126	0.54																			
2400	1169	0.60																			
2600	1214	0.66	1486	1.24																	
2800	1261	0.73	1525	1.35	1641	1.67															
3000	1309	0.80	1567	1.46	1679	1.79	1786	2.14													
3200	1358	0.88	1610	1.57	1719	1.93	1822	2.29													
3400	1409	0.96	1654	1.69	1761	2.07	1862	2.45	1956	2.84											
3600	1460	1.05	1699	1.81	1804	2.21	1903	2.61	1995	3.02	2085	3.43									
3800	1512	1.15	1745	1.94	1848	2.36	1945	2.78	2036	3.21	2123	3.63									
4000	1564	1.25	1792	2.08	1893	2.51	1989	2.95	2078	3.40	2163	3.85	2325	4.76							
4500	1698	1.54	1913	2.45	2010	2.93	2100	3.41	2187	3.90	2269	4.40	2423	5.41	2568	6.43					
5000	1836	1.89	2040	2.88	2131	3.39	2218	3.92	2300	4.45	2379	5.00	2528	6.10	2668	7.22	2798	8.34	2927	9.50	
5500	1977	2.29	2169	3.37	2257	3.92	2339	4.49	2418	5.06	2494	5.65	2638	6.84	2773	8.05	2901	9.28	3022	10.52	
6000	2121	2.76	2302	3.92	2386	4.52	2465	5.12	2541	5.74	2613	6.36	2752	7.64	2883	8.95	3007	10.26	3124	11.59	
6500	2266	3.30	2437	4.54	2517	5.18	2594	5.83	2667	6.48	2737	7.15	2871	8.51	2996	9.88	3117	11.30	3232	12.73	
7000	2414	3.90	2575	5.23	2652	5.92	2725	6.61	2795	7.30	2863	8.01	2992	9.44	3114	10.91	3230	12.40	3341	13.91	
7500	2563	4.59	2715	6.01	2788	6.74	2858	7.46	2926	8.20	2992	8.95	3116	10.46	3234	12.01	3346	13.58			
8000	2713	5.37	2857	6.87	2926	7.64	2994	8.41	3059	9.19	3122	9.98	3243	11.57							
8500	2864	6.24	3001	7.83	3067	8.63	3131	9.45	3194	10.27	3255	11.09									
9000	3016	7.20	3147	8.87	3209	9.73	3271	10.59	3331	11.45											
9500	3169	8.28	3294	10.04																	
10000	3323	9.46																			

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 20.00 in.
 Maximum BHP = 0.605 x (RPM/1000)
 Tip Speed, fpm = 5.24 x RPM

Size

2000 sisw

Design 9240 Airfoil Plenum Fans

Class I RPM 2196
 Class II RPM 3056

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2100	944	0.50																		
2300	973	0.55																		
2500	1004	0.61																		
2700	1036	0.66																		
2900	1070	0.72																		
3100	1104	0.78																		
3300	1140	0.85																		
3500	1176	0.92			1490	1.97														
4000	1269	1.12			1414	1.69														
4500	1367	1.35			1594	2.42	1686	2.87	1774	3.33										
					1676	2.78	1765	3.29	1848	3.79	1928	4.30								
5000	1467	1.61	1352	1.48	1761	3.17	1847	3.72	1928	4.27	2005	4.83	2150	5.96						
5500	1569	1.92	1383	1.59	1852	3.60	1933	4.19	2012	4.79	2086	5.40	2227	6.63	2357	7.87				
6000	1674	2.27	1414	1.69	1944	4.07	2023	4.71	2098	5.34	2170	6.00	2306	7.32	2434	8.66	2553	10.01	2670	11.40
6500	1781	2.66	1495	1.98	2039	4.59	2115	5.27	2188	5.95	2257	6.64	2390	8.06	2513	9.49	2630	10.95	2741	12.40
7000	1890	3.12	1581	2.29	2136	5.17	2210	5.88	2280	6.61	2348	7.34	2475	8.84	2596	10.36	2710	11.92	2819	13.49
7500	2000	3.62	1671	2.64	2235	5.80	2306	6.55	2374	7.32	2440	8.09	2564	9.67	2681	11.29	2792	12.92	2898	14.58
8000	2112	4.19	1761	3.17	2336	6.49	2405	7.29	2471	8.09	2534	8.90	2654	10.56	2769	12.27	2876	13.98	2980	15.73
8500	2224	4.81	1847	3.72	2438	7.25	2505	8.09	2569	8.93	2631	9.79	2747	11.52	2858	13.31	2963	15.10		
9000	2337	5.51	1928	4.30	2476	7.21	2543	8.08	2607	8.95	2668	9.84	2729	10.74	2842	12.55	2950	14.41		
9500	2451	6.28	2005	4.83	2647	8.97	2709	9.88	2769	10.81	2827	11.75	2939	13.66	3043	15.58				
10000	2566	7.12	2086	5.40	2754	9.95	2814	10.91	2872	11.87	2928	12.84	3036	14.83						
11000	2797	9.05	2170	6.00	2914	11.09	3026	13.18												
12000	3030	11.33																		

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6-5/8" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 22.25 in.
 Maximum BHP = 1.03 x (RPM/1000)
 Tip Speed, fpm = 5.83 x RPM

Size

2225 sisw

Design 9240 Airfoil Plenum Fans

Class I RPM 1974
 Class II RPM 2747

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	892	0.72																		
3500	951	0.87																		
4000	1013	1.02																		
4500	1079	1.20	1233	1.92																
5000	1148	1.40	1290	2.19	1381	2.69	1469	3.22												
			1350	2.48	1438	3.03	1521	3.60	1599	4.17										
5500	1219	1.63	1412	2.79	1498	3.39	1578	4.00	1653	4.62	1726	5.25								
6000	1291	1.89	1477	3.13	1560	3.78	1637	4.44	1711	5.11	1780	5.77	1912	7.14						
6500	1365	2.18	1544	3.50	1624	4.19	1699	4.89	1770	5.61	1839	6.33	1967	7.80	2087	9.27				
7000	1440	2.50	1613	3.90	1689	4.63	1763	5.38	1832	6.14	1898	6.90	2023	8.46	2139	10.04	2251	11.64		
7500	1516	2.86	1683	4.35	1757	5.11	1828	5.90	1895	6.70	1960	7.51	2082	9.17	2197	10.85	2303	12.52	2407	14.24
8000	1594	3.26	1754	4.83	1826	5.64	1895	6.47	1961	7.31	2023	8.16	2142	9.91	2254	11.68	2359	13.46	2459	15.25
8500	1673	3.70	1827	5.36	1897	6.20	1964	7.07	2027	7.96	2088	8.85	2205	10.68	2314	12.54	2417	14.43	2514	16.31
9000	1752	4.18	1900	5.92	1968	6.81	2034	7.73	2095	8.64	2155	9.58	2268	11.49	2375	13.44	2476	15.42	2572	17.41
9500	1833	4.71	1975	6.54	2041	7.48	2104	8.42	2164	9.38	2222	10.36	2333	12.35	2437	14.38	2537	16.45	2631	18.54
10000	1914	5.30	2051	7.21	2114	8.18	2176	9.17	2235	10.17	2291	11.19	2399	13.25	2501	15.38	2598	17.53	2691	19.70
10500	1995	5.93	2127	7.92	2189	8.94	2249	9.98	2307	11.02	2362	12.08	2467	14.22	2567	16.42	2661	18.64		
11000	2078	6.61	2204	8.70	2264	9.76	2322	10.83	2378	11.91	2432	13.01	2536	15.25	2633	17.51	2726	19.82		
11500	2160	7.36	2282	9.52	2340	10.63	2397	11.74	2451	12.87	2504	14.00	2605	16.32	2700	18.66				
12000	2243	8.17	2361	10.41	2417	11.56	2472	12.72	2525	13.89	2577	15.07	2675	17.45						
12500	2327	9.03	2440	11.37	2495	12.56	2548	13.76	2600	14.96	2650	16.18								
13000	2410	9.96	2520	12.38	2573	13.61	2624	14.85	2675	16.11	2724	17.38								
13500	2495	10.96	2601	13.46	2652	14.74	2702	16.03												
14000	2579	12.03	2682	14.63	2731	15.94														

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 7-3/8" from the fan base. The performance shown is for Plenum Fan without ducts.



Wheel Diameter = 24.50 in.
 Maximum BHP = 1.67 x (RPM/1000)
 Tip Speed, fpm = 6.41 x RPM

Class I RPM 1793
 Class II RPM 2495

Size

2450 SISW

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	796	0.82																			
4000	823	0.92																			
4500	859	1.04																			
5000	899	1.18	1127	2.33																	
5500	944	1.34	1154	2.53	1256	3.21															
6000	991	1.51	1186	2.77	1281	3.46	1374	4.20													
6500	1040	1.71	1224	3.02	1312	3.74	1398	4.50	1485	5.30											
7000	1090	1.91	1265	3.30	1347	4.05	1429	4.83	1509	5.65	1589	6.51									
7500	1140	2.14	1309	3.61	1387	4.38	1463	5.19	1539	6.03	1614	6.91									
8000	1191	2.39	1355	3.94	1429	4.75	1501	5.58	1573	6.45	1643	7.35	1784	9.26							
8500	1242	2.65	1402	4.29	1473	5.13	1542	6.00	1610	6.90	1677	7.82	1809	9.77	1942	11.86					
9000	1294	2.94	1451	4.66	1519	5.55	1585	6.45	1650	7.38	1714	8.33	1840	10.32	1965	12.45	2090	14.72			
9500	1347	3.25	1500	5.06	1567	5.99	1630	6.92	1692	7.89	1754	8.88	1874	10.92	1993	13.09	2110	15.37			
10000	1400	3.58	1550	5.49	1615	6.45	1677	7.43	1737	8.44	1795	9.45	1910	11.55	2024	13.77	2136	16.07	2248	18.54	
10500	1454	3.94	1601	5.95	1664	6.95	1725	7.97	1782	9.00	1839	10.05	1949	12.22	2059	14.49	2165	16.84	2272	19.33	
11000	1507	4.32	1651	6.42	1714	7.48	1773	8.53	1829	9.60	1884	10.69	1990	12.92	2095	15.25	2198	17.65	2300	20.18	
11500	1562	4.73	1702	6.93	1764	8.02	1822	9.13	1877	10.24	1930	11.37	2033	13.66	2134	16.04	2233	18.51	2332	21.07	
12000	1617	5.17	1753	7.46	1815	8.61	1873	9.76	1926	10.91	1978	12.08	2078	14.45	2175	16.88	2271	19.42	2365	22.01	
12500	1672	5.63	1805	8.03	1866	9.22	1922	10.41	1975	11.60	2026	12.81	2124	15.26	2218	17.77	2310	20.35	2401	23.00	
13000	1728	6.14	1857	8.62	1917	9.86	1973	11.11	2026	12.35	2076	13.60	2170	16.11	2262	18.70	2351	21.33	2439	24.05	
14000	1841	7.23	1963	9.91	2020	11.25	2075	12.59	2126	13.93	2175	15.25	2266	17.93	2354	20.67	2438	23.45			
15000	1954	8.47	2070	11.34	2125	12.78	2178	14.21	2228	15.64	2276	17.06	2364	19.90	2449	22.80					
16000	2069	9.87	2178	12.91	2231	14.44	2281	15.96	2330	17.49	2377	19.02	2464	22.04							
17000	2184	11.41	2288	14.65	2338	16.27	2387	17.89	2434	19.50	2479	21.12									

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 27.00 in.
 Maximum BHP = 2.71 x (RPM/1000)
 Tip Speed, fpm = 7.07 x RPM

Class I RPM 1627
 Class II RPM 2264

Size

2700 SISW

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	731	1.04																			
5000	754	1.15																			
5500	781	1.28																			
6000	811	1.42	1020	2.80																	
6500	844	1.57	1039	3.00	1135	3.81															
7000	879	1.74	1062	3.22	1151	4.05															
7500	915	1.92	1088	3.46	1172	4.32	1254	5.22													
8000	951	2.11	1117	3.73	1196	4.60	1273	5.53	1351	6.51											
8500	989	2.32	1148	4.01	1223	4.91	1296	5.86	1369	6.86	1442	7.91									
9000	1026	2.55	1180	4.31	1252	5.25	1322	6.22	1391	7.24	1460	8.31									
9500	1064	2.79	1214	4.63	1282	5.60	1350	6.61	1416	7.64	1481	8.73	1612	11.04							
10000	1102	3.04	1249	4.97	1315	5.98	1379	7.02	1442	8.08	1505	9.19	1629	11.54							
11000	1180	3.61	1321	5.72	1383	6.80	1443	7.89	1501	9.03	1560	10.20	1673	12.62	1786	15.21	1898	17.96			
12000	1259	4.25	1396	6.55	1455	7.70	1511	8.88	1566	10.08	1620	11.30	1725	13.84	1829	16.51	1932	19.32	2035	22.27	
13000	1339	4.97	1471	7.45	1529	8.69	1583	9.95	1635	11.23	1685	12.53	1784	15.19	1881	17.95	1977	20.85	2071	23.86	
14000	1420	5.77	1547	8.45	1603	9.78	1656	11.12	1706	12.48	1754	13.85	1847	16.64	1939	19.54	2028	22.53	2117	25.65	
15000	1502	6.67	1624	9.55	1679	10.97	1731	12.40	1779	13.84	1825	15.29	1914	18.23	2001	21.28	2085	24.36	2169	27.57	
16000	1586	7.68	1702	10.74	1756	12.26	1806	13.79	1854	15.31	1899	16.84	1984	19.93	2067	23.12	2147	26.34	2226	29.66	
17000	1670	8.78	1781	12.03	1833	13.66	1883	15.29	1929	16.91	1973	18.52	2056	21.77	2135	25.10	2212	28.47			
18000	1755	10.01	1861	13.46	1911	15.17	1959	16.88	2005	18.60	2048	20.32	2129	23.73	2206	27.23					
19000	1841	11.37	1941	14.98	1990	16.79	2036	18.60	2081	20.41	2124	22.21	2204	25.84							
20000	1926	12.84	2023	16.66	2070	18.57	2115	20.48	2158	22.38	2200	24.26									
21000	2012	14.45	2105	18.43	2150	20.44	2194	22.44	2236	24.44											

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6-5/8" from the fan base. The performance shown is for Plenum Fan without ducts.



Wheel Diameter = 30.00 in.
 Maximum BHP = 4.59 x (RPM/1000)
 Tip Speed, fpm = 7.85 x RPM

Size

3000 sisw

Class I RPM 1464
 Class II RPM 2037

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5500	656	1.27																			
6000	672	1.38																			
6500	691	1.50																			
7000	712	1.63																			
7500	735	1.78	921	3.49																	
8000	759	1.93	934	3.69	1021	4.70															
8500	784	2.10	951	3.91	1032	4.93															
9000	810	2.27	969	4.15	1046	5.18	1123	6.30													
10000	863	2.66	1011	4.67	1081	5.76	1150	6.90	1219	8.12											
11000	918	3.09	1057	5.26	1122	6.40	1185	7.60	1248	8.85	1311	10.16									
12000	973	3.58	1107	5.91	1167	7.12	1226	8.37	1285	9.68	1342	11.02	1457	13.89							
13000	1029	4.12	1158	6.62	1215	7.90	1271	9.22	1326	10.58	1380	11.98	1486	14.94	1592	18.10					
14000	1086	4.71	1212	7.39	1267	8.75	1319	10.15	1371	11.57	1421	13.03	1521	16.07	1619	19.29	1718	22.73			
15000	1143	5.37	1266	8.24	1319	9.68	1370	11.15	1419	12.65	1466	14.17	1560	17.33	1653	20.66	1744	24.11	1836	27.80	
16000	1202	6.09	1321	9.16	1373	10.68	1422	12.23	1469	13.81	1514	15.41	1604	18.69	1691	22.09	1777	25.66	1863	29.38	
17000	1261	6.89	1377	10.15	1427	11.76	1475	13.39	1521	15.05	1564	16.72	1649	20.13	1732	23.65	1815	27.34	1895	31.12	
18000	1321	7.76	1432	11.20	1483	12.92	1530	14.65	1574	16.37	1616	18.12	1697	21.68	1777	25.32	1855	29.13	1932	33.01	
19000	1381	8.70	1489	12.34	1538	14.16	1584	15.96	1627	17.77	1668	19.60	1748	23.33	1823	27.10	1898	31.03	1972	35.03	
20000	1443	9.75	1546	13.57	1594	15.47	1639	17.37	1682	19.28	1722	21.19	1799	25.06	1872	29.00	1944	33.06	2014	37.17	
21000	1504	10.86	1603	14.87	1650	16.88	1695	18.89	1737	20.89	1777	22.89	1851	26.90	1922	31.01	1991	35.17			
22000	1566	12.07	1662	16.29	1707	18.38	1750	20.47	1792	22.56	1831	24.66	1905	28.86	1974	33.11					
23000	1628	13.39	1720	17.77	1765	19.98	1807	22.17	1847	24.36	1886	26.53	1959	30.92	2026	35.31					
24000	1690	14.81	1780	19.38	1822	21.67	1864	23.95	1903	26.24	1942	28.54	2013	33.07							
25000	1753	16.33	1839	21.10	1881	23.49	1921	25.87	1960	28.24	1997	30.60									

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 7-3/8" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 33.00 in.
 Maximum BHP = 7.49 x (RPM/1000)
 Tip Speed, fpm = 8.64 x RPM

Size

3300 sisw

Class I RPM 1273
 Class II RPM 1736

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6500	585	1.48																			
7000	599	1.59																			
8000	631	1.85																			
9000	665	2.15	823	4.10																	
10000	702	2.47	850	4.55	918	5.69															
11000	739	2.82	881	5.07	945	6.25	1007	7.51													
12000	778	3.21	915	5.63	975	6.88	1033	8.18	1090	9.54											
13000	818	3.63	950	6.25	1008	7.57	1063	8.92	1117	10.34	1169	11.80									
14000	858	4.10	986	6.89	1043	8.31	1096	9.74	1146	11.20	1196	12.72	1294	15.93							
15000	900	4.62	1024	7.58	1078	9.09	1130	10.62	1179	12.14	1226	13.71	1318	16.99	1410	20.51					
16000	942	5.19	1062	8.31	1115	9.92	1166	11.54	1213	13.16	1259	14.79	1347	18.17	1432	21.75					
17000	985	5.82	1101	9.09	1153	10.79	1202	12.50	1249	14.23	1293	15.94	1378	19.45	1459	23.13	1539	26.96			
18000	1028	6.50	1140	9.93	1191	11.71	1239	13.52	1285	15.34	1328	17.15	1410	20.81	1489	24.59	1565	28.50	1641	32.63	
19000	1073	7.24	1181	10.83	1230	12.69	1277	14.59	1321	16.50	1364	18.41	1444	22.24	1521	26.16	1594	30.16	1666	34.35	
20000	1117	8.04	1222	11.80	1270	13.73	1315	15.72	1359	17.71	1401	19.71	1479	23.74	1554	27.83	1625	31.94	1694	36.22	
21000	1162	8.91	1263	12.83	1310	14.86	1354	16.90	1397	18.98	1438	21.08	1515	25.31	1588	29.56	1657	33.82	1724	38.21	
22000	1207	9.84	1305	13.95	1350	16.03	1394	18.16	1436	20.33	1476	22.53	1552	26.93	1623	31.35	1691	35.80			
23000	1253	10.86	1347	15.11	1392	17.29	1434	19.51	1475	21.75	1514	24.02	1589	28.65	1659	33.22	1725	37.88			
24000	1299	11.95	1390	16.39	1433	18.63	1475	20.91	1514	23.23	1553	25.58	1626	30.36	1695	35.18					
25000	1345	13.11	1433	17.71	1475	20.05	1516	22.42	1555	24.83	1593	27.25	1664	32.17	1732	37.19					
26000	1392	14.36	1477	19.14	1518	21.55	1557	23.99	1595	26.46	1632	28.97	1703	34.11							
27000	1439	15.70	1521	20.64	1561	23.15	1600	25.68	1637	28.23	1673	30.81									
28000	1486	17.14	1566	22.23	1604	24.82	1642	27.42	1678	30.05	1713	32.72									
29000	1533	18.65	1611	23.94	1648	26.60	1685	29.30	1720	32.03											
30000	1580	20.26	1656	25.71	1692	28.47	1728	31.24													

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6" from the fan base. The performance shown is for Plenum Fan without ducts.



Wheel Diameter = 36.50 in.
 Maximum BHP = 12.4 x (RPM/1000)
 Tip Speed, fpm = 9.56 x RPM

Size

3650 SISW

Class I RPM 1151
 Class II RPM 1570

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	530	1.82																		
9000	551	2.06																		
10000	575	2.33																		
11000	601	2.63	744	5.01																
12000	628	2.95	763	5.46	826	6.84														
13000	656	3.29	785	5.95	844	7.38	903	8.90												
14000	684	3.66	810	6.50	866	7.98	920	9.54	974	11.19										
15000	713	4.06	835	7.09	889	8.63	941	10.23	991	11.92	1042	13.69								
16000	742	4.49	861	7.70	914	9.33	963	10.99	1011	12.72	1059	14.52								
17000	772	4.96	888	8.35	939	10.06	987	11.80	1034	13.59	1079	15.45	1168	19.35						
18000	803	5.47	916	9.03	966	10.84	1013	12.67	1057	14.52	1101	16.42	1185	20.41						
19000	834	6.02	944	9.74	993	11.65	1039	13.57	1082	15.50	1124	17.48	1205	21.56	1285	25.88				
20000	865	6.61	972	10.50	1020	12.50	1065	14.51	1108	16.54	1149	18.59	1227	22.78	1303	27.17	1379	31.84		
21000	897	7.25	1001	11.28	1048	13.39	1092	15.49	1134	17.63	1174	19.75	1251	24.07	1324	28.57	1395	33.28	1468	38.29
22000	929	7.93	1030	12.13	1076	14.30	1120	16.52	1161	18.74	1200	20.95	1275	25.43	1346	30.06	1414	34.83	1483	39.89
23000	962	8.67	1060	13.03	1105	15.28	1148	17.58	1188	19.88	1227	22.20	1300	26.85	1369	31.61	1436	36.48	1501	41.62
24000	994	9.45	1090	13.97	1134	16.32	1176	18.68	1216	21.08	1254	23.51	1325	28.34	1393	33.22	1458	38.24	1522	43.45
25000	1028	10.29	1121	14.98	1164	17.38	1205	19.84	1244	22.36	1281	24.86	1352	29.91	1418	34.92	1482	40.11	1543	45.35
26000	1061	11.18	1151	16.03	1193	18.53	1234	21.06	1272	23.63	1309	26.23	1378	31.46	1444	36.72	1506	41.98	1566	47.37
28000	1128	13.14	1214	18.32	1254	20.98	1293	23.67	1329	26.40	1365	29.17	1433	34.80	1496	40.39	1556	46.07		
30000	1196	15.35	1277	20.88	1316	23.71	1353	26.54	1388	29.42	1423	32.35	1488	38.32	1550	44.29				
32000	1265	17.82	1342	23.71	1378	26.67	1414	29.67	1448	32.71	1481	35.79	1545	42.09						
34000	1334	20.60	1407	26.78	1442	29.92	1476	33.09	1509	36.29	1541	39.52								
36000	1404	23.64	1474	30.21	1507	33.53	1540	36.86												

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 6-5/8" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 40.25 in.
 Maximum BHP = 20.2 x (RPM/1000)
 Tip Speed, fpm = 10.5 x RPM

Size

4025 SISW

Class I RPM 1044
 Class II RPM 1423

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	472	2.06																		
10000	485	2.27																		
11000	501	2.52																		
12000	519	2.79																		
13000	538	3.08	670	5.94																
14000	557	3.39	683	6.36																
15000	578	3.72	699	6.83	754	8.53														
16000	598	4.07	716	7.34	769	9.08	821	10.95												
17000	620	4.44	734	7.89	785	9.68	834	11.59	883	13.59										
18000	641	4.83	753	8.47	802	10.33	849	12.27	895	14.30	942	16.47								
19000	663	5.26	772	9.08	820	11.02	866	13.01	910	15.09	954	17.27								
20000	685	5.71	792	9.71	839	11.74	883	13.81	926	15.92	968	18.14								
22000	731	6.71	833	11.05	878	13.27	920	15.51	961	17.76	1000	20.08	1076	24.95						
24000	777	7.84	875	12.51	919	14.93	959	17.34	999	19.79	1036	22.23	1107	27.28	1177	32.64	1247	38.28		
26000	825	9.12	918	14.12	960	16.70	1000	19.31	1038	21.93	1074	24.56	1142	29.89	1208	35.39	1272	41.22	1336	47.27
28000	873	10.57	962	15.88	1003	18.61	1041	21.42	1078	24.22	1113	27.04	1179	32.69	1242	38.49	1302	44.42	1362	50.66
30000	922	12.17	1007	17.81	1046	20.69	1084	23.68	1119	26.66	1153	29.67	1218	35.71	1278	41.80	1336	47.98	1393	54.35
32000	972	13.95	1053	19.92	1091	22.97	1127	26.11	1162	29.25	1195	32.45	1258	38.90	1316	45.31	1373	51.84		
34000	1022	15.93	1099	22.22	1136	25.45	1171	28.72	1204	32.03	1237	35.39	1298	42.22	1356	49.02	1411	55.93		
36000	1073	18.11	1147	24.76	1182	28.13	1216	31.54	1248	35.01	1280	38.53	1340	45.71	1396	52.90				
38000	1124	20.50	1195	27.48	1228	31.02	1261	34.60	1293	38.23	1323	41.90	1382	49.39						
40000	1175	23.13	1243	30.45	1276	34.18	1308	37.93	1338	41.71	1368	45.53								
42000	1227	26.00	1292	33.64	1324	37.52	1354	41.43	1384	45.37	1413	49.37								
44000	1279	29.10	1342	37.13	1372	41.18	1401	45.25												

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 7-3/8" from the fan base. The performance shown is for Plenum Fan without ducts.



Wheel Diameter = 44.50 in.
 Maximum BHP = 31.5 x (RPM/1000)
 Tip Speed, fpm = 11.7 x RPM

Size

4450 sisw

Class I RPM 944
 Class II RPM 1288

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	433	2.43																		
11000	442	2.65																		
12000	453	2.88	597	6.04																
13000	464	3.11	604	6.42																
14000	476	3.36	611	6.82	671	8.70														
15000	489	3.62	620	7.25	678	9.19	733	11.25												
16000	503	3.90	630	7.70	686	9.72	740	11.83	790	14.04										
17000	518	4.20	640	8.14	695	10.27	747	12.44	796	14.69	844	17.08								
18000	533	4.52	651	8.61	705	10.81	756	13.07	804	15.40	850	17.80								
19000	549	4.86	663	9.09	715	11.37	765	13.72	812	16.15	857	18.60	944	23.84						
20000	565	5.23	676	9.59	727	11.95	775	14.39	821	16.90	865	19.44	949	24.75						
21000	582	5.62	689	10.11	738	12.55	785	15.07	831	17.67	874	20.29	956	25.74	1034	31.51				
22000	599	6.03	703	10.66	751	13.17	797	15.77	841	18.44	883	21.16	964	26.78	1040	32.61				
24000	633	6.92	732	11.84	777	14.48	821	17.24	863	20.05	904	22.97	982	28.94	1055	35.07	1124	41.39	1192	48.13
26000	668	7.91	762	13.14	805	15.90	847	18.79	887	21.78	926	24.83	1001	31.11	1072	37.60	1139	44.26	1204	51.12
28000	704	9.01	794	14.56	835	17.46	875	20.49	913	23.58	951	26.79	1023	33.44	1091	40.25	1157	47.22	1219	54.36
30000	740	10.24	827	16.11	867	19.16	905	22.30	941	25.55	977	28.87	1046	35.78	1112	42.93	1176	50.34	1237	57.77
32000	777	11.58	861	17.79	899	21.00	935	24.27	971	27.66	1005	31.11	1071	38.29	1135	45.78	1197	53.42	1256	61.34
34000	815	13.05	895	19.61	932	22.98	967	26.39	1001	29.92	1034	33.51	1098	40.96	1160	48.73	1219	56.66	1276	64.87
36000	853	14.67	930	21.58	966	25.10	1000	28.68	1033	32.36	1065	36.07	1126	43.78	1186	51.79	1243	60.05		
38000	892	16.43	966	23.68	1000	27.37	1034	31.15	1065	34.94	1096	38.79	1155	46.76	1213	55.03	1268	63.58		
40000	930	18.36	1002	25.93	1036	29.83	1068	33.73	1098	37.68	1128	41.69	1186	49.93	1241	58.47				
45000	1029	23.92	1094	32.34	1125	36.62	1155	40.97	1184	45.35	1212	49.77	1265	58.74						
50000	1129	30.68	1188	39.90	1217	44.62	1244	49.38	1271	54.20										

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 9" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 49.00 in.
 Maximum BHP = 50.9 x (RPM/1000)
 Tip Speed, fpm = 12.8 x RPM

Size

4900 sisw

Class I RPM 857
 Class II RPM 1169

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
11000	387	2.72																			
13000	399	3.14																			
15000	415	3.59	545	7.49																	
17000	433	4.08	555	8.28	610	10.56															
19000	453	4.61	569	9.15	621	11.57	669	14.09	717	16.80											
21000	475	5.21	584	10.05	634	12.65	681	15.32	726	18.10	768	20.98									
23000	498	5.88	602	11.00	649	13.77	694	16.62	737	19.55	778	22.52	857	28.88							
25000	523	6.63	621	12.03	666	14.94	710	17.98	751	21.05	791	24.23	866	30.77	938	37.77					
27000	548	7.45	641	13.11	685	16.17	726	19.35	766	22.64	805	25.95	877	32.79	946	39.92	1013	47.56			
29000	573	8.35	663	14.29	705	17.49	745	20.84	783	24.23	820	27.76	891	34.97	958	42.41	1021	50.05	1082	58.24	
31000	600	9.33	686	15.59	726	18.92	764	22.36	801	25.94	837	29.59	905	37.16	970	44.91	1032	52.90	1091	61.11	
33000	626	10.40	710	16.97	748	20.42	784	24.00	820	27.75	855	31.53	921	39.39	984	47.51	1044	55.89	1102	64.34	
35000	653	11.55	734	18.47	771	22.05	806	25.75	840	29.62	874	33.57	938	41.73	999	50.21	1058	58.86	1114	67.75	
37000	681	12.81	759	20.05	795	23.80	829	27.62	862	31.61	894	35.72	956	44.17	1016	52.98	1072	61.93	1128	71.23	
39000	709	14.18	784	21.75	819	25.66	852	29.63	884	33.75	915	37.97	975	46.70	1033	55.83	1088	65.08	1142	74.70	
41000	737	15.65	810	23.57	844	27.62	876	31.76	907	36.02	937	40.34	995	49.34	1051	58.76	1105	68.33	1158	78.28	
43000	765	17.24	836	25.52	869	29.72	900	34.05	930	38.39	959	42.85	1016	52.11	1070	61.80	1123	71.69			
45000	794	18.96	863	27.54	895	31.98	925	36.40	954	40.91	983	45.52	1037	55.03	1090	64.95	1141	75.18			
47000	823	20.79	890	29.75	921	34.29	950	38.91	979	43.61	1007	48.37	1060	58.12	1111	68.26	1161	78.82			
49000	852	22.77	917	32.03	947	36.79	976	41.60	1004	46.42	1031	51.32	1083	61.40	1132	71.75					
50000	867	23.82	930	33.25	960	38.06	989	42.95	1017	47.90	1043	52.88	1094	63.03	1143	73.56					
55000	941	29.54	999	39.83	1027	45.06	1054	50.36	1081	55.71	1106	61.10	1154	72.08							
60000	1016	36.29	1070	47.36	1096	53.02	1122	58.75	1146	64.53											
65000	1091	44.05	1142	55.97	1166	62.05															

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 9-7/8" from the fan base. The performance shown is for Plenum Fan without ducts.



Wheel Diameter = 54.25 in.
 Maximum BHP = 84.7 x (RPM/1000)
 Tip Speed, fpm = 14.2 x RPM

Size

5425 SISW

Class I RPM 775
 Class II RPM 1056

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	348	3.25																			
14000	351	3.44																			
16000	361	3.87																			
18000	372	4.31	490	9.03																	
20000	385	4.79	498	9.80	548	12.56															
22000	399	5.30	507	10.65	555	13.51	600	16.55													
24000	415	5.86	518	11.53	564	14.58	607	17.70	649	21.00											
26000	431	6.47	530	12.44	574	15.64	616	18.95	656	22.35	695	25.93									
28000	448	7.14	542	13.39	586	16.78	626	20.25	665	23.80	702	27.45	774	35.25							
30000	466	7.88	556	14.39	598	17.92	637	21.57	675	25.34	711	29.13	780	37.04							
32000	484	8.67	571	15.47	611	19.14	649	22.96	686	26.85	721	30.90	788	39.07	851	47.77					
34000	503	9.52	587	16.61	625	20.42	662	24.38	697	28.44	732	32.62	797	41.23	858	50.04	917	59.35			
36000	522	10.44	603	17.81	640	21.77	676	25.86	710	30.09	743	34.42	807	43.36	867	52.50	924	62.00	979	71.97	
38000	542	11.43	620	19.11	656	23.19	690	27.41	723	31.80	756	36.28	818	45.55	876	55.05	932	64.85	985	74.90	
40000	561	12.50	637	20.47	672	24.68	705	29.04	738	33.57	769	38.20	829	47.79	886	57.65	941	67.81	993	78.08	
45000	611	15.48	682	24.28	715	28.86	745	33.52	776	38.41	805	43.37	861	53.69	915	64.41	967	75.39	1017	86.63	
50000	663	18.98	729	28.65	760	33.60	789	38.66	817	43.84	844	49.12	897	60.12	948	71.61	997	83.35	1044	95.52	
55000	716	23.10	778	33.59	807	39.02	834	44.42	860	49.94	886	55.58	936	67.21	984	79.34	1030	91.88			
60000	769	27.85	827	39.19	855	45.02	881	50.91	906	56.81	930	62.81	977	75.15	1022	87.84					
65000	823	33.30	878	45.48	904	51.74	929	58.07	953	64.43	976	70.85	1021	83.81							
70000	878	39.55	929	52.57	954	59.26	978	65.99	1001	72.78	1023	79.59									
75000	934	46.62	982	60.46	1005	67.52	1028	74.66	1050	81.89											
80000	989	54.54	1035	69.20																	

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 11" from the fan base. The performance shown is for Plenum Fan without ducts.

Wheel Diameter = 60.00 in.
 Maximum BHP = 140 x (RPM/1000)
 Tip Speed, fpm = 15.7 x RPM

Size

6000 SISW

Class I RPM 700
 Class II RPM 955

Design 9240 Airfoil Plenum Fans

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP		
	CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	315	3.99																			
18000	321	4.39																			
20000	328	4.82																			
22000	336	5.27	443	11.04																	
24000	346	5.75	449	11.80	495	15.19															
26000	356	6.24	455	12.64	499	16.07															
28000	367	6.78	463	13.51	505	17.11	545	20.85													
30000	379	7.36	471	14.39	512	18.15	551	22.03	589	26.13											
32000	391	7.98	480	15.32	520	19.25	558	23.32	594	27.47	629	31.86									
34000	404	8.65	489	16.27	528	20.38	565	24.62	600	28.92	634	33.39	699	42.95							
36000	417	9.37	499	17.25	537	21.54	573	25.93	608	30.43	640	35.04	703	44.68							
38000	430	10.14	510	18.29	547	22.72	582	27.27	615	31.97	648	36.74	709	46.62	767	57.11					
40000	444	10.97	521	19.38	557	23.95	591	28.67	624	33.53	655	38.48	715	48.69	771	59.29					
45000	479	13.24	551	22.38	584	27.27	616	32.36	647	37.63	677	43.01	733	54.04	787	65.45	838	77.18	887	89.50	
50000	515	15.88	583	25.81	614	31.01	644	36.43	673	42.05	701	47.83	754	59.68	806	71.97	855	84.50	902	97.43	
55000	552	18.90	617	29.66	646	35.26	674	40.96	701	46.94	727	53.00	778	65.62	827	78.72	874	92.16	919	105.88	
60000	591	22.37	651	34.01	679	39.94	706	46.04	731	52.26	756	58.68	804	72.01	851	85.82	896	100.16	939	114.59	
65000	629	26.29	687	38.79	713	45.13	739	51.64	763	58.24	787	64.96	833	78.91	877	93.50	920	108.38			
70000	668	30.72	723	44.09	748	50.85	773	57.75	796	64.77	819	71.88	863	86.44	905	101.54	946	117.37			
75000	708	35.75	760	49.89	784	57.11	808	64.45	830	71.86	852	79.34	894	94.56	934	110.35					
80000	748	41.31	797	56.29	821	63.97	843	71.75	865	79.59	886	87.46	926	103.40							
85000	789	47.54	836	63.39	858	71.50	880	79.65	901	87.90	921	96.24									
90000	830	54.47	874	71.07	895	79.56	916	88.15	936	96.82											
95000	871	62.04	913	79.55	934	88.47															

The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 12-1/8" from the fan base. The performance shown is for Plenum Fan without ducts.



Size

6600 sisw

Design 9240 Airfoil Plenum Fans

Wheel Diameter = 66.00 in.
 Maximum BHP = 226 x (RPM/1000)
 Tip Speed, fpm = 17.3 x RPM

Class I RPM 637
 Class II RPM 868

Volume	1"SP		2"SP		2-1/2"SP		3"SP		3-1/2"SP		4"SP		5"SP		6"SP		7"SP		8"SP	
CFM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	287	4.95																		
25000	301	6.02																		
30000	318	7.19	410	14.68	451	18.77														
35000	339	8.52	424	16.85	462	21.27	498	25.89	533	30.76										
40000	362	10.08	441	19.12	477	24.00	511	29.01	543	34.21	574	39.48								
45000	386	11.90	460	21.63	493	26.89	526	32.35	556	37.92	586	43.69	642	55.44	696	68.22				
50000	412	13.95	481	24.38	512	30.00	543	35.87	572	41.83	601	48.03	654	60.63	705	73.72	753	87.43		
55000	439	16.30	503	27.43	533	33.38	562	39.60	590	45.98	617	52.60	668	66.03	717	79.97	763	94.12	808	109.10
60000	466	18.95	528	30.88	556	37.15	583	43.65	610	50.45	635	57.34	684	71.62	731	86.38	776	101.57	818	116.95
65000	494	21.90	553	34.65	579	41.26	605	48.15	630	55.17	655	62.46	702	77.57	747	93.10	790	109.08	831	125.35
70000	522	25.19	578	38.80	604	45.81	629	52.99	653	60.40	676	67.97	721	83.72	764	100.11	806	116.93	846	134.15
75000	551	28.86	605	43.33	630	50.76	653	58.29	676	66.05	698	73.98	741	90.40	783	107.49	823	125.00	861	143.04
80000	580	32.98	632	48.27	656	56.11	678	64.04	700	72.15	722	80.43	763	97.48	803	115.16	841	133.58		
85000	609	37.45	659	53.68	682	61.89	704	70.26	725	78.76	746	87.38	786	105.04	824	123.37	861	142.54		
90000	639	42.46	687	59.44	709	68.13	730	76.97	751	85.89	771	94.87	809	113.19	846	132.13				
95000	670	47.90	715	65.74	736	74.93	757	84.11	777	93.40	796	102.79	833	121.94						
100000	700	53.87	743	72.57	764	82.08	784	91.71	803	101.43	822	111.24	858	131.19						
105000	730	60.42	772	79.88	792	89.87	811	99.96	830	110.11	848	120.31								
110000	761	67.51	801	87.80	820	98.17	839	108.65	857	119.25										
115000	792	75.15	831	96.34	849	107.14	867	118.03												
120000	823	83.44	860	105.39																
125000	854	92.41																		

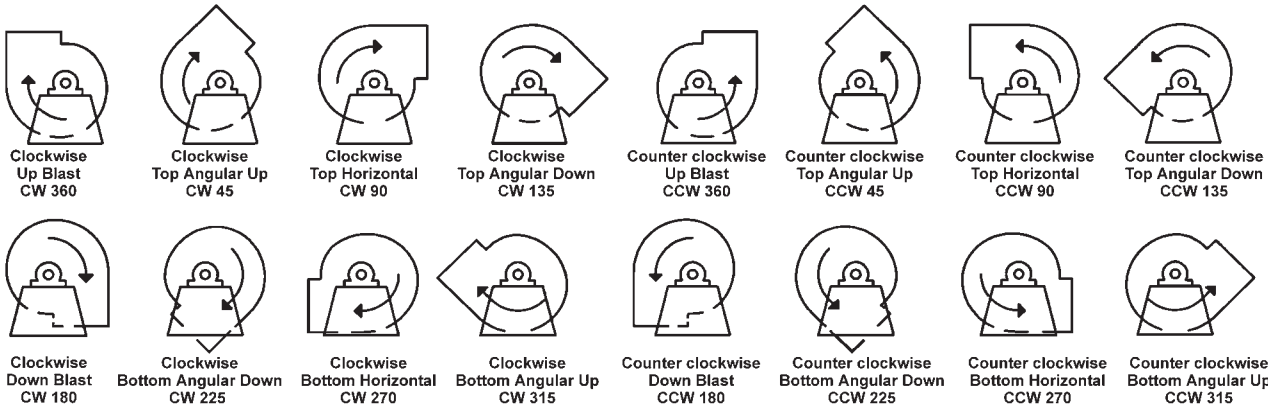
The BHP shown does not include drive losses. The ratings include the effect of a Plenum floor located 13-3/8" from the fan base. The performance shown is for Plenum Fan without ducts.

Sound data was obtained in accordance with AMCA Standard 300, Reverberant Room Method for Sound Testing of Fans.

Upon request Northern Blower will provide Sound Level Ratings for any fan selection from this catalogue. Refer also to the Northern Blower Sound Bulletin.

Fan Geometry

Designations for Rotation and Discharge of Centrifugal Fans



Notes:

- 1) Direction of rotation is determined from the drive side of the fan.
- 2) On single inlet fans, the drive side is always considered as the side opposite the fan inlet.
- 3) On double inlet fans with drives on both sides, the drive side is that with the higher powered drive unit.
- 4) Direction of discharge is determined in accordance with the diagrams. Angle of discharge is referred to the vertical axis of the fan and designated in degrees from such standard reference axis. Angle of discharge may be any intermediate angle as required.
- 5) For a fan inverted for ceiling suspension, or side wall mounting, the direction of rotation and discharge is determined when the fan is resting on the floor.



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