

# M.K. plastics

CORPORATION

SERVING THE NEEDS OF MODERN INDUSTRY



**AXCL**  
FRP FANS

We are pleased to provide you with this Engineering brochure for the AXCL Inline Bifurcated Centrifugal Fiberglass Blower. This information contained within is also available on the *M.K. Plastics* Computerized Performance Selection CD. This CD includes information on all of the *M.K. Plastics* fans, exhaust systems and their components, and is available from your technical sales representative or *M.K. Plastics* directly.

We look forward to assisting you with your important application.

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**ABOUT...**

For over 35 years, *M.K. Plastics* has been engineering, designing, and fabricating thermo-plastic and FRP ventilation components and systems for institutional and industrial applications. Founded in 1963, *M.K. Plastics* today has facilities and offices in Montreal, Quebec, Canada; Spiez, Switzerland; and Indianapolis, IN & Moores, NY, USA. In major cities throughout the United States, technical sales representatives of *M.K. Plastics Corporation* are ready to assist you.

**Corporate Headquarters...**

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[www.mkplastics.com](http://www.mkplastics.com)

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**Other Quality Corrosion Resistant Fans  
Available from *M.K. Plastics* Corporation:**

- **Axijet®** High Plume Dilution Blower
- **Plastifer®** Venturi Exhaust System
- **CNW** - Utility Centrifugal Blower
- **DHK** - Medium Pressure Centrifugal Blower
- **AXB** - Bifurcated Axial Inline Fans
- **AXPR** - Axial Panel Fans
- **RKW** - Centrifugal Domed Blower
- **PRVS** - High Pressure/Low Volume Blower
- **PVC** Duct and Fittings

*Your local M.K. Plastics Representative Will Be  
Pleased To Provide You With Technical  
Information Upon Request.*



Each AXCL fan is statically and dynamically balanced and test run with vibration measurements taken before shipment.

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## INTRODUCTION

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*M.K. Plastics Corporation's AXCL is an inline bifurcated fiberglass centrifugal blower assembly in which the impeller and housing are completely fabricated of fiberglass reinforced plastic (FRP). The AXCL is available in either belt or direct drive, and may be installed in horizontal or vertical positions. The AXCL is manufactured with high quality corrosion resistant resins and is fiberglass reinforced. This innovative design has no metal in the airstream, for superior corrosion resistance and long life in corrosive atmospheres.*

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## DESIGN & CONSTRUCTION

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Twelve sizes are available, 1225 (12.25" diameter impeller) through 4900 (49" diameter impeller) with capacities from approximately 500 to 50,000 CFM and up to 8" static pressure. The AXCL is manufactured with high quality, corrosion resistant resin and fiberglass reinforced, able to withstand temperatures up to 200° F and has UV inhibitors added to the resins to resist the UV component of sunlight for outdoor applications.

The Impeller of the AXCL is a backward curved and airfoil design allowing for high efficiency and stability at medium to high static pressures and medium to high flow rates.

The AXCL housings are bifurcated, isolating the drive components from the exhaust air stream, and facilitating easy and safe access to the motor, belts and bearings. The housings are smooth both exterior for aesthetic appearance and interior, for unrestricted airflow. Housing has round slip inlets and outlets, facilitating quick installation to round ducts. Inlet and outlet flanges and flange drilling are available.



Standard equipment includes a belt drive guard, 304 stainless steel hardware, and a carbon steel (C1045) blower shaft (isolated from the corrosive air stream). A 316 stainless steel shaft is available when required. Regreasable pillow block bearings are selected for L-10 100,000 hrs, minimizing maintenance. An access door for inspection and impeller maintenance, is supplied as standard.

Refer to *M.K. Plastics* corrosion resistant charts and Installation & Operation manual for more specific application information.

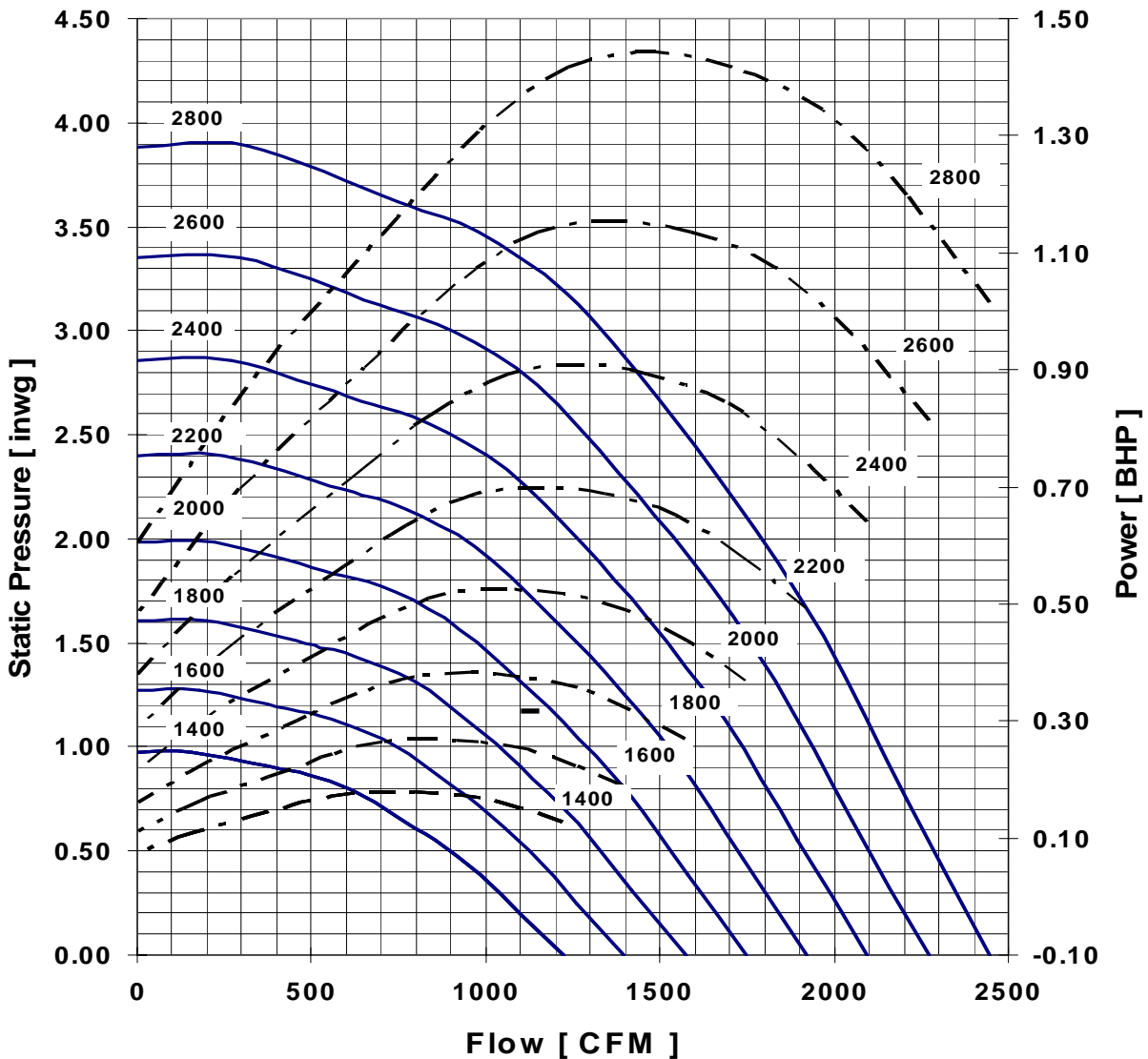
## PERFORMANCE

Max. speed [ rpm ] = 2825

Outlet area [sq. ft] = 1.147

Inlet		STATIC PRESSURE, inches of water													
Fan	Ov	0.5		1		1.5		2		2.5		3		3.5	
Flow		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	523	1182	0.11	1532	0.22	1829	0.35	2091	0.50	2323	0.65	2531	0.82	2723	0.99
800	697	1323	0.15	1638	0.29	1905	0.44	2149	0.60	2370	0.78	2576	0.96	2726	1.16
1000	872	1491	0.21	1776	0.37	2020	0.54	2235	0.72	2445	0.92	2639	1.12		
1200	1046	1673	0.28	1926	0.46	2157	0.66	2361	0.82	2549	1.07	2720	1.30		
1400	1221	1870	0.38	2094	0.57	2303	0.79	2501	1.02	2679	1.26				
1600	1395	2073	0.50	2270	0.71	2470	0.95	2647	1.20	2820	1.46				
1800	1569	2282	0.65	2467	0.89	2641	1.14	2811	1.41						
2000	1744	2491	0.82	2664	1.09	2820	1.36								

Performance at standard conditions: 70°F, 0.075 lbm/ft<sup>3</sup>



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
1400	0.25	62	68	66	65	68	64	52	41	71
	0.40	62	68	66	65	66	61	53	45	69
	0.65	62	66	67	65	64	59	54	49	68
1600	0.25	66	71	74	68	72	69	57	45	75
	0.50	66	71	74	68	70	65	57	49	73
	0.85	66	69	73	69	67	63	58	53	72
1800	0.25	71	74	79	71	74	73	62	49	79
	0.65	71	74	79	72	72	69	61	53	77
	1.10	71	73	77	72	70	66	61	56	75
2000	0.25	76	77	81	74	76	76	67	52	81
	0.85	75	77	81	75	74	71	64	57	79
	1.30	75	76	79	75	73	69	64	59	78
2200	0.25	81	79	83	77	77	79	71	56	83
	1.00	79	80	83	77	76	74	68	60	81
	1.65	79	79	81	78	75	72	67	62	80
2400	0.25	85	81	84	79	79	81	75	60	86
	1.25	83	82	84	80	78	77	70	63	84
	1.90	82	82	82	80	77	75	70	64	83
2600	0.25	89	83	86	81	80	83	78	63	88
	1.50	86	84	86	82	80	79	73	65	86
	2.30	85	84	84	83	79	77	72	67	85
2800	0.25	92	85	87	83	81	85	82	66	90
	1.65	89	85	87	84	82	81	75	68	88
	2.60	88	86	85	85	81	79	74	69	87

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

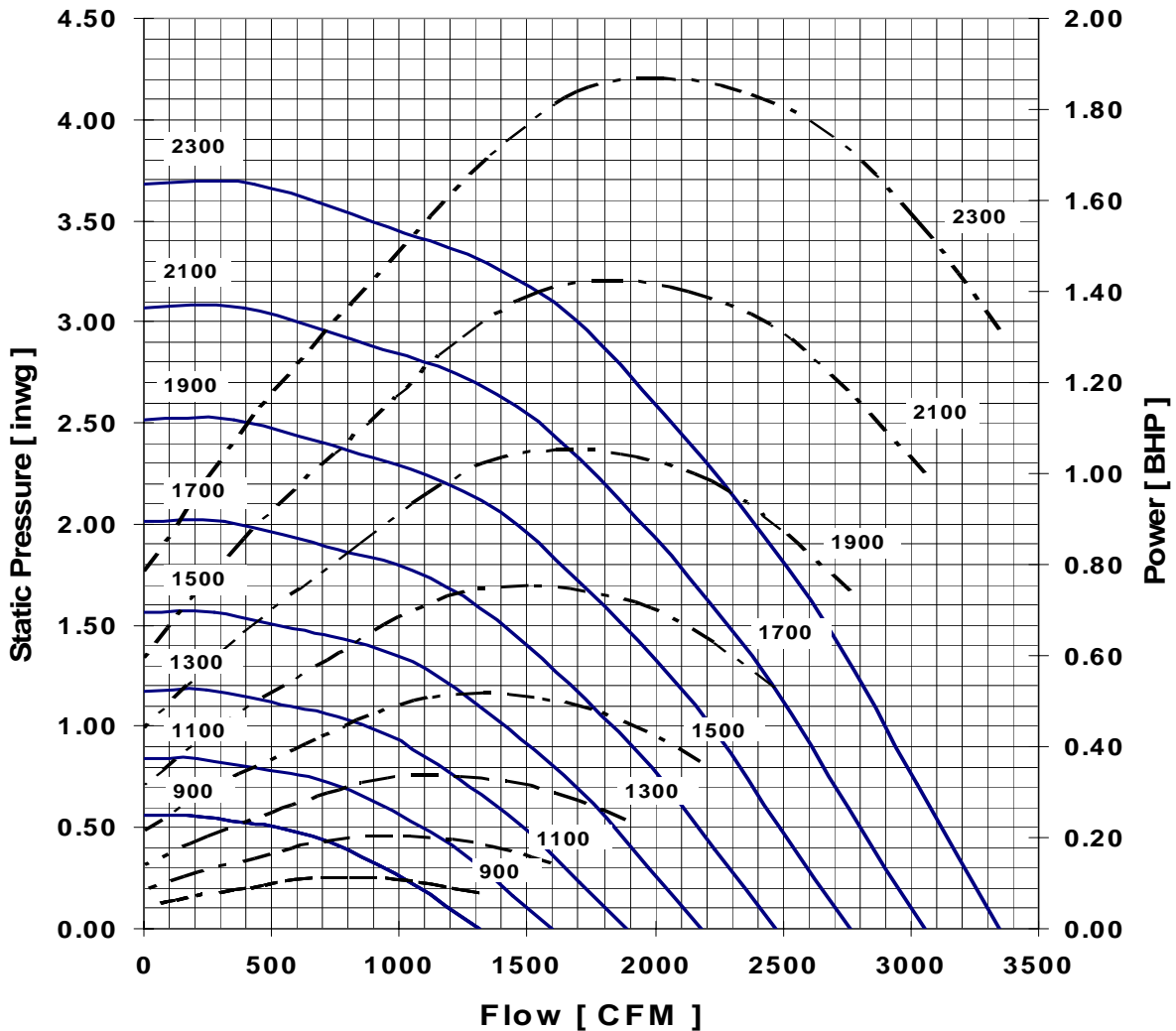
## PERFORMANCE

Max. speed [ rpm ] = 2385

Outlet area [sq. ft] = 1.530

Fan	Ov	STATIC PRESSURE, inches of water													
		0.5		1		1.5		2		2.5		3		3.5	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
800	523	979	0.14	1282	0.30	1539	0.48	1759	0.68	1953	0.89	2131	1.12	2293	1.35
1100	719	1107	0.21	1373	0.39	1601	0.60	1807	0.83	1995	1.08	2170	1.33	2333	1.61
1400	915	1255	0.29	1495	0.51	1703	0.75	1882	1.01	2061	1.28	2226	1.57	2376	1.87
1700	1111	1420	0.40	1632	0.65	1826	0.93	1999	1.22	2157	1.52	2301	1.84		
2000	1307	1597	0.55	1785	0.83	1959	1.13	2123	1.46	2273	1.80				
2300	1503	1782	0.74	1947	1.05	2111	1.38	2257	1.73						
2600	1699	1970	0.97	2123	1.31	2264	1.67								
2900	1895	2161	1.25	2305	1.64										

Performance at standard conditions: 70°F, 0.075 lbm/ft<sup>3</sup>



## ACOUSTIC PERFORMANCE

Speed rpm	Sp inwg	Frequency[Hz]								LwA dB
		63	125	250	500	1000	2000	4000	8000	
1100	0.25	64	70	65	66	66	59	49	38	69
	0.40	62	68	65	65	63	57	50	44	67
	0.55	64	68	66	65	62	57	52	47	67
1300	0.25	68	73	70	70	72	67	54	42	75
	0.50	68	73	70	69	69	63	55	48	72
	0.80	68	71	71	69	67	62	57	52	71
1500	0.25	71	76	74	72	76	73	60	46	79
	0.65	71	76	74	72	73	68	60	52	77
	1.05	72	74	75	72	71	66	61	56	75
1700	0.25	77	79	84	75	78	77	65	51	83
	0.90	76	79	84	76	76	71	64	57	81
	1.35	77	78	83	76	74	70	65	60	79
1900	0.25	82	82	86	78	80	80	70	55	86
	1.10	81	82	86	79	78	75	68	60	83
	1.65	81	81	85	79	77	73	68	63	82
2100	0.25	87	85	88	81	82	83	74	59	88
	1.40	85	85	88	82	80	77	71	64	86
	2.00	85	84	86	82	80	76	71	66	85
2300	0.25	88	87	90	83	84	85	76	60	90
	1.65	89	87	90	84	82	80	74	67	88
	2.50	89	87	88	85	82	79	73	68	87

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

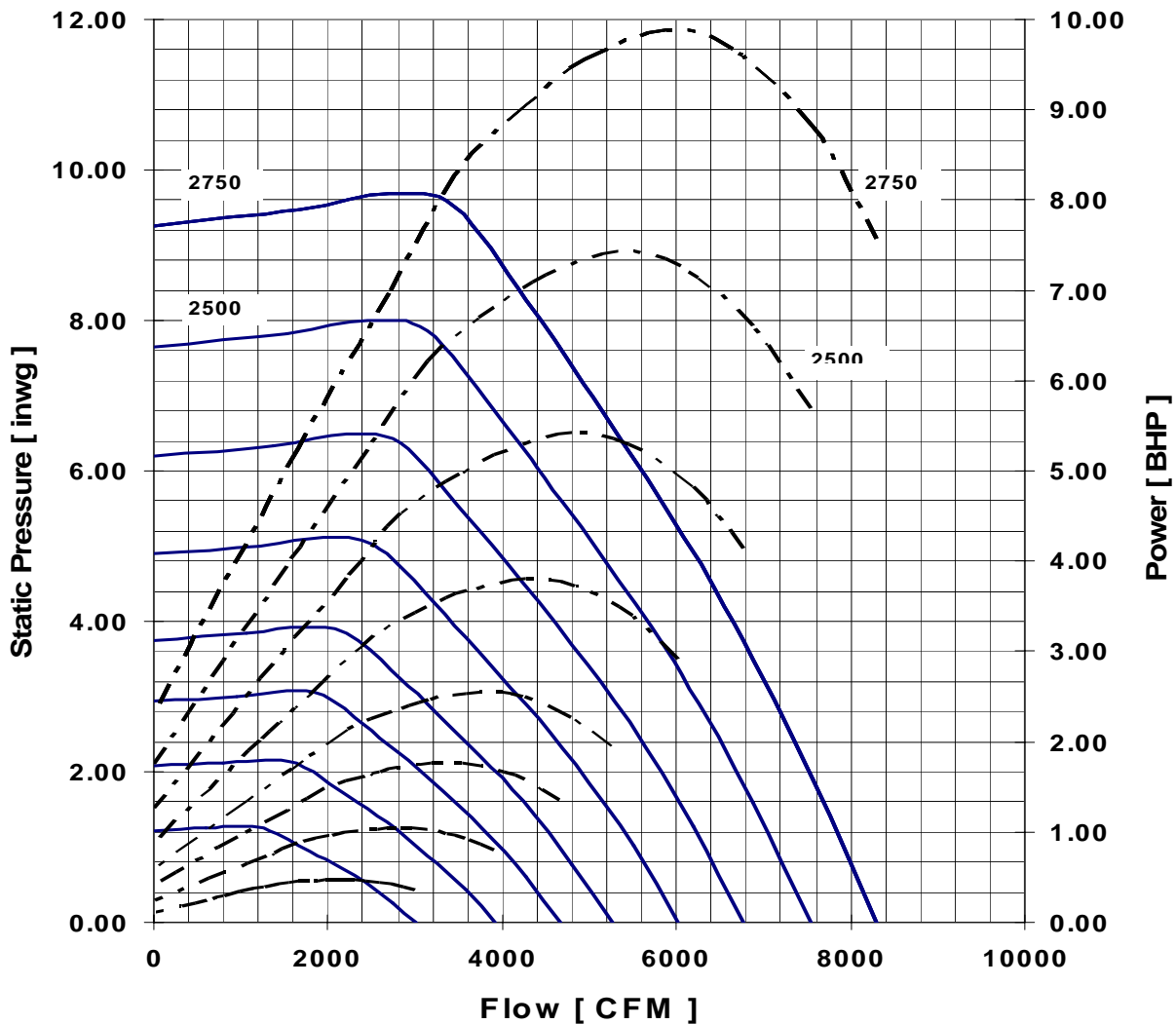
## PERFORMANCE

Max. speed [ rpm ] = 2765

Outlet area [sq. ft] = 2.348

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1278	1077	0.52	1153	0.68	1294	1.02	1538	1.70	1741	2.39	1917	3.08	2082	3.80	2229	4.53	2367	5.30
3300	1405	1168	0.65	1238	0.82	1367	1.19	1605	1.95	1803	2.70	1976	3.45	2135	4.23	2282	5.01	2417	5.81
3600	1533	1262	0.80	1326	1.00	1450	1.39	1673	2.22	1867	3.03	2038	3.86	2193	4.68	2335	5.53	2470	6.38
3900	1661	1357	0.99	1417	1.20	1532	1.62	1744	2.50	1932	3.39	2101	4.28	2253	5.18	2395	6.08	2526	7.00
4200	1789	1453	1.20	1509	1.43	1617	1.87	1817	2.81	2001	3.79	2167	4.74	2314	5.70	2455	6.67	2582	7.62
4500	1917	1549	1.44	1601	1.68	1703	2.16	1891	3.15	2070	4.20	2232	5.22	2379	6.24	2514	7.28	2643	8.31
4800	2044	1645	1.72	1695	1.97	1791	2.48	1970	3.54	2141	4.63	2299	5.75	2445	6.82	2579	7.93	2705	9.04
5100	2172	1741	2.02	1789	2.30	1879	2.84	2053	3.96	2214	5.09	2367	6.29	2511	7.44	2643	8.59		

Performance at standard conditions: 70°F, 0.075 lbm/ft3





## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
1000	0.25	58	68	68	66	63	54	50	47	67
	0.75	59	66	66	63	58	51	49	47	64
	1.20	57	63	63	59	54	49	46	43	60
1300	0.25	64	73	76	73	73	62	58	54	76
	1.50	64	69	73	69	64	57	54	52	71
	2.00	63	68	71	67	62	56	53	50	68
1550	0.25	69	76	82	78	77	69	63	59	81
	2.10	69	73	79	75	70	63	59	56	76
	3.00	68	72	77	72	66	61	58	55	73
1750	0.25	73	79	84	82	80	74	66	62	84
	2.75	73	76	80	78	73	67	62	59	79
	3.75	71	74	79	76	70	65	61	58	77
2000	0.25	78	81	87	86	83	80	70	66	88
	3.50	77	79	83	82	77	71	65	63	83
	4.75	75	77	81	80	74	69	64	61	80
2250	0.25	82	83	89	89	86	85	73	69	91
	4.40	81	82	85	86	81	75	68	66	86
	6.00	79	80	84	84	78	72	67	64	84
2500	0.25	85	85	91	92	88	88	76	72	94
	5.50	83	84	87	89	84	78	71	68	89
	7.50	81	83	86	87	81	76	70	67	87
2750	0.25	86	89	93	96	91	90	80	75	97
	6.50	85	88	89	93	87	82	74	71	92
	9.00	82	86	88	90	84	78	73	70	90

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

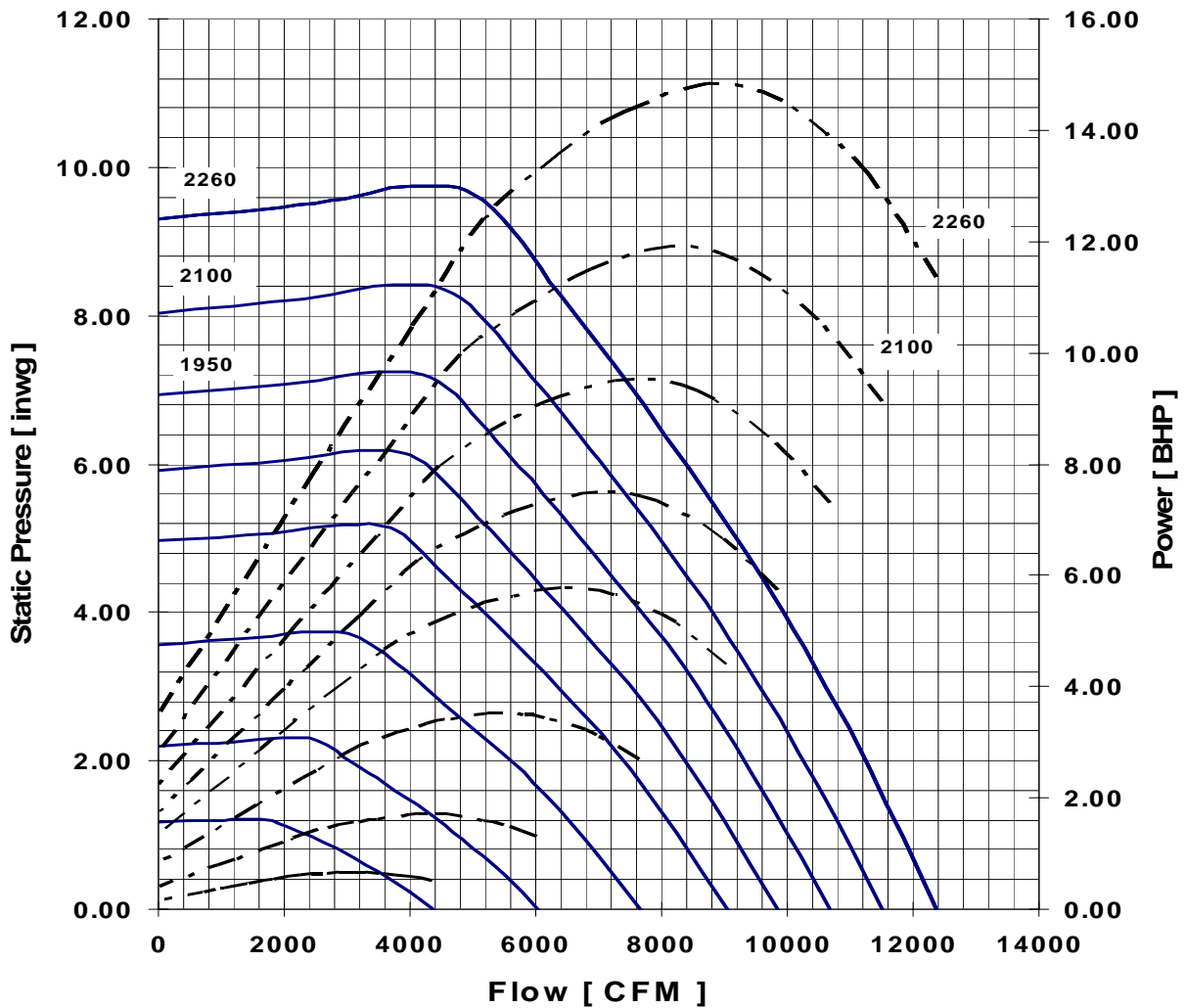
## PERFORMANCE

Max. speed [ rpm ] = 2260

Outlet area [sq. ft] = 3.274

Fan	Ov	STATIC PRESSURE, inches of water																			
		0.25		0.5		1		2		3		4		5		6		7			
Flow		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
4000	1222	803	0.59	873	0.81	997	1.27	1205	2.18	1376	3.10	1526	4.05	1661	5.04	1789	6.07	1926	7.19		
5000	1527	973	1.01	1030	1.28	1132	1.82	1326	2.98	1488	4.11	1629	5.25	1759	6.43	1879	7.61	1991	8.83		
6000	1833	1147	1.61	1192	1.92	1285	2.56	1457	3.93	1609	5.31	1745	6.66	1867	8.03	1982	9.40	2091	10.83		
7000	2138	1323	2.42	1365	2.80	1444	3.53	1594	5.09	1735	6.67	1867	8.30	1985	9.85	2097	11.49	2201	13.11		
8000	2443	1501	3.49	1537	3.90	1607	4.76	1744	6.48	1870	8.26	1994	10.13	2107	11.96	2214	13.74				
9000	2749	1679	4.84	1712	5.31	1776	6.28	1900	8.19	2014	10.17	2129	12.22	2238	14.32						
10000	3054	1859	6.53	1889	7.04	1945	8.06	2059	10.22	2167	12.38										
11000	3360	2039	8.57	2065	9.11	2120	10.29	2220	12.61												

Performance at standard conditions: 70°F, 0.075 lbm/ft3



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
800	0.25	64	71	68	67	60	54	51	47	67
	0.75	63	69	66	63	56	51	49	47	64
	1.10	60	66	63	59	53	49	46	43	60
1100	0.25	68	77	78	75	74	63	59	56	77
	1.50	68	74	75	71	66	59	57	54	72
	2.00	67	71	73	68	63	58	55	52	70
1400	0.25	75	81	86	82	81	72	66	62	85
	2.50	75	78	83	78	73	66	62	60	79
	3.50	74	76	81	75	70	65	61	58	77
1650	0.25	80	84	90	87	85	78	70	67	89
	3.50	80	82	87	83	78	71	67	64	84
	4.75	79	80	85	80	75	69	65	62	82
1800	0.25	83	86	92	89	87	82	73	69	91
	4.25	82	83	88	86	80	74	69	66	86
	5.75	81	82	86	83	77	72	68	65	84
1950	0.25	86	88	93	91	89	85	75	71	93
	5.00	85	85	89	88	83	76	71	68	88
	6.75	83	84	88	86	80	74	70	67	86
2100	0.25	88	89	94	93	90	88	77	73	95
	5.75	87	87	91	90	85	79	73	70	90
	7.75	85	85	89	88	82	77	72	69	88
2260	0.25	91	90	95	96	92	91	79	75	97
	6.50	90	89	92	93	87	82	75	72	93
	9.00	87	87	90	90	84	79	73	70	90

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

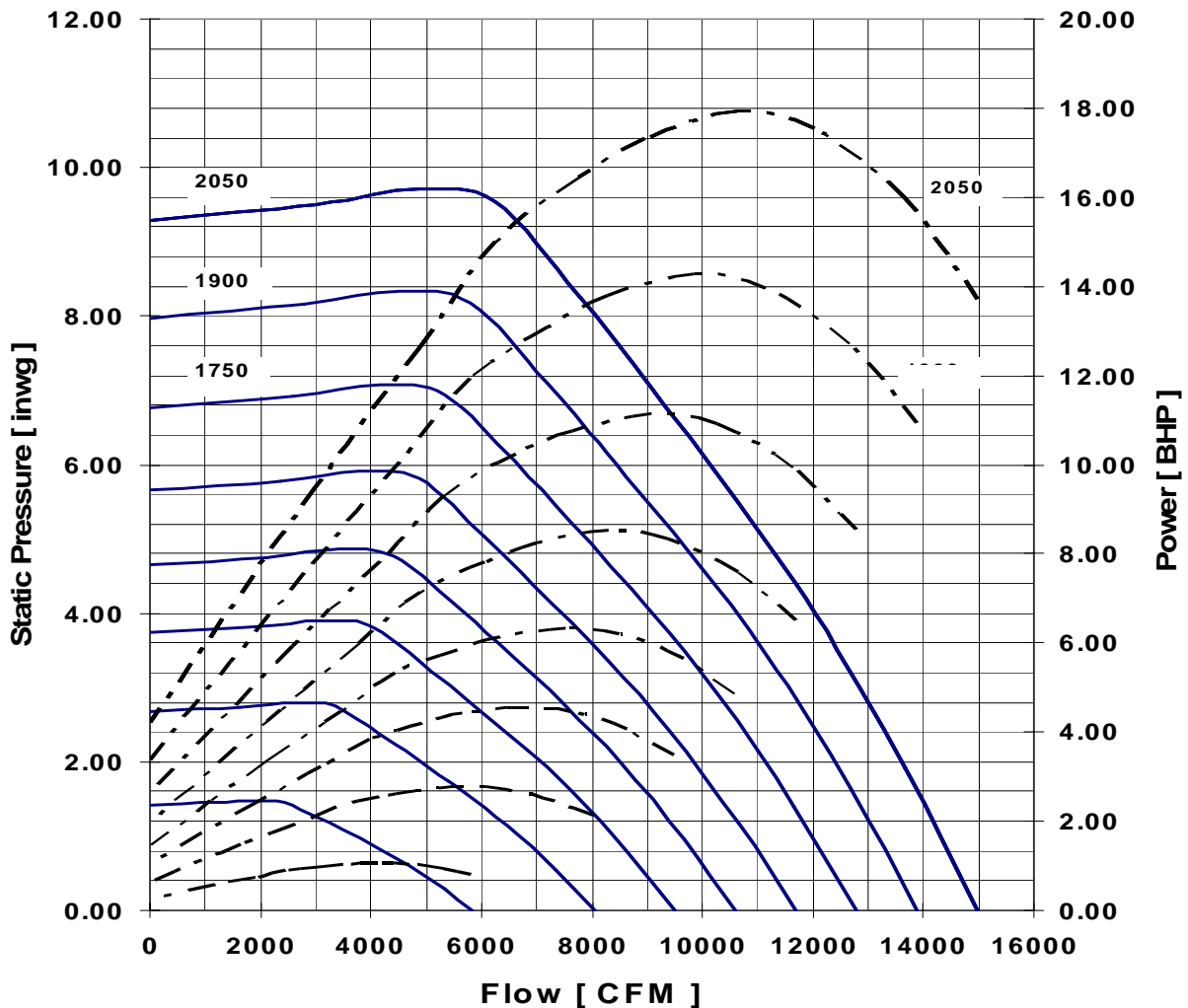
## PERFORMANCE

Max. speed [ rpm ] = 2060

Outlet area [sq. ft] = 4.43

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
Flow		CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1129	749	0.78	809	1.04	920	1.61	1109	2.76	1261	3.89	1397	5.08	1520	6.31	1629	7.55	1753	8.95
6000	1354	877	1.20	927	1.51	1023	2.18	1197	3.54	1347	4.93	1476	6.30	1593	7.70	1703	9.14	1803	10.58
7000	1580	1005	1.76	1048	2.13	1138	2.90	1294	4.47	1435	6.07	1561	7.68	1673	9.26	1779	10.90	1876	12.53
8000	1806	1137	2.50	1177	2.93	1253	3.77	1397	5.57	1529	7.42	1651	9.23	1761	11.05	1861	12.88	1957	14.70
9000	2032	1269	3.43	1305	3.91	1373	4.86	1505	6.85	1629	8.89	1741	10.96	1851	13.01	1949	15.03	2043	17.16
10000	2257	1403	4.60	1435	5.11	1498	6.21	1620	8.36	1732	10.60	1841	12.87	1941	15.18	2038	17.40		
11000	2483	1537	6.01	1565	6.54	1623	7.73	1735	10.07	1841	12.55	1941	14.97	2041	17.56				
12000	2709	1671	7.67	1699	8.30	1751	9.54	1856	12.14	1955	14.75	2047	17.45						

Performance at standard conditions: 70°F 3



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
800	0.25	68	74	72	71	64	57	54	50	71
	1.00	65	71	69	65	58	54	51	49	66
	1.30	64	69	66	62	56	52	49	46	64
1100	0.25	72	80	81	78	77	66	62	59	81
	1.85	72	77	78	74	69	62	59	57	75
	2.50	71	75	76	71	66	61	58	55	73
1300	0.25	76	83	86	83	83	72	67	63	86
	2.50	76	81	84	80	74	67	64	61	81
	3.50	75	78	81	76	71	65	62	59	78
1450	0.25	80	85	90	86	85	76	70	66	89
	3.25	80	82	87	82	77	70	66	64	84
	4.50	79	81	85	79	74	68	65	62	81
1600	0.25	83	87	93	89	87	80	73	69	91
	4.00	83	84	89	85	80	73	69	66	86
	5.50	82	83	87	82	77	71	67	64	84
1750	0.25	86	89	94	91	89	84	75	71	93
	4.75	86	86	91	88	83	76	71	68	89
	6.50	84	85	89	85	79	74	70	67	86
1900	0.25	89	90	96	94	91	87	77	73	96
	5.75	88	88	92	90	85	79	73	70	91
	7.75	86	86	90	88	82	76	72	69	88
2050	0.25	91	92	97	96	93	90	79	76	98
	6.50	90	90	94	93	87	81	75	73	93
	9.00	88	88	92	90	84	79	74	71	90

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.



# AXCL 2700

28.63" Impeller Diameter  
 Backward airfoil  
 Fiberglass Reinforced Plastic

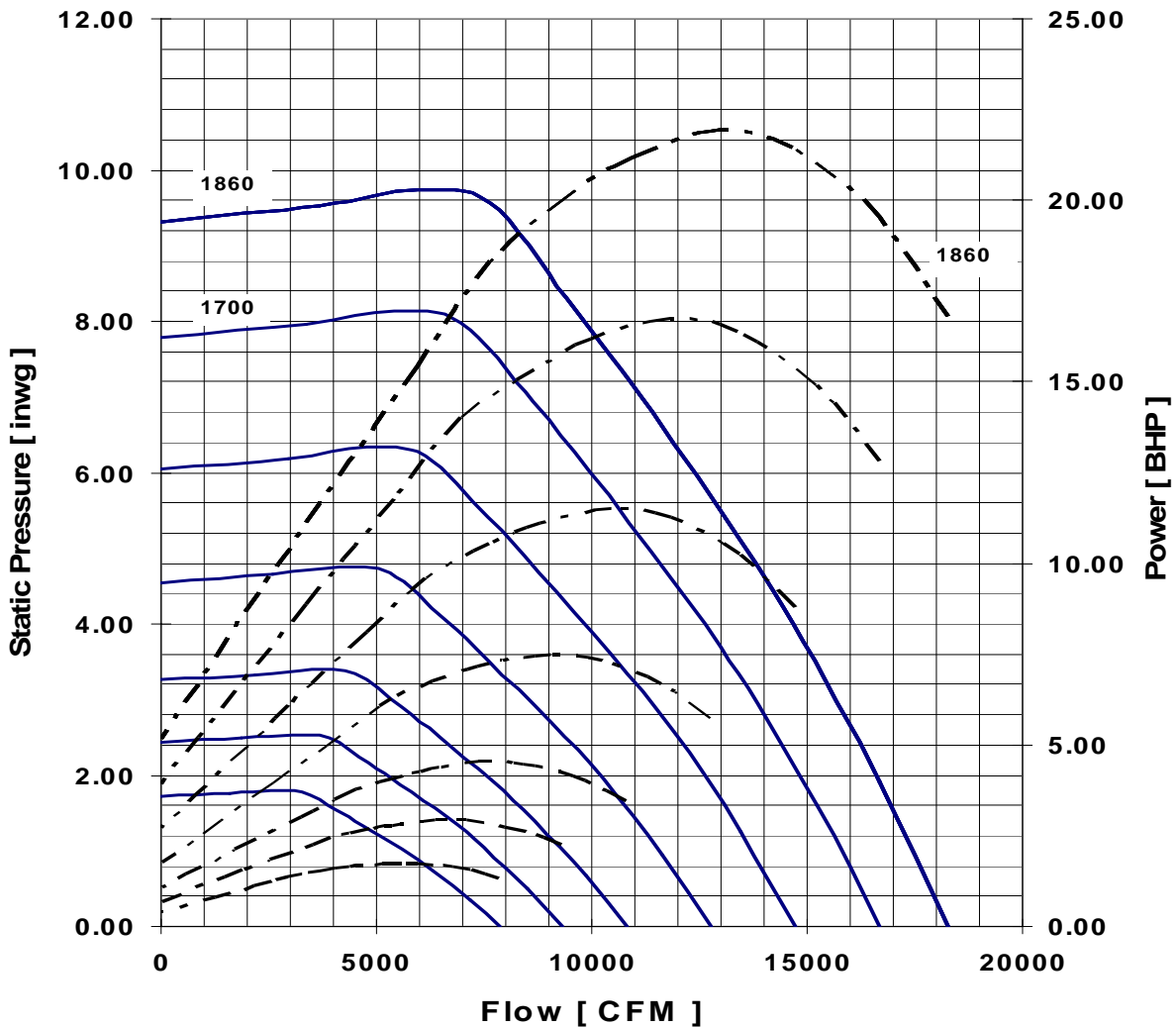
## PERFORMANCE

Max. speed [ rpm ] = 1865

Outlet area [sq. ft] = 5.074

Fan	Ov	STATIC PRESSURE, inches of water																			
		0.25		0.5		1		2		3		4		5		6		7			
Flow		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
7000	1380	765	1.32	812	1.68	903	2.46	1064	4.05	1199	5.66	1317	7.25	1426	8.92	1526	10.62	1617	12.33		
8000	1577	861	1.83	903	2.26	985	3.12	1135	4.97	1264	6.74	1379	8.60	1485	10.45	1579	12.29	1670	14.18		
9000	1774	957	2.47	995	2.95	1070	3.91	1209	5.95	1332	7.99	1444	10.02	1547	12.15	1641	14.19	1729	16.29		
10000	1971	1055	3.26	1091	3.81	1160	4.89	1285	7.09	1405	9.41	1511	11.62	1611	13.90	1703	16.25	1788	18.48		
11000	2168	1155	4.25	1187	4.82	1248	5.98	1367	8.40	1479	10.89	1582	13.47	1679	15.91	1767	18.36	1853	20.98		
12000	2365	1253	5.37	1283	6.00	1339	7.28	1450	9.83	1553	12.53	1655	15.33	1747	18.10	1835	20.76				
13000	2562	1353	6.73	1381	7.41	1433	8.77	1538	11.56	1632	14.40	1729	17.37	1820	20.44						
14000	2759	1453	8.29	1479	9.01	1527	10.44	1626	13.47	1717	16.50	1807	19.72								

Performance at standard conditions: 70°F, 0.075 lbfm/ft3



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
800	0.25	72	78	75	74	67	60	57	53	74
	1.25	69	74	72	67	61	56	54	51	69
	1.65	67	73	69	65	59	55	52	49	67
950	0.25	74	81	80	78	74	65	61	58	79
	1.75	73	77	77	73	66	61	58	56	74
	2.25	71	76	75	70	64	60	57	54	72
1100	0.25	76	84	84	82	80	69	65	62	84
	2.25	76	80	82	77	72	65	62	60	78
	3.10	74	78	79	74	69	64	61	58	76
1300	0.25	80	87	90	86	86	75	70	66	89
	3.25	80	83	87	82	77	69	66	64	83
	4.25	79	82	85	79	74	68	65	62	81
1500	0.25	85	89	95	90	89	81	74	70	93
	4.50	85	86	91	86	80	74	70	67	87
	6.00	83	85	90	83	78	72	69	66	85
1700	0.25	89	92	97	94	92	86	77	73	96
	5.50	89	89	94	90	85	78	73	71	91
	7.50	87	88	92	87	82	76	72	69	89
1860	0.25	92	94	99	96	94	89	80	76	98
	6.50	92	91	95	93	87	81	76	73	93
	9.00	90	90	93	90	84	79	74	71	91

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

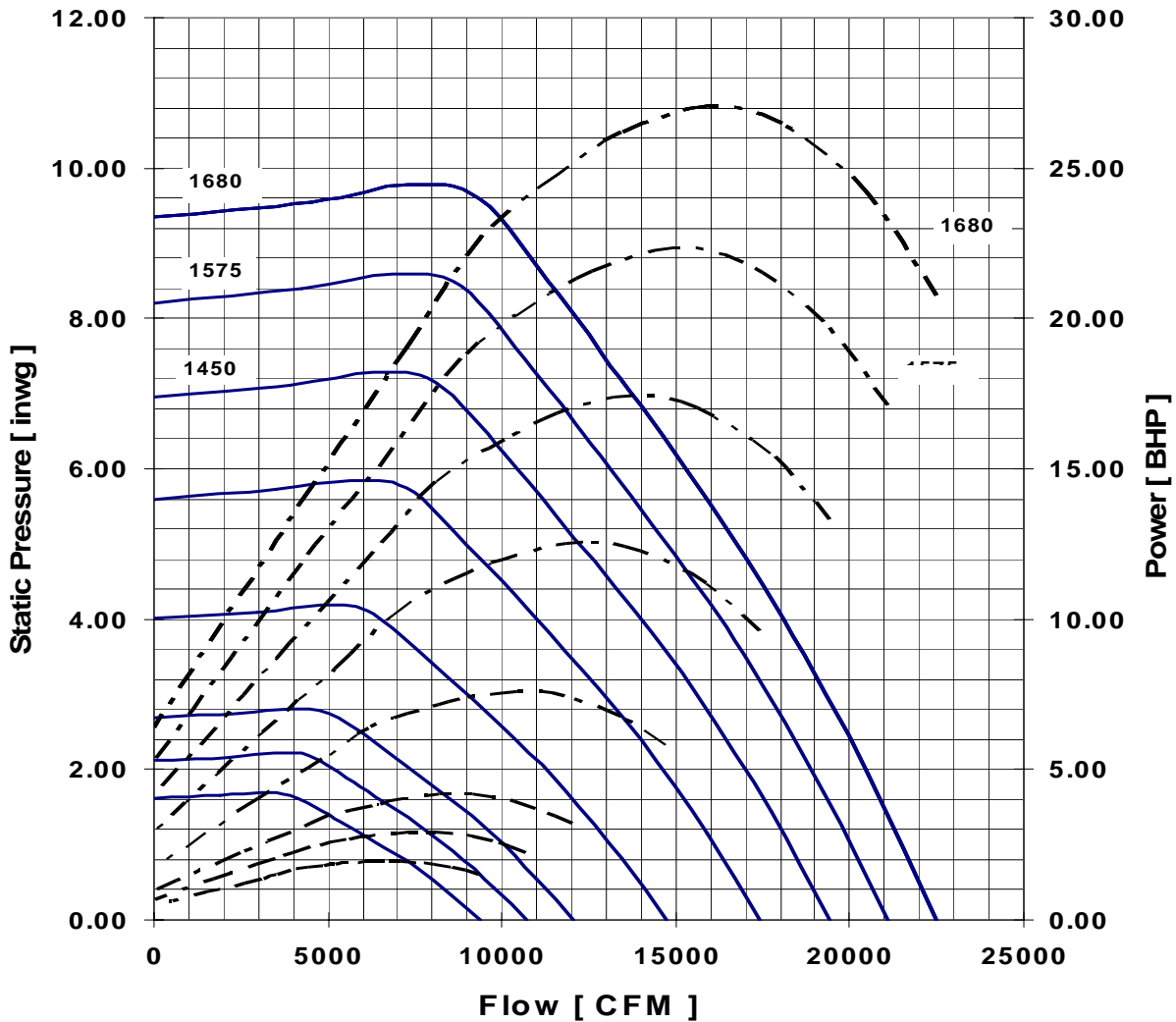
## PERFORMANCE

Max. speed [ rpm ] = 1680

Outlet area [sq. ft] = 5.94

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	1515	717	1.80	759	2.28	835	3.25	979	5.32	1101	7.39	1207	9.46	1301	11.54	1391	13.69	1473	15.86
10000	1684	787	2.34	824	2.86	897	3.94	1032	6.26	1149	8.51	1253	10.85	1347	13.13	1432	15.43	1514	17.81
11000	1852	859	3.00	893	3.58	961	4.75	1085	7.21	1197	9.73	1301	12.28	1391	14.79	1476	17.29	1555	19.85
12000	2020	931	3.78	962	4.40	1026	5.69	1141	8.34	1251	11.16	1349	13.83	1438	16.54	1523	19.39	1601	22.11
13000	2189	1003	4.68	1033	5.37	1092	6.77	1200	9.62	1305	12.59	1400	15.59	1488	18.49	1570	21.49	1645	24.46
14000	2357	1075	5.72	1103	6.45	1157	7.95	1261	10.98	1359	14.14	1451	17.40	1538	20.59	1617	23.69		
15000	2525	1147	6.90	1175	7.72	1224	9.30	1323	12.49	1414	15.84	1505	19.31	1588	22.84	1667	26.15		
16000	2694	1221	8.29	1245	9.09	1292	10.77	1388	14.25	1473	17.76	1561	21.44	1641	25.12				

Performance at standard conditions: 70°F, 0.075 lbm/ft3





## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
700	0.25	73	78	75	74	65	60	56	53	74
	1.25	69	74	71	66	59	56	53	50	68
	1.50	68	73	69	64	59	55	52	49	66
800	0.25	76	82	79	78	70	63	60	56	78
	1.50	73	78	75	71	64	60	57	55	72
	2.00	71	76	73	68	62	59	56	53	70
900	0.25	78	84	82	80	75	67	63	59	81
	1.85	76	81	79	75	68	63	60	58	76
	2.50	74	78	77	72	66	62	59	56	73
1100	0.25	81	87	88	85	84	72	68	65	87
	2.75	80	84	85	81	75	68	66	63	82
	3.75	78	82	83	77	72	67	64	61	79
1300	0.25	85	90	93	89	89	78	73	69	92
	3.75	85	88	91	86	80	73	70	68	87
	5.25	83	85	88	83	77	71	68	65	84
1450	0.25	88	93	97	92	91	82	76	72	95
	4.75	88	90	94	89	83	76	73	70	90
	6.75	86	88	92	86	80	75	71	68	87
1575	0.25	91	94	99	95	93	86	78	74	97
	5.75	91	91	96	91	86	79	74	72	92
	8.00	89	90	94	88	82	77	73	70	90
1680	0.25	93	95	100	96	95	88	80	76	99
	6.75	93	93	97	93	87	81	76	73	94
	9.00	91	91	95	90	84	79	75	72	91

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

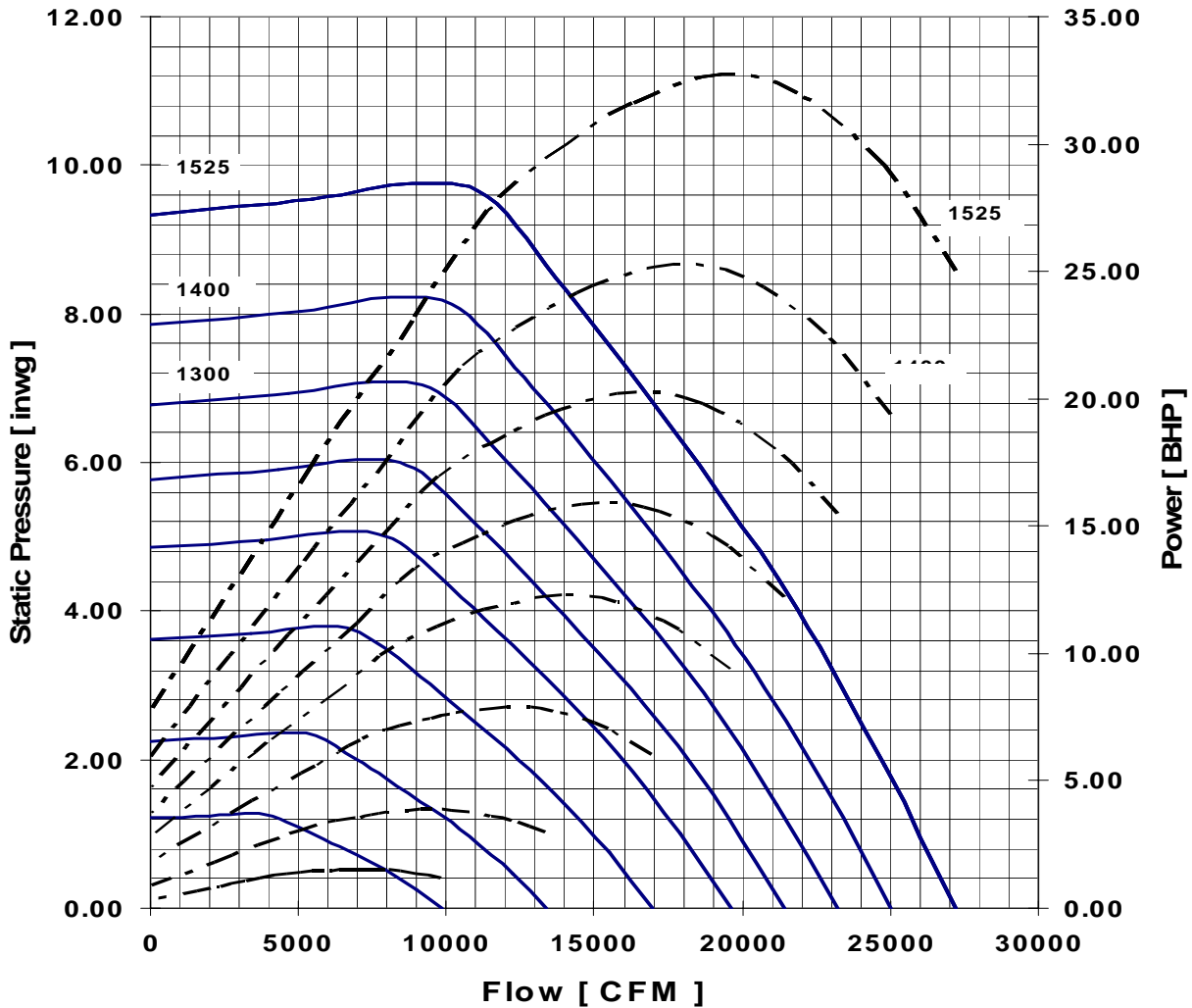
## PERFORMANCE

Max. speed [ rpm ] = 1525

Outlet area [sq. ft] = 7.366

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	1493	657	2.23	695	2.82	764	4.01	894	6.54	1003	9.03	1099	11.55	1185	14.10	1267	16.74	1343	19.44
12000	1629	709	2.76	745	3.43	811	4.71	932	7.44	1041	10.20	1135	12.98	1220	15.70	1297	18.46	1373	21.37
13000	1765	763	3.40	795	4.10	857	5.46	973	8.41	1076	11.37	1170	14.37	1253	17.35	1332	20.38	1403	23.38
14000	1901	817	4.14	847	4.88	907	6.39	1014	9.46	1114	12.72	1207	15.91	1288	19.09	1364	22.29	1435	25.48
15000	2036	871	4.97	899	5.75	954	7.33	1057	10.67	1155	14.14	1244	17.56	1323	20.86	1399	24.41	1470	27.84
17000	2308	979	6.96	1005	7.87	1054	9.69	1147	13.31	1238	17.24	1320	21.13	1399	25.01	1473	28.89		
19000	2579	1089	9.51	1113	10.53	1157	12.57	1244	16.62	1323	20.87	1403	25.16	1476	29.54				
21000	2851	1199	12.60	1219	13.63	1259	15.81	1341	20.43	1414	24.90	1485	29.60						

Performance at standard conditions: 70°F, 0.075 lbm/ft3



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
550	0.25	72	73	71	70	59	56	53	49	69
	0.85	69	71	68	63	56	53	51	48	64
	1.15	67	69	64	60	55	52	49	46	62
750	0.25	78	84	80	79	71	65	61	57	79
	1.50	76	82	77	73	66	61	59	57	74
	2.15	73	79	74	69	63	60	57	54	71
950	0.25	83	88	87	85	81	71	67	64	86
	2.50	80	85	84	79	73	67	65	62	81
	3.50	79	83	81	76	70	66	63	60	78
1100	0.25	85	91	91	88	87	75	71	68	90
	3.50	83	87	88	83	77	71	68	65	84
	4.75	82	86	86	80	75	70	67	64	82
1200	0.25	86	92	94	90	90	78	74	70	93
	4.00	85	89	91	86	81	73	71	68	87
	5.50	84	87	89	83	77	72	69	66	85
1300	0.25	89	94	96	92	92	81	76	72	95
	4.75	88	91	93	88	83	76	73	70	90
	6.50	86	89	91	85	80	74	71	68	87
1400	0.25	91	95	99	94	94	84	78	74	97
	5.50	91	92	96	91	85	78	74	72	92
	7.50	89	91	94	88	82	77	73	70	90
1525	0.25	94	97	102	97	96	87	80	77	100
	6.50	94	94	98	93	88	81	77	74	95
	9.00	91	92	97	90	84	79	75	72	92

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

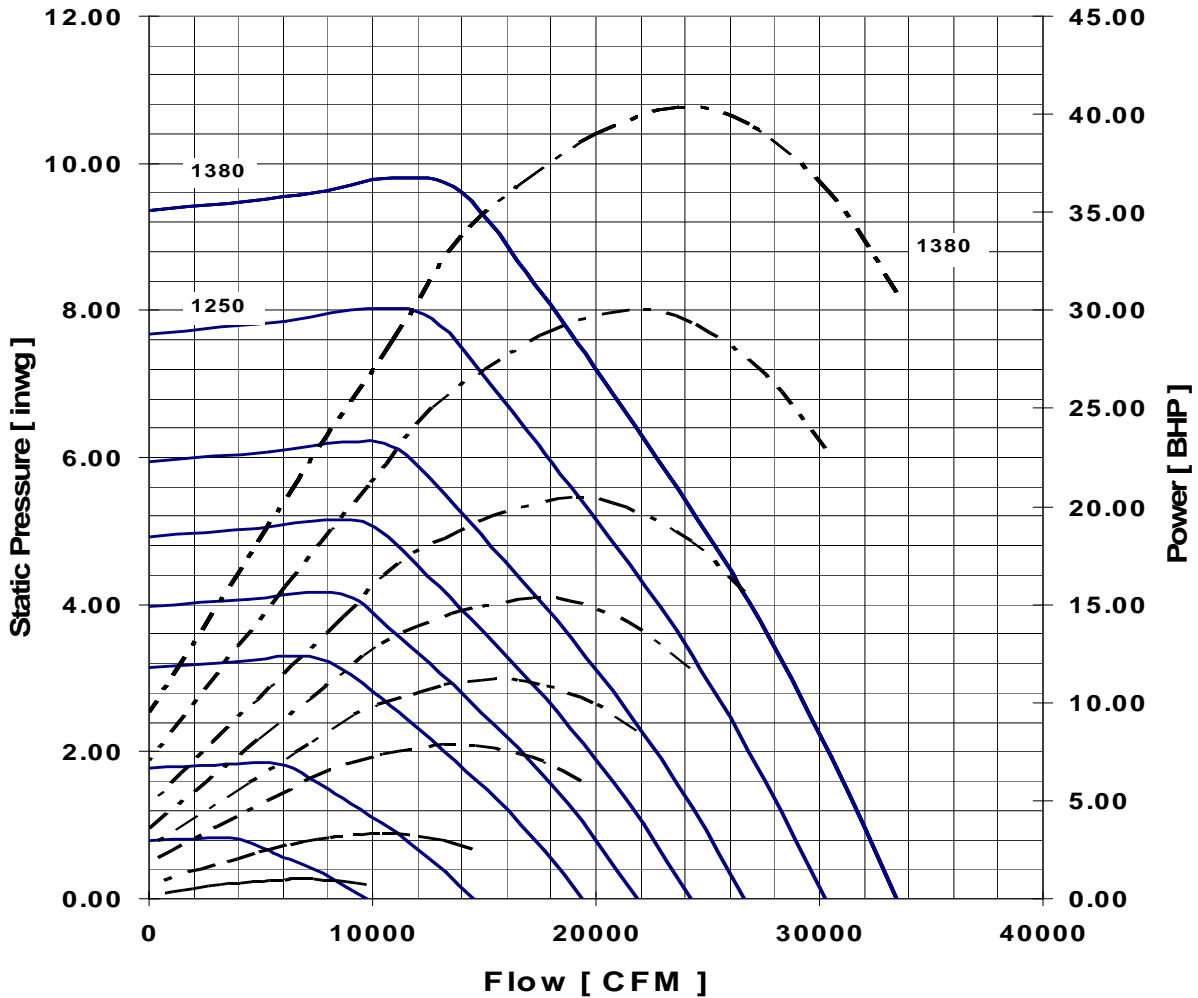
Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

## PERFORMANCE

Max. speed [ rpm ] = 1380

Outlet area [sq. ft] = 9.852

Fan	Ov	STATIC PRESSURE, inches of water																			
		0.25		0.5		1		2		3		4		5		6		7			
Flow		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
15000	1523	653	3.59	683	4.38	742	5.98	850	9.38	947	12.81	1032	16.31	1109	19.73	1179	23.19	1245	26.70		
16000	1624	691	4.20	721	5.10	777	6.78	882	10.43	973	14.00	1059	17.75	1132	21.32	1203	25.03	1267	28.71		
17000	1726	731	4.94	759	5.87	811	7.61	911	11.44	1003	15.43	1085	19.22	1159	23.14	1229	27.07	1293	30.95		
18000	1827	771	5.76	797	6.71	848	8.61	941	12.55	1032	16.82	1111	20.78	1185	24.89	1253	29.09	1317	33.16		
19000	1929	811	6.66	835	7.62	883	9.62	973	13.81	1061	18.20	1138	22.47	1211	26.74	1279	31.17	1343	35.62		
21000	2132	891	8.75	913	9.80	957	12.06	1041	16.54	1123	21.42	1197	26.22	1267	30.96	1332	35.61				
23000	2335	971	11.22	993	12.46	1033	14.92	1111	19.74	1185	24.99	1257	30.15	1323	35.45						
25000	2538	1051	14.13	1071	15.44	1109	18.12	1182	23.39	1253	29.06	1320	34.70								
Performance at standard conditions: 70°F, 0.075 lbm/ft3																					



## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
400	0.25	70	68	66	59	53	50	48	45	62
	0.55	67	65	61	55	51	48	46	44	59
	0.75	65	62	58	54	49	46	43	42	56
600	0.25	77	80	77	77	65	62	58	55	76
	1.25	74	77	73	68	61	58	56	53	70
	1.75	72	75	70	65	60	57	54	51	68
800	0.25	83	89	85	84	77	70	66	62	84
	2.25	80	85	82	77	70	66	63	61	79
	3.00	79	84	79	74	68	65	62	59	76
900	0.25	85	91	89	87	82	73	69	65	87
	2.75	83	88	86	81	74	69	66	64	82
	4.00	81	86	82	77	72	68	65	62	79
1000	0.25	87	93	92	89	86	76	72	68	90
	3.50	85	89	88	84	77	71	69	66	85
	5.00	83	88	86	80	75	70	67	64	82
1100	0.25	89	95	94	91	90	78	75	71	93
	4.25	87	91	91	86	80	74	71	69	88
	6.00	85	90	89	83	78	73	70	67	85
1250	0.25	91	97	98	94	94	82	78	74	97
	5.50	90	93	95	90	84	77	74	72	92
	7.50	89	92	93	87	82	76	73	70	89
1380	0.25	95	99	102	97	97	87	81	77	100
	6.75	94	95	98	93	87	80	77	74	94
	9.00	92	94	97	90	85	79	76	73	92

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.



# AXCL 4025

42.63" Impeller Diameter  
 Backward airfoil  
 Fiberglass Reinforced Plastic

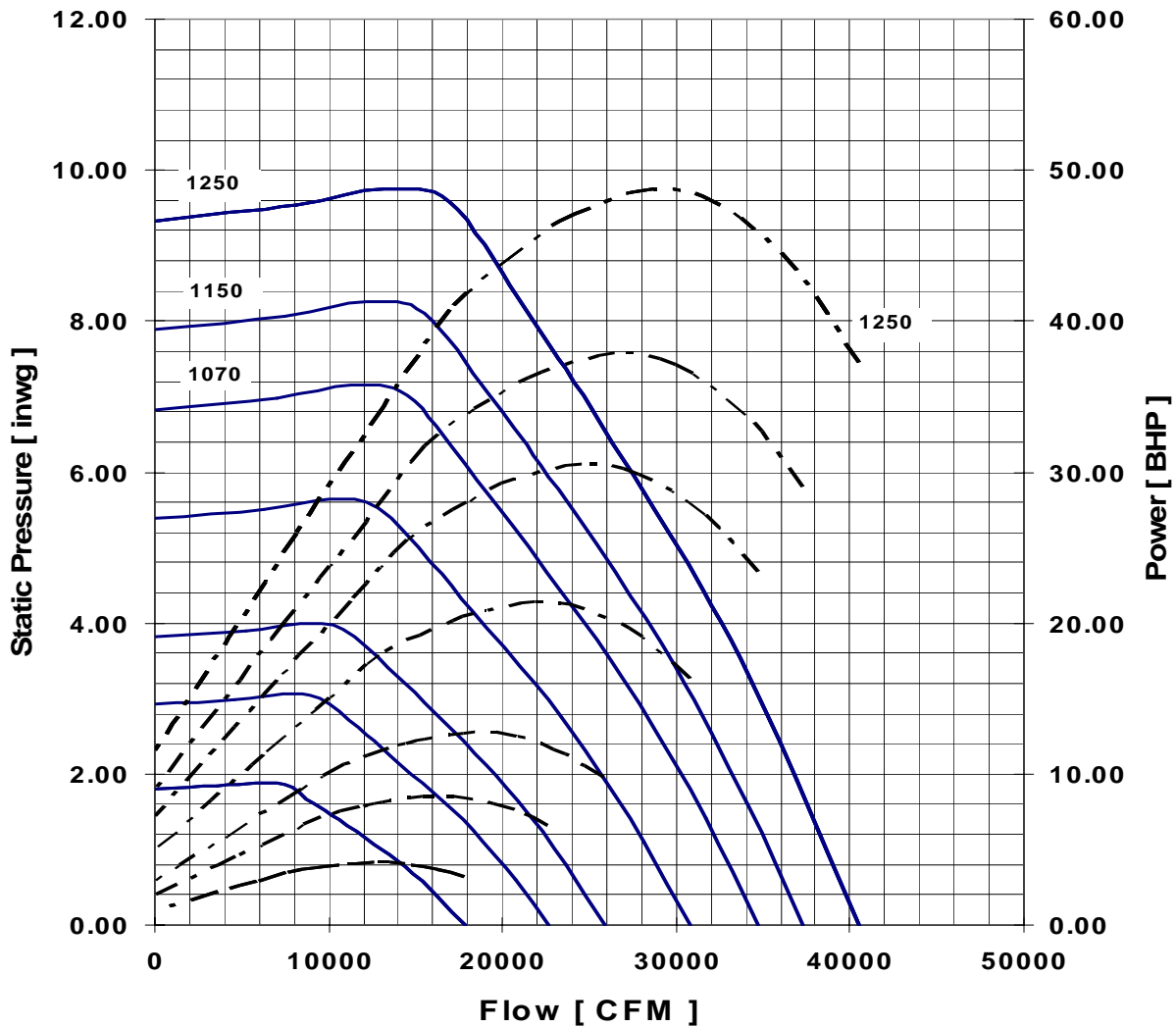
## PERFORMANCE

Max. speed [ rpm ] = 1250

Outlet area [sq. ft.] = 10.559

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	1610	557	3.66	587	4.57	642	6.38	747	10.36	835	14.15	914	18.11	982	21.89	1049	25.99	1111	30.11
19000	1799	615	4.83	641	5.83	695	7.92	791	12.23	876	16.54	951	20.82	1020	25.19	1085	29.64	1143	34.01
21000	1989	675	6.31	699	7.41	748	9.68	835	14.28	917	19.19	991	23.83	1059	28.71	1120	33.42	1179	38.27
23000	2178	733	7.97	757	9.25	801	11.68	882	16.72	961	21.95	1032	27.19	1099	32.42	1161	37.82	1217	43.01
25000	2368	793	10.01	815	11.37	855	14.00	932	19.35	1007	25.10	1076	30.97	1141	36.62	1201	42.27		
27000	2557	853	12.37	873	13.79	912	16.81	985	22.49	1053	28.53	1120	34.71	1182	41.07	1241	47.05		
29000	2746	915	15.23	933	16.69	968	19.75	1038	25.96	1103	32.51	1167	39.06	1226	45.67				
31000	2936	975	18.33	993	19.98	1024	23.01	1091	29.76	1153	36.57	1211	43.41						

Performance at standard conditions: 70°F, 0.075 lbm/ft3



## ACOUSTIC PERFORMANCE

Speed rpm	Sp inwg	Frequency[Hz]								LwA dB
		63	125	250	500	1000	2000	4000	8000	
550	0.25	79	80	78	77	66	62	59	55	76
	1.25	76	78	74	69	62	59	57	54	71
	1.75	74	75	71	66	61	58	55	52	68
700	0.25	84	89	85	84	74	69	65	61	84
	2.00	81	86	81	76	69	66	63	61	78
	2.75	79	83	78	73	67	64	61	58	76
800	0.25	86	92	88	87	80	73	69	65	87
	2.75	83	89	85	80	73	69	66	63	82
	3.75	82	87	82	77	71	67	64	61	79
950	0.25	90	95	93	91	87	77	73	70	92
	3.75	87	92	90	85	79	73	71	68	87
	5.00	86	90	88	82	77	72	69	66	84
1070	0.25	92	97	97	94	92	81	77	73	96
	4.75	90	94	94	89	83	76	74	71	90
	6.90	88	92	91	85	80	75	72	69	87
1150	0.25	93	99	99	95	95	83	79	75	98
	5.75	91	95	96	91	85	78	75	73	92
	8.00	90	94	93	87	82	77	74	71	89
1250	0.25	95	100	102	97	97	85	81	77	100
	6.75	94	96	98	93	87	80	77	75	94
	9.00	92	95	96	90	85	79	76	73	92

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

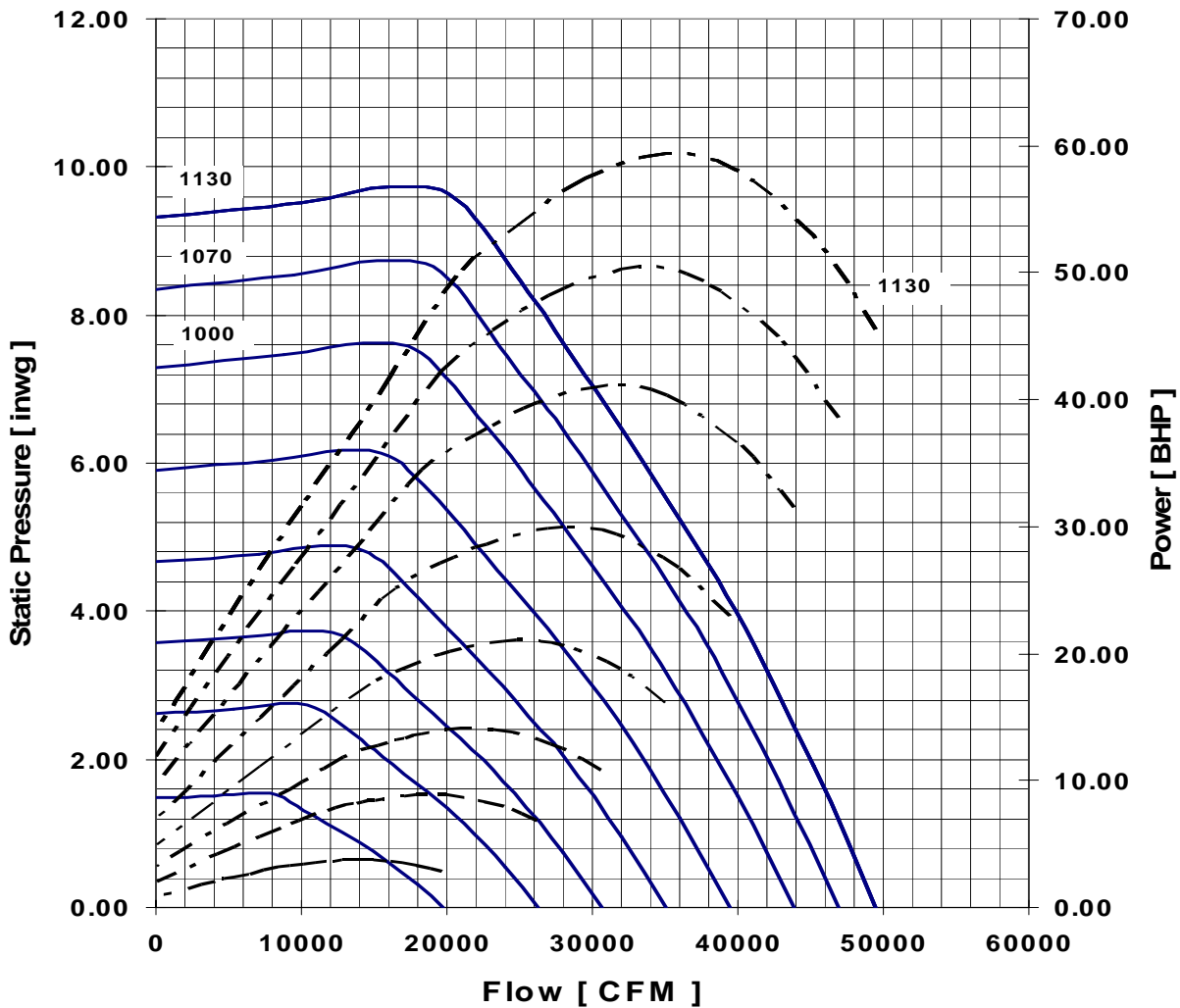
## PERFORMANCE

Max. speed [ rpm ] = 1130

Outlet area [sq. ft] = 13.095

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19000	1451	465	3.57	495	4.59	548	6.64	647	11.01	729	15.39	801	19.72	867	24.25	926	28.71	982	33.40
21000	1604	509	4.61	535	5.70	586	8.01	679	12.86	759	17.57	829	22.39	893	27.24	951	32.11	1007	37.17
23000	1756	551	5.74	573	6.96	624	9.48	711	14.68	788	19.87	857	25.14	920	30.45	976	35.59	1032	41.20
25000	1909	595	7.15	617	8.44	662	11.12	744	16.72	820	22.59	888	28.23	949	34.02	1005	39.62	1059	45.49
27000	2062	639	8.77	661	10.25	703	13.15	779	19.08	850	25.17	917	31.36	976	37.35	1032	43.69	1085	49.86
30000	2291	705	11.64	725	13.25	762	16.42	832	22.82	900	29.63	964	36.83	1023	43.51	1076	50.12	1129	57.37
33000	2520	773	15.25	791	16.99	824	20.45	891	27.50	953	34.94	1014	42.55	1070	50.31	1123	57.58		
36000	2749	839	19.33	855	21.13	887	25.01	951	32.91	1007	40.69	1064	48.83	1117	56.97				

Performance at standard conditions: 70°F, 0.075 lbr





## ACOUSTIC PERFORMANCE

Speed	Sp	Frequency[Hz]								LwA
rpm	inwg	63	125	250	500	1000	2000	4000	8000	dB
550	0.25	79	80	78	77	66	62	59	55	76
	1.25	76	78	74	69	62	59	57	54	71
	1.75	74	75	71	66	61	58	55	52	68
700	0.25	84	89	85	84	74	69	65	61	84
	2.00	81	86	81	76	69	66	63	61	78
	2.75	79	83	78	73	67	64	61	58	76
800	0.25	86	92	88	87	80	73	69	65	87
	2.75	83	89	85	80	73	69	66	63	82
	3.75	82	87	82	77	71	67	64	61	79
950	0.25	90	95	93	91	87	77	73	70	92
	3.75	87	92	90	85	79	73	71	68	87
	5.00	86	90	88	82	77	72	69	66	84
1070	0.25	92	97	97	94	92	81	77	73	96
	4.75	90	94	94	89	83	76	74	71	90
	6.90	88	92	91	85	80	75	72	69	87
1150	0.25	93	99	99	95	95	83	79	75	98
	5.75	91	95	96	91	85	78	75	73	92
	8.00	90	94	93	87	82	77	74	71	89
1250	0.25	95	100	102	97	97	85	81	77	100
	6.75	94	96	98	93	87	80	77	75	94
	9.00	92	95	96	90	85	79	76	73	92

The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

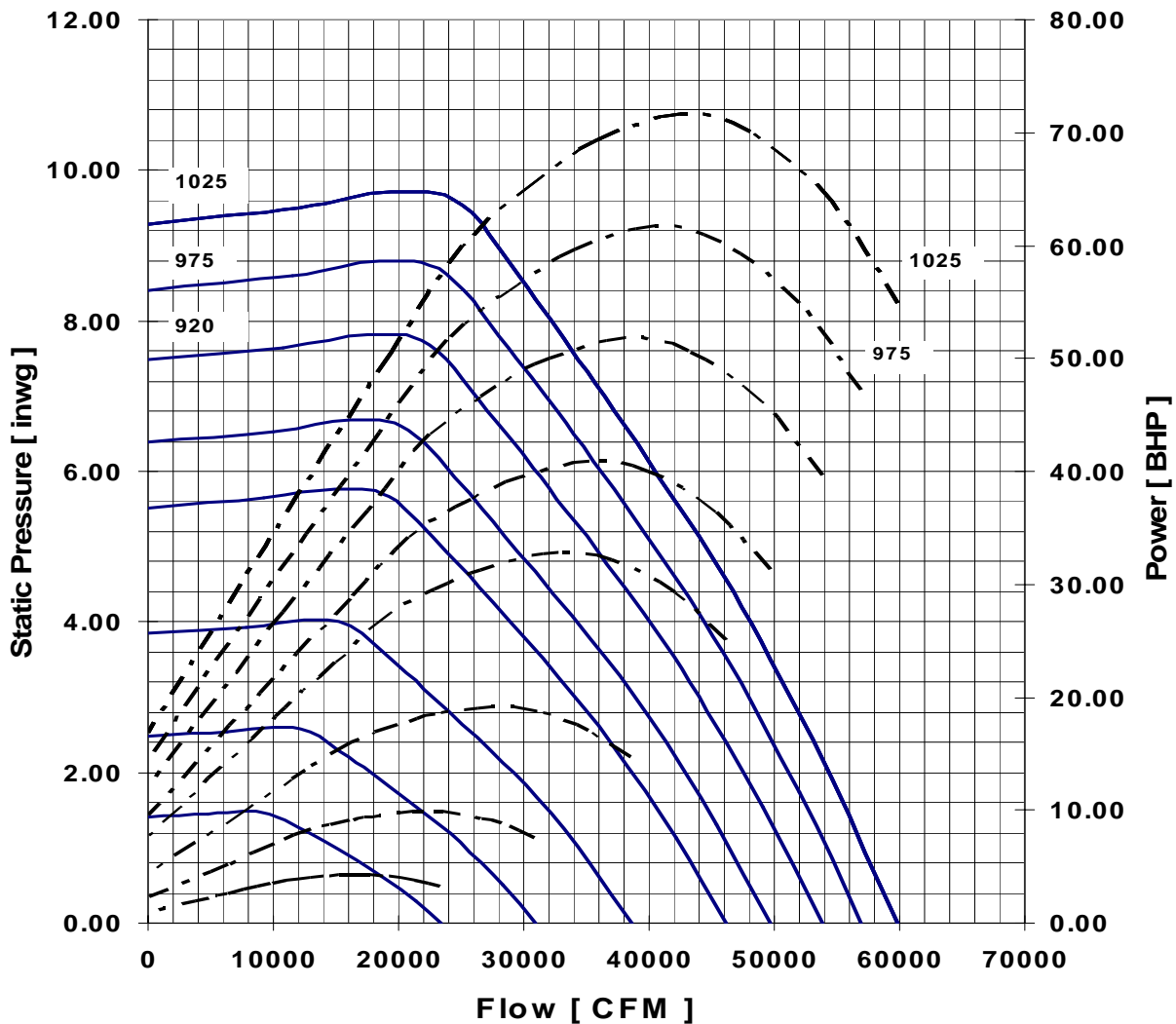
## PERFORMANCE

Max. speed [ rpm ] = 1030

Outlet area [sq. ft] = 16.449

Fan	Ov	STATIC PRESSURE, inches of water																	
		0.25		0.5		1		2		3		4		5		6		7	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
21000	1273	391	3.50	418	4.53	473	6.95	564	11.67	641	16.54	707	21.40	767	26.37	823	31.63	879	37.29
23000	1394	423	4.35	449	5.54	498	8.06	588	13.35	661	18.54	726	23.74	788	29.40	843	34.96	893	40.56
25000	1515	455	5.33	479	6.63	524	9.26	611	15.12	685	20.83	749	26.57	807	32.35	861	38.27	911	44.23
27000	1636	487	6.45	509	7.85	555	10.86	635	16.95	707	23.10	770	29.36	826	35.36	879	41.68	929	48.09
29000	1758	519	7.70	541	9.31	583	12.39	661	19.02	729	25.54	791	32.10	847	38.78	901	45.64	949	52.36
32000	1940	569	10.04	589	11.77	627	15.12	697	22.12	764	29.59	826	36.95	879	43.99	932	51.72	979	58.87
36000	2182	635	13.77	653	15.68	687	19.48	751	27.19	814	35.47	870	43.77	926	52.10	973	59.85	1020	68.33
40000	2424	701	18.32	719	20.63	749	24.84	811	33.56	864	42.07	920	51.35	970	60.62	1020	69.75		

Performance at standard conditions: 70°F, 0.075 lbm/ft3



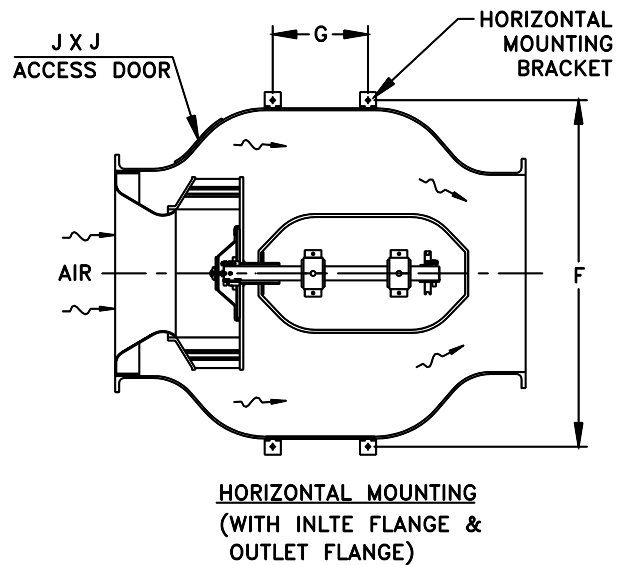
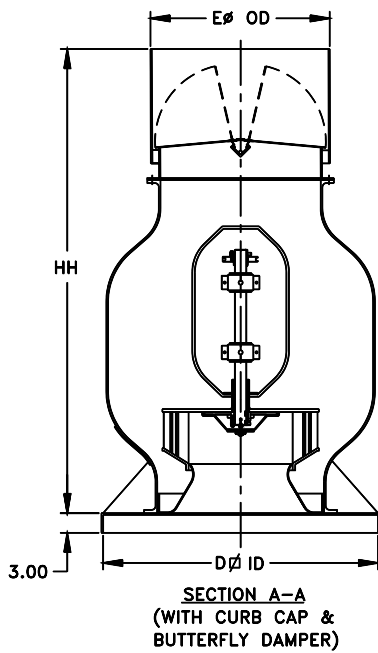
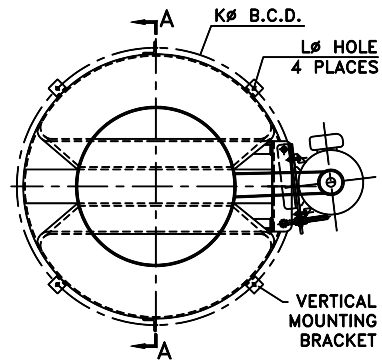
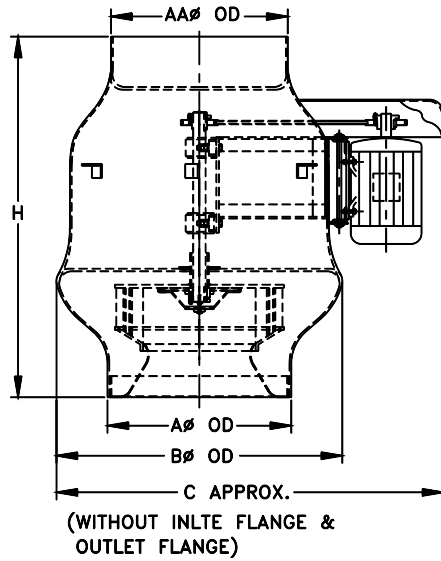
## ACOUSTIC PERFORMANCE

Speed rpm	Sp inwg	Frequency[Hz]								LwA dB
		63	125	250	500	1000	2000	4000	8000	
400	0.25	80	78	77	70	63	60	56	53	72
	1.00	77	75	70	64	60	57	55	53	68
	1.35	75	72	67	62	58	55	52	51	65
530	0.25	85	86	84	82	71	67	64	60	81
	1.75	82	83	79	73	67	64	62	59	76
	2.40	80	81	76	71	66	63	60	57	73
660	0.25	89	93	89	89	78	73	70	66	88
	2.75	86	90	85	80	73	70	67	65	82
	3.75	85	88	82	77	72	68	65	62	80
790	0.25	93	99	94	93	86	78	74	71	93
	4.00	90	95	91	85	79	74	72	69	87
	5.40	88	93	88	82	77	73	70	67	85
850	0.25	94	100	96	95	89	80	76	73	95
	4.75	91	96	93	87	81	76	73	71	89
	6.25	90	95	90	85	79	75	72	69	87
920	0.25	96	101	99	96	92	83	79	75	97
	5.50	93	97	95	90	83	78	75	73	91
	7.25	92	96	93	87	81	77	74	71	89
975	0.25	97	102	100	98	94	84	80	76	99
	6.00	95	99	97	92	85	80	77	75	93
	8.25	93	97	94	89	83	79	76	73	91
1025	0.25	98	103	102	99	96	85	82	78	100
	6.75	96	99	98	93	87	81	78	76	95
	11.25	94	98	96	90	85	80	77	74	92

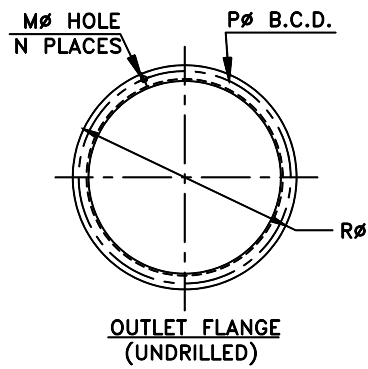
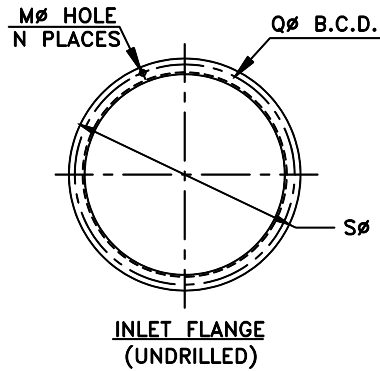
The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts calculated per AMCA Standard 301.

Values shown are for (inlet Lwi) sound power levels for installation type B: Free inlet, Ducted outlet.

## DIMENSIONS



## DIMENSIONS



DIM	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL	AXCL
[in]	1225	1500	1825	2225	2450	2700	3000	3300	3650	4025	4450	4900
A	14.88	17.13	21.13	25.88	28.88	30.88	33.50	38.50	43.00	44.50	49.75	55.75
AA	14.88	17.13	21.13	24.88	28.88	30.88	33.50	37.25	43.00	44.50	49.75	55.75
B	21.00	25.00	33.00	41.00	44.25	46.00	49.50	54.50	60.50	66.00	73.00	80.00
C	33.00	38.00	48.00	55.00	60.00	62.00	66.00	72.00	79.00	84.00	94.00	100.00
D	22.00	27.00	35.00	43.00	46.00	48.00	50.00	55.00	61.00	67.00	74.00	81.00
E	17.25	19.25	23.38	27.38	31.50	33.50	37.50	40.50	46.63	47.63	52.63	58.63
F	23.63	27.63	35.63	43.63	48.25	50.00	53.50	58.50	64.50	71.25	78.25	85.25
G	9.00	8.75	8.88	11.81	8.75	12.13	19.00	23.69	26.13	24.44	28.56	32.56
H	31.31	35.50	43.00	51.00	58.00	63.00	69.00	74.00	80.63	86.00	94.00	103.00
HH	45.31	51.50	61.00	71.00	80.00	89.00	97.00	105.00	114.63	122.00	134.00	147.00
J	3.00	4.00	4.00	4.00	6.00	6.00	6.00	6.00	8.00	8.00	10.00	10.00
K	23.63	27.63	35.63	43.63	48.25	50.00	53.50	58.50	64.50	71.25	78.25	85.25
L	0.44	0.44	0.44	0.44	0.56	0.56	0.56	0.56	0.56	0.69	0.69	0.69
M	0.38	0.38	0.38	0.38	0.44	0.44	0.44	0.44	0.44	0.56	0.56	0.56
N	8	12	12	14	16	16	16	18	20	24	24	24
P	16.25	18.75	23.25	27.00	31.00	33.00	36.25	40.25	46.00	47.50	52.25	59.00
Q	16.25	18.75	23.25	28.00	31.00	33.00	36.25	41.50	46.00	47.50	52.25	59.00
R	17.50	20.00	24.75	28.50	32.50	34.50	38.00	41.75	47.50	49.25	54.25	61.00
S	17.50	20.00	24.75	29.50	32.50	34.50	38.00	43.00	47.50	49.25	54.25	61.00

Note: AXCL 1225 uses Flange Bearing.

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## ACCESSORIES

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**CURB CAP-** For vertical outdoor installation on roof curbs.

**SPECIAL FRP FORMULATIONS-** A graphite liner may be laminated to the inside of the casing to remove any buildup of static electricity when handling potentially explosive gases. A flame retardant construction, class 1, of 25 or less is available.

**SHAFT SEAL-** A Teflon shaft (hub) seal is available for more severe environments. A Vacuum Seal is also available to eliminate any shaft seal leakage when exhausting toxic or hazardous fumes.

**DISCONNECT SWITCH-** A special PVC NEMA 3R disconnect switch is available to protect the switch from corrosion.

### HOUSING DRAIN

**DAMPERS-** Discharge, outlet or inlet PVC or FRP dampers are available.

**MOUNTING BRACKETS-** Suspension or floor mounting brackets for horizontal or vertical installation.

**VIBRATION ISOLATION-** Rubber vibration pads or spring isolators for easy installation on mounting brackets allows.

**FLEXIBLE CONNECTORS-** To isolate fan equipment from conduits and ducting.

**SPECIAL ALLOYS-** Are available for shafts and hardware for increased corrosion resistance.

**FLANGE AND SLEEVE-** A PVC or FRP mating flange with a 2" sleeve is available for use with a flexible connection.

**MOTORS-** UL and CSA, open drip proof, TENV, TEFC, Mill and Chem Duty, Washdown or Explosion proof motors are available, all complying with EPAC standards. Premium High efficiency motors are available as required.

## SPECIFICATION

### PART I GENERAL

#### 1.01 WORK INCLUDED

FRP Bifurcated Inline Centrifugal Blower

#### 1.02 RELATED WORK

All sections, drawing plans, and contract documents.

#### 1.03 REFERENCES

- A. AMCA -99 Standards Handbook
- B. AMCA 210 - Laboratory Methods of Testing Fans for Rating Purposes.
- C. AMCA 211 - Certified Ratings Procedure - Air Performance.
- D. AMCA 300 - Test Code for Sound Rating Air Moving Devices.
- E. AMCA 311 - Certified Sound Ratings Program for Air Moving Devices.
- F. AFMBA - Method of Evaluating Load Ratings of Bearings (ASA - B3.1 1).
- G. AMCA 204 - Balance Quality and Vibration Levels for Fans.

#### 1.04 QUALITY ASSURANCE

- A. Performance ratings: Conform to AMCA standard 211 and 311. Fan must be licensed and bear the AMCA seal for Certified Sound and Air Performance. Acceptable manufacturers whose equipment is not licensed to bear the AMCA seal for Certified Sound and Air Performance must submit air and sound performance tests conducted by an independent third party, and stamped by a registered professional engineer.
- B. Classification for Spark Resistant Construction; Conform to AMCA 99
- C. Each fan shall be tested before shipping. Motors to be tested for amperage drawn.
- D. A certificate to be supplied with each fan as to quality control before shipping and compliance to specifications.

#### 1.05 SUBMITTALS

- A. M. K. Plastics to submit product data on each AXCL fan.
- B. Provide fan curves for each fan at the specified operating point, with the flow, static pressure and horsepower clearly plotted.

### PART 2 EQUIPMENT

#### 2.01 GENERAL

- A. Base fan performance at standard conditions (density 0.075 Lb/ft<sup>3</sup>)
- B. Fans selected shall be capable of accommodating static pressure and airflow of scheduled values.
- C. Each fan shall be belt or direct drive according to the specifications.

#### 2.02 FAN HOUSING

- A. Fan housing to be aerodynamically bifurcated designed with high efficiency inlet, engineered to reduce incoming air turbulence. Casings to be smooth exterior and resin rich interior.
- B. Fan housing shall be manufactured in specifically formulated resins, for maximum corrosion resistance, UV inhibited and reinforced with fiberglass for structural strength. Fastening bolts holding the casing to the support plate are to be encapsulated in FRP. No uncoated metal fan parts in the corrosive air stream will be tolerated.
- C. AXCL fans to be supplied with a graphite liner and grounding strap to remove static electricity, as well as a flame retardancy of 25 or less, if required.
- D. A casing drain with plug attached to the casing at the lowest point for condensation removal as specified.
- E. Fan inlet and outlet shall have slip connections or flanged as shown on the drawings.
- F. An access door shall be supplied for impeller inspection and service.
- G. Standard finish color to be light gray.

H. Hub seal to be neoprene or Teflon (when required).

I. M. K. Plastics when requested will supply a Vacuum Hub Seal to avoid any contaminated air from escaping (patent pending).

#### 2.03 FAN IMPELLER

- A. Impellers on 1225 and 1500 blowers shall be solid molded FRP With backwardly curved blades. Impellers larger than 1500 blowers shall be backwardly inclined airfoil. FRP hub to have a tight fitting cap to protect shaft end. The hub to extend outside the casing. Impellers manufactured in steel and coated with a plastic material are not acceptable. The impeller shall be electronically balanced both statically and dynamically Grade GS.3 per AMCA 204 Standard..

#### 2.04 BASE SUPPORT

- A. The blower stands shall be manufactured of structurally formed or structural steel support lugs, epoxy coated, as shown on the drawings. Curb cap stands for mounting on a roof curb, integral to the bifurcated housing, and fabricated of FRP, shall be provided for roof mounting, vertical upblast, as shown on the drawings A belt guard and shaft guard are standard. A weather cover is available as required.

#### 2.05 FAN MOTORS AND DRIVES

- A. Motors to be TEFC and premium-efficiency with a 1.15 service factor. Mill & Chem Duty or Explosion proof, as scheduled.
- B. Belts and sheaves shall be sized for 150% of the fan BHP, and are to be accessible for service and maintenance.
- C. AXCL fans to have pillow block bearings and to have a minimum L-50 life of 200,000 hours life.
- D. Shafts to be AISI -1045 carbon steel. The shaft shall not be in the corrosive air stream.
- E. Drive guard to be supplied and manufactured according to OSHA standards.
- F. Fans up to 5 HP motor to have variable pitch drives.

#### 3.0 INSTALLATION

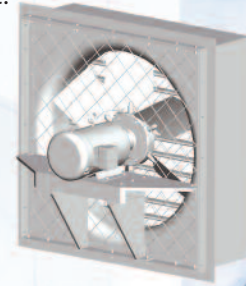
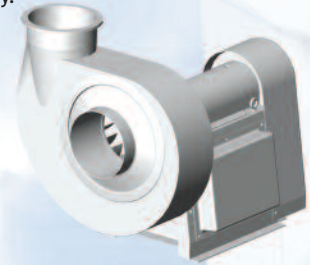
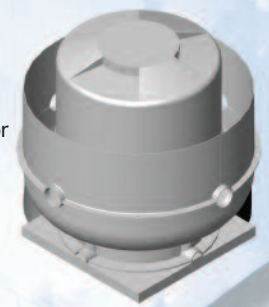
- A. Install fans in accordance with manufacturers instructions.

#### 4.0 ACCEPTABLE MANUFACTURERS

- A. M.K. Plastics Corporation, model AXCL FRP Bifurcated Inline Centrifugal Fan.

## CONDITIONS OF SALE

- 1.Prices quoted are current, prices prevailing at time of shipping will apply. Material in stock is offered subject to prior sale. All Sales Contracts arising out of this quotation shall be subject to our regular conditions show on this side.
- 2.All deliveries quoted are based on availability of material and labor at the time of quotation and subject to change. Deliveries are contingent upon strikes, accidents, fires, and other causes and we shall not be liable for any loss or damage caused by delays beyond the control of the company.
- 3.Goods invoiced up to and including the last day of the calendar month shall be paid for not later than the last business day of the following month. The company reserves the right to charge interest at commercial rates on any overdue account.
- 4.Any order accepted by us cannot be countermanded, revised or cancelled without our written consent and upon such terms as will indemnify us against any loss. The word "loss" as used herein shall include, but not limited to, cost of materials, special machinery, tools, jigs and fixtures built or purchased for the contract and all parts in process, fabricated in whole or in part by previous customer authorization.
- 5.No contract arising from the acceptance of this quotation shall be valid and binding until approved by the company, such contract shall be governed by and interpreted in accordance with the laws of Province of Quebec.
- 6.All memoranda, drawings and information furnished by the company shall remain its property and shall be considered business or trade secrets received in trust and confidence for the sole purpose of assisting the buyer.
- 7.Orders to customer's drawings or descriptions are filled with the understanding that the customer assumes the obligation to protect M.K. Plastics Corp. from any action for infringements of patents.
- 8.No modification of the above conditions of sale shall be effected by our receipt or acknowledgement of a purchase order containing additional or different conditions.



## LIMITATION OF WARRANTY AND LIABILITY

We will not be responsible for the damage to equipment or materials through improper installation, storage, improper servicing, or through attempts to operate it in excess of its rated capacity or recommended use, intentional or otherwise. We will not be responsible for consequential damage.

Based on the fact that M.K. Plastics Corp. has no direct control over the actual handling and use of its products in the field, M.K. Plastics Corp. does not assume any liability for any loss of customer or any personnel or any physical damages that claimed by anyone due to a failure or cause attributed to the use of its products. In no event shall M.K. Plastics Corp. be responsible for consequential damages of any such defective material or workmanship, including but not limited to the buyer's loss of material or profit, increase expense of operation, downtime or reconstruction of the work and in no event shall M.K. Plastics Corp. obligation under this warranty exceed the original contract price of the defective item.

M.K. Plastics Corp. warrants its equipment, products and parts, to be free from defects in workmanship and material under normal use and service for one (1) year after delivery to the first user. Our obligation under this warranty being limited to repairing or replacing, at our option, without cost at our factory any part, or parts which shall, within such warranty period, be returned to us with transportation charged prepaid, and which our examination shall disclose to our satisfaction to have been defective.

M.K. Plastics Corp. will not be responsible for the cost of removal of a defective product or parts or the installation of a replaced product or parts, or for costs due for its removal, crating or shipping.

On account of variables including but not limited to, vibration, system noise characteristics, motor overloading or change in voltage conditions, the specifics of customer application of equipment or other system conditions, M.K. Plastics Corp. does not expressly warrant its equipment for any specific purpose.

The customer and its agents are responsible for the selection and application of M.K. Plastics Corp. products, including their fitness for the purpose and performance intended. Consequently, the customer on behalf of its agents assumes all liability related to the user/misuse, application and selection of the M.K. Plastics Corp.



75-01-MAY 2008

**M.K. Plastics**  
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