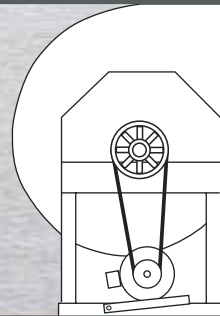
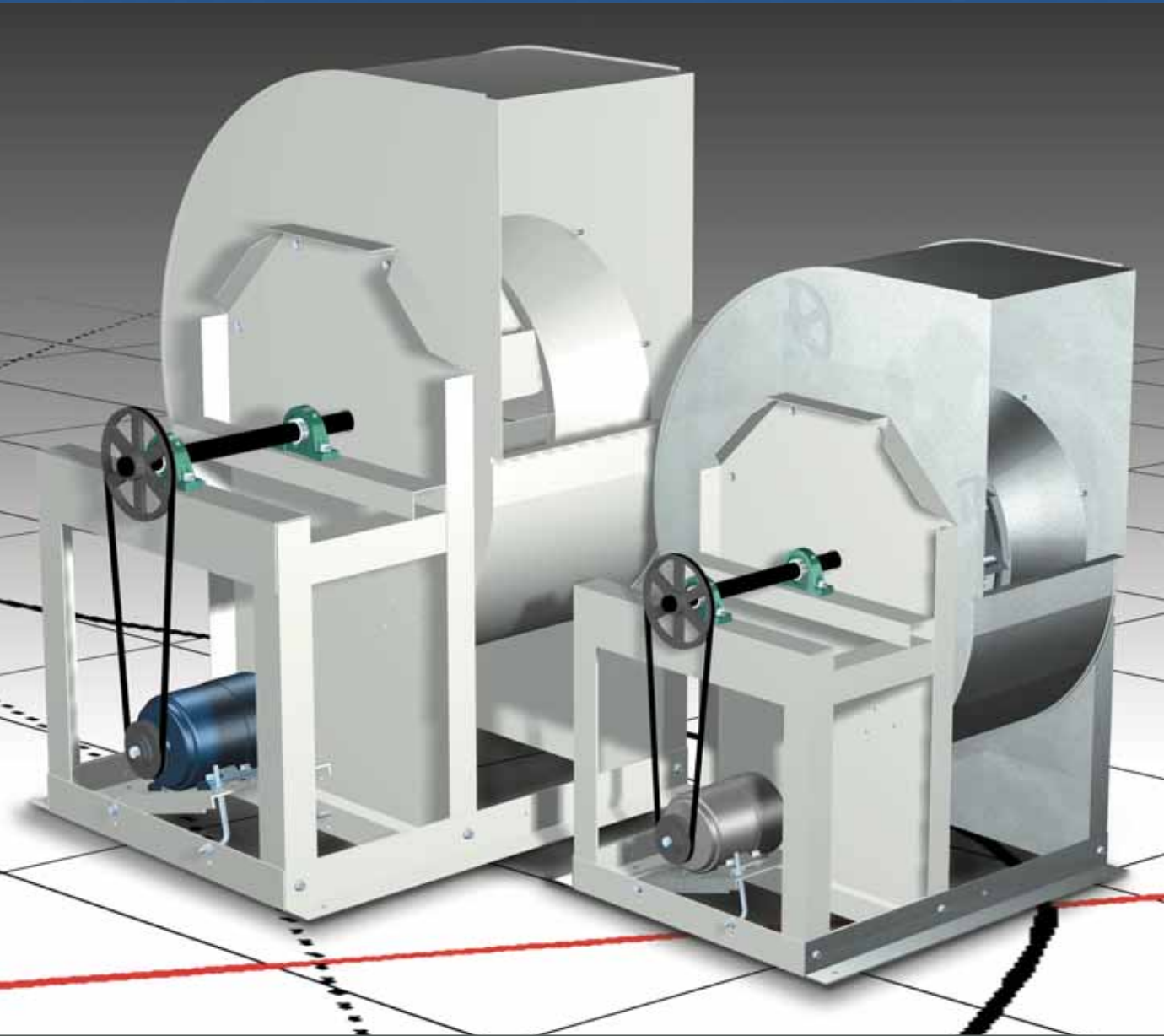


Centrifugal Backward Inclined Model SWB-M

Utility Fans



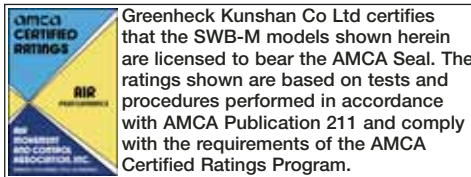
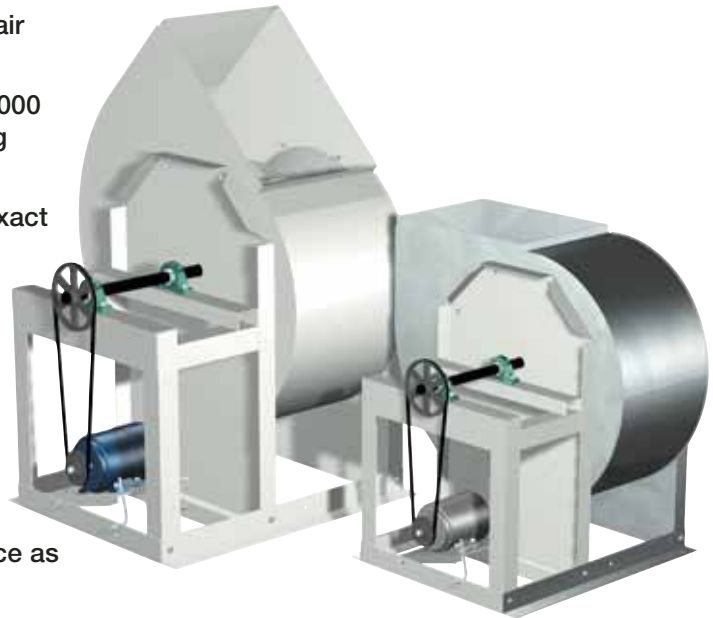
BUILDING VALUE IN AIR.

 **GREENHECK**
Building Value in Air.

July
2005

Greenheck's backward inclined utility fans have many advantages; higher operating efficiencies, non-overloading horsepower curve and higher pressure capability. You will also receive the following benefits with a Greenheck backward inclined utility fan.

- This unit will meet your supply, exhaust, and return air requirements.
- Performance ranges from 500 cfm (850 m³/hr) to 30,000 cfm (50,970 m³/hr) with static pressure up to 5 in. wg (1242 Pa).
- Two different series of construction will meet your exact needs in the most economical manner.
- Each fan is tested prior to shipment to provide you with smooth, vibration free operation.
- Greenheck utility fans are designed, engineered, and tested to provide years of dependable service with minimal maintenance.
- Each fan size has been tested in our AMCA Accredited Laboratory, and all models are licensed to bear the AMCA air performance seal. Performance as cataloged is assured.



Series 200 SWB-M models are listed for electrical (UL/cUL 705) File no. E40001

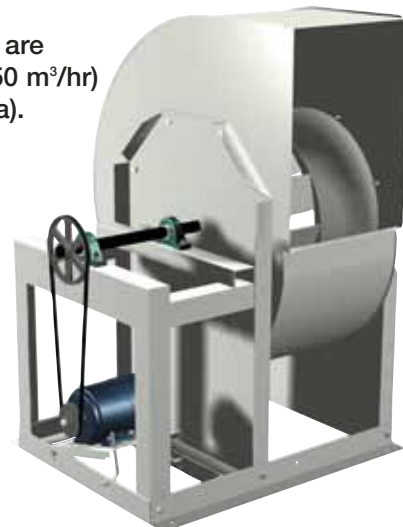


Series 200 SWB-M models are listed for grease removal (UL/cUL 762) File no. MH11745 and Emergency Smoke Control Systems File No. MH17511.

SWB-M Series 200

Greenheck's model SWB-M Series 200 backward inclined utility fans are available in thirteen sizes (210 - 224 with capacities from 500 cfm (850 m³/hr) to 30,000 cfm (50,970 m³/hr) and static pressures to 5 in. wg (1242 Pa).

- Entire fan is constructed of steel and is coated with Permatector.
- Larger shafts, bearings, and increased material thickness.
- Steel wheel. *(Except size M210 has aluminum wheel)*
- Clockwise and counter-clockwise wheel rotation.



Quick Delivery Programs

More than five SWB-M configurations are stocked in four strategically located Greenheck warehouses. Greenheck's Quick Delivery (QD) Program includes stock products that can be shipped in as little as four hours. To speed the process even more, order your fans over the Internet using QD Online at www.greenheck.com/qd



Quick Build Programs

Our Quick Build (QB) Program ensures rapid response time with your needs dictating manufacturing time. Products can be manufactured in one, three, five or ten days, then shipped to your job site.

Leading Edge Technical Support

All Greenheck products are supported by the industry's best product literature, electronic media, and computer aided selection program (CAPS). You'll also find extensive product and IOM (Installation and Operating Manual) information on the Internet. www.greenheck.com

And, of course, you can always count on the personal service and expertise of our national and international representative organization. To locate your nearest Greenheck representative call 715-359-6171 or visit our website at www.greenheck.com



Finish

All structural steel parts are phosphatized and coated with Greenheck's Permator for a long lasting finish.

Wheels

Backward inclined wheels are constructed of heavy gauge, single thickness blades securely riveted or welded to a heavy gauge backplate and wheel cone. Each wheel is statically and dynamically balanced to precise tolerances.

Drives

Drives are sized for a minimum of 150% of driven horsepower. Machined cast iron motor pulleys are factory set to the required RPM and adjustable for final system balancing.



Motors

Heavy duty ball bearing motors are carefully matched to the fan load. Open drip proof, totally enclosed and explosion proof enclosures are available.

Shafts and Bearings

Precision turned, ground and polished solid steel shafts are sized so the first critical speed is at least 25% over the maximum operating speed. Stainless steel shafts are available on Series 200 SWB-M's. Heavy duty, self aligning pillow block ball bearings are selected for a minimum L10 life in excess of 100,000 hours (L50 life of 500,000 hours) at maximum cataloged operating conditions.

Model SWB-M Arrangement 10, single width, backward inclined, utility fans feature:

Inlet Cones

The streamlined inlet cone design provides a low turbulence air intake. This reduces intake losses and sound levels.

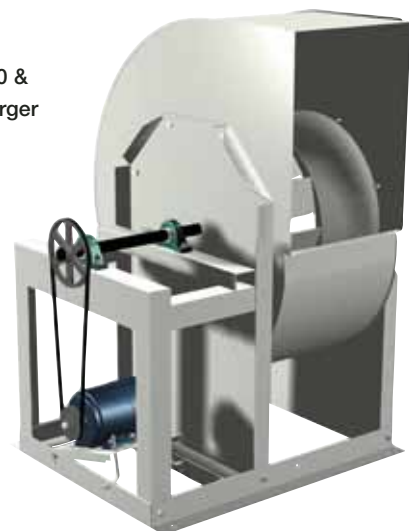
Housing

Utility fan housings are constructed of heavy gauge steel. Series 200 fans are constructed of steel and is coated with permator. They are available in CW or CCW rotation and are field rotatable to the eight standard discharge positions. Housing sides are bonded to the fan scroll with an airtight lock seam.

Housing Supports and Drive Frame

Housing supports are constructed of structural steel with formed flanges for extra strength. Rugged welded steel drive frame members support the shaft and bearings and provide rigid reinforcement for the housing. A pivoting motor plate with adjusting screws make belt tensioning a quick and easy operation. Prepunched mounting holes are provided for ease of installation.

Sizes M130 &
M227 or larger





UL/cUL 762

Series 200 SWB-M models are listed for grease removal (UL/cUL 762). The UL/cUL 762 option includes a weatherhood, threaded drain connection, and bolted access door. Indoor mounting requires the fan to have welded scroll construction.

Inlet Vane Dampers

External inlet vane dampers are available on model SWB-M fans sizes 12-36. External vanes are mounted on the inlet flange. Inlet vane dampers feature zinc plated steel blade axles, stainless steel washers and bearings. Vanes can be used for either manual or automatic operation, with controls furnished by others. These inlet vanes are suitable for temperatures up to 200°F.

Weatherhoods

Weatherhoods are available to completely cover the motor and drive compartments; protecting the shaft and bearings, and motor and drive components from moisture and other adverse conditions. Weatherhoods are vented to provide sufficient motor cooling.

Access Doors

To provide access for inspection and cleaning, either bolted or hinged quick opening access doors are available.

Coatings

SWB-M Series 200 is available with a wide selection of protective and decorative coatings.

Drain Connection

Threaded drain connections can be provided to drain moisture from the bottom of the fan housing.

Grease Trap with Drain Connection

Aluminum trap designed to collect grease residue and avoid drainage onto roof surface. Disposal grease absorbents are available for easy maintenance.

Inlet and Outlet Guards

Inlet and outlet guards are constructed of expanded metal mounted in a steel frame to provide protection for non-ducted installations. The guards can be easily removed for maintenance or inspection.

Flanged Inlet & Outlet

Flanges are welded to the fan and are available for damper mounting or flanged duct connections. (Inlet flanges have pre-punched mounting holes).

Isolation

Base mounted Neoprene or housed spring isolators are available to dampen mechanical vibration and assure quiet operation. The model SWB-M is available with ¼" deflection Neoprene isolators, free standing isolators, restrained isolators, and housed spring isolators. Isolators are sized to match the weight of each fan.



Heat Slinger and Shaft Seal

The heat slinger is an aluminum cooling disc mounted on the fan shaft between the inboard bearing and the fan housing. The disc dissipates heat that is conducted along the fan shaft. The shaft seal with an aluminum rub ring is available for applications where contaminated or high temperature air is being handled.



Belt Guards

Sturdy three-sided fabricated steel belt guards provide protection from rotating pulleys and belts.

Dampers

Gravity or motorized parallel blade backdraft dampers can be provided. These dampers feature sturdy galvanized frames with prepunched mounting holes, aluminum blades with felt edges, and balanced design for minimal resistance to airflow. Backdraft dampers are not suitable for downblast or bottom angular downblast discharge positions. To install a backdraft damper directly to the fan, the fan must be supplied with a flanged outlet.

Heavy duty dampers are available for high pressure applications on fans with motors equal to or greater than 7.5 horsepower.

Disconnect Switches

Assorted NEMA rated disconnect switches are available for positive electrical shut-off and safety when servicing fans. The following switches are available to meet individual electrical requirements and can be factory mounted or shipped loose for field mounting.



Operation Temp. & Construction	Series 100	Series 200	
	Galvanized	Painted Steel	Aluminum Airstream
-20° to 200°F Standard	✓	✓	✓
201° to 300°F Heat Slinger Shaft Seal	✓	✓	✓
301° to 400°F Heat Slinger Shaft Seal		✓	✓

The maximum continuous operating temperature on the SWB-M is 400°F. For continuous operating temperatures between 401° and 1,000°F use an Arrangement 1, 9, or 10, backward inclined centrifugal fan, model BISW.

Features	High Temperature Option	High Temperature Option with UL
Steel Construction	✓	✓
Shaft Seal	✓	✓
Heat Slinger	✓	✓
Weatherhood		✓
UL Label		
(Power ventilators for smoke control systems)		✓

Operating Temperatures

Greenheck's model SWB-M is suitable for application above normal operating temperatures of 70°F. Refer to the chart at the right for operation temperature guidelines and optional accessories.

High Temperature Emergency Smoke Control

The Series 200 may be equipped for emergency smoke removal application by specifying a high temperature option. The table to the right indicates the construction features that are included in the high temperature options, enabling exhaust of heat and smoke at 500°F for a minimum of 4 hours or 1000°F for a minimum of 15 minutes.

High temperature testing was conducted at Greenheck's Research and Design facility with airstream temperatures in excess of 1000°F. Temperatures were monitored at the following critical locations throughout the tests: bearings, bearing compartment, belt tube, motor, motor compartment, airstream and fan housing.

Emergency Smoke Temperature and Time Guidelines				
Code	Class	Tested Temp.	Converted Temp.	Time
IRI		500° F	(260° C)	4.0 Hours
SBCCI		1000° F	(537° C)	0.25 Hours
BSI	Class A	150° C	(302° F)	5.0 Hours
	Class B	250° C	(482° F)	2.0 Hours
	Class C	300° C	(572° F)	0.5 Hours
	Class D	300° C	(572° F)	1.0 Hours
	Class E	400° C	(752° F)	2.0 Hours

- **High Temperature Option**

500° F (260° C) for a minimum of 4 hours
1000° F (537° C) for a minimum of 15 min.

Temperature ratings tested in accordance to UL smoke control systems.

- **Emergency Smoke Control - U.L. Listed**

500° F (260° C) for a minimum of 4 hours
1000° F (537° C) for a minimum of 15 min.

Spark Resistant Construction

The following AMCA Standards apply to fan applications that may involve the handling of potentially explosive or flammable particles, fumes, or vapors.

AMCA Type A - All parts in contact with the airstream are constructed of nonferrous material (aluminum). Available on Series 200 construction with the aluminum construction and aluminum wheel options.

AMCA Type B - The fan wheel is constructed of nonferrous material (aluminum). A nonferrous (aluminum) rub ring surrounds the fan shaft where it

passes through the fan housing. Available on all sizes with an aluminum wheel and rub ring.

AMCA Type C - The inlet cone is constructed of nonferrous material (aluminum). A nonferrous (aluminum) rub ring surrounds the fan shaft where it passes through the fan housing. Available on all sizes with an aluminum wheel and rub ring.

The above constructions minimizes the potential of ferrous components making contact that may produce sparks, these do not guarantee against the potential of producing sparks. The installer must electrically ground all fan and system components.

Extended Lube Lines

Lubrication lines with grease fittings are extended from shaft bearings to the base of the drive frame panel for easy bearing lubrication without disassembling the fan.

Equipment Supports

Models GESS and GESR Equipment Supports are available to you for roof mounting of all utility fans. Equipment Supports are available in a number of lengths, widths and heights, and can be built for a pitched roof.

Aluminum Construction - Airstream

Aluminum airstream option is available on Series 200 SWB-M's.

Welded Scroll Construction

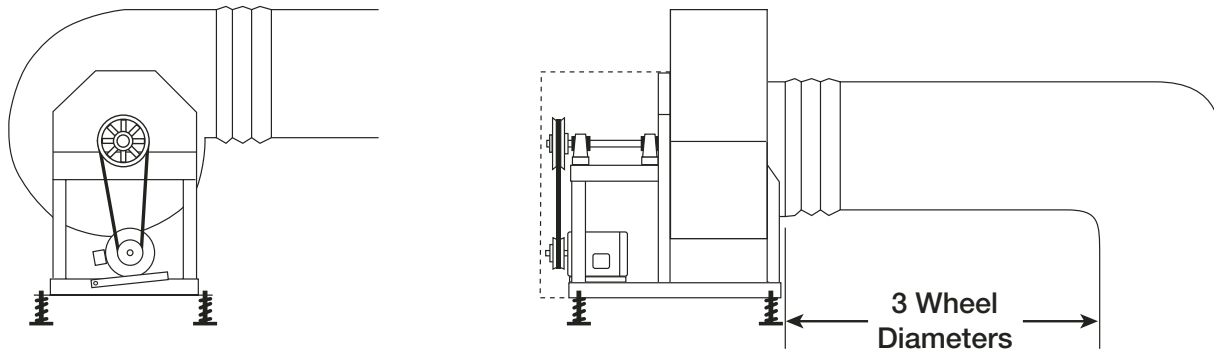
Welded scroll construction is available on Series 200 SWB-M's.

Model SWB-M Series 200 are designed for your supply, exhaust and return air applications. Tests were conducted to assure safe, rugged and reliable fans capable of withstanding severe conditions.

Due to the varying air streams encountered in commercial ventilation, systems designers must be aware of national, state, and local codes and guidelines governing these installations.

Typical Installation - General Clean Air or Fume Hood (Non Grease)

Greenheck's Series 200 SWB-M's are designed for applications ranging from clean air to contaminated air. Typical installations are shown below.



Typical Installation - Commercial Kitchen (Grease)

Greenheck's series 200 SWB-M's are designed to meet restaurant and food service applications. These fans are UL and cUL Listed for grease removal and have been tested under elevated temperature conditions.

Due to high temperatures and grease-laden air streams in commercial kitchen ventilation, system designers must be aware of governing codes and guidelines. The National Fire Protection Association (NFPA) is the primary source for many local codes for commercial kitchen ventilation systems. Local code authorities should be consulted before proceeding with any kitchen ventilation project.

Installation must include a means for inspecting, cleaning and servicing the exhaust fan.

Fans selected for grease removal must include a weatherhood, bolted access door, and 1 in. drain connection. For grease applications where the fan is mounted indoors, the welded scroll option must be selected.

An outlet guard is strongly recommended when the fan discharge is accessible.

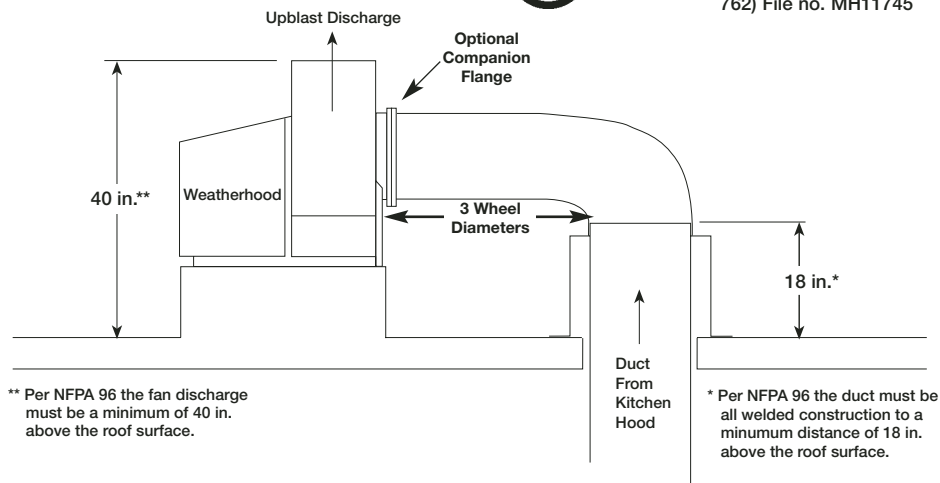
An upblast discharge is recommended.

The fan must discharge a minimum of 40 in. above the roof line and the exhaust duct must be fully welded to a distance of 18 in. above the roof surface.

No dampers are to be used in the system.



Series 200 SWB-M models are listed for grease removal (UL/cUL 762) File no. MH11745



This catalog contains comprehensive air performance data for Greenheck's backward inclined utility fans. Air performance is shown in both fan tables and fan curves.

Selection

The first consideration in any fan selection is the amount of air to be moved and the resistance to this air movement. Air volume requirements are established through specific codes or accepted industry standards. Once the air volume is known, system resistance can be determined by summing up the losses through the system components. Duct layout, duct size, coil, filters, dampers and fan accessories all affect system resistance. "ASHRAE Guide and Data Books" and manufacturer's data on individual system components are common sources of information available to the system designer.

In most applications, several fans may meet the required airflow and system resistance conditions. An optimum fan selection requires evaluation of alternative fan types and fan sizes, as they relate to initial cost, operating cost, available space and allowable sound levels. The relative importance of these facts varies with each system.

Backward inclined utility fans turn at twice the speed of forward curved fans. Advantages of backward inclined fans are higher operating efficiencies and a non-overloading horsepower curve, which reaches a maximum in the middle of the normal operation range. The wheel design is stronger, permitting operation at higher static pressures.

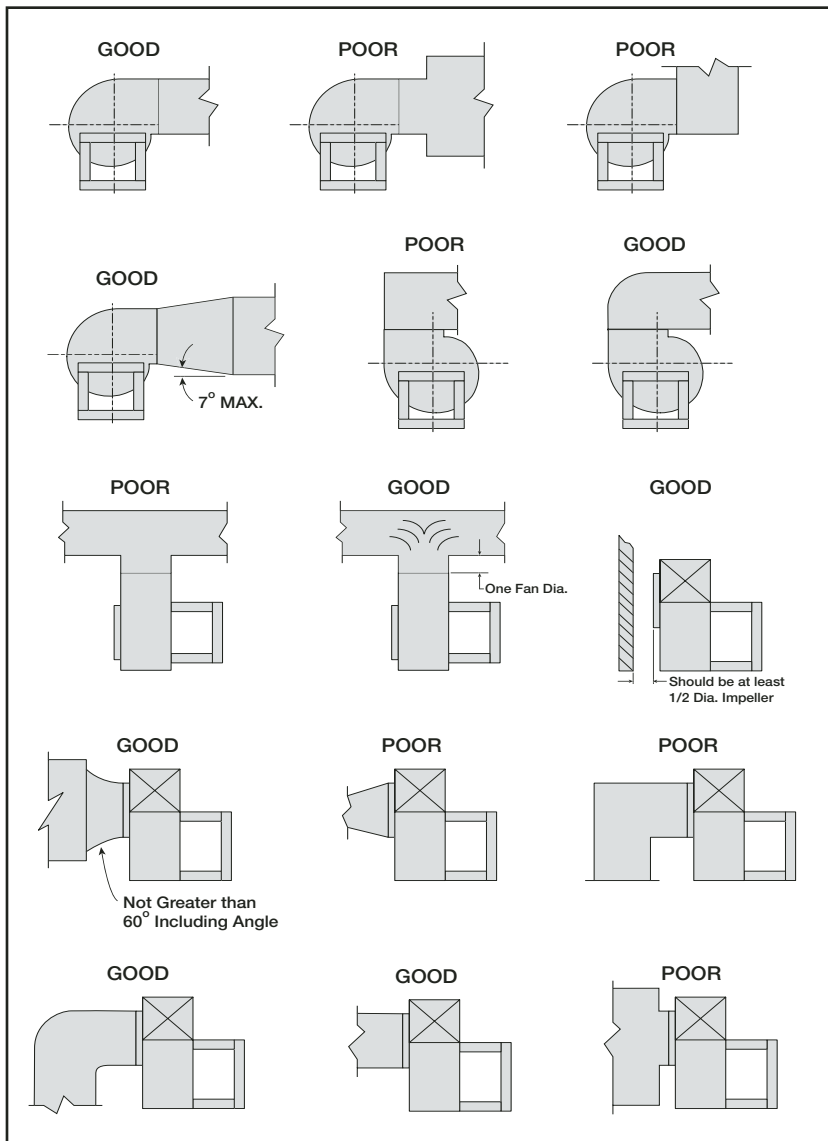
Larger fans tend to turn slower and generate less noise. These fans generally have lower operating costs, however, this may be offset by higher initial costs when compared to a smaller fan. For a given application, a smaller fan will have a higher speed and a steeper performance curve. The steeper performance curve minimizes airflow changes in the system as system resistance varies.

Effects of Installation on Performance

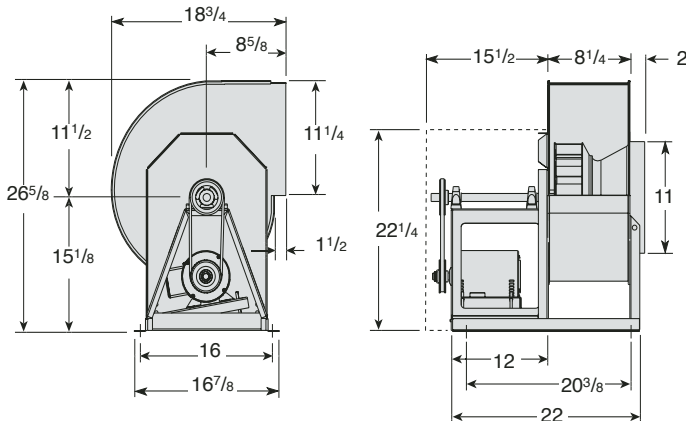
Fan ratings presented in the performance tables and curves of this catalog are in accordance with AMCA Standard 210 "Laboratory Methods of Testing Fans for Aerodynamic Performance Rating". The AMCA test procedure utilizes an open inlet and a straight outlet duct to assure maximum static regain.

Any installation with inlet or discharge configurations that deviate from this standard, may result in reduced fan performance. Restricted or unstable flow at the fan inlet can cause pre-rotation of incoming air or uneven loading of the fan wheel yielding large system losses and increased sound levels. Free discharge or turbulent flow in the discharge ductwork will also result in system effect losses.

The examples below show system layouts and inlet and discharge configurations which can affect fan performance.



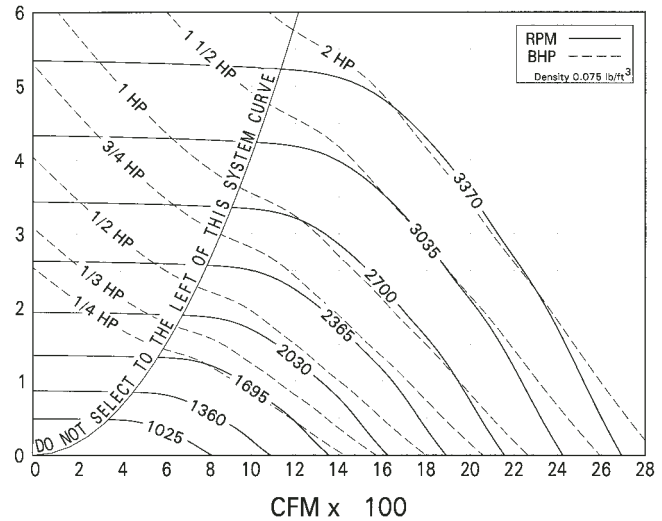
All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 11¹/₈ in.
Shaft Diameter = ³/₄ in.
Outlet Area = 0.63 ft²
Max Motor Frame Size = 145T

Tip Speed = 2.91 x RPM
Maximum BHP = (RPM/2649)³
Max RPM = 3370
Unit Weight = 140 lbs

Static Pressure in inches W.G.



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
500	791	1078	0.06	1475	0.15																	
625	988	1159	0.08	1501	0.17	1809	0.27															
750	1186	1264	0.11	1551	0.19	1836	0.30	2095	0.43													
875	1384	1383	0.14	1632	0.23	1873	0.34	2122	0.47	2350	0.61	2556	0.76									
1000	1582	1505	0.18	1735	0.28	1952	0.39	2156	0.51	2377	0.66	2583	0.82	2773	0.99	2950	1.16					
1125	1779	1634	0.23	1848	0.34	2042	0.46	2236	0.59	2415	0.72	2610	0.88	2800	1.06	2976	1.24	3142	1.43	3299	1.63	
1250	1977	1770	0.28	1968	0.41	2147	0.53	2317	0.67	2495	0.81	2657	0.96	2826	1.13	3003	1.33	3169	1.53	3326	1.73	
1375	2175	1910	0.35	2090	0.48	2261	0.62	2421	0.76	2575	0.92	2736	1.08	2885	1.24	3030	1.41	3196	1.62	3353	1.83	
1500	2373	2054	0.43	2214	0.57	2381	0.72	2528	0.87	2676	1.03	2816	1.20	2965	1.37	3103	1.55	3235	1.73			
1625	2570	2200	0.52	2347	0.67	2501	0.83	2646	0.99	2781	1.16	2916	1.33	3045	1.51	3183	1.70	3314	1.90			
1750	2768	2347	0.63	2484	0.79	2624	0.95	2766	1.13	2895	1.30	3021	1.48	3145	1.67	3263	1.87					
1875	2966	2495	0.74	2621	0.92	2751	1.09	2887	1.28	3014	1.46	3132	1.65	3250	1.85	3366	2.05					
2000	3164	2644	0.88	2764	1.06	2886	1.24	3010	1.44	3135	1.64	3250	1.84	3359	2.04							
2125	3361	2794	1.03	2909	1.22	3022	1.42	3134	1.61	3256	1.83											
2250	3559	2945	1.20	3055	1.40	3159	1.61	3268	1.81													
2375	3757	3096	1.39	3201	1.60	3300	1.82															

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.
Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

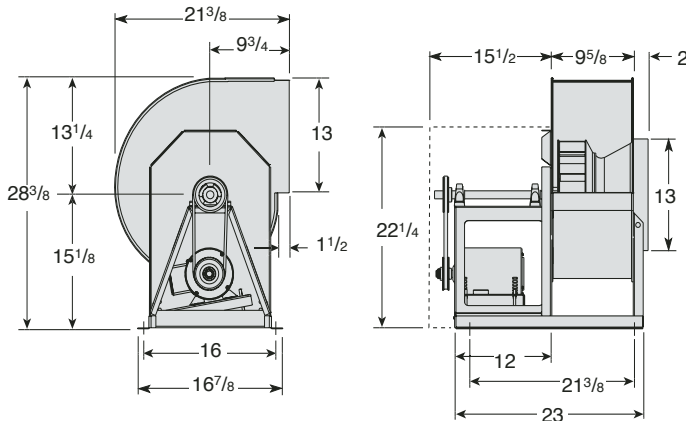
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
1100	100	79	69	61	63	61	59	48	42	66	2615	100	88	79	76	81	77	76	74	68	83
	90	76	68	62	63	60	58	47	41	65		90	91	79	75	80	75	74	71	65	82
	80	74	68	62	62	59	57	46	40	65		80	89	78	75	79	75	73	70	64	81
	70	72	68	61	61	58	55	45	39	64		70	88	78	74	79	74	72	68	63	80
	60	70	69	60	61	57	53	44	38	63		60	87	77	73	78	74	71	67	62	79
1860	100	79	74	71	74	70	70	64	57	76	3370	100	87	82	80	88	82	81	81	77	89
	90	79	74	71	73	68	68	61	56	75		90	94	83	79	86	81	79	78	74	87
	80	79	73	70	72	68	66	60	54	74		80	92	82	78	86	80	79	77	72	87
	70	77	73	69	71	67	65	58	53	73		70	90	80	77	85	79	78	75	70	86
	60	76	72	69	71	67	63	57	52	72		60	88	79	76	84	78	77	74	69	85

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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

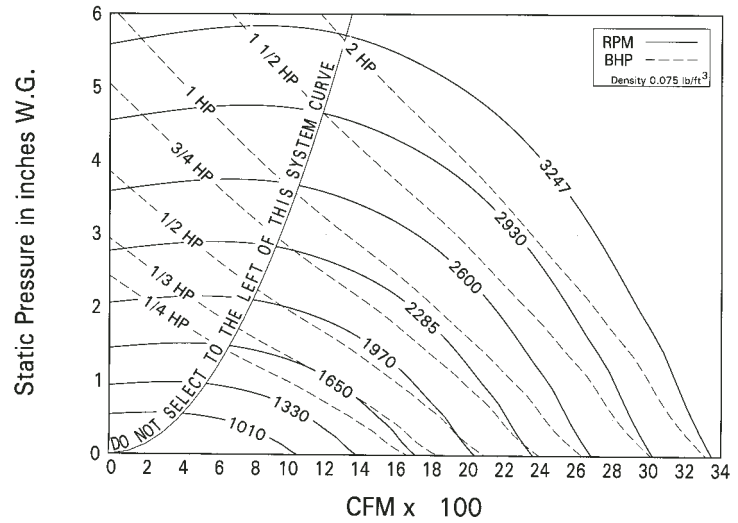
SWB-M212 Series 200

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 12 1/4 in.
 Shaft Diameter = 1 in.
 Outlet Area = 0.85 ft²
 Max Motor Frame Size = 145T

Tip Speed = 3.21 x RPM
 Maximum BHP = (RPM/2372)³
 Max RPM = 3247
 Unit Weight = 170 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
600	729	1020	0.07	1372	0.16																	
750	912	1087	0.09	1411	0.19	1685	0.30															
900	1094	1177	0.12	1462	0.22	1723	0.35	1954	0.47	2158	0.61											
1050	1277	1285	0.16	1532	0.26	1771	0.39	1992	0.54	2196	0.68	2380	0.84	2549	0.99							
1200	1459	1400	0.20	1620	0.31	1832	0.44	2040	0.60	2234	0.76	2418	0.93	2587	1.10	2745	1.28	2893	1.46			
1350	1642	1522	0.25	1719	0.37	1913	0.52	2099	0.66	2284	0.84	2457	1.03	2625	1.21	2783	1.40	2931	1.59	3071	1.79	
1500	1824	1647	0.31	1828	0.45	2002	0.59	2175	0.75	2342	0.92	2510	1.12	2667	1.32	2821	1.53	2969	1.74	3109	1.95	
1650	2007	1775	0.38	1943	0.54	2103	0.68	2262	0.86	2416	1.02	2569	1.21	2722	1.43	2868	1.65	3008	1.88	3147	2.11	
1800	2189	1903	0.47	2063	0.63	2212	0.79	2353	0.95	2503	1.17	2643	1.34	2783	1.54	2923	1.77	3060	2.02	3190	2.27	
1950	2372	2039	0.57	2187	0.74	2325	0.92	2460	1.09	2593	1.28	2729	1.52	2858	1.69	2987	1.90	3115	2.16	3245	2.42	
2100	2554	2177	0.69	2312	0.86	2443	1.05	2570	1.24	2693	1.43	2818	1.65	2944	1.91	3064	2.09	3183	2.30			
2250	2737	2316	0.82	2439	1.00	2564	1.20	2683	1.41	2801	1.61	2914	1.81	3033	2.06	3150	2.34					
2400	2919	2456	0.97	2566	1.16	2688	1.37	2801	1.59	2912	1.81	3021	2.02	3126	2.24	3239	2.51					
2550	3102	2593	1.13	2695	1.33	2813	1.55	2922	1.78	3026	2.03	3131	2.25	3233	2.47							
2700	3284	2730	1.31	2830	1.52	2940	1.76	3045	2.00	3145	2.25	3244	2.50									
2850	3467	2867	1.50	2968	1.75	3067	1.98	3169	2.23													

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.
 Performance ratings do not include the effects of appurtenances (accessories).

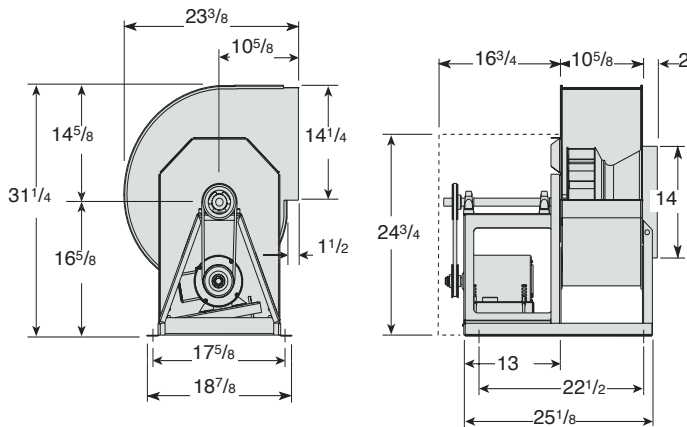
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

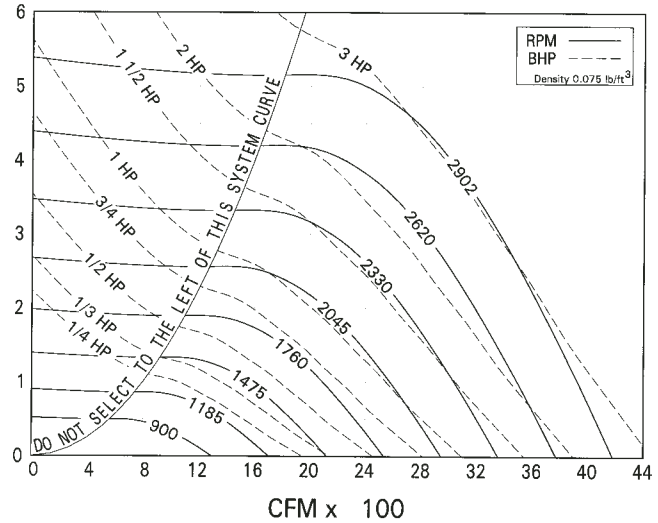
INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
1025	100	81	69	62	65	62	60	48	43	68	2505	100	89	79	78	84	78	78	75	69	85
	90	78	69	63	65	61	59	47	42	67		90	93	79	77	83	76	76	73	67	84
	80	76	69	63	64	60	58	46	41	66		80	91	78	76	82	76	75	71	66	83
	70	74	69	62	63	59	56	45	40	65		70	90	77	75	81	75	74	70	64	82
	60	72	70	60	62	58	55	44	39	64		60	88	77	75	81	74	73	68	63	81
	50	70	69	59	61	57	54	43	38	63		50	86	76	74	80	73	72	67	62	80
1765	100	82	75	72	76	71	72	65	59	78	3250	100	89	84	82	91	84	83	83	79	92
	90	83	74	72	75	69	69	63	57	76		90	97	84	80	90	82	81	81	76	90
	80	82	74	71	74	69	68	61	56	75		80	95	82	79	89	81	81	79	74	89
	70	80	73	70	73	68	66	59	55	74		70	92	81	79	88	80	80	77	72	88
	60	79	73	70	73	68	65	58	54	74		60	90	79	78	88	79	80	76	71	87
	50	77	72	69	72	67	64	57	53	73		50	88	78	77	87	78	79	75	70	86

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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

All dimensions are in inches.
For additional discharge positions see page 9.



Static Pressure in inches W.G.



Wheel Diameter = $13\frac{1}{2}$ in.
Shaft Diameter = 1 in.
Outlet Area = 1.03 ft²
Max Motor Frame Size = 184T

Tip Speed = $3.53 \times \text{RPM}$
Maximum BHP = $(\text{RPM}/2002)^3$
Max RPM = 2902
Unit Weight = 183 lbs

CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
800	785	930	0.10	1279	0.22																	
975	957	987	0.12	1286	0.24																	
1150	1129	1067	0.15	1320	0.27	1573	0.43	1809	0.62													
1325	1301	1158	0.19	1374	0.32	1596	0.47	1816	0.66	2024	0.88											
1500	1473	1256	0.24	1448	0.39	1639	0.54	1836	0.72	2031	0.93	2219	1.17	2392	1.42							
1675	1645	1357	0.30	1533	0.45	1704	0.62	1879	0.80	2052	1.00	2226	1.23	2399	1.50	2560	1.77					
1850	1817	1463	0.37	1624	0.53	1779	0.72	1935	0.90	2095	1.10	2251	1.33	2406	1.57	2567	1.86	2719	2.15	2862	2.46	
2025	1989	1570	0.46	1722	0.63	1864	0.81	2006	1.02	2148	1.22	2295	1.45	2438	1.69	2575	1.95	2726	2.25	2869	2.57	
2200	2161	1680	0.55	1821	0.74	1955	0.93	2085	1.15	2215	1.37	2346	1.59	2482	1.84	2615	2.10	2741	2.37	2876	2.68	
2375	2333	1791	0.66	1923	0.86	2049	1.07	2171	1.28	2291	1.54	2412	1.76	2534	2.00	2659	2.27	2784	2.55			
2550	2504	1903	0.79	2028	1.00	2148	1.22	2262	1.44	2375	1.68	2486	1.97	2599	2.20	2713	2.46	2828	2.74			
2725	2676	2017	0.93	2135	1.16	2248	1.38	2357	1.63	2463	1.86	2568	2.14	2673	2.44	2778	2.68	2885	2.96			
2900	2848	2131	1.08	2243	1.33	2350	1.57	2455	1.82	2555	2.08	2654	2.33	2753	2.65	2852	2.96					
3075	3020	2246	1.26	2352	1.53	2455	1.78	2555	2.04	2651	2.31	2745	2.58	2838	2.85							
3250	3192	2362	1.45	2463	1.73	2561	2.01	2656	2.27	2749	2.56	2838	2.85									
3425	3364	2478	1.66	2575	1.96	2669	2.26	2759	2.53	2849	2.83											

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

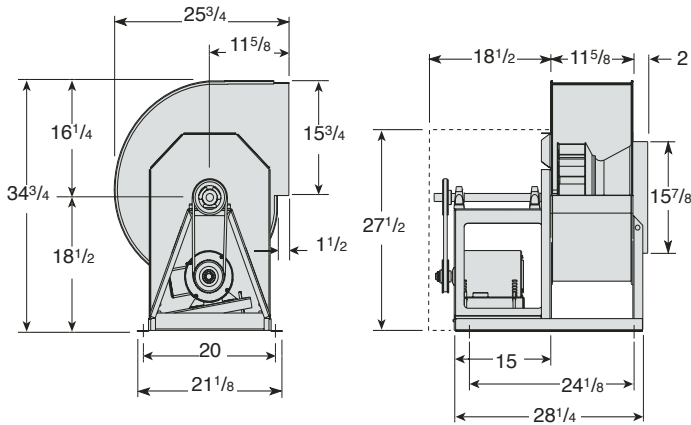
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
950	100	73	74	64	63	57	54	51	44	65	2250	100	88	86	83	86	79	74	72	67	86
	90	73	75	63	63	55	53	50	44	65		90	88	85	83	86	78	73	70	66	85
	80	73	74	62	61	54	52	49	44	64		80	87	86	82	85	77	71	68	64	85
	70	73	72	61	60	53	52	48	44	62		70	86	85	81	84	75	70	67	63	83
	60	73	71	60	58	52	51	48	44	61		60	87	85	79	82	73	69	66	62	82
1600	100	84	81	76	78	70	68	63	60	78	2902	100	102	90	88	97	86	81	78	75	95
	90	85	80	76	77	68	63	61	57	77		90	106	91	88	93	86	81	77	72	93
	80	85	80	75	75	67	62	59	56	75		80	108	88	88	91	84	79	75	70	91
	70	85	80	73	74	65	61	58	54	74		70	108	87	87	92	83	79	74	69	91
	60	85	80	71	72	63	61	57	53	73		60	106	87	84	90	81	77	73	67	89

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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

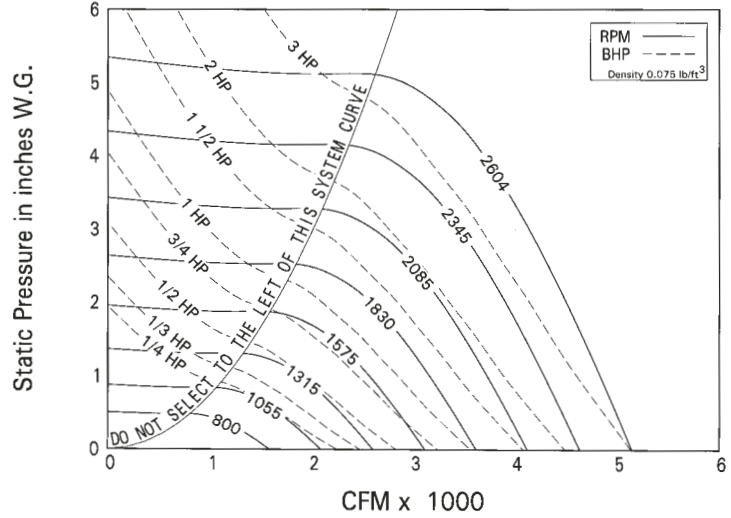
SWB-M215 Series 200

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 15 in.
Shaft Diameter = 1 in.
Outlet Area = 1.25 ft²
Max Motor Frame Size = 184T

Tip Speed = 3.93 x RPM
Maximum BHP = (RPM/1679)³
Max RPM = 2604
Unit Weight = 231 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1000	810	839	0.12																			
1225	992	895	0.15	1158	0.30																	
1450	1175	971	0.19	1194	0.35	1417	0.54															
1675	1357	1058	0.25	1248	0.41	1444	0.60	1636	0.83													
1900	1539	1150	0.32	1320	0.50	1487	0.68	1661	0.91	1830	1.16											
2125	1722	1246	0.40	1401	0.58	1551	0.80	1701	1.01	1857	1.27	2006	1.54									
2350	1904	1346	0.49	1488	0.69	1624	0.92	1759	1.15	1897	1.40	2038	1.68	2168	1.97	2313	2.32					
2575	2086	1447	0.61	1580	0.82	1706	1.05	1829	1.33	1953	1.56	2079	1.84	2208	2.15	2329	2.46	2456	2.82			
2800	2269	1550	0.73	1674	0.97	1791	1.21	1906	1.47	2020	1.77	2134	2.04	2249	2.34	2369	2.67	2482	3.01	2591	3.35	
3025	2451	1655	0.88	1771	1.13	1882	1.40	1989	1.66	2094	1.98	2199	2.28	2305	2.57	2410	2.89	2523	3.24			
3250	2633	1761	1.05	1870	1.32	1975	1.60	2075	1.89	2174	2.17	2271	2.54	2370	2.85	2468	3.16	2567	3.5			
3475	2816	1868	1.24	1971	1.54	2070	1.82	2166	2.13	2259	2.43	2351	2.75	2441	3.16	2534	3.48					
3700	2998	1975	1.46	2073	1.78	2167	2.08	2259	2.39	2346	2.72	2434	3.05	2520	3.41							
3925	3180	2083	1.69	2176	2.04	2266	2.36	2353	2.69	2438	3.03	2520	3.38	2602	3.72							
4150	3363	2192	1.96	2281	2.32	2366	2.67	2449	3.01	2531	3.37											
4375	3545	2302	2.25	2386	2.63	2467	3.01	2547	3.36													

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

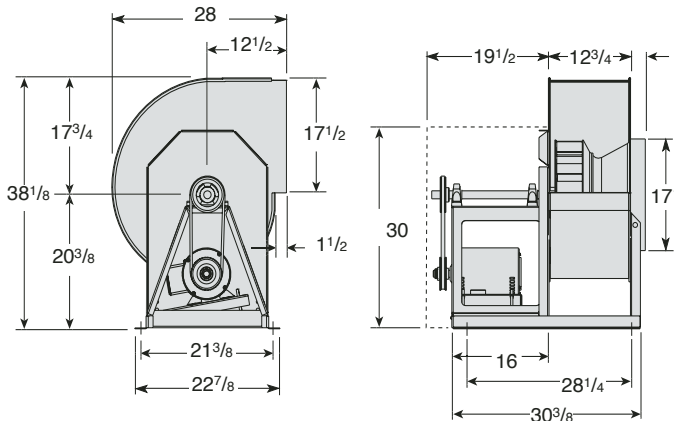
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
850	100	80	69	65	67	64	59	49	43	68	2020	100	88	81	81	83	79	79	75	69	85
	90	77	69	65	66	63	58	48	42	68		90	90	80	80	82	78	77	73	67	84
	80	76	69	65	65	62	57	47	42	67		80	89	79	79	82	77	75	71	65	83
	70	75	69	64	64	60	55	46	41	66		70	88	78	79	81	76	74	70	64	82
	60	74	69	63	63	59	54	45	40	64		60	87	78	78	80	75	73	68	63	81
	50	73	68	62	62	58	53	44	39	63		50	86	77	77	79	74	72	67	62	80
1435	100	82	76	75	76	73	71	65	58	78	2605	100	90	85	86	90	85	85	83	79	92
	90	82	75	74	75	71	69	63	57	77		90	95	84	84	89	83	82	80	75	90
	80	81	75	74	74	70	67	61	56	76		80	93	83	83	88	82	81	79	74	89
	70	80	74	73	74	69	66	60	55	75		70	91	82	83	87	81	81	77	72	88
	60	79	74	72	73	69	64	58	54	74		60	89	81	82	86	80	80	75	70	87
	50	78	73	71	72	68	63	57	53	73		50	88	80	81	85	79	79	74	69	86

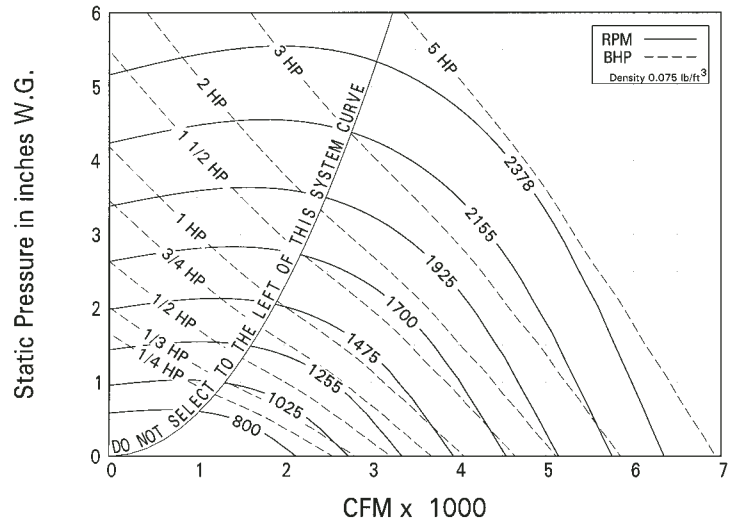
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = $16\frac{1}{2}$ in.
Shaft Diameter = $1\frac{1}{4}$ in.
Outlet Area = 1.52 ft²
Max Motor Frame Size = 184T

Tip Speed = $4.32 \times \text{RPM}$
Maximum BHP = $(\text{RPM}/1414)^3$
Max RPM = 2378
Unit Weight = 251 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1200	789	762	0.15																			
1500	986	815	0.19	1053	0.37																	
1800	1184	886	0.25	1091	0.44	1285	0.66															
2100	1381	970	0.32	1148	0.53	1322	0.77	1487	1.03	1632	1.30											
2400	1578	1062	0.41	1216	0.63	1371	0.89	1524	1.17	1668	1.47	1800	1.78									
2700	1776	1156	0.52	1294	0.76	1432	1.03	1568	1.33	1706	1.65	1836	1.98	1957	2.33	2069	2.68					
3000	1973	1256	0.65	1381	0.92	1505	1.20	1630	1.52	1749	1.85	1874	2.20	1994	2.57	2106	2.94	2211	3.33	2311	3.72	
3300	2171	1359	0.81	1472	1.10	1583	1.40	1696	1.72	1811	2.07	1919	2.44	2032	2.83	2143	3.23	2248	3.64	2348	4.05	
3600	2368	1462	1.00	1567	1.31	1670	1.63	1773	1.96	1873	2.32	1981	2.71	2080	3.11	2181	3.53	2286	3.96			
3900	2565	1566	1.21	1661	1.53	1758	1.89	1853	2.24	1950	2.61	2043	3.01	2142	3.43	2234	3.86	2324	4.30			
4200	2763	1671	1.45	1762	1.80	1853	2.18	1941	2.55	2028	2.93	2117	3.35	2204	3.78	2296	4.23					
4500	2960	1777	1.73	1864	2.11	1947	2.50	2029	2.91	2112	3.30	2195	3.72	2277	4.17	2358	4.63					
4800	3157	1884	2.05	1967	2.45	2042	2.85	2124	3.29	2200	3.72	2277	4.14	2355	4.60							
5100	3355	1992	2.41	2071	2.84	2143	3.25	2218	3.71	2290	4.17	2364	4.62									
5400	3552	2100	2.80	2175	3.25	2245	3.69	2313	4.15													
5700	3750	2208	3.25	2279	3.71	2348	4.19															

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

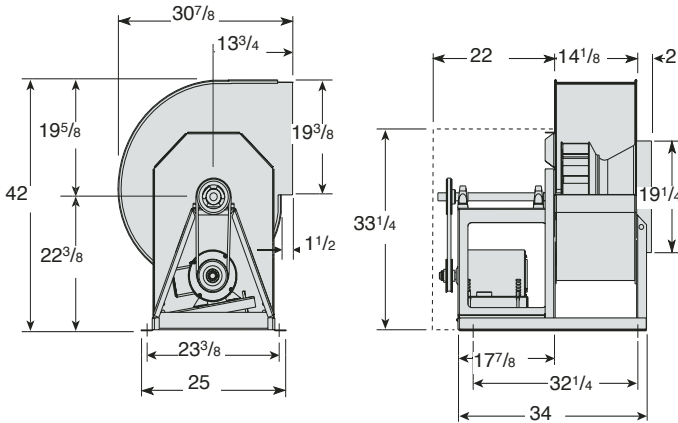
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
775	100	78	68	65	66	63	57	48	43	68	1845	100	87	80	82	83	79	78	74	68	85
	90	76	68	66	65	63	56	47	42	67		90	89	80	81	81	78	76	72	66	84
	80	75	68	65	64	61	55	46	41	66		80	87	79	80	81	77	75	70	65	83
	70	74	68	64	63	60	54	45	40	65		70	86	78	79	80	76	73	69	63	82
	60	73	68	63	62	59	52	44	39	64		60	85	77	79	80	75	72	68	62	81
	50	72	68	63	62	59	52	44	39	64		50	84	76	77	78	74	71	67	61	80
1310	100	81	75	76	75	73	70	64	57	78	2380	100	89	85	87	89	85	85	82	78	92
	90	81	75	75	74	71	68	62	56	76		90	93	84	85	88	83	82	80	75	90
	80	80	74	74	74	70	66	60	55	75		80	91	83	85	87	82	81	78	73	89
	70	79	74	73	73	69	65	59	54	74		70	90	82	84	86	81	80	76	71	88
	60	78	73	73	72	68	63	58	53	74		60	88	81	83	85	80	79	75	70	87
	50	77	72	72	71	67	62	57	52	73		50	87	80	82	84	79	78	74	69	86

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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

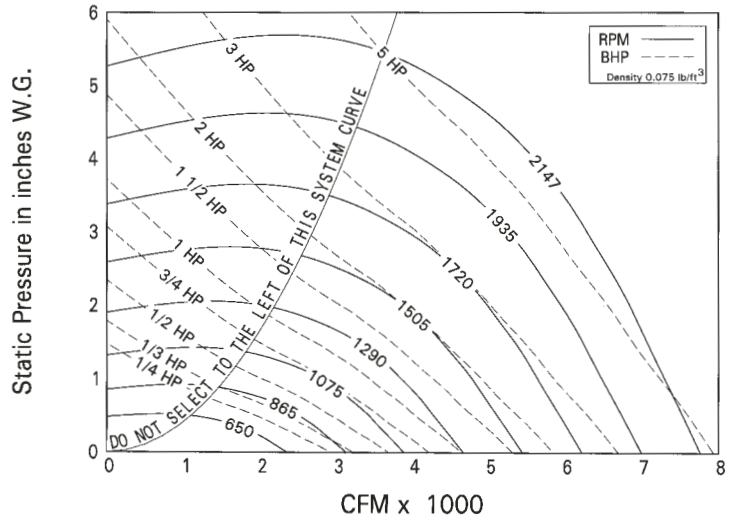
SWB-M218 Series 200

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 18 1/4 in.
 Shaft Diameter = 1 1/4 in.
 Outlet Area = 1.87 ft²
 Max Motor Frame Size = 213T

Tip Speed = 4.78 x RPM
 Maximum BHP = (RPM/1196)³
 Max RPM = 2147
 Unit Weight = 324 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
1500	813	690	0.18																			
1800	976	729	0.23	944	0.45																	
2100	1139	781	0.28	973	0.51	1146	0.79															
2400	1302	840	0.34	1009	0.59	1175	0.88	1321	1.20													
2700	1465	906	0.43	1056	0.69	1204	0.99	1350	1.33	1478	1.68	1594	2.05									
3000	1627	974	0.52	1110	0.80	1246	1.12	1380	1.47	1507	1.85	1623	2.24	1730	2.65							
3300	1790	1044	0.63	1169	0.93	1292	1.26	1414	1.62	1537	2.02	1653	2.44	1759	2.87	1858	3.31	1952	3.76			
3600	1953	1117	0.76	1233	1.08	1345	1.42	1459	1.81	1570	2.21	1682	2.65	1788	3.10	1888	3.57	1981	4.04	2069	4.53	
3900	2116	1193	0.92	1300	1.26	1403	1.61	1507	2.00	1612	2.43	1714	2.87	1818	3.35	1917	3.84	2010	4.34	2098	4.85	
4200	2278	1269	1.09	1368	1.45	1464	1.82	1561	2.22	1659	2.67	1756	3.12	1850	3.61	1947	4.12	2040	4.64	2127	5.18	
4500	2441	1346	1.28	1438	1.66	1530	2.07	1619	2.48	1709	2.92	1801	3.41	1890	3.90	1979	4.42	2069	4.96			
4800	2604	1423	1.50	1508	1.90	1597	2.33	1680	2.76	1765	3.21	1850	3.70	1936	4.22	2019	4.75	2103	5.30			
5100	2767	1501	1.74	1582	2.17	1666	2.62	1745	3.07	1824	3.54	1904	4.03	1984	4.56	2064	5.12	2143	5.68			
5400	2930	1579	2.01	1658	2.48	1735	2.93	1812	3.42	1885	3.90	1961	4.40	2036	4.93	2112	5.50					
5700	3092	1658	2.31	1734	2.80	1805	3.27	1880	3.78	1951	4.29	2021	4.81	2092	5.35							
6000	3255	1737	2.63	1810	3.15	1877	3.65	1949	4.18	2017	4.72	2084	5.25									

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

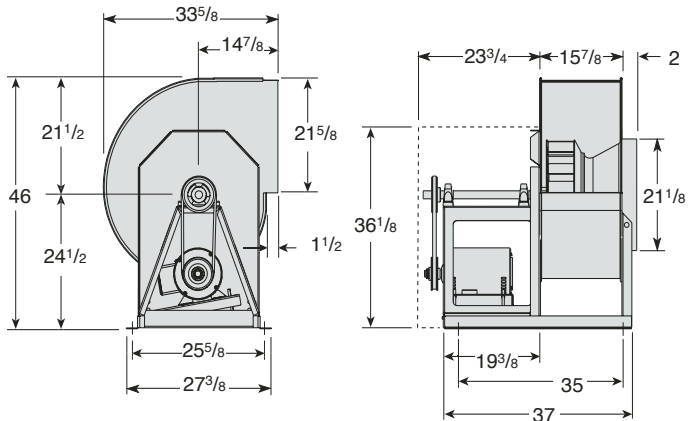
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
700	100	83	82	69	66	64	61	56	46	71	1665	100	90	85	90	87	80	79	77	69	89
	90	82	81	68	65	61	60	55	45	70		90	89	82	88	85	79	77	72	67	86
	80	82	80	67	65	60	59	54	44	69		80	88	81	87	83	77	75	71	68	85
	70	83	82	66	64	59	58	54	45	70		70	87	82	86	82	77	74	72	69	84
	60	84	84	65	62	58	58	54	45	71		60	88	83	85	82	77	74	72	70	84
1180	100	82	80	82	78	72	72	66	61	80	2150	100	95	92	94	94	88	85	84	77	95
	90	80	79	81	76	70	69	64	59	78		90	94	90	92	92	87	83	79	74	93
	80	82	76	79	75	68	66	63	58	77		80	92	89	91	90	85	82	78	75	91
	70	85	75	77	73	68	66	64	59	75		70	92	89	90	89	85	81	78	76	91
	60	84	76	76	72	68	65	64	60	75		60	93	90	91	89	85	81	78	77	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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

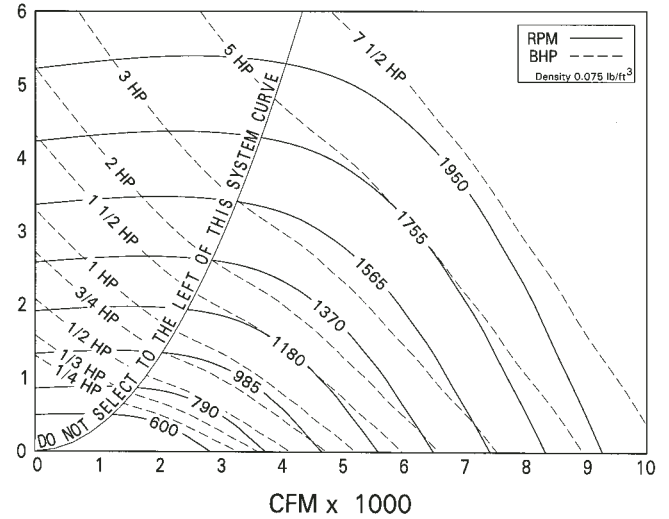
All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 20 in.
Shaft Diameter = 1 1/4 in.
Outlet Area = 2.23 ft²
Max Motor Frame Size = 215T

Tip Speed = 5.23 x RPM
Maximum BHP = (RPM/1027)³
Max RPM = 1950
Unit Weight = 389 lbs

Static Pressure in inches W.G.



CFM	OV	Static Pressure in Inches																			
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	807	630	0.22	849	0.48																
2200	986	670	0.28	871	0.55	1039	0.88														
2600	1166	723	0.35	895	0.64	1062	0.99	1203	1.37												
3000	1345	786	0.44	934	0.75	1085	1.11	1226	1.52	1350	1.96										
3400	1525	854	0.56	984	0.88	1114	1.25	1249	1.69	1373	2.15	1486	2.64	1589	3.15						
3800	1704	924	0.70	1041	1.04	1159	1.44	1274	1.86	1396	2.36	1509	2.87	1612	3.41	1708	3.97	1800	4.54		
4200	1884	996	0.86	1104	1.23	1210	1.64	1317	2.09	1420	2.57	1532	3.12	1635	3.69	1731	4.27	1822	4.88	1907	5.50
4600	2063	1072	1.06	1171	1.46	1267	1.88	1365	2.35	1462	2.85	1556	3.38	1658	3.98	1754	4.60	1845	5.23	1930	5.88
5000	2243	1149	1.28	1241	1.71	1329	2.16	1418	2.63	1508	3.17	1596	3.71	1684	4.29	1778	4.93	1868	5.60	1953	6.28
5400	2422	1227	1.53	1311	1.99	1395	2.48	1477	2.97	1559	3.50	1643	4.09	1724	4.67	1805	5.30	1891	5.98		
5800	2602	1305	1.82	1383	2.31	1463	2.83	1538	3.35	1616	3.90	1693	4.48	1771	5.11	1847	5.74	1922	6.40		
6200	2781	1384	2.15	1458	2.68	1533	3.22	1605	3.78	1676	4.34	1748	4.93	1820	5.57	1893	6.25				
6600	2960	1463	2.52	1535	3.10	1603	3.65	1673	4.24	1739	4.83	1807	5.44	1874	6.08	1942	6.76				
7000	3140	1543	2.93	1612	3.54	1675	4.12	1742	4.74	1806	5.37	1868	6.00	1932	6.66						
7400	3319	1623	3.39	1689	4.03	1749	4.65	1812	5.29	1874	5.96	1933	6.62								
7800	3499	1704	3.90	1767	4.57	1825	5.24	1883	5.89	1943	6.58										

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

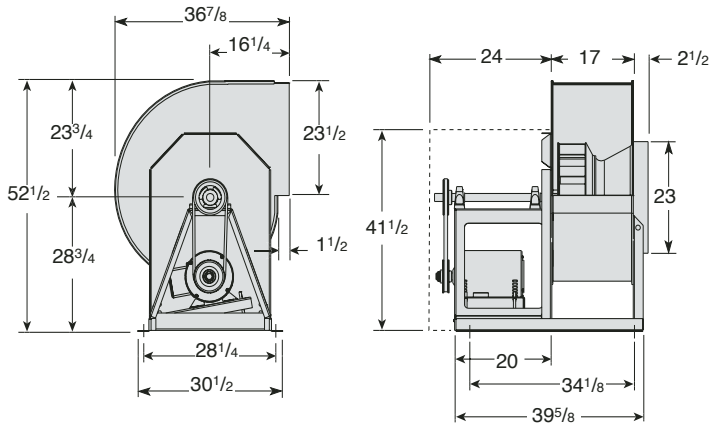
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
650	100	81	78	70	67	63	60	54	46	70	1520	100	90	86	91	87	81	80	77	69	89
	90	80	77	69	65	61	59	53	44	69		90	89	84	89	85	79	77	72	67	87
	80	81	75	68	64	60	58	52	43	67		80	88	83	87	83	78	75	72	68	85
	70	83	76	66	63	59	58	52	43	67		70	87	83	86	82	78	75	72	70	84
	60	84	77	65	62	59	57	53	44	67		60	88	84	86	82	78	75	72	71	84
1880	100	94	92	94	93	87	85	82	76	94	1950	100	95	93	95	94	88	86	83	77	95
	90	93	89	92	91	86	82	78	73	92		90	94	91	93	92	87	83	79	74	93
	80	92	89	91	89	84	81	77	74	91		80	93	90	91	90	85	82	78	75	92
	70	91	89	90	88	84	80	78	75	90		70	92	90	91	89	85	81	79	76	91
	60	92	90	90	88	84	80	78	76	90		60	93	91	91	89	85	81	79	77	91

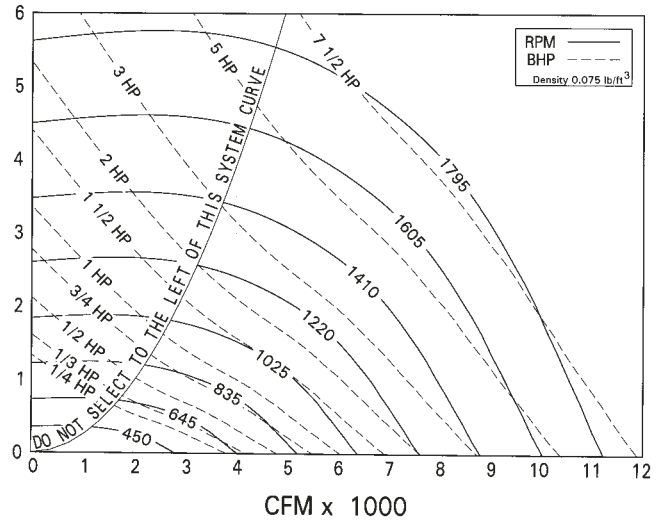
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

SWB-M222 Series 200

All dimensions are in inches.
For additional discharge positions see page 9.



Static Pressure in inches W.G.



Wheel Diameter = 22 1/4 in.
 Shaft Diameter = 1 1/4 in.
 Outlet Area = 2.74 ft²
 Max Motor Frame Size = 215T

Tip Speed = 5.82 x RPM
 Maximum BHP = (RPM/897)³
 Max RPM = 1795
 Unit Weight = 450 lbs

CFM	OV	Static Pressure in Inches																					
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0			
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP		
2300	848	587	0.27	777	0.55																		
2750	1014	625	0.34	799	0.65	951	1.00																
3200	1180	671	0.42	828	0.76	967	1.13	1099	1.54	1225	1.99												
3650	1346	723	0.52	863	0.88	996	1.29	1114	1.72	1229	2.19	1343	2.69										
4100	1512	781	0.64	903	1.02	1026	1.47	1143	1.93	1247	2.42	1347	2.93	1453	3.49	1550	4.06						
4550	1678	841	0.79	952	1.19	1063	1.66	1173	2.16	1276	2.68	1370	3.22	1457	3.77	1554	4.38	1646	5.00	1733	5.64		
5000	1845	903	0.96	1003	1.39	1103	1.86	1206	2.41	1305	2.96	1399	3.53	1485	4.12	1566	4.73	1650	5.36	1737	6.04		
5450	2011	969	1.16	1059	1.61	1153	2.12	1245	2.67	1336	3.27	1428	3.87	1514	4.50	1595	5.13	1671	5.79	1742	6.45		
5900	2177	1034	1.39	1117	1.86	1203	2.39	1288	2.96	1375	3.58	1458	4.23	1544	4.89	1624	5.57	1699	6.25	1771	6.95		
6350	2343	1100	1.66	1178	2.16	1256	2.71	1337	3.30	1415	3.92	1496	4.61	1574	5.31	1653	6.02	1728	6.74				
6800	2509	1167	1.96	1239	2.50	1313	3.06	1388	3.68	1462	4.32	1536	5.01	1611	5.75	1683	6.51	1758	7.26				
7250	2675	1235	2.29	1303	2.87	1372	3.45	1440	4.09	1512	4.77	1580	5.46	1651	6.22	1721	7.01	1789	7.81				
7700	2841	1303	2.67	1369	3.28	1432	3.89	1497	4.55	1562	5.24	1629	5.97	1692	6.72	1760	7.53						
8150	3007	1371	3.08	1435	3.72	1494	4.39	1555	5.04	1615	5.78	1679	6.52	1741	7.30								
8600	3173	1440	3.54	1500	4.23	1555	4.93	1615	5.60	1672	6.35	1730	7.12	1791	7.93								
9050	3339	1508	4.04	1566	4.78	1621	5.50	1675	6.22	1730	6.96	1785	7.78										

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

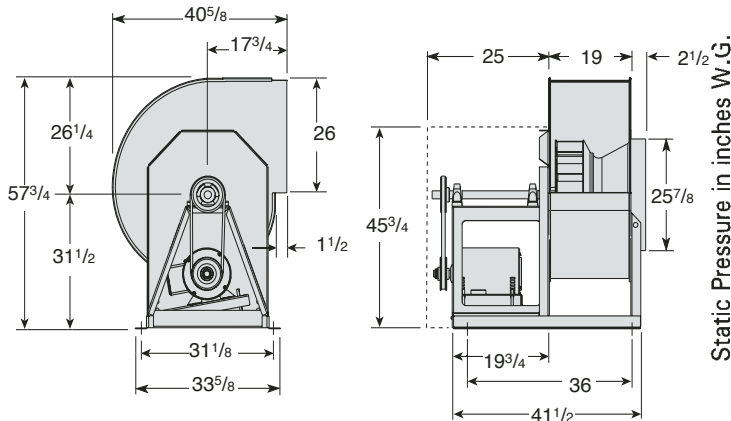
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
600	100	83	78	71	68	64	61	55	46	71	1400	100	91	88	92	88	82	81	77	69	90
	90	82	78	70	66	63	60	54	45	70		90	89	86	90	86	81	78	73	68	88
	80	82	76	69	65	61	59	53	44	69		80	88	85	88	84	79	76	73	69	86
	70	84	76	68	64	61	59	53	44	68		70	88	85	87	83	79	76	73	71	86
	60	85	77	66	63	60	59	54	45	68		60	89	86	87	83	79	76	74	72	86
	1000	100	84	83	83	78	74	72	67	63		81	1795	100	96	94	96	95	90	87	84
90		82	81	82	77	72	70	65	60	79	90	95		92	94	93	88	84	80	75	94
80		83	79	80	75	70	68	64	59	78	80	94		92	93	91	86	83	80	76	93
70		84	78	79	74	70	67	65	60	77	70	93		92	92	90	86	82	80	77	92
60		83	78	77	73	70	67	66	62	76	60	94		92	92	90	86	82	80	78	92

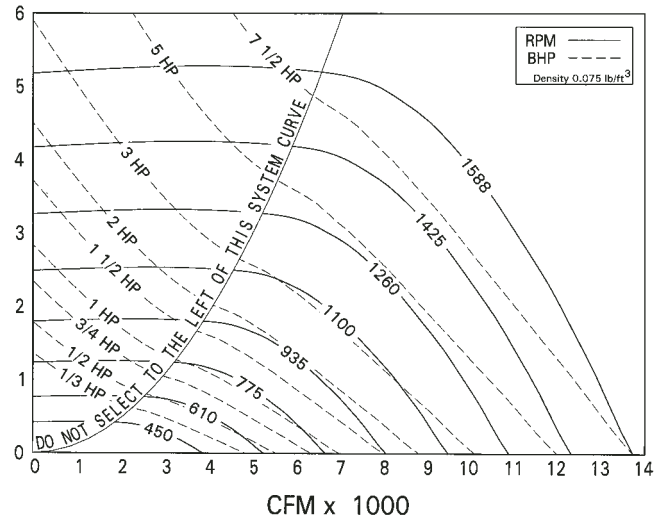
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 24 1/2 in.
Shaft Diameter = 1 1/2 in.
Outlet Area = 3.40 ft²
Max Motor Frame Size = 256T

Tip Speed = 6.41 x RPM
Maximum BHP = (RPM/749)³
Max RPM = 1588
Unit Weight = 568 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
2800	848	515	0.32																			
3350	1015	550	0.40	707	0.77																	
3900	1182	594	0.50	726	0.89	861	1.37															
4450	1349	642	0.62	759	1.03	874	1.51	993	2.08													
5000	1516	693	0.77	798	1.21	900	1.71	1005	2.27	1111	2.92											
5550	1682	745	0.95	843	1.42	936	1.95	1029	2.52	1123	3.15	1218	3.88	1306	4.64							
6100	1849	800	1.15	890	1.67	976	2.21	1061	2.81	1145	3.46	1230	4.15	1318	4.95	1400	5.77					
6650	2016	856	1.39	940	1.95	1020	2.52	1097	3.15	1175	3.81	1253	4.53	1330	5.27	1412	6.13	1489	7.02	1561	7.93	
7200	2183	914	1.66	992	2.26	1067	2.88	1138	3.52	1210	4.21	1282	4.93	1354	5.72	1424	6.51	1501	7.42	1573	8.37	
7750	2349	972	1.97	1044	2.61	1116	3.27	1184	3.94	1250	4.66	1317	5.41	1382	6.19	1450	7.04	1516	7.89	1586	8.83	
8300	2516	1031	2.31	1098	3.00	1166	3.70	1231	4.42	1292	5.14	1355	5.93	1418	6.74	1478	7.58	1542	8.49			
8850	2683	1090	2.71	1154	3.44	1218	4.18	1279	4.94	1339	5.70	1397	6.50	1455	7.34	1514	8.21	1572	9.10			
9400	2850	1150	3.15	1211	3.92	1270	4.70	1329	5.50	1387	6.31	1442	7.13	1497	7.99	1551	8.89					
9950	3016	1211	3.64	1268	4.45	1323	5.27	1380	6.11	1435	6.97	1489	7.83	1540	8.70							
10500	3183	1272	4.19	1326	5.03	1378	5.90	1433	6.78	1485	7.67	1537	8.58	1587	9.49							
11050	3350	1333	4.79	1384	5.67	1435	6.58	1486	7.50	1536	8.44	1586	9.38									

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

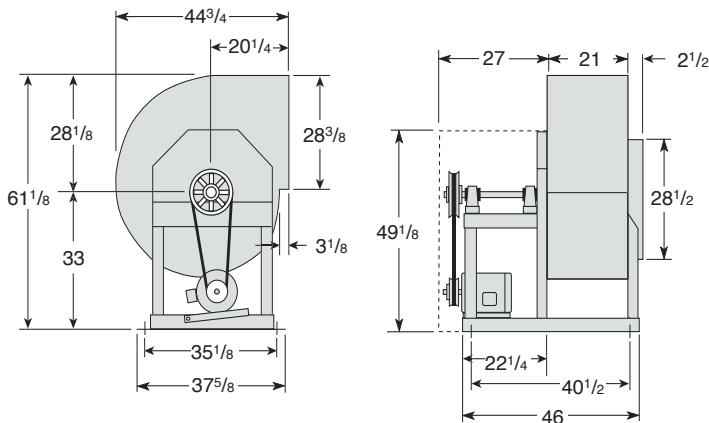
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
525	100	82	69	65	65	57	54	48	39	66	1235	100	90	84	93	86	82	80	77	68	89
	90	81	70	65	65	57	54	49	39	66		90	89	82	93	84	79	78	73	67	88
	80	81	70	65	65	58	54	49	40	66		80	89	81	90	82	78	77	71	67	86
	70	81	70	65	64	58	54	50	41	66		70	88	79	87	81	77	76	72	68	84
	60	81	69	65	64	58	54	50	41	66		60	90	80	87	81	78	76	72	69	84
880	100	86	79	82	75	71	71	63	58	79	1590	100	95	91	95	94	89	87	84	77	96
	90	85	79	81	74	70	70	62	57	78		90	93	90	95	93	87	84	80	74	94
	80	84	78	80	73	70	68	62	57	77		80	94	89	93	91	85	83	78	74	92
	70	85	76	78	72	70	68	63	57	76		70	92	87	90	89	84	82	79	75	91
	60	85	74	76	71	69	67	64	58	75		60	94	88	90	89	84	82	79	76	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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

SWB-M227 Series 200

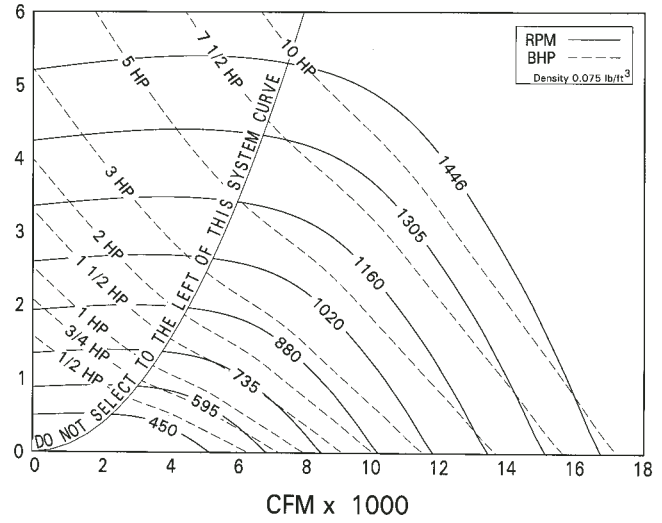
All dimensions are in inches.
 For additional discharge positions see page 9.



Wheel Diameter = 26⁷/₈ in.
 Shaft Diameter = 1¹/₂ in.
 Outlet Area = 4.10 ft²
 Max Motor Frame Size = 284T

Tip Speed = 7.03 x RPM
 Maximum BHP = (RPM/637)³
 Max RPM = 1446
 Unit Weight = 715 lbs

Static Pressure in inches W.G.



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
3800	947	489	0.44	642	0.89																	
4450	1109	522	0.55	662	1.03	780	1.57															
5100	1271	563	0.68	682	1.19	800	1.78	899	2.41													
5750	1433	606	0.85	706	1.36	820	2.00	919	2.68	1007	3.39	1090	4.15									
6400	1596	652	1.04	744	1.59	841	2.24	939	2.97	1027	3.73	1106	4.52	1179	5.34							
7050	1758	699	1.26	785	1.86	865	2.51	960	3.28	1047	4.09	1126	4.92	1199	5.79	1267	6.68	1335	7.62			
7700	1920	748	1.52	828	2.17	904	2.85	981	3.61	1067	4.47	1146	5.36	1219	6.27	1286	7.21	1350	8.17	1411	9.16	
8350	2082	799	1.81	872	2.51	943	3.23	1012	4.01	1088	4.87	1167	5.81	1239	6.78	1307	7.76	1370	8.78	1430	9.81	
9000	2244	850	2.15	918	2.90	985	3.67	1050	4.47	1111	5.32	1187	6.29	1260	7.31	1327	8.34	1390	9.41			
9650	2406	901	2.53	965	3.33	1029	4.15	1089	4.99	1150	5.87	1209	6.80	1280	7.87	1347	8.95	1411	10.06			
10300	2568	954	2.96	1013	3.81	1073	4.68	1132	5.57	1187	6.47	1244	7.43	1301	8.46	1368	9.59	1431	10.76			
10950	2730	1006	3.45	1063	4.35	1120	5.26	1175	6.20	1228	7.14	1281	8.13	1333	9.16	1389	10.27					
11600	2892	1059	3.99	1113	4.93	1166	5.89	1219	6.88	1271	7.88	1320	8.89	1371	9.95	1419	11.05					
12250	3054	1113	4.59	1164	5.57	1214	6.59	1265	7.62	1314	8.67	1362	9.73	1409	10.8							
12900	3216	1167	5.25	1215	6.28	1263	7.35	1311	8.42	1358	9.52	1405	10.63									
13550	3379	1221	5.97	1267	7.04	1313	8.17	1358	9.29	1404	10.44											

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.
 Performance ratings do not include the effects of appurtenances (accessories).

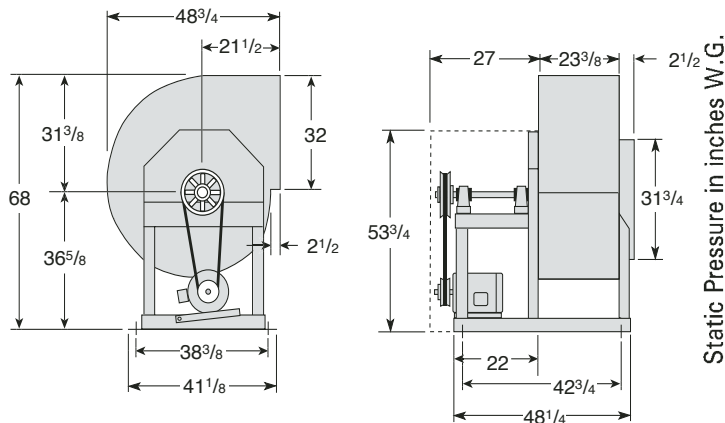
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
500	100	81	71	68	65	59	55	49	40	67	1130	100	90	86	93	86	83	81	77	68	90
	90	81	71	67	65	59	55	49	40	67		90	89	85	93	84	80	79	73	67	88
	80	80	71	67	65	59	55	50	41	66		80	89	83	90	83	79	77	71	67	86
	70	80	70	67	64	59	56	50	41	66		70	87	81	87	82	78	76	72	69	85
	60	80	70	66	64	59	56	51	42	66		60	89	82	87	82	78	76	73	69	85
815	100	86	81	82	76	73	72	64	58	80	1446	100	95	93	96	94	90	87	84	77	96
	90	85	80	82	75	72	70	63	57	79		90	94	91	96	93	87	85	80	74	94
	80	84	79	80	74	71	69	63	58	78		80	94	91	93	91	86	83	79	74	92
	70	84	77	78	73	71	68	63	58	77		70	92	88	91	89	85	82	79	76	91
	60	85	76	77	72	70	68	64	58	76		60	94	89	91	89	85	82	79	76	91

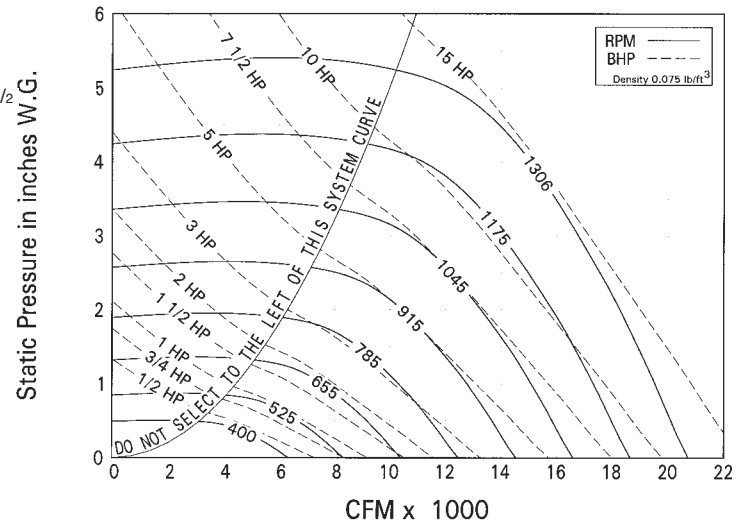
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = $29\frac{5}{8}$ in.
Shaft Diameter = $1\frac{3}{4}$ in.
Outlet Area = 5.03 ft²
Max Motor Frame Size = 284T

Tip Speed = 7.75 x RPM
Maximum BHP = $(\text{RPM}/534)^3$
Max RPM = 1306
Unit Weight = 810 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
4000	805	418	0.46																			
5000	1007	449	0.59	579	1.16																	
6000	1208	492	0.78	597	1.37	707	2.10															
7000	1410	541	1.02	632	1.65	725	2.40	818	3.26													
8000	1611	592	1.31	674	2.00	754	2.78	836	3.66	918	4.64	992	5.66									
9000	1813	646	1.67	721	2.43	791	3.25	863	4.14	936	5.14	1010	6.24	1077	7.37	1143	8.55					
10000	2014	701	2.09	770	2.93	835	3.80	898	4.74	962	5.75	1028	6.84	1095	8.05	1159	9.29	1218	10.57	1278	11.90	
11000	2215	758	2.59	821	3.51	882	4.45	939	5.43	997	6.48	1056	7.59	1114	8.77	1177	10.09	1236	11.44	1292	12.82	
12000	2417	816	3.18	873	4.17	930	5.19	985	6.23	1037	7.31	1090	8.47	1144	9.68	1195	10.93	1254	12.34			
13000	2618	875	3.86	928	4.93	981	6.02	1032	7.14	1082	8.27	1130	9.46	1179	10.71	1229	12.02	1276	13.37			
14000	2820	935	4.65	984	5.79	1033	6.95	1081	8.15	1128	9.35	1174	10.58	1219	11.87	1264	13.22					
15000	3021	994	5.54	1041	6.76	1086	7.99	1132	9.26	1177	10.55	1220	11.84	1263	13.17	1304	14.55					
16000	3223	1055	6.56	1098	7.83	1141	9.16	1184	10.49	1227	11.85	1268	13.23									
17000	3424	1116	7.70	1156	9.04	1197	10.44	1236	11.85	1277	13.29											
18000	3626	1177	8.97	1215	10.38	1254	11.85	1291	13.34													
19000	3827	1238	10.39	1274	11.86																	

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

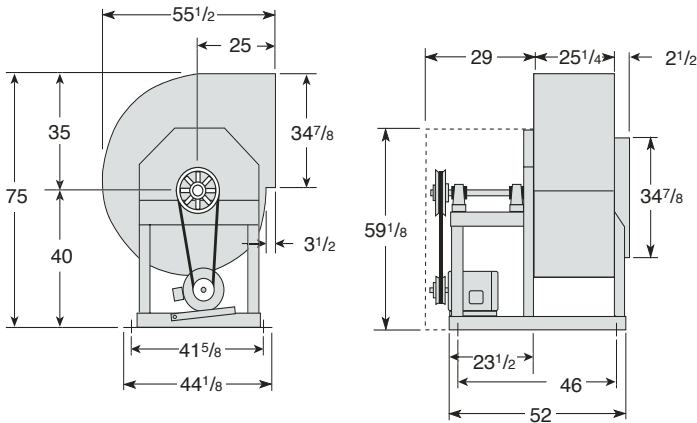
% WOV = (CFM x 100) / (RPM x 3.60)

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
425	100	80	70	67	65	58	54	47	38	66	1010	100	90	88	92	86	83	81	76	67	90
	90	80	70	67	65	58	54	48	38	66		90	89	87	92	84	81	78	73	67	88
	80	80	70	67	64	58	54	48	39	66		80	89	85	90	83	79	77	71	67	86
	70	80	70	67	64	58	55	49	39	66		70	87	83	87	82	79	76	72	69	85
	60	79	70	67	64	59	55	49	40	66		60	89	83	87	82	79	76	73	69	85
	60	79	70	67	64	59	55	49	40	66		60	89	83	87	82	79	76	73	69	85
720	100	86	82	82	76	73	71	63	58	79	1306	100	96	94	97	95	90	88	84	76	96
	90	85	81	81	75	72	70	63	57	78		90	94	93	96	93	88	85	80	75	95
	80	84	80	80	74	71	68	62	57	77		80	95	92	94	91	86	84	79	74	93
	70	84	78	78	73	71	68	63	57	77		70	93	90	92	89	85	83	80	76	92
	60	84	77	76	72	71	68	64	58	76		60	94	91	92	89	86	83	80	77	92
	60	84	77	76	72	71	68	64	58	76		60	94	91	92	89	86	83	80	77	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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

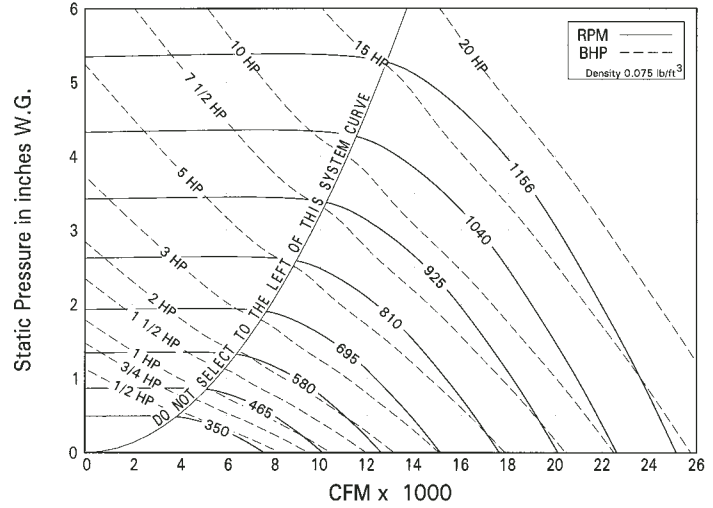
SWB-M233 Series 200

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 33 in.
Shaft Diameter = 1 3/4 in.
Outlet Area = 6.12 ft²
Max Motor Frame Size = 286T

Tip Speed = 8.64 x RPM
Maximum BHP = (RPM/452)³
Max Steel/Aluminum RPM = 1156/975
Unit Weight = 980 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
6000	991	398	0.68	508	1.33																	
7000	1156	430	0.87	527	1.58	619	2.35															
8000	1322	465	1.09	550	1.80	634	2.68	714	3.59													
9000	1487	502	1.35	579	2.11	655	3.03	728	4.01	799	5.04											
10000	1652	540	1.65	611	2.50	678	3.38	748	4.50	813	5.56	876	6.69									
11000	1817	579	2.01	646	2.94	708	3.87	771	4.94	832	6.20	891	7.35	948	8.54							
12000	1983	620	2.42	683	3.42	741	4.44	796	5.46	855	6.74	911	8.11	965	9.36	1016	10.64	1072	12.12			
13000	2148	661	2.90	720	3.96	774	5.08	828	6.18	878	7.32	933	8.76	985	10.25	1035	11.61	1083	12.98	1132	14.47	
14000	2313	702	3.44	758	4.57	811	5.76	860	6.96	908	8.14	956	9.45	1007	11.01	1055	12.61	1102	14.09	1147	15.56	
15000	2478	744	4.06	797	5.26	848	6.51	894	7.81	940	9.07	984	10.35	1030	11.81	1077	13.48	1122	15.19			
16000	2644	787	4.76	837	6.02	885	7.34	930	8.71	973	10.09	1016	11.43	1057	12.80	1100	14.39	1145	16.17			
17000	2809	830	5.54	878	6.87	923	8.26	967	9.69	1008	11.17	1049	12.61	1088	14.04	1126	15.49					
18000	2974	874	6.42	919	7.81	961	9.26	1004	10.77	1044	12.31	1082	13.88	1121	15.38							
19000	3139	918	7.39	960	8.83	1001	10.36	1042	11.93	1081	13.54	1117	15.18	1154	16.82							
20000	3305	962	8.46	1002	9.96	1042	11.56	1080	13.19	1118	14.87	1154	16.58									
21000	3470	1006	9.64	1044	11.2	1082	12.86	1119	14.56	1156	16.31											

Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

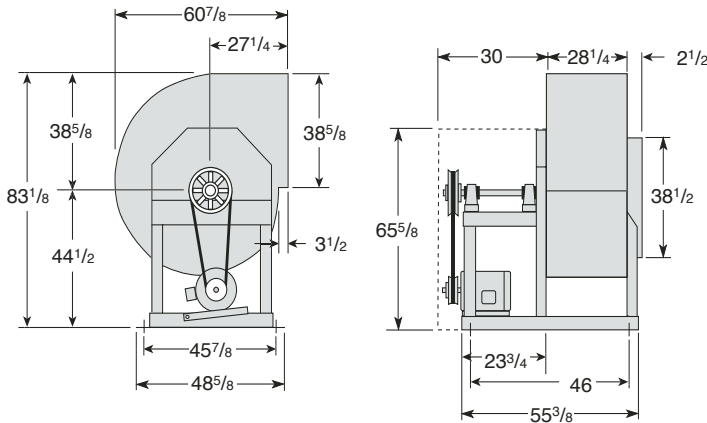
Sound Power [dB Ref 10⁻¹² watts]

$$\% \text{ WOV} = (\text{CFM} \times 100) / (\text{RPM} \times 3.60)$$

INLET SOUND POWER, Lwi																					
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
400	100	79	71	68	65	59	55	48	39	67	900	100	90	90	92	86	83	81	75	66	89
	90	79	71	68	65	59	55	48	39	67		90	88	89	91	84	81	78	72	66	88
	80	79	71	68	64	59	55	48	39	66		80	88	87	89	82	79	76	71	67	86
	70	79	71	68	64	59	55	49	40	66		70	86	85	87	81	79	76	72	68	85
	60	78	70	68	64	59	56	50	41	66		60	88	85	86	82	79	76	73	69	85
	650	100	86	83	81	76	74	70	63	58		80	1155	100	95	95	97	94	90	88	83
90		85	82	81	75	73	69	62	57	79	90	94		94	96	92	88	84	80	74	94
80		84	81	79	74	72	68	62	57	78	80	94		93	94	90	86	83	78	74	92
70		83	79	78	73	71	68	63	57	77	70	92		91	92	89	85	82	79	76	91
60		83	78	76	73	71	68	64	58	76	60	93		91	92	89	85	82	80	77	91

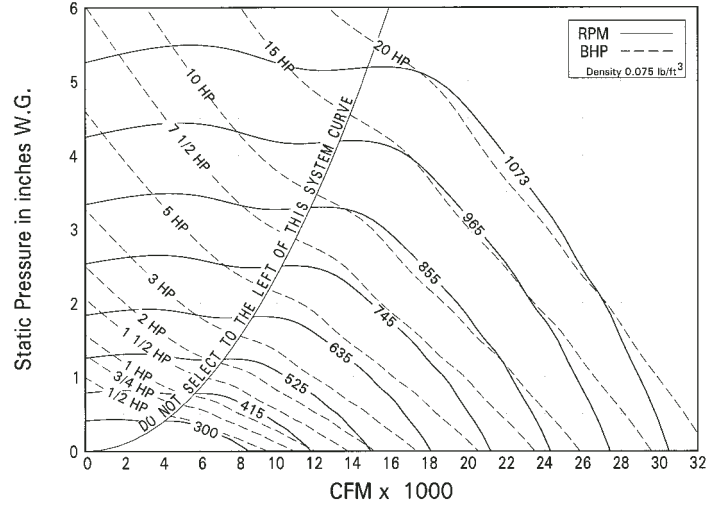
The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.

All dimensions are in inches.
For additional discharge positions see page 9.



Wheel Diameter = 36 1/4 in.
 Shaft Diameter = 2 in.
 Outlet Area = 7.52 ft²
 Max Motor Frame Size = 286T

Tip Speed = 9.46 x RPM
 Maximum BHP = (RPM/387)³
 Max Steel/Aluminum RPM = 1073/960
 Unit Weight = 1170 lbs



CFM	OV	Static Pressure in Inches																				
		0.5		1.0		1.5		2.0		2.5		3.0		3.5		4.0		4.5		5.0		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
7000	948	362	0.81	472	1.62																	
8200	1111	390	1.02	481	1.83	578	2.89															
9400	1273	420	1.26	501	2.14	582	3.18	668	4.44													
10600	1436	452	1.55	528	2.53	596	3.54	670	4.79	747	6.23											
11800	1598	487	1.90	556	2.96	620	4.07	683	5.26	748	6.67	818	8.27									
13000	1761	520	2.28	586	3.43	647	4.67	703	5.88	762	7.26	820	8.81	883	10.55	945	12.38					
14200	1924	556	2.74	617	3.98	675	5.31	729	6.63	778	7.97	834	9.52	888	11.21	944	13.06	1002	15.03			
15400	2086	594	3.30	651	4.61	705	5.99	756	7.46	804	8.88	850	10.34	901	12.04	952	13.87	1001	15.79	1056	17.91	
16600	2249	633	3.93	686	5.32	735	6.75	785	8.32	831	9.88	875	11.42	917	12.99	965	14.82	1012	16.78	1057	18.79	
17800	2411	672	4.63	719	6.07	767	7.60	814	9.23	859	10.96	902	12.59	942	14.25	981	15.94	1026	17.86	1070	19.95	
19000	2574	711	5.42	754	6.90	801	8.58	845	10.25	888	12.04	929	13.86	969	15.60	1007	17.38	1043	19.17			
20200	2737	751	6.30	790	7.85	836	9.66	876	11.36	918	13.20	958	15.15	996	17.05	1033	18.91	1069	20.80			
21400	2899	791	7.29	829	8.95	870	10.77	909	12.60	949	14.50	987	16.49	1024	18.57	1060	20.56					
22600	3062	831	8.38	867	10.16	904	11.96	944	13.98	980	15.89	1017	17.95	1054	20.09							
23800	3224	871	9.58	906	11.48	938	13.25	979	15.46	1013	17.44	1048	19.54									
25000	3387	911	10.90	945	12.88	976	14.77	1013	16.95	1048	19.14											

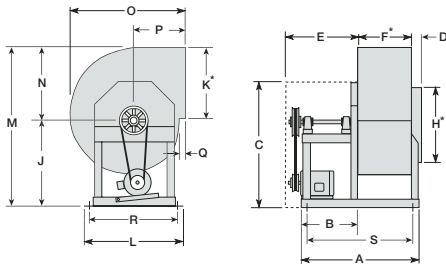
Performance certified is for installation Type B - free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.
 Performance ratings do not include the effects of appurtenances (accessories).

Sound Power [dB Ref 10⁻¹² watts]

% WOV = (CFM x 100) / (RPM x 3.60)

		INLET SOUND POWER, Lwi																			
RPM	% WOV	1	2	3	4	5	6	7	8	LwiA	RPM	% WOV	1	2	3	4	5	6	7	8	LwiA
375	100	80	72	70	66	60	56	48	40	68	840	100	90	92	92	87	85	82	75	66	91
	90	80	72	70	66	60	56	49	40	68		90	89	92	92	85	82	79	73	67	89
	80	80	72	69	65	61	56	49	40	68		80	88	90	89	83	81	77	72	68	87
	70	79	72	69	65	61	57	50	41	67		70	86	87	87	82	80	77	73	70	86
	60	79	71	69	65	61	57	51	42	67		60	87	87	87	83	80	77	74	71	86
610	100	86	85	82	77	75	71	64	59	81	1073	100	96	97	98	95	91	89	83	76	97
	90	85	84	81	76	74	70	63	58	80		90	95	96	97	93	89	85	80	74	95
	80	84	83	80	75	73	69	63	58	79		80	95	95	95	91	87	84	79	74	93
	70	83	81	78	74	72	69	64	58	78		70	93	92	93	90	86	83	80	77	92
	60	83	79	77	74	72	69	64	58	77		60	94	93	93	90	86	83	81	78	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 and LwiA sound power levels for installation Type B: free inlet, ducted outlet. Outlet ratings include the effects of duct end correction. The AMCA Certified ratings Seal applies to air performance ratings only.



* F, H, and K are outside dimensions.

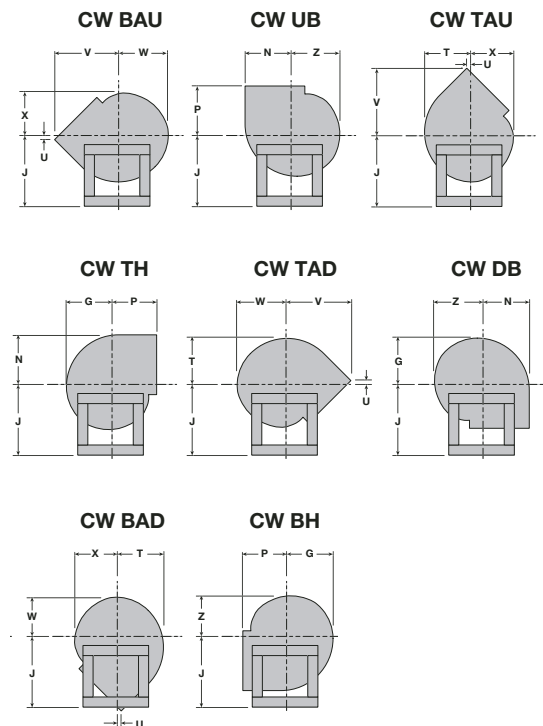
200 Series SWB-M

Unit Size	Wheel Dia.	Shaft Dia.	A	B	C	D	E	F	H	J	K	L	M	N	O	P	Q	R	S	Mounting Hole Size	Weight* (Lbs.)
210	11½	¾	22	12	22¼	2	15½	8¼	11	15½	11¼	16½	26½	11½	18¾	8½	1½	16	20½	½	140
212	12¼	1	23	12	22¼	2	15½	9½	13	15½	13	16½	28½	13¼	21½	9¼	1½	16	21½	½	170
213	13½	1	25½	13	24¾	2	16¾	10½	14	16½	14¼	18½	31¼	14¾	23½	10½	1½	17½	22½	½	183
215	15	1	28¼	15	27½	2	18½	11½	15½	18½	15¼	21½	34¼	16¼	25½	11½	1½	20	24½	½	231
216	16½	1¼	30¾	16	30	2	19½	12¾	17½	20½	17½	22½	38½	17¾	28	12½	1½	21½	28¼	½	251
218	18¼	1¼	34	17½	33¼	2	22	14¾	19¼	22½	19½	25	42	19½	30½	13¼	1½	23½	32¼	½	324
220	20	1¼	37	19½	36½	2	23¼	15½	21½	24½	21½	27½	46	21½	33½	14¾	1½	25½	35	5/8	389
222	22¼	1¼	39½	20	41½	2½	24	17	23	28½	23½	30½	52½	23¼	36½	16¼	1½	28½	34½	5/8	450
224	24½	1½	41½	19¾	45¾	2½	25	19	25½	31½	26	33½	57¼	26¼	40½	17¾	1½	31½	36	5/8	568
227	26½	1½	46	22¼	49½	2½	27	21	28½	33	28½	37½	61½	28½	44¼	20¼	3½	35½	40½	5/8	715
230	29½	1¾	48¼	22	53¼	2½	27	23½	31¾	36½	32	41½	68	31½	48¼	21½	2½	38½	42¼	5/8	810
233	33	1¾	52	23½	59½	2½	29	25¼	34¾	40	34¾	44½	75	35	55½	25	3½	41½	46	5/8	980
236	36¼	2	55½	23¾	65½	2½	30	28¼	38½	44½	38½	48½	83½	38½	60½	27¼	3½	45½	46	5/8	1170

All dimensions are in inches. *Approximate shipping weight with largest frame size motor.

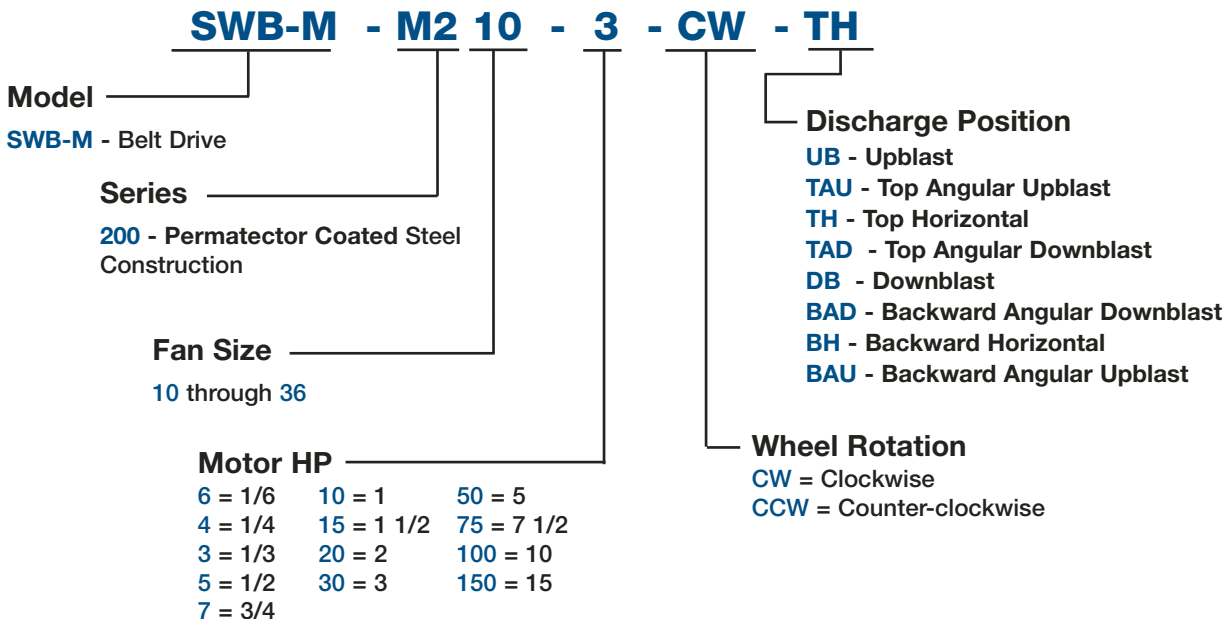
UNIT SIZE	U	V	W	X	T	G	Z
210	1⅙	14⅙	9¼	7⅓	10¼	10½	8½
212	2⅙	16⅙	10⅙	9	12½	11½	9⅙
213	2⅙	17⅙	11¼	9½	13½	12½	10½
215	3⅙	19½	13⅙	11	15½	14½	12½
216	3½	21¼	14⅙	12	16⅙	15½	13¼
218	4⅙	23½	15⅓	13¼	18⅙	17½	14½
220	4⅙	25½	17¼	14½	20⅙	18½	16½
222	5⅙	28⅙	19⅙	16	22½	20½	17⅙
224	5⅙	30⅙	21⅙	17¾	24⅙	22½	19⅙
227	5	34	22	19	26½	24½	20½
230	6⅙	38½	25	21½	29	27¼	2¼
233	7¼	41	27	23	32½	30¼	25⅓
236	8	46½	30¾	25½	35	32½	28⅙

All dimensions are in inches.



Model Number Code

The model number system is designed to completely identify the fan. The correct code letters and numbers must be specified to designate the correct construction. The remainder of the model number is determined by the size and performance selected from pages 8 through 31.



Typical Specifications

Model SWB-M Belt Drive Utility Fans

Supply, exhaust and return air fans shall be of the belt driven utility fan type in AMCA Arrangement 10 with a single width, single inlet housing, in CW or CCW rotation as specified.

The housing shall be constructed of heavy gauge steel (or aluminum optional) with air tight lock formed seams. The housing shall be easily rotated in the field to any of the eight standard discharge positions. Housing and bearing supports shall be constructed of welded steel members to prevent vibration and to rigidly support the shaft and bearings.

The fan wheel shall be of the non-overloading backward inclined, centrifugal fan type and constructed of heavy gauge steel for the series 200 (except size M210 has aluminum).

Wheels shall be statically and dynamically balanced. The wheel cone and fan inlet cone shall be carefully matched for maximum performance and operating efficiency.

Motors shall be heavy duty, ball bearing type matched to the fan load and furnished at the specified voltage, phase and enclosure. The fan shaft shall be ground and polished solid steel mounted in heavy duty, permanently sealed, pillow block ball bearings. Bearings shall be selected for a minimum L10 life in excess of 100,000 hours of maximum cataloged operating speed. Drives shall be sized for a minimum of 150% of driven horsepower. Pulleys shall be of the fully machined cast iron type, keyed and securely attached to the wheel and motor shafts. The motor pulley shall be adjustable for final system balancing.

All fans shall bear the AMCA Certified Ratings Seal for air performance.

Utility fans shall be model SWB-M (with backward inclined wheels) as manufactured by Greenheck, of Schofield, Wisconsin.

Centrifugal Utility Fans



Model SFD centrifugal forward curved direct driven utility fans are designed for supply, exhaust and return air applications requiring low to medium air volume and pressure. Capacities range from 232 cfm to 2,641 cfm and up to 2 in. wg of static pressure.



Model SFB centrifugal forward curved belt driven utility fans are designed for supply, exhaust and return air applications requiring high air volumes and low static pressures. Capacities range from 300 cfm to 20,000 cfm and up to 2½ in. wg of static pressure.



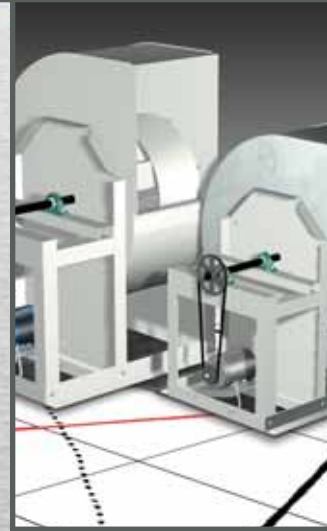
Model SWB Series 100 centrifugal backward inclined belt driven utility fans are designed for supply, exhaust and return air applications requiring high air volumes and high static pressures. The fan's galvanized construction make them cost efficient with capacities ranging from 500 cfm to 23,000 cfm and up to 3 in. wg of static pressure.



Model SWB-M Series 200 centrifugal backward inclined belt driven utility fans are designed for supply, exhaust and return air applications requiring high air volumes and high static pressures. With heavy gauge steel construction, these light industrial duty fans have capacities ranging from 500 cfm to 30,000 cfm and up to 5 in. wg of static pressure. Aluminum airstream construction is also available.



Model BISW-21 (PermaLock scroll) and **Model BISW-41** (welded scroll) Industrial duty centrifugals, for moderate to high pressures, feature backward inclined flat-bladed (BI) or airfoil (AF) wheels. These units can be either belt drive or direct drive with capacities ranging from 50 cfm to 200,000 cfm and up to 20 in. wg of static pressure. Maximum operating temperature is 1,000°F. Construction options includes single width or double width. Alternative materials such as stainless steel and aluminum are also available.



Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of top

quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time. And building

owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

Our Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the purchase date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Greenheck prove defective during this period, they should be returned to the nearest authorized motor service station. Greenheck will not be responsible for any removal or installation costs.

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

