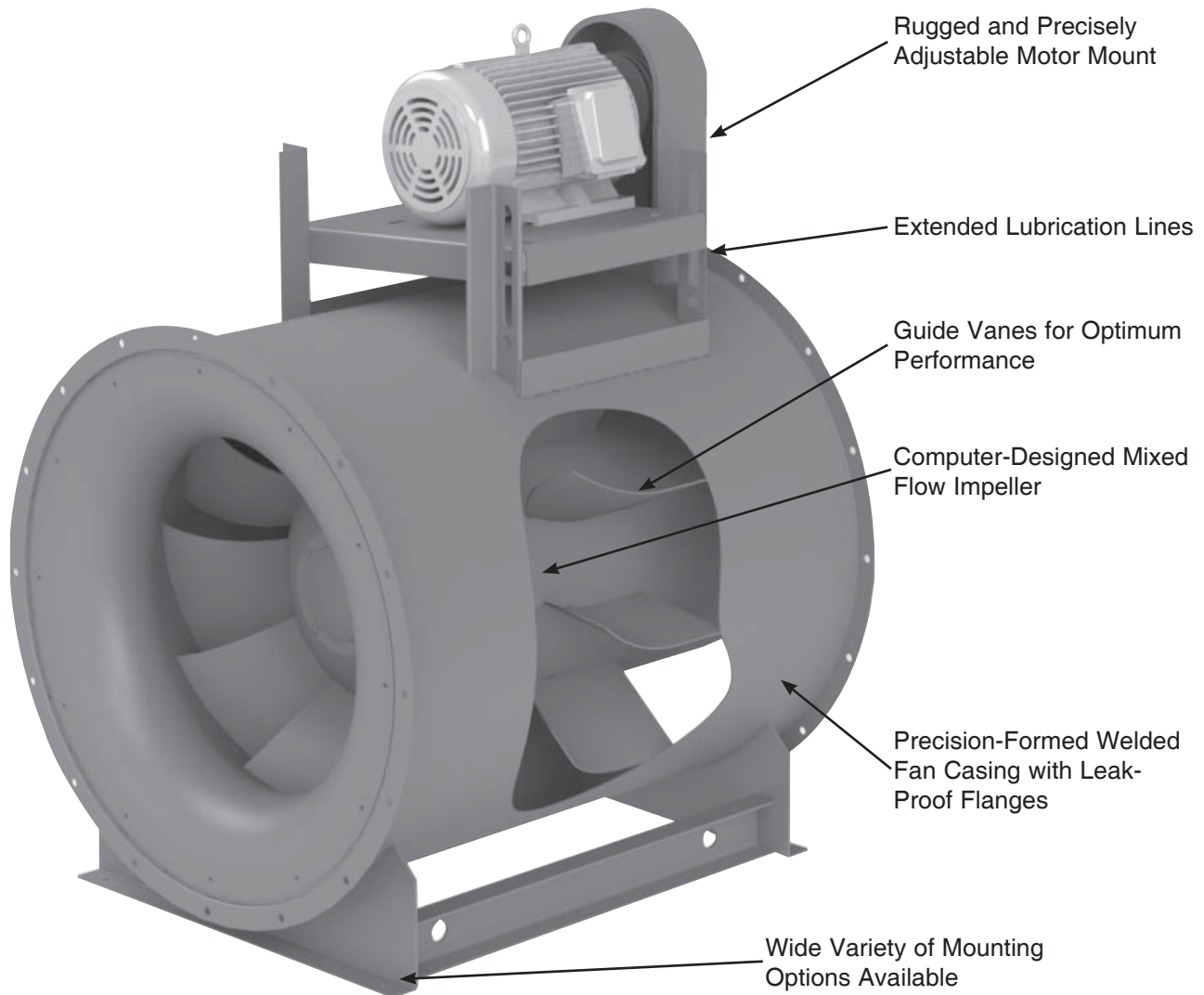


Model VMBL

CONSTRUCTION FEATURES - Advanced Mixed Flow Fan



A product of the latest computerized design techniques, improving upon already proven designs, the VMBL Mixed Flow Fan is designed to save the user cost both in terms of energy consumption and a long trouble-free life. Lower operating speed for a given performance level is the key to this feature, and our VMBL delivers!

The VMBL features bearings lubrication via extended lubrication lines and an externally adjustable motor base. Leakproof rolled flanges assure the fan's integrity. Shafts and bearings are sized for long and robust service life. While intended for HVAC applications, the VMBL has a heavy-duty construction, which makes it a favorite for industrial applications as well.

AMCA LICENSED AIR and SOUND DATA

The Carnes Company certifies that the Model VMBL shown herein is licensed to bear the AMCA Seal - Airflow Measurement Station Performance. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 611 and comply with the requirements of the AMCA Certified Ratings Program.



Model VMBL

ADVANCED MIXED FLOW FAN

Fans shall be VMBL Advanced Mixed Flow Fans. Fans shall be V-belt driven with fixed or adjustable pulleys. The fan impeller shall be mounted on a separate shaft and the bearings supported within a tube centered in the fan casing.

Guide Specifications

Performance

Fans shall be tested in accordance with AMCA 210 test code for air moving devices and shall be guaranteed by Carnes Company to be deliver rated published performance levels within permitted tolerances. Fans shall be tested in an AMCA-approved laboratory for air and sound performance.

Construction

Fan casing shall be minimum of welded 14-gauge. The casing joints shall be continuously welded. Drilled inlet and outlet flanges are standard and shall be integrally rolled or solid welded to insure a leak-proof casing.

Guide Vanes

Fan casing shall be fitted with aerodynamically designed stationary straightening guide vanes on the discharge side of the impeller. Vane design shall be integrated with casing design so as to maximize air-straightening effect. Vanes shall be precisely located and welded to both the fan casing and the bearing housing and act to straighten the tangential component of the air movement downstream of the impeller blades, thereby converting rotational energy losses to pressure, improving efficiency and static pressure capability and reducing power requirements.

Impeller

Impeller shall be made of fabricated steel of all welded construction. Fan impeller shall be designed by means of Computational Fluid Dynamics (CFD) software for maximum efficiency. Conversion (guide) vanes shall be matched to impeller design for improved efficiency and decreased noise output.

Shaft

Shafts shall be AISI 1040 or 1045 cold drawn steel round shapes, accurately turned, ground, polished, and checked for accuracy and straightness. Shaft size shall be selected for the first critical speed of at least 1.25 times the maximum speed.

Bearings

Bearings shall be heavy duty, grease lubricated, anti-friction ball or spherical roller, self-aligning,

flange block type and selected for a minimum average bearing life (AFBMA L-50) in excess of 200,000 hours at the maximum load. All bearings shall be provided with prefilled factory extended lubrication lines fitted with grease fittings terminating at the casing exterior.

Drive

Fans shall be equipped with a (fixed/adjustable*) pitch V-belt drive selected to operate at the required RPM. The V-belt drive is to consist of cast iron sheaves and anti-static conducting belts. Drives shall be selected with a (1.3-1.5) service factor based upon the required motor horsepower of the fan. The complete fan shaft and bearing assembly is mounted within a steel fabricated inner cylinder.

**Fixed only for select drive ranges.*

Motor

Motors for fans shall be manufactured in accordance with current applicable standards of IEEE and NEMA and, where applicable, shall meet at least current EPACT standards for efficiency level. Motors shall be foot-mounted, NEMA standard (ODP, TEFC), continuous duty, ball bearing type with class (B or F) insulation and of cast iron construction when commercially available.

Finish

The entire fan assembly, excluding the shaft, bearings and impeller, shall be thoroughly cleaned before application of finish coat. Prior to assembly, all steel parts are primed and then painted with a molecular film technique epoxy and then electrostatic incorporation of a solid powder to obtain a uniform finish.

Accessories

When specified, accessories shall be provided by Carnes Company to maintain one-source responsibility.

Factory Run Test

All fans with motors and drives mounted by Carnes Company shall be completely assembled and test run as a unit at the specified operating speed prior to shipment.

Model VMBL 12 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
1400	1528 0.17 11.4	1399 0.20 10.4	1247 0.22 10.0													
1490	1627 0.20 12.7	1505 0.23 11.8	1366 0.26 11.3	1202 0.28 11.0	920 0.29 10.7											
1575	1719 0.24 13.7	1604 0.27 12.9	1476 0.30 12.4	1329 0.32 12.0	1128 0.34 11.7											
1660	1812 0.28 14.9	1703 0.31 14.2	1584 0.34 13.6	1454 0.37 13.3	1296 0.39 12.9	1004 0.40 12.6										
1750	1911 0.32 16.6	1807 0.36 15.7	1698 0.40 15.0	1574 0.43 14.6	1433 0.45 14.2	1236 0.47 13.8	804 0.44 13.6									
1855	2025 0.38 18.1	1928 0.42 17.5	1828 0.46 16.9	1712 0.50 16.5	1589 0.53 16.1	1447 0.55 15.6	1209 0.56 15.3									
1960	2140 0.45 19.6	2047 0.50 19.3	1955 0.54 19.0	1847 0.57 18.6	1737 0.61 18.2	1607 0.63 17.7	1452 0.65 17.4	1170 0.65 17.2								
2065	2254 0.53 22.0	2167 0.57 21.4	2079 0.62 20.8	1981 0.66 20.4	1876 0.69 20.0	1763 0.73 19.7	1636 0.75 19.4	1449 0.77 19.1	1121 0.75 18.8							
2190	2391 0.63 24.1	2308 0.68 23.7	2225 0.73 23.3	2138 0.77 23.0	2039 0.81 22.7	1940 0.85 22.3	1825 0.88 22.0	1705 0.90 21.7	1508 0.92 21.4							
2310	2522 0.74 26.6	2443 0.79 26.3	2365 0.84 25.9	2286 0.89 25.6	2193 0.93 25.2	2099 0.97 24.7	2001 1.01 24.3	1888 1.04 23.8	1774 1.07 23.4	1259 1.05 22.9						
2380	2598 0.81 28.3	2522 0.86 28.0	2446 0.91 27.7	2370 0.96 27.4	2281 1.01 27.0	2191 1.05 26.5	2100 1.09 26.1	1992 1.12 25.7	1882 1.15 25.2	1526 1.18 24.6						
2545	2778 0.99 31.5	2707 1.05 31.1	2636 1.10 30.7	2565 1.16 30.3	2488 1.21 29.9	2403 1.25 29.6	2318 1.30 29.3	2233 1.34 28.9	2131 1.37 28.6	1908 1.43 27.9	1442 1.41 27.3					
2690	2937 1.17 35.1	2869 1.23 34.5	2802 1.29 33.9	2735 1.34 33.3	2667 1.40 32.7	2587 1.45 32.3	2507 1.50 31.9	2427 1.54 31.5	2344 1.59 31.1	2149 1.66 30.3	1866 1.70 29.8	1302 1.62 29.7				
2840	3101 1.38 38.0	3037 1.44 37.6	2973 1.50 37.2	2909 1.56 36.9	2845 1.62 36.5	2775 1.68 36.1	2699 1.73 35.7	2623 1.78 35.3	2547 1.83 35.0	2374 1.91 34.2	2189 1.98 33.5	1862 2.00 32.8	1235 1.87 32.2			
2990	3264 1.61 40.6	3204 1.67 40.3	3143 1.74 40.0	3083 1.80 39.7	3022 1.86 39.4	2961 1.93 39.1	2889 1.98 38.8	2816 2.03 38.4	2744 2.09 38.0	2595 2.19 37.3	2419 2.26 36.5	2209 2.32 35.8	1881 2.34 35.3			
3225	3521 2.02 46.2	3465 2.09 45.6	3409 2.16 45.1	3352 2.23 44.5	3296 2.29 43.9	3240 2.36 43.3	3182 2.43 42.8	3115 2.49 42.5	3047 2.54 42.2	2913 2.66 41.7	2769 2.76 41.1	2606 2.84 40.5	2426 2.91 39.9	2122 2.93 39.3	1600 2.80 38.7	
3400	3712 2.37 50.5	3659 2.44 50.1	3605 2.51 49.7	3552 2.58 49.3	3499 2.66 49.0	3446 2.73 48.6	3392 2.80 48.2	3333 2.87 47.8	3270 2.93 47.3	3142 3.05 46.5	3015 3.17 45.6	2868 3.26 44.7	2714 3.35 43.8	2527 3.42 43.1	2239 3.43 43.1	1754 3.30 43.0

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 15 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.														
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
1245	1935 0.21 12.0	1772 0.25 11.1	1579 0.28 10.7	1342 0.30 10.3											
1315	2044 0.25 13.3	1890 0.29 12.3	1711 0.32 11.8	1501 0.35 11.4	1108 0.35 11.1										
1400	2176 0.30 14.5	2031 0.34 13.6	1868 0.38 13.0	1683 0.41 12.6	1428 0.43 12.3										
1480	2301 0.35 15.8	2163 0.40 14.8	2013 0.44 14.1	1848 0.48 13.8	1650 0.50 13.5	1299 0.51 13.2									
1565	2433 0.42 17.3	2303 0.46 16.5	2166 0.51 15.7	2010 0.55 15.2	1834 0.58 14.7	1596 0.60 14.4									
1650	2565 0.49 18.6	2442 0.54 17.8	2317 0.59 17.0	2169 0.63 16.6	2013 0.67 16.3	1834 0.70 15.9	1535 0.71 15.7								
1740	2705 0.57 20.1	2588 0.62 19.5	2471 0.68 19.0	2334 0.72 18.5	2194 0.77 18.0	2029 0.80 17.5	1831 0.83 17.2	1469 0.82 17.1							
1855	2884 0.69 23.0	2774 0.75 22.4	2664 0.80 21.9	2542 0.86 21.3	2411 0.90 20.7	2272 0.95 20.1	2113 0.98 19.5	1899 1.00 19.1	1539 0.99 19.2						
1960	3047 0.82 25.1	2943 0.88 24.5	2839 0.94 23.9	2730 0.99 23.3	2605 1.04 22.9	2480 1.09 22.5	2338 1.13 22.1	2187 1.17 21.7	1954 1.18 21.5						
2060	3202 0.95 26.9	3104 1.01 26.5	3005 1.07 26.1	2906 1.14 25.8	2788 1.19 25.4	2669 1.24 25.0	2547 1.29 24.6	2404 1.33 24.3	2261 1.36 23.9						
2175	3381 1.12 30.1	3288 1.18 29.4	3194 1.25 28.8	3101 1.31 28.2	2995 1.37 27.8	2882 1.43 27.5	2770 1.48 27.2	2647 1.53 26.9	2511 1.57 26.7	2131 1.62 26.1					
2280	3544 1.29 32.5	3455 1.36 32.2	3366 1.42 31.8	3277 1.49 31.5	3182 1.56 31.2	3075 1.62 30.7	2967 1.67 30.3	2860 1.73 29.8	2735 1.77 29.4	2473 1.85 28.5					
2415	3754 1.53 36.6	3670 1.60 36.3	3586 1.67 36.0	3502 1.75 35.7	3417 1.82 35.3	3318 1.88 34.8	3217 1.94 34.3	3116 2.00 33.8	3015 2.06 33.2	2772 2.15 32.2	2441 2.21 31.4	1797 2.14 31.0			
2545	3956 1.79 40.6	3876 1.87 40.1	3797 1.94 39.7	3717 2.02 39.2	3637 2.10 38.7	3550 2.17 38.3	3454 2.23 37.9	3358 2.30 37.5	3262 2.36 37.2	3049 2.47 36.4	2817 2.56 35.7	2427 2.59 35.0			
2720	4228 2.18 44.9	4154 2.27 44.4	4079 2.35 43.9	4004 2.43 43.4	3929 2.51 43.0	3854 2.59 42.5	3768 2.67 42.1	3678 2.73 41.7	3588 2.80 41.3	3409 2.94 40.5	3196 3.04 39.7	2979 3.14 38.9	2592 3.16 38.3		
2880	4477 2.59 49.7	4407 2.68 49.0	4336 2.77 48.4	4265 2.85 47.8	4195 2.94 47.2	4124 3.03 46.5	4051 3.11 45.9	3967 3.19 45.6	3882 3.26 45.2	3712 3.40 44.5	3532 3.54 43.7	3328 3.64 43.0	3115 3.74 42.3	2732 3.75 42.2	
3045	4734 3.06 54.0	4667 3.16 53.6	4600 3.25 53.2	4533 3.34 52.7	4466 3.43 52.3	4400 3.52 51.9	4333 3.62 51.5	4260 3.70 51.2	4180 3.78 50.8	4019 3.93 50.2	3859 4.08 49.5	3678 4.21 48.9	3485 4.32 48.3	3273 4.42 47.6	2911 4.44 46.9

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 16 - BELT DRIVE – PERFORMANCE DATA

Mixed Flow Fan

RPM	STATIC PRESSURE, INCHES W. G.																
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500	6.000
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
900	2076 0.14 7.8	1770 0.17 6.8	1298 0.19 6.4														
1000	2306 0.19 9.5	2037 0.23 8.3	1697 0.26 7.7														
1120	2583 0.26 11.5	2351 0.31 10.2	2076 0.35 9.6	1677 0.36 9.1													
1250	2883 0.37 13.6	2675 0.42 12.3	2440 0.46 11.6	2159 0.50 11.2	1722 0.50 11.1												
1320	3044 0.43 15.2	2847 0.48 13.9	2630 0.54 13.0	2382 0.58 12.5	2066 0.60 12.0	1334 0.55 12.2											
1400	3229 0.51 16.5	3043 0.57 15.5	2844 0.63 14.7	2627 0.68 14.1	2353 0.70 13.5	1937 0.70 13.5											
1470	3390 0.60 17.7	3214 0.66 16.7	3028 0.71 15.8	2822 0.77 15.3	2579 0.80 14.8	2282 0.82 14.4	1700 0.78 14.8										
1565	3609 0.72 19.7	3443 0.78 18.6	3276 0.85 17.7	3082 0.90 17.2	2877 0.96 16.7	2630 0.98 16.2	2278 0.99 16.1	1610 0.92 16.3									
1650	3805 0.84 21.3	3648 0.91 20.2	3490 0.98 19.2	3311 1.04 18.7	3127 1.10 18.2	2904 1.14 17.8	2669 1.17 17.4	2259 1.15 17.5									
1740	4013 0.99 23.7	3864 1.06 22.7	3714 1.13 21.7	3550 1.20 21.0	3375 1.26 20.5	3187 1.32 20.0	2964 1.35 19.5	2703 1.37 19.2	2295 1.34 19.5								
1835	4232 1.16 25.4	4090 1.23 24.4	3949 1.31 23.4	3799 1.38 22.5	3634 1.45 22.0	3468 1.52 21.6	3268 1.56 21.1	3057 1.59 20.6	2767 1.60 20.4								
1975	4555 1.44 28.3	4423 1.52 27.4	4292 1.60 26.5	4160 1.68 25.7	4009 1.76 25.2	3855 1.83 24.7	3701 1.90 24.2	3508 1.94 23.8	3312 1.98 23.3	2715 1.97 23.2							
2085	4809 1.70 31.9	4684 1.78 30.8	4559 1.87 29.8	4435 1.95 28.8	4299 2.03 28.0	4153 2.11 27.6	4007 2.19 27.1	3852 2.26 26.6	3666 2.29 26.2	3256 2.35 25.4	2464 2.24 26.1						
2210	5097 2.02 34.6	4979 2.11 33.5	4862 2.20 32.5	4744 2.29 31.4	4624 2.38 30.4	4487 2.46 30.0	4349 2.54 29.5	4212 2.63 29.0	4059 2.69 28.6	3709 2.77 27.6	3206 2.77 27.4	2245 2.57 27.8					
2340	5397 2.40 38.4	5286 2.50 37.3	5175 2.59 36.1	5064 2.69 34.9	4953 2.78 33.7	4829 2.87 33.0	4699 2.96 32.5	4570 3.04 32.1	4440 3.13 31.6	4127 3.24 30.7	3796 3.32 29.8	3228 3.27 30.1					
2455	5662 2.78 41.0	5556 2.87 39.9	5450 2.97 38.8	5344 3.07 37.7	5239 3.17 36.6	5129 3.27 35.7	5005 3.36 35.2	4881 3.45 34.8	4758 3.54 34.4	4489 3.70 33.5	4174 3.79 32.6	3795 3.83 32.1	3216 3.75 32.7				
2590	5973 3.26 44.4	5873 3.36 43.5	5773 3.47 42.6	5672 3.57 41.8	5572 3.68 40.9	5472 3.78 40.0	5360 3.88 39.4	5243 3.98 39.0	5125 4.07 38.6	4891 4.26 37.7	4606 4.38 36.8	4307 4.48 35.9	3889 4.48 35.6	3340 4.40 35.8			
2740	6319 3.86 50.2	6224 3.97 49.0	6130 4.08 47.8	6035 4.19 46.6	5940 4.30 45.4	5845 4.41 44.2	5750 4.52 43.0	5639 4.62 42.6	5528 4.73 42.2	5306 4.93 41.3	5075 5.12 40.4	4792 5.22 39.6	4509 5.32 38.7	4090 5.31 38.6	3571 5.22 39.0		
2900	6688 4.57 54.3	6599 4.69 53.4	6509 4.81 52.6	6420 4.93 51.8	6330 5.04 50.9	6240 5.16 50.1	6151 5.28 49.2	6056 5.39 48.5	5951 5.50 48.0	5742 5.71 47.1	5532 5.93 46.1	5297 6.09 45.2	5030 6.20 44.2	4762 6.31 43.3	4369 6.30 43.1	3879 6.20 43.4	3003 5.84 43.7

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 18 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
900	2916 0.24 9.8	2582 0.29 8.7	2160 0.33 8.1													
1000	3240 0.33 11.9	2948 0.39 10.3	2605 0.44 9.7	2103 0.45 9.3												
1055	3418 0.39 12.8	3142 0.45 11.6	2825 0.50 10.9	2429 0.54 10.3												
1115	3613 0.46 14.2	3351 0.52 12.8	3057 0.58 12.0	2704 0.62 11.5	2152 0.62 11.4											
1180	3823 0.54 15.3	3576 0.61 14.0	3304 0.67 13.2	2994 0.73 12.8	2600 0.75 12.5											
1255	4066 0.65 17.2	3834 0.72 15.9	3585 0.79 15.0	3315 0.86 14.4	2974 0.89 13.9	2465 0.89 13.8										
1320	4277 0.76 18.4	4056 0.83 17.2	3826 0.91 16.2	3569 0.98 15.6	3268 1.03 15.0	2912 1.05 14.5	2237 1.01 15.2									
1400	4536 0.91 19.9	4328 0.99 18.9	4118 1.07 18.0	3876 1.14 17.5	3621 1.20 17.0	3311 1.24 16.5	2876 1.24 16.5									
1480	4795 1.07 22.1	4598 1.16 20.9	4402 1.24 19.7	4178 1.32 19.1	3949 1.39 18.6	3673 1.44 18.2	3379 1.48 17.7	2882 1.46 17.9								
1560	5055 1.25 24.1	4868 1.34 23.1	4681 1.43 22.1	4476 1.52 21.4	4259 1.60 21.0	4026 1.67 20.5	3747 1.71 20.0	3433 1.74 19.6	2924 1.70 19.9							
1675	5427 1.55 27.0	5253 1.65 26.1	5079 1.74 25.1	4899 1.84 24.2	4697 1.92 23.8	4494 2.01 23.4	4262 2.08 22.9	4002 2.12 22.5	3719 2.15 22.1							
1770	5735 1.83 29.9	5570 1.93 28.7	5406 2.03 27.5	5241 2.13 26.3	5052 2.23 25.8	4861 2.32 25.4	4669 2.41 25.0	4430 2.46 24.6	4184 2.51 24.2	3452 2.50 24.2						
1860	6027 2.13 32.3	5870 2.23 31.3	5713 2.34 30.3	5557 2.44 29.3	5386 2.54 28.5	5203 2.64 28.1	5021 2.74 27.6	4825 2.82 27.1	4592 2.87 26.6	4072 2.94 25.9						
1975	6399 2.54 35.3	6252 2.66 34.3	6104 2.77 33.3	5957 2.88 32.2	5806 2.99 31.3	5634 3.10 30.8	5462 3.20 30.4	5291 3.30 29.9	5100 3.38 29.4	4660 3.49 28.5	4033 3.49 28.3					
2115	6853 3.13 39.5	6715 3.25 38.5	6577 3.37 37.5	6439 3.49 36.5	6302 3.61 35.5	6151 3.72 34.8	5991 3.83 34.3	5830 3.94 33.8	5670 4.05 33.3	5292 4.20 32.3	4880 4.31 31.4	4229 4.27 31.4				
2240	7258 3.71 44.7	7128 3.84 43.6	6998 3.97 42.6	6868 4.10 41.6	6737 4.22 40.5	6607 4.35 39.5	6456 4.47 39.0	6304 4.58 38.5	6153 4.70 38.0	5841 4.92 37.0	5453 5.04 36.0	5064 5.15 35.0	4374 5.06 35.3			
2320	7517 4.12 47.0	7391 4.26 45.9	7266 4.39 44.7	7140 4.52 43.5	7015 4.65 42.3	6889 4.78 41.1	6750 4.91 40.7	6604 5.03 40.7	6457 5.15 40.7	6165 5.39 40.6	5811 5.54 40.5	5436 5.66 40.4	4928 5.69 40.0	4244 5.58 39.0		
2460	7971 4.92 52.0	7852 5.06 50.7	7734 5.20 49.5	7615 5.34 48.2	7497 5.48 47.0	7378 5.62 45.7	7260 5.76 44.5	7122 5.89 44.1	6984 6.01 43.8	6708 6.27 43.0	6425 6.51 42.3	6072 6.64 41.6	5718 6.77 40.9	5222 6.78 40.7	4577 6.67 40.9	
2600	8424 5.81 58.3	8312 5.95 57.0	8200 6.10 55.8	8088 6.25 54.5	7976 6.40 53.3	7864 6.55 52.0	7752 6.69 50.8	7635 6.84 49.7	7504 6.97 49.3	7243 7.24 48.4	6982 7.51 47.6	6691 7.73 46.7	6357 7.87 45.8	6022 8.00 45.0	5552 8.01 44.7	4942 7.89 45.0

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 20 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
690	3183 0.20 7.7	2677 0.25 6.7														
765	3529 0.27 9.3	3083 0.33 8.2	2505 0.37 7.7													
845	3898 0.36 11.3	3505 0.43 9.8	3022 0.48 9.2	2224 0.49 9.1												
900	4152 0.43 12.3	3789 0.51 11.0	3364 0.57 10.4	2769 0.60 10.0												
945	4360 0.50 13.6	4014 0.58 12.3	3616 0.65 11.5	3122 0.69 10.7												
1000	4614 0.60 14.7	4287 0.68 13.3	3918 0.75 12.6	3479 0.81 12.1	2812 0.81 11.9											
1065	4913 0.72 16.5	4606 0.81 15.2	4269 0.89 14.4	3890 0.96 13.8	3431 1.00 13.2											
1125	5190 0.85 17.7	4900 0.94 16.5	4589 1.03 15.6	4248 1.11 15.1	3826 1.16 14.5	3213 1.16 14.4										
1190	5490 1.00 19.5	5215 1.10 18.2	4930 1.19 17.1	4608 1.28 16.6	4242 1.35 16.1	3831 1.39 15.6	3094 1.36 16.1									
1250	5767 1.16 21.0	5505 1.26 19.8	5242 1.36 18.6	4936 1.46 18.2	4617 1.54 17.8	4226 1.59 17.4	3694 1.60 17.2									
1345	6205 1.45 23.7	5962 1.56 22.5	5719 1.67 21.3	5446 1.77 20.6	5161 1.87 20.1	4834 1.94 19.6	4471 1.99 19.1	3939 1.99 19.2								
1420	6551 1.70 25.5	6321 1.82 24.5	6091 1.93 23.6	5842 2.04 22.9	5572 2.15 22.4	5301 2.25 22.0	4957 2.31 21.5	4613 2.36 21.1	4035 2.33 21.2							
1500	6920 2.01 28.2	6702 2.13 27.1	6484 2.25 25.9	6260 2.37 24.9	6005 2.48 24.5	5749 2.59 24.0	5463 2.68 23.6	5137 2.74 23.1	4811 2.79 22.7							
1590	7336 2.39 31.3	7130 2.52 30.2	6924 2.65 29.2	6718 2.78 28.1	6484 2.90 27.6	6243 3.02 27.1	6002 3.13 26.6	5711 3.21 26.1	5404 3.27 25.7	4535 3.27 25.5						
1700	7843 2.93 34.9	7651 3.06 33.9	7458 3.20 32.8	7266 3.34 31.8	7062 3.47 31.0	6836 3.60 30.5	6611 3.72 30.1	6385 3.85 29.7	6107 3.92 29.2	5532 4.05 28.4	4549 3.97 28.5					
1800	8304 3.47 39.1	8123 3.62 37.8	7941 3.76 36.5	7759 3.91 35.2	7578 4.05 33.9	7367 4.19 33.4	7154 4.32 32.9	6942 4.46 32.5	6729 4.59 32.0	6186 4.72 31.1	5539 4.80 30.5	4472 4.65 31.1				
1900	8766 4.08 42.5	8594 4.24 41.4	8422 4.39 40.4	8249 4.54 39.3	8077 4.70 38.3	7892 4.85 37.5	7690 4.99 36.9	7488 5.13 36.4	7287 5.27 35.9	6823 5.47 34.8	6309 5.61 33.8	5550 5.60 33.6	4305 5.33 34.0			
2020	9319 4.91 47.4	9158 5.07 46.4	8996 5.23 45.3	8834 5.40 44.2	8672 5.56 43.2	8510 5.72 42.1	8324 5.88 41.5	8134 6.02 41.0	7945 6.17 40.5	7565 6.47 39.5	7086 6.63 38.5	6602 6.78 37.4	5823 6.72 37.6	4659 6.44 38.3		
2185	10081 6.21 54.9	9931 6.39 53.8	9781 6.56 52.7	9632 6.74 51.6	9482 6.92 50.4	9332 7.09 49.3	9183 7.27 48.2	9008 7.43 47.7	8832 7.59 47.2	8481 7.92 46.2	8121 8.23 45.1	7673 8.39 44.1	7226 8.55 43.1	6594 8.56 42.8	5775 8.42 43.2	
2290	10565 7.15 59.4	10422 7.34 58.3	10279 7.52 57.2	10137 7.71 56.1	9994 7.89 55.0	9851 8.08 53.9	9708 8.26 52.8	9556 8.44 51.9	9389 8.61 51.4	9054 8.95 50.3	8719 9.29 49.3	8336 9.54 48.2	7909 9.71 47.2	7483 9.88 46.1	6821 9.84 46.1	6040 9.69 46.5

Performance certified is for installation type B - free inlet, ducted outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Mixed Flow Fan

Model VMBL 23 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.														
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
690	4489 0.31 10.0	4009 0.39 8.3	3380 0.44 7.3												
745	4847 0.39 11.3	4417 0.47 9.5	3854 0.54 8.5												
795	5172 0.47 12.7	4780 0.56 10.9	4274 0.65 9.9	3593 0.69 9.3											
845	5498 0.56 13.8	5129 0.66 12.1	4677 0.76 11.1	4139 0.82 10.2											
910	5921 0.71 15.7	5578 0.81 14.0	5175 0.91 12.8	4700 0.99 11.9	4048 1.03 11.6										
955	6213 0.82 16.8	5887 0.93 15.2	5515 1.04 14.0	5079 1.13 13.2	4597 1.19 12.4	3711 1.20 13.0									
1010	6571 0.96 18.6	6263 1.08 17.0	5925 1.20 15.7	5533 1.31 14.9	5078 1.38 14.1	4430 1.41 14.0									
1060	6897 1.12 20.0	6602 1.24 18.4	6293 1.36 17.0	5922 1.48 16.3	5505 1.56 15.5	5062 1.63 14.8	4249 1.64 15.5								
1140	7417 1.39 22.6	7144 1.52 21.1	6870 1.66 19.6	6531 1.78 18.8	6174 1.90 18.1	5770 1.97 17.4	5280 2.03 17.1	4524 2.04 17.6							
1205	7840 1.64 24.7	7581 1.78 23.4	7322 1.92 22.1	7018 2.06 21.1	6692 2.19 20.2	6323 2.28 19.4	5941 2.36 18.5	5369 2.40 18.6							
1270	8263 1.92 26.9	8017 2.07 25.6	7772 2.22 24.4	7500 2.36 23.3	7190 2.50 22.5	6865 2.62 21.8	6502 2.71 21.0	6140 2.79 20.3	5507 2.81 20.8						
1345	8751 2.28 29.8	8519 2.44 28.6	8287 2.59 27.3	8050 2.75 26.1	7757 2.90 25.3	7464 3.05 24.5	7136 3.15 23.7	6794 3.24 22.9	6452 3.33 22.1						
1440	9369 2.80 33.4	9152 2.96 32.0	8936 3.13 30.6	8719 3.30 29.2	8465 3.47 28.2	8191 3.62 27.6	7918 3.78 26.9	7601 3.88 26.2	7281 3.97 25.6	6415 4.10 25.2					
1520	9889 3.29 37.3	9684 3.47 35.9	9479 3.65 34.4	9274 3.82 33.0	9053 4.00 31.8	8794 4.17 31.1	8535 4.33 30.5	8265 4.48 29.8	7963 4.58 29.1	7357 4.78 27.8					
1615	10507 3.94 40.5	10314 4.13 39.1	10121 4.32 37.7	9928 4.51 36.3	9735 4.70 34.9	9501 4.88 34.1	9257 5.06 33.5	9013 5.24 32.8	8754 5.39 32.2	8184 5.60 30.9	7503 5.77 30.2				
1710	11126 4.68 45.2	10943 4.88 43.8	10761 5.08 42.3	10579 5.28 40.9	10396 5.49 39.4	10199 5.68 38.2	9969 5.87 37.6	9739 6.06 37.0	9509 6.24 36.3	8991 6.51 35.1	8453 6.73 33.8	7669 6.86 33.7			
1830	11906 5.74 49.4	11736 5.95 48.1	11566 6.17 46.8	11395 6.38 45.5	11225 6.60 44.2	11054 6.81 42.9	10856 7.02 42.0	10641 7.22 41.4	10426 7.42 40.8	9988 7.80 39.6	9485 8.04 38.3	8982 8.28 37.1	8223 8.40 37.3		
1985	12915 7.32 56.4	12758 7.56 55.1	12601 7.79 53.9	12444 8.02 52.7	12286 8.26 51.5	12129 8.49 50.3	11972 8.72 49.0	11788 8.95 48.2	11589 9.16 47.6	11192 9.60 46.3	10779 9.99 45.1	10316 10.25 43.9	9852 10.51 42.6	9278 10.71 42.1	8409 10.74 43.4

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 27 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.														
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
600	5585 0.37 9.9	4971 0.46 8.2	4136 0.54 7.3												
665	6190 0.50 11.7	5651 0.61 10.1	4964 0.70 9.0												
700	6515 0.58 12.8	6013 0.70 11.0	5396 0.80 10.0	4459 0.85 9.5											
745	6934 0.70 14.4	6462 0.83 12.6	5917 0.94 11.5	5198 1.02 10.5											
790	7353 0.84 15.6	6908 0.97 13.9	6405 1.09 12.7	5773 1.18 11.8											
835	7772 0.99 17.2	7351 1.13 15.5	6886 1.26 14.3	6335 1.37 13.4	5632 1.45 12.6										
875	8144 1.14 18.6	7742 1.29 16.9	7309 1.42 15.5	6824 1.55 14.7	6192 1.64 13.8	5228 1.67 13.8									
935	8703 1.39 20.8	8326 1.55 19.0	7936 1.70 17.4	7493 1.84 16.7	6953 1.95 16.1	6322 2.03 15.5									
945	8796 1.43 21.1	8423 1.59 19.5	8040 1.75 18.0	7601 1.89 17.2	7077 2.00 16.3	6492 2.10 15.5									
995	9261 1.67 22.8	8908 1.84 21.3	8554 2.01 19.7	8139 2.16 18.9	7693 2.29 18.1	7137 2.39 17.2	6399 2.45 17.1								
1050	9773 1.97 24.6	9438 2.14 23.1	9103 2.32 21.6	8723 2.48 20.7	8329 2.63 19.9	7831 2.75 19.2	7304 2.86 18.4	6458 2.89 18.7							
1110	10331 2.33 26.4	10015 2.51 25.3	9698 2.70 24.3	9353 2.87 23.4	8980 3.04 22.6	8571 3.18 21.8	8073 3.30 21.0	7547 3.40 20.3	6672 3.41 21.0						
1200	11169 2.94 31.1	10876 3.14 29.6	10583 3.34 28.1	10287 3.54 26.7	9941 3.72 26.0	9596 3.89 25.4	9194 4.04 24.7	8734 4.16 24.0	8273 4.28 23.4	6687 4.32 24.4					
1270	11821 3.48 33.8	11544 3.70 32.6	11267 3.91 31.3	10990 4.12 30.1	10678 4.32 29.2	10352 4.50 28.5	10026 4.69 27.8	9609 4.83 27.2	9174 4.95 26.5	7995 5.10 26.4					
1345	12519 4.14 38.0	12257 4.36 36.6	11996 4.59 35.2	11734 4.82 33.8	11458 5.03 32.6	11150 5.23 31.7	10842 5.43 30.9	10526 5.62 30.0	10115 5.75 29.2	9293 6.02 27.5					
1440	13403 5.08 42.7	13159 5.32 41.3	12914 5.56 39.8	12670 5.80 38.4	12426 6.05 36.9	12148 6.26 36.1	11861 6.47 35.4	11573 6.68 34.7	11279 6.89 34.0	10511 7.18 32.6	9643 7.43 31.7				
1530	14241 6.09 48.5	14011 6.35 47.0	13781 6.60 45.5	13551 6.86 44.1	13321 7.12 42.6	13082 7.37 41.3	12811 7.59 40.6	12541 7.82 39.9	12270 8.04 39.2	11634 8.41 37.8	10911 8.72 36.4	9958 8.92 36.1			
1670	15544 7.92 55.5	15333 8.20 54.1	15122 8.48 52.6	14912 8.76 51.2	14701 9.04 49.8	14491 9.32 48.3	14268 9.59 47.1	14020 9.84 46.4	13772 10.08 45.7	13276 10.57 44.4	12670 10.96 43.0	12008 11.29 41.6	11264 11.58 40.7	10101 11.62 42.0	
1770	16474 9.43 61.1	16276 9.73 59.6	16077 10.02 58.2	15878 10.32 56.8	15680 10.62 55.4	15481 10.92 54.0	15282 11.21 52.6	15062 11.49 51.6	14828 11.75 51.0	14360 12.26 49.7	13891 12.78 48.3	13266 13.14 47.0	12641 13.49 45.7	11924 13.79 44.9	10827 13.83 46.1

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Mixed Flow Fan

Model VMBL 30 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
530	7024 0.46 10.0	6241 0.58 8.2	5172 0.67 7.2													
570	7554 0.57 11.4	6841 0.70 9.5	5906 0.80 8.5													
625	8282 0.75 13.0	7651 0.90 11.5	6878 1.02 10.3													
665	8813 0.90 14.7	8219 1.06 12.9	7532 1.20 11.8	6630 1.30 10.8												
700	9276 1.05 16.0	8712 1.22 14.4	8073 1.37 13.3	7267 1.49 12.4												
750	9939 1.29 18.4	9413 1.47 16.6	8833 1.64 15.3	8154 1.78 14.3	7325 1.89 13.3											
790	10469 1.51 19.8	9969 1.70 18.1	9434 1.88 16.7	8843 2.04 15.8	8060 2.16 14.8											
840	11132 1.82 21.8	10662 2.02 20.0	10176 2.21 18.3	9620 2.39 17.4	8957 2.53 16.6	8217 2.65 15.7										
885	11728 2.12 23.5	11282 2.34 21.7	10836 2.55 19.9	10310 2.73 19.2	9746 2.91 18.6	9044 3.03 17.9	8114 3.11 17.6									
960	12722 2.71 26.8	12311 2.94 25.4	11899 3.17 23.9	11442 3.38 22.8	10955 3.58 22.0	10382 3.75 21.1	9735 3.89 20.3	8869 3.97 20.2								
1010	13384 3.16 29.1	12994 3.40 27.7	12603 3.64 26.2	12186 3.87 25.0	11723 4.08 24.2	11252 4.29 23.4	10636 4.43 22.5	10021 4.58 21.7	9059 4.63 22.0							
1075	14246 3.81 32.8	13879 4.06 31.3	13511 4.32 29.7	13143 4.58 28.1	12709 4.80 27.4	12274 5.03 26.6	11782 5.22 25.8	11203 5.38 25.0	10625 5.53 24.3	8689 5.60 25.3						
1135	15041 4.48 32.5	14693 4.75 31.8	14345 5.02 31.2	13997 5.29 30.6	13607 5.54 29.9	13195 5.78 29.2	12784 6.02 28.5	12269 6.20 27.8	11721 6.36 27.1	10279 6.56 26.8						
1200	15902 5.30 35.6	15573 5.58 35.2	15244 5.87 34.8	14915 6.16 34.3	14569 6.43 33.8	14180 6.68 32.9	13791 6.93 32.1	13398 7.18 31.2	12880 7.35 30.4	11845 7.70 28.7	10119 7.77 29.8					
1285	17029 6.50 43.8	16722 6.81 42.5	16414 7.12 41.2	16107 7.42 39.9	15800 7.73 38.6	15451 8.01 37.6	15088 8.28 36.8	14724 8.55 36.0	14360 8.81 35.2	13393 9.18 33.6	12333 9.51 32.4	10632 9.55 33.8				
1370	18155 7.88 50.3	17867 8.21 48.8	17579 8.53 47.2	17291 8.86 45.6	17002 9.19 44.0	16706 9.51 42.6	16365 9.80 41.9	16025 10.08 41.1	15684 10.37 40.4	14899 10.86 39.0	13992 11.25 37.6	12862 11.53 37.0	11266 11.58 38.2			
1460	19348 9.54 56.3	19077 9.89 54.7	18807 10.23 53.2	18537 10.58 51.7	18266 10.93 50.1	17996 11.28 48.6	17701 11.61 47.5	17381 11.91 46.8	17061 12.22 46.1	16421 12.83 44.8	15604 13.28 43.4	14753 13.69 42.0	13632 13.96 41.8	12135 14.01 43.1		
1560	20673 11.63 64.4	20420 12.01 62.8	20167 12.38 61.1	19914 12.75 59.5	19661 13.12 57.9	19408 13.50 56.2	19154 13.87 54.6	18868 14.21 53.7	18569 14.54 53.0	17970 15.19 51.6	17350 15.82 50.2	16553 16.26 48.9	15756 16.71 47.5	14752 17.02 47.0	13351 17.07 48.3	11944 17.12 49.5

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 33 - BELT DRIVE – PERFORMANCE DATA

Mixed Flow Fan

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.500	2.000	3.000	4.000	4.500	5.000	5.500	6.000	6.500	7.000	7.500
	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP
	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones
485	9034 0.54	7936 0.71	6378 0.83	2055 0.80	302 1.00											
	11.4	9.7	8.4	9.5	10.9											
510	9500 0.63	8475 0.81	7062 0.94	3397 0.87	989 1.09											
	12.5	10.7	9.3	10.0	11.5											
535	9965 0.73	9009 0.92	7731 1.07	5601 1.10	1495 1.15											
	13.5	11.7	10.4	10.4	11.8											
585	10897 0.95	10045 1.17	8985 1.34	7496 1.45	3717 1.32	86 1.79										
	15.7	14.0	12.7	11.4	12.8	15.6										
620	11549 1.13	10745 1.36	9773 1.55	8525 1.70	6555 1.71	1116 1.99										
	17.4	15.7	14.4	13.1	13.5	16.1										
675	12573 1.46	11835 1.71	10986 1.93	9987 2.12	8637 2.23	2302 2.20	83 2.76									
	20.0	18.5	17.1	15.9	14.7	17.2	19.7									
710	13225 1.70	12523 1.96	11744 2.20	10857 2.41	9683 2.56	4209 2.39	1165 3.03									
	21.6	20.1	18.7	17.6	16.4	17.9	20.4									
750	13970 2.00	13306 2.28	12600 2.55	11760 2.77	10758 2.95	7297 2.95	1983 3.23									
	23.4	22.0	20.6	19.5	18.4	18.6	21.1									
800	14902 2.43	14279 2.73	13656 3.02	12870 3.26	12066 3.49	9585 3.70	3793 3.53									
	25.7	24.3	22.9	21.8	20.8	19.5	22.0									
850	15833 2.91	15247 3.23	14660 3.55	13961 3.81	13220 4.06	11323 4.44	6773 4.05	833 5.33								
	28.1	26.7	25.4	24.3	23.3	21.2	22.9	27.8								
900	16764 3.46	16211 3.79	15657 4.13	15036 4.43	14336 4.69	12681 5.14	10167 5.25	2055 5.79								
	30.6	29.3	27.9	26.7	25.7	23.8	23.9	28.8								
960	17882 4.20	17363 4.56	16844 4.91	16310 5.26	15654 5.54	14264 6.08	12414 6.43	3557 6.27	289 7.88							
	34.1	32.6	31.2	29.7	28.8	27.0	25.2	30.0	34.9							
1000	18627 4.75	18129 5.12	17630 5.49	17132 5.86	16520 6.16	15261 6.75	13582 7.17	5735 6.72	1531 8.50							
	36.4	35.0	33.6	32.2	31.2	29.3	27.4	30.7	35.7							
1060	19745 5.65	19274 6.05	18804 6.44	18334 6.83	17805 7.19	16617 7.81	15196 8.33	10252 8.32	2792 9.12	1604 10.13						
	40.1	38.8	37.5	36.1	34.9	33.0	31.0	31.9	36.9	39.4						
1135	21142 6.94	20703 7.36	20263 7.78	19824 8.20	19385 8.62	18281 9.29	17157 9.95	13692 10.57	5561 10.05	3174 11.01	2101 12.12	632 12.90				
	45.2	43.8	42.5	41.2	39.9	37.9	36.0	33.8	38.6	41.1	43.5	46.0				
1205	22446 8.31	22032 8.75	21618 9.20	21205 9.65	20791 10.09	19807 10.85	18761 11.56	16093 12.63	9882 11.64	5960 12.01	3515 13.00	2505 14.18	1269 15.15			
	50.1	48.8	47.6	46.3	45.0	42.9	41.0	37.2	40.3	42.7	45.1	47.5	49.9			
1280	23843 9.95	23453 10.43	23064 10.90	22674 11.38	22285 11.85	21418 12.72	20434 13.47	18126 14.75	14653 15.11	10679 14.02	6814 14.25	4004 15.23	3053 16.48	2101 17.74	699 18.50	
	55.9	54.6	53.4	52.1	50.9	48.6	46.7	42.9	42.5	44.8	47.1	49.4	51.7	54.0	56.3	
1365	25426 12.07	25061 12.58	24696 13.08	24330 13.59	23965 14.10	23220 15.09	22298 15.90	20364 17.43	17825 18.50	15822 18.34	12881 17.64	8350 16.91	5437 17.90	3832 19.12	2940 20.46	1965 21.70
	62.9	61.7	60.5	59.2	58.0	55.6	53.7	49.8	46.0	47.5	49.7	51.9	54.1	56.3	58.6	60.8
1470	27382 15.08	27043 15.62	26704 16.17	26365 16.71	26025 17.26	25347 18.35	24560 19.30	22847 21.03	20716 22.39	19549 22.98	17853 22.98	15994 22.81	11498 20.87	8336 21.38	5631 22.45	4191 23.77
	71.0	69.8	68.6	67.3	66.1	63.7	61.6	57.8	54.1	52.2	52.5	54.8	57.1	59.4	61.7	64.0

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 36 - BELT DRIVE – PERFORMANCE DATA

RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.500	2.000	3.000	4.000	4.500	5.000	5.500	6.000	6.500	7.000	7.500
	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP	CFM BHP
	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones	Sones
435	11384 0.69	10015 0.90	8078 1.05	3467 1.02	577 1.26											
	11.5	9.9	8.6	9.5	10.5											
470	12300 0.87	11072 1.11	9412 1.28	5964 1.25	2414 1.41											
	13.1	11.4	10.2	10.4	11.4											
500	13085 1.05	11964 1.31	10519 1.51	8234 1.59	3894 1.55											
	14.5	12.8	11.6	11.2	12.3											
530	13870 1.25	12817 1.52	11516 1.75	9786 1.91	5300 1.70	556 2.29										
	16.1	14.3	13.1	12.0	13.1	15.3										
560	14655 1.47	13659 1.76	12461 2.01	10939 2.19	8575 2.22	2155 2.49										
	17.7	16.0	14.7	13.5	13.8	16.0										
605	15833 1.85	14910 2.17	13852 2.45	12614 2.68	10956 2.84	4413 2.80	257 3.47									
	20.1	18.6	17.3	16.1	15.2	17.3	19.4									
650	17010 2.30	16152 2.64	15217 2.95	14133 3.22	12758 3.42	6532 3.13	2663 3.86									
	22.5	21.1	19.8	18.7	17.6	18.5	20.4									
685	17926 2.69	17112 3.05	16264 3.39	15235 3.67	14066 3.92	10456 4.07	4430 4.18									
	24.3	22.9	21.6	20.5	19.5	19.4	21.3									
720	18842 3.12	18067 3.50	17292 3.87	16321 4.17	15342 4.47	12327 4.76	6121 4.51									
	26.2	24.9	23.5	22.5	21.5	20.4	22.3									
760	19889 3.67	19155 4.07	18421 4.46	17546 4.80	16618 5.11	14245 5.59	8643 5.13	1355 6.62								
	28.3	27.1	25.8	24.7	23.8	21.8	23.4	27.2								
810	21198 4.45	20509 4.87	19820 5.29	19055 5.68	18185 6.01	16150 6.58	13100 6.75	3976 7.27								
	31.3	30.0	28.7	27.5	26.6	24.8	24.8	28.7								
850	22244 5.14	21588 5.58	20931 6.02	20248 6.45	19419 6.80	17634 7.46	15205 7.86	5968 7.83	52 9.73							
	34.0	32.6	31.3	30.0	29.1	27.3	26.0	29.9	33.8							
815	21329 4.53	20644 4.95	19959 5.38	19205 5.77	18340 6.10	16337 6.68	13367 6.88	4229 7.34								
	31.6	30.3	29.0	27.8	26.9	25.1	25.0	28.9								
970	25385 7.64	24810 8.14	24234 8.65	23659 9.15	23039 9.63	21585 10.43	19939 11.13	14855 11.55	6328 11.84	3736 12.92	1143 14.00					
	42.4	41.0	39.6	38.1	36.9	35.1	33.4	33.6	37.7	39.8	41.9					
1015	26563 8.75	26013 9.28	25463 9.81	24913 10.34	24363 10.86	22982 11.71	21583 12.54	17262 13.33	8503 12.71	6026 13.84	3548 14.97	1071 16.10				
	45.9	44.5	43.0	41.6	40.2	38.4	36.7	35.2	39.3	41.4	43.5	45.6				
1095	28656 10.99	28146 11.56	27637 12.13	27127 12.70	26617 13.27	25427 14.26	24139 15.16	20924 16.57	15159 16.26	9887 15.57	7590 16.79	5294 18.02	2998 19.24	701 20.46		
	52.4	51.1	49.7	48.4	47.0	44.9	43.1	39.4	42.1	44.3	46.4	48.6	50.8	52.9		
1175	30750 13.57	30275 14.19	29800 14.80	29325 15.41	28850 16.02	27829 17.17	26630 18.14	23939 19.87	20090 20.69	17484 20.49	11386 18.77	9246 20.08	7106 21.39	4966 22.70	2826 24.01	686 25.32
	59.7	58.4	57.1	55.8	54.4	52.0	50.2	46.6	45.3	47.3	49.4	51.4	53.4	55.5	57.5	59.5
1250	32713 16.34	32266 16.99	31820 17.64	31373 18.30	30927 18.95	30034 20.25	28924 21.30	26668 23.36	23608 24.78	21504 24.92	19055 24.71	12814 22.20	10740 23.55	8728 24.94	6716 26.33	4705 27.73
	67.0	65.8	64.5	63.3	62.0	59.5	57.6	53.8	50.1	50.7	52.6	54.5	56.5	58.4	60.3	62.3
1335	34937 19.91	34519 20.60	34101 21.30	33683 21.99	33265 22.69	32429 24.08	31484 25.33	29372 27.53	26832 29.34	25393 30.09	23575 30.41	21282 30.19	17685 29.07	12765 27.66	10881 29.15	8998 30.64
	74.7	73.4	72.2	71.0	69.8	67.3	65.2	61.6	57.9	56.1	56.1	58.1	60.1	62.1	64.1	66.2

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Model VMBL 40 - BELT DRIVE – PERFORMANCE DATA

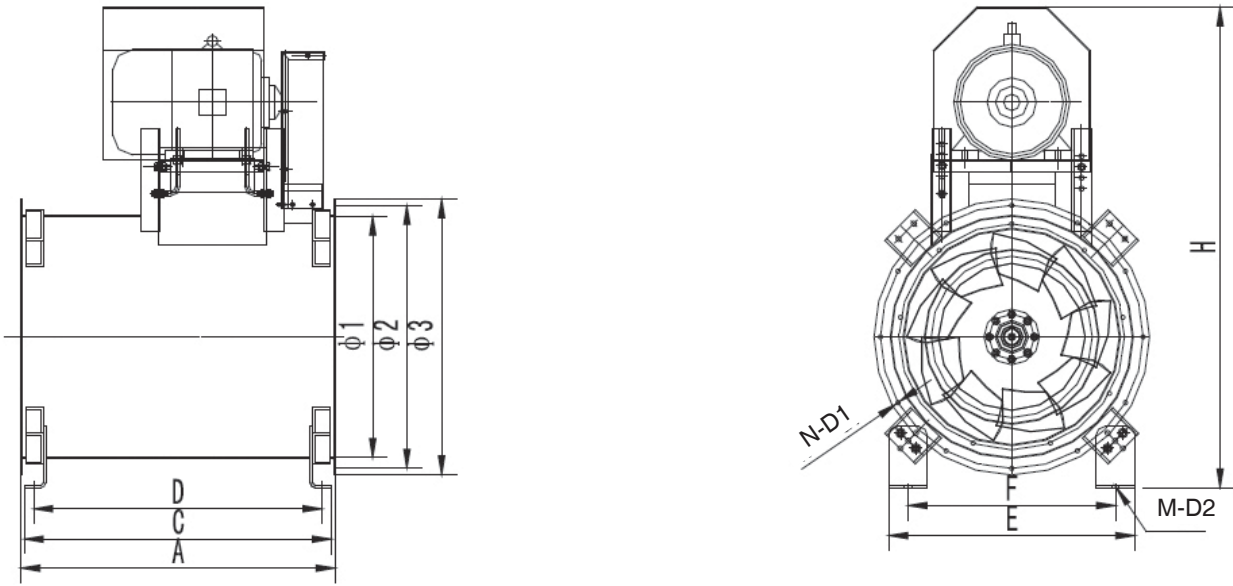
RPM	STATIC PRESSURE, INCHES W. G.															
	0.000	0.250	0.500	0.750	1.000	1.250	1.500	1.750	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500
	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones	CFM BHP Sones
400	14552 0.93 11.9	12907 1.20 10.5	10610 1.40 9.2													
425	15462 1.11 13.4	13952 1.41 11.9	11924 1.64 10.7													
450	16371 1.32 14.9	14985 1.65 13.1	13202 1.90 12.0	10403 2.01 11.5												
470	17099 1.50 16.0	15774 1.84 14.0	14128 2.12 12.9	11855 2.30 11.9												
505	18372 1.87 18.1	17139 2.23 16.4	15661 2.54 15.1	13794 2.78 14.0	10924 2.83 14.2											
535	19464 2.22 19.6	18300 2.61 18.2	16952 2.95 16.8	15349 3.23 15.6	13135 3.39 14.8											
565	20555 2.61 21.8	19453 3.02 20.0	18224 3.39 18.5	16830 3.72 17.4	14968 3.95 16.2	12243 3.96 16.7										
615	22374 3.37 24.9	21362 3.82 23.2	20310 4.25 21.6	19030 4.60 20.6	17582 4.91 19.7	15839 5.15 18.8	13115 5.10 19.5									
645	23466 3.89 26.6	22500 4.35 25.4	21535 4.82 24.1	20324 5.20 23.0	19103 5.57 21.8	17442 5.82 20.7	15343 5.93 20.5									
680	24739 4.55 28.6	23823 5.05 27.3	22907 5.54 26.1	21814 5.96 24.9	20656 6.35 23.9	19267 6.67 22.8	17690 6.94 21.7	15344 6.92 22.3								
720	26194 5.41 32.1	25329 5.93 30.4	24464 6.45 28.7	23495 6.92 27.5	22401 7.33 26.7	21302 7.75 25.9	19813 8.03 25.1	18257 8.28 24.4								
775	28195 6.74 36.7	27392 7.30 35.1	26588 7.87 33.5	25773 8.42 32.0	24757 8.87 31.0	23741 9.31 30.1	22643 9.72 29.1	21260 10.03 28.2	19876 10.33 27.2							
815	29650 7.84 39.7	28886 8.43 38.3	28122 9.02 37.0	27358 9.61 35.6	26444 10.11 34.5	25478 10.58 33.4	24511 11.05 32.4	23332 11.42 31.4	22016 11.74 30.4	18506 11.92 30.7						
860	31288 9.21 44.5	30563 9.84 42.9	29839 10.46 41.2	29115 11.08 39.5	28320 11.66 38.1	27404 12.15 37.2	26488 12.64 36.3	25572 13.14 35.4	24364 13.49 34.5	21781 14.11 32.9	17809 13.91 35.4					
915	33289 11.10 48.4	32608 11.76 47.0	31927 12.42 45.7	31247 13.09 44.4	30566 13.75 43.0	29725 14.29 42.1	28864 14.81 41.2	28003 15.34 40.3	27142 15.86 39.4	24816 16.59 37.6	21905 16.93 37.4	17112 16.29 39.3				
970	35289 13.22 54.0	34647 13.92 52.5	34005 14.63 50.9	33363 15.33 49.3	32721 16.03 47.8	32014 16.68 46.5	31202 17.23 45.6	30390 17.79 44.7	29578 18.35 43.8	27676 19.29 42.0	25466 20.05 40.3	22316 20.11 41.5	16652 18.91 43.8			
1030	37472 15.83 60.6	36868 16.58 59.0	36263 17.32 57.5	35659 18.07 56.0	35054 18.81 54.4	34449 19.56 52.9	33717 20.18 51.8	32953 20.77 50.8	32188 21.36 49.7	30659 22.54 47.7	28634 23.39 45.6	26552 24.20 43.6	23341 24.05 45.7	17896 22.72 48.0		
1120	40747 20.35 70.8	40191 21.16 69.1	39635 21.97 67.5	39079 22.79 65.8	38523 23.60 64.1	37967 24.41 62.5	37411 25.22 60.8	36730 25.89 59.8	36027 26.53 58.8	34620 27.81 57.0	33214 29.10 55.1	31316 29.99 53.3	29402 30.87 51.4	26781 31.04 52.4	23731 30.78 54.9	
1190	43293 24.41 78.3	42770 25.27 76.9	42247 26.14 75.6	41723 27.00 74.2	41200 27.86 72.8	40677 28.72 71.4	40153 29.58 70.0	39623 30.44 68.7	38961 31.12 67.7	37637 32.48 65.7	36313 33.85 63.7	34899 35.13 61.7	33098 36.06 59.7	31296 37.00 57.7	28914 37.28 58.2	26044 37.00 60.7

Performance certified is for installation type B - free inlet, ducted outlet.
 Performance ratings (bhp) do not include transmission losses.
 Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

Mixed Flow Fan

Model: VMBL 12-16



DIMENSIONS LISTED IN INCHES

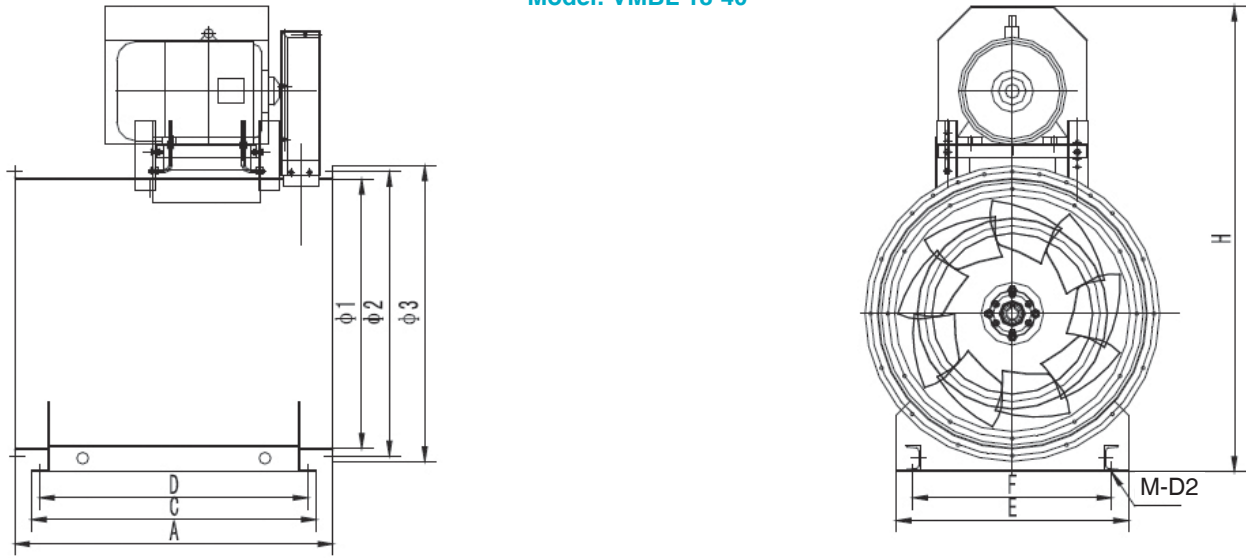
Model	Wheel	1	2	3	A	C	D	E	F	N	D1	M	D2	H (Max)	Weight (lb)
12	15.75	18	19	21	24	23	22	19	16	8	0	4	1	39	130
15	17.75	20	22	23	28	27	25	21	18	12	0	4	1	42	157
16	19.75	22	24	25	29	28	26	23	19	12	0	4	1	46	201

DIMENSIONS LISTED IN MILLIMETERS

Model	Wheel	1	2	3	A	C	D	E	F	N	D1	M	D2	H (Max)	Weight (Kg)
12	400	450	490	530	610	594	550	486	406	8	12	4	15	980	59
15	450	510	550	590	707	691	647	546	456	12	12	4	15	1070	71
16	500	560	610	640	730	714	670	572	482	12	12	4	15	1160	91

Mixed Flow Fan

Model: VMBL 18-40



DIMENSIONS LISTED IN INCHES

Model	Wheel	1	2	3	A	C	D	E	F	N	D1	M	D2	H (Max)	Weight (lb)
18	22.0	25	26	28	33	29	27	20	16	12	0.472	4	0.591	48	254
20	24.25	28	30	31	36	32	31	24	20	12	0.472	4	0.591	55	355
23	28.0	32	34	35	38	34	32	28	24	16	0.472	6	0.591	57	403
27	31.5	36	38	39	42	39	37	31	27	16	0.551	6	0.787	63	542
30	35.5	40	42	43	48	44	42	35	31	16	0.551	6	0.787	67	644
33	39.5	44	46	48	52	47	45	39	34	20	0.551	6	0.787	72	847
36	44.0	50	52	54	58	55	53	43	35	20	0.551	6	0.787	81	1164
40	49.25	56	58	60	64	60	58	48	40	20	0.551	6	0.787	87	1495

DIMENSIONS LISTED IN MILLIMETERS

Model	Wheel	1	2	3	A	C	D	E	F	N	D1	M	D2	H (Max)	Weight (Kg)
18	560	630	670	710	830	730	690	510	410	12	12	4	15	1230	115
20	630	712	750	792	915	825	775	620	520	12	12	4	15	1400	161
23	710	809	855	889	960	860	810	700	600	16	12	6	15	1455	183
27	800	910	955	990	1075	985	936	790	690	16	14	6	20	1590	246
30	900	1017	1055	1097	1210	1120	1070	890	790	16	14	6	20	1690	292
33	1000	1130	1180	1230	1320	1190	1140	990	870	20	14	6	20	1825	384
36	1120	1270	1320	1370	1470	1390	1336	1100	900	20	14	6	20	2045	528
40	1250	1421	1470	1520	1637	1530	1480	1220	1020	20	14	6	20	2205	678

VMBL 12
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
1400	0.000	69	75	70	73	70	68	60	50	75
1800	0.000	78	80	77	79	77	75	69	59	81
	1.000	79	80	75	77	75	69	63	56	79
2200	2.000	79	78	73	76	73	68	64	60	77
	0.000	84	84	86	83	82	79	76	66	87
	1.000	87	84	85	81	82	77	72	63	86
2600	2.000	86	84	84	81	82	75	70	62	85
	3.000	86	84	84	81	82	75	70	62	85
	0.000	88	87	92	87	86	83	81	73	91
3400	1.000	92	89	91	85	86	82	78	70	90
	2.000	91	89	91	85	86	81	75	68	90
	3.000	89	88	89	85	86	80	74	68	89
3400	0.000	93	96	98	92	93	91	88	82	98
	1.000	95	97	98	91	92	90	87	80	97
	2.000	97	98	98	90	92	90	85	78	97
	3.000	95	97	97	90	92	89	83	77	96
	4.000	94	97	97	90	92	88	82	76	96
	5.000	94	97	97	90	92	88	81	75	96

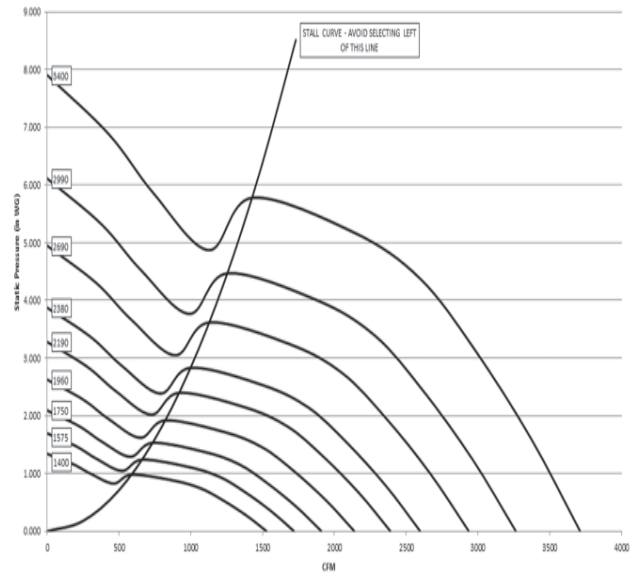
VMBL 15
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
1245	0.000	70	77	72	74	70	69	59	49	76
1675	0.000	79	82	77	80	78	76	69	60	83
	1.000	81	82	75	79	77	71	65	57	81
2100	2.000	80	79	75	79	75	69	63	60	80
	0.000	86	87	87	85	84	82	78	68	89
	1.000	89	87	86	84	84	79	74	65	88
2325	2.000	88	87	86	84	84	78	72	65	87
	3.000	88	87	86	84	84	78	72	65	87
	0.000	89	89	91	89	88	84	81	71	92
3045	1.000	93	90	89	87	86	83	78	68	91
	2.000	91	90	89	87	86	81	75	68	90
	3.000	91	90	89	87	86	79	73	68	89
	4.000	91	90	86	86	85	79	73	70	89
3045	0.000	96	97	100	93	94	91	89	82	99
	1.000	98	98	99	92	94	90	88	80	98
	2.000	100	98	99	91	94	90	86	79	98
	3.000	99	98	99	91	94	89	85	78	98
	4.000	97	98	99	91	94	88	83	76	97
	5.000	97	98	98	91	94	88	82	76	97

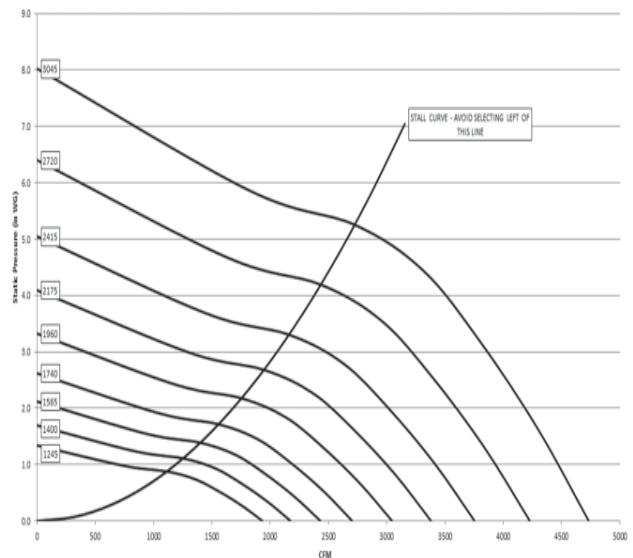
Values shown are for inlet L_{WIA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VMBL 12
AIR PERFORMANCE



VMBL 15
AIR PERFORMANCE



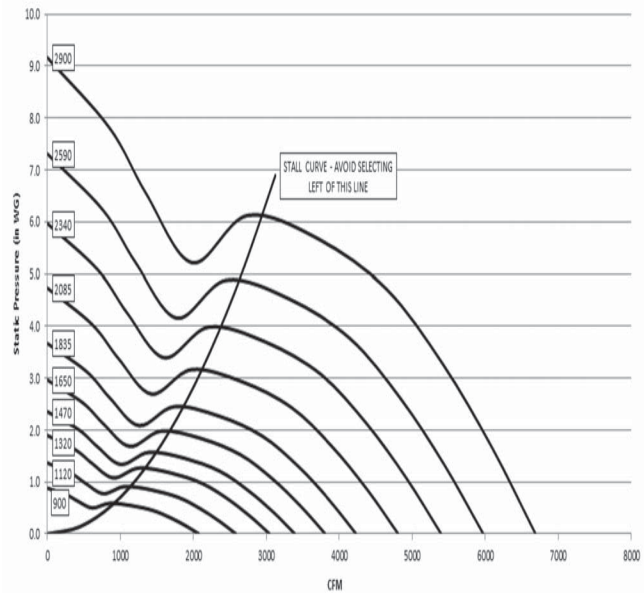
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

Mixed Flow Fan

VMBL 16
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
900	0.000	59	66	65	67	66	62	52	42	70
	0.000	68	73	76	75	76	73	65	55	80
	0.250	67	73	75	73	74	71	64	55	78
	0.500	67	73	75	72	73	70	63	54	77
	0.750	67	73	75	72	72	68	62	55	76
	1.000	69	73	74	72	70	67	62	56	75
	1.250	73	73	74	72	70	67	64	61	75
1300	1.500	77	73	73	72	69	66	66	66	75
	1.750	82	73	72	72	68	65	67	72	76
	0.000	76	78	83	81	81	80	75	65	86
	0.500	75	77	83	80	80	79	73	63	85
	1.000	75	77	83	79	78	77	71	63	83
	1.500	75	78	83	79	77	76	70	63	82
	2.000	75	78	83	79	77	76	70	63	82
1700	2.500	75	78	83	79	77	76	70	63	82
	0.000	82	82	87	86	86	86	82	72	92
	0.500	82	82	87	85	85	85	80	71	90
	1.000	81	81	87	84	84	84	79	70	89
	1.500	81	82	87	84	83	83	78	70	89
	2.000	80	82	87	84	83	82	77	70	88
	2.500	80	82	87	84	82	81	76	69	88
2100	3.000	84	86	86	85	82	80	76	72	88
	0.350	82	82	87	85	85	85	81	71	91
	4.000	93	93	83	86	82	79	76	77	88
	4.500	97	96	82	87	82	78	76	80	89
	0.000	87	91	93	95	93	93	91	84	99
	0.500	87	91	93	95	92	92	90	83	99
	1.000	86	90	93	95	92	92	90	83	98
2900	1.500	86	90	93	95	91	91	89	82	98
	2.000	86	90	93	95	91	91	89	82	97
	2.500	86	90	93	95	91	90	88	81	97
	3.000	86	90	93	95	91	90	88	81	97
	3.500	85	90	93	95	90	89	87	81	97
	4.000	85	90	93	95	90	89	87	80	97
	4.500	85	90	93	95	90	88	86	80	96
	5.000	86	91	93	95	90	88	86	80	96
	5.500	88	93	94	94	90	88	85	81	96

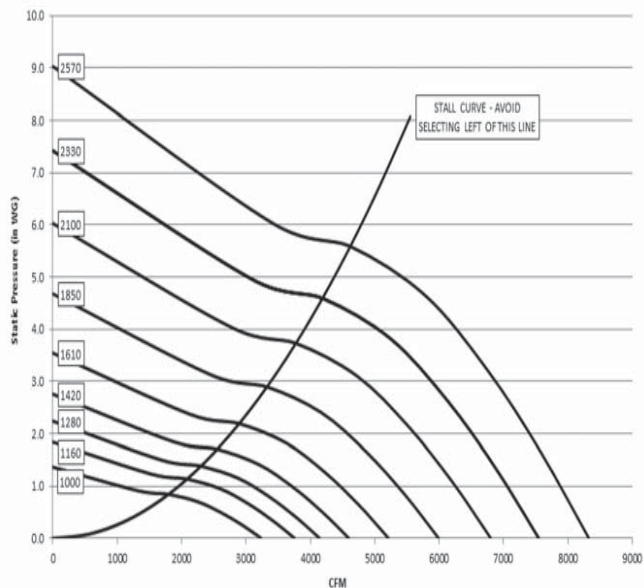
VMBL 16
AIR PERFORMANCE



VMBL 18
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
900	0.000	63	70	69	70	70	65	55	45	73
	0.000	71	76	78	78	78	76	67	57	82
	0.250	70	76	77	76	76	74	65	56	80
	0.500	70	76	77	75	75	72	64	56	79
	0.750	70	76	77	75	74	71	64	56	78
	1.000	71	76	77	74	73	70	64	56	77
	1.250	73	76	77	74	72	69	65	60	77
1240	1.500	77	76	77	74	71	68	66	65	77
	0.000	77	80	85	83	83	81	75	65	88
	0.500	76	79	84	82	82	80	74	65	86
	1.000	76	80	84	81	80	78	73	64	85
	1.500	76	80	84	81	79	77	72	64	84
	2.000	76	80	84	81	79	77	72	64	84
	2.500	76	80	84	81	79	77	72	64	84
1580	3.000	76	80	84	81	79	77	72	64	84
	0.000	84	85	89	88	88	87	84	74	93
	0.500	83	84	89	87	87	86	82	73	92
	1.000	83	84	89	86	86	85	81	72	91
	1.500	83	84	89	86	85	84	80	72	90
	2.000	82	85	89	86	85	83	79	71	90
	2.500	82	85	89	86	84	82	78	71	90
1975	3.000	84	86	88	86	84	82	78	72	89
	0.350	84	85	89	87	87	86	83	73	92
	4.000	91	91	86	88	84	80	76	77	89
	4.500	95	94	85	88	84	80	76	80	90
	5.000	99	96	83	89	84	79	75	82	90
	0.000	90	92	95	96	94	94	92	84	100
	0.500	90	92	95	96	93	93	91	83	100
2600	1.000	89	91	94	95	93	93	90	82	99
	1.500	89	91	94	95	92	92	89	81	98
	2.000	89	91	94	95	92	92	89	81	98
	2.500	89	91	94	95	92	91	88	81	98
	3.000	89	91	94	95	92	91	88	81	98
	3.500	88	91	95	95	91	90	87	80	97
	4.000	88	91	95	95	91	90	87	80	97
	4.500	88	91	95	95	91	89	86	80	97
	5.000	89	92	95	95	91	89	86	80	97
	5.500	91	94	95	94	91	88	85	81	97

VMBL 18
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

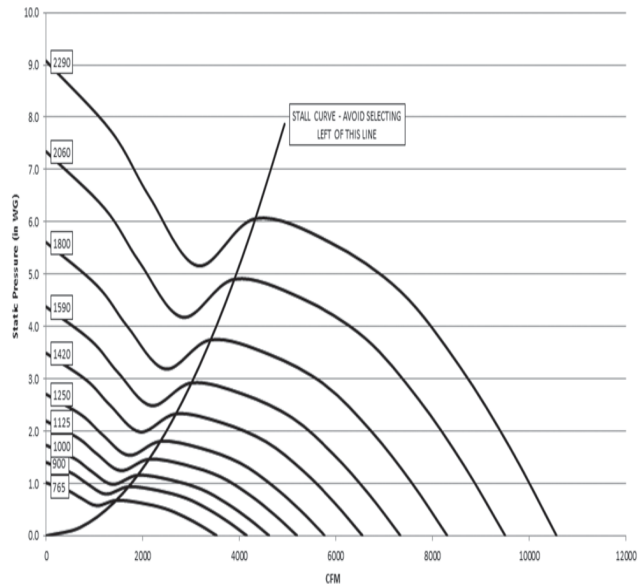
Values shown are for inlet L_{WiA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VMBL 20
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
690	0.000	62	67	67	68	66	59	49	39	70
	0.000	70	76	75	76	76	73	63	53	80
	0.250	69	76	73	74	74	71	61	52	78
	0.500	69	76	73	73	73	69	61	52	77
	0.750	70	76	73	72	72	68	60	53	76
	1.000	72	75	73	72	71	67	61	56	75
1000	1.250	75	73	74	72	70	66	64	64	75
	1.500	79	71	75	72	69	65	67	71	76
	0.000	78	81	84	83	83	81	73	63	87
	0.500	77	81	83	81	81	78	71	62	85
	1.000	77	81	83	81	80	77	70	63	84
	1.500	77	81	83	80	78	75	69	63	83
1350	2.000	77	81	83	80	78	75	69	63	83
	2.500	77	81	83	80	78	75	69	63	83
	0.000	83	86	90	87	87	86	81	71	92
	0.500	83	85	90	86	86	85	79	70	91
	1.000	82	85	90	85	85	84	78	69	90
	1.500	82	85	90	85	84	83	77	69	90
1650	2.000	82	85	90	85	84	82	77	69	89
	2.500	83	86	90	85	83	81	76	70	89
	3.000	87	88	89	85	82	80	76	72	88
	3.500	83	85	90	87	86	85	80	70	91
	4.000	95	92	86	85	81	79	76	78	88
	0.000	92	92	96	96	95	95	92	83	101
2290	0.500	92	92	96	95	94	94	91	82	100
	1.000	91	91	96	95	94	94	90	82	99
	1.500	91	91	96	94	93	93	89	81	99
	2.000	91	91	96	94	93	93	89	81	98
	2.500	91	91	96	94	92	92	88	80	98
	3.000	91	91	96	94	92	92	88	80	98
2290	3.500	90	92	96	94	92	91	87	80	98
	4.000	90	92	96	94	91	91	87	79	97
	4.500	90	92	96	94	91	91	86	79	97
	5.000	91	93	96	94	91	90	86	80	97
	5.500	94	96	95	94	91	89	85	81	97

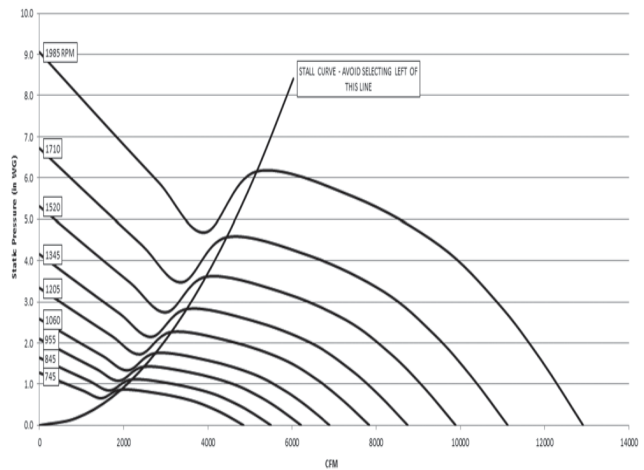
VMBL 20
AIR PERFORMANCE



VMBL 23
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
690	0.000	66	70	69	70	69	67	56	45	73
	0.000	76	77	77	77	77	75	68	57	81
	0.250	75	76	76	76	75	73	65	55	80
	0.500	74	74	75	75	74	71	63	54	78
	0.750	74	73	74	74	73	70	63	54	77
	1.000	74	72	73	73	72	69	62	54	76
950	1.250	76	74	75	75	72	68	61	54	77
	1.500	79	77	77	77	73	68	61	54	78
	2.000	84	82	80	80	74	66	59	54	80
	0.000	83	82	84	82	82	81	77	66	87
	0.500	82	80	82	81	80	79	73	63	85
	1.000	83	79	81	80	79	77	71	62	84
1200	1.500	84	77	79	78	78	75	69	61	82
	2.000	84	77	79	78	78	75	69	61	82
	2.500	84	77	79	78	78	75	69	61	82
	0.000	88	87	88	86	87	85	83	72	92
	0.500	88	86	87	86	86	84	81	70	91
	1.000	89	85	86	85	85	83	79	69	89
1450	1.500	90	84	85	84	84	82	77	68	88
	2.000	91	83	84	83	83	81	76	68	87
	2.500	92	83	84	83	83	80	75	67	87
	3.000	92	86	85	84	84	80	75	67	88
	3.500	88	86	87	86	86	84	82	71	91
	4.000	92	93	88	87	86	80	73	67	90
1985	4.500	92	96	90	89	87	80	73	67	91
	0.000	94	96	95	94	93	93	91	84	99
	0.500	94	96	94	94	93	92	90	83	98
	1.000	94	95	94	93	92	92	89	82	98
	1.500	94	95	93	93	92	91	88	81	97
	2.000	95	95	93	93	92	91	88	81	97
1985	2.500	95	95	92	92	91	90	87	80	96
	3.000	96	95	91	91	90	89	86	79	96
	3.500	97	95	91	91	90	89	86	79	95
	4.000	97	95	90	90	89	88	85	78	95
	4.500	98	95	90	90	89	88	85	78	95
	5.000	98	96	92	91	90	88	85	78	95
5.500	98	98	93	92	91	89	84	78	96	

VMBL 23
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

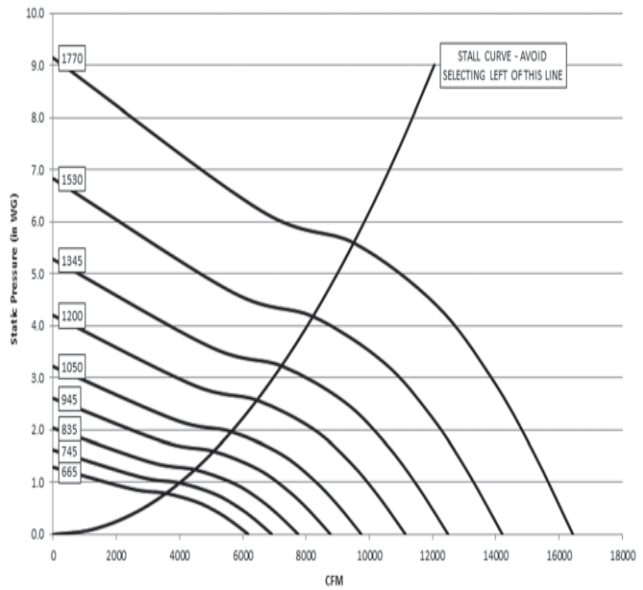
Values shown are for inlet L_{WIA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VMBL 27
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
600	0.000	68	70	70	71	70	65	54	43	73
	0.000	76	78	77	78	78	76	66	55	82
	0.250	75	76	76	76	76	73	63	53	80
	0.500	74	75	75	75	75	71	62	53	78
	0.750	73	74	74	74	74	69	61	53	77
825	1.000	73	73	73	74	73	68	61	53	76
	1.250	76	75	75	75	73	68	61	53	77
	1.500	80	77	77	76	73	68	61	54	78
	0.000	83	83	84	83	83	81	75	64	87
	0.500	82	81	82	81	81	78	72	62	85
1050	1.000	82	80	81	80	80	77	71	62	84
	1.500	83	78	79	79	78	75	69	61	82
	2.000	83	78	79	79	78	75	69	61	82
	2.500	83	78	79	79	78	75	69	61	82
	3.000	83	78	79	79	78	75	69	61	82
1300	0.000	90	89	89	88	88	87	83	72	93
	0.500	90	87	88	87	86	85	80	70	91
	1.000	90	86	87	86	85	84	78	69	90
	1.500	91	85	86	85	85	83	77	68	89
	2.000	91	84	85	84	84	82	76	68	89
	2.500	92	85	85	84	84	81	76	68	88
	3.000	93	88	86	85	85	81	75	68	89
	0.350	90	88	89	87	87	86	81	71	92
	4.000	95	94	90	89	87	80	74	68	91
	4.500	96	97	91	90	88	80	74	68	92
1770	0.000	97	97	97	95	95	94	92	84	100
	0.500	97	97	96	95	94	93	91	83	100
	1.000	97	96	96	94	94	93	90	81	99
	1.500	97	96	95	94	93	92	89	80	98
	2.000	98	96	95	94	93	92	88	80	98
	2.500	98	95	94	93	92	91	88	79	97
	3.000	99	95	93	92	92	90	87	79	97
	3.500	100	95	93	92	92	90	86	79	96
	4.000	100	94	92	91	91	89	86	78	96
	4.500	101	94	92	91	91	89	85	78	96
5.000	101	96	93	92	92	89	85	78	96	
5.500	101	97	94	93	92	90	84	78	97	

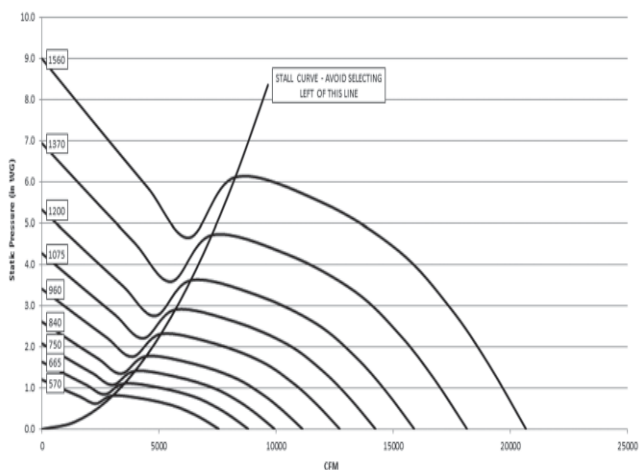
VMBL 27
AIR PERFORMANCE



VMBL 30
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
530	0.000	69	71	71	72	70	64	53	42	74
	0.000	77	80	78	79	78	75	64	53	82
	0.500	74	77	76	76	75	70	61	52	79
	1.000	73	75	74	75	73	68	60	52	77
	1.500	81	79	77	78	73	67	60	54	78
725	0.000	85	85	85	85	84	83	75	64	88
	0.500	84	83	84	83	82	80	72	62	86
	1.000	83	82	83	82	81	78	70	61	85
	1.500	83	80	81	81	80	76	69	61	84
	2.000	83	80	81	81	80	76	69	61	84
950	2.500	83	80	81	81	80	76	69	61	84
	3.000	83	80	81	81	80	76	69	61	84
	0.000	90	89	90	89	87	87	82	71	92
	0.500	90	88	89	87	87	86	80	70	91
	1.000	90	87	88	87	86	84	78	68	91
1150	1.500	90	86	87	86	85	83	77	68	90
	2.000	91	85	86	85	85	82	76	68	89
	2.500	92	85	86	85	84	81	75	67	88
	3.000	93	88	87	86	85	81	75	67	89
	0.350	90	88	89	89	87	86	81	70	91
1560	4.000	95	93	90	89	86	80	74	67	91
	0.000	99	97	98	95	96	95	93	83	101
	0.500	99	96	97	95	95	94	92	82	100
	1.000	99	96	97	94	95	94	90	80	100
	1.500	99	95	96	94	94	93	89	79	99
	2.000	100	95	96	94	94	93	88	79	99
	2.500	100	94	95	93	93	92	88	78	98
	3.000	101	94	94	92	93	91	87	78	98
	3.500	102	94	94	92	93	91	86	78	97
	4.000	103	93	93	91	92	90	85	77	97
4.500	103	94	93	91	92	90	85	77	96	
5.000	103	95	94	92	93	90	85	77	97	
5.500	103	97	95	93	93	90	84	77	97	

VMBL 30
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

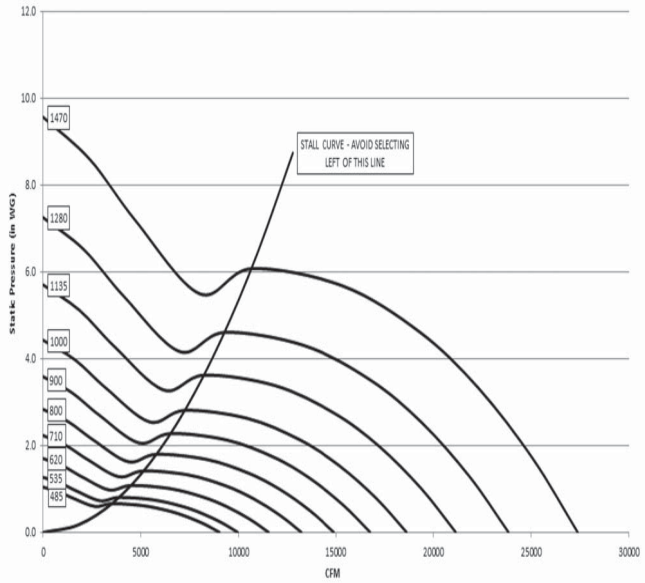
Values shown are for inlet L_{WiA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VMBL 33
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
485	0.000	74	71	72	73	71	65	55	45	75
	0.000	80	81	78	79	78	74	66	56	82
	0.500	77	78	76	77	76	70	61	52	79
	1.000	77	78	76	76	74	67	59	49	78
	1.500	88	87	82	79	74	66	59	53	80
650	0.000	89	93	88	88	87	84	78	68	92
	0.500	88	91	86	87	87	83	75	66	90
	1.000	87	89	85	86	86	82	73	64	89
	1.500	86	88	84	84	85	80	72	62	88
	2.000	86	88	84	84	85	80	72	62	88
825	2.500	86	88	84	84	85	80	72	62	88
	0.000	93	97	93	93	93	91	84	75	97
	0.500	92	95	92	92	92	90	82	74	96
	1.000	92	94	91	91	92	88	80	72	95
	1.500	91	93	90	90	91	88	80	71	94
1000	2.000	91	92	89	89	90	87	79	70	94
	2.500	90	91	88	88	90	86	78	69	93
	3.000	92	93	89	89	90	85	77	68	93
	0.350	92	96	92	92	92	90	83	74	96
	4.000	99	98	94	92	91	84	76	69	95
1335	0.000	98	103	102	99	99	98	94	85	104
	0.500	98	102	101	98	98	97	93	84	104
	1.000	97	102	101	98	98	97	92	83	103
	1.500	97	101	100	97	97	96	91	82	102
	2.000	97	101	100	97	97	96	91	82	102
1335	2.500	97	100	99	96	97	96	90	81	101
	3.000	96	100	99	96	96	95	90	81	101
	3.500	96	99	98	95	96	95	89	80	101
	4.000	96	99	98	95	96	95	89	80	100
	4.500	95	98	97	94	95	94	88	79	100
1335	5.000	96	99	98	94	95	94	88	79	100
	5.500	98	101	99	95	96	94	88	79	100

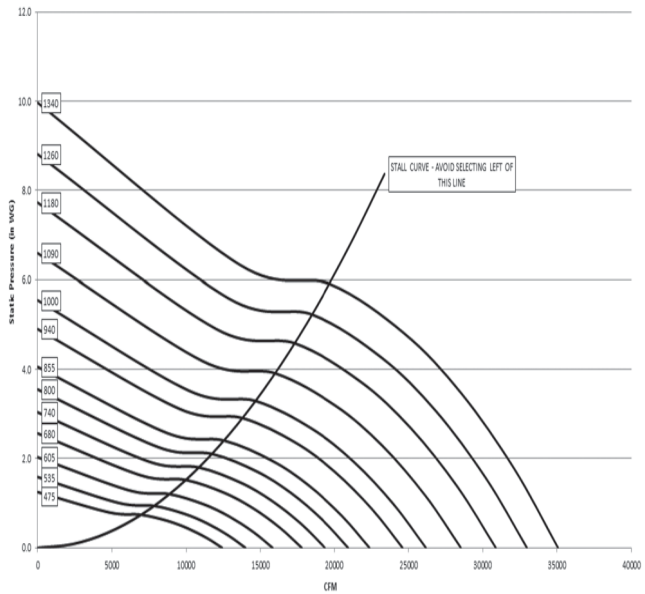
VMBL 33
AIR PERFORMANCE



VMBL 36
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								LWA
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	
435	0.000	76	72	74	74	71	65	55	45	75
	0.000	84	85	82	83	82	77	68	58	85
	0.500	81	81	79	81	79	74	65	56	83
	1.000	79	80	78	79	78	72	63	53	81
	1.500	86	84	81	81	78	70	62	55	82
640	2.000	94	90	86	84	77	69	63	58	84
	0.000	85	90	84	85	85	82	76	66	89
	0.500	84	87	82	84	84	80	72	63	88
	1.000	83	86	81	83	83	79	71	61	86
	1.500	82	84	80	81	82	77	69	59	85
850	2.000	82	84	80	81	82	77	69	59	85
	2.500	82	84	80	81	82	77	69	59	85
	3.000	82	84	80	81	82	77	69	59	85
	3.500	82	84	80	81	82	77	69	59	85
	0.000	90	94	90	90	90	88	83	74	94
1050	0.500	89	92	89	89	89	87	80	71	93
	1.000	89	91	88	88	89	86	78	69	92
	1.500	88	90	87	87	88	85	77	68	92
	2.000	87	89	86	86	87	84	76	67	91
	2.500	88	90	87	85	87	83	75	67	90
1050	3.000	92	93	89	87	88	83	75	67	91
	0.350	89	93	89	89	89	87	81	72	94
	4.000	100	100	95	91	89	81	73	67	94
	4.500	104	103	97	93	90	81	73	67	95
	5.000	108	107	100	95	90	80	72	67	97
1470	5.500	112	110	103	97	91	79	71	67	100
	0.000	95	101	102	97	97	97	93	85	103
	0.500	95	100	101	96	97	96	92	84	102
	1.000	94	100	100	96	96	96	91	83	102
	1.500	94	99	99	95	96	95	90	82	101
1470	2.000	94	99	99	95	96	95	90	82	101
	2.500	93	98	98	94	95	94	89	81	100
	3.000	93	98	98	94	95	94	89	80	100
	3.500	93	98	97	94	94	94	88	80	99
	4.000	92	97	97	93	94	93	88	79	99
1470	4.500	92	97	96	93	93	93	87	78	98
	5.000	94	98	97	94	94	93	87	78	99
	5.500	96	100	99	95	94	93	86	78	99

VMBL 36
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

Values shown are for inlet L_{WiA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

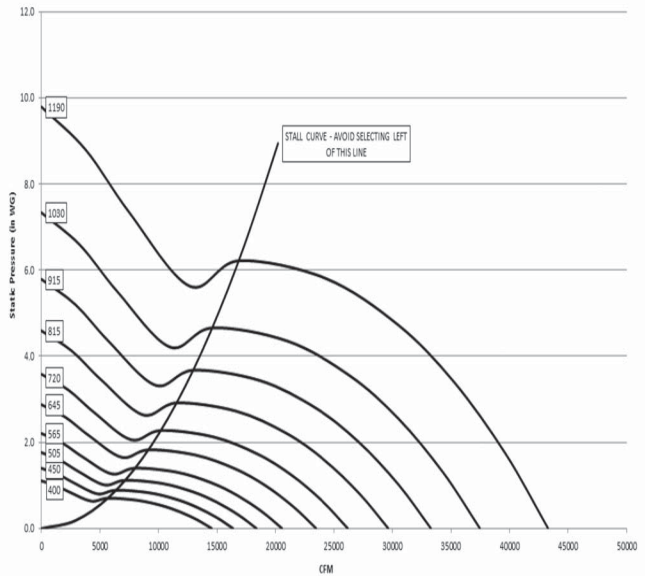
VMBL 40
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10 ⁻¹² WATTS								
		OCTAVE BANDS								
		1	2	3	4	5	6	7	8	LWA
400	0.000	78	74	75	75	72	65	55	45	76
	0.000	85	83	83	83	81	76	67	57	85
	0.500	81	80	80	81	79	71	63	54	83
550	1.000	79	78	78	80	77	69	60	50	81
	1.500	86	84	82	81	75	67	60	53	81
	0.000	90	92	88	89	88	84	76	66	92
725	0.500	89	90	87	88	87	82	74	65	90
	1.000	87	88	86	86	86	80	72	63	89
	1.500	87	88	85	86	85	79	71	61	88
	2.000	87	88	85	86	85	79	71	61	88
	2.500	87	88	85	86	85	79	71	61	88
	3.000	87	88	85	86	85	79	71	61	88
	3.500	87	88	85	86	85	79	71	61	88
875	0.000	94	98	93	93	92	90	84	74	97
	0.500	94	97	91	92	92	89	81	72	96
	1.000	93	95	90	91	91	87	79	70	95
	1.500	92	94	90	90	91	86	79	69	94
	2.000	91	93	89	89	90	86	78	68	93
	2.500	90	92	89	88	89	85	77	67	93
	3.000	94	95	90	90	90	84	76	67	93
1190	0.350	94	97	92	93	92	89	82	72	96
	4.000	101	101	94	94	91	83	75	68	95
	4.500	105	104	96	96	92	82	74	69	97
	0.000	100	104	102	100	100	98	93	85	105
	0.500	100	103	101	99	99	98	92	84	104
	1.000	99	103	100	99	99	97	91	83	103
	1.500	99	102	99	98	98	97	90	82	103
1190	2.000	99	102	99	98	98	97	90	81	102
	2.500	98	101	98	97	97	96	89	80	102
	3.000	98	101	98	97	97	96	89	80	102
	3.500	98	100	98	96	97	95	88	79	101
	4.000	97	100	97	96	96	95	88	79	101
	4.500	97	99	97	95	96	94	87	78	100
	5.000	98	100	98	96	96	94	87	78	100
5.500	100	102	99	97	97	93	86	78	101	

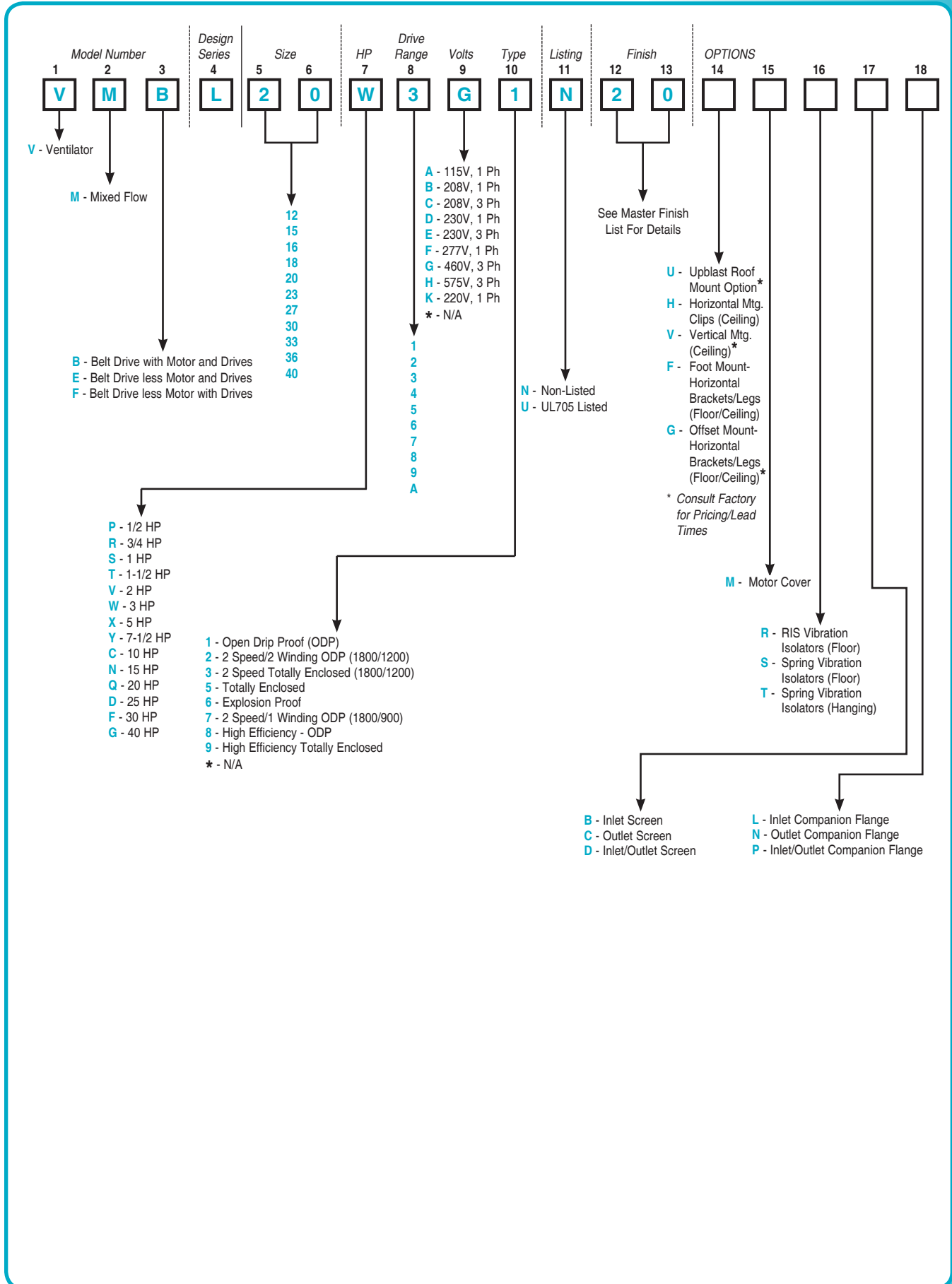
Values shown are for inlet L_{wiA} sound power levels for installation Type B: Free inlet, ducted outlet. The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA International Standard 301.

The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VMBL 40
AIR PERFORMANCE

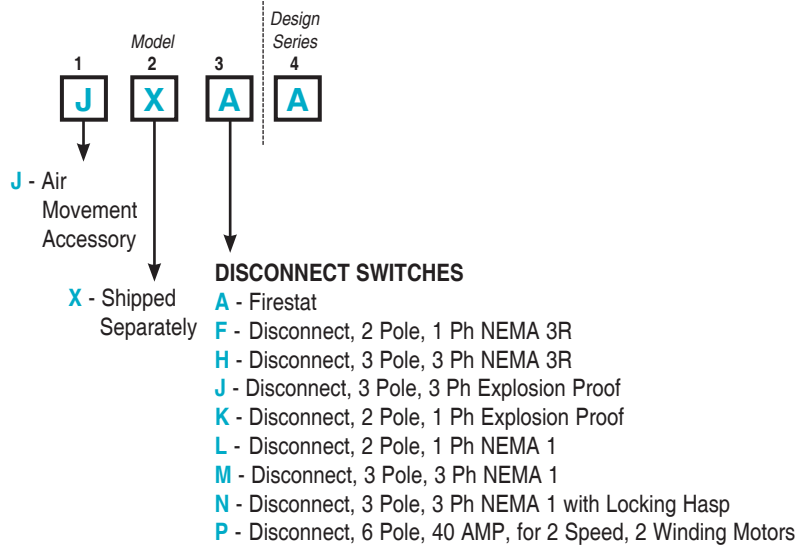


Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.



Mixed Flow Fan

▼ Electrical Accessories



NOTE: Units with two speed motors are fitted with two separate standard disconnects unless ordered otherwise.

▼ Mounting Accessories

