

BULLETIN: VB-1100-98
March-98

PVC AND FRP CENTRIFUGAL FANS VCB-SERIES



VIRON®

INTERNATIONAL

PVC AND FRP CENTRIFUGAL FANS

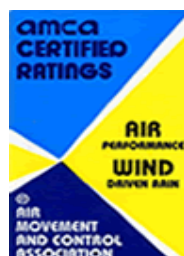


VCB-1100 SERIES

VIRON® INTERNATIONAL is a leading manufacturer of corrosion resistant PVC and FIBERGLASS fans. Our manufacturing facilities in Michigan and Texas operate the most modern equipment and efficient manpower found in the fan industry. Our PVC and FIBERGLASS Centrifugal Fans are produced in 20 standard sizes with wheel diameters ranging from 12" to 80", allowing our fans to produce volumes from 400 to 150,000 CFM

STANDARD DESIGN PARAMETERS:

1. High Efficiency
2. Easy Maintenance
3. Minimum Operating Cost
4. Structural Integrity



VIRON® INTERNATIONAL certifies that the VCB-1100 Series PVC and FRP Centrifugal Fans shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Ratings Program.

SPECIFICATIONS

PVC GENERAL SPECIFICATIONS

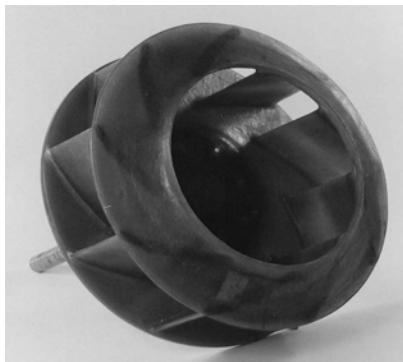
- Corrosion resistant PVC sheet with flame retardant additives will reduce the flame spread rating to below 25. This material is then rated for Class 1 flame spread.
- All structural parts in the airstream are PVC.
- All internal hardware is stainless steel.
- The fan housing is solid PVC sheet using premium grade corrosion resistant material.
- The fan wheel is solid fiberglass using a premium grade corrosion resistant resin. The backward incline wheel design offers efficient, low cost handling of industrial process air or gas. As an option **VIRON®** can manufacture a steel wheel with a PVC coating. The coating thickness will vary from 40 to 100 MILS depending upon the application.
- Maximum temperature limitation is 140°F on all PVC fans.

FRP GENERAL SPECIFICATIONS

- Corrosion resistant polyester resin with flame retardant additives will reduce the flame spread ratings to below 25.
- All structural parts in the airstream are fiberglass and resin.
- All internal hardware is stainless steel.
- The fan housing is solid fiberglass using premium grade corrosion resistant material.
- The fan wheel is solid fiberglass using a premium grade corrosion resistant resin. The backward incline wheel design offers efficient, low cost handling of industrial process air or gas.
- Maximum temperature limitation is 200°F on all fiberglass fans.
- Special high corrosion construction is optional on all **VIRON®** fiberglass air moving equipment.

PVC AND FRP STANDARD SPECIFICATIONS

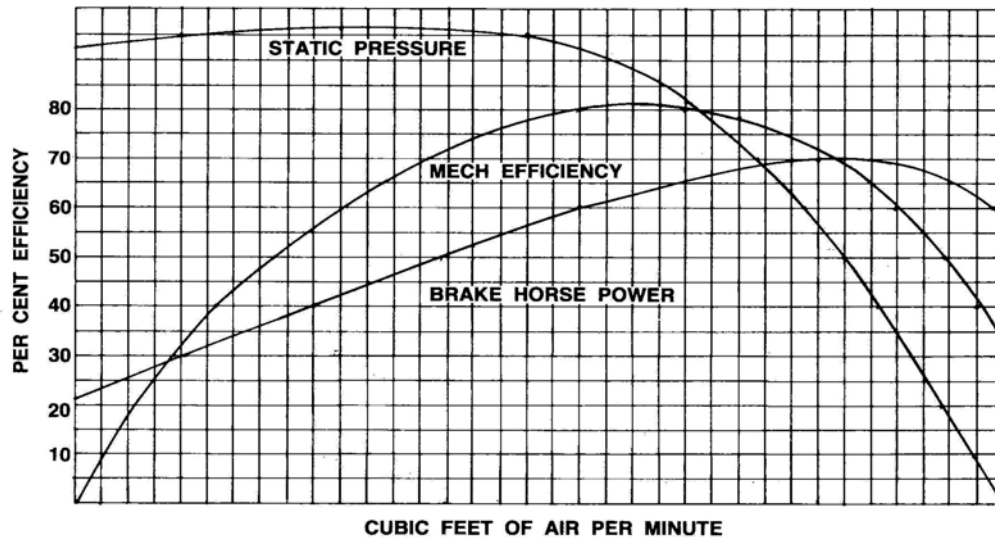
- **Size** - 12" to 80" diameter wheel, 20 convenient sizes to choose from giving you 400 to over 150,000 CFM.
 - **Motor** - All motors are TEFC.
 - **Belts** - All belts are industrial grade V-belt type.
 - **Bearings** - All bearings are heavy duty, self aligning, ball bearing type.
 - **Drain** - All fan housings have 1" drain at the lowest point of the housing.
 - **Hardware** - All hardware is stainless steel.
 - **Wheel** - All fan wheels are dynamically balanced.
 - **Pedestal Base** - All pedestal bases are constructed of heavy gauge steel. The trapezoid design insures smooth performance and structural integrity. An epoxy protective coating is applied to all bases.
-



FRP BACKWARD INCLINE WHEEL

The fan wheel is solid fiberglass using a premium grade corrosion resistant resin. This design offers our customers one of the highest efficiencies and quietest operation of any fan wheel manufactured. This wheel has a non-overloading characteristic, and has been proven to save horsepower over the entire volume range.

CENTRIFUGAL FAN PERFORMANCE CURVES



TEMPERATURE AND ALTITUDE CORRECTION DATA CORRECTION FACTOR TABLE

Air Temp. Deg. F	Altitude In Feet Above Sea Level																			
	0	500	1000	1500	2000	2500	3000	3500	4000	4500	5000	5500	6000	6500	7000	7500	8000	8500	9000	10000
0°	.87	.89	.91	.92	.94	.96	.98	.99	1.01	1.03	1.05	1.06	1.09	1.10	1.13	1.15	1.17	1.19	1.22	1.26
40°	.94	.96	.98	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.26	1.28	1.30	1.32	1.36
70°	1.00	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.18	1.20	1.22	1.25	1.27	1.30	1.32	1.35	1.37	1.40	1.45
80°	1.02	1.04	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.26	1.28	1.30	1.33	1.36	1.38	1.41	1.43	1.48
100°	1.06	1.08	1.10	1.12	1.14	1.16	1.19	1.21	1.23	1.25	1.28	1.30	1.33	1.35	1.38	1.41	1.43	1.46	1.48	1.54
120°	1.09	1.12	1.14	1.16	1.18	1.20	1.23	1.25	1.28	1.30	1.32	1.35	1.38	1.40	1.43	1.46	1.48	1.51	1.53	1.58
140°	1.13	1.15	1.18	1.20	1.22	1.25	1.27	1.29	1.32	1.34	1.37	1.40	1.42	1.45	1.48	1.51	1.54	1.57	1.58	1.65
160°	1.17	1.19	1.22	1.24	1.26	1.29	1.31	1.34	1.36	1.39	1.42	1.44	1.47	1.50	1.53	1.56	1.59	1.62	1.64	1.70
180°	1.21	1.23	1.26	1.28	1.30	1.33	1.36	1.38	1.41	1.43	1.46	1.49	1.52	1.55	1.58	1.61	1.64	1.67	1.70	1.75
200°	1.25	1.27	1.29	1.32	1.34	1.37	1.40	1.42	1.45	1.48	1.51	1.54	1.57	1.60	1.63	1.66	1.69	1.72	1.75	1.81
250°	1.34	1.36	1.39	1.42	1.45	1.47	1.50	1.53	1.56	1.59	1.62	1.65	1.68	1.71	1.74	1.78	1.82	1.85	1.88	1.94
300°	1.43	1.46	1.49	1.52	1.55	1.58	1.61	1.64	1.67	1.70	1.74	1.77	1.80	1.84	1.87	1.91	1.94	1.98	2.00	2.08
350°	1.53	1.56	1.59	1.62	1.65	1.68	1.72	1.75	1.78	1.81	1.85	1.88	1.92	1.96	2.00	2.04	2.07	2.11	2.14	2.22
400°	1.62	1.65	1.69	1.72	1.75	1.79	1.82	1.85	1.89	1.93	1.96	2.00	2.04	2.08	2.12	2.16	2.20	2.25	2.27	2.35
450°	1.72	1.75	1.79	1.82	1.86	1.89	1.93	1.96	2.00	2.04	2.08	2.12	2.16	2.20	2.24	2.29	2.33	2.38	2.41	2.50
500°	1.81	1.85	1.88	1.92	1.96	1.99	2.03	2.07	2.11	2.15	2.19	2.23	2.28	2.32	2.36	2.41	2.46	2.51	2.54	2.62
550°	1.91	1.94	1.98	2.02	2.06	2.10	2.14	2.18	2.22	2.26	2.30	2.35	2.40	2.44	2.49	2.54	2.58	2.63	2.68	2.77
600°	2.00	2.04	2.08	2.12	2.16	2.20	2.24	2.29	2.33	2.38	2.42	2.47	2.50	2.56	2.61	2.66	2.71	2.77	2.80	2.90
650°	2.10	2.14	2.18	2.22	2.26	2.31	2.35	2.40	2.44	2.49	2.54	2.58	2.53	2.68	2.74	2.79	2.84	2.90	2.94	3.04
700°	2.19	2.23	2.27	2.32	2.36	2.41	2.46	2.50	2.55	2.60	2.65	2.70	2.75	2.80	2.86	2.91	2.97	3.03	3.06	3.18
750°	2.28	2.33	2.37	2.42	2.47	2.51	2.56	2.61	2.66	2.71	2.76	2.81	2.87	2.92	2.98	3.04	3.10	3.16	3.19	3.31
800°	2.38	2.43	2.48	2.52	2.57	2.62	2.66	2.72	2.76	2.81	2.86	2.90	2.98	3.02	3.10	3.14	3.21	3.26	3.33	3.45
850°	2.47	2.52	2.57	2.62	2.67	2.72	2.76	2.82	2.87	2.92	2.97	3.02	3.09	3.14	3.21	3.26	3.33	3.38	3.46	3.58
900°	2.57	2.62	2.67	2.72	2.76	2.83	2.88	2.93	2.98	3.03	3.08	3.14	3.21	3.26	3.34	3.39	3.47	3.52	3.60	3.73
950°	2.66	2.72	2.77	2.82	2.87	2.92	2.98	3.03	3.08	3.14	3.19	3.24	3.32	3.38	3.46	3.51	3.58	3.64	3.72	3.86
1000°	2.76	2.82	2.87	2.92	2.98	3.04	3.09	3.14	3.20	3.26	3.31	3.37	3.45	3.50	3.59	3.64	3.72	3.78	3.86	4.00

PERFORMANCE AT OTHER THAN STANDARD CONDITIONS

Any particular fan, operating at a constant speed on a fixed system when there is no internal heat exchange involved, will deliver the same volume of air but the static pressure and brake horsepower will vary with the density. The capacity tables in this catalog are based on the fan handling standard air at a density of .075 lbs. per cubic foot corresponding to 70°F, and 29.92" Hg. Barometric Pressure. Therefore, when the fan handles air or other gases at other than standard densities due to temperature, altitude, or the kind of gas, the published tables should be used in the following manner:

General Method

Step 1 Compute the equivalent static pressure in the following manner:

$$\text{Equivalent SP} = \text{Required SP} \times \frac{0.75}{\text{Actual Density}}$$

When both temperature and altitude vary from standard.

$$\text{Actual Density} = \frac{\text{Density at temp.} \times \text{density at alt.}}{.075}$$

(See chart below)

Step 2 Using the required CFM and the equivalent SP, obtain the RPM and BHP from the standard capacity table, interpolating when necessary.

Step 3 The RPM obtained is the correct value.
The BHP obtained must be corrected for the actual density as follows:

$$\text{BHP (from table)} \times \frac{\text{Actual Density}}{.075}$$

Example

To compute the changes in RPM and BHP on a VCB-1140 fan from 17,733 CFM, 1½" s.p. at sea level to operating a fan with 250°F air at 5000' altitude follow steps 1 through 3.

Step 1 Equivalent SP = 1.5 X $\frac{.075}{.0465} = 2.42"$

$$\text{Actual Density} = \frac{.056 \times .0623}{0.075} = .0465$$

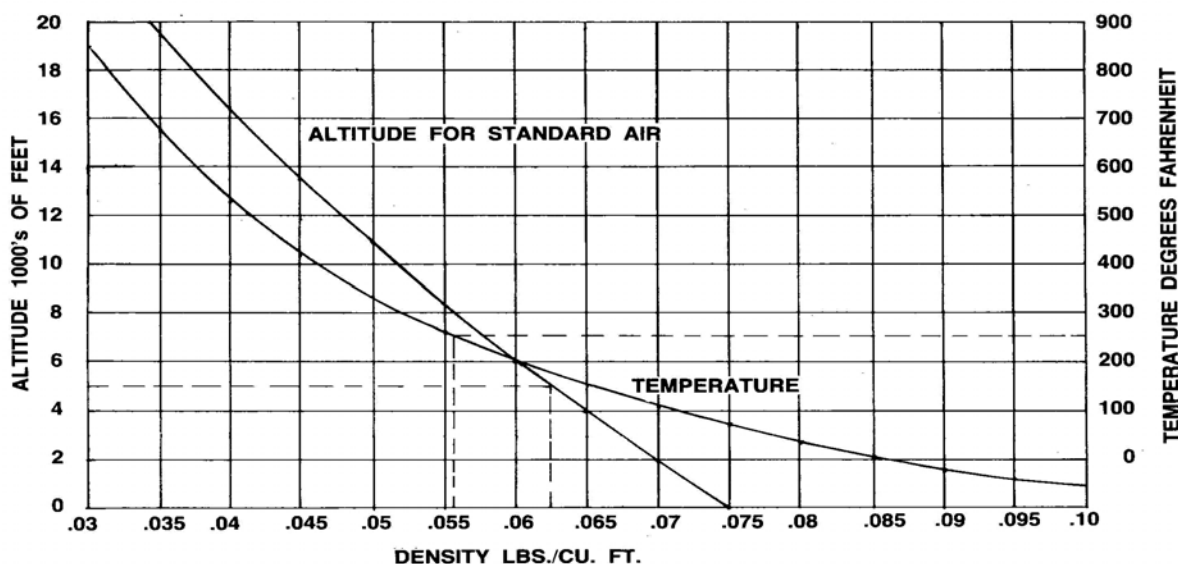
Where .056 is read from temperature curve and .0623 from altitude curve.
(See chart below)

Step 2 From capacity table on page 22, by interpolation:
RPM = 722
BHP = 9.27

Step 3 Actual RPM required = 722

$$\text{Actual BHP} = 9.27 \times \frac{.0465}{0.75} = 5.75$$

Correct performance is: 17,733 CFM, 1½ SP, 722 RPM, 5.75 BHP, when handling air at 250°F., and 5000' elevation.



SELECTION GUIDE

VIRON® MODEL CODE:	VCB	1160	BD	FRP	FRP	9	CW360	50	TEFC	NORM	460	3	60
VIRON® Centrifugal Fan													
Series and Wheel Diameter													
Drive Code													
Housing Material Code													
Fan Wheel Material Code													
Drive Arrangement (see page 7)													
Rotation and Discharge Position (see page 7)													
Motor Horsepower													
Motor Type Code													
Motor Efficiency Code													
Motor Voltage													
Motor Phase													
Motor Cycle													

HOUSING MATERIAL CODE

Fiberglass	FRP
Polyvinyl Chloride	PVC
Polypropylene	PP

MOTOR TYPE CODE

Totally Enclosed Fan Cooled	TEFC
Open Drip Proof	OPEN
Explosion Proof	EXPL
Chemical Duty	CHEM

FAN WHEEL MATERIAL CODE

Fiberglass	FRP
Steel With Polyvinyl Chloride Coated	PVC
Steel With Kynar Coated	KYN
Stainless Steel	SST

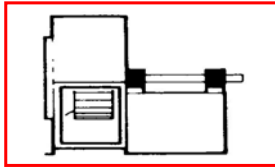
MOTOR EFFICIENCY CODE

Normal Efficiency	NORM
High Efficiency	HIGH

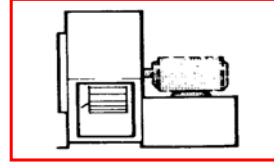
DRIVE CODE

Direct Drive	DD
Belt Drive	BD

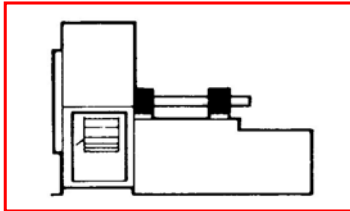
DRIVE ARRANGEMENTS FOR CENTRIFUGAL FANS



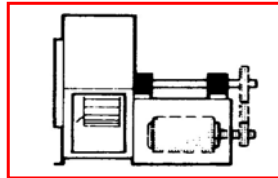
ARR.1 SWSI. For belt drive or direct connection. Impeller overhung. Two bearings on base.



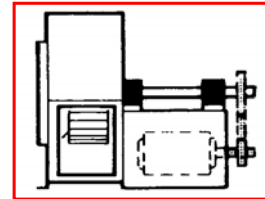
ARR. 4 SWSI. For direct drive. Impeller overhung on prime mover shaft. No bearings on fan. Prime mover base mounted or integrally directly connected.



ARR. 8 SWSI. For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



ARR. 9 SWSI. For belt drive, impeller overhung, two bearings, with prime mover outside base.



ARR. 10 SWSI. For belt drive, impeller overhung, two bearings, with prime mover inside base.

ROTATION AND DISCHARGE FOR CENTRIFUGAL FANS



Clockwise
Up Blast
CW 360



Clockwise
Top Angular Up
CW 45



Clockwise
Top Horizontal
CW 90



Clockwise
Top Angular Down
CW 135



Clockwise
Down Blast
CW 180



Clockwise
Bottom Angular Down
CW 225



Clockwise
Bottom Horizontal
CW 270



Clockwise
Bottom Angular Up
CW 315



Counterclockwise
Up Blast
CCW 360



Counterclockwise
Top Angular Up
CCW 45



Counterclockwise
Top Horizontal
CCW 90



Counterclockwise
Top Angular Down
CCW 135



Counterclockwise
Down Blast
CCW 180



Counterclockwise
Bottom Angular Down
CCW 225



Counterclockwise
Bottom Horizontal
CCW 270



Counterclockwise
Bottom Angular Up
CCW 315

NOTES:

1. Direction of rotation is determined from drive side of fan.
2. On single inlet fans, drive side is always considered as the side opposite fan inlet.

FAN ACCESSORIES



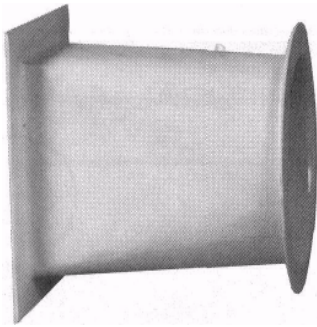
PARALLEL BLADE OUTLET DAMPER

The **VIRON®** Parallel Blade Outlet Damper is fabricated from Fiberglass Reinforced Plastic (FRP). It is designed to control the volume of corrosive fumes exiting the VCB Series fans. The linkage is placed outside the airstream for easy maintenance and long life.



COMMON STEEL BASE

All **VIRON®** VCB Series fans come standard with Common Steel Bases. This adds structural rigidity and helps distribute the weight on a more even basis. When you need to mount the fan from the Common Steel Base, the factory can supply a heavier frame to accommodate any design criteria.



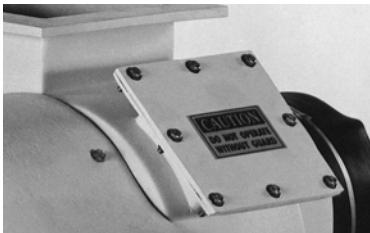
OUTLET TRANSITION

In many instances the installing contractor may want to put a stack off the fan outlet. **VIRON®** can manufacture a standard Outlet Transition to accommodate the rectangular fan outlet to a round duct stack.



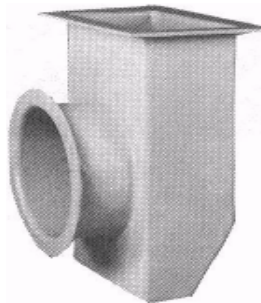
FLANGED INLET

A permanent bonded inlet flange is available for use by the installing contractor to mount an Inlet Duct or Inlet Plenum Box so a portion of the duct can be removable for future maintenance.



BOLTED CLEANOUT DOOR

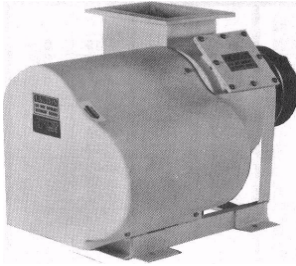
In order to properly maintain your fan you must visually inspect the fan wheel on a monthly basis, to do this **VIRON** offers a Bolted Cleanout Door. The Bolted Cleanout Door is fabricated into the rounded portion of the fan scroll. This allows your maintenance personnel to get the closest view of the fan wheel. Standard hardware is type 304 stainless steel with PVC closed cell gasket material.



INLET PLENUM BOX

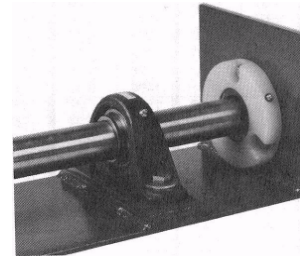
When there is not room to adequately design the inlet duct to a fan, **VIRON®** offers an Inlet Plenum Box. This Fiberglass Reinforced Plastic (FRP) fabricated box can be mounted to accommodate a duct coming from any direction, and still minimize the pressure loss associated with tight design parameters.

FAN ACCESSORIES



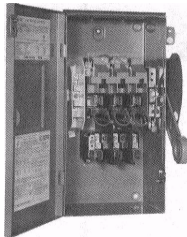
WEATHER COVER

All VCB Series Fans can be shipped with a complete weather cover. This weather cover protects the shaft, bearings, sheaves, drives, belts, and motors. It is available in all sizes.



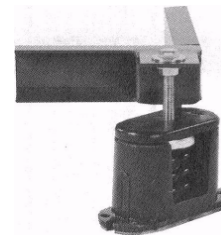
VITON SHAFT SEAL

In certain applications, it is important to keep fumes from escaping through the interface area of the shaft and the fan housing. By utilizing this positive shaft seal, you can keep fumes contained and away from your bearings which help operate your fan.



ELECTRICAL DISCONNECT SWITCH

Frequently fans are installed at remote locations. When this happens, **VIRON®** can mount an Electrical Disconnect Switch to the fan. This safety device can help insure your workers safety when periodic maintenance is required.



VIBRATION ISOLATION

A variety of different Vibration Isolation products are available for your **VIRON®** VCB Series Fans. The list of products can range from neoprene pads to 4" spring isolators with seismic restraints.

OTHER POPULAR FAN ACCESSORIES

Adjustable V-Belt Drives
Belt Guard
Butterfly Stack Cap
Class III Wheels
Flange Inlet
Flange Inlet Drilling
Flex Inlet Connections
Hinged Access Door
Inlet Flange Gasket
Inspection Port
Motor Speed Controls

Motors:
ODP
TEFC
High Efficiency TEFC
2 Speed - 1800/900 & 1800/1200
Explosion Proof
Chemical Duty
Outlet Flange Drilling
Outlet Flange Gasket
PVC Shaft Seal
Rubber Mount Vibration Isolators

Shaft Guard
Special Belts
Special Lifting Lugs
Special Sliding Bases (for motors)
Stainless Steel Shaft
Starter
Static Grounding Graphite Coating
Teflon Shaft Seal
Veil Interior
Vinyl Ester Resin

VCB-1112

Wheel Diameter
12 1/4" Ø I. D.

INLET 12-7/8" Ø I.D.
OUTLET 9-3/4" x 12-3/4" I.D.

Area .90 Sq. Ft.
Area .86 Sq. Ft.

Tip Speed = RPM X 3.21
Max BHP = .07 RPM³
1000

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
432	500	1007	0.06	1183	0.09	1349	0.12	1644	0.21								
518	600	1067	0.07	1227	0.10	1374	0.14	1652	0.22	1924	0.34						
604	700	1139	0.08	1284	0.12	1420	0.16	1670	0.24	1908	0.35	2142	0.47	2315	0.58		
690	800	1212	0.10	1352	0.14	1477	0.18	1711	0.27	1926	0.37	2134	0.49	2339	0.62	2543	0.78
777	900	1276	0.12	1426	0.16	1543	0.21	1762	0.30	1964	0.41	2155	0.52	2341	0.65	2524	0.80
863	1000	1326	0.14	1499	0.19	1618	0.24	1822	0.34	2014	0.45	2193	0.56	2365	0.69	2533	0.83
949	1100	1390	0.16	1562	0.22	1692	0.27	1888	0.38	2070	0.49	2242	0.61	2405	0.74	2562	0.88
1036	1200	1464	0.19	1610	0.24	1763	0.31	1963	0.43	2133	0.54	2297	0.67	2454	0.80	2603	0.95
1122	1300	1548	0.22	1670	0.28	1817	0.34	2037	0.48	2203	0.60	2358	0.73	2507	0.87	2652	1.02
1208	1400	1634	0.26	1740	0.32	1867	0.38	2110	0.53	2278	0.67	2424	0.80	2568	0.94	2706	1.09
1295	1500	1724	0.30	1818	0.36	1928	0.43	2180	0.58	2352	0.73	2498	0.88	2633	1.03	2766	1.18
1381	1600	1814	0.35	1902	0.41	1997	0.48	2229	0.64	2424	0.80	2572	0.96	2704	1.11	2830	1.27
1467	1700	1906	0.41	1989	0.47	2073	0.54	2279	0.69	2495	0.88	2646	1.04	2779	1.21	2899	1.37
1553	1800	2000	0.47	2078	0.53	2156	0.60	2337	0.76	2553	0.95	2718	1.13	2853	1.31	2974	1.48
1640	1900	2094	0.54	2168	0.60	2242	0.68	2403	0.83	2599	1.02	2789	1.22	2926	1.41	3049	1.60
1726	2000	2188	0.61	2259	0.68	2329	0.76	2475	0.92	2652	1.10	2849	1.31	2998	1.52	3122	1.72
1812	2100	2283	0.69	2352	0.77	2418	0.84	2554	1.01	2712	1.19	2893	1.40	3068	1.63	3195	1.84
1899	2200	2379	0.78	2445	0.86	2509	0.94	2637	1.11	2779	1.29	2945	1.50	3125	1.73	3266	1.96
1985	2300	2475	0.87	2539	0.96	2600	1.04	2722	1.21	2851	1.40	3002	1.60	3169	1.84	3336	2.09
2071	2400	2572	0.98	2633	1.06	2692	1.15	2809	1.33	2929	1.52	3066	1.72	3220	1.95	3385	2.21
2158	2500	2669	1.09	2728	1.18	2785	1.27	2897	1.45	3011	1.65	3135	1.86	3277	2.08	3431	2.33
2244	2600	2766	1.21	2823	1.30	2879	1.40	2987	1.59	3095	1.79	3209	2.00	3340	2.22	3483	2.47
2330	2700	2863	1.34	2919	1.43	2973	1.53	3077	1.73	3181	1.93	3288	2.15	3407	2.38	3540	2.62
2416	2800	2961	1.48	3015	1.58	3068	1.68	3169	1.88	3269	2.09	3371	2.31	3479	2.54	3602	2.79
2589	3000	3157	1.78	3208	1.89	3258	2.00	3354	2.22	3447	2.44	3541	2.67	3637	2.90	3740	3.16
2762	3200	3354	2.13	3403	2.25	3450	2.36	3541	2.60	3629	2.83	3716	3.07	3804	3.31	3895	3.57
2934	3400	3551	2.52	3598	2.65	3643	2.77	3729	3.02	3813	3.27	3895	3.52	3978	3.77	4061	4.04
3107	3600	3749	2.96	3794	3.09	3837	3.23	3919	3.49	3999	3.75	4077	4.01	4155	4.28	4233	4.55
3279	3800	3947	3.45	3990	3.59	4031	3.73	4111	4.01	4187	4.28	4262	4.56	4335	4.84	4409	5.12
3452	4000	4146	3.99	4187	4.14	4227	4.29	4303	4.58	4376	4.87	4448	5.16	4518	5.45	4588	5.75
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
949	1100	2715	1.03	2867	1.20	3016	1.37	3165	1.56	3314	1.76	3576	2.15				
1036	1200	2747	1.10	2889	1.25	3029	1.42	3167	1.61	3304	1.80	3577	2.22	3849	2.69	3994	2.97
1122	1300	2790	1.17	2925	1.33	3057	1.50	3187	1.67	3315	1.86	3569	2.27	3821	2.72	4072	3.22
1208	1400	2841	1.25	2970	1.41	3095	1.58	3219	1.76	3341	1.95	3580	2.34	3816	2.78	4050	3.25
1295	1500	2895	1.34	3021	1.51	3142	1.68	3261	1.86	3377	2.04	3604	2.44	3828	2.87	4048	3.33
1381	1600	2955	1.44	3076	1.61	3194	1.79	3310	1.97	3421	2.16	3639	2.55	3852	2.97	4062	3.43
1467	1700	3019	1.54	3136	1.72	3250	1.90	3362	2.09	3472	2.28	3682	2.68	3887	3.10	4087	3.55
1553	1800	3086	1.66	3200	1.84	3310	2.02	3418	2.21	3524	2.41	3731	2.82	3929	3.25	4121	3.70
1640	1900	3161	1.78	3267	1.96	3375	2.16	3480	2.35	3582	2.55	3783	2.97	3976	3.40	4163	3.86
1726	2000	3236	1.91	3342	2.10	3442	2.30	3544	2.50	3644	2.70	3838	3.13	4028	3.57	4210	4.03
1812	2100	3310	2.04	3416	2.25	3516	2.45	3612	2.65	3709	2.86	3898	3.30	4082	3.75	4261	4.22
1899	2200	3383	2.18	3491	2.40	3591	2.61	3686	2.82	3777	3.04	3962	3.48	4140	3.94	4314	4.42
1985	2300	3455	2.32	3564	2.55	3665	2.78	3761	3.00	3852	3.22	4028	3.67	4202	4.14	4371	4.63
2071	2400	3526	2.47	3636	2.71	3739	2.95	3835	3.18	3927	3.41	4097	3.88	4267	4.36	4432	4.85
2158	2500	3592	2.62	3707	2.87	3811	3.12	3909	3.37	4001	3.61	4172	4.10	4334	4.58	4496	5.09
2244	2600	3634	2.75	3777	3.04	3883	3.30	3982	3.56	4075	3.81	4247	4.32	4405	4.82	4562	5.33
2330	2700	3681	2.89	3829	3.19	3953	3.48	4054	3.75	4147	4.02	4321	4.55	4480	5.07	4630	5.59
2416	2800	3734	3.05	3873	3.35	4018	3.67	4124	3.95	4219	4.23	4395	4.78	4555	5.33	4704	5.87
2589	3000	3855	3.42	3978	3.70	4107	4.01	4240	4.34	4360	4.68	4540	5.27	4703	5.86		
2762	3200	3993	3.84	4101	4.12	4215	4.42	4334	4.74	4458	5.08	4681	5.79				
2934	3400	4147	4.31	4240	4.60	4340	4.89	4446	5.21	4558	5.54						
3107	3600	4312	4.83	4393	5.13	4481	5.43	4575	5.74	4674	6.07						
3279	3800	4483	5.41	4558	5.71	4635	6.02	4718	6.34								
3452	4000	4658	6.05														
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1467	1700	4284	4.03	4479	4.54	4673	5.09										
1553	1800	4310	4.17	4497	4.68	4682	5.21										
1640	1900	4345	4.34	4525	4.84	4702	5.36										
1726	2000	4387	4.51	4560	5.02												
1812	2100	4434	4.71	4602	5.21												
1899	2200	4485	4.92	4649	5.43												
1985	2300	4537	5.13	4700	5.66												
2071	2400	4593	5.36														
2158	2500	4653	5.60														
2244	2600	4716	5.86														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92" hg. Bar) Shaded areas show Class III Wheel Design

VCB-1113

Wheel Diameter
14 1/4" Ø I. D.

INLET 14-1/4"Ø I.D.
OUTLET 10-3/4" x 14" I.D.

Area 1.10 Sq. Ft.
Area 1.04 Sq. Ft.

Tip Speed = RPM X 3.54
Max BHP = .12 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
523	500	913	0.07	1073	0.10	1224	0.15	1490	0.25								
627	600	967	0.08	1112	0.12	1246	0.17	1499	0.27	1746	0.41						
732	700	1032	0.10	1164	0.14	1288	0.19	1515	0.29	1731	0.42	1944	0.57	2099	0.70		
836	800	1098	0.12	1225	0.17	1339	0.22	1551	0.33	1747	0.45	1937	0.59	2123	0.76	2309	0.95
940	900	1157	0.14	1293	0.20	1399	0.25	1598	0.36	1781	0.49	1955	0.63	2124	0.79	2290	0.97
1045	1000	1201	0.17	1358	0.23	1466	0.29	1652	0.41	1826	0.54	1989	0.68	2146	0.84	2298	1.01
1150	1100	1259	0.19	1417	0.26	1533	0.33	1712	0.46	1877	0.60	2033	0.74	2181	0.90	2323	1.07
1254	1200	1326	0.23	1459	0.30	1597	0.37	1779	0.52	1934	0.66	2082	0.81	2225	0.97	2360	1.15
1359	1300	1401	0.27	1513	0.34	1647	0.42	1846	0.58	1996	0.73	2137	0.89	2273	1.05	2405	1.23
1463	1400	1480	0.32	1576	0.38	1692	0.46	1912	0.64	2064	0.81	2197	0.97	2328	1.14	2453	1.32
1567	1500	1560	0.37	1647	0.44	1747	0.52	1975	0.71	2131	0.89	2263	1.06	2386	1.24	2507	1.43
1672	1600	1642	0.43	1722	0.50	1809	0.58	2021	0.77	2197	0.97	2331	1.16	2450	1.35	2566	1.54
1776	1700	1726	0.49	1801	0.57	1878	0.65	2065	0.84	2261	1.06	2398	1.26	2518	1.46	2627	1.66
1881	1800	1810	0.57	1881	0.65	1952	0.73	2118	0.92	2315	1.15	2463	1.37	2585	1.58	2695	1.79
1985	1900	1895	0.65	1962	0.73	2030	0.82	2177	1.01	2355	1.23	2527	1.48	2651	1.71	2763	1.93
2090	2000	1980	0.73	2045	0.82	2109	0.91	2242	1.11	2403	1.33	2583	1.59	2717	1.84	2829	2.07
2195	2100	2067	0.83	2129	0.92	2189	1.02	2313	1.22	2458	1.44	2623	1.69	2780	1.97	2895	2.22
2299	2200	2153	0.94	2213	1.03	2271	1.13	2388	1.33	2518	1.56	2669	1.81	2833	2.10	2960	2.37
2404	2300	2240	1.05	2298	1.15	2354	1.25	2465	1.46	2583	1.69	2721	1.94	2873	2.22	3023	2.53
2508	2400	2327	1.18	2383	1.28	2437	1.39	2543	1.60	2653	1.83	2778	2.08	2919	2.36	3069	2.68
2613	2500	2415	1.31	2469	1.42	2521	1.53	2623	1.75	2727	1.99	2840	2.24	2970	2.52	3110	2.82
2717	2600	2503	1.45	2555	1.57	2606	1.68	2704	1.91	2803	2.16	2906	2.41	3026	2.69	3156	2.99
2822	2700	2591	1.61	2642	1.73	2691	1.85	2786	2.09	2880	2.33	2978	2.59	3087	2.87	3208	3.17
2926	2800	2679	1.78	2729	1.90	2776	2.02	2868	2.27	2959	2.52	3052	2.79	3152	3.07	3264	3.37
3135	3000	2857	2.15	2904	2.28	2949	2.41	3036	2.68	3121	2.94	3206	3.22	3293	3.51	3388	3.81
3344	3200	3035	2.56	3079	2.71	3122	2.85	3205	3.13	3285	3.41	3364	3.70	3445	4.00	3527	4.31
3553	3400	3213	3.04	3256	3.19	3297	3.34	3375	3.64	3451	3.94	3526	4.24	3601	4.55	3677	4.87
3762	3600	3392	3.57	3433	3.73	3472	3.89	3547	4.20	3620	4.52	3691	4.84	3762	5.16	3833	5.49
3971	3800	3572	4.15	3611	4.33	3648	4.50	3720	4.83	3790	5.16	3858	5.50	3925	5.84	3992	6.18
4180	4000	3751	4.81	3789	4.99	3825	5.17	3894	5.52	3961	5.87	4026	6.22	4090	6.58	4154	6.94
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1150	1100	2463	1.25	2601	1.45	2737	1.66	2873	1.89	3008	2.13	3241	2.60				
1254	1200	2492	1.33	2621	1.52	2748	1.73	2873	1.95	2998	2.18	3246	2.69	3493	3.27	3620	3.59
1359	1300	2530	1.42	2653	1.61	2773	1.81	2891	2.03	3007	2.26	3239	2.75	3468	3.30	3696	3.91
1463	1400	2576	1.52	2693	1.71	2807	1.92	2920	2.13	3030	2.36	3248	2.84	3462	3.37	3675	3.95
1567	1500	2624	1.62	2739	1.83	2849	2.03	2957	2.25	3063	2.48	3269	2.96	3472	3.47	3673	4.04
1672	1600	2678	1.74	2788	1.95	2896	2.16	3001	2.38	3102	2.61	3301	3.09	3494	3.61	3685	4.16
1776	1700	2736	1.87	2843	2.08	2946	2.30	3048	2.53	3148	2.76	3339	3.25	3525	3.76	3707	4.31
1881	1800	2797	2.00	2900	2.22	3001	2.45	3099	2.68	3195	2.92	3383	3.42	3563	3.93	3738	4.48
1985	1900	2865	2.16	2961	2.38	3059	2.61	3154	2.84	3247	3.09	3430	3.59	3605	4.12	3775	4.67
2090	2000	2932	2.31	3028	2.55	3120	2.78	3213	3.02	3303	3.27	3480	3.78	3652	4.33	3817	4.89
2195	2100	2999	2.47	3096	2.72	3186	2.97	3274	3.21	3362	3.47	3534	3.99	3700	4.54	3864	5.11
2299	2200	3065	2.64	3163	2.90	3254	3.16	3340	3.42	3423	3.67	3591	4.21	3753	4.77	3911	5.35
2404	2300	3131	2.81	3229	3.08	3322	3.36	3408	3.63	3490	3.90	3651	4.44	3809	5.01	3963	5.60
2508	2400	3195	2.99	3295	3.28	3388	3.56	3475	3.85	3558	4.13	3712	4.69	3867	5.27	4018	5.87
2613	2500	3256	3.17	3359	3.47	3454	3.77	3542	4.07	3625	4.37	3781	4.95	3928	5.54	4075	6.15
2717	2600	3294	3.33	3423	3.68	3519	3.99	3608	4.30	3692	4.61	3848	5.22	3992	5.83	4135	6.45
2822	2700	3337	3.50	3472	3.86	3582	4.21	3673	4.54	3758	4.86	3916	5.50	4060	6.14	4196	6.77
2926	2800	3384	3.69	3511	4.05	3643	4.44	3737	4.78	3823	5.12	3982	5.79	4128	6.45	4263	7.10
3135	3000	3493	4.13	3604	4.48	3722	4.85	3844	5.25	3951	5.65	4114	6.38	4262	7.09	4399	7.80
3344	3200	3617	4.64	3715	4.98	3819	5.34	3928	5.73	4041	6.15	4242	7.00	4393	7.76		
3553	3400	3756	5.20	3841	5.55	3932	5.91	4029	6.29	4131	6.70	4342	7.58				
3762	3600	3905	5.84	3979	6.19	4059	6.56	4145	6.94	4235	7.33	4427	8.19				
3971	3800	4059	6.53	4128	6.89	4198	7.27	4273	7.66	4354	8.05						
4180	4000	4217	7.30	4282	7.67	4347	8.05	4413	8.45								
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1776	1700	3887	4.89	4064	5.51	4240	6.17	4416	6.87								
1881	1800	3910	5.06	4080	5.67	4248	6.32	4414	7.00								
1985	1900	3941	5.25	4104	5.86	4265	6.50	4425	7.17								
2090	2000	3978	5.47	4136	6.08	4291	6.71	4445	7.38								
2195	2100	4020	5.70	4173	6.32	4323	6.95	4472	7.62								
2299	2200	4066	5.96	4216	6.57	4362	7.21										
2404	2300	4114	6.21	4261	6.85	4404	7.50										
2508	2400	4164	6.49	4308	7.13	4450	7.80										
2613	2500	4218	6.78	4359	7.43												
2717	2600	4275	7.09	4412	7.75												
2822	2700	4334	7.42	4468	8.09												
2926	2800	4394	7.76														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92" hg. Bar)

Shaded areas show Class III Wheel Design

VCB-1115

Wheel Diameter
15-5/16" Ø I. D.

INLET 15-5/16"Ø I.D.
OUTLET 11-3/4" x 15-5/8" I.D.

Area 1.27 Sq. Ft.
Area 1.27 Sq. Ft.

Tip Speed = RPM X 3.93
Max BHP = .21 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
637	500	819	0.08	964	0.13	1102	0.18	1334	0.31	1564	0.50	1752	0.71				
764	600	866	0.10	998	0.15	1119	0.20	1349	0.34	1564	0.50						
892	700	923	0.12	1043	0.17	1155	0.23	1361	0.36	1558	0.52						
1019	800	983	0.15	1096	0.20	1200	0.26	1392	0.40	1570	0.55	1742	0.73	1912	0.93	2075	1.16
1147	900	1038	0.17	1157	0.24	1253	0.30	1433	0.44	1599	0.60	1757	0.77	1910	0.97	2062	1.19
1274	1000	1076	0.20	1215	0.28	1312	0.35	1480	0.50	1638	0.66	1786	0.84	1928	1.03	2066	1.24
1401	1100	1125	0.24	1270	0.32	1371	0.40	1533	0.56	1682	0.73	1824	0.91	1958	1.10	2087	1.31
1529	1200	1184	0.28	1307	0.36	1429	0.45	1592	0.63	1732	0.80	1867	0.99	1996	1.19	2119	1.40
1656	1300	1250	0.32	1353	0.41	1477	0.50	1652	0.70	1786	0.88	1915	1.08	2038	1.28	2158	1.50
1784	1400	1319	0.38	1408	0.46	1515	0.56	1710	0.78	1847	0.98	1968	1.18	2086	1.39	2200	1.61
1911	1500	1391	0.44	1469	0.53	1562	0.62	1767	0.86	1907	1.08	2026	1.29	2138	1.51	2247	1.74
2038	1600	1463	0.51	1536	0.60	1616	0.70	1811	0.93	1965	1.18	2086	1.41	2193	1.64	2298	1.87
2166	1700	1537	0.59	1605	0.68	1676	0.78	1849	1.01	2023	1.28	2145	1.53	2253	1.78	2352	2.02
2293	1800	1612	0.68	1676	0.77	1742	0.88	1895	1.11	2076	1.39	2204	1.66	2313	1.92	2412	2.18
2421	1900	1687	0.77	1749	0.88	1810	0.98	1946	1.22	2110	1.49	2261	1.79	2372	2.07	2472	2.34
2548	2000	1763	0.88	1822	0.99	1880	1.10	2003	1.33	2152	1.61	2317	1.93	2430	2.23	2531	2.52
2675	2100	1840	0.99	1896	1.11	1951	1.22	2064	1.46	2198	1.74	2351	2.05	2487	2.39	2590	2.69
2803	2200	1916	1.12	1971	1.24	2024	1.36	2130	1.61	2251	1.88	2390	2.19	2541	2.55	2648	2.88
2930	2300	1994	1.26	2046	1.38	2097	1.50	2198	1.76	2307	2.04	2435	2.35	2575	2.70	2704	3.07
3058	2400	2071	1.40	2122	1.53	2171	1.66	2268	1.93	2368	2.21	2484	2.52	2614	2.86	2752	3.25
3185	2500	2149	1.56	2198	1.70	2245	1.83	2338	2.11	2433	2.39	2538	2.71	2658	3.05	2787	3.43
3312	2600	2227	1.74	2274	1.88	2320	2.02	2410	2.30	2500	2.59	2596	2.91	2707	3.25	2826	3.62
3440	2700	2305	1.92	2351	2.07	2396	2.21	2482	2.50	2569	2.81	2658	3.13	2759	3.47	2871	3.84
3567	2800	2384	2.12	2429	2.27	2472	2.42	2556	2.72	2639	3.03	2723	3.36	2816	3.70	2919	4.07
3822	3000	2541	2.56	2584	2.72	2625	2.88	2704	3.20	2781	3.53	2859	3.87	2939	4.22	3027	4.60
4077	3200	2699	3.06	2740	3.23	2779	3.40	2854	3.75	2927	4.09	2999	4.45	3072	4.81	3148	5.19
4332	3400	2858	3.62	2896	3.81	2934	3.99	3005	4.35	3074	4.72	3143	5.09	3211	5.47	3281	5.86
4586	3600	3017	4.25	3054	4.45	3089	4.64	3158	5.03	3224	5.41	3288	5.80	3353	6.20	3418	6.60
4841	3800	3176	4.95	3211	5.16	3246	5.36	3311	5.77	3374	6.18	3436	6.59	3497	7.00	3558	7.42
5096	4000	3336	5.72	3370	5.95	3403	6.16	3466	6.59	3526	7.02	3585	7.45	3644	7.88	3702	8.32
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1401	1100	2214	1.54	2339	1.78	2463	2.04	2587	2.33	2710	2.63	2903	3.15				
1529	1200	2238	1.62	2355	1.86	2471	2.12	2585	2.39	2698	2.68	2925	3.32	3128	3.96		
1656	1300	2271	1.73	2382	1.97	2491	2.22	2598	2.49	2704	2.77	2915	3.38	3123	4.06	3332	4.82
1784	1400	2311	1.85	2417	2.09	2521	2.34	2622	2.61	2723	2.89	2921	3.49	3116	4.14	3310	4.86
1911	1500	2353	1.98	2457	2.23	2557	2.48	2654	2.75	2750	3.03	2938	3.62	3123	4.26	3305	4.96
2038	1600	2400	2.12	2500	2.37	2598	2.64	2692	2.91	2785	3.19	2965	3.78	3140	4.42	3313	5.10
2166	1700	2451	2.27	2548	2.53	2642	2.80	2734	3.08	2824	3.37	2997	3.97	3166	4.60	3332	5.28
2293	1800	2505	2.44	2598	2.70	2689	2.98	2778	3.26	2866	3.56	3035	4.17	3198	4.81	3357	5.48
2421	1900	2564	2.62	2652	2.89	2740	3.17	2827	3.46	2911	3.76	3077	4.38	3236	5.03	3389	5.71
2548	2000	2624	2.80	2710	3.09	2794	3.38	2878	3.68	2960	3.98	3120	4.61	3276	5.28	3426	5.97
2675	2100	2684	3.00	2770	3.30	2852	3.60	2932	3.90	3012	4.21	3167	4.86	3319	5.53	3466	6.24
2803	2200	2743	3.20	2830	3.52	2912	3.83	2989	4.15	3066	4.46	3217	5.12	3364	5.81	3508	6.52
2930	2300	2801	3.41	2889	3.74	2972	4.07	3050	4.40	3124	4.73	3270	5.40	3413	6.10	3553	6.82
3058	2400	2858	3.62	2948	3.97	3031	4.32	3110	4.67	3184	5.01	3324	5.70	3465	6.41	3601	7.14
3185	2500	2914	3.84	3005	4.21	3090	4.58	3169	4.94	3244	5.30	3383	6.01	3518	6.74	3651	7.49
3312	2600	2953	4.04	3062	4.46	3148	4.84	3228	5.22	3303	5.59	3444	6.34	3573	7.08	3704	7.85
3440	2700	2990	4.25	3113	4.70	3205	5.11	3286	5.50	3362	5.90	3504	6.68	3634	7.45	3758	8.22
3567	2800	3030	4.47	3147	4.92	3261	5.39	3343	5.80	3420	6.21	3563	7.02	3694	7.82	3815	8.62
3822	3000	3124	4.99	3227	5.42	3335	5.88	3447	6.39	3535	6.85	3680	7.73	3813	8.60	3936	9.47
4077	3200	3232	5.59	3323	6.02	3418	6.46	3519	6.95	3622	7.47	3795	8.48	3930	9.42	4055	10.3
4332	3400	3352	6.27	3431	6.70	3517	7.14	3606	7.61	3699	8.11	3894	9.22	4045	10.3	4172	11.3
4586	3600	3484	7.02	3552	7.46	3626	7.91	3706	8.38	3789	8.87	3966	9.94	4151	11.1		
4841	3800	3620	7.85	3683	8.30	3747	8.76	3818	9.23	3892	9.72	4051	10.8	4221	11.9		
5096	4000	3760	8.77	3818	9.22	3878	9.69	3939	10.2	4006	10.7	4149	11.7				
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2166	1700	3494	6.00	3656	6.77	3816	7.59	3976	8.46	4135	9.39						
2293	1800	3513	6.20	3668	6.95	3820	7.76	3972	8.60	4123	9.50						
2421	1900	3540	6.43	3688	7.18	3834	7.97	3979	8.80	4123	9.68						
2548	2000	3571	6.68	3715	7.43	3855	8.22	3995	9.04	4133	9.91						
2675	2100	3608	6.96	3747	7.72	3883	8.50	4018	9.32	4151	10.2						
2803	2200	3648	7.27	3783	8.03	3915	8.81	4046	9.63	4175	10.5						
2930	2300	3689	7.58	3823	8.36	3952	9.15	4079	9.97	4204	10.8						
3058	2400	3734	7.91	3864	8.70	3992	9.51	4116	10.3								
3185	2500	3781	8.26	3908	9.06	4034	9.89	4156	10.7								
3312	2600	3831	8.63	3955	9.44	4077	10.3	4197	11.1								
3440	2700	3882	9.02	4004	9.85	4123	10.7										
3567	2800	3936	9.43	4055	10.3	4172	11.1										
3822	3000	4051	10.3	4162	11.2												
4077	3200	4172	11.3	4281	12.2												

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92 Bar)

Shaded areas show Class III Wheel Design

VCB-1116

Wheel Diameter
16-1/2"

INLET 17-3/8" Ø I.D.
OUTLET 13-1/8" x 17-1/8" I.D.

Area 1.65 Sq. Ft.
Area 1.56 Sq. Ft.

Tip Speed = RPM X 4.32
Max BHP = .33 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
780	500	707	0.09	851	0.15	987	0.22	1217	0.38								
936	600	740	0.11	863	0.17	984	0.24	1211	0.41	1427	0.62						
1092	700	786	0.13	892	0.19	998	0.26	1204	0.42	1397	0.63	1584	0.87	1713	1.07		
1248	800	839	0.16	935	0.22	1027	0.29	1214	0.46	1390	0.65	1560	0.88	1725	1.14	1885	1.44
1404	900	895	0.20	985	0.26	1069	0.33	1232	0.50	1398	0.69	1554	0.91	1706	1.16	1854	1.44
1560	1000	952	0.24	1039	0.31	1117	0.38	1266	0.55	1414	0.74	1562	0.97	1702	1.21	1840	1.48
1716	1100	1011	0.28	1095	0.36	1170	0.44	1308	0.61	1441	0.80	1577	1.03	1711	1.27	1840	1.54
1872	1200	1070	0.33	1152	0.42	1225	0.51	1356	0.69	1480	0.88	1602	1.10	1727	1.34	1850	1.61
2028	1300	1130	0.39	1210	0.48	1281	0.58	1407	0.77	1524	0.97	1637	1.19	1750	1.43	1866	1.70
2184	1400	1192	0.45	1270	0.56	1338	0.66	1461	0.86	1573	1.07	1680	1.30	1784	1.54	1889	1.80
2340	1500	1254	0.52	1329	0.63	1397	0.74	1517	0.96	1624	1.19	1726	1.42	1826	1.66	1923	1.92
2496	1600	1318	0.60	1389	0.72	1456	0.84	1573	1.07	1678	1.31	1776	1.55	1870	1.80	1963	2.06
2652	1700	1382	0.69	1450	0.82	1516	0.94	1631	1.19	1734	1.44	1828	1.69	1919	1.95	2007	2.22
2808	1800	1447	0.79	1513	0.92	1575	1.05	1689	1.32	1790	1.58	1883	1.85	1970	2.11	2054	2.39
2964	1900	1513	0.90	1576	1.04	1636	1.17	1748	1.46	1847	1.73	1938	2.01	2023	2.29	2105	2.57
3120	2000	1580	1.02	1640	1.16	1698	1.31	1808	1.60	1905	1.89	1994	2.19	2078	2.48	2157	2.78
3276	2100	1647	1.15	1704	1.30	1760	1.45	1867	1.76	1963	2.07	2051	2.37	2133	2.68	2211	2.99
3432	2200	1714	1.29	1770	1.45	1823	1.60	1927	1.93	2022	2.25	2108	2.57	2189	2.90	2266	3.22
3588	2300	1782	1.45	1835	1.61	1887	1.77	1987	2.11	2082	2.45	2167	2.78	2246	3.12	2322	3.46
3744	2400	1850	1.61	1902	1.78	1952	1.95	2049	2.30	2141	2.65	2226	3.01	2304	3.36	2378	3.71
3900	2500	1919	1.79	1968	1.97	2017	2.15	2111	2.51	2201	2.87	2285	3.24	2362	3.61	2435	3.97
4056	2600	1988	1.99	2036	2.17	2083	2.35	2174	2.73	2261	3.11	2345	3.49	2421	3.87	2493	4.25
4212	2700	2057	2.20	2103	2.39	2149	2.58	2237	2.96	2322	3.35	2404	3.75	2480	4.15	2551	4.55
4368	2800	2126	2.42	2171	2.62	2215	2.81	2301	3.21	2383	3.62	2463	4.03	2540	4.45	2610	4.85
4680	3000	2265	2.92	2308	3.12	2349	3.33	2430	3.76	2508	4.19	2584	4.63	2658	5.07	2729	5.52
4992	3200	2406	3.48	2445	3.70	2484	3.92	2561	4.37	2635	4.83	2708	5.29	2778	5.76	2847	6.24
5304	3400	2546	4.11	2584	4.35	2621	4.58	2693	5.06	2764	5.54	2833	6.03	2901	6.53	2967	7.03
5616	3600	2687	4.82	2723	5.07	2758	5.32	2827	5.82	2895	6.33	2961	6.85	3025	7.37	3089	7.89
5928	3800	2829	5.61	2863	5.87	2896	6.13	2962	6.67	3026	7.20	3090	7.74	3152	8.29	3213	8.84
6240	4000	2971	6.48	3003	6.76	3035	7.03	3098	7.59	3159	8.15	3220	8.72	3280	9.29	3338	9.87
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1716	1100	1966	1.82	2089	2.13	2211	2.47	2331	2.84	2449	3.23	2650	3.98	2751	4.40		
1872	1200	1968	1.90	2084	2.20	2199	2.52	2312	2.87	2423	3.25	2641	4.07	2854	5.00	2954	5.48
2028	1300	1981	1.99	2090	2.29	2198	2.61	2305	2.95	2410	3.31	2616	4.09	2818	4.97	3016	5.95
2184	1400	1996	2.08	2105	2.40	2207	2.71	2308	3.05	2407	3.40	2603	4.16	2795	5.01	2983	5.94
2340	1500	2021	2.20	2120	2.50	2223	2.84	2319	3.17	2413	3.52	2600	4.27	2783	5.09	2962	5.99
2496	1600	2054	2.34	2146	2.64	2239	2.96	2335	3.31	2427	3.67	2605	4.41	2779	5.21	2951	6.08
2652	1700	2094	2.50	2180	2.80	2266	3.11	2353	3.45	2442	3.81	2617	4.57	2784	5.37	2948	6.22
2808	1800	2138	2.68	2220	2.98	2301	3.29	2382	3.62	2464	3.97	2634	4.75	2795	5.55	2953	6.40
2964	1900	2184	2.87	2264	3.18	2341	3.49	2418	3.62	2495	4.17	2650	4.91	2812	5.76	2963	6.60
3120	2000	2234	3.08	2310	3.39	2385	3.71	2458	4.05	2531	4.39	2678	5.13	2827	5.94	2980	6.83
3276	2100	2286	3.30	2359	3.62	2431	3.95	2502	4.29	2572	4.64	2711	5.37	2851	6.16	2995	7.04
3432	2200	2339	3.54	2410	3.87	2480	4.20	2548	4.55	2616	4.91	2750	5.65	2883	6.43	3017	7.28
3588	2300	2394	3.80	2463	4.13	2531	4.48	2597	4.83	2662	5.19	2792	5.94	2919	6.73	3046	7.57
3744	2400	2449	4.06	2517	4.41	2583	4.77	2648	5.13	2711	5.50	2837	6.26	2960	7.06	3081	7.89
3900	2500	2505	4.34	2573	4.71	2637	5.08	2700	5.45	2762	5.82	2883	6.60	3003	7.41	3120	8.25
4056	2600	2562	4.63	2628	5.02	2692	5.40	2754	5.78	2814	6.16	2932	6.95	3048	7.78	3163	8.63
4212	2700	2619	4.94	2685	5.34	2748	5.74	2809	6.13	2868	6.53	2983	7.33	3096	8.17	3207	9.04
4368	2800	2677	5.26	2741	5.67	2804	6.08	2864	6.50	2923	6.91	3035	7.73	3145	8.58	3253	9.46
4680	3000	2794	5.96	2857	6.39	2918	6.83	2976	7.27	3034	7.71	3144	8.60	3249	9.48	3351	10.39
4992	3200	2913	6.71	2974	7.18	3033	7.65	3091	8.11	3147	8.58	3254	9.53	3357	10.46	3455	11.41
5304	3400	3031	7.53	3093	8.04	3151	8.53	3207	9.03	3262	9.52	3367	10.52	3467	11.52	3563	12.52
5616	3600	3151	8.42	3211	8.96	3270	9.50	3325	10.02	3378	10.54	3481	11.59	3579	12.65	3674	13.71
5928	3800	3272	9.39	3331	9.95	3388	10.52	3444	11.09	3497	11.64	3597	12.75	3693	13.86	3786	14.98
6240	4000	3396	10.45	3452	11.03	3508	11.62	3562	12.22	3616	12.82	3715	13.99	3809	15.15	3900	16.32
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2652	1700	3110	7.14	3269	8.13	3426	9.18	3581	10.31	3734	11.51						
2808	1800	3108	7.30	3260	8.27	3411	9.30	3560	10.39	3708	11.54						
2964	1900	3112	7.50	3259	8.45	3404	9.45	3548	10.52	3690	11.65						
3120	2000	3123	7.72	3265	8.67	3405	9.66	3543	10.71	3680	11.81						
3276	2100	3140	7.98	3276	8.92	3411	9.90	3545	10.94	3676	12.02						
3432	2200	3154	8.21	3292	9.20	3423	10.18	3552	11.21	3679							

VCB-1118

Wheel Diameter
18-1/4"

INLET 19" Ø I.D.
OUTLET 14-1/2" x 19" I.D.

Area 1.97 Sq. Ft.
Area 1.90 Sq. Ft.

Tip Speed = RPM X 4.78
Max BHP = .57 $\frac{\text{RPM}^3}{1000}$

Volume	Outlet	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
950	500	639	0.11	769	0.18	893	0.27	1098	0.47								
1140	600	668	0.13	780	0.21	890	0.29	1096	0.50	1290	0.76						
1330	700	709	0.16	806	0.23	902	0.32	1088	0.52	1264	0.76	1433	1.06	1546	1.30		
1520	800	757	0.20	844	0.27	927	0.36	1097	0.56	1256	0.80	1411	1.07	1560	1.40	1706	1.77
1710	900	807	0.24	889	0.32	965	0.41	1113	0.60	1263	0.85	1405	1.11	1543	1.42	1677	1.76
1900	1000	859	0.29	937	0.38	1008	0.47	1143	0.67	1277	0.91	1411	1.18	1539	1.47	1664	1.80
2090	1100	912	0.34	987	0.44	1055	0.54	1181	0.75	1302	0.98	1425	1.25	1547	1.55	1663	1.87
2280	1200	965	0.40	1039	0.51	1105	0.62	1223	0.84	1336	1.07	1447	1.34	1561	1.64	1672	1.97
2470	1300	1019	0.47	1091	0.59	1155	0.70	1269	0.94	1376	1.18	1478	1.45	1581	1.74	1686	2.07
2660	1400	1074	0.55	1145	0.67	1207	0.80	1318	1.05	1419	1.30	1516	1.58	1611	1.87	1706	2.19
2850	1500	1130	0.63	1198	0.77	1260	0.90	1368	1.17	1465	1.44	1558	1.72	1648	2.02	1736	2.34
3040	1600	1187	0.73	1252	0.87	1313	1.02	1419	1.30	1514	1.59	1602	1.88	1688	2.19	1772	2.51
3230	1700	1245	0.84	1307	0.99	1366	1.14	1470	1.45	1564	1.75	1649	2.05	1731	2.37	1812	2.70
3420	1800	1304	0.96	1363	1.12	1420	1.28	1523	1.60	1614	1.92	1698	2.24	1777	2.57	1854	2.90
3610	1900	1363	1.09	1420	1.25	1475	1.42	1576	1.77	1665	2.10	1748	2.44	1825	2.78	1899	3.13
3800	2000	1423	1.23	1477	1.41	1530	1.58	1630	1.94	1717	2.30	1798	2.66	1874	3.01	1946	3.37
3990	2100	1483	1.39	1535	1.57	1586	1.76	1683	2.13	1770	2.51	1849	2.88	1924	3.26	1994	3.63
4180	2200	1544	1.56	1594	1.75	1643	1.94	1737	2.34	1823	2.73	1901	3.12	1974	3.52	2044	3.91
4370	2300	1605	1.75	1653	1.95	1701	2.15	1791	2.55	1877	2.97	1954	3.38	2026	3.79	2094	4.20
4560	2400	1666	1.95	1713	2.16	1759	2.36	1846	2.79	1930	3.22	2007	3.65	2077	4.08	2145	4.50
4750	2500	1728	2.17	1773	2.38	1817	2.60	1902	3.04	1984	3.48	2060	3.94	2130	4.38	2196	4.82
4940	2600	1790	2.40	1833	2.63	1876	2.85	1959	3.30	2038	3.77	2114	4.24	2183	4.70	2248	5.16
5130	2700	1852	2.66	1894	2.89	1935	3.12	2015	3.59	2093	4.07	2167	4.55	2236	5.04	2300	5.52
5320	2800	1914	2.93	1955	3.16	1995	3.40	2073	3.89	2148	4.38	2220	4.89	2290	5.40	2353	5.89
5700	3000	2040	3.52	2078	3.78	2116	4.03	2189	4.55	2260	5.08	2329	5.61	2396	6.15	2460	6.70
6080	3200	2166	4.20	2202	4.47	2237	4.75	2307	5.30	2375	5.85	2440	6.42	2504	6.99	2567	7.57
6460	3400	2292	4.97	2326	5.25	2360	5.54	2426	6.12	2490	6.71	2553	7.31	2614	7.91	2674	8.52
6840	3600	2419	5.82	2452	6.13	2484	6.43	2546	7.05	2608	7.67	2668	8.29	2726	8.93	2784	9.56
7220	3800	2547	6.77	2577	7.09	2608	7.42	2668	8.06	2726	8.72	2784	9.37	2840	10.04	2895	10.71
7600	4000	2675	7.83	2704	8.16	2733	8.50	2790	9.18	2846	9.87	2901	10.56	2955	11.25	3008	11.96
Volume	Outlet	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2090	1100	1777	2.22	1889	2.61	2000	3.02	2108	3.47	2215	3.95	2391	4.84				
2280	1200	1779	2.31	1885	2.68	1988	3.08	2090	3.51	2191	3.97	2389	4.98	2580	6.10	2665	6.66
2470	1300	1790	2.43	1889	2.79	1987	3.18	2084	3.60	2179	4.04	2366	5.00	2549	6.08	2729	7.28
2660	1400	1804	2.54	1902	2.92	1994	3.31	2086	3.72	2176	4.15	2354	5.08	2528	6.12	2699	7.26
2850	1500	1825	2.68	1916	3.06	2009	3.46	2095	3.87	2181	4.30	2350	5.21	2516	6.22	2679	7.32
3040	1600	1855	2.85	1938	3.21	2023	3.61	2110	4.04	2193	4.47	2355	5.38	2513	6.36	2668	7.43
3230	1700	1890	3.04	1968	3.40	2047	3.79	2126	4.20	2207	4.65	2365	5.57	2516	6.55	2665	7.60
3420	1800	1930	3.26	2004	3.62	2077	4.01	2151	4.41	2226	4.84	2380	5.79	2526	6.77	2669	7.81
3610	1900	1971	3.49	2043	3.87	2113	4.25	2183	4.65	2253	5.07	2395	5.99	2541	7.02	2678	8.05
3800	2000	2016	3.74	2084	4.12	2153	4.52	2219	4.92	2285	5.35	2418	6.25	2555	7.24	2693	8.33
3990	2100	2062	4.01	2128	4.40	2194	4.80	2259	5.22	2322	5.65	2448	6.54	2575	7.51	2706	8.58
4180	2200	2110	4.30	2174	4.70	2237	5.11	2300	5.53	2362	5.97	2483	6.87	2603	7.83	2725	8.88
4370	2300	2159	4.61	2222	5.02	2283	5.44	2343	5.87	2403	6.31	2521	7.23	2636	8.20	2751	9.22
4560	2400	2209	4.94	2271	5.36	2330	5.79	2389	6.23	2446	6.68	2560	7.62	2672	8.59	2782	9.61
4750	2500	2259	5.27	2321	5.72	2379	6.17	2436	6.62	2492	7.08	2602	8.02	2711	9.02	2817	10.04
4940	2600	2310	5.63	2371	6.09	2429	6.56	2484	7.02	2539	7.49	2646	8.45	2751	9.46	2855	10.51
5130	2700	2362	6.00	2421	6.48	2478	6.97	2534	7.45	2587	7.93	2691	8.91	2794	9.93	2895	11.00
5320	2800	2414	6.39	2472	6.89	2529	7.39	2584	7.89	2636	8.39	2738	9.40	2838	10.44	2936	11.51
5700	3000	2519	7.23	2576	7.76	2631	8.29	2684	8.83	2736	9.37	2835	10.44	2931	11.52	3024	12.63
6080	3200	2626	8.15	2681	8.71	2735	9.28	2787	9.85	2838	10.42	2935	11.57	3028	12.71	3117	13.86
6460	3400	2733	9.14	2788	9.75	2841	10.35	2892	10.96	2941	11.56	3036	12.78	3127	14.00	3214	15.21
6840	3600	2840	10.21	2895	10.87	2948	11.52	2998	12.16	3046	12.80	3139	14.08	3228	15.36	3314	16.66
7220	3800	2949	11.39	3002	12.07	3054	12.76	3105	13.45	3152	14.12	3243	15.47	3331	16.83	3415	18.19
7600	4000	3060	12.66	3111	13.38	3162	14.10	3211	14.82	3260	15.56	3349	16.97	3435	18.39	3517	19.82
Volume	Outlet	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3230	1700	2812	8.73	2956	9.93	3099	11.23	3239	12.61	3378	14.08	3651	17.29				
3420	1800	2809	8.92	2948	10.10	3085	11.36	3220	12.70	3354	14.12	3617	17.21				
3610	1900	2813	9.15	2947	10.31	3078	11.55	3209	12.85	3337	14.24	3590	17.22				
3800	2000	2823	9.42	2951	10.58	3078	11.79	3203	13.08	3328	14.43	3572	17.34				
3990	2100	2837	9.73	2961	10.88	3083	12.09	3									

VCB-1120

Wheel Diameter
21"Ø I. D.

INLET 21" Ø I.D.
OUTLET 15-7/8" x 20-7/8" I.D.

Area 2.40 Sq. Ft.
Area 2.30 Sq. Ft.

Tip Speed = RPM X 5.24
Max BHP = .90 $\frac{\text{RPM}^3}{1000}$

Volume	Outlet	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1150	500	583	0.14	702	0.22	814	0.33	1005	0.57								
1380	600	611	0.16	713	0.25	812	0.35	999	0.60	1177	0.92						
1610	700	650	0.20	737	0.28	824	0.38	993	0.63	1153	0.92	1306	1.28	1415	1.58		
1840	800	694	0.24	773	0.33	848	0.43	1002	0.67	1146	0.96	1286	1.29	1422	1.68	1554	2.12
2070	900	740	0.29	814	0.39	883	0.49	1017	0.73	1153	1.02	1282	1.34	1407	1.71	1529	2.12
2300	1000	787	0.35	859	0.46	923	0.57	1045	0.81	1167	1.09	1289	1.42	1405	1.78	1518	2.17
2530	1100	836	0.42	905	0.53	967	0.65	1081	0.91	1190	1.19	1302	1.51	1412	1.87	1518	2.26
2760	1200	885	0.49	962	0.62	1012	0.75	1120	1.01	1222	1.30	1322	1.62	1425	1.98	1527	2.38
2990	1300	935	0.57	1001	0.72	1059	0.86	1163	1.14	1259	1.43	1352	1.75	1445	2.11	1540	2.50
3220	1400	986	0.67	1050	0.82	1107	0.97	1208	1.28	1299	1.58	1388	1.91	1474	2.26	1560	2.65
3450	1500	1037	0.78	1099	0.94	1156	1.10	1254	1.42	1342	1.75	1426	2.09	1508	2.45	1588	2.83
3680	1600	1090	0.89	1149	1.07	1204	1.24	1301	1.59	1387	1.93	1467	2.28	1545	2.65	1621	3.04
3910	1700	1143	1.03	1200	1.21	1253	1.39	1348	1.76	1433	2.13	1511	2.50	1585	2.88	1658	3.27
4140	1800	1197	1.17	1251	1.36	1303	1.56	1397	1.95	1479	2.34	1556	2.73	1628	3.12	1697	3.53
4370	1900	1252	1.33	1304	1.53	1353	1.74	1446	2.15	1527	2.56	1602	2.97	1672	3.38	1739	3.80
4600	2000	1307	1.51	1356	1.72	1404	1.93	1495	2.37	1575	2.80	1648	3.23	1717	3.67	1783	4.10
4830	2100	1363	1.70	1410	1.92	1456	2.15	1544	2.60	1623	3.06	1695	3.51	1763	3.96	1827	4.42
5060	2200	1418	1.91	1464	2.14	1508	2.38	1593	2.85	1672	3.33	1743	3.80	1810	4.28	1873	4.76
5290	2300	1475	2.14	1519	2.38	1561	2.62	1644	3.12	1722	3.62	1791	4.12	1857	4.61	1919	5.11
5520	2400	1531	2.39	1573	2.64	1615	2.89	1694	3.40	1770	3.93	1840	4.45	1905	4.96	1966	5.48
5750	2500	1588	2.66	1629	2.92	1669	3.18	1746	3.71	1820	4.25	1889	4.80	1953	5.33	2013	5.87
5980	2600	1645	2.95	1684	3.22	1723	3.49	1798	4.04	1870	4.60	1939	5.17	2002	5.73	2061	6.29
6210	2700	1702	3.26	1740	3.54	1778	3.82	1850	4.38	1920	4.96	1988	5.55	2051	6.14	2109	6.72
6440	2800	1760	3.59	1797	3.88	1833	4.17	1903	4.76	1971	5.35	2037	5.96	2100	6.58	2158	7.18
6900	3000	1875	4.32	1910	4.63	1944	4.94	2010	5.57	2075	6.20	2137	6.85	2198	7.50	2256	8.16
7360	3200	1991	5.16	2024	5.49	2056	5.82	2119	6.48	2180	7.15	2240	7.83	2298	8.53	2354	9.23
7820	3400	2108	6.10	2138	6.44	2169	6.79	2228	7.50	2287	8.21	2344	8.93	2399	9.66	2454	10.39
8280	3600	2224	7.15	2254	7.52	2282	7.89	2339	8.63	2395	9.38	2449	10.14	2502	10.90	2555	11.68
8740	3800	2342	8.32	2369	8.71	2397	9.10	2451	9.88	2504	10.67	2556	11.46	2607	12.27	2657	13.08
9200	4000	2459	9.61	2486	10.02	2512	10.43	2563	11.25	2614	12.08	2664	12.92	2713	13.76	2761	14.61
Volume	Outlet	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2530	1100	1622	2.68	1723	3.14	1823	3.63	1922	4.17	2019	4.75	2190	5.88	2273	6.50		
2760	1200	1624	2.79	1720	3.23	1814	3.71	1907	4.22	1998	4.77	2178	5.98	2353	7.34	2440	8.09
2990	1300	1635	2.93	1725	3.37	1814	3.84	1901	4.33	1988	4.86	2158	6.02	2324	7.31	2487	8.74
3220	1400	1648	3.07	1737	3.53	1821	4.00	1904	4.49	1986	5.00	2147	6.12	2305	7.36	2460	8.72
3450	1500	1668	3.24	1750	3.69	1835	4.18	1914	4.67	1992	5.18	2145	6.28	2295	7.48	2443	8.80
3680	1600	1696	3.45	1772	3.89	1848	4.36	1927	4.87	2003	5.40	2149	6.49	2293	7.67	2434	8.95
3910	1700	1730	3.69	1800	4.12	1871	4.58	1943	5.08	2016	5.61	2160	6.73	2297	7.90	2432	9.16
4140	1800	1766	3.95	1833	4.39	1900	4.85	1967	5.34	2034	5.85	2173	6.99	2307	8.17	2436	9.42
4370	1900	1805	4.24	1870	4.69	1934	5.15	1997	5.64	2060	6.14	2188	7.24	2321	8.47	2446	9.72
4600	2000	1846	4.54	1908	5.00	1970	5.48	2031	5.97	2090	6.47	2211	7.55	2334	8.74	2460	10.06
4830	2100	1889	4.88	1949	5.35	2008	5.83	2067	6.33	2125	6.85	2239	7.92	2354	9.08	2472	10.36
5060	2200	1933	5.23	1992	5.71	2049	6.21	2105	6.72	2161	7.24	2271	8.33	2380	9.48	2490	10.73
5290	2300	1979	5.61	2036	6.11	2091	6.61	2146	7.13	2200	7.66	2307	8.77	2411	9.93	2515	11.16
5520	2400	2025	6.00	2081	6.52	2135	7.04	2188	7.57	2240	8.11	2343	9.24	2445	10.41	2545	11.64
5750	2500	2071	6.41	2127	6.96	2180	7.50	2231	8.04	2282	8.59	2382	9.73	2481	10.93	2577	12.17
5980	2600	2118	6.85	2173	7.41	2225	7.98	2276	8.54	2326	9.10	2423	10.27	2518	11.48	2613	12.74
6210	2700	2165	7.30	2219	7.89	2271	8.47	2322	9.06	2370	9.64	2465	10.83	2558	12.06	2649	13.34
6440	2800	2213	7.78	2266	8.38	2318	8.99	2368	9.60	2416	10.21	2508	11.42	2599	12.67	2687	13.96
6900	3000	2310	8.81	2362	9.45	2412	10.10	2460	10.75	2508	11.40	2598	12.70	2685	14.00	2769	15.34
7360	3200	2409	9.93	2459	10.62	2508	11.30	2555	11.99	2601	12.68	2690	14.07	2774	15.46	2855	16.85
7820	3400	2507	11.14	2558	11.89	2605	12.62	2652	13.35	2696	14.08	2783	15.55	2866	17.08	2945	18.50
8280	3600	2606	12.46	2656	13.25	2704	14.04	2749	14.82	2793	15.59	2878	17.14	2959	18.69	3037	20.26
8740	3800	2706	13.90	2755	14.72	2802	15.56	2848	16.40	2891	17.22	2974	18.85	3053	20.48	3130	22.13
9200	4000	2809	15.46	2855	16.33	2901	17.20	2946	18.08	2990	18.96	3071	20.68	3149	22.40	3224	24.13
Volume	Outlet	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3910	1700	2565	10.51	2696	11.95	2825	13.50	2953	15.15	3079	16.91	3327	20.75	3454	22.94		
4140	1800	2564	10.74	2690	12.16	2814	13.67	2937	15.27	3058	16.97	3296	20.66	3530	24.77		
4370	1900	2568	11.04	2689	12.43	2809	13.91	2927	15.47	3043	17.12	3273	20.70				

VCB-1122

Wheel Diameter
22-1/4" Ø I. D.

INLET 24" Ø I.D.
OUTLET 17-5/8" x 23-1/4" I.D.

Area 3.14 Sq. Ft.
Area 2.83 Sq. Ft.

Tip Speed = RPM X 5.83
Max BHP = 1.54 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1415	500	524	0.17	631	0.27	732	0.40	901	0.70								
1698	600	548	0.20	640	0.31	730	0.43	899	0.74	1059	1.14						
1981	700	582	0.24	661	0.35	740	0.47	893	0.77	1037	1.14	1175	1.58	1269	1.94		
2264	800	622	0.30	693	0.41	761	0.53	900	0.83	1131	1.18	1157	1.60	1279	2.08	1399	2.63
2547	900	663	0.36	730	0.48	792	0.61	913	0.90	1036	1.26	1152	1.66	1265	2.11	1375	2.62
2830	1000	705	0.43	769	0.56	827	0.70	938	1.00	1048	1.35	1158	1.75	1262	2.19	1365	2.68
3113	1100	749	0.51	811	0.66	866	0.80	969	1.11	1068	1.46	1169	1.86	1269	2.31	1364	2.79
3396	1200	793	0.60	853	0.76	907	0.92	1004	1.25	1097	1.60	1187	1.99	1280	2.44	1372	2.93
3679	1300	837	0.70	896	0.88	949	1.05	1042	1.40	1129	1.76	1213	2.16	1297	2.59	1383	3.08
3962	1400	882	0.82	940	1.01	991	1.19	1082	1.56	1165	1.94	1245	2.35	1322	2.79	1400	3.26
4245	1500	928	0.95	964	1.15	1034	1.35	1123	1.75	1203	2.15	1279	2.57	1353	3.01	1425	3.48
4528	1600	975	1.09	1029	1.30	1078	1.52	1165	1.94	1243	2.37	1315	2.80	1386	3.26	1454	3.74
4811	1700	1023	1.25	1074	1.48	1122	1.70	1208	2.16	1284	2.61	1354	3.06	1421	3.53	1487	4.02
5094	1800	1071	1.43	1120	1.67	1166	1.91	1251	2.39	1325	2.86	1394	3.34	1459	3.83	1522	4.33
5377	1900	1120	1.63	1166	1.87	1211	2.12	1294	2.63	1368	3.14	1435	3.64	1498	4.15	1559	4.67
5660	2000	1169	1.84	1214	2.10	1257	2.36	1339	2.90	1410	3.43	1477	3.96	1539	4.50	1598	5.03
5943	2100	1219	2.08	1262	2.35	1303	2.62	1382	3.18	1454	3.74	1519	4.30	1580	4.86	1638	5.42
6226	2200	1269	2.33	1310	2.62	1350	2.90	1426	3.49	1497	4.08	1561	4.66	1621	5.24	1679	5.83
6509	2300	1319	2.61	1358	2.91	1397	3.20	1471	3.81	1542	4.43	1604	5.04	1663	5.65	1720	6.26
6792	2400	1369	2.92	1407	3.22	1445	3.53	1517	4.16	1585	4.80	1648	5.44	1706	6.08	1761	6.72
7075	2500	1420	3.24	1457	3.56	1493	3.88	1563	4.53	1629	5.20	1692	5.87	1749	6.53	1803	7.20
7358	2600	1471	3.59	1506	3.92	1541	4.26	1609	4.93	1674	5.62	1736	6.33	1793	7.01	1846	7.70
7641	2700	1522	3.97	1556	4.31	1590	4.66	1656	5.36	1719	6.07	1780	6.79	1836	7.52	1889	8.23
7924	2800	1573	4.37	1607	4.73	1639	5.09	1703	5.81	1764	6.54	1824	7.29	1881	8.05	1933	8.79
8490	3000	1676	5.27	1708	5.65	1738	6.08	1799	6.80	1857	7.58	1913	8.37	1968	9.18	2020	9.99
9056	3200	1780	6.28	1809	6.69	1838	7.09	1895	7.91	1951	8.74	2005	9.58	2057	10.43	2108	11.29
9622	3400	1854	7.42	1912	7.85	1939	8.28	1993	9.15	2046	10.03	2097	10.91	2148	11.81	2197	12.72
10188	3600	1988	8.70	2015	9.16	2041	9.61	2092	10.53	2142	11.45	2192	12.38	2240	13.33	2287	14.28
10754	3800	2093	10.13	2118	10.60	2143	11.08	2192	12.05	2240	13.02	2287	14.00	2333	14.99	2378	15.99
11320	4000	2198	11.70	2222	12.21	2246	12.71	2292	13.72	2338	14.74	2383	15.77	2427	16.81	2471	17.85
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3113	1100	1458	3.31	1550	3.88	1640	4.49	1729	5.16	1817	5.87	1963	7.22				
3396	1200	1460	3.44	1546	3.99	1631	4.59	1714	5.22	1797	5.90	1959	7.40	2117	9.09	2188	9.92
3679	1300	1468	3.61	1550	4.15	1630	4.73	1709	5.35	1787	6.01	1940	7.44	2090	9.04	2238	10.82
3962	1400	1480	3.79	1560	4.35	1636	4.93	1711	5.53	1785	6.18	1930	7.56	2073	9.10	2213	10.79
4245	1500	1498	3.99	1572	4.55	1648	5.16	1719	5.76	1789	6.39	1928	7.75	2064	9.25	2197	10.88
4528	1600	1522	4.24	1590	4.78	1660	5.37	1731	6.01	1799	6.66	1931	8.00	2061	9.47	2188	11.05
4811	1700	1552	4.53	1615	5.07	1679	5.64	1744	6.26	1811	6.91	1940	8.30	2064	9.74	2186	11.30
5094	1800	1584	4.86	1645	5.40	1705	5.97	1765	6.57	1827	7.20	1953	8.62	2072	10.07	2189	11.62
5377	1900	1618	5.20	1677	5.76	1735	6.33	1792	6.93	1849	7.56	1965	8.92	2085	1.45	2197	11.98
5660	2000	1655	5.58	1711	6.14	1767	6.73	1821	7.34	1876	7.96	1985	9.30	2096	10.78	2209	12.40
5943	2100	1693	5.98	1747	6.56	1801	7.16	1854	7.78	1906	8.41	2009	9.74	2113	11.18	2220	12.77
6226	2200	1733	6.42	1785	7.01	1837	7.62	1888	8.25	1939	8.90	2038	10.24	2136	11.67	2236	13.21
6509	2300	1773	6.88	1824	7.49	1874	8.11	1924	8.75	1973	9.41	2069	10.78	2163	12.21	2258	13.73
6792	2400	1814	7.36	1865	8.00	1913	8.64	1961	9.29	2008	9.96	2102	11.35	2193	12.80	2293	14.32
7075	2500	1855	7.86	1906	8.53	1953	9.20	2000	9.87	2046	10.55	2136	11.96	2225	13.44	2312	14.96
7358	2600	1897	8.39	1947	9.09	1994	9.78	2040	10.47	2085	11.17	2172	12.60	2258	14.10	2343	15.66
7641	2700	1940	8.95	1988	9.67	2035	10.39	2080	11.11	2124	11.83	2210	13.29	2293	14.81	2376	16.39
7924	2800	1982	9.53	2030	1.27	2076	11.02	2121	11.77	2165	12.52	2248	14.01	2330	15.56	2410	17.15
8490	3000	2069	10.78	2115	11.58	2161	12.37	2204	13.17	2247	13.97	2328	15.57	2406	17.18	2482	18.83
9056	3200	2157	12.16	2202	13.00	2246	13.85	2289	14.69	2330	15.55	2410	17.26	2486	18.96	2559	20.67
9622	3400	2244	13.63	2290	14.55	2333	15.45	2375	16.35	2415	17.25	2493	19.06	2568	20.88	2639	22.68
10188	3600	2333	15.24	2378	16.22	2421	17.19	2462	18.14	2502	19.09	2578	21.00	2651	22.91	2721	27.84
10754	3800	2423	16.99	2466	18.01	2509	19.04	2550	20.07	2589	21.08	2664	23.08	2735	25.10	2804	27.12
11320	4000	2514	18.90	2556	19.97	2597	21.04	2638	22.12	2677	23.21	2751	25.32	2821	27.44	2888	29.56
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4811	1700	2306	12.98	2424	14.77	2541	16.69	2656	18.75	2770	20.93	2993	25.70	3097	28.14		
5094	1800	2304	13.26	2418	15.02	2530	16.89	2641	18.88	2750	20.99	2966	25.58	3176	30.67		
5377	1900	2308	13.62	2417	15.35	2525	17.18	2631	19.12	2737	21.17	2944	25.60	3148	30.53		
5660	2000	2316	14.02	2421	15.74	2525	17.54	2628	19.45	2729							

VCB-1124

Wheel Diameter
24-1/2" Ø I. D.

INLET 26" Ø I.D.
OUTLET 19-1/2" x 25-1/2" I.D.

Area 3.69 Sq. Ft.
Area 3.45 Sq. Ft.

Tip Speed = RPM X 6.41
Max BHP = 2.44 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1727	500	466	0.20	576	0.35	680	0.52										
2072	600	481	0.22	571	0.36	663	0.54	831	0.94								
2417	700	504	0.27	582	0.39	659	0.55	816	0.98	963	1.47						
2762	800	522	0.31	604	0.45	670	0.60	808	1.00	944	1.50	1073	2.07	1137	2.37		
3108	900	544	0.36	624	0.52	691	0.68	810	1.04	933	1.53	1054	2.10	1170	2.73	1257	3.24
3453	1000	571	0.42	644	0.59	714	0.77	825	1.12	933	1.57	1044	2.13	1153	2.77	1259	3.46
3798	1100	602	0.48	666	0.66	732	0.85	846	1.24	942	1.65	1042	2.18	1143	2.80	1243	3.50
4144	1200	635	0.56	692	0.74	754	0.95	869	1.38	962	1.79	1049	2.27	1142	2.86	1234	3.54
4489	1300	670	0.66	722	0.84	776	1.05	888	1.50	984	1.96	1066	2.43	1148	2.96	1233	3.61
4834	1400	707	0.76	755	0.95	803	1.16	908	1.64	1007	2.15	1068	2.63	1163	3.14	1239	3.72
5180	1500	744	0.88	789	1.07	834	1.29	929	1.79	1025	2.31	1111	2.85	1184	3.37	1254	3.92
5525	1600	782	1.01	824	1.22	866	1.43	952	1.93	1044	2.50	1132	3.07	1207	3.63	1275	4.19
5870	1700	820	1.16	860	1.38	899	1.60	979	2.10	1066	2.70	1150	3.29	1230	3.90	1297	4.48
6215	1800	859	1.32	897	1.55	934	1.78	1009	2.29	1088	2.88	1170	3.52	1248	4.16	1320	4.80
6561	1900	899	1.50	935	1.74	970	1.98	1041	2.50	1113	3.09	1192	3.77	1267	4.42	1341	5.11
6906	2000	939	1.70	973	1.95	1007	2.20	1074	2.73	1142	3.32	1214	4.00	1288	4.71	1358	5.41
7251	2100	979	1.91	1012	2.18	1044	2.44	1108	2.98	1172	3.58	1238	4.25	1310	5.01	1378	5.73
7597	2200	1019	2.14	1051	2.42	1082	2.70	1143	3.26	1204	3.87	1266	4.53	1332	5.28	1400	6.07
7942	2300	1059	2.39	1090	2.69	1120	2.97	1178	3.56	1237	4.17	1296	4.85	1356	5.58	1422	6.41
8287	2400	1100	2.67	1130	2.97	1159	3.27	1215	3.88	1271	4.51	1327	5.19	1384	5.92	1444	6.73
8633	2500	1141	2.96	1170	3.28	1198	3.59	1252	4.22	1305	4.87	1359	5.55	1413	6.29	1469	7.10
8978	2600	1181	3.27	1210	3.61	1237	3.94	1289	4.59	1341	5.25	1392	5.95	1444	6.69	1497	7.50
9323	2700	1222	3.61	1250	3.96	1276	4.30	1327	4.98	1377	5.66	1426	6.37	1476	7.13	1527	7.93
9668	2800	1264	3.97	1290	4.33	1316	4.69	1365	5.39	1413	6.10	1461	6.82	1509	7.59	1557	8.40
10359	3000	1346	4.76	1372	5.16	1396	5.54	1443	6.30	1488	7.05	1532	7.81	1577	8.60	1622	9.42
11050	3200	1429	5.66	1453	6.09	1477	6.50	1521	7.31	1564	8.11	1606	8.92	1648	9.74	1690	10.6
11740	3400	1513	6.66	1536	7.13	1558	7.57	1600	8.44	1641	9.29	1681	10.1	1720	11.0	1759	11.9
12431	3600	1596	7.79	1618	8.28	1639	8.76	1680	9.69	1719	10.6	1757	11.5	1794	12.4	1832	13.3
13121	3800	1680	9.04	1701	9.57	1721	10.1	1760	11.1	1798	12.0	1834	13.0	1870	13.9	1905	14.9
13812	4000	1764	10.4	1784	11.0	1804	11.5	1841	12.6	1877	13.6	1912	14.6	1946	15.6	1980	16.6
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3798	1100	1340	4.24	1434	5.02	1522	5.79	1553	6.07	1583	6.35						
4144	1200	1326	4.28	1416	5.08	1503	5.91	1589	6.77	1663	7.55	1719	8.16				
4489	1300	1319	4.33	1404	5.12	1487	5.96	1569	6.85	1650	7.76	1799	9.57	1851	10.2		
4834	1400	1319	4.42	1398	5.19	1477	6.02	1555	6.90	1633	7.83	1783	9.77	1927	11.8	1980	12.6
5180	1500	1325	4.55	1399	5.29	1474	6.10	1548	6.97	1621	7.89	1765	9.85	1905	11.9	2040	14.1
5525	1600	1340	4.78	1406	5.45	1476	6.23	1546	7.07	1615	7.97	1753	9.92	1887	12.0	2019	14.3
5870	1700	1361	5.08	1422	5.71	1484	6.41	1549	7.22	1615	8.10	1746	10.0	1875	12.1	2002	14.4
6215	1800	1383	5.42	1442	6.05	1500	6.72	1558	7.44	1620	8.28	1744	10.1	1867	12.2	1989	14.5
6561	1900	1406	5.77	1465	6.43	1521	7.10	1576	7.80	1630	8.53	1747	10.3	1864	12.3	1981	14.6
6906	2000	1428	6.14	1488	6.83	1543	7.52	1597	8.22	1649	8.96	1755	10.6	1866	12.5	1977	14.7
7251	2100	1445	6.47	1511	7.25	1566	7.96	1619	8.68	1670	9.42	1769	11.0	1872	12.8	1978	14.9
7597	2200	1464	6.83	1528	7.62	1589	8.42	1642	9.17	1693	9.93	1789	11.5	1883	13.2	1984	15.2
7942	2300	1485	7.21	1547	8.01	1607	8.84	1665	9.68	1716	10.5	1811	12.1	1902	13.7	1993	15.6
8287	2400	1507	7.61	1567	8.43	1625	9.27	1684	10.1	1739	11.0	1834	12.7	1923	14.3	2010	16.1
8633	2500	1528	7.97	1588	8.88	1645	9.74	1702	10.6	1757	11.5	1857	13.3	1945	15.0	2030	16.8
8978	2600	1552	8.36	1610	9.31	1666	10.2	1721	11.1	1775	12.0	1880	13.9	1968	15.7	2052	17.5
9323	2700	1578	8.79	1632	9.72	1689	10.7	1742	11.6	1794	12.6	1898	14.5	1991	16.4	2074	18.3
9668	2800	1606	9.26	1657	10.2	1710	11.2	1764	12.2	1815	13.2	1916	15.1	2015	17.2	2097	19.1
10359	3000	1667	10.3	1712	11.2	1759	12.2	1808	13.2	1859	14.3	1955	16.4	2049	18.5	2142	20.7
11050	3200	1732	11.5	1774	12.4	1816	13.4	1860	14.4	1905	15.5	2000	17.8	2089	20.0	2177	22.2
11740	3400	1799	12.8	1839	13.7	1878	14.7	1918	15.7	1959	16.8	2043	19.1	2133	21.6	2217	23.9
12431	3600	1869	14.2	1906	15.2	1944	16.2	1981	17.2	2018	18.3	2095	20.6	2176	23.0	2261	25.7
13121	3800	1940	15.9	1976	16.8	2011	17.9	2047	18.9	2082	20.0	2153	22.3	2227	24.7	2304	27.3
13812	4000	2014	17.6	2047	18.6	2080	19.7	2114	20.7	2148	21.8	2215	24.1	2283	26.6	2354	29.2
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5870	1800	2125	16.7	2246	19.2	2354	21.4	2394	22.3	2433	23.2						
6215	1800	2109	16.8	2226	19.3	2341	21.9	2453	24.5	2513	25.9	2588	27.8				
6561	1900	2096	16.9	2210	19.4	2321	22.0	2431	24.7	2538	27.5	2667	30.9	2737	32.8		
6906	2000	2088	17.0	2198	19.5	2306	22.2	2412	24.9	2517	27.7	2720	33.4	2817	36.3		
7251	2100	2084	17.2	2190	19.7	2294	22.3	2398	25.0	2499	27.8	2698	33.7	2890	39.8	2963	42.2
7597	2200	2085	17.4	2186	19.9												

VCB-1127

Wheel Diameter
27" Ø I. D.

INLET 29" Ø I.D.
OUTLET 21-1/2" x 28-1/8" I.D.

Area 4.59 Sq. Ft.
Area 4.20 Sq. Ft.

Tip Speed = RPM X 7.07
Max BHP = 3.96 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2100	500	423	0.24	523	0.42	617	0.63										
2520	600	436	0.27	518	0.43	601	0.65	755	1.15								
2940	700	457	0.33	528	0.48	598	0.67	741	1.19	874	1.79						
3360	800	474	0.38	548	0.55	608	0.73	733	1.21	856	1.83	974	2.52	1032	2.89		
3780	900	494	0.44	567	0.63	628	0.82	735	1.26	847	1.85	957	2.56	1062	3.32	1141	3.95
4200	1000	518	0.51	585	0.72	648	0.93	748	1.36	847	1.91	947	2.59	1046	3.36	1142	4.20
4620	1100	547	0.59	604	0.80	665	1.04	768	1.51	855	2.00	946	2.65	1037	3.41	1128	4.25
5040	1200	577	0.69	628	0.90	684	1.16	789	1.68	873	2.18	952	2.75	1036	3.48	1120	4.30
5460	1300	609	0.80	656	1.02	705	1.27	806	1.83	893	2.39	968	2.95	1042	3.60	1119	4.39
5880	1400	642	0.93	685	1.15	729	1.41	824	2.00	914	2.61	988	3.20	1056	3.81	1125	4.53
6300	1500	676	1.07	716	1.31	757	1.57	844	2.18	930	2.82	1009	3.47	1075	4.10	1138	4.77
6720	1600	710	1.24	748	1.48	786	1.75	865	2.35	948	3.04	1028	3.74	1096	4.41	1157	5.09
7140	1700	745	1.42	781	1.68	817	1.95	889	2.56	968	3.28	1044	4.00	1117	4.75	1178	5.45
7560	1800	781	1.61	815	1.89	849	2.17	917	2.79	988	3.50	1062	4.28	1133	5.05	1199	5.84
7980	1900	817	1.83	849	2.12	881	2.41	945	3.04	1011	3.76	1082	4.59	1150	5.38	1217	6.21
8400	2000	853	2.07	884	2.38	915	2.68	975	3.32	1037	4.04	1102	4.86	1169	5.73	1233	6.58
8820	2100	889	2.33	919	2.65	949	2.97	1006	3.63	1064	4.36	1124	5.17	1189	6.10	1251	6.97
9240	2200	926	2.61	955	2.95	983	3.29	1038	3.97	1094	4.71	1150	5.52	1209	6.42	1271	7.39
9660	2300	962	2.92	991	3.27	1018	3.63	1070	4.33	1124	5.08	1177	5.90	1232	6.79	1291	7.80
10080	2400	999	3.25	1027	3.62	1053	3.99	1104	4.72	1154	5.49	1205	6.31	1257	7.21	1311	8.19
10500	2500	1036	3.61	1063	4.00	1088	4.38	1137	5.14	1186	5.93	1235	6.76	1284	7.66	1334	8.64
10920	2600	1074	3.99	1099	4.40	1124	4.80	1171	5.59	1218	6.39	1265	7.24	1312	8.15	1359	9.12
11340	2700	1111	4.40	1136	4.83	1160	5.24	1206	6.06	1251	6.90	1296	7.76	1341	8.68	1386	9.65
11760	2800	1148	4.84	1172	5.28	1196	5.72	1240	6.57	1284	7.43	1327	8.31	1371	9.24	1414	10.2
12600	3000	1223	5.80	1246	6.29	1268	6.76	1311	7.68	1352	8.59	1392	9.52	1432	10.5	1473	11.5
13440	3200	1299	6.90	1321	7.42	1342	7.93	1382	8.91	1421	9.89	1459	10.9	1497	11.9	1535	12.9
14280	3400	1375	8.13	1395	8.69	1415	9.23	1454	10.3	1491	11.3	1527	12.4	1563	13.4	1598	14.5
15120	3600	1450	9.50	1470	10.1	1490	10.7	1526	11.8	1562	12.9	1596	14.0	1630	15.1	1664	16.2
15960	3800	1527	11.0	1546	11.7	1564	12.3	1599	13.5	1633	14.7	1666	15.8	1699	17.0	1731	18.1
16800	4000	1603	12.7	1621	13.4	1639	14.0	1673	15.3	1706	16.6	1737	17.8	1768	19.0	1799	20.2
Volume	Outlet	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4620	1100	1215	5.15	1301	6.10	1382	7.05	1410	7.39	1437	7.73						
5040	1200	1203	5.20	1284	6.17	1364	7.18	1441	8.22	1510	9.2	1561	9.94				
5460	1300	1197	5.27	1274	6.22	1349	7.24	1424	8.32	1496	9.4	1634	11.7	1681	12.5		
5880	1400	1197	5.37	1269	6.30	1340	7.31	1411	8.38	1481	9.5	1617	11.9	1748	14.3	1799	15.3
6300	1500	1203	5.54	1270	6.43	1337	7.41	1404	8.46	1471	9.6	1601	12.0	1728	14.5	1851	17.1
6720	1600	1216	5.81	1276	6.63	1340	7.57	1403	8.59	1465	9.7	1590	12.1	1712	14.6	1831	17.3
7140	1700	1235	6.18	1291	6.95	1347	7.80	1406	8.78	1465	9.8	1584	12.2	1701	14.7	1816	17.4
7560	1800	1255	6.59	1309	7.36	1362	8.17	1414	9.05	1470	10.1	1582	12.3	1694	14.8	1804	17.6
7980	1900	1276	7.02	1330	7.82	1381	8.64	1430	9.49	1479	10.4	1585	12.6	1691	15.0	1797	17.7
8400	2000	1296	7.47	1351	8.31	1401	9.14	1450	10.0	1497	10.9	1592	12.9	1693	15.2	1794	17.9
8820	2100	1312	7.87	1372	8.81	1422	9.68	1470	10.6	1516	11.5	1606	13.4	1699	15.6	1795	18.1
9240	2200	1329	8.31	1387	9.27	1443	10.2	1491	11.2	1537	12.1	1624	14.0	1709	16.0	1800	18.5
9660	2300	1348	8.78	1404	9.75	1459	10.8	1512	11.8	1557	12.7	1644	14.7	1727	16.7	1809	18.9
10080	2400	1368	9.27	1422	10.3	1476	11.3	1528	12.3	1579	13.4	1665	15.4	1746	17.5	1824	19.6
10500	2500	1388	9.70	1442	10.8	1494	11.8	1545	12.9	1595	14.0	1686	16.2	1766	18.3	1843	20.4
10920	2600	1409	10.2	1462	11.3	1513	12.4	1562	13.5	1611	14.6	1707	16.9	1787	19.1	1863	21.3
11340	2700	1433	10.7	1482	11.8	1533	13.1	1581	14.2	1629	15.3	1723	17.7	1808	20.0	1883	22.2
11760	2800	1459	11.3	1504	12.4	1552	13.6	1602	14.8	1648	16.0	1739	18.4	1829	20.9	1904	23.2
12600	3000	1514	12.5	1555	13.6	1598	14.8	1641	16.1	1688	17.4	1775	20.0	1860	22.5	1944	25.2
13440	3200	1573	14.0	1611	15.1	1649	16.3	1689	17.5	1729	18.8	1815	21.7	1896	24.3	1976	27.1
14280	3400	1634	15.6	1670	16.7	1706	17.9	1742	19.1	1779	20.4	1855	23.2	1936	26.3	2013	29.1
15120	3600	1697	17.4	1731	18.5	1765	19.7	1799	21.0	1833	22.3	1903	25.0	1976	28.0	2053	31.3
15960	3800	1763	19.3	1794	20.5	1826	21.7	1859	23.0	1891	24.3	1955	27.1	2022	30.1	2092	33.3
16800	4000	1829	21.5	1859	22.7	1890	24.0	1920	25.3	1951	26.6	2012	29.4	2073	32.3	2137	35.5
Volume	Outlet	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17140	1700	1928	20.3	2038	23.3	2138	26.1	2174	27.2	2210	28.2						
7560	1800	1913	20.4	2019	23.5	2124	26.6	2225	29.7	2282	31.6	2350	33.8				
7980	1900	1902	20.6	2005	23.6	2106	26.8	2205	30.0	2302	33.4	2422	37.6	2486	40.0		
8400	2000	1894	20.7	1994	23.7	2092	26.9	2189	30.2	2283	33.6	2468	40.6	2558	44.2	2618	46.7
8820	2100	1891	20.9	1987	23.9	2082	27.1	2175	30.4	2267	33.8	2448	41.0	2622	48.4	2691	51.4
9240	2200	1892	21.2	1984	24.1	2075	27.2	2165	30.5	2255							

VCB-1130

Wheel Diameter
32" Ø I. D.

INLET 32" Ø I.D.
OUTLET 23-3/4" x 31-1/4" I.D.

Area 5.59 Sq. Ft.
Area 5.15 Sq. Ft.

Tip Speed = RPM X 7.85
Max BHP = 6.71 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2577	500	381	0.29	471	0.52	556	0.78										
3092	600	392	0.33	466	0.54	542	0.80	677	1.40								
3608	700	411	0.40	474	0.59	538	0.83	667	1.47	787	2.20						
4123	800	426	0.47	492	0.68	547	0.89	660	1.49	771	2.25	877	3.10	926	3.53		
4639	900	444	0.54	509	0.77	564	1.01	661	1.55	763	2.29	862	3.15	957	4.10	1024	4.82
5154	1000	465	0.62	525	0.88	582	1.14	673	1.67	762	2.35	853	3.19	942	4.15	1028	5.18
5669	1100	490	0.72	543	0.98	597	1.27	690	1.85	768	2.46	851	3.26	934	4.20	1015	5.24
6185	1200	517	0.84	564	1.10	614	1.42	709	2.05	784	2.68	856	3.39	932	4.28	1008	5.30
6700	1300	546	0.98	588	1.25	633	1.56	724	2.24	803	2.93	870	3.62	937	4.43	1007	5.40
7216	1400	575	1.13	615	1.41	654	1.72	740	2.45	821	3.20	887	3.92	949	4.68	1012	5.57
7731	1500	605	1.31	642	1.60	679	1.92	758	2.67	836	3.45	906	4.25	966	5.03	1023	5.85
8246	1600	636	1.51	671	1.81	705	2.13	776	2.88	852	3.73	923	4.58	984	5.41	1040	6.25
8762	1700	668	1.72	700	2.04	732	2.38	798	3.13	869	4.02	938	4.90	1003	5.82	1058	6.69
9277	1800	699	1.97	730	2.30	761	2.65	822	3.41	887	4.30	954	5.25	1018	6.20	1077	7.16
9793	1900	731	2.23	761	2.59	790	2.94	848	3.72	907	4.60	972	5.62	1033	6.60	1094	7.62
10308	2000	764	2.52	792	2.89	820	3.27	875	4.06	930	4.95	989	5.96	1050	7.02	1108	8.06
10823	2100	796	2.84	823	3.23	850	3.62	902	4.44	955	5.33	1009	6.33	1068	7.47	1124	8.54
11339	2200	829	3.18	855	3.59	880	4.00	930	4.84	981	5.75	1032	6.75	1086	7.87	1141	9.05
11854	2300	862	3.55	887	3.99	912	4.42	959	5.28	1007	6.21	1056	7.21	1105	8.32	1159	9.56
12370	2400	895	3.95	919	4.41	943	4.86	989	5.76	1035	6.70	1081	7.72	1128	8.82	1177	10.0
12885	2500	928	4.38	952	4.86	974	5.33	1019	6.27	1063	7.23	1107	8.26	1151	9.37	1197	10.6
13400	2600	961	4.85	984	5.35	1006	5.84	1049	6.81	1091	7.80	1134	8.85	1176	9.97	1220	11.2
13916	2700	884	5.35	1017	5.87	1038	6.38	1080	7.39	1121	8.41	1161	9.47	1202	10.6	1244	11.8
14431	2800	1028	5.88	1050	6.42	1071	6.96	1111	8.00	1150	9.06	1190	10.1	1229	11.3	1269	12.5
15462	3000	1095	7.05	1116	7.64	1136	8.22	1174	9.35	1211	10.5	1248	11.6	1284	12.8	1321	14.0
16493	3200	1162	8.38	1182	9.02	1201	9.64	1238	10.9	1273	12.0	1307	13.2	1341	14.5	1376	15.7
17524	3400	1230	9.87	1249	10.6	1267	11.2	1302	12.5	1335	13.8	1368	15.1	1400	16.3	1432	17.7
18554	3600	1298	11.5	1316	12.3	1333	13.0	1367	14.4	1399	15.7	1430	17.1	1460	18.4	1491	19.8
19585	3800	1366	13.4	1383	14.2	1400	14.9	1432	16.4	1463	17.8	1492	19.3	1522	20.7	1551	22.1
20616	4000	1434	15.4	1451	16.3	1467	17.1	1498	18.6	1527	20.2	1556	21.7	1584	23.2	1612	24.6
Volume	Outlet	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5669	1100	1095	6.36	1172	7.52	1239	8.60	1265	9.02								
6185	1200	1083	6.42	1157	7.61	1229	8.86	1298	10.1	1354	11.2	1400	12.1				
6700	1300	1077	6.49	1147	7.68	1215	8.94	1282	10.3	1348	11.6	1465	14.2	1508	15.2		
7216	1400	1077	6.62	1142	7.77	1207	9.02	1271	10.3	1334	11.7	1457	14.6	1573	17.6	1613	18.7
7731	1500	1082	6.81	1143	7.92	1204	9.14	1264	10.4	1324	11.8	1442	14.8	1557	17.9	1668	21.1
8246	1600	1093	7.13	1148	8.15	1205	9.32	1262	10.6	1319	11.9	1432	14.9	1542	18.0	1650	21.4
8762	1700	1110	7.58	1160	8.53	1211	9.59	1265	10.8	1319	12.1	1426	15.0	1532	18.2	1635	21.5
9277	1800	1128	8.08	1177	9.03	1224	10.0	1272	11.1	1322	12.4	1424	15.2	1525	18.3	1625	21.7
9793	1900	1147	8.61	1195	9.59	1241	10.6	1286	11.6	1330	12.8	1426	15.5	1522	18.5	1618	21.8
10308	2000	1165	9.16	1213	10.2	1259	11.2	1302	12.3	1345	13.4	1432	15.8	1524	18.8	1615	22.0
10823	2100	1179	9.65	1232	10.8	1277	11.9	1320	13.0	1362	14.1	1443	16.4	1528	19.2	1615	22.3
11339	2200	1194	10.2	1246	11.4	1296	12.6	1339	13.7	1380	14.8	1450	17.2	1537	19.7	1619	22.7
11854	2300	1211	10.8	1261	12.0	1311	13.2	1358	14.4	1399	15.6	1477	18.0	1552	20.5	1627	23.3
12370	2400	1229	11.4	1278	12.6	1326	13.8	1373	15.1	1418	16.4	1495	18.9	1569	21.4	1640	24.1
12885	2500	1246	11.9	1295	13.2	1342	14.5	1388	15.8	1434	17.2	1514	19.8	1587	22.4	1656	25.1
13400	2600	1265	12.5	1313	13.9	1359	15.2	1404	16.6	1448	18.0	1533	20.8	1605	23.4	1673	26.1
13916	2700	1286	13.1	1331	14.5	1377	16.0	1420	17.4	1463	18.8	1548	21.7	1624	24.5	1692	27.3
14431	2800	1309	13.8	1350	15.2	1394	16.7	1438	18.2	1480	19.6	1563	22.6	1643	25.6	1710	28.4
15462	3000	1358	15.3	1395	16.7	1434	18.2	1474	19.7	1516	21.4	1595	24.5	1672	27.6	1747	30.9
16493	3200	1410	17.1	1445	18.5	1480	19.9	1516	21.4	1553	23.0	1630	26.5	1703	29.8	1776	33.2
17524	3400	1465	19.0	1498	20.4	1530	21.9	1563	23.4	1596	25.0	1666	28.4	1739	32.2	1808	35.6
18554	3600	1521	21.2	1552	22.6	1583	24.1	1613	25.7	1644	27.3	1708	30.7	1774	34.4	1843	38.3
19585	3800	1580	23.6	1608	25.0	1637	26.6	1667	28.1	1696	29.7	1754	33.2	1815	36.8	1878	40.8
20616	4000	1639	26.2	1666	27.7	1694	29.2	1721	30.8	1749	32.5	1804	35.9	1860	39.6	1918	43.5
Volume	Outlet	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8762	1700	1737	25.1	1836	28.7	1917	31.8	1950	33.1	1982	34.4						
9277	1800	1723	25.2	1819	28.9	1913	32.8	2005	36.7	2047	38.5	2108	41.3				
9793	1900	1712	25.4	1806	29.1	1897	33.0	1987	37.0	2074	41.1	2173	45.9				
10308	2000	1706	25.5	1795	29.3	1884	33.2	1971	37.3	2057	41.5	2223	50.1	2294	53.9		
10823	2100	1702	25.8	1789	29.5	1874	33.4	1959	37.5	2042	41.7	2205	50.5	2360	59.5	2413	62.7
11339	2200	1702	26.1	1786	29.7	1868	33.6	1950	37.7	2031	41.9	2190	50.9	2344	60.2	2479	68.8
11854	23																

VCB-1133

Wheel Diameter
33" Ø I. D.

INLET 34-1/2" Ø I.D.
OUTLET 26-1/4" x 34-3/8" I.D.

Area 6.49 Sq. Ft.
Area 6.27 Sq. Ft.

Tip Speed = RPM X 8.64
Max BHP = 10.80 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3179	500	347	0.36	427	0.63	504	0.95										
3814	600	358	0.41	424	0.65	492	0.97	619	1.74								
4450	700	375	0.49	433	0.72	490	1.01	605	1.78	714	2.68	759	3.10				
5086	800	390	0.58	450	0.84	499	1.10	599	1.81	699	2.73	795	3.77	851	4.43		
5721	900	406	0.66	465	0.96	516	1.25	602	1.89	693	2.78	781	3.82	867	4.97	941	6.06
6357	1000	427	0.77	480	1.09	532	1.41	614	2.06	693	2.86	775	3.88	855	5.03	932	6.29
6993	1100	451	0.90	497	1.22	546	1.58	631	2.29	701	3.03	774	3.97	848	5.10	921	6.35
7628	1200	476	1.05	518	1.37	562	1.76	648	2.54	717	3.31	780	4.15	848	5.22	916	6.44
8264	1300	503	1.23	541	1.55	580	1.93	662	2.78	734	3.62	795	4.47	854	5.41	916	6.58
8900	1400	530	1.43	565	1.77	601	2.14	677	3.04	750	3.96	811	4.85	867	5.77	922	6.81
9536	1500	559	1.65	591	2.00	624	2.39	693	3.30	764	4.27	829	5.26	863	6.21	934	7.21
10171	1600	587	1.90	618	2.27	649	2.67	711	3.57	779	4.62	843	5.66	900	6.69	950	7.72
10807	1700	616	2.18	645	2.57	674	2.98	733	3.89	796	4.98	857	6.06	917	7.20	967	8.27
11443	1800	646	2.49	674	2.90	701	3.32	755	4.25	812	5.32	873	6.50	930	7.66	985	8.86
12078	1900	676	2.82	702	3.26	728	3.70	780	4.65	832	5.72	890	6.96	945	8.17	999	9.41
12714	2000	706	3.19	731	3.66	756	4.12	805	5.08	854	6.16	906	7.38	961	8.70	1013	9.98
13350	2100	736	3.60	760	4.08	784	4.57	830	5.56	877	6.65	926	7.86	977	9.23	1028	10.6
13985	2200	766	4.03	790	4.55	812	5.05	857	6.08	902	7.19	947	8.40	994	9.75	1045	11.2
14621	2300	797	4.51	819	5.05	841	5.58	884	6.65	927	7.77	970	8.99	1014	10.3	1061	11.8
15257	2400	827	5.02	849	5.58	870	6.14	912	7.25	952	8.40	993	9.64	1035	11.0	1078	12.4
15893	2500	858	5.57	879	6.16	900	6.74	940	7.90	979	9.08	1018	10.3	1058	11.7	1098	13.1
16528	2600	889	6.16	910	6.78	930	7.39	968	8.59	1006	9.80	1043	11.1	1081	12.4	1120	13.9
17164	2700	920	6.80	940	7.45	959	8.08	997	9.32	1033	10.6	1069	11.9	1106	13.3	1142	14.7
17800	2800	951	7.48	970	8.16	989	8.81	1025	10.1	1061	11.4	1096	12.7	1131	14.1	1166	15.6
19071	3000	1013	8.98	1032	9.71	1050	10.4	1084	11.8	1117	13.2	1150	14.6	1182	16.0	1215	17.5
20342	3200	1076	10.7	1093	11.5	1110	12.2	1143	13.7	1175	15.2	1205	16.7	1236	18.2	1266	19.7
21614	3400	1139	12.6	1155	13.4	1172	14.3	1203	15.9	1233	17.4	1262	19.0	1291	20.6	1320	22.2
22885	3600	1202	14.7	1218	15.6	1233	16.5	1263	18.2	1292	19.9	1320	21.6	1347	23.2	1374	24.9
24157	3800	1265	17.1	1280	18.1	1295	19.0	1324	20.8	1351	22.6	1378	24.3	1404	26.1	1430	27.9
25428	4000	1328	19.7	1343	20.7	1357	21.7	1385	23.7	1411	25.5	1437	27.4	1462	29.2	1487	31.1
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6993	1100	993	7.71	1062	9.13	1129	10.6	1162	11.3	1185	11.9						
7628	1200	983	7.78	1049	9.23	1114	10.7	1177	12.3	1238	13.9	1287	15.2				
8264	1300	979	7.89	1041	9.31	1102	10.8	1163	12.4	1222	14.1	1337	17.5	1386	19.1		
8900	1400	980	8.06	1038	9.44	1096	10.9	1153	12.5	1210	14.2	1320	17.8	1427	21.5	1483	23.5
9536	1500	986	8.33	1040	9.66	1094	11.1	1148	12.7	1202	14.3	1308	17.9	1411	21.7	1511	25.7
10171	1600	998	8.79	1046	9.98	1097	11.4	1148	12.9	1199	14.5	1300	18.0	1399	21.9	1495	25.9
10807	1700	1014	9.37	1059	10.5	1104	11.7	1152	13.2	1200	14.8	1295	18.2	1390	22.0	1483	26.1
11443	1800	1031	9.99	1075	11.2	1118	12.4	1159	13.6	1204	15.1	1295	18.5	1385	22.2	1475	26.3
12078	1900	1049	10.7	1092	11.9	1134	13.1	1174	14.4	1214	15.7	1298	18.9	1384	22.5	1470	26.5
12714	2000	1064	11.3	1110	12.6	1151	13.9	1190	15.2	1229	16.5	1305	19.4	1386	22.9	1468	26.8
13350	2100	1077	11.9	1126	13.3	1168	14.7	1207	16.0	1245	17.4	1318	20.2	1392	23.4	1470	27.2
13985	2200	1092	12.6	1139	14.0	1185	15.5	1225	16.9	1262	18.3	1334	21.2	1403	24.2	1475	27.8
14621	2300	1108	13.3	1153	14.8	1198	16.3	1242	17.9	1280	19.3	1350	22.2	1417	25.3	1483	28.5
15257	2400	1125	14.1	1169	15.6	1212	17.1	1255	18.7	1297	20.3	1367	23.4	1434	26.4	1497	29.7
15893	2500	1141	14.7	1185	16.4	1227	18.0	1269	19.6	1309	21.2	1385	24.5	1450	27.7	1513	30.9
16528	2600	1159	15.5	1201	17.2	1243	18.9	1284	20.5	1323	22.2	1401	25.7	1468	29.0	1530	32.3
17164	2700	1180	16.3	1219	18.0	1260	19.8	1300	21.5	1338	23.2	1414	26.8	1485	30.3	1547	33.7
17800	2800	1201	17.2	1238	18.8	1276	20.6	1317	22.5	1354	24.3	1428	27.9	1501	31.6	1564	35.2
19071	3000	1248	19.1	1281	20.8	1315	22.5	1350	24.4	1387	26.4	1459	30.3	1528	34.2	1596	38.2
20342	3200	1297	21.4	1328	23.0	1359	24.8	1391	26.6	1423	28.6	1492	32.8	1558	36.9	1623	41.0
21614	3400	1348	23.8	1378	25.6	1406	27.3	1436	29.2	1465	31.1	1526	35.3	1592	39.8	1654	44.2
22885	3600	1401	26.6	1429	28.4	1456	30.2	1483	32.0	1511	34.0	1567	38.1	1625	42.6	1687	47.5
24157	3800	1456	29.6	1481	31.4	1507	33.3	1533	35.2	1559	37.2	1611	41.3	1665	45.7	1720	50.5
25428	4000	1511	32.9	1536	34.8	1560	36.7	1585	38.7	1609	40.7	1659	44.9	1708	49.3	1759	54.0
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10807	1700	1574	30.4	1664	34.8	1750	39.4	1792	41.6	1821	43.2						
11443	1800	1563	30.6	1649	35.1	1734	39.8	1816	44.5	1882	48.5	1937	51.8				
12078	1900	1554	30.8	1638	35.3	1720	40.0	1801	44.9	1880	49.9	1997	57.7	2049	61.3		
12714	2000	1549	31.0	1630	35.5	1709	40.3	1787	45.2	1865	50.3	2015	60.8	2109	67.8	2158	71.6
13350	2100	1547	31.3	1625	35.8	1701	40.5	1777	45.4	1852	50.6	1999	61.3	2141	72.5	2218	78.8
13985	2200	1549	31.8	1623	36.1	1697	40.8	1770	45.7								

VCB-1136

Wheel Diameter
36-1/2" Ø I. D.

INLET 38-1/2" Ø I.D.
OUTLET 29" x 38" I.D.

Area 8.08 Sq. Ft.
Area 7.65 Sq. Ft.

Tip Speed = RPM X 9.56
Max BHP = 18.70 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3827	500	316	0.43	379	0.67	435	0.94										
4592	600	323	0.48	386	0.77	439	1.06	533	1.72								
5357	700	334	0.54	394	0.86	446	1.19	536	1.88	616	2.66	688	3.54				
6122	800	350	0.64	402	0.94	454	1.32	542	2.07	618	2.87	689	3.75	754	4.74		
6888	900	369	0.76	416	1.05	462	1.41	550	2.28	624	3.13	692	4.03	755	5.00	814	6.07
7653	1000	388	0.89	433	1.21	474	1.55	557	2.45	632	3.40	698	4.35	758	5.34	816	6.41
8418	1100	409	1.04	451	1.39	490	1.74	565	2.59	641	3.68	705	4.69	764	5.73	820	6.82
9184	1200	432	1.21	470	1.58	508	1.97	577	2.79	647	3.85	714	5.04	772	6.15	827	7.28
9949	1300	455	1.39	491	1.79	527	2.21	592	3.05	656	4.06	720	5.28	781	6.56	834	7.76
10714	1400	479	1.60	513	2.04	546	2.47	609	3.37	668	4.34	728	5.52	788	6.88	843	8.25
11480	1500	504	1.83	535	2.29	567	2.76	628	3.73	683	4.70	739	5.82	794	7.15	850	8.64
12245	1600	529	2.10	559	2.58	588	3.08	646	4.10	700	5.12	752	6.21	804	7.48	856	8.94
13010	1700	555	2.39	583	2.89	611	3.42	666	4.48	719	5.58	768	6.68	817	7.90	866	9.31
13775	1800	581	2.71	608	3.23	634	3.78	686	4.90	738	6.08	785	7.22	831	8.42	878	9.76
14541	1900	608	3.07	633	3.61	658	4.18	707	5.36	756	6.57	803	7.80	847	9.02	891	10.3
15306	2000	634	3.46	659	4.02	682	4.61	730	5.86	776	7.10	823	8.42	865	9.68	906	11.0
16071	2100	661	3.89	684	4.47	707	5.08	752	6.38	797	7.68	841	9.03	884	10.4	924	11.7
16837	2200	688	4.36	711	4.96	732	5.59	775	6.92	818	8.30	860	9.68	903	11.1	942	12.5
17602	2300	715	4.86	737	5.49	758	6.14	799	7.51	840	8.96	881	10.4	921	11.9	961	13.4
18367	2400	743	5.41	764	6.06	784	6.74	823	8.14	863	9.65	902	11.1	940	12.6	979	14.2
19133	2500	770	6.00	790	6.68	810	7.37	848	8.82	886	10.4	924	11.9	961	13.5	998	15.1
19898	2600	798	6.64	817	7.34	836	8.05	873	9.55	910	11.1	946	12.8	982	14.4	1017	16.0
20663	2700	826	7.32	844	8.04	863	8.78	898	10.3	934	11.9	969	13.6	1003	15.3	1038	17.0
21428	2800	853	8.05	872	8.8	889	9.56	924	11.1	958	12.8	992	14.5	1026	16.3	1059	19.0
22959	3000	909	9.67	926	10.5	943	11.3	976	12.9	1008	14.7	1039	16.5	1071	18.4	1102	20.2
24490	3200	965	11.5	982	12.4	997	13.2	1028	15.0	1058	16.8	1088	18.7	1118	20.6	1147	22.6
26020	3400	1021	13.6	1037	14.5	1052	15.4	1082	17.2	1110	19.1	1138	21.1	1166	23.1	1194	25.2
27551	3600	1078	15.9	1093	16.8	1107	17.8	1135	19.7	1162	21.7	1189	23.8	1215	25.9	1242	28.0
29081	3800	1135	18.5	1149	19.4	1162	20.4	1189	22.5	1215	24.6	1241	26.7	1266	28.9	1291	31.1
30612	4000	1191	21.3	1205	22.3	1218	23.4	1244	25.5	1269	27.7	1293	29.9	1317	32.2	1341	34.5
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8418	1100	873	7.97	924	9.18	973	10.5	1021	11.8	1066	13.2						
9184	1200	878	8.45	928	9.68	975	11.0	1021	12.3	1066	13.7	1152	16.8				
9949	1300	885	8.99	933	10.2	979	11.6	1024	12.9	1068	14.3	1152	17.3	1232	20.6		
10714	1400	893	9.54	940	10.9	986	12.2	1029	13.6	1072	15.0	1153	18.0	1231	21.2	1306	24.7
11480	1500	901	10.1	948	11.5	993	12.9	1036	14.3	1077	15.8	1157	18.8	1233	22.0	1306	25.5
12245	1600	909	10.5	957	12.1	1001	13.6	1043	15.1	1084	16.6	1162	19.7	1237	22.9	1308	26.4
13010	1700	915	10.9	964	12.6	1010	14.3	1052	15.8	1092	17.4	1169	20.6	1242	23.9	1312	27.4
13775	1800	924	11.3	970	13.0	1016	14.8	1061	16.6	1101	18.2	1177	21.6	1249	25.0	1317	28.5
14541	1900	935	11.8	979	13.4	1023	15.2	1067	17.1	1110	19.1	1185	22.6	1256	26.1	1324	29.7
15306	2000	948	12.4	990	14.0	1031	15.7	1073	17.6	1115	19.6	1194	23.5	1264	27.2	1331	31.0
16071	2100	963	13.1	1003	14.6	1042	16.3	1082	18.2	1122	20.1	1201	24.3	1273	28.3	1339	32.2
16837	2200	979	13.9	1017	15.4	1055	17.0	1093	18.8	1131	20.7	1207	24.9	1282	29.4	1348	33.5
17602	2300	997	14.8	1033	16.3	1069	17.9	1106	19.6	1142	21.5	1214	25.6	1287	30.1	1357	34.7
18367	2400	1016	15.8	1050	17.3	1085	18.9	1120	20.5	1155	22.3	1224	26.3	1293	30.8	1363	35.6
19133	2500	1035	16.7	1069	18.3	1102	19.9	1135	21.6	1168	23.3	1235	27.2	1302	31.6	1369	36.3
19898	2600	1053	17.7	1088	19.4	1120	21.0	1152	22.7	1184	24.4	1248	28.2	1312	32.5	1376	37.2
20663	2700	1072	18.7	1107	20.5	1139	22.2	1170	23.9	1200	25.7	1262	29.4	1324	33.5	1386	38.1
21428	2800	1092	19.8	1125	21.6	1158	23.5	1188	25.2	1218	27.0	1277	30.7	1337	34.7	1397	39.2
22959	3000	1133	22.1	1164	24.0	1195	25.9	1226	27.9	1256	29.8	1311	33.6	1367	37.6	1422	41.8
24490	3200	1177	24.6	1206	26.6	1235	28.6	1264	30.7	1293	32.8	1348	36.9	1401	40.9	1452	45.2
26020	3400	1222	27.4	1249	29.5	1277	31.6	1304	33.7	1331	35.8	1386	40.3	1438	44.7	1487	49.0
27551	3600	1268	30.3	1295	32.6	1321	34.8	1346	37.0	1372	39.2	1424	43.8	1476	48.6	1524	53.2
29081	3800	1316	33.4	1341	35.8	1366	38.2	1391	40.6	1415	42.9	1464	47.6	1512	52.5	1562	57.6
30612	4000	1365	36.9	1388	39.3	1412	41.8	1436	44.4	1459	46.9	1506	51.8	1552	56.8	1598	62.0
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13010	1700	1379	31.0	1445	34.9	1508	38.9	1570	43.1	1629	47.4						
13775	1800	1383	32.2	1447	36.0	1509	40.0	1570	44.2	1629	48.5	1742	57.7				
14541	1900	1389	33.5	1451	37.3	1512	41.3	1572	45.5	1629	49.8	1741	59.0	1847	68.7		
15306	2000	1395	34.8	1457	38.7	1517	42.7	1575	46.9	1632	51.3	1742	60.4	1847	70.2	1947	80.4
16071	2100	1402	36.1	1463	40.2	1522	44.3	1580	48.5	1635	52.8	1743	62.0	1847	71.7	1947	82.1
16837	2200	1410	37.5	1471	41.7	1529	45.9	1585	50.2	1640	54.6	1747	63.7	1848	73.4	1	

VCB-1140

Wheel Diameter
40-1/4" Ø I. D.

INLET 42-1/4" Ø I.D.
OUTLET 32" x 42" I.D.

Area 9.74 Sq. Ft.
Area 9.33 Sq. Ft.

Tip Speed = RPM X 10.54
Max BHP = 30.42 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4667	500	287	0.52	344	0.81	395	1.15										
5600	600	293	0.59	350	0.94	398	1.29	484	2.09								
6533	700	303	0.66	357	1.05	405	1.45	486	2.29	558	3.23	624	4.31				
7466	800	318	0.78	365	1.14	412	1.61	492	2.53	561	3.50	624	4.57	684	5.77		
8400	900	335	0.93	377	1.28	419	1.72	499	2.78	566	3.81	627	4.91	684	6.09	739	7.39
9333	1000	352	1.08	393	1.48	430	1.89	506	2.98	573	4.15	633	5.30	688	6.51	740	7.80
10266	1100	372	1.27	410	1.70	445	2.13	513	3.16	582	4.48	640	5.72	693	6.99	744	8.31
11200	1200	392	1.47	427	1.93	461	2.40	524	3.40	587	4.68	648	6.14	700	7.49	750	8.87
12133	1300	413	1.70	446	2.19	478	2.70	537	3.73	595	4.95	653	6.43	708	8.00	757	9.46
13066	1400	435	1.96	466	2.49	496	3.03	553	4.12	607	5.29	661	6.73	714	8.38	765	10.1
14000	1500	458	2.24	486	2.80	515	3.37	570	4.55	620	5.73	671	7.09	721	8.71	771	10.5
14933	1600	481	2.57	508	3.15	534	3.76	587	5.00	636	6.25	683	7.57	730	9.12	777	10.9
15866	1700	504	2.92	530	3.53	555	4.18	604	5.47	653	6.82	697	8.17	741	9.63	786	11.4
16799	1800	528	3.32	552	3.95	576	4.62	623	5.99	670	7.42	713	8.81	754	10.3	796	11.9
17733	1900	552	3.76	575	4.42	598	5.11	643	6.55	687	8.02	730	9.53	769	11.0	809	12.6
18666	2000	577	4.24	599	4.92	620	5.64	663	7.16	705	8.67	747	10.3	785	11.8	823	13.4
19599	2100	601	4.76	622	5.48	643	6.22	664	7.79	724	9.38	764	11.0	802	12.7	838	14.3
20533	2200	626	5.33	646	6.07	666	6.84	705	8.46	743	10.1	781	11.8	820	13.6	855	15.3
21466	2300	650	5.96	670	6.72	689	7.52	726	9.18	764	10.9	800	12.7	836	14.5	872	16.3
22399	2400	675	6.63	694	7.42	712	8.24	748	9.96	784	11.8	819	13.6	854	15.4	889	17.4
23333	2500	700	7.35	719	8.18	736	9.02	771	10.8	805	12.7	839	14.6	873	16.5	906	18.4
24266	2600	725	8.13	743	8.98	760	9.86	793	11.7	826	13.6	860	15.6	892	17.5	924	19.5
25199	2700	751	8.97	768	9.85	784	10.8	817	12.6	848	14.6	880	16.7	911	18.7	942	20.7
26132	2800	776	9.87	792	10.8	809	11.7	840	13.6	870	15.6	901	17.8	932	19.9	962	22.0
27999	3000	827	11.9	842	12.8	857	13.8	887	15.8	916	17.9	944	20.1	973	22.4	1001	24.7
29866	3200	878	14.1	892	15.1	907	16.2	935	18.3	962	20.5	989	22.8	1016	25.2	1042	27.7
31732	3400	929	16.6	943	17.7	957	18.8	983	21.1	1009	23.4	1034	25.8	1060	28.3	1085	30.8
33599	3600	980	19.5	994	20.6	1007	21.8	1032	24.1	1057	26.6	1081	29.1	1105	31.6	1128	34.3
35465	3800	1032	22.6	1044	23.8	1057	25.1	1081	27.5	1105	30.1	1128	32.7	1150	35.3	1173	38.1
37332	4000	1083	26.1	1095	27.4	1107	28.7	1131	31.3	1153	33.9	1175	36.6	1197	39.4	1219	42.2
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10266	1100	792	9.71	838	11.2	883	12.7	926	14.4	967	16.1						
11200	1200	797	10.3	841	11.8	884	13.4	926	15.0	967	16.7	1045	20.4				
12133	1300	803	11.0	846	12.5	888	14.1	929	15.7	969	17.4	1044	21.1	1117	25.1		
13066	1400	810	11.6	853	13.2	894	14.9	934	16.6	972	18.3	1046	21.9	1117	25.9	1185	30.1
14000	1500	818	12.3	860	14.0	901	15.7	940	17.4	977	19.2	1049	22.9	1118	26.8	1184	31.0
14933	1600	824	12.8	868	14.8	908	16.6	947	18.4	984	20.2	1054	24.0	1122	28.0	1186	32.1
15866	1700	830	13.3	874	15.3	916	17.4	954	19.3	991	21.2	1060	25.1	1127	29.2	1190	33.4
16799	1800	838	13.8	880	15.8	922	18.0	962	20.2	999	22.2	1068	26.3	1133	30.5	1195	34.8
17733	1900	849	14.4	888	16.4	928	18.5	967	20.8	1007	23.2	1075	27.5	1139	31.8	1201	36.2
18666	2000	860	15.1	898	17.0	936	19.2	974	21.4	1011	23.8	1083	28.7	1147	33.2	1207	37.7
19599	2100	874	16.0	910	17.9	946	19.9	982	22.1	1018	24.5	1089	29.6	1155	34.5	1215	39.3
20533	2200	889	17.0	923	18.8	958	20.8	992	22.9	1026	25.3	1095	30.3	1163	35.9	1223	40.8
21466	2300	905	18.1	938	19.9	970	21.8	1003	23.9	1036	26.1	1102	31.1	1167	36.6	1231	42.3
22399	2400	922	19.2	954	21.1	985	23.0	1016	25.0	1048	27.2	1111	32.1	1173	37.5	1236	43.3
23333	2500	940	20.5	970	22.4	1001	24.3	1030	26.3	1061	28.4	1121	33.1	1181	38.5	1241	44.3
24266	2600	956	21.6	988	23.7	1017	25.7	1046	27.7	1075	29.8	1133	34.4	1191	39.6	1248	45.3
25199	2700	973	22.8	1005	25.0	1034	27.1	1062	29.2	1090	31.3	1145	35.8	1202	40.8	1257	46.5
26132	2800	991	24.2	1022	26.4	1052	28.7	1079	30.8	1106	32.9	1160	37.4	1213	42.3	1267	47.8
27999	3000	1029	27.0	1057	29.3	1085	31.6	1113	34.1	1140	36.4	1191	41.0	1241	45.9	1291	51.0
29866	3200	1069	30.1	1095	32.5	1121	34.9	1148	37.4	1174	40.0	1224	45.1	1272	50.0	1318	55.1
31732	3400	1110	33.4	1135	36.9	1160	38.6	1184	41.1	1209	43.8	1259	49.3	1305	54.6	1350	59.8
33599	3600	1152	37.0	1176	39.8	1200	42.5	1223	45.2	1246	47.9	1293	53.5	1340	59.4	1383	64.9
35465	3800	1196	40.9	1218	43.8	1241	46.7	1263	49.6	1285	52.4	1329	58.2	1373	64.2	1418	70.4
37332	4000	1240	45.1	1261	48.1	1283	51.1	1304	54.2	1326	57.3	1368	63.3	1409	69.4	1451	75.7
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15866	1700	1251	37.8	1310	42.5	1368	47.3	1424	52.4	1478	57.7						
16799	1800	1255	39.2	1313	43.9	1369	48.7	1424	53.8	1477	59.1	1579	70.2				
17733	1900	1260	40.8	1316	45.5	1372	50.3	1425	55.4	1478	60.7	1579	71.8	1675	83.6		
18666	2000	1266	42.4	1321	47.2	1376	52.1	1428	57.2	1480	62.4	1579	73.5	1675	85.4	1766	97.9
19599	2100	1272	44.0	1327	48.9	1381	53.9	1433	59.1	1483	64.4	1581	75.5	1675	87.3	1766	99.9
20533	2200	1280	45.7	1334	50.8	1387	55.9	1438	61.1	1438	66.5	1584	77.6	1676	89.4	1766	102
21466	2300	1287	47.														

VCB-1144

Wheel Diameter
44-1/4" Ø I. D.

INLET 46-1/4" Ø I.D.
OUTLET 3-3/8" x 46-1/2" I.D.

Area 11.67 Sq. Ft.
Area 11.41 Sq. Ft.

Tip Speed = RPM X 11.65
Max BHP = 50.18 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5750	500	260	0.64	311	1.00	357	1.41										
6900	600	266	0.72	317	1.15	360	1.58	437	2.56								
8050	700	275	0.82	323	1.29	367	1.79	440	2.81	505	3.97	565	5.28				
9200	800	289	0.97	331	1.40	373	1.97	445	3.11	508	4.30	565	5.61	619	7.07		
10350	900	304	1.15	342	1.59	380	2.12	452	3.42	513	4.69	568	6.03	619	7.48	668	9.06
11500	1000	320	1.34	356	1.83	390	2.33	458	3.66	519	5.10	573	6.52	622	8.00	669	9.59
12650	1100	338	1.57	372	2.10	403	2.63	465	3.88	526	5.50	579	7.04	628	8.59	673	10.2
13800	1200	356	1.83	388	2.39	419	2.97	475	4.19	531	5.75	587	7.56	634	9.22	679	10.9
14950	1300	376	2.11	405	2.72	434	3.34	487	4.60	539	6.09	591	7.90	641	9.84	685	11.6
16100	1400	396	2.43	423	3.08	450	3.74	502	5.09	550	6.52	568	8.27	647	10.3	693	12.4
17250	1500	417	2.79	442	3.48	468	4.18	518	5.63	563	7.08	608	8.73	653	10.7	698	12.9
18400	1600	438	3.19	462	3.91	486	4.66	533	6.18	577	7.72	619	9.34	661	11.2	704	13.4
19550	1700	459	3.64	482	4.39	505	5.18	549	6.77	592	8.44	632	10.1	672	11.9	712	14.0
20700	1800	481	4.13	503	4.91	524	5.74	566	7.42	608	9.17	647	10.9	684	12.7	722	14.7
21850	1900	503	4.68	524	5.49	544	6.34	584	8.12	624	9.92	662	11.8	698	13.6	733	15.5
23000	2000	525	5.28	545	6.12	564	7.00	603	8.88	640	10.7	678	12.7	713	14.6	747	16.6
24150	2100	547	5.94	566	6.81	585	7.72	621	9.66	657	11.6	693	13.6	728	15.7	761	17.7
25300	2200	570	6.65	588	7.56	606	8.50	641	10.5	675	12.6	710	14.6	744	16.8	776	18.9
26450	2300	592	7.43	610	8.37	627	9.35	661	11.4	684	13.6	727	15.7	759	17.9	792	20.2
27600	2400	615	8.27	632	9.25	649	10.3	681	12.4	713	14.6	744	16.8	776	19.1	807	21.5
28750	2500	638	9.17	654	10.2	670	11.2	701	13.4	732	15.7	763	18.1	793	20.4	823	22.8
29900	2600	661	10.1	677	11.2	692	12.3	722	14.5	752	16.9	781	19.3	810	21.7	839	24.2
31050	2700	684	11.2	689	12.3	714	13.4	743	15.7	772	18.1	800	20.6	828	23.2	856	25.7
32200	2800	707	12.3	722	13.4	736	14.6	764	16.9	792	19.4	819	22.0	847	24.7	874	27.3
34500	3000	753	14.8	767	16.0	781	17.2	807	19.7	833	22.3	859	25.0	885	27.8	910	30.6
36800	3200	800	17.6	813	18.9	826	20.2	851	22.8	876	25.5	900	28.3	924	31.3	948	34.3
39100	3400	846	20.8	859	22.1	871	23.5	895	26.3	918	29.1	941	32.1	964	35.1	986	38.2
41400	3600	893	24.3	905	25.7	917	27.2	940	30.1	962	33.1	984	36.2	1005	39.3	1026	42.5
43700	3800	940	28.3	952	29.8	963	31.3	985	34.3	1006	37.5	1027	40.7	1047	43.9	1067	47.3
46000	4000	987	32.7	998	34.2	1009	35.8	1030	39.0	1050	42.3	1070	45.6	1090	49.0	1109	52.5
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12650	1100	717	11.9	758	13.7	798	15.6	837	17.7	875	19.8						
13800	1200	721	12.7	761	14.5	800	16.4	838	18.4	875	20.5	945	25.0				
14950	1300	727	13.5	766	15.4	804	17.3	841	19.3	876	21.4	945	25.9	1010	30.7		
16100	1400	733	14.3	772	16.3	809	18.3	845	20.3	880	22.5	946	27.0	1010	31.7	1071	36.9
17250	1500	741	15.1	779	17.2	815	19.3	851	21.5	885	23.6	950	28.2	1012	33.0	1072	38.1
18400	1600	746	15.8	786	18.2	822	20.4	857	22.6	890	24.9	954	29.5	1015	34.4	1073	39.5
19550	1700	752	16.3	791	18.8	830	21.4	864	23.7	897	26.1	960	30.9	1020	35.9	1077	41.1
20700	1800	759	16.9	797	19.4	834	22.1	872	24.9	904	27.4	967	32.4	1025	37.5	1081	42.8
21850	1900	769	17.7	805	20.1	840	22.8	876	25.6	911	28.5	974	33.8	1032	39.1	1087	44.6
23000	2000	780	18.7	814	21.0	848	23.6	882	26.3	915	29.3	981	35.3	1039	40.8	1093	46.4
24150	2100	793	19.8	825	22.0	857	24.5	890	27.2	922	30.1	986	36.3	1046	42.5	1100	48.3
25300	2200	807	21.0	837	23.2	868	25.6	899	28.2	930	31.1	991	37.2	1053	44.0	1107	50.2
26450	2300	822	22.4	851	24.6	880	26.9	910	29.4	939	32.2	998	38.3	1057	44.9	1115	52.0
27600	2400	837	23.8	866	26.1	894	28.4	922	30.9	950	33.5	1006	39.4	1063	46.0	1119	53.2
28750	2500	853	25.3	881	27.6	908	30.0	935	32.5	962	35.1	1016	40.8	1070	47.3	1124	54.3
29900	2600	868	26.7	897	29.3	923	31.8	949	34.3	975	36.8	1027	42.4	1079	48.7	1131	55.7
31050	2700	884	28.3	912	31.0	939	33.6	964	36.1	989	38.7	1039	44.2	1089	50.3	1139	57.1
32200	2800	900	29.9	927	32.6	955	35.5	979	38.1	1004	40.7	1052	46.2	1100	52.2	1148	58.8
34500	3000	935	33.4	960	36.2	985	39.1	1011	42.1	1035	45.1	1080	50.7	1125	56.7	1170	63.0
36800	3200	972	37.3	995	40.3	1019	43.3	1042	46.3	1066	49.5	1111	55.7	1154	61.8	1196	68.1
39100	3400	1009	41.5	1032	44.6	1054	47.8	1076	51.0	1098	54.2	1142	60.9	1185	67.5	1225	73.9
41400	3600	1048	45.9	1069	49.3	1091	52.7	1111	56.0	1132	59.4	1174	66.2	1216	73.4	1256	80.3
43700	3800	1087	50.7	1108	54.3	1128	57.9	1148	61.5	1168	65.0	1208	72.1	1247	79.4	1287	87.0
46000	4000	1128	56.0	1147	59.7	1167	63.4	1186	67.2	1205	71.0	1243	78.4	1280	85.9	1318	93.6
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19550	1700	1132	46.5	1185	52.1	1237	58.1	1287	64.3	1337	70.8						
20700	1800	1135	48.2	1188	53.9	1238	59.9	1288	66.0	1336	72.5	1429	86.2				
21850	1900	1140	50.1	1191	55.9	1241	61.9	1290	68.0	1337	74.5	1428	88.1	1515	103		
23000	2000	1146	52.1	1196	58.0	1245	64.0	1293	70.3	1339	76.7	1429	90.3	1515	105		
24150	2100	1152	54.2	1202	60.2	1250	66.3	1297	72.6	1342	79.1	1430	92.7	1515	107		
25300	2200	1159	56.3	1208	62.5	1255	68.7	1302	75.2	1347	81.7	1433	95.4	1517	110		
26450	2300	1166	58.4	1215	64.8	1262	71.2	1307	77.8	1352	84.5	1437	98.3	1519	11		

VCB-1149

Wheel Diameter
49" Ø I. D.

INLET 51-1/4" Ø I.D.
OUTLET 39" x 51-1/8" I.D.

Area 14.33 Sq. Ft.
Area 13.85 Sq. Ft.

Tip Speed = RPM X 12.83
Max BHP = 81.31 $\frac{\text{RPM}^3}{1000}$

Volume	Outlet	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6923	500	236	0.77	283	1.21	324	1.70										
8308	600	241	0.87	298	1.39	327	1.91	397	3.10								
9692	700	249	0.98	293	1.55	333	2.16	399	3.39	459	4.79	513	6.39				
11077	800	261	1.16	300	1.69	338	2.38	404	3.75	461	5.18	513	6.78	562	8.55		
12461	900	275	1.38	310	1.91	344	2.55	410	4.12	465	5.65	515	7.27	562	9.04	607	11.0
13846	1000	290	1.61	323	2.19	354	2.80	415	4.42	471	6.15	520	7.86	565	9.66	608	11.6
15231	1100	305	1.88	337	2.52	365	3.16	422	4.68	478	6.65	526	8.48	570	10.4	611	12.3
16615	1200	322	2.19	351	2.86	379	3.57	430	5.04	482	6.95	532	9.11	575	11.1	616	13.2
18000	1300	340	2.52	366	3.26	393	4.01	442	5.53	489	7.34	537	9.54	582	11.9	622	14.0
19384	1400	358	2.90	383	3.69	407	4.48	454	6.11	498	7.85	543	9.97	587	12.4	628	14.9
20769	1500	376	3.33	400	4.16	423	5.01	468	6.76	510	8.51	551	10.5	592	12.9	633	15.6
22154	1600	395	3.81	417	4.68	439	5.58	482	7.42	522	9.27	561	11.2	600	13.5	638	16.2
23538	1700	415	4.34	435	5.25	456	6.21	497	8.12	536	10.1	573	12.1	609	14.3	645	16.8
24923	1800	434	4.93	454	5.87	474	6.87	512	8.89	551	11.0	586	13.1	620	15.2	654	17.7
26307	1900	454	5.58	473	6.56	491	7.59	528	9.73	564	11.9	600	14.1	632	16.3	665	18.7
27692	2000	474	6.30	492	7.31	510	8.38	545	10.6	579	12.9	614	15.3	645	17.5	676	19.9
29077	2100	494	7.08	511	8.13	528	9.23	562	11.6	595	13.9	628	16.4	659	18.8	689	21.2
30461	2200	514	7.93	531	9.02	547	10.2	579	12.6	611	15.1	642	17.5	674	20.2	703	22.7
31846	2300	535	8.85	551	9.99	566	11.2	597	13.6	628	16.3	657	18.8	687	21.5	717	24.2
33230	2400	555	9.85	571	11.0	586	12.2	615	14.8	645	17.5	673	20.2	702	22.9	731	25.8
34615	2500	576	10.9	591	12.1	605	13.4	634	16.0	662	18.8	690	21.6	717	24.4	745	27.3
36000	2600	596	12.1	611	13.3	625	14.6	652	17.3	679	20.2	706	23.2	733	26.0	759	29.0
37384	2700	617	13.3	631	14.6	645	16.0	671	18.7	697	21.7	723	24.7	749	27.7	775	30.8
38769	2800	638	14.7	652	16.0	665	17.4	690	20.2	716	23.2	741	26.4	766	29.5	790	32.7
41538	3000	680	17.6	692	19.0	705	20.5	729	23.5	753	26.7	776	29.9	800	33.3	823	36.7
44307	3200	722	21.0	734	22.5	746	24.0	768	27.2	791	30.5	813	33.9	835	37.4	857	41.1
47076	3400	764	24.7	775	26.3	786	28.0	808	31.3	829	34.8	850	38.3	871	42.0	892	45.7
49846	3600	806	28.9	817	30.6	828	32.4	848	35.9	869	39.5	888	43.2	908	47.0	928	50.9
52615	3800	848	33.6	859	35.4	869	37.2	889	40.9	908	44.7	927	48.5	946	52.5	964	56.5
55384	4000	891	38.8	901	40.7	911	42.6	930	46.4	948	50.4	966	54.4	984	58.5	1002	62.7
Volume	Outlet	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15231	1100	651	14.4	668	16.6	725	18.9	761	21.4	794	23.9						
16615	1200	654	15.3	691	17.5	727	19.8	761	22.2	794	24.8	858	30.2				
18000	1300	659	16.2	695	18.5	730	20.9	763	23.3	796	25.9	858	31.3	918	37.2		
19384	1400	665	17.3	701	19.6	734	22.1	767	24.5	799	27.1	859	32.5	917	38.4	973	44.6
20769	1500	672	18.3	707	20.8	740	23.3	772	25.9	803	28.5	862	34.0	919	39.8	973	46.0
22154	1600	677	19.0	713	21.9	746	24.6	778	27.2	808	30.0	866	35.6	922	41.5	975	47.7
23538	1700	682	19.7	718	22.7	753	25.8	784	28.6	814	31.5	871	37.3	925	43.3	978	49.5
24923	1800	689	20.4	723	23.4	757	26.7	791	30.0	820	33.0	877	39.0	930	45.2	981	51.6
26307	1900	697	21.3	730	24.3	762	27.5	795	30.9	827	34.5	883	40.8	936	47.2	986	53.7
27692	2000	707	22.4	738	25.3	769	28.4	800	31.8	831	35.3	890	42.5	942	49.2	992	56.0
29077	2100	718	23.8	748	26.5	777	29.5	807	32.8	836	36.3	895	43.9	949	51.2	998	58.2
30461	2200	731	25.2	759	27.9	787	30.8	815	34.0	843	37.5	899	45.0	955	53.2	1005	60.5
31846	2300	744	26.8	771	29.5	797	32.4	824	35.4	851	38.8	905	46.2	959	54.3	1011	62.7
33230	2400	758	28.6	784	31.3	809	34.2	835	37.1	861	40.3	912	47.6	964	55.6	1015	64.3
34615	2500	772	30.4	797	33.2	822	36.1	847	39.1	871	42.2	921	49.1	970	57.0	1020	65.6
36000	2600	786	32.1	812	35.2	836	38.1	859	41.1	883	44.3	931	51.0	978	58.7	1026	67.2
37384	2700	800	33.9	826	37.2	850	40.3	873	43.3	896	46.5	941	53.2	987	60.6	1033	68.9
38769	2800	815	35.9	839	39.1	864	42.5	887	45.7	909	48.9	953	55.6	997	62.8	1041	70.9
41538	3000	846	40.0	869	43.5	892	47.0	915	50.6	937	54.1	978	60.9	1019	68.1	1061	75.7
44307	3200	879	44.7	900	48.2	922	51.9	943	55.6	965	59.4	1006	66.9	1045	74.2	1083	81.8
47076	3400	912	49.7	933	53.5	953	57.2	973	61.1	994	65.0	1034	73.1	1073	81.0	1109	88.7
49846	3600	947	54.9	967	59.1	986	63.1	1005	67.1	1024	71.2	1062	79.5	1101	88.1	1137	96.4
52615	3800	983	60.7	1001	65.0	1020	69.4	1038	73.6	1056	77.8	1092	86.4	1129	95.2	1165	104
55384	4000	1019	67.0	1037	71.4	1054	75.9	1072	80.5	1090	85.1	1124	93.9	1158	103	1193	112
Volume	Outlet	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
CFM	Vol.	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
23538	1700	1028	56.1	1076	63.0	1123	70.2	1169	77.8	1214	85.6						
24923	1800	1031	58.2	1078	65.1	1124	72.3	1169	79.8	1213	87.6	1297	104				
26307	1900	1035	60.5	1081	67.4	1127	74.7	1171	82.2	1214	90.0	1297	106	1376	124		
27692	2000	1040	62.9	1086	69.9	1130	77.2	1173	84.8	1216	92.6	1297	109	1376	127		
29077	2100	1045	65.3	1090	72.6	1134	80.0	1177	87.6	1218	95.5	1299	112	1376	129		
30461	2200	1051	67.9	1096	75.3	1139	82.9	1181	90.7	1222	98.6	1301	115	1377	133		
31846	2300	1058	70.4	1102	78.1	1145	85.9	1186	93.8	1227	102	1305	119	1379	136		
33230	2400	1064	72.9	1108	80.9	1151	88.9	1192	97.0	1232	105	1309	122	1382	140		
34615	2500	1069	74.9	1115	83.6	1157	91.9	1198	100	1238	109	1313	126	1386	144		
36000	2600	1073	76.3	1121	86.0	1154	94.9	1204	104								

VCB-1154

Wheel Diameter
54-1/4" Ø I. D.

INLET 56-1/4" Ø I.D.
OUTLET 43-1/8" x 56-1/2" I.D.

Area 17.26 Sq. Ft.
Area 16.92 Sq. Ft.

Tip Speed = RPM X 14.20
Max BHP = 135.0 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8460	500	213	0.94	255	1.48	293	2.09										
10152	600	218	1.06	260	1.70	295	2.34	359	3.79								
11844	700	225	1.20	265	1.90	300	2.64	361	4.15	414	5.87	463	7.82				
13536	800	236	1.41	271	3.07	306	2.91	365	4.58	416	6.34	463	8.29	508	10.5		
15228	900	248	1.68	280	2.33	311	3.12	370	5.04	420	6.91	465	8.90	508	11.1	548	13.4
16920	1000	261	1.96	291	2.68	319	3.43	375	5.41	425	7.52	469	9.61	510	11.8	549	14.2
18612	1100	275	2.29	304	3.08	330	3.85	380	5.73	431	8.13	475	10.4	514	12.7	552	15.1
20304	1200	291	2.67	316	3.49	342	4.36	368	6.16	435	8.50	480	11.1	520	13.5	556	16.1
21996	1300	306	3.08	330	3.97	354	4.90	398	6.75	441	8.97	485	11.7	525	14.5	561	17.2
23688	1400	322	3.54	345	4.50	367	5.47	410	7.46	450	9.59	490	12.2	530	15.2	567	18.2
25380	1500	339	4.06	360	5.08	381	6.11	423	8.25	460	10.4	497	12.9	535	15.8	572	19.1
27072	1600	356	4.64	376	5.70	396	6.81	435	9.06	471	11.3	506	13.7	541	16.5	576	19.8
28764	1700	374	5.29	392	6.39	411	7.57	448	9.91	484	12.4	517	14.8	550	17.5	583	20.6
30456	1800	391	6.01	409	7.16	427	8.37	462	10.8	497	13.4	528	16.0	559	18.6	591	21.6
32148	1900	409	6.80	426	7.99	443	9.25	476	11.9	509	14.5	541	17.3	570	19.9	600	22.8
33840	2000	427	7.66	443	8.91	459	10.2	491	13.0	522	15.7	554	18.6	582	21.4	610	24.3
35532	2100	445	8.61	461	9.90	476	11.2	506	14.1	536	17.0	566	20.0	595	23.0	622	25.9
37224	2200	463	9.64	478	11.0	493	12.4	522	15.3	551	18.4	579	21.4	608	24.6	634	27.7
38916	2300	482	10.8	496	12.2	510	13.6	538	16.6	566	19.8	593	23.0	620	26.2	647	29.6
40608	2400	500	12.0	514	13.4	528	14.9	554	18.0	581	21.3	607	24.6	633	28.0	659	31.5
42300	2500	519	13.3	532	14.8	545	16.3	571	19.5	596	22.9	622	26.4	647	29.8	672	33.4
43992	2600	537	14.7	550	16.2	563	17.8	588	21.1	612	24.6	637	28.2	661	31.8	685	35.4
45684	2700	556	16.2	569	17.8	581	19.4	605	22.8	628	26.4	652	30.1	675	33.8	698	37.5
47376	2800	575	17.8	587	19.5	599	21.2	622	24.7	645	28.3	668	32.1	690	36.0	713	39.8
50760	3000	612	21.4	624	23.2	635	25.0	657	28.6	678	32.5	700	36.5	721	40.6	742	44.8
54144	3200	650	25.5	661	27.3	672	29.2	692	33.1	713	37.1	733	41.3	752	45.6	772	50.1
57528	3400	688	30.1	698	32.0	708	34.0	728	38.1	747	42.3	766	46.7	785	51.1	804	55.8
60912	3600	726	35.2	736	37.3	745	39.4	764	43.6	783	48.1	801	52.6	818	57.2	836	62.0
64296	3800	764	40.9	773	43.1	783	45.3	801	49.8	818	54.4	835	59.1	852	63.9	869	68.9
67680	4000	802	47.2	811	49.5	820	51.8	837	56.5	854	61.3	871	66.2	887	71.3	903	76.4
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18612	1100	588	17.6	622	20.3	655	23.1	687	26.1	718	29.3						
20304	1200	591	18.7	624	21.4	656	24.2	687	27.2	717	30.3	775	37.0				
21996	1300	595	19.9	628	22.7	659	25.5	689	28.5	719	31.7	775	38.3	829	45.5		
23688	1400	601	21.1	633	24.0	663	27.0	693	30.0	721	33.2	776	39.8	828	46.9	879	54.6
25380	1500	607	22.3	638	25.4	668	28.5	697	31.6	725	34.9	779	41.6	830	48.7	879	56.3
27072	1600	611	23.3	644	26.8	674	30.0	702	33.3	730	36.6	782	43.5	832	50.7	880	58.3
28764	1700	616	24.1	648	27.8	680	31.6	708	35.0	735	38.5	787	45.6	836	52.9	883	60.6
30456	1800	622	25.0	653	28.7	684	32.7	714	36.7	741	40.3	792	47.7	840	55.3	886	63.1
32148	1900	629	26.1	659	29.7	688	33.6	718	37.8	747	42.2	797	49.9	845	57.7	891	65.7
33840	2000	638	27.4	666	30.9	694	34.8	722	38.9	750	43.2	803	52.0	851	60.2	896	68.4
35532	2100	648	29.0	675	32.4	702	36.1	728	40.1	755	44.4	808	53.8	857	62.6	901	71.2
37224	2200	659	30.8	685	34.1	710	37.7	736	41.6	761	45.8	812	55.0	863	65.0	907	74.0
38916	2300	671	32.8	695	36.1	720	39.6	744	43.3	768	47.4	817	56.5	866	66.5	913	76.7
40608	2400	684	34.8	707	38.2	730	41.7	753	45.4	777	49.3	824	58.2	870	68.0	917	78.7
42300	2500	697	37.0	719	40.5	742	44.0	764	47.7	786	51.5	831	60.1	876	69.8	921	80.3
43992	2600	709	39.2	732	42.9	754	46.5	775	50.2	797	54.0	840	62.3	883	71.8	926	82.2
45684	2700	722	41.4	745	45.4	766	49.1	787	52.9	808	56.8	849	64.9	891	74.0	932	84.3
47376	2800	735	43.7	757	47.8	779	51.9	800	55.8	820	59.7	860	67.8	900	76.7	940	86.7
50760	3000	763	48.8	783	53.0	804	57.3	825	61.7	845	66.0	863	74.4	920	83.1	957	82.5
54144	3200	792	54.5	812	58.8	831	63.3	851	67.8	870	72.5	908	81.6	943	90.6	977	99.9
57528	3400	823	60.5	841	65.2	859	69.8	878	74.5	896	79.3	933	89.2	968	98.8	1001	108
60912	3600	854	67.0	872	72.0	889	77.0	906	81.8	924	86.8	958	96.9	993	108	1025	118
64296	3800	886	74.0	903	79.2	919	84.6	936	89.8	952	94.9	985	105	1018	116	1051	127
67680	4000	919	81.6	935	87.0	951	92.5	967	98.2	982	104	1014	115	1045	126	1076	137
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28764	1700	928	68.6	972	77.1	1015	85.9	1056	95.2	1096	105						
30456	1800	931	71.2	974	79.6	1015	88.4	1056	97.7	1096	107						
32148	1900	934	73.9	977	82.5	1018	91.3	1057	101	1096	110						
33840	2000	939	76.9	980	85.5	1021	94.5	1060	104	1098	113						
35532	2100	944	79.9	985	88.8	1024	97.9	1063	107	1100	117						
37224	2200	949	83.0	990	92.1	1029	101	1067	111	1104	121						
38916	2300	955	86.1	995	95.5	1034	105	1071	115	1108	125						
40608	2400	961	89.1	1001	98.9	1039	109	1076	119	1112	129						
42300	2500	966	91.6	1007	102	1045	112	1082	123	1117	133						
43992	2600	969	93.4	1012	105	1051	116	1087	127	1123	137						
45684	2700	974	95.4	1015	107	1057	120	1093	131	1129	142						
47376	2800	980	97.6	1020	109	1060	122	1099	135	1134	146						
50760	3000	995	103	1032	114	1069	126	1107	139	1144	153						
54144	3200	1012	110	1048	121	1083	132	1118	145								
57528	3400	1033	118	1066	129	1099	140	1132	152								
60912	3600	1057	128	1088	138	1119	149	1150	160								
64296	3800	1082	138	1111	149	1141	160										
67680	4000	1107	149	1136	160												

*Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

VCB-1160

Wheel Diameter
60"Ø I. D.

INLET 62" Ø I.D.
OUTLET 47-3/4" x 62-1/2" I.D.

Area 20.97 Sq. Ft.
Area 20.71 Sq. Ft.

Tip Speed = RPM X 15.71
Max BHP = 223.8 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10362	500	192	1.15	231	1.81	265	2.55										
12434	600	197	1.30	235	2.08	267	2.86	324	4.64								
14507	700	203	1.47	240	2.33	272	3.23	326	5.08	375	7.18	419	9.57				
16579	800	213	1.73	245	2.53	276	3.57	330	5.61	376	7.76	419	10.2	459	12.8		
18652	900	225	2.06	253	2.85	281	3.82	335	6.17	380	8.46	421	10.9	459	13.5	495	16.4
20724	1000	236	2.41	263	3.28	289	4.20	339	6.62	385	9.21	424	11.8	451	14.5	496	17.3
22796	1100	249	2.81	275	3.77	298	4.72	344	7.01	390	9.96	429	12.7	465	15.5	499	18.5
24869	1200	263	3.27	266	4.28	309	5.34	351	7.55	394	10.4	434	13.6	470	16.6	503	19.7
26941	1300	277	3.77	299	4.87	321	6.00	360	8.28	399	11.0	438	14.3	475	17.8	508	21.0
29014	1400	292	4.34	312	5.52	332	6.70	371	9.14	407	11.7	443	14.9	479	18.6	513	22.3
31086	1500	307	4.98	326	6.22	345	7.48	382	10.1	416	12.7	450	15.8	483	19.4	517	23.4
33158	1600	322	5.69	340	6.99	358	8.35	394	11.1	426	13.9	458	16.8	490	20.3	521	24.2
35231	1700	338	6.49	355	7.84	372	9.28	405	12.1	438	15.1	467	18.1	497	21.4	527	25.2
37303	1800	354	7.37	370	8.78	386	10.3	418	13.3	449	16.5	478	19.6	506	22.8	534	26.4
39376	1900	370	8.34	386	9.8	401	11.3	431	14.5	461	17.8	489	21.1	516	24.4	542	28.0
41448	2000	387	9.40	401	10.9	416	12.5	444	15.9	473	19.3	501	22.8	527	26.2	552	29.8
43520	2100	403	10.6	417	12.1	431	13.8	458	17.3	485	20.8	512	24.5	538	28.2	562	31.8
45593	2200	419	11.8	433	13.5	446	15.2	472	18.8	498	22.5	524	26.2	550	30.2	573	33.9
47665	2300	436	13.2	449	14.9	462	16.7	487	20.4	512	24.3	536	28.1	561	32.2	585	36.2
49738	2400	453	14.7	465	16.5	478	18.3	502	22.1	526	26.2	549	30.2	573	34.3	596	38.6
51810	2500	469	16.3	482	18.1	494	20.0	517	23.9	540	28.1	563	32.3	585	36.5	608	40.9
63882	2600	486	18.0	498	19.9	510	21.9	532	25.9	554	30.2	576	34.6	598	38.9	620	43.4
55955	2700	503	19.9	515	21.9	526	23.9	547	28.0	569	32.4	590	37.0	611	41.5	632	46.0
58027	2800	520	21.9	531	23.9	542	26.0	563	30.2	584	34.7	604	39.4	625	44.2	645	48.8
62172	3000	554	26.3	565	28.4	575	30.6	595	35.1	614	39.8	633	44.7	652	49.8	671	54.9
66317	3200	588	31.3	598	33.6	608	35.9	627	40.6	645	45.5	663	50.6	681	55.9	699	61.4
70462	3400	623	36.9	632	39.3	641	41.8	659	46.8	676	51.9	693	57.2	710	62.7	727	68.4
74606	3600	657	43.2	666	45.7	675	48.3	692	53.6	708	59.0	725	64.5	741	70.2	757	76.1
78751	3800	692	50.2	700	52.9	709	55.6	725	61.1	741	66.7	756	72.5	771	78.4	787	84.5
82896	4000	726	57.9	734	60.7	742	63.6	758	69.3	773	75.2	788	81.2	803	87.4	817	93.7
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22796	1100	531	21.6	562	24.8	592	28.3	621	32.0	649	35.8						
24869	1200	534	22.9	564	26.2	593	29.7	621	33.3	649	37.1	701	45.3				
26941	1300	538	24.3	568	27.7	596	31.3	623	34.9	650	38.8	701	46.9	749	55.7		
29014	1400	543	25.8	572	29.4	600	33.0	626	36.8	652	40.6	702	48.7	749	57.5	795	66.8
31086	1500	549	27.3	577	31.1	604	34.9	630	38.7	656	42.7	704	50.9	750	59.6	795	68.9
33158	1600	553	28.5	582	32.8	609	36.8	635	40.8	660	44.9	707	53.3	752	62.1	796	71.4
35231	1700	557	29.5	586	34.1	615	38.6	640	42.9	665	47.1	711	55.8	756	64.8	798	74.2
37303	1800	562	30.6	590	35.1	618	40.0	646	44.9	670	49.4	716	58.4	760	67.7	801	77.2
39376	1900	569	31.9	596	36.4	622	41.2	649	46.3	675	51.6	721	61.1	764	70.6	805	80.4
41448	2000	577	33.6	602	37.8	628	42.5	653	47.6	678	52.9	727	63.7	769	73.7	810	83.8
43520	2100	586	35.6	610	39.6	634	44.2	659	49.1	683	54.4	731	65.8	775	76.7	815	87.2
45593	2200	596	37.8	619	41.8	642	46.1	665	50.9	688	56.1	734	67.4	780	79.7	820	90.6
47665	2300	607	40.1	629	44.2	651	48.5	673	53.0	695	58.1	739	69.1	783	81.3	826	93.9
49738	2400	618	42.7	640	46.8	661	41.1	682	55.6	703	60.4	745	71.2	787	83.2	829	96.3
51810	2500	630	45.4	651	49.6	671	53.9	691	58.4	711	63.1	752	73.6	792	85.4	833	98.3
53882	2600	641	48.0	662	52.6	682	57.0	701	61.5	721	66.2	760	76.3	799	87.9	837	101
55955	2700	653	50.7	674	55.6	693	60.2	712	64.8	731	69.6	768	79.6	806	90.7	843	103
58027	2800	665	53.6	685	58.5	705	63.6	724	68.3	742	73.1	778	83.1	814	94.0	850	106
62172	3000	690	58.9	709	65.0	728	70.2	747	75.7	765	80.9	798	91	832	102	856	113
66317	3200	717	66.8	734	72.1	752	77.5	770	83.1	787	88.8	821	100	853	111	884	122
70462	3400	744	74.2	761	79.9	778	85.6	794	91.3	811	97.2	844	109	875	121	905	133
74606	3600	773	82.1	789	88.3	804	94.4	820	100	836	106	867	119	899	132	928	144
78751	3800	802	90.7	817	97.1	832	104	847	110	862	116	891	129	921	142	951	156
82896	4000	831	100	846	107	860	113	875	120	889	127	917	140	945	154		
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35231	1700	839	84.0	879	94.3	917	105	955	117								
37303	1800	842	87.2	880	97.5	918	108	955	120								
39376	1900	845	90.5	883	101	920	112	956	123								
41448	2000	849	94.1	885	105	923	116	958	127								
43520	2100	853	97.8	890	109	926	120	961	131								
45593	2200	858	102	895	113	930	124										
47665	2300	864	105	900	117	935	129										
49738	2400	869	109	905	121	940	133										
51810	2500	873	112	910	125	945	138										
53882	2600	876	114	915	129	950	142										
55955	2700	881	117	918	131	956	147										
58027	2800	886	120	922	134	958	149										
62172	3000	900	126	933	140												
66317	3200	916	135	948	148												
70462	3400	935	145														
74606	3600	956	156														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92" hg. Bar)

Shaded areas show Class III Wheel Design

VCB-1166

Wheel Diameter
66" Ø I. D.

INLET 69" Ø I.D.
OUTLET 52-3/8" x 68-7/8" I.D.

Area 25.97 Sq. Ft.
Area 25.05 Sq. Ft.

Tip Speed = RPM X 17.28
Max BHP = 360.4 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11980	500	174	1.34	209	2.12	241	3.02										
14376	600	178	1.54	212	2.43	242	3.35	295	5.51								
16772	700	183	1.70	217	2.75	246	3.76	296	5.96	341	8.52						
19168	800	190	1.97	220	2.96	250	4.20	298	6.55	341	9.12	381	12.0	417	15.2		
21564	900	200	2.33	227	3.27	253	4.49	303	7.20	344	9.89	382	12.8	417	16.0	451	19.5
23960	1000	210	2.72	235	3.72	259	4.85	307	7.84	348	10.7	384	13.8	418	17.0	451	20.4
26356	1100	221	3.15	245	4.27	267	5.38	310	8.23	352	11.6	388	14.6	421	18.1	452	21.6
28752	1200	232	3.66	255	4.84	276	6.05	316	8.76	356	12.3	392	15.9	425	19.4	455	23.0
31148	1300	244	4.20	265	5.47	286	6.80	323	9.48	360	12.9	397	16.9	429	20.7	459	24.5
33544	1400	257	4.81	276	6.18	295	7.57	331	10.4	365	13.6	400	17.6	434	22.0	463	26.0
35940	1500	270	5.50	288	6.96	306	8.41	341	11.4	372	14.6	405	18.4	437	22.8	468	27.5
38336	1600	283	6.26	300	7.79	317	9.35	351	12.6	381	15.8	411	19.4	441	23.7	471	28.5
40732	1700	297	7.11	313	8.70	329	10.4	360	13.7	390	17.1	418	20.7	447	24.8	475	29.6
43128	1800	310	8.06	326	9.70	341	11.5	371	15.0	400	18.6	427	22.2	453	26.2	480	30.8
45524	1900	324	9.09	339	10.8	353	12.6	382	16.3	410	20.2	436	23.9	461	27.9	487	32.2
47920	2000	338	10.2	352	12.0	366	13.9	393	17.8	420	21.7	446	25.8	470	29.8	494	34.1
50316	2100	352	11.5	366	13.3	379	15.2	405	19.3	430	23.4	456	27.7	479	31.9	502	36.2
52712	2200	367	12.8	379	14.7	392	16.7	417	21.0	441	25.2	466	29.6	489	34.1	511	38.5
55108	2300	381	14.3	393	16.3	405	18.3	429	22.7	453	27.2	476	31.7	500	36.5	521	41.0
57504	2400	395	15.9	407	17.9	419	20.0	442	24.5	465	29.2	487	33.9	509	38.7	531	43.7
59900	2500	410	17.6	421	19.7	433	21.9	455	26.5	477	31.4	498	36.2	519	41.2	541	46.4
62296	2600	424	19.4	436	21.6	446	23.9	468	28.6	489	33.6	510	38.7	530	43.8	551	49.0
64692	2700	439	21.5	450	23.7	460	26.0	481	30.9	501	36.0	521	41.3	541	46.5	561	51.9
67088	2800	454	23.5	464	25.9	474	28.3	494	33.2	514	38.5	533	44.0	553	49.4	572	54.9
71880	3000	483	28.2	493	30.7	503	33.2	521	38.5	540	44.0	558	49.7	576	55.7	594	61.4
76672	3200	513	33.5	522	36.1	531	38.8	549	44.4	566	50.1	583	56.1	600	62.3	618	68.6
81464	3400	542	39.4	551	42.2	560	45.1	577	50.9	593	56.9	609	63.1	625	69.6	642	76.3
86256	3600	572	46.1	581	49.0	589	52.0	605	58.1	621	64.4	636	70.9	651	77.6	666	84.5
91048	3800	602	53.5	610	56.6	618	59.7	634	66.2	648	72.7	663	79.5	678	86.4	692	93.6
95840	4000	632	61.7	640	65.0	647	68.3	662	75.0	677	81.8	691	88.8	704	96.0	718	103
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26356	1100	482	25.4	511	29.3	538	33.6	565	38.0								
28752	1200	484	26.8	512	30.8	539	35.0	565	39.4	590	44.1						
31148	1300	487	28.4	514	32.5	540	36.7	565	41.1	590	45.7	637	55.6	681	66.0		
33544	1400	491	30.1	518	34.3	543	38.6	568	43.1	591	47.7	637	57.5	681	68.1	722	79.3
35940	1500	495	31.9	521	36.2	546	40.7	570	45.3	594	50.0	638	59.8	681	70.4	722	81.6
38336	1600	500	33.6	526	38.2	550	42.8	574	47.6	597	52.4	641	62.4	682	73.0	723	84.2
40732	1700	503	34.8	531	40.1	555	45.0	578	50.0	601	54.9	644	65.2	685	75.9	724	87.2
43128	1800	507	35.9	534	41.5	560	47.2	583	52.4	605	57.6	648	68.2	688	79.1	726	90.5
45524	1900	512	37.2	537	42.7	563	48.6	588	54.7	610	60.2	652	71.2	691	82.4	729	94.0
47920	2000	518	38.8	542	44.2	566	50.0	590	56.2	614	62.7	656	74.2	695	85.9	733	97.8
50316	2100	525	40.8	548	45.9	571	51.6	594	57.7	617	64.2	661	77.3	700	89.4	737	102
52712	2200	533	43.1	555	48.0	577	53.5	599	59.5	621	65.9	664	79.7	704	92.9	741	106
55108	2300	542	45.6	563	50.5	584	55.8	605	61.6	626	67.8	667	81.5	709	96.3	745	110
57504	2400	551	48.4	571	53.3	591	58.4	611	64.0	631	70.1	671	83.5	712	98.3	750	113
59900	2500	561	51.3	580	56.3	599	61.4	619	66.9	638	72.7	677	85.9	715	100	754	116
62296	2600	571	54.4	590	59.5	608	64.7	627	70.1	645	75.8	682	88.5	719	103	756	119
64692	2700	581	57.4	600	62.9	618	68.2	636	73.7	653	79.3	689	91.6	725	106	760	121
67088	2800	591	60.5	610	66.4	628	71.9	645	77.4	662	83.1	696	95.3	731	109	765	124
71880	3000	612	67.3	630	73.3	648	79.6	665	85.6	681	91.5	713	104	745	117	777	131
76672	3200	634	74.8	651	81.0	668	87.4	685	94.0	701	101	732	113	762	126	792	140
81464	3400	658	83.0	673	89.5	689	96.1	705	103	721	110	752	124	780	137	808	151
86256	3600	682	91.6	697	98.7	712	106	727	113	741	120	771	134	800	149		
91048	3800	706	101	721	108	735	116	749	123	763	131	791	146				
95840	4000	732	111	745	119	759	127	773	135	786	142						
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40732	1700	762	99.0	798	112												
43128	1800	763	102	799	115												
45524	1900	766	106	801	119												
47920	2000	768	110	803	123												
50316	2100	772	114	806	127												
52712	2200	776	118	810	132												
55108	2300	780	123														
57504	2400	785	127														
59900	2500	789	132														
62296	2600	794	135														
64692	2700	796	138														
67088	2800	800	141														
71880	3000	809	147														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92" hg. Bar)

Shaded areas show Class III Wheel Design

VCB-1173

Wheel Diameter
73"Ø I. D.

INLET 76" Ø I.D.
OUTLET 58" x 76" I.D.

Area 31.50 Sq. Ft.
Area 30.60 Sq. Ft.

Tip Speed = RPM X 19.11
Max BHP = 596 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15306	500	158	1.70	190	2.67	218	3.77										
18367	600	162	1.92	193	3.07	220	4.23	267	6.87								
21428	700	167	2.17	197	3.44	223	4.77	268	7.51	308	10.6	344	14.2				
24489	800	175	2.56	201	3.74	227	5.27	271	8.29	309	11.5	344	15.0	377	19.0		
27550	900	184	3.04	208	4.21	231	5.65	275	9.12	312	12.5	346	16.1	377	20.0	407	24.3
30611	1000	194	3.55	216	4.84	237	6.20	279	9.78	316	13.6	349	17.4	379	21.4	408	25.6
33672	1100	205	4.15	226	5.57	245	6.97	283	10.4	321	14.7	353	18.8	382	22.9	410	27.3
36733	1200	216	4.82	235	6.32	254	7.88	289	11.1	323	15.4	357	20.2	386	24.6	413	29.1
39794	1300	227	5.56	245	7.18	263	8.85	296	12.2	328	16.2	360	21.1	390	26.3	417	31.1
42855	1400	239	6.40	256	8.14	273	9.89	305	13.5	334	17.3	364	22.1	394	27.5	421	33.0
45917	1500	252	7.34	268	9.18	283	11.0	314	14.9	342	18.8	369	23.3	397	28.6	425	34.6
48978	1600	265	8.39	279	10.3	294	12.3	323	16.4	350	20.5	376	24.8	402	29.9	428	35.8
52039	1700	278	9.56	291	11.6	305	13.7	333	17.9	359	22.3	384	26.7	408	31.6	433	37.3
55100	1800	291	10.9	304	12.9	317	15.1	343	19.6	369	24.3	392	28.9	416	33.7	439	39.0
58161	1900	304	12.3	316	14.4	329	16.7	354	21.5	378	26.3	402	31.2	424	36.1	446	41.3
61222	2000	317	13.8	329	16.1	341	18.4	365	23.4	388	28.4	411	33.7	433	38.7	453	43.9
64283	2100	331	15.6	342	17.9	354	20.3	376	25.5	398	30.7	420	36.1	442	41.6	462	46.9
67344	2200	344	17.4	355	19.9	366	22.4	388	27.7	409	33.2	430	38.7	451	44.5	471	50.1
70405	2300	358	19.4	369	22.0	379	24.6	400	30.0	420	35.8	440	41.5	461	47.4	480	53.5
73466	2400	371	21.6	382	24.2	392	26.9	412	32.6	432	38.6	451	44.5	470	50.6	490	56.9
76528	2500	385	24.0	395	26.7	405	29.5	424	35.3	443	41.4	462	47.7	480	53.9	499	60.3
79589	2600	399	26.5	409	29.3	418	32.2	437	38.2	455	44.5	473	51.0	491	57.4	509	64.0
82650	2700	413	29.3	422	32.2	431	35.1	449	41.3	467	47.7	484	54.5	502	61.2	519	67.9
85711	2800	427	32.2	436	35.2	445	38.2	462	44.6	479	51.2	496	58.1	513	65.1	529	72.0
91833	3000	455	38.7	463	41.9	472	45.1	488	51.8	504	58.7	520	65.9	535	73.4	551	80.9
97955	3200	483	46.0	491	49.4	499	52.8	514	59.8	529	67.1	544	74.6	559	82.5	574	90.5
104077	3400	511	54.3	518	57.9	526	61.5	541	68.9	555	76.5	569	84.3	583	92.5	597	101
110200	3600	539	63.5	546	67.3	554	71.1	568	78.9	581	86.8	595	95.0	608	103	621	112
116322	3800	567	73.8	574	77.8	581	81.8	595	89.9	608	98.3	620	107	633	116	645	125
122444	4000	596	85.2	602	89.4	609	93.5	622	102	634	111	646	120	659	129	670	138
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
33672	1100	437	31.9	462	36.7	487	41.9	511	47.3	533	52.9						
36733	1200	439	33.8	464	38.7	488	43.9	511	49.3	533	54.9	576	67.0				
39794	1300	442	35.9	467	41.0	490	46.2	512	51.6	534	57.3	576	69.3	616	82.4		
42855	1400	446	38.2	470	43.4	493	48.8	515	54.3	536	60.0	577	72.1	616	85.0	653	98.9
45917	1500	451	40.4	474	45.9	496	51.5	518	57.2	539	63.1	579	75.2	617	88.2	653	102
48978	1600	454	42.2	478	48.4	501	54.3	522	60.3	542	66.3	581	78.7	618	91.8	654	106
52039	1700	457	43.5	482	50.4	505	57.1	526	63.3	546	69.6	585	82.5	621	95.8	656	110
55100	1800	462	45.2	485	51.9	508	59.1	530	66.4	550	73.0	588	86.3	624	100	659	114
58161	1900	468	47.2	489	53.7	511	60.9	533	68.4	555	76.3	593	90.2	628	104	662	119
61222	2000	474	49.6	495	55.9	516	62.9	537	70.4	557	78.3	597	94.1	632	109	666	124
64283	2100	481	52.5	501	58.5	521	65.3	541	72.6	561	80.4	601	97.3	636	113	670	129
67344	2200	490	55.7	509	61.7	528	68.1	547	75.2	565	82.9	603	99.6	641	118	674	134
70405	2300	499	59.2	517	65.2	535	71.6	553	78.3	571	85.8	607	102	643	120	678	139
73466	2400	508	63.0	525	69.1	543	75.4	560	82.1	577	89.2	612	105	647	123	681	142
76528	2500	517	67.0	534	73.2	551	79.6	568	86.2	584	93.2	618	109	651	126	684	145
79589	2600	527	70.8	544	77.6	560	84.1	576	90.8	592	97.7	624	113	656	130	688	149
82650	2700	536	74.8	553	82.1	569	88.9	585	95.7	600	103	631	117	662	134	693	153
85711	2800	546	79.1	562	86.4	579	93.9	594	101	609	108	639	123	668	139	698	157
91833	3000	567	88.3	582	95.9	597	104	613	112	628	119	656	134	683	150	711	167
97955	3200	588	98.5	603	106	617	114	632	123	646	131	674	148	700	164	726	181
104077	3400	611	109	625	118	638	126	652	135	666	143	693	161	719	179		
110200	3600	634	121	647	130	660	139	673	148	686	157	712	175				
116322	3800	658	134	670	143	683	153	695	162	707	172	732	191				
122444	4000	682	148	694	157	706	167	718	177	730	187						
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
52039	1700	690	124	722	139												
55100	1800	692	129	724	144												
58161	1900	694	134	726	149												
61222	2000	698	139	728	155												
64283	2100	701	145	732	161												
67344	2200	705	150														
70405	2300	710	156														
73466	2400	714	161														
76528	2500	718	166														
79589	2600	720	169														
82650	2700	724	173														
85711	2800	728	177														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#cu.ft.-70°F-29.92" hg. Bar)

Shaded areas show Class III Wheel Design

VCB-1180

Wheel Diameter
80-3/4" Ø I. D.

INLET 84" Ø I.D.
OUTLET 64-1/8" x 84-1/4" I.D.

Area 38.48 Sq. Ft.
Area 37.52 Sq. Ft.

Tip Speed = RPM X 21.14
Max BHP = 987.4 $\frac{\text{RPM}^3}{1000}$

Volume CFM	Outlet Vol.	.5" s.p.		.75" s.p.		1" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18755	500	143	2.08	171	3.27	197	4.62										
22506	600	146	2.35	175	3.76	198	5.18	241	8.41								
26257	700	151	2.66	178	4.21	202	5.84	242	9.19	278	13.0	311	17.3				
30008	800	158	3.14	182	4.58	205	6.46	245	10.2	280	14.1	311	18.4	341	23.2		
33759	900	167	3.73	188	5.16	209	6.92	249	11.2	282	15.3	313	19.7	341	24.5	368	29.7
37510	1000	176	4.35	196	5.93	214	7.60	252	12.0	286	16.7	315	21.3	343	26.2	369	31.4
41261	1100	185	5.09	204	6.83	221	8.54	256	12.7	290	18.0	319	23.0	346	28.1	371	33.4
45012	1200	195	5.92	213	7.75	230	9.66	261	13.7	292	18.8	323	24.7	349	30.1	374	35.7
48763	1300	206	6.82	222	8.81	238	10.9	268	15.0	297	19.9	326	25.9	353	32.2	377	38.0
52514	1400	217	7.85	232	9.99	247	12.1	275	16.5	302	21.3	329	27.0	356	33.7	381	40.4
56265	1500	228	9.00	242	11.3	256	13.5	284	18.3	309	23.0	334	28.5	359	35.0	384	42.3
60016	1600	239	10.3	253	12.6	266	15.1	292	20.1	317	25.1	340	30.4	364	36.7	387	43.8
63767	1700	251	11.7	264	14.2	276	16.8	301	22.0	325	27.4	347	32.8	369	38.7	391	45.6
67518	1800	263	13.3	275	15.9	287	18.6	310	24.1	334	29.8	355	35.4	376	41.3	397	47.8
71269	1900	275	15.1	286	17.7	298	20.5	320	26.3	342	32.2	363	38.3	383	44.2	403	50.6
75020	2000	287	17.0	298	19.8	309	22.6	330	28.8	351	34.8	372	41.3	391	47.5	410	53.9
78771	2100	299	19.1	310	22.0	320	24.9	340	31.3	360	37.7	380	44.3	400	51.0	418	57.5
82522	2200	311	21.4	322	24.4	331	27.5	351	34.0	370	40.7	389	47.5	408	54.6	426	61.4
86273	2300	324	23.9	334	27.0	343	30.2	362	36.9	380	43.9	398	50.9	417	58.2	435	65.6
90024	2400	336	26.6	346	29.8	355	33.1	373	40.0	390	47.3	408	54.5	425	62.0	443	69.8
93775	2500	349	29.5	358	32.8	367	36.2	384	43.3	401	50.8	418	58.5	435	66.1	451	74.0
97526	2600	361	32.6	370	36.0	378	39.5	395	46.9	412	54.6	428	62.6	444	70.4	460	78.5
101277	2700	374	36.0	382	39.5	390	43.1	407	50.7	422	58.5	438	66.9	454	75.0	469	83.3
105028	2800	386	39.6	394	43.2	403	47.0	418	54.7	433	62.8	449	71.3	464	79.9	479	88.3
112530	3000	411	47.5	419	51.4	427	55.4	442	63.5	456	72.0	470	80.9	484	90.1	499	99.3
120032	3200	437	56.5	444	60.7	451	64.9	465	73.5	479	82.4	492	91.6	506	101	519	111
127534	3400	462	66.7	469	71.1	476	75.5	489	84.5	502	93.9	515	104	528	113	540	124
135036	3600	488	78.1	495	82.7	501	87.3	514	96.8	526	107	538	117	550	127	562	138
142538	3800	514	90.7	520	95.6	526	100	538	110	550	121	561	131	573	142	584	153
150040	4000	539	105	545	110	551	115	563	125	574	136	585	147	596	158	607	169
Volume CFM	Outlet Vol.	4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
41261	1100	395	39.0	418	45.0	440	51.3	462	57.9	482	64.8						
45012	1200	397	41.4	419	47.4	441	53.7	462	60.3	482	67.3	521	82.1				
48763	1300	400	44.0	422	50.2	443	56.6	463	63.2	483	70.2	521	84.9	557	101		
52514	1400	404	46.8	425	53.2	446	59.8	465	66.5	485	73.5	521	88.3	557	104	591	121.0
56265	1500	408	49.5	429	56.3	449	63.1	468	70.1	487	77.3	523	92.2	557	108	590	125
60013	1600	411	51.7	433	59.3	453	66.5	472	73.8	490	81.2	526	96.5	559	112	591	129
63767	1700	414	53.3	436	61.7	457	69.9	476	77.6	494	85.3	529	101	561	117	593	134
67518	1800	418	55.4	439	63.6	459	72.4	480	81.3	498	89.4	532	106	564	123	595	140
71269	1900	423	57.8	443	65.8	462	74.5	482	83.8	502	93.4	536	111	568	128	598	146
75020	2000	429	60.8	448	68.5	466	77.0	485	86.2	504	95.8	540	115	572	133	602	152
78771	2100	435	64.4	453	71.7	471	80.0	489	88.9	507	98.5	543	119	576	139	605	158
82522	2200	443	68.3	460	75.6	477	83.5	494	92.2	511	102	545	122	580	144	609	164
86273	2300	451	72.6	467	80.0	484	87.7	500	96.0	516	105	549	125	582	147	613	170
90024	2400	459	77.3	475	84.7	491	92.5	506	101	522	109	553	129	585	151	616	174
93775	2500	468	82.1	483	89.8	498	97.6	513	106	528	114	559	133	589	155	619	178
97526	2600	476	86.9	492	95.1	507	103	521	111	535	120	564	138	593	159	622	182
101277	2700	485	91.8	501	101	515	109	529	117	543	126	571	144	599	164	626	187
105028	2800	494	87.0	509	106	524	115	537	124	551	132	578	150	605	170	631	192
112530	3000	513	108.0	527	118	540	127	555	137	568	146	593	165	618	184	643	205
120032	3200	532	121.0	545	130	558	140	572	150	585	161	610	181	633	201	657	221
127534	3400	553	134	565	145	578	155	590	165	602	176	627	198	650	219		
135036	3600	574	149	586	160	597	171	609	181	621	192	644	215				
142538	3800	595	164	607	176	618	188	629	199	640	211	662	234				
150040	4000	617	181	628	193	639	205	650	218	660	230						
Volume CFM	Outlet Vol.	10" s.p.		11" s.p.		12" s.p.		13" s.p.		14" s.p.		16" s.p.		18" s.p.		20" s.p.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
63767	1700	623	152	653	171												
67518	1800	625	158	654	177												
71269	1900	628	164	656	183												
75020	2000	631	170	659	190												
78771	2100	634	177	662	197												
82522	2200	638	184														
86273	2300	642	191														
90024	2400	646	198														
93775	2500	649	203														
97526	2600	651	207														
101277	2700	654	211														
105028	2800	658	216														

"Performance shown is for installation type B-Free inlet, Ducted outlet" "Power rating (BHP) does not include drive losses" "Performance ratings do not include the effects of appurtenances in the airstream"

All capacities based on standard air (density .075#/cu.ft.-70°F-29.92" hg. Bar)

Shaded areas show Class III Wheel Design

PVC CORROSION TABLE

This table may be used as a guide for ventilating gases and vapors from processes where chemicals shown are used.
Maximum temperatures shown.

ENVIRONMENT	Type 1	Type I	Type II	Type II	ENVIRONMENT	Type 1	Type I	Type II	Type II	ENVIRONMENT	Type I	Type I	Type II	Type II
	70°	140°	70°	140°		70°	140°	70°	140°		70°	140°	70°	140°
ACIDS					ALKALIES					SALTS (cont'd.)				
Acetic 20-30%	E	G	G	L	Ammonium Bifluoride	E	E	E	E	Sodium Ferricyanide	E	E	E	E
Acetic 30-60%	E	E	G	L	Ammonium Carbonate	E	E	E	E	Sodium Fluoride	E	E	E	E
Benzene	U	U	U	U	Ammonium Fluoride 25%	E	L	U	U	Sodium Nitrate	E	E	E	E
Benzene Sulfonic 10%	E	E	E	E	Ammonium Hydroxide 28%	E	E	E	E	Sodium Nitrite	E	E	E	E
Benzoic	E	E	E	E	Barium Carbonate	E	E	E	E	Sodium Sulfate	E	E	E	E
Boric	E	E	E	E	Calcium Hydroxide	E	E	E	E	Sodium Sulfite	E	E	E	E
Butyric 20%	G	U	L	U	Magnesium Carbonate	E	E	E	E	Stannic Chloride	E	E	E	E
Carbonic	E	E	E	E	Potassium Bicarbonate	E	E	E	E	Stannous Chloride	E	G	E	G
Chloracetic	E	L	E	U	Potassium Carbonate	E	E	E	E	Zinc Chloride	E	E	E	E
Chromic 10%	E	E	E	E	Potassium Hydroxide					Zinc Nitrate	E	E	E	E
Chromic 25%	E	L	G	L	10, 20, 35%	E	E	E	E	Zinc Sulfate	E	E	E	E
Citric	E	E	E	E	Sodium Bicarbonate	E	E	E	E					
Fluoroboric	E	E	E	E	Sodium Carbonate	E	E	E	E					
Fluorosilicic	E	E	E	E	Sodium Hydroxide 10, 35%	E	E	E	E	SOLVENTS				
Formic	E	U	E	U	Sodium Sulfide	E	E	E	E	Acetone	U	U	U	U
Glucose	E	E	E	E	Trisodium Phosphate	E	E	E	E	Benzene	U	U	U	U
Hydrobromic 20%	E	E	E	G						Carbon Bisulfide	U	U	U	U
Hydrochloric 0-25%	E	G	E	G	SALTS					Carbon Tetrachloride	L	U	U	U
Hydrochloric 25-40%	E	E	E	G	Aluminum Chloride	E	E	E	E	Chlorobenzene	U	U	U	U
Hydrocyanic	E	E	E	E	Aluminum Nitrate	E	E	E	E	Ethyl Acetate	U	U	U	U
Hydrofluoric 10%	E	L	E	G	Aluminum Sulfate	E	E	E	E	Ethyl Chloride	U	U	U	U
Hydrofluorosilicic 30%	E	G	G	L	Ammonium Chloride	E	E	E	E	Ethylene Glycol	E	E	E	E
Hypochlorous 20%	E	E	E	E	Ammonium Nitrate	E	E	E	E	Heptane	E	G	L	U
Lactic 28%	E	E	E	E	Ammonium Persulfate	E	E	E	E	Hexane	E	L	U	U
Maleic	E	E	E	E	Ammonium Sulfate	E	E	E	E	Methyl Ethyl Ketone	U	U	U	U
Nitric 10, 35, 40%	E	G	G	L	Aniline	U	U	U	U	Naphtha	E	E	E	G
Nitric 20%	E	L	G	L	Aniline Sulfate, saturated	U	U	U	U	Trichloroethylene	U	U	U	U
Nitric (vapor) 60%	E	L	G	U	Antimony Trichloride	E	E	E	E	Toluene	U	U	U	U
Nitrous Oxide	E	E	E	E	Barium Chloride	E	E	E	E	Xylene	U	U	U	U
Oleic	E	E	E	E	Barium Sulfide	E	E	E	E	BLEACHES				
Oxalic	E	E	E	G	Calcium Chlorate	E	E	E	E	Calcium Chlorate	E	E	E	E
Perchloric 10%	E	L	G	L	Calcium Chloride	E	E	E	E	Calcium Hypochlorite	E	E	E	E
Phosphoric 0-25%	E	G	E	G	Calcium Sulfate	E	E	E	E	Chlorine Water	E	E	E	E
Phosphoric 25-75%	E	E	E	G	Copper Chloride	E	E	E	E	Hydrogen Peroxide 30%	E	E	E	G
Phosphorus (yellow)	E	G	G	L	Copper Cyanide	E	E	E	E	Hydrogen Peroxide 50%	E	E	E	L
Picric	U	U	U	U	Copper Fluoride 2%	E	E	E	E	Sodium Chlorate	E	G	G	L
Silicic	E	E	E	E	Copper Sulfate	E	E	E	E	Sodium Hypochlorite	E	E	E	E
Stearic	E	E	G	G	Ferric Chloride	E	E	E	E	OTHERS				
Sulfamic (See					Ferric Nitrate	E	E	E	E	Aluminum Hydroxide	E	E	E	E
Benzene Sulfonic 10%)	E	E	E	E	Ferric Sulfate	E	E	E	G	Ammonium Phosphate	E	E	-	-
Sulfuric 0-75%	E	E	E	G	Ferrous Chloride	E	E	E	E	Aqua Regia	E	L	L	U
Sulfuric 75-90%	E	E	L	L	Lead Acetate	E	E	E	E	Glycerine	E	E	E	E
Sulfuric 95%	E	G	U	U	Magnesium Chloride	E	E	E	E	Kerosene	E	E	E	E
Sulfurous	E	E	E	E	Magnesium Hydroxide	E	E	E	E	Photographic Solutions	E	E	E	E
Tannic	E	E	E	E	Magnesium Sulfate	E	E	E	E	Tetrahydrofurane	U	U	U	U
Tartaric	E	E	E	E	Mercuric Chloride	E	E	G	G	Sodium Xylene Sulfonate	-	-	-	-
ALCOHOLS					Mercurous Nitrate	E	E	G	G	Sorbitol Solution	-	-	-	-
Amyl	E	E	L	U	Nickel Chloride	E	E	E	E	Urea	E	E	E	E
Benzol	U	U	U	U	Nickel Nitrate	E	E	E	E	Urea-Ammonium-Nitrate	E	E	E	E
Butyl	E	G	L	U	Nickel Sulfate	E	E	E	E					
Ethyl 0-98%	E	E	E	E	Potassium Chloride	E	E	E	E	PLATING SOLUTIONS				
Methyl	E	E	E	E	Potassium Dichromate 40%	E	E	E	E	Brass	E	E	E	E
GASES AND VAPORS					Potassium Ferricyanide	E	E	E	E	Cadmium	E	E	E	E
Ammonia, Dry	E	E	E	E	Potassium Nitrate	E	E	E	E	Chromium	E	G	G	G
Ammonia, Wet	L	U	-	-	Potassium Permanganate 10%	E	E	G	G	Copper	E	E	E	E
Bromine	U	U	U	U	Potassium Persulfate	E	E	E	E	Gold	E	E	E	E
Carbon Dioxide	E	E	E	E	Potassium Sulfate	E	E	E	E	Judium	E	E	E	E
Carbon Monoxide	E	E	E	E	Silver Nitrate	E	E	E	E	Lead	E	E	E	E
Chlorine, Dry	G	G	G	G	Sodium Acetate	E	E	E	E	Nickel	E	E	E	E
Fluorine	L	U	U	U	Sodium Bisulfate	E	E	E	E	Rhodium	E	E	E	E
Hydrogen	E	E	E	G	Sodium Chloride	E	E	E	E	Silver	E	E	E	E
Hydrogen Sulfide	E	E	E	E	Sodium Chlorate	E	G	G	L	Tin	E	E	E	E
Sulfur Dioxide, Wet	G	U	L	U	Sodium Cyanide	E	E	E	E	Zinc	E	E	E	G
Sulfur Trioxide, Dry	E	E	E	G	Sodium Dichromate	E	E	E	G					

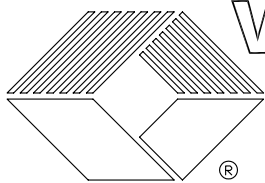
KEY:

E = Excellent

G = Good

L = Limited

U = Unsuitable



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ENVIRONMENTAL CONTROL SYSTEMS

CENTRIFUGAL FAN SPECIFICATIONS

MODEL NO.	
USER	
REP.	
JOB NO.	DATE
CFM	BHP
S.P.	FAN RPM
ROTATION	HP TEFC MOTOR
DISCHARGE	MOTOR RPM
UP BLAST	
DRIVE	VOLTS
BELT DRIVE	
CLASS	PHASE
ARRANGEMENT	HERTZ
9	
QTY. REQ'D	WEIGHT
TAG NO.	WHEEL MAT'L
	FRP

INSPECTION DOOR
(OPTIONAL)

A

DIA ID

B ID

N



OUTLET

UNDRILLED
FLANGE

PVC FLEX
CONNECT

8"

SHAFT & BELT
GUARD



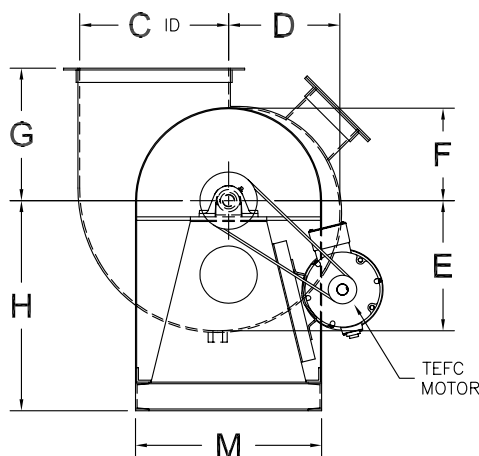
INLET

1" DIA ID
DRAIN

J

K

L



TEFC
MOTOR

VCB	WHEEL ø	SHAFT ø	INLET			D	E	F	G	H	J	K	L	M	N	FAN WEIGHT	MOTOR HP	MOTOR WEIGHT
			A	B	C													
1112	12¼"	1¾"	13¾"	9¼"	12¾"	9¼"	11¾"	8¼"	12¾"	19"	3"	18¼"	31¾"	16½"	1½"	219	½	22
1113	13½"	1¾"	14¾"	10¾"	14"	10¾"	12¾"	8¾"	12¾"	20"	3"	18¼"	32¾"	17½"	1½"	267	¾	26
1115	15"	1¾"	16¼"	11¾"	15½"	11½"	13¾"	9¼"	13¾"	22"	3"	22¼"	37¾"	19½"	1½"	321	1	36
1116	16½"	1¾"	17¾"	13¾"	17½"	12¾"	15"	10¾"	14¼"	24"	3"	24¼"	40¾"	21½"	1½"	383	1½	41
1118	18¼"	1¾"	19¾"	14½"	18½"	14"	16¾"	11¾"	15½"	26"	3"	24¼"	42¾"	23½"	1½"	462	2	45
1120	20"	1¾"	21¾"	15¾"	20¾"	15¾"	18¾"	12¾"	16¾"	27"	3"	26¼"	45¾"	25½"	1½"	534	3	68
1122	22¼"	2¾"	23¾"	17¾"	23¾"	17¾"	20¾"	14"	18¼"	30"	3"	26¼"	47½"	28½"	1½"	618	5	78
1124	24½"	2¾"	26¾"	19½"	25¾"	18¾"	22¾"	15¾"	19¾"	32"	3"	26¼"	49¾"	31½"	2"	710	7½	126
1127	27"	2¾"	29¾"	21½"	28¾"	20¾"	24¾"	16¾"	21¾"	35"	3"	27¼"	52¾"	34¾"	2"	820	10	138
1130	30"	2¾"	32¾"	23¾"	31¼"	23¾"	27¾"	19"	23¾"	38"	3"	27¼"	54¾"	38½"	2"	954	15	244
1133	33"	2¾"	34¾"	26¼"	34¾"	25¾"	29¾"	20¾"	25¼"	41"	3"	27¼"	57¾"	41¼"	2"	1,092	20	269
1136	36½"	2¾"	38¾"	29"	38"	28"	33¾"	12¾"	27¾"	46"	4"	28¼"	61¾"	45¼"	2"	1,312	25	396
1140	40¼"	2½"	43"	32"	42"	30½"	36¼"	24½"	29¾"	50"	4"	30¼"	66¾"	49¾"	2"	1,580	30	433
1144	44½"	2½"	47"	35¾"	46½"	34¾"	40¾"	27¾"	33"	55"	4"	32¼"	72¾"	55¾"	2"	1,890	40	517
1149	49"	3¾"	52"	39"	51¾"	37¾"	44¾"	30¼"	36¾"	59"	4"	34¼"	78¾"	60¾"	2"	2,230	50	579
1154	54¼"	3¾"	56¾"	43¾"	56¾"	41¾"	48¾"	33¾"	39¾"	65"	4"	36¼"	84¾"	66¾"	2"	2,600	60	747
1160	60"	3¾"	62"	47¾"	62¾"	45¾"	54"	37¾"	43¾"	71"	4"	38¼"	92½"	70¾"	2"	3,520	75	833
1166	66"	3½"	69¼"	52¾"	68¾"	51¾"	60½"	42¾"	48¾"	81"	8"	43¾"	102¾"	80½"	2"	6,021	100	1,118
1173	73"	4¾"	76"	58"	76"	55¾"	66¾"	45¾"	51¾"	88"	8"	47¾"	112¾"	90¾"	2"	7,819	125	1,238
1180	80¾"	4½"	84"	64¾"	84¼"	61¾"	72¾"	50¾"	57¾"	97"	8"	55¾"	125¾"	99¾"	2"	10,253	150	1,421

1100 SERIES PVC CENTRIFUGAL FAN

FRP CORROSION TABLE

This table may be used as a guide for ventilating gases and vapors from processes where chemicals shown are used.

Maximum temperatures shown.

ENVIRONMENT	°F	ENVIRONMENT	°F	ENVIRONMENT	°F
ACIDS		GASES (cont'd.)		SALTS (cont'd.)	
Acetic to 10%	200	Hydrogen Fluoride , Wet	150	Potassium Permanganate	80
Acetic to 50%	150	Hydrogen Sulfide	200	Potassium Persulfate	140
Acrylic	100	Sulfur Dioxide, Dry	200	Potassium Sulfate	200
Benzene Sulfonic to 25%	170	Sulfur Dioxide, Wet	170	Silver Nitrate	170
Benzene Sulfonic 25% up	80	Sulfur Trioxide, Dry	120	Sodium Acetate	200
Benzoic	200	Sulfur Trioxide, Wet	120	Sodium Bisulfate	200
Boric	200			Sodium Chloride	200
Butyric to 50%	200	ALKALIES		Sodium Chlorite	200
Butyric 50% up	80	Ammonium Bocarbonate	150	Sodium Cyanide	170
Carbonic	200	Ammonium Carbonate	120	Sodium Dichromate	200
Chloracetic to 25%	170	Ammonium Hydroxide to 5%	150	Sodium Ferricyanide	150
Chloracetic 25% to 50%	150	Ammonium Hydroxide to 10%	120	Sodium Fluoride	200
Chromic to 5%	120	Ammonium Hydroxide to 29%	80	Sodium Nitrate	200
Chromic 5% up	N. R.	Aqueous Ammonia to 5%	150	Sodium Nitrite	150
Citric	200	Barium Carbonate	200	sodium Silicate pH Less Than 12	200
Fluoroboric	S 170	Barium Hydroxide to 10%	140	Sodium Sulfate	170
Fluorosilicic up to 32%	S 90	Calcium Hydroxide	170	Sodium Sulfite	200
Formic	F 200	Magnesium Carbonate	200	Stannic Chloride	200
Gluconic to 50%	170	Potassium Bicarbonate	170	Stannous Chloride	200
Hydrobromic to 50%	150	Potassium Carbonate	150	Zinc Chloride	200
Hydrochloric to 15%	*200	Potassium Hydroxide to 50%	120	Zinc Nitrate	170
Hydrochloric to 37%	*150	Sodium Bicarbonate	170	Zinc Sulfite	
Hydrochloric	*F 200	Sodium Carbonate to 35%	150		
Hydrocyanic to 10%	150	Sodium Hydroxide to 10%	N. R.	SOLVENTS	
Hydrofluoric to 10%	S 150	Sodium Hydroxide to 50%	N. R.	Acetone to 10%	F 180
Hydrofluorosilicic up to 30%	140	Sodium Sulfide	150	Benzene	80
Hypochlorous to 20%	170	Trisodium Phosphate	140	Carbon Disulfide	80
Lactic	200			Carbon Tetrachloride	F 140
Maleic	170	SALTS		Chlorobenzene	N. R.
Nitric to 5%	150	Aluminum Chloride	200	Ethyl Acetate	F 100
Nitric above 5%	N. R.	Aluminum Potassium Sulfate	200	Ethyl Chloride	F 90
Nitric (vapor)	F 150	Aluminum Sulfate	200	Ethylene Dibromide	100
Nitrous to 10%	150	Ammonium Chloride	200	Ethylene Glycol	200
Oleic	200	Ammonium Nitrate	200	n-Heptane	200
Oxalic	200	Ammonium Persulfate to 25%	170	Hexane	140
Perchloric	F 150	Ammonium Persulfate , saturated	150	Methyl Ethyl Ketone	80
Phosphoric	170	Ammonium Sulfate	200	Naphtha	200
Phosphoric, super	150	Aniline Sulfate to 25%	200	Naphthalene	200
Phosphoric (vapor)	F 200	Aniline Sulfate, saturated	170	Tetrachloroethylene	80
Phthalic	200	Antimony Trichloride	170	Toluene	80
Picric to 10%	80	Barium Chloride	200	Xylene	80
Silicic	200	Barium Sulfide	170		
Stearic	200	Calcium Chlorate	200	BLEACHES	200
Sulfamic, (see Benzene Sulfonic up to 25%)	170	Calcium Chloride	200	Calcium Chlorate	200
Sulfuric to 25%	190	Calcium Sulfate	200	Calcium Hypochlorite	170
Sulfuric to 50%	140	Copper Chloride	200	Chlorine Dioxide up to 15%	170
Sulfuric to 70%	80	Copper Cyanide	200	Chlorine Water	120
Sulfuric to 98% (Oleum)	N. R.	Copper Fluoride	150	Hydrogen Peroxide to 10%	80
Sulfurous to 10%	170	Copper Oxychloride	150	Hydrogen Peroxide to 30%	120
Tannic	200	Copper Sulfate	200	Sodium Chlorate	F 170
Tartaric	200	Ferric Chloride	200	Sodium Hypochlorite	
Trichloroacetic to 50%	170	Ferric Nitrate	170		
		Ferric Sulfate	200	OTHERS	
ALCOHOLS		Ferrous Chloride	200	Aluminum Chlorohydroxide	200
Amyl	170	Ferrous Nitrate	200	Ammonium Phosphate	200
Benzyl	100	Ferrous Sulfate	200	Aqua Regia	F 80
Butyl	140	Lead Acetate	200	Detergents	150
Ethyl	80	Magnesium Chloride	200	Glycerine	200
Methyl	80	Magnesium Hydroxide	170	Kerosene	200
		Magnesium Sulfate	200	Photographic Solutions	90
GASES AND VAPORS		Mercuric Chloride	200	Perchlorethylene	80
Ammonia, Dry	170	Mercurous Chloride	200	Sodium Tetraborate	200
Ammonia, Wet	150	Nickel Chloride	200	Sodium Tripolyphosphate	200
Bromine	100	Nickel Nitrate	200	Sodium Xylene Sulfonate	150
Carbon Dioxide	200	Nickel Sulfate	200	Sorbitol Solution	200
Carbon Monoxide	200	Potassium Chloride	200	Urea	140
Chlorine	N. R.	Potassium Dichromate	170	Urea-Ammonium-Nitrate	120
Fluorine	200	Potassium Ferricyanide	200	8-8-8 Fertilizer	120
		Potassium Nitrate	200	Shell D-D	N. R.
				Steam, Etc	180

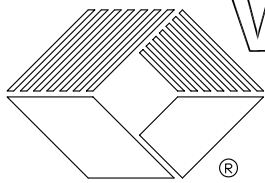
N. R. = Not Recommended

F = Fumes Only

S = Surfacing Mat

* Special hardware recommended; contact factory.

Note: Except where prefixed by "F" the resin manufacturers figures are for immersion and the resistance is higher where exposure to fumes only is required



VIRON® INTERNATIONAL CORP.

OWOSSO, MICHIGAN TEMPLE, TEXAS

989-723-8255

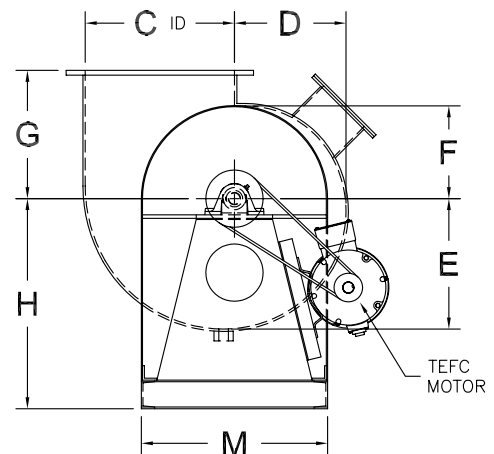
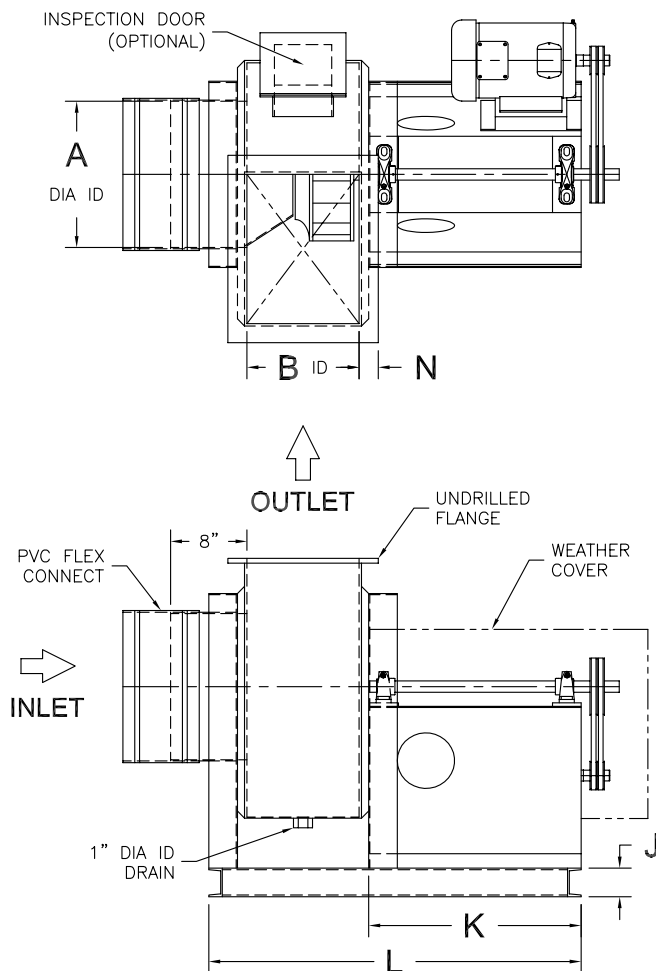
989-723-8417 FAX

EMAIL: info@vironintl.org

ENVIRONMENTAL CONTROL SYSTEMS

CENTRIFUGAL FAN SPECIFICATIONS

MODEL NO.	
USER	
REP.	
JOB NO.	DATE
CFM	BHP
S.P.	FAN RPM
ROTATION	HP TEFC MOTOR
DISCHARGE	MOTOR RPM
DRIVE	VOLTS
CLASS	PHASE
ARRANGEMENT	HERTZ
QTY. REQ'D	WEIGHT
TAG NO.	WHEEL MAT'L
FRP	



VCB	WHEEL ø	SHAFT ø	INLET			D	E	F	G	H	J	K	L	M	N	FAN WEIGHT	MOTOR HP	MOTOR WEIGHT
			A	B	C													
1112	12¼"	1¾"	12⅞"	9¼"	12⅞"	10"	11¼"	8¼"	12⅞"	19"	3"	18¼"	32½"	16½"	2"	220	½	22
1113	13½"	1¾"	14¼"	10¾"	14"	10⅞"	12⅝"	8⅝"	13"	20"	3"	18¼"	34"	17½"	2"	271	¾	26
1115	15"	1¾"	15⅝"	11¾"	15⅝"	11⅝"	13⅝"	9¾"	13⅝"	22"	3"	22¼"	39"	19½"	2"	349	1	36
1116	16½"	1⅞"	17⅝"	13⅝"	17⅝"	12⅝"	14⅞"	10⅝"	14⅞"	24"	3"	24¼"	42⅞"	21½"	2"	391	1½	41
1118	18¼"	1⅞"	19"	14½"	19"	14⅞"	16⅞"	11⅝"	15⅝"	26"	3"	24¼"	43¾"	23½"	2"	489	2	45
1120	20"	1⅞"	21"	15⅝"	20⅝"	15⅝"	18⅝"	12⅝"	16¾"	27"	3"	26¼"	47⅝"	25½"	2"	558	3	68
1122	22¼"	2⅜"	24"	17⅝"	23¼"	17⅝"	20⅝"	14⅞"	18⅝"	30"	3"	26¼"	48⅞"	28½"	2"	647	5	78
1124	24½"	2⅜"	26"	19½"	25½"	18⅝"	22¼"	14⅝"	20⅝"	32"	3"	26¼"	50⅝"	31½"	2"	720	7½	126
1127	27"	2⅜"	29"	21½"	28"	20¾"	24⅞"	17⅞"	21⅝"	35"	3"	27¼"	53¼"	34⅝"	2"	892	10	138
1130	30"	2⅜"	32"	23¼"	31¼"	23⅞"	27⅞"	19"	23⅞"	38"	3"	27¼"	56¼"	38½"	3"	1,050	15	244
1133	33"	2⅞"	34½"	26¼"	34¼"	25⅞"	29⅞"	20⅝"	25⅝"	41"	3"	27¼"	59¾"	41¼"	3"	1,242	20	269
1136	36½"	2⅞"	38½"	29"	38"	28"	33"	28"	27⅝"	46"	4"	28¼"	63¾"	45¼"	3"	1,552	25	396
1140	40¼"	2⅝"	42¼"	32"	42"	30⅞"	36⅞"	25⅝"	29¾"	50"	4"	30¼"	67¾"	49⅝"	3"	1,722	30	433
1144	44½"	2⅝"	46½"	35⅝"	46⅝"	34⅞"	40⅝"	28⅞"	32⅝"	55"	4"	32¼"	74¾"	54⅞"	3"	2,153	40	517
1149	49"	3⅜"	51¼"	39"	51⅝"	37⅝"	44⅝"	30⅞"	35⅞"	59"	4"	34¼"	81"	60⅞"	3"	2,760	50	579
1154	54¼"	3⅜"	56¼"	43⅞"	56¼"	41⅝"	49⅞"	34⅝"	39¼"	65"	4"	36¼"	87"	67"	4"	2,950	60	747
1160	60"	3⅞"	62"	47¼"	62¼"	46⅞"	54⅞"	37⅞"	43⅝"	71"	4"	38¼"	93¼"	70½"	4"	3,760	75	833
1166	66"	3⅝"	69"	52⅝"	68⅝"	50⅝"	59⅝"	41⅞"	47¼"	77"	4"	44"	106⅝"	80⅞"	4"	6,326	100	1,118
1173	73"	4⅞"	76"	58"	75⅝"	56"	66"	46"	51½"	84"	4"	47⅝"	115⅞"	90⅝"	4"	7,907	125	1,238
1180	80¾"	4⅝"	84"	64⅞"	83⅝"	62"	73⅝"	50⅞"	56½"	93"	4"	55⅝"	130½"	99⅝"	4"	10,573	150	1,421

1100 SERIES FRP CENTRIFUGAL FAN

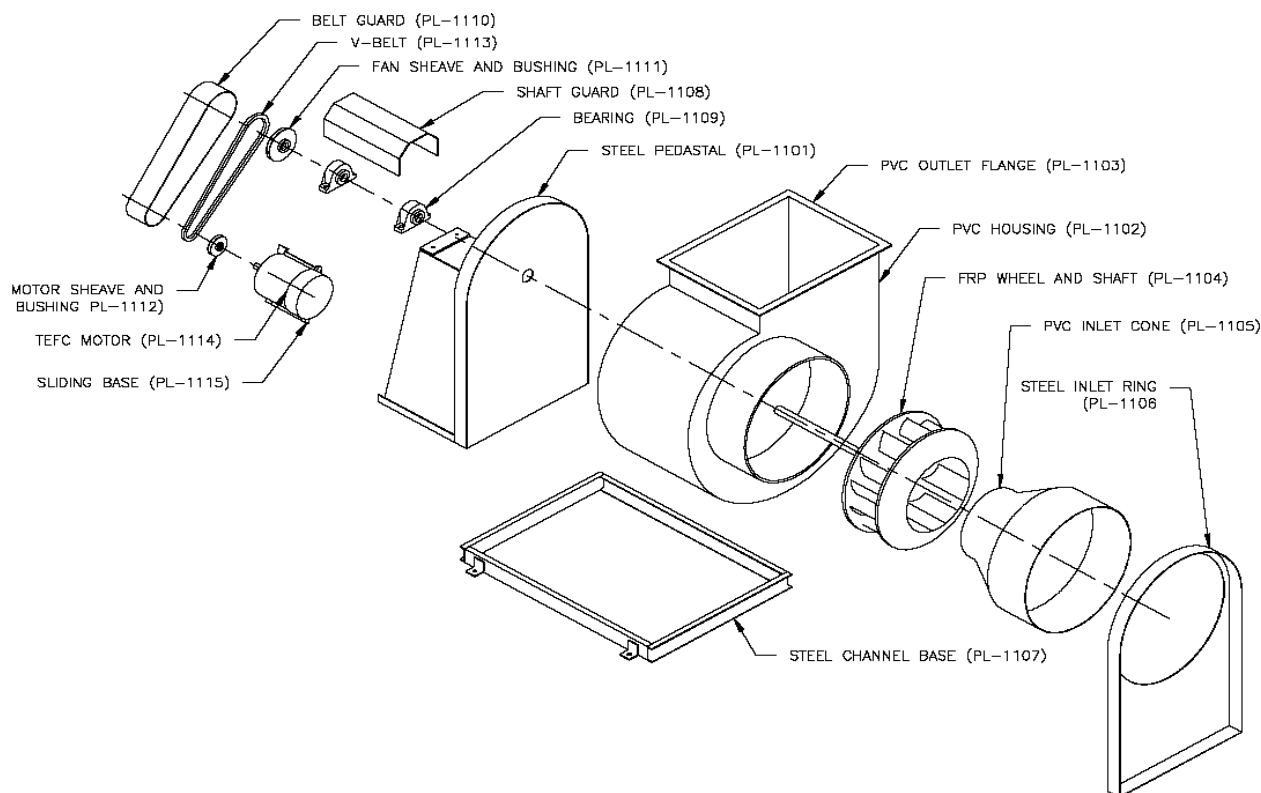
TYPICAL VIRON® APPLICATIONS

Anodizing	Metal Recovery
Batteries	Metal Cleaning
Breweries	Municipal Waste Treatment
Chemical Filling Operations	Pharmaceuticals
Chemical Industries	Phosphating
Clean Rooms	Photographic
Coatings	Pickling
Electro-Chemical Machining	Plastics Manufacturing
Emergency Chlorine	Plating
Etching	Printed Circuits
Fish Processing	Pulp & Paper
Food Processing	Refining
Foundry	Semiconductors
Glass	Stripping
Industrial Waste Treatment	Tank Venting
Laboratories	Textiles
Medical	

PARTIAL CUSTOMER LIST

3M	Hitachi
Alcoa	Hughes Aircraft
Anheuser Busch	IBM
AT & T	John Deere
Bendix	Lockheed
Boeing Aircraft	Mortom Thiokol
Caterpillar	Motorola
Chrysler Corp.	Northern Telecom
Delco Electronics	Occidental Chemical
Digital Corp.	Perkin Elmer
Dow Chemical	Pfizer Chemical
Dupont	Pratt Whitney
Eli Lilly	Sandia National Lab
Federal Mogul	SEH America
Ford Electronics	Sematech
General Dynamics	Signetics Corp.
General Electric	Square D
General Motors	Sundstrand Corp.
GTE	Texas Instruments
Harris Semiconductor	Unisys
Hewlett Packard	Westinghouse Corp.

SERIES VCB-1100 PARTS LIST



PARTS LIST

PL-1101 - Steel Pedestal
 PL-1102 - FRP Housing
 PL-1103 - FRP Outlet Flange
**PL-1104 - FRP Wheel & Shaft*
 PL-1105 - FRP Inlet Cone
 PL-1106 - Steel Inlet Ring
 PL-1107 - Steel Channel Base
 PL-1108 - Shaft Guard

PARTS LIST (Cont.)

**PL-1109 - Bearings*
 PL-1110 - Belt Guard
 PL-1111 - Fan Drive
 PL-1112 - Motor Drive
**PL-1113 - Belts*
 PL-1114 - Motor
 PL-1115 - Motor Sliding Base

** Suggested Spare Parts*

• LIMITED WARRANTY

VIRON® INTERNATIONAL warrants to the dealers and owners its VIRON® products and parts to be free from defects in workmanship and material under normal use and services for one (1) year after the date of shipment by VIRON to the first retail purchaser or first user: if and only if VIRON® is notified in writing of the defect within fourteen (14) days from date that the defect is discovered. Written notice of defects discovered within the final fourteen (14) days of the warranty period must be sent to VIRON® via facsimile or first class mail prior to the expiration of the warranty period otherwise this warranty shall be void. Our obligation under this warranty is expressly limited to repairing or replacing at our option, without cost at our factory any part or parts thereof which shall be returned to and received by VIRON® within such warranty period with transportation charges both to and from VIRON® prepaid, and which our examination shall disclose to our satisfaction to have been defective. In the event a defect is discovered within the final seven days of the warranty period, the returned goods must be received by VIRON® at VIRON®'s facility within seven days following expiration of the warranty period. Any request for repair or replacement should be directed to VIRON® INTERNATIONAL, Owosso, MI.

If examined equipment is found not to be defective or for some other reason not to be within the warranty coverage, seller's service time expended on and off location will be charged to the purchaser. This warranty gives you specific legal rights which vary from state to state. FAILURE TO PAY THE INVOICE IN FULL WILL RESULT IN VOIDING ANY AND ALL WARRANTIES.

• LIMITATION OF WARRANTY AND LIABILITY

This warranty does not apply to such VIRON® products and parts which in the sole judgment of VIRON® have failed as a result of faulty installation or abuse, or incorrect electrical connections or alterations, made by others, or use under abnormal operating conditions or misapplication of products and parts.

This warranty does not apply to damage resulting from shipment or storage of VIRON® products. Purchaser acknowledges that VIRON® products contain rotating parts that may be damaged by the forces of nature if not installed or put to their intended use within seven (7) days of delivery. **THIS WARRANTY DOES NOT COVER COMPONENT PARTS THAT CARRY A SEPARATE WARRANTY FROM THE MANUFACTURER OF THE COMPONENT PART.**

VIRON® will not approve for payment any repair made outside its factory without prior written consent of its Owosso, Michigan office. The foregoing shall constitute our sole and exclusive warranty and our sole and exclusive liability and is in lieu of all other warranties, whether written, oral, implied or statutory.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE PAGE HEREOF. SELLER DOES NOT WARRANT MERCHANTABILITY THAT SAID GOODS AND ARTICLES ARE OF MERCHANTABLE QUALITY, OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE.

The liability of any seller on any claim of any kind, including contract, warranty, tort, or negligence, for any loss or damage arising out of or connected with or resulting from the sale and purchase of products and parts covered by any VIRON® proposal, acknowledgement, order, or from the performance or breach of any contract pertaining to such sale or purchase, or from the design, manufacture, sale, delivery, resale, installation, technical direction in installation, inspection, repair, operation or use of any products or parts covered by any VIRON® proposal, acknowledgement, order or furnished by seller, shall in no case exceed the price as paid by purchaser allocable to the products or parts thereof which give rise to the claim and shall terminate one year after shipment of said products and parts.

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