

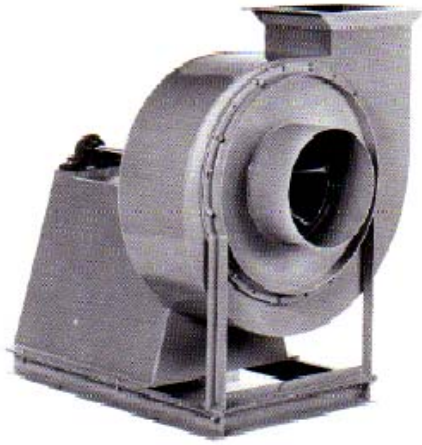
BULLETIN: VB-600

# FRP RADIAL BLOWERS



# VIRON®

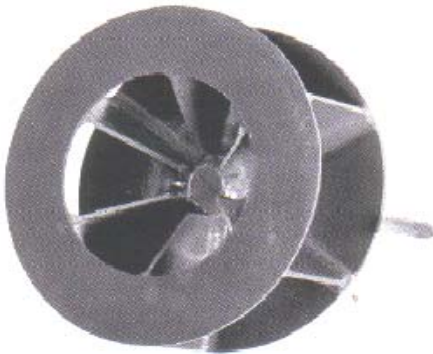
INTERNATIONAL



**SERIES VRB-600**

**VIRON**<sup>®</sup> International has been a leading manufacturer of corrosion resistant fiberglass blowers since 1971. **VIRON's** modern facilities in both Michigan and Texas operate the most modern equipment and efficient manpower found in the fan business. **VIRON's** radial blowers come in 17 different sizes ranging from 9" to 60" inlets and capacities to over 100,000 CFM.

Each radial blower is fabricated and assembled in **VIRON's** two manufacturing locations. All blowers are tested and balanced at the speed at which they will operate. Electronic dynamic balancing guarantees smooth, vibration-free performance.



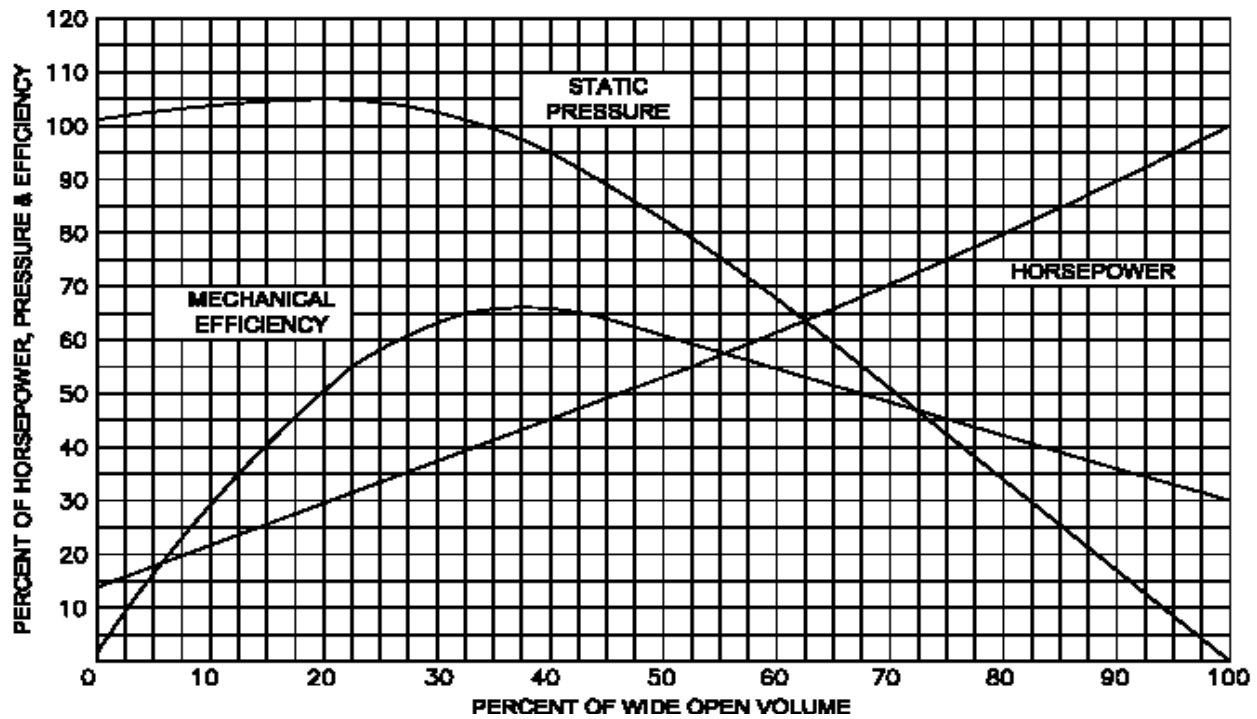
### General Specifications

- Corrosion resistant polyester resin plus flame retardant additives reduce the flame spread rate below 25.
- All structural parts in the airstream are fiberglass and resin.
- All internal hardware is stainless steel.
- The blower housing is solid fiberglass using premium grade corrosion resistant resin.
- The blower wheel is solid fiberglass using a premium grade corrosion resistant resin. The six blade design offers efficient, low cost handling of industrial process air and gas.
- Maximum temperature limitation is 200°F on all fiberglass blowers.
- Special high corrosion construction is optional on all **VIRON** fiberglass air moving equipment.

### Standard Specifications

- **Sizes** - 9" to 60" inlet, 17 convenient sizes to choose from giving you 400 to over 100,000 CFM.
- **Motor** - All motors are TEFC type.
- **Belts** - All belts are industrial grade V-belt type.
- **Bearings** - All bearings are heavy duty, self aligning and ball bearing type.
- **Hardware** - All hardware is stainless steel, and resin coated.
- **Wheels** - All blower wheels are dynamically balanced.
- **Pedestal Bases** - All pedestal bases are constructed of heavy gauge steel. The trapezoid design insures smooth performance and structural integrity.

# RADIAL FAN CHARACTERISTIC CURVE



## 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	0.94	.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	2.63	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

# VRB-609

WHEEL DIAMETER - 15-5/8"

INLET 9-1/4" - AREA 0.44 SQ. FT.

OUTLET 9" x 7-1/2" - AREA 0.44 SQ. FT.

TIP SPEED (FPM) = 4.09 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
435	1000	880	0.12																		
522	1200	906	0.15	1223	0.29																
609	1400	943	0.18	1243	0.34	1492	0.52														
696	1600	986	0.22	1268	0.39	1511	0.58	1722	0.79												
783	1800	1032	0.27	1300	0.05	1533	0.65	1739	0.87	1926	1.11										
870	2000	1079	0.32	1338	0.52	1558	0.73	1761	0.96	1944	1.21	2112	1.47								
957	2200	1127	0.38	1380	0.60	1591	0.82	1785	1.06	1965	1.32	2130	1.60	2264	1.88						
1044	2400	1177	0.45	1425	0.69	1628	0.92	1813	1.17	1988	1.44	2151	1.73	2303	2.03	2446	2.34	2583	2.66		
1131	2600	1227	0.53	1472	0.08	1670	1.03	1847	1.30	2014	1.58	2174	1.88	2324	2.19	2465	2.51	2599	2.64	2728	3.19
1218	2800	1279	0.62	1519	0.89	1714	1.16	1886	1.44	2047	1.73	2200	2.03	2347	2.36	2487	2.69	2619	3.04	2746	3.39
1305	3000	1331	0.72	1567	1.01	1780	1.30	1928	1.59	2083	1.89	2230	2.20	2373	2.54	2510	2.89	2641	3.25	2766	3.62
1392	3200	1384	0.82	1616	1.14	1806	1.45	1972	1.76	2123	2.07	2265	2.40	2402	2.74	2536	3.09	2665	3.47	2788	3.85
1479	3400	1438	0.94	1666	1.28	1854	1.62	2017	1.94	2165	2.27	2304	2.61	2437	2.96	2565	3.32	2690	3.70	2812	4.09
1566	3600	1493	1.08	1716	1.44	1901	1.79	2064	2.14	2209	2.49	2345	2.83	2474	3.19	2600	3.57	2719	3.95	2838	4.35
1653	3800	1548	1.22	1767	1.61	1950	1.98	2111	2.35	2255	2.72	2388	3.06	2514	3.45	2636	3.83	2754	4.23	2867	4.63
1740	4000	1604	1.38	1819	1.79	1999	2.18	2158	2.58	2301	2.96	2433	3.34	2557	3.73	2675	4.12	2790	4.53	2902	4.95
1827	4200	1661	1.55	1871	1.98	2049	2.40	2206	2.81	2348	3.22	2479	3.62	2601	4.02	2717	4.43	2829	4.85	2937	5.27
1914	4400	1718	1.74	1924	2.19	2099	2.63	2255	3.07	2395	3.50	2525	3.92	2646	4.34	2760	4.76	2870	5.19	2976	5.63
2001	4600	1775	1.94	1978	2.42	2150	2.88	2304	3.34	2443	3.79	2572	4.23	2692	4.67	2805	5.11	2913	5.56	3017	6.00
2088	4800	1834	2.16	2032	2.66	2202	3.15	2354	3.62	2492	4.09	2619	4.56	2739	5.02	2851	5.48	2958	5.94	3060	6.41
2175	5000	1892	2.40	2087	2.92	2254	3.43	2404	3.93	2541	4.42	2667	4.91	2786	5.39	2897	5.87	3003	6.35	3104	6.83
2262	5200	1951	2.66	2142	3.20	2307	3.73	2455	4.25	2590	4.76	2715	5.27	2833	5.78	2944	6.28	3049	6.78	3149	7.27
2349	5400	2011	2.93	2197	3.50	2360	4.05	2506	4.59	2640	5.12	2764	5.66	2881	6.18	2991	6.71	3095	7.23	3195	7.74
2436	5600	2070	3.22	2253	3.81	2413	4.39	2558	4.95	2690	5.61	2814	6.06	2929	6.61	3038	7.15	3142	7.69	3241	8.23
2523	5800	2130	3.54	2309	4.15	2467	4.74	2610	5.33	2741	5.91	2863	6.48	2978	7.05	3086	7.62	3189	8.18	3288	8.74
VOL. CFM	Outlet Vel. FPM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1131	2600	2852	3.54																		
1218	2800	2867	3.76	2984	4.13																
1305	3000	2886	3.99	3001	4.38	3113	4.77	3222	5.17												
1392	3200	2907	4.24	3021	4.64	3131	5.04	3238	5.46	3342	5.88	3444	6.31								
1479	3400	2930	4.50	3043	4.91	3152	5.33	3257	5.76	3360	6.19	3460	6.63	3557	7.08	3653	7.54				
1566	3600	2954	4.77	3066	5.20	3174	5.63	3278	6.07	3380	6.52	3479	6.97	3575	7.43	3669	7.90	2761	8.38	3852	8.86
1653	3800	2980	5.06	3090	5.50	3197	5.94	3301	6.40	3402	6.86	3500	7.33	3595	7.80	3688	8.28	2779	8.77	3868	9.26
1740	4000	3009	5.37	3117	5.82	3222	6.27	3325	6.74	3424	7.22	3522	7.70	3616	8.19	3709	8.68	3779	9.18	3887	9.69
1827	4200	3044	5.72	3147	6.16	3249	6.62	3350	7.10	3449	7.59	3545	8.06	3639	8.59	3730	9.09	3820	9.61	3907	10.13
1914	4400	3080	6.08	3182	6.54	3280	7.00	3378	7.48	3475	7.98	3570	8.49	3663	9.00	3753	9.53	3842	10.05	3929	10.59
2001	4600	3119	6.46	3218	6.93	3316	7.42	3409	7.90	0.5	8.40	3596	8.91	3688	9.44	3778	9.97	3866	10.52	3952	11.06
2088	4800	3159	6.88	3256	7.35	3351	7.84	3444	8.34	3536	8.85	3626	9.36	3715	9.90	3804	10.44	3891	11.00	3976	11.56
2175	5000	3202	7.31	3297	7.80	3390	8.30	3481	8.81	3571	9.33	3659	9.86	3745	10.39	3832	10.94	3917	11.50	4001	12.07
2262	5200	3246	7.77	3340	8.28	3431	8.79	3520	9.31	3608	9.83	3695	10.37	3781	10.92	3863	11.47	3946	12.03	4029	12.61
2349	5400	3291	8.26	3383	8.78	3473	9.30	3561	9.83	3647	10.37	3732	10.92	3816	11.47	3900	12.05	3979	12.61	4069	13.19
2436	5600	3337	8.77	3428	9.30	3517	9.84	3604	10.38	3688	10.93	3772	11.49	3854	12.06	3934	12.63	4014	13.21	4099	13.80
2523	5800	3383	9.30	3474	9.85	3562	10.40	3647	10.96	3731	11.53	3813	12.10	3893	12.57	3973	13.26	4051	13.85	4128	14.45
2610	6000	3429	9.85	3520	10.42	3507	10.99	3692	11.57	3774	12.15	3855	12.73	3935	13.32	4013	13.91	4090	14.51	4166	15.12
2697	6200	3476	10.42	3566	11.02	3653	11.61	3737	12.20	3819	12.80	3899	13.39	3977	13.99	4054	14.60	4130	15.21	4205	15.84
2785	6400	3523	11.02	3613	11.63	3699	12.25	3783	12.86	3864	13.47	3943	14.08	4021	14.70	4097	15.32	4172	15.95	4245	16.56
2872	6600	3571	11.64	3660	12.28	3746	12.91	3829	13.54	3910	14.17	3989	14.80	4066	15.44	4141	16.07	4215	16.71	4287	17.36

Data in bold type indicates the quietest and most efficient performance. BHP does not include drive losses. Performance shown is with inlet and outlet ducts.

# VRB-611

WHEEL DIAMETER - 19-1/8"

INLET 11-1/4" - AREA 0.66 SQ. FT.

OUTLET 11" x 9-1/16" - AREA 0.657 SQ. FT.

TIP SPEED (FPM) = 5.01 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
649	1000	<b>720</b>	<b>0.18</b>																		
779	1200	742	0.22	1001	0.44																
909	1400	771	0.27	<b>1017</b>	<b>0.50</b>	1221	0.77														
1039	1600	807	0.33	1037	0.58	1236	0.87	1409	1.18												
1169	1800	844	0.40	1064	0.67	<b>1254</b>	<b>0.97</b>	1423	1.30	1576	1.65										
1299	2000	883	0.48	1094	0.77	1275	1.09	<b>1441</b>	<b>1.44</b>	1590	1.81	1728	2.20								
1429	2200	922	0.57	1129	0.89	1302	1.22	<b>1460</b>	<b>1.58</b>	1674	2.58	1800	3.04	1869	2.81						
1559	2400	963	0.68	1166	1.02	1332	1.37	1483	1.75	1627	2.16	<b>1760</b>	<b>2.59</b>	1884	3.03	2001	3.50	2113	3.98		
1689	2600	1004	0.79	1204	1.17	1366	1.55	1511	1.94	1648	2.36	1779	2.80	<b>1902</b>	<b>3.27</b>	2017	3.75	2127	4.25	2232	4.76
1819	2800	1046	0.92	1243	1.34	1402	1.74	1543	2.15	1674	2.58	1800	3.04	1921	3.52	<b>2035</b>	<b>4.03</b>	2143	4.54	2247	5.07
1914	3000	1089	1.07	1282	1.51	1440	1.95	1577	2.38	1704	2.82	1825	3.29	1941	3.79	2054	4.31	<b>2161</b>	<b>4.85</b>	2263	5.40
2078	3200	1133	1.23	1322	1.71	1478	2.17	1613	2.63	1737	3.10	1853	3.58	1965	4.09	2075	4.62	2180	5.18	<b>2281</b>	<b>5.75</b>
2209	3400	1177	1.41	1363	1.92	1517	2.42	1651	2.90	1771	3.39	1885	3.89	1994	4.42	2098	4.96	2201	5.53	2301	6.12
2338	3600	1222	1.61	1404	2.15	1556	2.68	1688	3.20	1808	3.71	1919	4.23	2024	4.77	2127	5.33	2225	5.90	2322	6.50
2469	3800	1267	1.83	1446	2.40	1596	2.96	1727	3.51	1845	4.06	1954	4.60	2057	5.16	2156	5.73	2253	6.32	2346	6.92
2599	4000	1313	2.06	1488	2.67	1636	3.26	1766	3.85	1883	4.42	1991	4.99	2092	5.57	2189	6.16	2282	6.76	2374	7.39
2728	4200	1359	2.32	1531	2.96	1676	3.59	1805	4.20	1921	4.81	2028	5.41	2128	6.01	2223	6.62	2314	7.24	2403	7.88
2859	4400	1406	2.60	1574	3.28	1718	3.93	1845	4.58	1960	5.22	2066	5.85	2165	6.48	2259	7.11	2348	7.75	2435	8.41
2988	4600	1453	2.91	1618	3.61	1759	4.30	1885	4.98	1999	5.66	2104	6.32	2203	6.98	2295	7.64	2384	8.30	2469	8.97
3119	4800	1500	3.23	1662	3.98	1802	4.70	1926	5.41	2039	6.12	2143	6.81	2241	7.50	2333	8.19	2420	8.88	2504	9.57
3248	5000	1548	3.59	1707	4.37	1844	5.12	1967	5.86	2079	6.60	2182	7.33	2279	8.06	2370	8.77	2457	9.48	2540	10.20
3378	5200	1596	3.97	1752	4.78	1887	5.57	2008	6.35	2119	7.11	2222	7.88	2318	8.63	2409	9.38	2495	10.12	2577	10.87
3508	5400	1645	4.38	1797	5.22	1931	6.05	2050	6.86	2160	7.65	2262	8.45	2357	9.24	2447	10.02	2533	10.79	2614	11.56
3638	5600	1694	4.82	1843	5.69	1974	6.55	2093	7.39	2201	8.22	2302	9.05	2396	9.87	2486	10.69	2571	11.49	2652	12.29
3769	5800	1743	5.28	1889	6.20	2019	7.09	2135	7.96	2242	8.83	2342	9.68	2436	10.54	2525	11.38	2610	12.22	2690	13.06
VOL. CFM	Outlet Vel. FPM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1689	2600	2334	5.29																		
1819	2800	2346	5.61	2442	6.17																
1914	3000	2361	5.96	2456	6.54	2547	7.13	2636	7.73												
2078	3200	2378	6.33	2472	6.93	2562	7.53	2649	8.15	2734	8.78	2818	9.43								
2209	3400	<b>2397</b>	<b>6.72</b>	2489	7.33	2579	7.96	2665	8.60	2749	9.25	2831	9.91	2911	10.58	2989	11.26				
2338	3600	2417	7.13	<b>2508</b>	<b>7.76</b>	<b>2597</b>	<b>8.41</b>	2682	9.07	2766	9.73	2846	10.41	2925	11.10	3002	11.80	3077	12.51	3151	13.24
2469	3800	2438	7.56	2528	8.21	2616	8.88	<b>2701</b>	<b>9.56</b>	2783	10.25	2863	10.94	2941	11.65	3018	12.37	3092	13.10	3165	13.84
2599	4000	2462	8.02	2550	8.69	2636	9.37	2720	10.07	<b>2802</b>	<b>10.78</b>	<b>2881</b>	<b>11.50</b>	2959	12.23	3034	12.97	3108	13.71	3180	14.47
2728	4200	2491	8.54	2575	9.20	2658	9.89	2741	10.61	2822	11.34	2900	12.08	<b>2977</b>	<b>12.83</b>	3052	13.59	3125	14.35	3197	15.13
2859	4400	2520	9.08	2604	9.77	2683	10.46	2764	11.18	2843	11.92	2921	12.68	2997	13.45	<b>3071</b>	<b>14.23</b>	<b>3144</b>	<b>15.02</b>	3215	15.82
2988	4600	2552	9.65	2633	10.35	2713	11.08	2789	11.80	2866	12.54	2942	13.31	3017	14.10	3091	14.90	3163	15.71	<b>3233</b>	<b>16.53</b>
3119	4800	2585	10.27	2664	10.99	2742	11.71	2818	12.46	2893	13.22	2966	13.99	3040	14.79	3112	15.60	3183	16.43	3253	17.27
3248	5000	2620	10.92	2698	11.66	2774	12.40	2848	13.16	2922	13.93	2994	14.72	3064	15.52	3135	16.34	3205	17.18	3274	18.03
3378	5200	2656	11.61	2732	12.36	2807	13.13	2880	13.90	2962	14.69	3023	15.49	3093	16.31	3161	17.13	3229	17.98	3296	18.84
3508	5400	2693	12.34	2768	13.11	2842	13.89	2914	14.69	2984	15.49	3054	16.31	3122	17.14	3191	18.00	3255	18.83	3321	19.70
3638	5600	2730	13.09	2805	13.89	2878	14.70	2948	15.51	3018	16.33	3086	17.16	3153	18.01	3219	18.87	3284	19.74	3349	20.62
3769	5800	2768	13.89	2842	14.71	2914	15.54	2984	16.38	3052	17.22	3120	18.07	3185	18.93	3250	19.80	3314	20.68	3378	21.58
3898	6000	2806	14.71	2880	15.57	2951	16.42	3021	17.28	3088	18.14	3154	19.02	3219	19.89	3283	20.78	3346	21.68	3408	22.59
4028	6200	2844	15.57	2918	16.46	2989	17.34	3058	18.23	3125	19.11	3190	20.01	3254	20.90	3317	21.81	3379	22.73	3440	23.64
4158	6400	2883	16.46	2956	17.38	3027	18.30	3095	19.21	3162	20.12	3226	21.04	3290	21.96	3352	22.89	3413	23.82	3473	24.77
4288	6600	2921	17.39	2994	18.34	3065	19.29	3133	20.23	3199	21.17	3264	22.11	3326	23.06	3388	24.01	3448	24.96	3508	25.93

Data in bold type indicates the quietest and most efficient performance. BHP does not include drive losses. Performance shown is with inlet and outlet ducts.

# VRB-613

WHEEL DIAMETER - 22-5/8"

INLET 13-1/4" - AREA 0.92 SQ. FT.

OUTLET 13" x 10-1/2" - AREA 0.918 SQ. FT.

TIP SPEED (FPM) = 5.92 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
907	1000	<b>610</b>	<b>0.25</b>																	
1089	1200	628	0.31	847	0.61															
1270	1400	653	0.37	<b>861</b>	<b>0.70</b>	1033	1.08													
1452	1600	683	0.46	878	0.81	1046	1.21	1192	1.65											
1633	1800	714	0.56	900	0.93	<b>1061</b>	<b>1.36</b>	1204	1.82	1333	2.31									
1815	2000	747	0.67	926	1.08	1079	1.52	<b>1219</b>	<b>2.01</b>	1346	2.53	1462	3.07							
1997	2200	781	0.80	956	1.24	1102	1.71	1236	2.21	<b>1360</b>	<b>2.76</b>	1475	3.33	1581	3.93					
2178	2400	815	0.94	987	1.43	1127	1.92	1255	2.44	1376	3.01	<b>1489</b>	<b>3.62</b>	1594	4.27	1693	4.88	1788	5.56	
2360	2600	850	1.11	1019	1.64	1156	2.16	1279	2.70	1395	3.29	1505	3.92	<b>1609</b>	<b>4.54</b>	1707	5.24	1800	5.93	
2541	2800	885	1.29	1052	1.87	1187	2.43	1306	3.00	1417	3.60	1523	4.24	1625	4.92	<b>1722</b>	<b>5.62</b>	1813	6.34	1901
2723	3000	922	1.49	1085	2.11	1218	2.72	1335	3.32	1442	3.94	1544	4.60	1643	5.30	1738	6.03	<b>1829</b>	<b>6.78</b>	1915
2905	3200	958	1.72	1119	2.39	1251	3.03	1365	3.67	1469	4.32	1568	5.00	1663	5.71	1756	6.45	1845	7.23	<b>1930</b>
3086	3400	996	1.97	1153	2.68	1283	3.38	1397	4.07	1499	4.74	1595	5.44	1667	6.17	1775	6.92	1863	7.72	1947
3268	3600	1034	2.25	1188	3.00	1316	3.74	1429	4.47	1530	5.18	1623	5.91	1713	6.66	1800	7.45	1883	8.24	1965
3449	3800	1072	2.55	1223	3.35	1350	4.13	1461	4.91	1561	5.66	1653	6.43	1741	7.20	1825	8.00	1907	8.83	1985
3631	4000	1111	2.88	1259	3.73	1384	4.56	1494	5.37	1593	6.18	1684	6.97	1770	7.78	1852	8.60	1931	9.44	2009
3813	4200	1150	3.24	1296	4.14	1419	5.01	1527	5.87	1626	6.72	1716	7.56	1801	8.40	1881	9.25	1958	10.11	2034
3994	4400	1189	3.63	1332	4.58	1453	5.49	1561	6.40	1658	7.29	1748	8.18	1832	9.05	1911	9.94	1987	10.83	2060
4176	4600	1229	4.06	1369	5.05	1489	6.01	1595	6.96	1692	7.90	1781	8.83	1864	9.75	1942	10.67	2017	11.59	2089
4357	4800	1269	4.52	1407	5.55	1525	6.56	1629	7.56	1725	8.54	1813	9.52	1896	10.48	1974	11.44	2048	12.40	2119
4539	5000	1310	5.01	1445	6.10	1561	7.15	1664	8.19	1759	9.22	1846	10.24	1929	11.25	2006	12.25	2079	13.25	2149
4721	5200	1351	5.54	1483	6.68	1597	7.78	1699	8.86	1793	9.94	1880	11.00	1961	12.06	2038	13.10	2111	14.14	2180
4902	5400	1392	6.12	1521	7.29	1634	8.44	1735	9.57	1827	10.69	1914	11.80	1994	12.90	2071	13.99	2143	15.08	2212
5084	5600	1433	6.73	1560	7.95	1671	9.15	1771	10.33	1862	11.49	1948	12.64	2028	13.79	2103	14.93	2175	16.05	2244
5265	5800	1475	7.38	1599	8.65	1708	9.90	1807	11.12	1897	12.33	1982	13.52	2062	14.71	2137	15.90	2208	17.07	2276
5447	6000	1516	8.06	1638	9.25	1745	10.65	1844	11.85	1933	13.06	2018	14.45	2101	15.50	2208	16.80	2288	18.00	2346
5629	6200	1557	8.78	1677	9.97	1782	11.38	1882	12.58	1971	13.60	2054	15.15	2136	16.25	2248	17.68	2360	19.00	2404
5810	6400	1598	9.51	1716	10.70	1817	12.00	1916	13.20	2005	14.25	2100	15.85	2175	16.90	2308	18.48	2472	19.90	2462
5992	6600	1639	10.25	1755	11.43	1853	12.63	1952	13.80	2041	14.90	2145	16.55	2210	17.50	2356	19.16	2540	20.80	2520

Data in bold type indicates the quietest and most efficient performance.  
BHP does not include drive losses.  
Performance shown is with inlet and outlet ducts.

# VRB-615

WHEEL DIAMETER - 26-1/8"

INLET 15-1/4" - AREA 1.23 SQ. FT.

OUTLET 15" x 12-1/8" - AREA 1.222 SQ. FT.

TIP SPEED (FPM) = 6.84 x RPM

VOL.	Outlet Vel.	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		FPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1208	1000	<b>528</b>	<b>0.33</b>																		
1449	1200	544	0.41	734	0.81																
1692	1400	566	0.50	<b>746</b>	<b>0.94</b>	895	1.43														
1933	1600	592	0.61	761	1.07	906	1.61	1033	2.19												
2175	1800	619	0.74	780	1.24	<b>920</b>	<b>1.80</b>	1044	2.42	1156	3.08										
2417	2000	647	0.89	803	1.43	935	2.02	<b>1056</b>	<b>2.67</b>	1166	3.36	1267	4.09								
2658	2200	676	1.06	828	1.65	955	2.27	1071	2.95	<b>1179</b>	<b>3.68</b>	1278	4.44	1371	5.23						
2900	2400	706	1.26	856	1.90	977	2.55	1088	3.25	1193	4.01	<b>1291</b>	<b>4.81</b>	1382	5.64	1468	6.50	1550	7.40		
3142	2600	736	1.47	883	2.18	1002	2.87	1108	3.60	1209	4.38	1305	5.21	<b>1395</b>	<b>6.08</b>	1479	6.98	1560	7.90	1637	8.85
3384	2800	767	1.72	911	2.48	1028	3.23	1131	3.99	1228	4.79	1320	5.65	1408	6.55	<b>1492</b>	<b>7.29</b>	1572	8.44	1647	9.43
3625	3000	799	1.99	940	2.82	1056	3.62	1157	4.42	1250	5.25	1338	6.12	1424	7.05	1506	8.02	<b>1585</b>	<b>9.02</b>	1660	10.04
3866	3200	831	2.29	970	3.18	1084	4.04	1183	4.89	1274	5.76	1359	6.66	1441	7.60	1521	8.60	1599	9.63	<b>1673</b>	<b>10.69</b>
4109	3400	863	2.62	999	3.57	1112	4.49	1210	5.40	1299	6.31	1382	7.24	1452	8.21	1539	9.22	1614	10.28	1687	11.37
4350	3600	896	2.99	1030	4.00	1141	4.98	1238	5.95	1326	6.90	1407	7.87	1484	8.87	1560	9.92	1632	10.97	1703	12.10
4592	3800	929	3.39	1060	4.46	1170	5.50	1266	6.53	1353	7.54	1433	8.55	1509	9.59	1581	10.65	1652	11.75	1720	12.87
4834	4000	963	3.84	1091	4.97	1200	6.07	1295	7.15	1381	8.22	1460	9.29	1534	10.36	1605	11.45	1674	12.57	1741	13.74
5075	4200	996	4.32	1123	5.51	1229	6.67	1324	7.82	1409	8.95	1487	10.06	1561	11.18	1630	12.31	1697	13.47	1762	14.75
5317	4400	1031	4.84	1156	6.09	1260	7.31	1353	8.52	1437	9.71	1515	10.89	1588	12.05	1656	13.23	1722	14.42	1786	15.63
5559	4600	1065	5.40	1187	6.72	1290	8.00	1382	9.27	1466	10.52	1543	11.76	1615	12.98	1683	14.20	1748	15.43	1810	16.68
5801	4800	1100	6.01	1219	7.40	1321	8.74	1412	10.06	1495	11.37	1572	12.67	1643	13.95	1711	15.23	1775	16.50	1836	17.79
6042	5000	1135	6.67	1252	8.12	1353	9.52	1442	10.90	1524	12.28	1600	13.64	1671	14.98	1738	16.31	1802	17.64	1863	18.97
6284	5200	1171	7.38	1285	8.89	1384	10.36	1473	11.80	1554	13.23	1629	14.65	1700	16.05	1766	17.44	1829	18.83	1890	20.21
6526	5400	1206	8.14	1318	9.71	1416	11.24	1504	12.75	1584	14.23	1659	15.71	1728	17.18	1795	18.63	1857	20.07	1917	21.50
6767	5600	1242	8.96	1352	10.59	1448	12.18	1535	13.75	1614	15.29	1688	16.83	1757	18.36	1823	19.87	1885	21.37	1945	22.86
7010	5800	1278	9.83	1385	11.52	1480	13.18	1566	14.81	1644	16.41	1718	18.00	1787	19.59	1852	21.17	1914	22.73	1973	24.28
VOL.	Outlet Vel.	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		FPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3142	2600	1711	9.84																		
3384	2800	1720	10.44	1791	11.48																
3625	3000	1732	11.09	1801	12.16	1868	13.25	1933	14.37												
3866	3200	1744	11.77	1813	12.88	1879	14.01	1943	15.15	2005	16.33	2066	17.53								
4109	3400	<b>1758</b>	<b>12.49</b>	1826	13.64	1891	14.80	1954	15.99	2016	17.19	2076	18.42	2134	19.67	2192	20.95				
4350	3600	1772	13.25	<b>1839</b>	<b>14.43</b>	<b>1904</b>	<b>15.64</b>	1967	16.86	2028	18.10	2087	19.36	2145	20.64	2201	21.95				
4592	3800	1788	14.05	1854	15.27	1918	16.51	<b>1980</b>	<b>17.77</b>	2041	19.05	2100	20.35	2157	21.67	2213	23.01	2267	24.36	2321	25.73
4834	4000	1806	14.92	1870	16.15	1933	17.43	1995	18.72	<b>2055</b>	<b>20.04</b>	<b>2113</b>	<b>21.38</b>	2170	22.74	2225	24.11	2279	25.50	2332	26.91
5075	4200	1827	15.88	1888	17.11	1949	18.40	2010	19.73	2069	21.08	2127	22.46	<b>2183</b>	<b>23.85</b>	2238	25.26	2292	26.69	2344	28.14
5317	4400	1848	16.88	1909	18.17	1968	19.45	2027	20.79	2085	22.17	2142	23.58	2198	25.01	<b>2252</b>	<b>26.46</b>	<b>2305</b>	<b>27.93</b>	2357	29.41
5559	4600	1871	17.95	1931	19.25	1990	20.61	2046	21.93	2102	23.32	2158	24.76	2213	26.22	2267	27.71	2319	29.21	<b>2371</b>	<b>30.73</b>
5801	4800	1896	19.10	1954	20.43	2011	21.78	2067	23.17	2121	24.58	2175	26.01	2229	27.49	2282	29.01	2334	30.55	2386	32.11
6042	5000	1921	20.31	1978	21.67	2034	23.06	2089	24.47	2143	25.91	2196	27.38	2247	28.85	2299	30.38	2350	31.95	2401	33.54
6284	5200	1948	21.59	2004	22.99	2059	24.41	2112	25.85	2165	27.32	2219	28.81	2268	30.34	2318	31.85	2368	33.43	2417	35.04
6526	5400	1975	22.94	2030	24.38	2084	25.83	2137	27.31	2188	28.80	2239	30.32	2289	31.86	2340	33.47	2387	35.02	2435	36.63
6767	5600	2002	24.35	2057	25.84	2110	27.33	2163	28.84	2213	30.37	2263	31.92	2312	33.49	2361	35.08	2408	36.70	2456	38.35
7010	5800	2030	25.82	2084	27.36	2137	28.90	2188	30.45	2238	32.02	2288	33.60	2336	35.20	2384	36.82	2431	38.46	2477	40.13
7251	6000	2058	27.35	2112	28.95	2154	30.54	2215	32.14	2265	33.74	2313	35.36	2361	36.99	2408	38.65	2454	40.32	2499	42.01
7492	6200	2086	28.95	2140	30.60	2192	32.25	2242	33.89	2291	35.54	2339	37.20	2386	38.87	2432	40.56	2478	42.26	2523	43.99
7734	6400	2114	30.61	2168	32.32	2220	34.02	2270	35.72	2319	37.42	2366	39.12	2413	40.83	2458	42.56	2503	44.30	2547	46.05
7976	6600	2142	32.33	2196	34.10	2248	35.86	2298	37.62	2346	39.37	2393	41.12	2439	42.68	2484	44.64	2529	46.42	2572	48.21

Data in bold type indicates the quietest and most efficient performance.

BHP does not include drive losses.

Performance shown is with inlet and outlet ducts.

# VRB-617

WHEEL DIAMETER - 29-5/8"

INLET 17-1/4" - AREA 1.58 SQ. FT.

OUTLET 17" x 13-3/4" - AREA 1.57 SQ. FT.

TIP SPEED (FPM) = 7.76 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1552	1000	<b>0.43</b>																		
1863	1200	0.52	647	1.04																
2173	1400	0.64	<b>658</b>	<b>1.20</b>	790	1.84														
2484	1600	0.79	671	1.38	800	2.07	912	2.81												
2794	1800	0.95	688	1.59	<b>811</b>	<b>2.32</b>	921	3.11	1020	3.95										
3105	2000	1.15	708	1.84	825	2.59	<b>932</b>	<b>3.43</b>	<b>1049</b>	<b>4.32</b>	1118	5.25								
3416	2200	1.37	731	2.12	842	2.92	945	3.79	<b>1040</b>	<b>4.72</b>	1128	5.70	1209	6.72						
3726	2400	1.62	755	2.45	862	3.28	960	4.18	1052	5.15	<b>1139</b>	<b>6.18</b>	1219	7.25	1295	8.35	1367	9.50		
4037	2600	1.89	779	2.80	884	3.69	978	4.63	1066	5.63	1151	6.70	<b>1230</b>	<b>7.81</b>	1305	8.96	1376	10.15	1444	11.37
4347	2800	2.21	804	3.19	907	4.15	998	5.12	1083	6.16	1165	7.25	1243	8.41	<b>1317</b>	<b>9.61</b>	<b>1387</b>	<b>10.85</b>	1454	12.11
4658	3000	2.56	830	3.62	932	4.65	1021	5.68	1103	6.75	1181	7.87	1256	9.06	1329	10.30	<b>1398</b>	<b>11.59</b>	1464	12.90
4968	3200	2.94	856	4.08	956	5.19	1044	6.28	1124	7.39	1199	8.55	1272	9.76	1342	11.04	1411	12.37	<b>1476</b>	<b>13.73</b>
5279	3400	3.37	882	4.58	981	5.77	1068	6.94	1146	8.10	1220	9.30	1290	10.55	1358	11.84	1424	13.20	1489	14.61
5589	3600	3.84	909	5.13	1007	6.40	1093	7.64	1170	8.87	1241	10.11	1310	11.39	1376	12.74	1440	14.10	1502	15.54
5900	3800	4.36	936	5.73	1032	7.07	1117	8.39	1194	9.69	1264	10.99	1331	12.31	1395	13.68	1458	15.10	1518	16.54
6210	4000	4.93	963	6.38	1059	7.79	1142	9.19	1218	10.56	1288	11.93	1354	13.30	1416	14.71	1477	16.15	1536	17.65
6521	4200	5.54	991	7.07	1085	8.56	1168	10.04	1243	11.49	1312	12.93	1377	14.36	1438	15.81	1498	17.30	1555	18.82
6832	4400	6.21	1019	7.83	1111	9.39	1194	10.94	1268	12.47	1337	13.98	1401	15.48	1461	16.99	1519	18.52	1576	20.08
7142	4600	6.94	1047	8.63	1138	10.28	1220	11.90	1294	13.51	1362	15.10	1425	16.67	1485	18.24	1542	19.82	1597	21.42
7453	4800	7.71	1076	9.50	1166	11.23	1246	12.92	1319	14.61	1387	16.28	1450	17.92	1509	19.56	1566	21.20	1620	22.85
7763	5000	8.57	1105	10.43	1193	12.23	1273	14.01	1345	15.77	1412	17.51	1475	19.24	1534	20.95	1590	22.65	1643	24.36
8074	5200	9.48	1134	11.42	1221	13.30	1299	15.16	1371	16.99	1438	18.81	1500	20.62	1559	22.41	1614	24.18	1667	25.95
8384	5400	10.46	1163	12.47	1249	14.44	1327	16.37	1397	18.28	1463	20.18	1525	22.07	1583	23.93	1639	25.78	1692	27.62
8695	5600	11.50	1193	13.60	1278	15.65	1354	17.66	1424	19.64	1490	21.62	1551	23.58	1608	25.52	1664	27.45	1716	29.36
9005	5800	12.62	1222	14.80	1306	16.93	1382	19.02	1451	21.08	1516	23.12	1576	25.16	1634	27.19	1689	29.19	1741	31.18
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4037	2600	1510	12.64																	
4347	2800	1518	13.41	1580	14.74															
4658	3000	1528	14.24	1589	15.61	1648	17.02	1706	18.46											
4968	3200	1539	15.12	1599	16.54	1658	17.99	1714	19.47	1769	20.97	1823	22.52							
5279	3400	<b>1551</b>	<b>16.05</b>	1611	17.52	1669	19.01	1725	20.53	1779	22.08	1832	23.66	1883	25.26	1934	26.90			
5589	3600	1564	17.02	<b>1623</b>	<b>18.54</b>	<b>1680</b>	<b>20.08</b>	1736	21.65	1789	23.25	1842	24.87	1893	26.52	1942	28.19	1991	29.89	2039
5900	3800	1578	18.05	1636	19.61	1693	21.21	<b>1747</b>	<b>22.83</b>	1801	24.47	1853	26.14	1903	27.83	1953	29.55	2001	31.29	2048
6210	4000	1593	19.16	1650	20.75	1706	22.38	1760	24.05	<b>1813</b>	<b>25.74</b>	<b>1864</b>	<b>27.46</b>	1914	29.21	1963	30.97	2011	32.76	2058
6521	4200	1612	20.39	1666	21.97	1720	23.63	1774	25.34	1826	27.08	1877	28.84	<b>1926</b>	<b>30.63</b>	1975	32.45	2022	34.28	2069
6832	4400	1630	21.68	1685	23.33	1736	24.98	1788	26.70	1840	28.48	1890	30.29	1939	32.12	<b>1987</b>	<b>33.99</b>	<b>2034</b>	<b>35.87</b>	2080
7142	4600	1651	23.06	1703	24.73	1756	26.47	1805	28.17	1855	29.96	1904	31.80	1952	33.68	2000	35.59	2047	37.52	<b>2092</b>
7453	4800	1673	24.53	1724	26.24	1774	27.98	1824	29.76	1872	31.57	1919	33.41	1967	35.32	2014	37.26	2060	39.24	2105
7763	5000	1695	26.09	1746	27.84	1795	29.62	1843	31.43	1891	33.28	1937	35.16	1983	37.06	2020	39.02	2074	41.03	2118
8074	5200	1718	27.73	1768	29.53	1816	31.35	1864	33.20	1910	35.09	1956	37.00	2001	38.97	2045	40.91	2089	42.93	2133
8384	5400	1742	29.46	1791	31.31	1839	33.18	1885	35.08	1931	37.00	1976	38.95	2020	40.93	2065	42.99	2106	44.98	2149
8695	5600	1766	31.27	1815	33.18	1862	35.11	1908	37.05	1953	39.01	1997	41.00	2040	43.01	2083	45.06	2125	47.14	2167
9005	5800	1791	33.16	1839	35.14	1886	37.12	1931	39.11	1975	41.12	2019	43.15	2061	45.21	2103	47.29	2145	49.40	2186
9316	6000	1815	35.13	1863	37.18	1910	39.23	1954	41.28	1998	43.34	2041	45.42	2083	47.52	2124	49.64	2165	51.79	2205
9626	6200	1840	37.18	1888	39.31	1934	41.42	1978	43.53	2022	45.65	2064	47.78	2106	49.93	2146	52.09	2186	54.28	2226
9937	6400	1865	39.32	1913	41.51	1958	43.70	2003	45.88	2046	48.06	2088	50.25	2129	52.45	2169	54.66	2208	56.90	2247
10248	6600	1890	41.53	1938	43.80	1983	46.07	2027	48.32	2070	50.57	2112	52.82	2152	55.07	2192	57.34	2231	59.62	2270

Data in bold type indicates the quietest and most efficient performance. BHP does not include drive losses. Performance shown is with inlet and outlet ducts.



# VRB-619

WHEEL DIAMETER - 33"

INLET 19-1/4" - AREA 1.97 SQ. FT.

OUTLET 19" x 15-3/8" - AREA 1.961 SQ. FT.

TIP SPEED (FPM) = 8.64 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1939	1000	417	0.54																		
2327	1200	429	0.65	579	1.30																
2714	1400	447	0.80	589	1.50	707	2.30														
3103	1600	467	0.98	601	1.72	716	2.58	816	3.52												
3491	1800	489	1.19	616	1.99	726	2.89	824	3.88	912	4.94										
3878	2000	511	1.43	634	2.30	738	3.24	834	4.29	921	5.40	1000	6.56								
4266	2200	534	1.71	654	2.65	754	3.64	845	4.73	931	5.90	1009	7.12	1082	8.40						
4654	2400	557	2.02	675	3.05	771	4.10	859	5.22	942	6.44	1019	7.72	1091	9.05	1159	10.43	1223	11.87		
5042	2600	581	2.37	697	3.50	791	4.61	875	5.78	954	7.03	1030	8.37	1101	9.76	1168	11.20	1231	12.68	1292	14.20
5430	2800	606	2.76	720	3.99	812	5.18	893	6.40	969	7.69	1042	9.06	1112	10.51	1178	12.01	1241	13.55	1301	15.13
5818	3000	631	3.19	742	4.52	834	5.81	913	7.09	987	8.43	1056	9.83	1124	11.32	1189	12.87	1251	14.47	1310	14.11
6205	3200	656	3.68	766	5.10	856	6.48	934	7.85	1005	9.24	1073	10.68	1138	12.19	1201	13.79	1262	15.45	1321	17.15
6593	3400	681	4.21	789	5.73	878	7.21	956	8.66	1026	10.12	1091	11.62	1154	13.17	1215	14.79	1274	16.49	1332	18.25
6982	3600	707	4.80	813	6.41	901	7.99	978	9.54	1047	11.08	1111	12.63	1172	14.23	1232	15.91	1288	17.61	1344	19.41
7370	3800	733	5.45	837	7.16	924	8.83	1000	10.48	1068	12.10	1131	13.72	1191	15.38	1248	17.09	1305	18.86	1358	20.66
7757	4000	760	6.15	862	7.97	947	9.73	1022	11.48	1090	13.19	1153	14.90	1211	16.62	1267	18.37	1321	20.18	1375	22.05
8145	4200	787	6.92	886	8.84	971	10.70	1045	12.54	1112	14.35	1174	16.15	1232	17.94	1287	19.75	1340	21.60	1391	23.50
8533	4400	814	7.76	912	9.78	994	11.73	1068	13.67	1135	15.58	1196	17.47	1253	19.34	1308	21.22	1360	23.13	1410	25.08
8921	4600	841	8.67	937	10.78	1019	12.84	1091	14.87	1157	16.88	1218	18.86	1275	20.83	1329	22.78	1380	24.76	1429	26.76
9309	4800	869	9.65	962	11.87	1043	14.02	1115	16.14	1180	18.25	1241	20.33	1297	22.39	1350	24.43	1401	26.48	1450	28.55
9697	5000	896	10.71	988	13.02	1068	15.28	1139	17.50	1204	19.70	1263	21.89	1320	24.03	1372	26.17	1422	28.30	1470	30.43
10084	5200	924	11.84	1014	14.26	1093	16.62	1163	18.93	1227	21.22	1286	23.50	1342	25.76	1394	27.99	1444	30.20	1492	32.42
10472	5400	952	13.06	1041	15.58	1118	18.04	1187	20.45	1250	22.83	1309	25.21	1365	27.56	1417	29.89	1466	32.20	1514	34.50
10861	5600	981	14.37	1067	16.99	1143	19.55	1212	22.06	1274	24.54	1333	27.00	1387	29.45	1439	31.88	1488	34.29	1535	36.68
11248	5800	1009	15.76	1094	18.49	1169	21.14	1236	23.76	1298	26.33	1356	28.88	1411	31.43	1462	33.96	1511	36.47	1558	38.95
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5042	2600	1351	15.79																		
5430	2800	1358	16.75	1414	18.42																
5818	3000	1367	17.79	1422	19.50	1475	21.26	1526	23.06												
6205	3200	1377	18.89	1431	20.66	1483	22.47	1534	24.31	1583	26.20	1631	28.13								
6593	3400	1386	20.04	1441	21.88	1493	23.75	1543	25.65	1592	27.58	1639	29.55	1685	31.56	1730	33.61				
6982	3600	1399	21.26	1452	23.16	1503	25.09	1553	27.05	1601	29.04	1648	31.07	1693	33.12	1738	35.21	1782	37.33	1824	39.50
7370	3800	1412	22.55	1464	24.50	1514	26.49	1564	28.51	1611	30.57	1658	32.65	1703	34.77	1747	36.91	1790	39.08	1832	41.29
7757	4000	1425	23.94	1476	25.92	1526	27.96	1575	30.04	1622	32.16	1669	34.31	1713	36.48	1757	38.69	1799	40.92	1841	43.18
8145	4200	1442	25.47	1491	27.45	1539	29.52	1587	31.65	1634	33.82	1679	36.03	1724	38.27	1767	40.53	1809	42.82	1851	45.14
8533	4400	1459	27.08	1507	29.15	1554	31.20	1600	33.35	1646	35.57	1691	37.83	1735	40.13	1778	42.45	1820	44.81	1861	47.19
8921	4600	1477	28.80	1524	30.89	1571	33.06	1615	35.19	1659	37.42	1703	39.72	1747	42.07	1789	44.45	1831	46.87	1872	49.31
9309	4800	1497	30.64	1542	32.78	1587	34.95	1632	37.17	1675	39.43	1717	41.74	1760	44.11	1802	46.54	1843	49.01	1883	51.51
9697	5000	1517	32.59	1562	34.78	1606	37.00	1649	39.26	1692	41.57	1733	43.92	1774	46.30	1815	48.75	1855	51.26	1895	53.81
10084	5200	1538	34.64	1582	36.89	1625	39.17	1668	41.48	1709	43.83	1750	46.22	1791	48.67	1830	51.11	1869	53.63	1908	56.21
10472	5400	1559	36.80	1603	39.12	1645	41.45	1687	43.81	1728	46.21	1768	48.65	1807	51.12	1847	53.69	1885	56.18	1923	58.77
10861	5600	1580	39.06	1624	41.45	1666	43.85	1707	46.28	1747	48.73	1787	51.21	1825	53.73	1864	56.29	1901	58.88	1939	61.52
11248	5800	1602	41.43	1645	43.90	1687	46.37	1728	48.56	1768	51.37	1806	53.90	1844	56.47	1882	59.07	1919	61.71	1955	64.39
11636	6000	1624	43.89	1667	46.45	1709	49.00	1749	51.56	1788	54.13	1826	56.73	1864	59.35	1901	62.00	1937	64.69	1973	67.41
12024	6200	1647	46.45	1689	49.10	1730	51.74	1770	54.38	1809	57.03	1847	59.69	1884	62.37	1920	65.07	1956	67.81	1992	70.57
12411	6400	1669	49.11	1711	51.85	1752	54.59	1792	57.31	1830	60.04	1868	62.77	1905	65.52	1941	68.20	1976	71.07	2011	73.89
12800	6600	1691	51.88	1734	54.72	1774	57.54	1814	60.36	1852	63.17	1889	65.98	1926	68.80	1961	71.63	1996	74.48	2031	77.35

Data in bold type indicates the quietest and most efficient performance. BHP does not include drive losses. Performance shown is with inlet and outlet ducts.

# VRB-621

WHEEL DIAMETER - 36-1/2"

INLET 21-1/4" - AREA 2.40 SQ. FT.

OUTLET 21" x 17" - AREA 2.41 SQ. FT.

TIP SPEED (FPM) = 9.56 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2383	1000	380	0.61																		
2860	1200	394	0.76	524	1.50																
3336	1400	409	0.93	<b>536</b>	<b>1.72</b>	638	2.66														
3813	1600	425	1.13	550	1.99	649	2.96	737	4.07												
4290	1800	443	1.37	565	2.30	<b>662</b>	<b>3.32</b>	747	4.45	824	5.71										
4766	2000	463	1.66	580	2.66	677	3.75	<b>760</b>	<b>4.91</b>	834	6.19	904	7.58								
5243	2200	484	1.99	596	3.06	691	4.22	773	5.45	<b>847</b>	6.76	914	8.16	978	9.68						
5720	2400	506	2.37	613	3.51	706	4.74	788	6.04	861	7.41	<b>927</b>	<b>8.85</b>	989	10.37	1048	12.00	1105	13.74		
6197	2600	528	2.80	631	4.03	722	5.32	808	7.41	890	8.91	955	10.47	<b>1002</b>	<b>11.18</b>	1059	12.82	1114	14.56	1168	16.39
6673	2800	550	3.27	651	4.61	738	5.97	818	7.41	904	8.91	969	11.39	1030	13.06	<b>1086</b>	<b>14.79</b>	<b>1139</b>	<b>16.59</b>	1190	18.45
7150	3000	574	3.80	673	5.26	756	6.68	833	8.19	904	9.76	969	11.39	1030	13.06	1086	14.79	<b>1139</b>	<b>16.59</b>	1190	18.45
7627	3200	597	4.39	694	5.96	775	7.46	850	9.04	920	10.69	984	12.38	1044	14.13	1100	15.92	1153	17.76	<b>1203</b>	<b>19.67</b>
8103	3400	621	5.04	716	6.73	795	8.33	867	9.96	936	11.68	999	13.45	1059	15.27	1115	17.13	1167	19.03	1217	20.99
8580	3600	645	5.75	738	7.57	816	9.28	885	10.97	952	12.75	1015	14.60	1074	16.49	1130	18.42	1182	20.39	1232	22.41
9057	3800	669	6.53	760	8.47	837	10.31	905	12.08	969	13.92	1031	15.83	1089	17.79	1144	19.80	1197	21.84	1246	23.93
9533	4000	694	7.38	783	9.46	859	11.41	925	13.28	988	15.17	1048	17.15	1105	19.18	1160	21.26	1212	23.38	1261	25.54
10010	4200	718	8.31	806	10.51	881	12.58	947	14.58	1007	16.54	1065	18.56	1121	20.67	1175	22.82	1227	25.01	1276	27.24
10487	4400	743	9.32	829	11.65	903	13.84	968	15.96	1027	18.00	1084	20.09	1138	22.25	1191	24.47	1242	26.74	1291	29.04
10964	4600	769	10.41	853	12.88	925	15.19	990	17.42	1048	19.58	1103	21.73	1156	23.94	1208	26.23	1258	28.56	1307	30.94
11440	4800	794	11.59	877	14.19	948	16.63	1011	18.97	1069	21.26	1123	23.49	1175	25.76	1225	28.10	1275	30.50	1322	32.95
11917	5000	820	12.87	901	15.59	971	18.16	1033	20.62	1091	23.03	1144	25.36	1194	27.69	1244	30.09	1292	32.55	1339	35.07
12394	5200	846	14.23	925	17.08	994	19.78	1056	22.38	1113	24.89	1165	27.35	1215	29.76	1263	32.21	1310	34.73	1356	37.31
12870	5400	872	15.70	949	18.68	1017	21.51	1078	24.22	1134	26.85	1187	29.44	1236	31.95	1282	34.47	1328	37.04	1373	39.67
13347	5600	898	17.27	974	20.38	1041	23.33	1101	26.17	1156	28.92	1208	31.63	1257	34.26	1303	36.86	1347	39.49	1391	42.18
13824	5800	924	18.95	999	22.18	1064	25.57	1124	28.23	1179	31.12	1230	33.92	1278	36.69	1324	39.39	1367	42.08	1410	44.83
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6197	2600	1219	18.34																		
6673	2800	1228	19.28	1277	21.30	1333	24.50	1378	26.70												
7150	3000	1239	20.38	1287	22.40	1343	25.77	1388	27.95	1431	30.22	1473	32.58								
7627	3200	<b>1252</b>	<b>21.63</b>	1298	23.66	1356	27.19	1399	29.38	1441	31.65	1482	33.99	1523	36.41	1563	38.91				
8103	3400	1265	23.00	<b>1311</b>	<b>25.06</b>	<b>1369</b>	<b>28.75</b>	1412	<b>30.97</b>	1453	33.25	1493	35.60	1533	38.02	1572	40.50	1610	43.06	1648	45.71
8580	3600	1279	24.47	1325	26.69	<b>1383</b>	<b>30.43</b>	<b>1425</b>	<b>32.70</b>	<b>1466</b>	<b>35.01</b>	<b>1506</b>	<b>37.38</b>	1545	39.81	1583	42.30	1620	44.86	1657	47.49
9057	3800	1294	26.05	1339	28.22	1397	32.23	1439	34.55	1480	36.91	1519	39.32	<b>1558</b>	<b>41.78</b>	1595	44.29	1632	46.86	1668	49.49
9533	4000	1308	27.73	1353	29.96	1368	31.80	1411	34.14	1453	38.93	1494	43.59	1531	47.13	<b>1608</b>	<b>46.44</b>	<b>1645</b>	<b>49.04</b>	<b>1680</b>	<b>51.69</b>
10010	4200	1323	29.51	1368	31.80	1411	34.14	1453	38.60	1508	41.07	1547	43.58	1585	46.14	<b>1622</b>	<b>48.73</b>	<b>1658</b>	<b>51.37</b>	<b>1693</b>	<b>54.06</b>
10487	4400	1338	31.38	1383	33.75	1426	36.16	1468	38.50	1508	41.07	1547	43.58	1585	46.14	1622	48.73	1658	51.37	1693	54.06
10964	4600	1353	33.36	1398	35.80	1441	38.28	1482	40.79	1522	43.33	1561	45.90	1599	48.52	1636	51.16	1672	53.85	1707	56.58
11440	4800	1368	35.44	1413	37.96	1456	40.51	1497	43.09	1537	45.70	1576	48.34	1614	51.02	1650	53.73	1686	56.47	1721	59.25
11917	5000	1384	37.63	1428	40.22	1471	42.85	1512	45.50	1552	48.19	1591	50.90	1628	53.64	1665	56.42	1701	59.22	1735	62.06
12394	5200	1400	39.93	1444	42.60	1486	45.30	1527	48.03	1567	50.79	1605	53.57	1643	56.39	1680	59.23	1715	62.10	1750	65.01
12870	5400	1417	42.36	1460	45.10	1502	47.87	1543	50.67	1582	53.51	1621	56.37	1658	59.26	1694	62.17	1730	65.11	1764	68.08
13347	5600	1434	44.93	1477	47.73	1518	50.57	1558	53.44	1598	56.35	1636	59.29	1673	62.25	1709	65.24	1745	68.25	1779	71.29
13824	5800	1452	47.63	1494	50.49	1535	53.40	1574	56.34	1613	59.32	1651	62.33	1688	65.37	1724	68.43	1760	71.52	1794	74.64
14300	6000	1471	50.49	1512	53.40	1552	56.37	1591	59.38	1629	62.43	1667	65.51	1704	68.61	1740	71.76	1775	74.93	1809	78.11
14777	6200	1491	53.50	1530	56.47	1569	59.49	1608	62.56	1646	65.68	1683	68.83	1720	72.01	1755	75.23	1790	78.46	1824	81.73
15254	6400	1511	56.67	1549	59.69	1588	62.77	1626	65.90	1663	69.08	1700	72.30	1736	75.55	1771	78.83	1806	82.14	1840	85.48
15731	6600	1531	60.00	1569	63.08	1607	66.22	1644	69.40	1681	72.64	1717	75.92	1752	79.24	1787	82.59	1821	85.97	1855	89.38

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.

# VRB-623

WHEEL DIAMETER - 40"

INLET 23-1/4" - AREA 2.88 SQ. FT.

OUTLET 23" x 18-5/8" - AREA 2.89 SQ. FT.

TIP SPEED (FPM) = 10.47 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2858	1000	<b>347</b>	<b>0.74</b>																		
3429	1200	360	0.91	478	1.80																
4001	1400	373	1.11	<b>489</b>	<b>2.06</b>	583	3.19														
4573	1600	388	1.36	502	2.39	593	3.55	672	4.88												
5144	1800	404	1.65	516	2.76	<b>605</b>	<b>3.99</b>	682	5.34	752	6.85										
5716	2000	422	1.99	529	3.19	618	4.49	<b>693</b>	<b>5.90</b>	762	7.42	825	9.09								
6288	2200	442	2.39	544	3.67	631	5.06	706	6.54	<b>773</b>	<b>8.11</b>	835	9.79	893	11.61	957	14.40	1009	16.48		
6859	2400	462	2.84	559	4.21	645	5.69	719	7.25	786	8.88	<b>846</b>	<b>10.61</b>	<b>903</b>	<b>12.44</b>	<b>967</b>	<b>15.38</b>	<b>1017</b>	<b>17.46</b>		
7431	2600	482	3.36	576	4.83	659	6.39	733	8.03	799	9.75	<b>859</b>	<b>11.54</b>	<b>915</b>	<b>13.41</b>	<b>979</b>	<b>16.51</b>	<b>1028</b>	<b>18.61</b>		
8002	2800	503	3.92	595	5.53	674	7.16	747	8.89	812	10.69	872	12.55	927	14.49	<b>967</b>	<b>15.38</b>	<b>1017</b>	<b>17.46</b>	1066	19.66
8574	3000	524	4.56	614	6.30	690	8.01	761	9.82	826	11.71	885	13.66	940	15.67	992	17.75	<b>1040</b>	<b>19.90</b>	1087	22.13
9146	3200	545	5.26	634	7.15	707	8.95	776	10.84	840	12.82	899	14.85	953	16.95	1005	19.10	1053	21.31	<b>1099</b>	<b>23.59</b>
9717	3400	567	6.04	654	8.07	726	9.99	792	11.95	854	14.01	913	16.14	967	18.32	1018	20.55	1066	22.83	1112	25.18
10289	3600	589	6.89	674	9.08	745	11.13	808	13.16	869	15.30	927	17.51	981	19.78	1031	22.10	1079	24.46	1125	26.88
10861	3800	611	7.83	694	10.17	764	12.37	826	14.49	885	16.69	941	18.99	995	21.34	1045	23.75	1093	26.20	1138	28.70
11432	4000	633	8.86	715	11.34	784	13.69	845	15.93	902	18.20	957	20.57	1009	23.01	1059	25.51	1106	28.05	1151	30.63
12004	4200	656	9.97	736	12.61	804	15.09	864	17.48	919	19.83	973	22.27	1024	24.79	1073	27.37	1120	30.00	1165	32.68
12576	4400	679	11.18	757	13.98	824	16.61	884	19.14	938	21.60	989	24.10	1039	26.69	1088	29.35	1134	32.07	1179	34.84
13147	4600	702	12.49	779	15.44	845	18.22	904	20.90	957	23.49	1007	26.06	1056	28.72	1103	31.46	1149	34.26	1193	37.12
13719	4800	725	13.91	801	17.02	865	19.94	923	22.76	976	25.50	1025	28.17	1073	30.90	1119	33.71	1164	36.59	1207	39.52
14291	5000	749	15.43	822	18.70	886	21.78	943	24.73	996	27.62	1045	30.42	1091	33.22	1135	36.09	1179	39.05	1222	42.07
14862	5200	772	17.08	845	20.49	907	23.73	964	26.84	1016	29.86	1064	32.80	1109	35.70	1153	38.64	1196	41.66	1238	44.75
15434	5400	796	18.84	867	22.41	929	25.80	984	29.05	1036	32.21	1084	35.31	1128	38.32	1171	41.34	1213	44.43	1254	47.59
16005	5600	820	20.72	889	24.44	950	27.99	1005	31.39	1056	34.69	1104	37.94	1148	41.10	1189	44.21	1230	47.37	1270	50.60
16577	5800	844	22.73	912	26.61	972	30.31	1026	33.86	1076	37.32	1123	40.69	1167	44.01	1209	47.24	1249	50.48	1288	53.77
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.		
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7431	2600	1113	22.00																		
8002	2800	1121	23.12	1166	25.55																
8574	3000	1131	24.45	1175	26.87	1217	29.39	1258	32.03												
9146	3200	<b>1143</b>	<b>25.95</b>	1185	28.38	1227	30.91	1267	33.53	1306	36.25	1345	39.08								
9717	3400	1155	27.59	<b>1197</b>	<b>30.06</b>	1238	32.62	1277	35.25	1316	37.96	1353	40.77	1390	43.67	1427	46.68				
10289	3600	1168	29.36	1210	31.89	<b>1250</b>	<b>34.49</b>	<b>1289</b>	<b>37.15</b>	1327	39.89	1364	42.70	1400	45.60	1435	48.58	1470	51.66	1505	54.83
10861	3800	1181	31.25	1223	33.85	1262	36.51	1301	39.22	<b>1338</b>	<b>42.00</b>	<b>1375</b>	<b>44.84</b>	1410	47.76	1445	50.75	1479	53.81	1513	56.96
11432	4000	1194	33.26	1236	35.94	1275	38.66	1314	41.44	1351	44.27	1387	47.16	<b>1422</b>	<b>50.11</b>	1456	53.13	1490	56.21	1523	59.37
12004	4200	1208	35.39	1249	38.15	1289	40.95	1327	43.80	1364	46.70	1400	49.65	1434	52.65	<b>1468</b>	<b>55.71</b>	<b>1502</b>	<b>58.82</b>	1534	62.00
12576	4400	1221	37.64	1262	40.49	1302	43.37	1340	46.30	1377	49.27	1412	52.28	1447	55.34	1481	58.46	1514	61.62	<b>1546</b>	<b>64.84</b>
13147	4600	1235	40.01	1276	42.94	1315	45.92	1353	48.92	1390	51.97	1426	55.06	1460	58.20	1494	61.37	1527	64.60	1559	67.87
13719	4800	1249	42.51	1290	45.53	1329	48.59	1367	51.69	1403	54.82	1439	57.99	1473	61.20	1507	64.45	1540	67.74	1571	71.07
14291	5000	1264	45.13	1304	48.25	1343	51.40	1381	54.58	1417	57.80	1452	61.06	1487	64.35	1520	67.67	1553	71.04	1584	74.44
14862	5200	1279	47.90	1318	51.10	1357	54.34	1394	57.61	1431	60.92	1466	64.26	1500	67.64	1533	71.05	1566	74.50	1598	77.98
15434	5400	1294	50.82	1333	54.10	1371	57.42	1408	60.79	1445	64.19	1480	67.62	1514	71.08	1547	74.58	1579	78.11	1611	81.67
16005	5600	1310	53.89	1348	57.25	1366	60.66	1423	64.11	1459	67.60	1494	71.12	1527	74.67	1561	78.26	1593	81.87	1624	85.52
16577	5800	1326	57.14	1354	60.57	1401	64.05	1438	64.59	1473	71.16	1508	74.77	1541	78.42	1574	82.09	1607	85.80	1638	89.53
17149	6000	1343	60.56	1380	64.06	1417	67.62	1453	71.53	1488	74.89	1522	78.59	1556	82.32	1588	86.08	1620	89.88	1652	93.70
17720	6200	1361	64.17	1397	67.73	1433	71.36	1468	75.05	1503	78.79	1537	82.57	1570	86.38	1603	90.24	1634	94.12	1666	98.04
18292	6400	1379	67.97	1415	71.60	1450	75.30	1484	79.05	1518	82.86	1552	86.72	1585	90.63	1617	94.56	1649	98.54	1680	102.54
18864	6600	1398	71.97	1433	75.67	1457	79.43	1501	83.25	1534	87.13	1567	91.07	1600	95.05	1632	99.07	1663	103.13	1694	107.22

Data in bold type indicates the quietest and most efficient performance.

BHP does not include drive losses.

Performance shown is with inlet and outlet ducts.

# VRB-626

WHEEL DIAMETER - 45-1/8"

INLET 26-1/4" - AREA 3.69 SQ. FT.

OUTLET 26" x 20-7/8" - AREA 3.694 SQ. FT.

TIP SPEED (FPM) = 11.81 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.			
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
3653	1000	307	0.94																			
4384	1200	318	1.16	423	2.30																	
5115	1400	330	1.42	<b>433</b>	<b>2.64</b>	516	4.08															
5844	1600	343	1.73	444	3.05	524	4.53	595	6.24													
6575	1800	358	2.10	456	3.53	<b>535</b>	<b>5.09</b>	603	6.82	665	8.76											
7306	2000	374	2.54	468	4.07	547	5.74	<b>613</b>	<b>7.53</b>	674	9.48	730	11.62									
8037	2200	391	3.06	481	4.69	558	6.47	625	8.35	<b>684</b>	<b>10.36</b>	738	12.51	790	14.83	846	18.40	892	21.07			
8768	2400	408	3.64	496	5.38	571	7.27	636	9.26	695	11.35	<b>749</b>	<b>13.56</b>	799	15.90	856	19.66	900	22.31	943	25.13	
9498	2600	426	4.29	510	6.17	583	8.16	648	10.27	707	12.46	760	14.74	<b>809</b>	<b>17.14</b>	866	21.09	910	23.78	951	26.59	
10229	2800	445	5.01	526	7.06	596	9.14	661	11.36	718	13.66	771	16.04	820	18.52	<b>866</b>	<b>21.09</b>	920	25.43	961	28.28	
10960	3000	463	5.83	543	8.06	611	10.23	673	12.55	731	14.97	783	17.46	832	20.02	877	22.68	<b>920</b>	<b>25.43</b>	961	28.28	
11690	3200	482	6.73	561	9.14	626	11.44	686	13.85	743	16.38	795	18.98	843	21.65	889	24.40	931	27.23	<b>972</b>	<b>30.14</b>	
12421	3400	501	7.72	578	10.32	642	12.77	700	15.27	756	17.90	807	20.62	855	23.40	900	26.26	943	29.18	983	32.17	
13151	3600	521	8.81	596	11.60	659	14.23	715	16.82	769	19.55	820	22.38	867	25.28	912	28.24	955	31.26	995	34.35	
13882	3800	540	10.01	614	12.99	676	15.80	731	18.52	783	21.33	833	24.26	880	27.27	924	30.35	967	33.48	1007	36.68	
14613	4000	560	11.32	633	14.49	694	17.49	747	20.36	798	23.26	846	26.28	893	29.40	937	32.59	979	35.84	1018	39.15	
15344	4200	580	12.74	651	16.12	711	19.29	765	22.34	813	25.35	860	28.46	906	31.68	949	34.98	991	38.34	1031	41.76	
16075	4400	600	14.29	670	17.86	729	21.22	782	24.46	830	27.60	875	30.79	920	34.11	962	37.51	1003	40.99	1043	44.52	
16805	4600	621	15.96	689	19.74	747	23.29	799	26.71	847	30.01	891	33.31	934	36.70	976	40.20	1016	43.79	1055	47.43	
17535	4800	641	17.77	708	21.74	766	25.49	817	29.08	864	32.59	907	36.00	949	39.48	990	43.07	1030	46.75	1068	50.51	
18266	5000	662	19.72	728	23.89	784	27.83	835	31.61	881	35.30	924	38.87	965	42.45	1004	46.12	1043	49.90	1081	53.75	
18997	5200	683	21.82	747	26.19	803	30.32	853	34.30	899	38.16	941	41.92	981	45.62	1020	49.38	1058	53.24	1095	57.19	
19728	5400	704	24.07	767	28.63	822	32.97	871	37.12	916	41.16	959	45.13	998	48.97	1036	52.83	1073	56.78	1109	60.82	
20458	5600	725	26.48	787	31.24	841	35.77	889	40.11	934	44.33	976	48.48	1015	52.52	1052	56.50	1088	60.53	1124	64.66	
21189	5800	747	29.05	807	34.00	860	38.73	908	43.27	952	47.70	994	52.00	1033	56.24	1069	60.37	1104	64.51	1139	68.72	
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.			
	Outlet Vel. FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
9498	2600	985	28.11																			
10229	2800	992	29.55	1031	32.65																	
10960	3000	1001	31.24	1039	34.33	1077	37.56	1113	40.93													
11690	3200	<b>1011</b>	<b>33.16</b>	1049	36.27	1085	39.50	1121	42.84	1156	46.32	1190	49.93									
12421	3400	1022	35.25	<b>1059</b>	<b>38.42</b>	1095	41.68	1130	45.04	1164	48.51	1197	52.10	1230	55.81	1262	59.65					
13151	3600	1033	37.51	1070	40.75	<b>1106</b>	<b>44.07</b>	<b>1140</b>	<b>47.48</b>	1174	50.97	1206	54.57	1238	58.27	1270	62.08	1300	66.01	1331	70.06	
13882	3800	1045	39.93	1081	43.26	1117	46.65	1151	50.12	<b>1184</b>	<b>53.67</b>	<b>1216</b>	<b>57.31</b>	1248	61.03	1278	64.85	1309	68.77	1338	72.79	
14613	4000	1057	42.51	1093	45.93	1128	49.41	1162	52.96	1195	56.58	1227	60.27	<b>1258</b>	<b>64.04</b>	1288	67.89	1318	71.83	1347	75.86	
15344	4200	1068	45.23	1105	48.75	1140	52.33	1174	55.97	1206	59.68	1238	63.44	1269	67.28	<b>1299</b>	<b>71.18</b>	<b>1328</b>	<b>75.17</b>	1357	79.23	
16075	4400	1081	48.10	1117	51.74	1152	55.42	1185	59.16	1218	62.96	1249	66.81	1280	70.72	1310	74.70	1339	78.75	<b>1368</b>	<b>82.86</b>	
16805	4600	1093	51.13	1129	54.88	1164	58.67	1197	62.58	1230	66.42	1261	70.36	1292	74.37	1321	78.43	1350	82.55	1379	86.73	
17535	4800	1105	54.32	1141	58.18	1176	62.09	1209	66.05	1241	70.05	1273	74.10	1303	78.20	1333	82.36	1362	86.56	1390	90.82	
18266	5000	1118	57.68	1154	61.65	1188	65.68	1221	69.75	1253	73.86	1285	78.02	1315	82.23	1345	86.48	1374	90.78	1402	95.13	
18997	5200	1131	61.21	1166	65.30	1200	69.44	1233	73.62	1266	77.85	1297	82.12	1327	86.44	1357	90.79	1385	95.20	1413	99.65	
19728	5400	1145	64.94	1179	69.13	1213	73.38	1246	77.68	1278	82.02	1309	86.41	1339	90.83	1368	95.30	1397	99.81	1425	104.36	
20458	5600	1159	68.87	1193	73.16	1226	77.51	1259	81.92	1290	86.38	1321	90.88	1351	95.42	1381	100.99	1409	104.62	1437	109.28	
21189	5800	1173	73.01	1207	77.40	1240	81.85	1272	86.37	1303	90.94	1334	95.55	1364	100.21	1393	104.90	1421	109.64	1449	114.41	
21920	6000	1188	77.39	1221	81.86	1253	86.41	1285	91.02	1316	95.70	1346	100.42	1376	105.19	1405	110.00	1433	114.85	1461	119.74	
22651	6200	1204	82.00	1236	86.56	1268	91.19	1299	95.90	1329	100.68	1359	105.51	1389	110.39	1418	115.31	1446	120.28	1473	125.28	
23381	6400	1220	86.86	1251	91.50	1282	96.22	1313	101.20	1343	105.89	1373	110.82	1402	115.81	1430	120.84	1458	125.92	1486	131.03	
24111	6600	1237	91.97	1267	96.70	1298	101.50	1328	106.38	1357	111.34	1387	116.37	1415	121.46	1443	126.60	1471	131.79	1498	137.01	

Data in bold type indicates the quietest and most efficient performance. BHP does not include drive losses.

Performance shown is with inlet and outlet ducts.

# VRB-629

WHEEL DIAMETER - 50-1/2"

INLET 29-1/4" - AREA 4.59 SQ. FT.

OUTLET 29" x 23-1/4" - AREA 4.596 SQ. FT.

TIP SPEED (FPM) = 13.22 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4545	1000	275	1.17																		
5454	1200	285	1.44																		
6363	1400	296	1.77	379	2.86	379	3.28	462	5.08												
7273	1600	308	2.15	398	3.79	470	5.64	533	7.77												
8181	1800	321	2.62	409	4.39	480	6.34	541	8.49	597	10.90										
9090	2000	335	3.17	420	5.07	490	7.14	550	9.37	604	11.80	654	14.46								
9999	2200	351	3.80	431	5.83	501	8.05	560	10.39	613	12.89	662	15.56	708	18.45						
10908	2400	366	4.52	444	6.70	512	9.05	571	11.52	623	14.12	671	16.87	716	19.78	759	22.89	800	26.21		
11818	2600	382	5.33	457	7.68	523	10.15	581	12.77	634	15.50	681	18.34	725	21.32	767	24.45	807	27.76	845	31.26
12727	2800	399	6.24	472	8.79	535	11.38	592	14.13	644	16.99	691	19.96	735	23.04	776	26.24	815	29.58	853	33.09
13636	3000	415	7.25	487	10.02	547	12.73	604	15.62	655	18.62	702	21.72	746	24.91	786	21.28	825	31.63	862	35.18
14545	3200	432	8.37	503	11.37	561	14.23	615	17.23	666	20.38	713	23.62	756	26.94	797	30.36	835	33.88	871	37.50
15454	3400	449	9.60	518	12.84	576	15.89	628	19.00	677	22.27	724	25.65	767	29.12	807	32.66	845	36.30	882	40.74
16363	3600	476	10.96	534	14.43	591	17.70	641	20.93	689	24.32	735	27.94	778	31.45	818	35.13	856	38.89	892	42.74
17272	3800	484	12.45	551	16.16	606	19.66	655	23.04	702	26.54	747	30.18	789	33.93	829	37.76	867	41.66	902	45.63
18181	4000	502	14.08	567	18.03	622	21.76	670	25.33	715	28.94	759	32.70	800	36.58	840	40.55	877	44.59	913	48.70
19090	4200	520	15.85	584	20.05	638	24.00	685	27.80	729	31.53	771	35.40	812	39.41	851	43.52	888	47.70	924	51.95
19999	4400	538	17.77	601	22.22	654	26.40	701	30.43	744	34.33	785	38.31	824	42.43	863	46.67	900	50.99	935	55.38
20909	4600	557	19.86	618	24.55	670	28.97	717	33.23	759	37.34	799	41.44	837	45.66	875	50.02	911	54.47	946	59.01
21818	4800	575	22.11	635	27.05	686	31.71	732	36.18	774	40.54	813	44.79	851	49.12	887	53.58	923	58.16	958	62.83
22727	5000	594	24.54	652	29.73	703	34.62	748	39.32	790	43.92	828	48.36	865	52.81	901	57.38	935	62.08	969	66.87
23636	5200	612	27.15	670	32.58	720	37.72	765	42.67	806	47.47	844	52.15	880	56.75	914	61.43	948	66.23	982	71.14
24545	5400	631	29.95	687	35.62	737	41.01	781	46.18	821	51.20	859	56.14	895	60.93	929	65.73	962	70.63	994	75.66
25454	5600	650	32.94	705	38.86	754	44.50	797	49.91	837	55.15	875	60.32	910	65.34	943	70.29	976	75.31	1008	80.44
26363	5800	669	36.14	723	42.30	771	48.19	814	53.84	854	59.34	891	64.49	926	69.97	959	75.11	990	80.25	1021	85.49
VOL. CFM	Outlet Vel. FPM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11818	2600	883	34.97																		
12727	2800	889	36.76	925	40.62																
13636	3000	897	38.87	932	42.71	965	46.73	998	50.92												
14545	3200	906	41.25	940	45.12	973	49.14	1005	53.30	1036	57.62	1067	62.12								
15454	3400	916	43.86	950	47.79	982	51.85	1013	56.03	1043	60.35	1073	64.81	1103	69.43	1132	74.21				
16363	3600	926	46.67	959	50.70	991	54.83	1022	59.06	1052	63.42	1081	67.89	1110	72.50	1138	77.24	1166	82.12	1193	87.17
17272	3800	937	49.68	970	53.82	1001	58.04	1032	62.36	1062	66.77	1090	71.29	1119	75.93	1146	80.68	1173	85.55	1200	90.56
18181	4000	947	52.88	980	57.14	1012	61.47	1042	65.88	1071	70.39	1100	74.98	1128	79.67	1155	84.46	1182	89.36	1208	94.38
19090	4200	958	56.27	991	60.65	1022	65.11	1052	69.64	1082	74.24	1110	78.93	1138	83.70	1165	88.56	1191	93.51	1217	98.57
19999	4400	969	59.84	1001	64.36	1033	68.95	1063	73.60	1092	78.32	1120	83.12	1148	87.99	1175	92.93	1201	97.97	1226	103.08
20909	4600	980	63.61	1012	68.27	1043	73.00	1073	77.78	1102	82.63	1131	87.54	1158	92.52	1185	97.57	1211	102.70	1236	107.90
21818	4800	991	67.58	1023	72.38	1054	77.25	1084	82.17	1113	87.15	1141	92.19	1169	97.29	1195	102.46	1221	107.69	1246	112.99
22727	5000	1002	71.75	1034	76.70	1065	81.71	1095	86.77	1124	91.89	1152	97.07	1179	102.30	1206	107.59	1231	112.94	1257	118.35
23636	5200	1014	76.15	1046	81.24	1076	86.39	1106	91.59	1135	96.85	1163	102.17	1190	107.53	1216	112.96	1242	118.43	1267	123.97
24545	5400	1026	80.79	1057	86.00	1088	91.29	1117	96.64	1146	102.04	1173	107.50	1201	113.00	1227	118.56	1253	124.17	1278	129.84
25454	5600	1039	85.68	1069	91.02	1099	96.43	1128	101.92	1157	107.46	1185	113.06	1211	118.71	1238	124.41	1263	130.16	1288	135.96
26363	5800	1052	90.84	1082	96.29	1111	101.83	1140	107.45	1168	113.13	1196	118.87	1223	124.66	1249	130.51	1274	136.40	1299	142.33
27272	6000	1065	96.28	1095	101.84	1124	107.50	1152	113.24	1180	119.06	1207	124.93	1234	130.87	1260	136.85	1285	142.88	1310	148.96
28181	6200	1079	102.02	1108	107.68	1137	113.45	1164	119.31	1192	125.25	1219	131.26	1245	137.33	1271	143.36	1296	149.63	1321	155.86
29090	6400	1094	108.06	1122	113.83	1150	119.71	1177	125.68	1204	131.74	1231	137.87	1257	144.07	1282	150.34	1308	156.64	1332	163.02
30000	6600	1190	114.41	1133	120.30	1163	126.28	1190	132.35	1217	138.52	1243	144.78	1269	151.11	1294	157.50	1319	163.95	1343	170.46

Data in bold type indicates the quietest and most efficient performance.

BHP does not include drive losses.

Performance shown is with inlet and outlet ducts.

# VRB-633

WHEEL DIAMETER - 57-1/2"

INLET 33-3/8" - AREA 5.94 SQ. FT.

OUTLET 33" x 26-1/2" - AREA 5.951 SQ. FT.

TIP SPEED (FPM) = 15.05 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.		
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	
5885	1000	242	1.52																		
7062	1200	251	1.87	333	3.70																
8239	1400	260	2.29	<b>341</b>	<b>4.25</b>	406	6.57														
9417	1600	270	2.79	350	4.91	413	7.30	10.06													
10594	1800	282	3.39	359	5.69	<b>422</b>	<b>8.21</b>	10.99	524	14.11											
11771	2000	294	4.10	369	6.56	431	9.25	<b>483</b>	<b>12.14</b>	15.28	575	18.72									
12947	2200	308	4.93	379	7.55	440	10.42	13.45	<b>539</b>	16.69	582	20.15	622	23.90							
12124	2400	322	5.86	390	8.67	450	11.72	501	14.92	548	18.29	<b>590</b>	<b>21.84</b>	629	25.61	667	29.63	703	33.94	33.94	
15302	2600	336	6.91	402	9.94	459	13.15	511	16.54	557	20.07	599	23.75	<b>637</b>	<b>27.61</b>	674	31.66	709	35.95	743	
16479	2800	350	8.08	415	11.38	470	14.73	520	18.30	566	22.01	608	25.84	646	29.83	<b>682</b>	33.98	717	38.31	750	
17656	3000	365	9.38	428	12.98	481	16.48	530	20.22	576	24.11	617	28.12	655	32.26	691	36.53	<b>725</b>	<b>40.96</b>	757	
18832	3200	380	10.83	442	14.73	493	18.43	541	22.32	585	26.39	626	30.58	664	34.88	700	39.31	734	43.86	<b>766</b>	
20010	3400	395	12.43	456	16.62	506	20.57	552	24.60	595	28.84	636	33.22	674	37.70	709	42.30	743	47.00	775	
21188	3600	410	14.19	470	18.69	519	22.92	563	27.10	606	31.49	646	36.05	693	40.72	719	45.49	752	50.36	784	
22365	3800	426	16.12	484	20.93	533	25.46	576	29.83	617	34.36	656	39.08	693	43.94	728	48.89	762	53.94	793	
23542	4000	441	18.23	498	23.35	547	28.17	589	32.80	628	37.47	667	42.34	703	47.37	738	52.51	771	57.74	802	
24719	4200	457	20.52	513	25.96	560	31.07	602	35.99	641	40.83	678	45.84	714	51.03	748	56.35	781	61.76	812	
25895	4400	473	23.02	528	28.77	574	34.19	616	39.41	654	44.46	690	49.61	724	54.94	758	60.43	791	66.03	822	
27073	4600	489	25.71	543	31.79	589	37.52	630	43.03	667	48.35	702	53.66	736	59.13	769	64.77	801	70.54	831	
28250	4800	505	28.63	558	35.03	603	41.06	644	46.85	681	52.49	715	57.99	748	63.60	780	69.39	811	75.32	842	
29427	5000	522	31.77	573	38.49	618	44.83	658	50.92	694	56.87	728	62.62	762	68.39	791	74.30	822	80.38	852	
30604	5200	538	35.15	589	42.19	632	48.85	672	55.25	708	61.47	742	67.53	773	73.48	803	79.54	833	85.76	862	
31781	5400	555	38.78	604	46.13	647	53.10	686	59.80	722	66.30	755	72.69	786	78.90	816	85.11	845	91.46	874	
32959	5600	571	42.66	620	50.32	662	57.62	701	64.62	736	71.42	769	78.11	800	84.61	829	91.02	857	97.51	885	
34136	5800	588	47.14	634	55.00	675	62.60	713	69.91	748	77.10	783	83.77	814	90.60	842	97.26	870	103.92	897	
15302	2600	776	45.29																		
16479	2800	781	47.60	813	52.60																
17656	3000	789	50.33	819	55.31	848	60.50	877	65.93												
18832	3200	<b>797</b>	<b>53.41</b>	826	58.43	855	63.63	883	69.02	910	74.62	937	80.44								
20010	3400	805	56.79	<b>834</b>	<b>61.89</b>	863	67.14	890	72.56	917	78.15	943	83.93	969	89.90	994	96.09				
21188	3600	814	60.43	843	65.65	<b>871</b>	<b>71.00</b>	<b>898</b>	<b>76.48</b>	925	82.12	950	87.91	976	93.87	1000	100.01	1025	106.34	1049	112.87
22365	3800	823	64.33	852	69.69	880	75.15	907	80.74	<b>933</b>	<b>86.46</b>	<b>958</b>	<b>92.32</b>	983	98.32	1007	104.47	1031	110.78	1055	117.26
23542	4000	832	68.48	861	73.99	889	79.60	916	85.31	942	91.14	967	97.09	<b>991</b>	<b>103.17</b>	1015	109.37	1039	115.72	1062	122.21
24719	4200	842	72.86	871	78.54	898	84.31	925	90.17	950	96.13	975	102.20	1000	108.38	<b>1023</b>	<b>114.67</b>	<b>1047</b>	<b>121.09</b>	1069	127.63
25895	4400	851	77.49	880	83.34	907	89.28	934	95.31	960	101.42	984	107.63	1009	113.93	1032	120.34	1055	126.86	<b>1078</b>	<b>133.48</b>
27073	4600	861	82.37	889	88.41	917	94.52	943	100.72	969	106.99	994	113.35	1018	119.80	1041	126.34	1064	132.98	1086	139.72
28250	4800	871	87.50	899	93.73	926	100.03	953	106.40	978	112.85	1003	119.38	1027	125.98	1050	132.67	1073	139.45	1095	146.31
29427	5000	881	92.91	909	99.32	936	105.80	962	112.36	988	118.99	1012	125.69	1036	132.46	1059	139.31	1082	146.24	1104	153.25
30604	5200	891	98.61	919	105.19	946	111.86	972	118.60	997	125.41	1022	132.29	1046	139.24	1069	146.27	1091	153.36	1114	160.53
31781	5400	902	104.61	929	111.36	956	118.21	982	125.14	1007	132.13	1031	139.20	1055	146.33	1078	153.53	1101	160.79	1123	168.13
32959	5600	913	110.94	940	117.85	966	124.87	992	131.97	1017	139.15	1041	146.40	1065	153.72	1088	161.10	1110	168.54	1132	176.05
34136	5800	924	117.62	951	124.68	977	131.86	1002	139.13	1027	145.49	1051	153.93	1074	161.43	1097	168.99	1120	176.62	1142	184.31
35313	6000	936	124.67	962	131.87	987	139.20	1012	146.63	1037	154.16	1061	161.78	1084	169.46	1107	177.21	1129	185.02	1151	192.89
36490	6200	949	132.10	974	139.44	999	146.91	1023	154.49	1047	162.19	1071	169.97	1094	177.83	1117	185.76	1139	193.76	1161	201.82
37667	6400	961	139.93	986	147.40	1010	155.00	1035	162.74	1058	170.58	1082	178.53	1105	186.56	1127	194.67	1149	202.85	1171	211.09
38844	6600	974	148.15	999	155.77	1022	163.51	1046	171.38	1069	179.37	1092	187.47	1115	195.66	1137	203.94	1159	212.30	1181	220.72

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.

# VRB-637

WHEEL DIAMETER - 64-3/8"

INLET 37-3/8" - AREA 7.47 SQ. FT.

OUTLET 37" x 29-5/8" - AREA 7.481 SQ. FT.

TIP SPEED (FPM) = 16.85 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7398	1000	216	1.91																		
8878	1200	224	2.34	297	4.66																
10357	1400	232	2.88	304	5.34	362	8.27														
11838	1600	241	3.51	312	6.18	368	9.18	418	12.64												
13317	1800	251	4.26	321	7.15	376	10.32	424	13.81	468	17.74										
14797	2000	263	5.15	329	8.25	384	11.63	431	15.26	473	19.20	513	23.54								
16276	2200	275	6.19	338	9.50	392	13.10	439	16.91	481	20.98	519	25.33	555	30.04	595	37.25	627	42.66		
17756	2400	287	7.36	348	10.90	401	14.73	447	18.76	488	22.99	526	27.46	561	32.20	595	39.81	632	45.19	663	50.88
19237	2600	300	8.68	358	12.50	410	16.53	456	20.79	497	25.22	534	29.85	569	34.71	601	39.81	632	45.19	663	50.88
20716	2800	312	10.15	370	14.30	419	18.52	464	23.01	505	27.66	542	32.49	576	37.50	609	42.71	639	48.16	669	53.86
22196	3000	326	11.80	382	16.31	429	20.72	473	25.42	513	30.31	550	35.35	584	40.55	616	45.93	647	51.49	676	57.27
23675	3200	339	13.62	394	18.51	440	23.16	482	28.05	522	33.17	559	38.44	583	43.85	624	49.42	654	55.14	683	61.05
25155	3400	352	15.63	406	20.90	451	25.86	492	30.93	531	36.26	567	41.76	601	47.40	633	43.17	663	59.09	691	65.16
26635	3600	366	17.84	419	23.49	463	28.81	503	34.07	540	39.59	576	45.32	610	51.19	641	57.19	671	63.31	699	69.57
28115	3800	380	20.27	432	26.31	475	32.00	514	37.50	550	43.20	585	49.13	618	55.23	650	61.46	679	67.81	707	74.28
29594	4000	394	22.92	444	29.35	487	35.42	525	41.23	561	47.10	595	53.23	627	59.55	668	66.01	688	72.58	716	79.28
31074	4200	408	25.80	458	32.64	500	39.06	537	45.25	571	51.33	605	57.63	636	64.15	667	70.83	696	77.64	724	84.57
32553	4400	422	28.93	471	36.17	512	42.98	549	49.54	583	55.89	615	62.36	646	69.07	676	75.97	705	83.00	732	90.16
34034	4600	436	32.33	484	39.97	525	47.16	562	54.09	595	60.78	626	67.45	656	74.23	686	81.42	714	88.67	743	96.06
35514	4800	451	35.99	498	44.04	538	51.61	574	58.90	607	65.99	637	72.91	667	79.96	696	87.23	723	94.68	751	102.28
36993	5000	465	39.94	511	48.39	551	56.36	586	64.01	619	71.49	649	78.72	678	85.97	706	93.41	733	101.05	760	108.86
38473	5200	480	44.19	525	53.03	564	61.40	599	69.46	632	77.27	661	84.89	689	92.38	717	99.99	743	107.81	779	115.81
39952	5400	495	48.75	539	57.99	577	66.76	612	75.17	644	83.35	674	91.39	701	99.18	728	106.99	754	114.98	779	123.16
41433	5600	510	53.62	563	63.26	591	72.43	625	81.24	656	89.78	686	98.19	713	106.36	739	114.42	765	122.59	790	130.94
42912	5800	525	58.84	567	68.86	604	78.44	638	87.64	669	96.59	698	105.31	726	113.90	751	122.26	776	130.64	800	139.16
VOL. CFM	Outlet Vel. FPM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19237	2600	692	56.93																		
20716	2800	697	59.64	725	66.12																
22196	3000	703	63.27	730	69.53	756	76.06	782	82.89												
23675	3200	710	67.14	737	73.45	763	79.98	788	86.76	812	93.80	836	101.12								
25155	3400	718	71.39	744	77.80	769	84.40	794	91.21	818	98.24	841	105.51	864	113.02	887	120.80				
26635	3600	726	75.97	752	82.53	777	89.25	801	96.15	825	103.23	848	110.52	870	118.01	892	125.73	914	133.69	935	141.89
28115	3800	734	80.87	760	87.60	785	94.48	809	101.50	832	108.69	855	116.05	877	123.59	898	131.33	920	139.26	941	147.41
29594	4000	742	86.08	768	93.01	793	100.06	817	107.25	840	114.58	862	122.05	884	129.69	905	137.49	926	145.47	947	153.63
31074	4200	751	91.59	776	98.73	801	105.98	825	113.35	848	120.85	870	128.48	892	136.25	913	144.16	934	152.23	954	160.45
32553	4400	759	97.41	785	104.77	809	112.24	833	119.81	856	127.50	878	135.30	900	143.23	921	151.28	941	159.47	961	167.80
34034	4600	768	103.55	793	111.14	818	118.83	841	126.61	864	134.50	886	142.50	908	150.61	929	158.83	949	167.17	969	175.64
35514	4800	777	110.00	802	117.83	826	125.74	850	133.76	872	141.86	894	145.07	916	158.37	937	166.78	957	175.30	977	183.93
36993	5000	786	116.80	811	124.86	835	133.01	858	141.25	881	149.58	903	158.01	924	166.52	945	175.13	965	183.84	985	192.66
38473	5200	795	123.96	820	132.24	844	140.62	867	149.10	889	157.66	911	166.31	933	175.05	953	183.87	973	192.79	993	201.80
39952	5400	804	131.51	829	140.00	852	148.60	876	157.31	898	166.11	920	174.99	941	183.95	962	193.00	982	202.13	1001	211.35
41433	5600	814	139.47	838	148.16	862	156.98	884	165.91	907	174.93	928	184.05	950	193.24	970	202.52	990	211.88	1010	221.32
42912	5800	824	147.87	848	156.74	871	165.76	894	174.91	916	184.16	937	193.50	958	202.93	979	212.44	999	222.03	1018	231.69
44392	6000	835	156.73	858	165.78	881	174.99	903	184.34	925	193.80	946	203.37	967	213.03	987	222.77	1007	232.59	1027	242.29
45871	6200	846	166.07	869	175.29	891	184.68	913	194.22	934	203.89	955	213.67	976	223.56	996	233.53	1016	243.58	1035	253.71
47351	6400	857	175.91	879	185.30	901	194.86	923	204.58	944	214.44	965	224.43	985	234.53	1005	244.72	1025	255.00	1044	265.36
49128	6600	869	186.25	891	195.83	912	205.55	933	215.44	954	225.49	974	235.67	994	245.97	1014	256.38	1034	266.89	1053	277.47

Data in bold type indicates the quietest and most efficient performance.  
BHP does not include drive losses.  
Performance shown is with inlet and outlet ducts.

# VRB-641

WHEEL DIAMETER - 71-1/4"

INLET 41-3/8" - AREA 9.17 SQ. FT.

OUTLET 41" x 32-7/8" - AREA 9.186 SQ. FT.

TIP SPEED (FPM) = 18.65 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.			
	Outlet Vel. FPM	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP		
9084	1000	195	2.34																			
10901	1200	202	2.88	268	5.72																	
12718	1400	209	3.53	275	6.56	327	10.15															
14536	1600	218	4.31	282	7.58	332	11.27	377	15.52													
16353	1800	227	5.23	289	8.78	339	12.67	382	16.96	422	21.78											
18169	2000	237	6.33	297	10.13	347	14.28	389	18.73	427	23.58	463	28.90									
19986	2200	248	7.60	305	11.66	354	16.08	396	20.77	434	25.76	468	31.11	501	36.89							
21803	2400	259	9.04	314	13.39	362	18.08	404	23.03	441	28.23	475	33.72	507	39.54	537	45.74	566	52.38			
23621	2600	270	10.66	323	15.35	370	20.30	411	25.53	448	30.97	482	36.66	513	42.51	543	48.88	571	55.49	598	62.48	
25438	2800	282	12.47	334	17.56	378	22.74	419	28.25	456	33.97	489	39.89	520	46.05	549	52.45	577	59.13	603	66.13	
27254	3000	294	14.49	344	20.03	387	25.44	427	31.22	463	37.22	497	43.41	527	49.80	556	56.39	584	63.23	610	70.32	
29071	3200	306	16.72	356	22.73	397	28.44	435	34.45	471	40.73	504	47.20	545	53.85	564	60.68	591	67.71	616	74.96	
30888	3400	318	19.19	367	25.66	407	31.75	444	37.98	479	44.52	512	51.28	542	58.20	571	65.29	598	72.55	624	80.00	
32706	3600	330	21.91	378	28.85	418	35.38	454	41.83	488	48.61	520	55.64	550	62.85	579	70.22	605	77.74	631	85.42	
34523	3800	343	24.89	389	32.30	429	39.30	463	46.04	496	53.04	528	60.33	558	67.82	586	75.47	613	83.26	638	91.21	
36339	4000	355	28.14	401	36.04	440	43.49	474	50.62	506	57.84	537	65.36	566	73.13	594	81.05	621	89.13	646	97.34	
38156	4200	368	31.68	413	40.08	451	47.96	485	55.56	516	63.03	546	70.76	574	78.77	602	86.98	628	95.34	654	103.84	
39973	4400	381	35.53	425	44.42	462	52.77	496	60.83	526	68.63	555	76.58	583	84.81	610	93.28	636	101.92	661	110.70	
41791	4600	394	39.69	437	49.08	474	57.91	507	66.42	537	74.63	565	82.82	592	91.27	619	99.98	644	108.88	669	117.95	
43607	4800	407	44.19	449	54.07	485	63.37	518	72.32	548	81.03	575	89.52	602	98.18	628	107.11	653	116.26	677	125.69	
45424	5000	420	49.04	461	59.42	497	69.20	529	78.60	559	87.78	586	96.66	612	105.56	637	114.70	662	124.08	686	133.67	
47241	5200	433	54.26	474	65.12	509	75.40	541	85.29	570	94.38	597	104.24	622	113.43	647	122.78	671	132.38	694	142.20	
49058	5400	447	59.86	486	71.20	521	81.97	552	92.31	581	102.35	608	112.21	633	121.78	657	131.38	680	141.19	703	151.23	
50876	5600	460	65.85	499	77.67	533	88.94	564	99.75	592	110.24	619	120.57	644	130.60	667	140.50	690	150.52	713	160.78	
52692	5800	473	72.24	511	84.55	545	96.32	576	107.61	604	118.61	630	129.30	655	139.85	678	150.13	700	160.41	722	170.88	
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.			
	Outlet Vel. FPM	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	RPM/BHP	
23621	2600	625	69.90																			
25438	2800	629	73.47	654	81.19																	
27254	3000	635	77.69	659	85.38	683	93.40	706	101.78													
29071	3200	641	82.45	665	90.19	688	98.21	711	106.54	733	115.18	754	124.17									
30888	3400	648	87.66	672	95.53	694	103.64	716	112.00	738	120.63	759	129.55	780	138.78	800	148.33					
32706	3600	655	93.29	679	101.34	701	109.59	723	118.06	744	126.76	765	135.70	785	144.91	805	154.38	825	164.15	844	174.23	
34523	3800	663	99.30	686	107.57	708	116.01	730	124.64	751	133.46	771	142.50	791	151.76	811	161.26	830	171.00	849	181.01	
36339	4000	670	105.70	693	114.20	715	122.87	737	131.69	758	140.69	778	149.87	798	159.25	817	168.83	836	178.62	854	188.64	
38156	4200	678	112.47	701	121.23	723	130.14	744	139.19	765	148.39	785	157.76	805	167.30	824	177.01	842	186.92	861	197.02	
39973	4400	685	119.61	708	128.65	730	137.82	752	147.12	772	156.55	792	166.14	812	175.87	831	185.76	849	195.82	867	206.05	
41791	4600	693	127.14	716	136.46	738	145.91	759	155.47	780	165.16	800	174.98	819	184.93	838	195.03	856	205.27	874	215.67	
43607	4800	701	135.07	724	144.68	745	154.40	767	164.24	787	174.20	807	184.27	827	194.47	845	204.79	864	215.25	882	225.85	
45424	5000	709	143.42	732	153.31	753	163.32	774	173.44	795	183.67	815	194.02	834	204.47	853	215.05	871	225.74	889	236.56	
47241	5200	717	152.21	740	162.38	761	172.67	782	183.07	803	193.59	822	204.21	842	214.94	860	225.78	878	236.73	896	247.79	
49058	5400	726	161.48	748	171.90	769	182.47	790	193.16	810	203.96	830	214.87	849	225.88	868	236.99	886	248.20	904	259.52	
50876	5600	735	171.25	756	181.92	778	192.75	798	203.72	818	214.80	838	225.99	857	237.28	875	248.68	894	260.17	911	271.76	
52692	5800	744	181.56	765	192.46	786	203.54	806	214.77	826	226.13	846	237.60	865	249.18	883	260.86	901	272.63	919	284.50	
54509	6000	754	192.45	774	203.56	795	214.87	815	226.35	835	237.97	854	249.72	873	261.58	891	273.54	909	285.60	927	297.75	
56326	6200	763	203.92	784	215.24	804	226.77	824	238.48	843	250.36	862	262.37	881	274.50	899	286.75	917	299.09	934	311.53	
58143	6400	774	216.00	794	227.53	813	239.27	833	251.20	852	263.31	871	275.68	889	287.98	907	300.50	925	313.12	942	325.84	
59961	6600	784	228.69	804	240.46	823	252.40	842	264.54	861	276.88	879	289.38	897	302.03	915	314.81	933	327.71	950	340.71	

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.



# VRB-645

WHEEL DIAMETER - 78-1/4"

INLET 45-3/8" - AREA 11.04 SQ. FT.

OUTLET 45" x 36-1/4" - AREA 11.066 SQ. FT.

TIP SPEED (FPM) = 20.49 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10944	1000	177	2.82																	
13132	1200	184	3.47	245	6.89															
15321	1400	191	4.25	250	7.90	298	12.23													
19699	1800	207	6.30	264	10.57	309	15.26	384	26.24											
21888	2000	216	7.62	271	12.20	316	17.20	354	22.57	389	28.41	422	34.81							
24077	2200	226	9.16	278	14.05	323	19.37	361	25.02	395	31.03	427	37.47	456	44.43					
26265	2400	236	10.89	286	16.13	330	21.79	368	27.75	402	34.01	433	40.62	461	47.63					
28455	2600	246	12.84	295	18.49	337	24.45	375	30.75	408	37.31	439	44.16	467	51.34					
30644	2800	257	15.02	304	21.16	345	27.39	382	34.03	415	40.92	446	48.06	474	55.47					
32832	3000	268	17.45	314	24.13	353	30.65	389	37.60	422	44.84	452	52.29	481	59.99					
35021	3200	279	20.15	324	27.39	362	34.26	397	41.50	429	49.06	459	56.86	487	64.87					
37210	3400	290	23.12	334	30.91	371	38.25	405	45.75	437	53.63	466	61.77	494	70.11					
39399	3600	301	26.39	344	34.75	381	42.62	413	50.39	444	58.56	474	67.03	501	75.72					
41588	3800	312	29.98	355	38.91	391	47.34	422	55.47	452	63.90	481	72.68	508	81.70					
43777	4000	324	33.90	365	43.42	401	52.39	432	60.98	461	69.67	489	78.73	516	88.08					
45965	4200	335	38.16	376	48.28	411	57.78	442	66.93	470	75.93	497	82.25	523	94.89					
48154	4400	347	42.80	387	53.51	421	63.57	452	73.28	479	82.67	506	92.25	531	102.17					
50344	4600	359	47.82	398	59.12	432	69.76	462	80.01	489	89.91	515	99.77	540	109.95					
52532	4800	371	53.24	409	65.14	442	76.34	472	87.12	499	97.61	524	107.84	548	118.27					
54721	5000	383	59.08	420	71.57	453	83.36	483	94.68	509	105.75	534	116.45	557	127.17					
56910	5200	395	65.36	432	78.45	464	90.83	493	102.74	519	114.30	544	125.57	567	136.64					
59098	5400	407	72.10	443	85.77	475	98.75	503	111.20	529	123.29	554	135.18	577	146.71					
61288	5600	419	79.32	454	93.57	486	107.14	514	120.17	540	132.80	564	145.24	587	157.33					
63476	5800	431	87.03	466	101.86	497	116.03	524	129.63	550	142.88	574	155.77	597	168.47					
VOL. CFM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26455	2600	569	84.21																	
30644	2800	573	88.51	596	97.81															
32832	3000	578	93.59	600	102.85	622	112.51	643	122.60											
35021	3200	584	99.32	606	108.65	627	118.31	648	128.34	668	138.75	687	149.58							
37210	3400	590	105.60	612	115.08	633	124.85	653	134.92	672	145.32	692	156.06	711	167.18	729	178.68			
39399	3600	597	112.38	618	122.08	639	132.02	659	142.22	678	152.70	697	163.47	715	174.56	734	185.98	751	197.74	209.88
41588	3800	604	119.63	625	129.58	645	139.75	665	150.14	684	160.78	703	171.66	721	182.82	739	194.26	756	205.99	218.05
43777	4000	610	127.33	632	137.58	652	148.01	671	158.64	690	169.48	709	180.54	727	191.84	744	203.38	762	215.18	227.25
45965	4200	617	135.49	638	146.04	659	156.77	678	167.67	697	178.76	715	190.04	733	201.53	751	213.24	768	225.17	237.34
48154	4400	624	144.09	645	154.98	665	166.02	685	177.22	704	188.59	722	200.13	740	211.86	757	223.77	774	235.89	248.21
50344	4600	631	153.16	652	164.39	672	175.76	692	187.28	710	198.95	729	210.78	746	222.77	763	234.94	780	247.28	259.81
52532	4800	639	162.72	659	174.29	679	186.00	699	197.85	717	209.84	735	221.98	753	234.26	770	246.70	787	259.30	272.07
54721	5000	646	172.77	667	184.68	686	196.74	706	208.93	724	221.26	742	233.72	760	246.32	777	259.05	794	271.94	284.97
56910	5200	654	183.36	674	195.61	694	208.00	713	220.54	731	233.21	749	246.00	767	258.93	784	271.98	801	285.17	298.50
59098	5400	661	194.53	681	207.08	701	219.81	720	232.69	738	245.70	756	258.84	774	272.10	791	285.48	807	298.99	312.63
61288	5600	669	206.30	689	219.15	708	232.20	727	245.41	745	258.76	763	272.24	781	285.84	798	299.57	814	313.41	327.37
63476	5800	678	218.72	697	231.85	716	245.19	735	258.72	753	272.41	771	286.23	788	300.17	805	314.24	821	328.42	342.72
65665	6000	687	231.83	706	245.21	724	258.84	742	272.67	760	286.67	778	300.82	795	315.11	812	329.52	828	344.05	358.68
67854	6200	696	245.65	714	259.29	732	273.17	750	287.28	768	301.59	785	316.06	802	330.68	819	345.43	835	360.30	375.28
70042	6400	705	260.20	723	274.09	741	288.23	759	302.61	776	317.20	793	331.97	810	345.91	826	361.99	843	379.27	392.52
72232	6600	715	275.49	732	289.66	750	304.05	767	318.68	784	333.54	801	348.60	818	363.84	834	379.24	850	394.77	410.43

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.

# VRB-649

WHEEL DIAMETER - 85-1/4"

INLET 49-1/2" - AREA 13.10 SQ. FT.

OUTLET 49" x 39-3/8" - AREA 13.121 SQ. FT.

TIP SPEED (FPM) = 22.32 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.		
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
12976	1000	<b>163</b>	<b>3.34</b>																			
15571	169		8.17																			
18166	1400	175	<b>5.04</b>	<b>230</b>	<b>9.36</b>	274	14.50															
20763	1600	182	6.15	236	10.83	278	16.10	316	22.17													
23358	1800	190	7.47	<b>242</b>	<b>12.54</b>	<b>284</b>	<b>18.09</b>	<b>320</b>	<b>24.23</b>	353	31.11											
25953	2000	198	9.04	249	14.47	290	20.39	<b>326</b>	<b>26.76</b>	357	33.68	387	41.28									
28648	2200	207	10.86	256	16.65	296	22.97	331	29.66	<b>363</b>	<b>36.79</b>	392	44.43	419	52.68							
31143	2400	217	12.91	263	19.12	303	25.83	338	32.90	369	40.32	<b>397</b>	<b>48.16</b>	424	56.47							
33739	2600	226	15.23	271	21.92	309	28.99	344	36.46	375	44.24	403	52.36	<b>429</b>	<b>60.87</b>	454	69.81					
36334	2800	236	17.81	279	25.08	316	32.48	351	40.35	381	48.52	409	56.98	435	65.77	<b>460</b>	<b>74.91</b>	483	84.46			89.24
38930	3000	246	20.69	288	28.47	324	36.34	357	44.59	388	53.16	415	62.00	441	71.12	465	80.55	<b>488</b>	<b>90.31</b>	516	100.44	107.40
41525	3200	256	23.89	297	32.61	332	40.62	364	49.20	394	58.18	422	67.42	448	76.91	472	86.67	494	96.71			
44120	3400	266	27.41	307	36.65	341	45.35	372	54.24	401	63.59	428	73.24	454	83.13	478	93.25	500	103.63			114.27
46716	3600	276	31.29	316	41.21	350	50.53	379	59.75	408	69.44	435	79.48	460	89.77	484	100.29	507	111.04	528	122.01	130.27
49311	3800	287	35.55	326	46.14	359	56.13	388	65.77	415	75.76	442	86.17	467	96.87	490	107.79	513	118.93	534	130.27	148.31
51906	4000	297	40.19	336	51.48	368	62.12	397	72.31	423	82.61	449	93.35	474	104.44	497	115.76	519	127.30			139.04
54501	4200	308	45.25	345	57.24	377	68.51	406	79.36	432	90.02	456	101.07	481	112.51	504	124.23	526	136.18	547	148.31	168.47
57096	4400	319	50.74	356	63.44	387	75.37	415	86.59	440	96.02	464	109.38	488	121.14	511	133.23	532	145.57	553	168.12	186.47
59693	4600	329	56.69	366	70.10	397	82.71	424	94.87	449	106.60	473	118.30	496	130.36	518	142.80	539	155.52	560	168.47	179.39
62288	4800	340	63.12	376	77.23	406	90.52	433	103.30	458	115.73	481	127.86	504	140.23	525	152.98	546	166.06	567	179.39	190.92
64883	5000	351	70.05	386	84.86	416	98.84	443	112.26	468	125.38	490	138.07	512	150.78	533	163.82	554	177.23	574	190.92	203.11
67478	5200	362	77.50	396	93.01	426	107.69	453	121.82	477	135.52	499	148.88	521	162.02	541	175.37	561	189.08	581	203.11	216.00
70073	5400	374	85.49	407	101.70	436	117.08	462	131.84	486	146.18	509	160.27	530	173.95	550	187.65	569	201.66	588	216.00	229.64
72669	5600	385	94.05	417	110.94	446	127.04	472	142.48	496	151.72	518	172.21	539	186.54	558	200.67	577	215.00			
75264	5800	396	103.19	428	120.77	456	137.57	482	153.70	505	169.41	527	184.69	548	199.75	567	214.43	586	229.12	604	244.07	

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.

# VRB-654

WHEEL DIAMETER - 93-3/4"

INLET 54-1/2" - AREA 15.90 SQ. FT.

OUTLET 54" x 43-1/4" - AREA 15.936 SQ. FT.

TIP SPEED (FPM) = 24.54 x RPM

VOL. CFM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15760	148	<b>4.06</b>																		
18912	1200	153	4.99	204	9.92		17.61													
22064	1400	159	6.13	<b>208</b>	<b>11.37</b>	248	17.61	26.92												
25217	1600	165	7.47	214	13.16	252	19.56	286	37.78											
28369	1800	172	9.07	<b>220</b>	<b>15.23</b>	<b>258</b>	<b>21.97</b>	<b>295</b>	<b>32.50</b>	320	40.90	351	50.13							
31521	2000	180	10.98	226	17.57	263	24.76	<b>295</b>	32.50	324	40.90	351	50.13							
34673	2200	186	13.19	232	20.23	269	27.90	301	36.02	<b>329</b>	<b>44.68</b>	356	53.96	380	63.99					
37825	2400	197	15.68	238	23.22	275	31.37	306	39.96	335	48.97	<b>360</b>	<b>58.49</b>	385	68.59	408	79.35	430	90.87	
40978	2600	205	18.49	246	26.62	281	35.21	312	44.28	340	53.73	366	63.59	<b>390</b>	<b>73.92</b>	412	84.79	433	96.25	454
44130	2800	214	21.63	253	30.46	287	39.45	318	49.00	346	58.93	371	63.88	395	79.87	<b>417</b>	<b>90.98</b>	438	102.58	458
47282	3000	223	25.13	262	34.75	294	44.14	324	54.15	352	64.56	377	75.30	400	86.38	422	97.83	<b>443</b>	<b>109.68</b>	<b>121.98</b>
50434	3200	232	29.01	270	39.44	301	49.34	330	59.76	358	70.65	383	81.88	406	93.41	428	105.26	448	117.46	468
53585	3400	241	33.29	278	44.51	309	55.08	337	65.88	364	77.23	389	88.95	412	100.96	434	113.26	454	125.86	473
56738	3600	251	38.01	287	50.04	317	61.37	344	72.57	370	84.33	395	96.53	418	109.03	439	121.81	460	134.85	479
59890	3800	260	43.17	296	56.04	326	68.17	352	79.87	377	92.01	401	104.38	424	117.65	445	130.91	465	144.43	485
63042	4000	270	48.81	305	62.52	334	75.44	360	86.38	392	109.33	414	122.75	436	136.64	457	150.88	477	165.39	496
66194	4200	279	54.96	314	69.52	342	83.20	368	93.20	400	124.44	426	141.12	449	155.88	469	167.71	480	180.13	500
69346	4400	289	61.63	323	77.05	351	91.54	376	105.53	399	119.05	421	132.84	443	147.12	463	161.81	483	176.80	502
72499	4600	299	68.85	332	85.13	360	100.46	385	115.21	408	129.47	429	143.67	450	158.33	470	173.43	489	188.88	508
75651	4800	309	76.66	341	93.80	369	109.94	393	125.45	416	140.56	437	155.29	457	170.31	477	185.79	496	201.67	514
78803	5000	319	85.08	350	103.07	378	120.05	402	136.34	424	152.28	445	167.68	464	183.12	484	198.96	502	215.24	521
81955	5200	329	94.12	360	112.96	386	130.79	411	147.95	433	164.59	453	180.82	472	196.77	491	212.99	509	229.64	527
85107	5400	339	103.83	369	123.51	396	142.20	419	160.12	441	177.54	462	194.65	481	211.26	499	227.90	516	244.91	534
88260	5600	349	114.22	379	134.74	405	154.29	423	173.04	450	191.23	470	209.14	489	226.55	507	243.72	524	261.11	541
91412	5800	359	125.32	388	146.67	414	167.08	437	186.67	458	205.74	478	224.30	497	242.60	515	260.43	532	278.27	548
<b>Outlet</b>	<b>Vel.</b>	<b>11" S.P.</b>	<b>12" S.P.</b>		<b>13" S.P.</b>		<b>14" S.P.</b>		<b>15" S.P.</b>		<b>16" S.P.</b>		<b>17" S.P.</b>		<b>18" S.P.</b>		<b>19" S.P.</b>		<b>20" S.P.</b>	
<b>VOL. CFM</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>	<b>RPM</b>	<b>BHP</b>
40978	2600	474	121.26																	
44130	2800	478	127.45	497	140.84															
47282	3000	482	134.77	500	148.10	518	162.01	536	176.55											
50434	3200	<b>487</b>	<b>143.02</b>	505	156.45	522	170.37	540	184.81	556	199.80	573	215.39							
53585	3400	492	152.06	<b>510</b>	<b>165.72</b>	527	179.78	544	194.29	560	209.26	576	224.73	592	240.73	608	257.30			
56738	3600	497	161.82	515	175.79	<b>532</b>	<b>190.10</b>	<b>549</b>	<b>204.80</b>	565	219.89	581	235.40	596	251.36	611	267.81	626	284.75	641
59890	3800	503	172.26	521	186.60	538	201.24	554	216.21	<b>570</b>	<b>231.52</b>	<b>586</b>	<b>247.20</b>	601	263.26	616	279.73	630	296.63	644
63042	4000	509	183.86	526	198.11	543	213.13	560	228.44	575	244.05	591	259.98	<b>606</b>	<b>276.24</b>	620	292.86	635	309.85	649
66194	4200	514	195.10	532	210.30	549	225.75	565	241.45	581	257.42	596	273.66	611	290.21	<b>625</b>	<b>307.06</b>	<b>640</b>	<b>324.24</b>	<b>654</b>
69346	4400	520	207.49	538	223.17	555	239.07	571	255.20	586	271.57	602	288.19	616	305.08	631	322.23	645	339.68	<b>659</b>
72499	4600	526	220.56	544	236.72	560	253.10	576	269.69	592	286.49	607	303.53	622	320.80	636	330.31	650	356.08	664
75651	4800	532	234.21	549	250.97	566	267.84	582	283.21	598	302.17	613	319.65	628	337.34	642	355.25	656	373.40	669
78803	5000	538	248.79	565	265.94	572	283.21	588	300.86	604	318.61	619	336.55	633	354.69	647	373.04	661	391.59	675
81955	5200	545	264.04	562	281.67	578	299.52	594	317.58	609	335.82	624	354.24	639	372.85	653	391.65	667	410.64	680
85107	5400	551	280.12	568	298.20	584	316.53	600	335.07	615	353.81	630	372.73	645	391.82	659	411.10	673	430.55	686
88260	5600	558	297.07	574	315.58	590	334.36	606	353.39	621	372.61	636	392.02	651	411.61	665	431.38	678	451.31	692
91412	5800	565	314.96	581	333.86	597	353.08	612	372.56	627	392.26	642	433.25	657	432.25	671	452.51	684	472.93	698
94564	6000	572	333.83	588	353.11	603	372.73	619	392.64	634	412.81	648	433.19	663	453.76	677	474.51	690	495.43	703
97716	6200	580	353.73	595	373.37	610	393.37	625	413.69	640	434.29	655	455.13	669	476.18	683	497.42	696	518.83	709
100779	6400	587	374.69	603	394.70	617	415.05	632	435.76	647	456.77	661	478.04	675	499.55	689	521.26	702	543.16	715
104021	6600	595	396.71	610	417.11	625	437.84	639	458.90	654	480.30	668	501.98	681	523.93	695	546.10	708	568.47	721

Data in bold type indicates the quietest and most efficient performance.  
BHP does not include drive losses.  
Performance shown is with inlet and outlet ducts.

# VRB-660

WHEEL DIAMETER - 104-1/4"

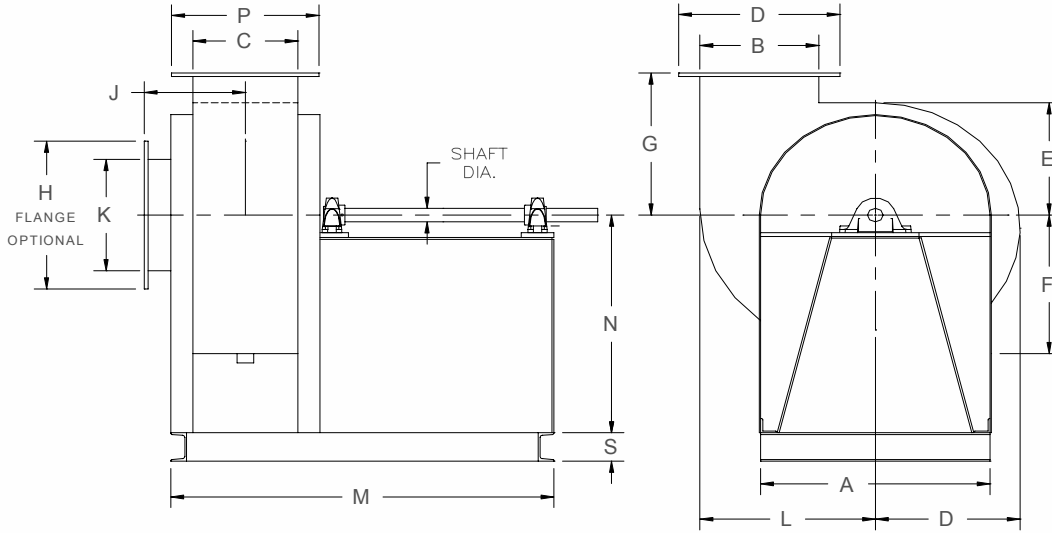
INLET 60-1/2" - AREA 19.64 SQ. FT.

OUTLET 60" x 48" - AREA 19.673 SQ. FT.

TIP SPEED (FPM) = 27.29 x RPM

VOL. CFM	Outlet Vel. FPM	1" S.P.		2" S.P.		3" S.P.		4" S.P.		5" S.P.		6" S.P.		7" S.P.		8" S.P.		9" S.P.		10" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19456	1000	<b>133</b>	<b>5.02</b>																		
23348	1200	138	6.17	183	12.25	21.73															
27239	1400	143	7.56	<b>188</b>	<b>14.04</b>	223															
31130	1600	149	9.22	193	16.24	227	24.14	258	33.24												
35021	1800	155	11.20	198	18.80	<b>232</b>	<b>27.13</b>	261	36.33	288	46.64										
38913	2000	162	13.55	203	21.70	<b>237</b>	<b>30.57</b>	<b>266</b>	<b>40.12</b>	292	50.50										
42804	2200	169	16.29	209	24.97	242	34.44	271	44.47	<b>296</b>	55.16	316	61.89								
46695	2400	177	19.36	214	28.67	247	38.73	276	49.33	301	60.46	<b>324</b>	<b>72.21</b>	346	84.67	367	97.96	387	112.18		
50587	2600	185	22.83	221	32.87	253	43.37	281	54.67	306	66.33	329	78.51	<b>351</b>	<b>91.26</b>	371	104.68	390	118.83	409	133.81
54478	2800	193	26.70	228	37.61	258	48.70	286	60.50	311	72.75	334	85.44	355	98.61	<b>375</b>	<b>112.32</b>	394	126.64	412	141.62
58369	3000	201	31.02	235	42.90	265	54.49	292	66.85	317	79.71	339	92.97	360	106.64	380	120.77	<b>399</b>	<b>135.41</b>	417	150.59
62261	3200	209	35.82	243	48.69	271	60.91	297	73.77	322	87.23	345	101.09	365	115.32	385	129.95	404	145.01	421	160.53
66152	3400	217	41.10	251	54.95	278	68.00	303	81.33	327	95.34	350	109.81	371	124.64	390	139.82	409	155.38	426	171.34
70043	3600	226	46.92	258	61.78	286	75.77	310	89.59	333	104.11	355	119.20	376	134.61	395	150.38	414	166.48	431	182.94
73934	3800	234	53.30	266	69.18	293	84.16	317	98.61	339	113.59	361	129.20	381	145.24	401	161.62	419	178.31	436	195.32
77826	4000	243	60.26	274	77.19	301	93.14	324	108.41	346	123.86	367	139.97	387	156.59	406	173.57	424	190.87	441	208.47
81718	4200	251	67.85	282	85.83	308	102.72	331	118.99	352	134.98	373	151.55	393	168.70	411	186.27	429	204.18	447	222.38
85608	4400	260	76.08	290	95.12	316	113.01	339	130.28	359	146.97	379	164.00	398	181.63	417	199.76	435	218.27	452	237.08
89500	4600	269	85.01	299	105.10	324	124.02	346	142.24	367	159.84	386	177.38	405	195.46	423	214.11	440	233.18	457	252.59
93391	4800	278	94.64	307	115.80	332	135.72	354	154.88	374	173.53	393	191.72	411	210.26	429	229.37	446	248.98	463	268.97
97282	5000	287	105.03	315	127.24	340	148.20	362	168.32	382	187.99	400	207.01	418	226.07	435	245.63	452	265.73	469	286.26
101174	5200	296	116.20	324	139.46	348	161.47	370	182.66	389	203.20	408	223.23	425	242.92	442	262.95	458	285.30	474	304.54
105065	5400	305	128.19	332	152.49	356	175.55	377	197.68	397	219.18	415	240.31	432	260.81	449	281.36	465	302.36	481	323.87
108957	5600	314	141.01	341	166.35	364	190.48	385	213.63	405	236.09	423	258.20	440	279.89	456	300.89	472	322.36	487	344.32
112847	5800	324	154.72	350	181.08	373	206.27	393	230.46	413	254.00	431	276.92	447	299.51	463	321.51	479	343.54	494	365.95
VOL. CFM	Outlet Vel. FPM	11" S.P.		12" S.P.		13" S.P.		14" S.P.		15" S.P.		16" S.P.		17" S.P.		18" S.P.		19" S.P.		20" S.P.	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50587	2600	427	149.71																		
54478	2800	430	157.35	447	173.88																
58369	3000	434	166.39	450	182.84	466	200.01	482	217.96												
62261	3200	<b>438</b>	<b>176.57</b>	454	193.15	470	210.33	486	228.16	501	246.67	516	265.92								
66152	3400	443	187.73	<b>459</b>	<b>204.59</b>	474	221.95	490	239.86	504	258.34	519	277.45	533	297.20	547	317.66				
70043	3600	448	199.78	464	217.02	<b>479</b>	<b>234.70</b>	494	252.83	509	271.46	523	290.62	537	310.33	550	330.63	564	351.55	577	373.12
73934	3800	453	212.67	469	230.37	484	248.44	499	266.92	<b>513</b>	<b>285.82</b>	<b>527</b>	<b>305.18</b>	541	325.01	554	345.35	567	366.21	580	387.64
77826	4000	458	226.37	474	244.58	489	263.13	504	282.03	518	301.30	532	320.96	<b>545</b>	<b>341.04</b>	558	361.56	571	382.54	584	404.00
81718	4200	463	240.86	479	259.63	494	278.70	509	298.08	523	317.80	536	337.86	550	358.28	<b>563</b>	<b>379.09</b>	<b>576</b>	<b>400.30</b>	588	421.93
85608	4400	468	256.16	484	275.52	499	295.15	514	315.06	528	335.27	541	355.79	555	376.64	568	397.82	580	419.36	<b>593</b>	<b>441.27</b>
89500	4600	474	272.89	489	292.25	504	312.47	519	332.95	533	353.70	546	374.72	560	396.04	573	417.67	585	439.61	597	461.88
93391	4800	479	289.27	494	309.84	509	330.67	524	351.74	538	373.05	552	394.63	565	416.47	578	438.58	590	460.98	602	483.68
97282	5000	484	307.15	500	328.33	515	349.76	529	371.44	543	393.35	557	415.50	570	437.89	583	460.54	595	483.45	607	506.62
101174	5200	490	325.98	505	347.74	520	369.78	535	392.07	548	414.59	562	437.34	575	460.31	588	483.52	600	506.97	612	530.66
105065	5400	496	345.82	511	368.15	526	390.78	540	413.67	554	436.80	567	460.16	580	483.73	593	507.53	605	531.54	618	555.79
108957	5600	502	366.75	517	389.60	531	412.80	545	436.28	559	460.01	573	483.98	586	508.17	598	532.56	611	557.17	623	581.99
112847	5800	508	388.84	523	412.18	537	435.90	551	459.95	565	484.28	578	508.85	591	533.64	604	558.65	616	583.86	628	609.28
116739	6000	515	412.14	529	435.94	543	460.16	557	484.74	570	509.64	583	534.80	596	560.20	609	585.81	621	611.64	633	637.66
120631	6200	522	436.71	536	460.95	549	485.64	563	510.73	576	536.16	589	561.89	602	587.87	614	614.09	627	640.53	638	667.16
124522	6400	529	462.58	542	487.28	556	512.41	569	537.97	582	563.91	595	590.18	607	616.73	620	643.54	632	670.57	644	697.81
128413	6600	536	489.76	549	514.96	562	540.54	575	566.54	588	592.96	601	619.73	613	646.83	626	674.20	638	701.82	649	729.66

Data in bold type indicates the quietest and most efficient performance.  
 BHP does not include drive losses.  
 Performance shown is with inlet and outlet ducts.



SIZE	Wheel Dia.	Shaft Dia.	A	B	C	D	E	F	G	J	K	L	M	N	O	P	R	S	Weight less Motor
VRB-609	15-5/8"	1-3/16"	17	9	7-1/2"	11-1/16"	9-11/16"	12-3/16"	11-11/16"	6-7/8"	9-1/4"	13-5/16"	31-1/2"	19	12	10-1/2"	12-1/4"	3	193
VRB-611	19-1/8"	1-7/16"	21	11	9-1/16"	13-1/4"	11-3/4"	14-7/8"	13-3/4"	7-5/8"	11-1/4"	16-1/2"	35-1/16"	23	14	12-1/16"	14-1/4"	3	288
VRB-613	22-5/8"	1-7/16"	23	13	10-1/2"	15-5/8"	13-7/8"	17-9/16"	15-7/8"	8-3/8"	13-1/4"	19-1/2"	38-1/2"	23-7/8"	17	14-1/2"	17-1/4"	3	340
VRB-615	26-1/8"	2-3/16"	26	15	12-1/8"	18-1/8"	16-1/16"	20-5/16"	19-1/16"	9-3/16"	15-1/4"	22-1/2"	40-1/8"	27-5/8"	19	16-1/8"	19-1/4"	3	579
VRB-617	29-5/8"	2-3/16"	29	17	13-3/4"	20-5/8"	18-5/16"	23-1/16"	21-3/8"	11-1/16"	17-1/4"	25-1/2"	42	29-5/8"	21	17-3/4"	21-1/4"	3	728
VRB-619	33	2-3/16"	32	19	15-3/8"	22-7/8"	20-5/16"	25-11/16"	23-3/8"	11-13/16"	19-1/4"	28-1/2"	44-5/8"	32	24	20-3/8"	24-1/4"	3	862
VRB-621	36-1/2"	2-15/16"	35	21	17	25-3/8"	22-1/2"	28-7/16"	25-9/16"	12-5/8"	21-1/4"	31-1/2"	46-1/4"	35-5/8"	26	22	26-1/4"	3	1078
VRB-623	40	2-15/16"	39	23	18-5/8"	27-3/4"	24-5/8"	31-1/8"	28-11/16"	13-15/16"	23-1/4"	34-1/2"	47-7/8"	38-5/8"	28	23-5/8"	27-1/4"	3	1220
VRB-626	45-1/8"	2-15/16"	44	26	20-7/8"	31-3/8"	27-3/4"	35-3/16"	31-3/4"	15-1/8"	26-1/4"	39	51-1/8"	42-5/8"	31	25-7/8"	30-1/4"	4	1500
VRB-629	50-1/2"	2-15/16"	48	29	23-1/4"	35	31	39-1/4"	35-1/8"	16-5/8"	29-1/4"	43-1/2"	56	46-5/8"	35	29-1/4"	35-1/4"	4	1800
VRB-633	57-1/2"	3-7/16"	53	33	26-1/2"	40-3/8"	35-13/16"	44-15/16"	39-13/16"	18-1/4"	33-5/8"	49-1/2"	61-1/4"	52-3/8"	39	32-1/2"	39-3/8"	4	2200
VRB-637	64-3/8"	3-15/16"	59	37	29-5/8"	44-5/8"	39-1/2"	50-1/16"	44-1/2"	19-13/16"	37-3/8"	55-1/2"	66-3/8"	56-15/16"	43	35-5/8"	43-3/8"	4	2800
VRB-641	71-1/4"	4-7/16"	66	41	32-7/8"	49-3/8"	43-3/4"	55-7/16"	48-3/4"	22-15/16"	41-3/8"	61-1/2"	71-5/8"	63-1/4"	47	38-5/8"	47-3/8"	4	5600
VRB-645	78-1/4"	4-15/16"	73	45	36-1/4"	54-1/8"	48	60-7/8"	53	24-3/8"	45-3/8"	67-1/2"	77	69	51	42-1/4"	51-3/8"	4	7000
VRB-649	85-1/4"	4-15/16"	80	49	39-3/8"	58-7/8"	52-3/16"	66-1/8"	57-3/16"	27-15/16"	49-1/2"	73-3/8"	85-7/8"	75	57	47-3/8"	57-1/2"	4	8400
VRB-654	93-3/4"	6	89	54	43-1/4"	64-5/8"	57-1/4"	72-5/8"	63-1/4"	29-7/8"	54-1/2"	80-5/8"	93-3/8"	83-3/16"	62	51-1/4"	62-1/2"	4	9800
VRB-660	104-1/4"	6-7/16"	92	60	48	71-15/16"	63-3/4"	80-13/16"	69-3/4"	32-5/16"	60-1/2"	89-11/16"	105-5/8"	92	68	56	68-1/2"	4	10500

Motor HP	Motor Weight
3/4	24
1	40
1-1/2	45
2	49
3	82
5	96
7-1/2	145
10	165
15	270
20	316
25	362
30	398
40	546
50	610
60	802
75	840
100	1172

# FIBERGLASS 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.

**N. R. = NOT RECOMMENDED**

**F = FUMES ONLY**

**S = SURFACING MAT**

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

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.

**\*Special hardware recommended: Contact Factory.**

- **LIMITED WARRANTY**

VIRON<sup>®</sup> INTERNATIONAL warrants to the dealers and owners its VIRON<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> within such warranty period with transportation charges both to and from VIRON<sup>®</sup> 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<sup>®</sup> at VIRON<sup>®</sup>'s facility within seven days following expiration of the warranty period. Any request for repair or replacement should be directed to VIRON<sup>®</sup> 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<sup>®</sup> products and parts which in the sole judgment of VIRON<sup>®</sup> 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<sup>®</sup> products. Purchaser acknowledges that VIRON<sup>®</sup> 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<sup>®</sup> 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 MERCHANTABILITY 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<sup>®</sup> 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<sup>®</sup> 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.

**IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT, OR WARRANTY, OR TORT, OR ALLEGED NEGLIGENCE, DEFECTS, INCORRECT ADVICE OR OTHER CAUSES, SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, including but not limited to loss of profits or revenue, loss of use of the equipment or any associated equipment, cost of removal or reinstallation or any cost associated therewith, cost capital, cost of substitute equipment, facilities or services, down time cost, or claims of customers of the purchase of such damages.**

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