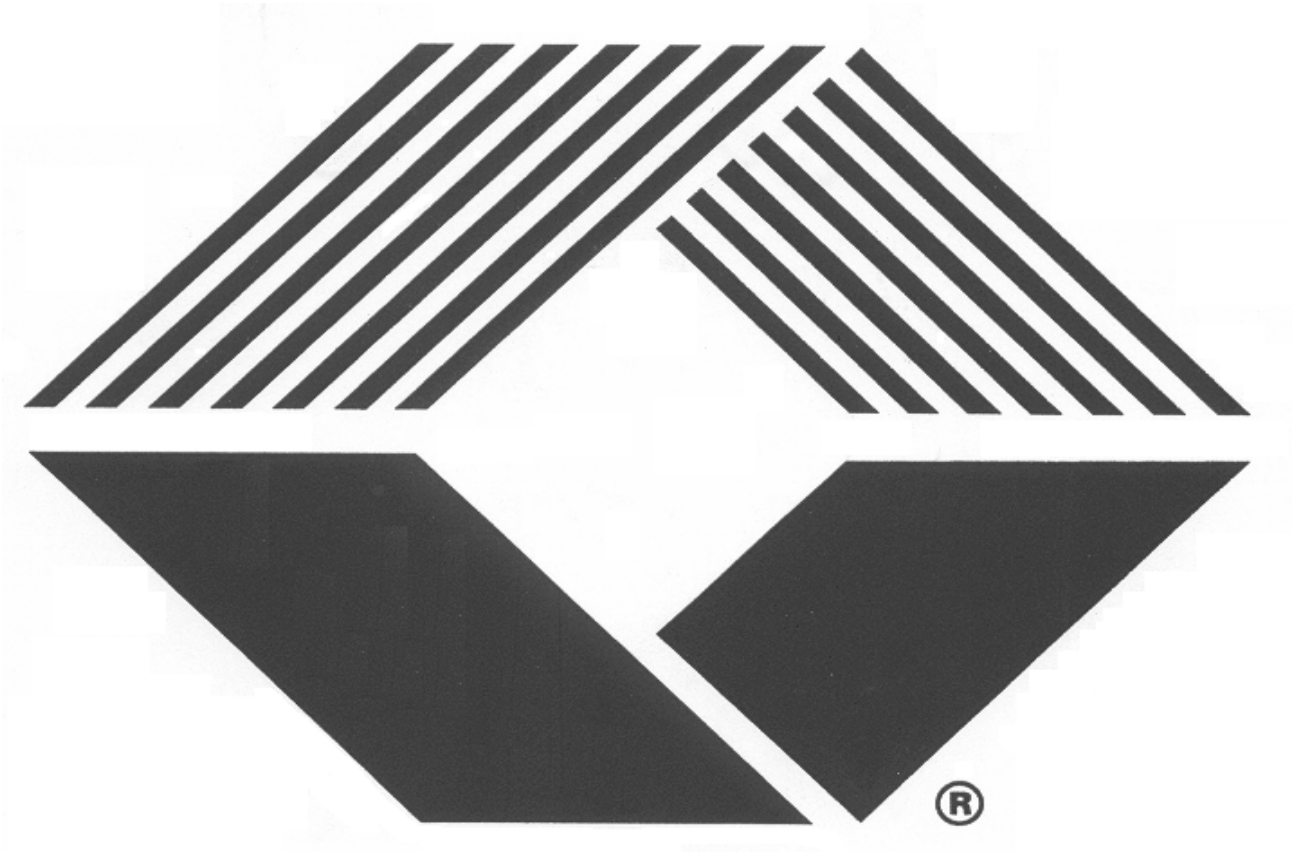
BULLETIN: VB-200-95

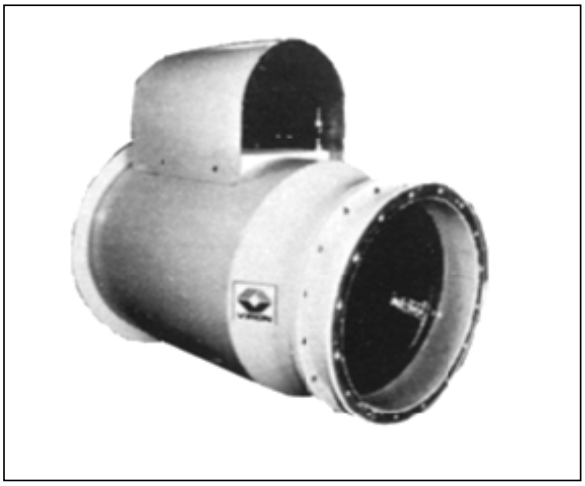
FRP INLINE CENTRIFUGAL FANS



VIRON®

INTERNATIONAL

FRP INLINE FAN



SERIES VIF-200

VIRON® International has been a leading manufacturer of corrosion resistant fiberglass fans since 1971. **VIRON's** modern facilities in Michigan and Texas operate the most modern equipment and efficient manpower found in the fan business.

VIRON's Inline Centrifugal fan comes in 17 different sizes ranging from 12" to 60" diameter wheels and capacities to over 100,000 CFM.

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

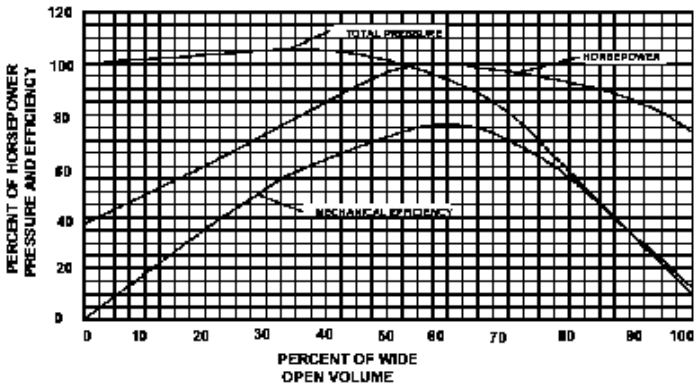
General Specifications

- 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 fan housing is solid fiberglass using premium grade corrosion resistant resin.
- The fan wheel is solid fiberglass using a premium grade corrosion resistant resin. The backward incline design offers efficient, low cost handling of industrial process air and gas.
- Maximum temperature limitation is 200°F on all fiberglass fans.
- Special high corrosion construction is optional on all **VIRON**® fiberglass air moving equipment.

Standard Specifications

- **Sizes** - 12" to 60" diameter wheel, 17 convenient sizes to choose from giving you 1,200 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 fan wheels are dynamically balanced.
- **Base Mount** - Base mount pedestal can be ordered as an option on all fiberglass inline centrifugal fans.

FRP Inline Centrifugal Fan Characteristic Curve



Temperature and Altitude 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

VIF-212

Wheel Diameter 12¼" Ø

Tip Speed = 3.207 X RPM. Max HP = .114 X $\frac{RPM^3}{1000}$

INLET 14" OUTLET 18"

AREA 1.06 SQ FT AREA 1.76 SQ FT

CL I .3322 Max RPM CL II .3929 Max RPM

Volume	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
1200	800	1196	.19	1327	.26	1458	.34	1593	.43	1729	.52	1860	.63	2110	.84	2340	1.08																		
1350	900	1316	.25	1432	.33	1547	.41	1665	.50	1785	.60	1905	.71	2140	.94	2361	1.19	2568	1.45	2779	1.87	2958	2.17												
1500	1000	1437	.33	1541	.41	1646	.50	1750	.59	1856	.69	1965	.80	2181	1.05	2390	1.30	2589	1.58	2802	2.02	2977	2.33	3144	2.66	3305	2.99	3459	3.34	3607	3.69		
1650	1100	1562	.42	1655	.50	1751	.60	1845	.70	1940	.80	2037	.92	2234	1.17	2430	1.44	2620	1.72	2834	2.19	3033	2.51	3165	2.85	3322	3.2	3474	3.55	3620	3.92		
1800	1200	1687	.53	1773	.62	1860	.72	1948	.82	2034	.93	2121	1.05	2300	1.3	2481	1.58	2659	1.88	3874	2.38	3036	2.71	3193	3.06	3345	3.42	3493	3.79	3636	4.16		
1950	1300	1814	.66	1894	.75	1972	.85	2054	.96	2134	1.08	2214	1.2	2376	1.46	2542	1.75	2709	2.05	2924	2.58	3077	2.93	3228	3.29	3375	3.66	3519	4.04	3658	4.43		
2100	1400	1941	.80	2015	.91	2088	1.01	2164	1.13	2239	1.25	2313	1.37	2462	1.64	2614	1.93	2769	2.25	2983	2.80	3128	3.16	3271	3.53	3412	3.91	3551	4.3	3686	4.71		
2250	1500	2069	.97	2138	1.08	2208	1.20	2276	1.31	2347	1.44	2417	1.57	2555	1.84	2695	2.14	2838	2.46	3015	3.05	3187	3.42	3322	3.80	3457	4.19	3590	4.59	3721	5.01		
2400	1600	2199	1.16	2265	1.28	2330	1.40	2392	1.52	2458	1.65	2524	1.79	2654	2.07	2784	2.38	2916	2.70	3127	3.32	3254	3.69	3382	4.08	3510	4.49	3637	4.9	3762	5.33		
2550	1700	2329	1.38	2389	1.50	2451	1.63	2511	1.76	2571	1.89	2634	2.03	2758	2.33	2879	2.64	3002	2.97	3211	3.62	3329	4.00	3449	4.4	3570	4.81	3691	5.24	3811	5.67		
2700	1800	2458	1.62	2517	1.75	2573	1.88	2632	2.03	2687	2.16	2745	2.30	2864	2.61	2979	2.93	3094	3.27	3300	3.96	3411	4.34	3524	4.74	3638	5.16	3752	5.59	3867	6.04		
2850	1900	2588	1.89	2644	2.03	2699	2.17	2754	2.32	2807	2.46	2860	2.60	2972	2.92	3082	3.25	3191	3.6	3395	4.33	3500	4.71	3605	5.12	3712	5.54	3821	5.98	3929	6.44		
3000	2000	2719	2.19	2771	2.33	2823	2.48	2875	2.63	2928	2.79	2977	2.93	3082	3.26	3188	3.61	3292	3.96	3597	5.17	3691	5.57	3785	5.98	3880	6.41						
3300	2200	2951	2.88	3028	3.04	3077	3.21	3125	3.37	3170	3.53	3219	3.70	3309	4.03	3406	4.4	3502	4.78	3809	6.15												
3600	2400	3247	3.72	3288	3.88	3330	4.05	3374	4.23	3417	4.41	3461	4.59	3546	4.96	3631	5.33	3720	5.73														
3900	2600	3509	4.70	3546	4.86	3586	5.05	3629	5.25	3667	5.44	3706	5.63	3789	6.04																		
4200	2800	3779	5.87	3808	6.01																												

BHP does not include drive losses

Performance shown is with outlet duct

VIF-213

Wheel Diameter 13-1/2"

Tip Speed = 3.534 X RPM. Max HP = .1811 X $\frac{RPM^3}{1000}$

INLET 15" OUTLET 20"

AREA 1.22 SQ FT AREA 2.18 SQ FT

CL I .3015 Max RPM CL II .3565 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
1472	800	1085	.23	1204	.31	1323	.41	1446	.52	1569	.64	1688	.76	1915	1.03	2124	1.31																
1656	900	1194	.31	1299	.40	1404	.50	1510	.61	1620	.73	1729	.86	1942	1.14	2142	1.44	2330	1.76														
1840	1000	1304	.40	1398	.49	1494	.60	1588	.72	1684	.84	1783	.98	1979	1.27	2169	1.58	2350	1.92	2521	2.27	2685	2.63										
2024	1100	1418	.51	1501	.61	1589	.73	1675	.85	1760	.97	1848	1.11	2027	1.42	2205	1.74	2377	2.09	2543	2.45	2701	2.83	2853	3.23	2999	3.63	3139	4.05	3273	4.48		
2208	1200	1531	.64	1609	.75	1688	.87	1767	1.00	1845	1.13	1924	1.27	2087	1.58	2251	1.92	2413	2.28	2571	2.66	2724	3.05	2872	3.46	3015	3.88	3152	4.32	3284	4.76		
2392	1300	1646	.80	1719	.92	1790	1.04	1864	1.17	1937	1.31	2009	1.46	2156	1.77	2307	2.12	2458	2.5	2608	2.89	2755	3.29	2897	3.72	3036	4.15	3170	4.6	3300	5.06		
2576	1400	1761	.97	1829	1.10	1895	1.23	1963	1.37	2032	1.52	2099	1.67	2234	1.99	2372	2.35	2513	2.73	2653	3.13	2792	3.55	2929	3.99	3063	4.44	3193	4.9	3320	5.38		
2760	1500	1877	1.18	1940	1.31	2004	1.45	2065	1.59	2130	1.75	2194	1.91	2319	2.24	2446	2.60	2575	2.99	2707	3.40	2838	3.84	2968	4.29	3096	4.75	3222	5.23	3345	5.72		
2944	1600	1995	1.41	2055	1.56	2114	1.70	2170	1.85	2230	2.01	2291	2.17	2409	2.52	2526	2.88	2646	3.28	2768	3.70	2892	4.15	3015	4.61	3137	5.09	3258	5.58	3376	6.08		
3128	1700	2113	1.68	2168	1.83	2224	1.98	2279	2.14	2333	2.30	2390	2.47	2502	2.83	2612	3.21	2724	3.61	2838	4.03	2953	4.49	3069	4.96	3185	5.45	3300	5.95	3414	6.47		
3312	1800	2230	1.97	2284	2.13	2334	2.29	2389	2.46	2438	2.62	2491	2.80	2599	3.17	2703	3.56	2807	3.97	2913	4.40	3021	4.86	3130	5.34	3239	5.84	3349	6.36	3458	6.89		
3496	1900	2348	2.29	2399	2.47	2449	2.64	2499	2.81	2547	2.98	2595	3.16	2697	3.55	2797	3.95	2896	4.37	2995	4.81	3095	5.27	3198	5.76	3301	6.27	3405	6.79	3509	7.34		
3680	2000	2467	2.66	2514	2.83	2562	3.01	2608	3.19	2657	3.39	2701	3.56	2797	3.96	2893	4.38	2987	4.81	3081	5.26	3176	5.72	3271	6.22	3369	6.73	3467	7.27	3565	7.82		
4048	2200	2705	3.50	2748	3.69	2792	3.89	2835	4.09	2877	4.29	2921	4.50	3003	4.90	3091	5.34	3178	5.81	3264	6.28	3349	6.76	3434	7.26	3521	7.79						
4416	2400	2946	4.51	2983	4.72	3022	4.92	3061	5.14	3101	5.36	3140	5.58	3218	6.02	3295	6.47	3376	6.96	3456	7.47	3535											
4784	2600	3184	5.69	3218	5.91	3254	6.14	3293	6.38	3327	6.60	3363	6.84	3438	7.33																		
5152	2800	3429	7.12	3455	7.30																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-215

Wheel Diameter 15"

Tip Speed = 3.927 X RPM. Max HP = .3078 X $\frac{RPM^3}{1000}$

INLET 16" OUTLET 22"

AREA 1.39 SQ FT AREA 2.64 SQ FT

CL I .2481 Max RPM CL II .3169 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
1808	800	963	.27	1065	.37	1145	.48	1285	.61	1394	.75																						
2034	900	1060	.36	1149	.47	1244	.58	1342	.71	1440	.85	1536	1.01																				
2260	1000	1157	.47	1239	.58	1321	.71	1408	.84	1496	.99	1584	1.14	1758	1.49																		
2486	1100	1253	.59	1332	.72	1405	.85	1482	.99	1561	1.14	1642	1.30	1802	1.66	1959	2.05																
2712	1200	1350	.74	1428	.89	1494	1.03	1563	1.17	1634	1.33	1707	1.49	1854	1.85	2000	2.25	2144	2.68														
2938	1300	1448	.91	1525	1.08	1567	1.23	1649	1.38	1713	1.54	1779	1.71	1914	2.08	2050	2.48	2185	2.92	2317	3.39												
3164	1400	1548	1.11	1622	1.30	1682	1.46	1739	1.61	1797	1.78	1857	1.96	1981	2.34	2107	2.75	2233	3.19	2358	3.67	2481	4.17										
3390	1500	1650	1.34	1718	1.54	1779	1.72	1832	1.88	1885	2.06	1939	2.24	2053	2.63	2170	3.05	2288	3.5	2406	3.98	2522	4.49	2637	5.03								
3616	1600	1755	1.62	1850	1.81	1875	2.01	1927	2.19	1976	2.37	2026	2.56	2131	2.96	2239	3.39	2350	3.84	2460	4.33	2570	4.85	2679	5.40	2787	5.96	2894	6.55				
3842	1700	1861	1.92	1912	2.10	1972	2.33	2023	2.53	2069	2.72	2116	2.91	2212	3.32	2313	3.76	2416	4.23	2520	4.73	2624	5.25	2728	5.80	2830	6.38	2932	6.98	3033	7.59		
4068	1800	1966	2.27	2010	2.44	2069	2.68	2119	2.90	2165	3.10	2208	3.31	2298	3.73	2391	4.18	2487	4.66	2585	5.16	2683	5.69	2781	6.25	2879	6.83	2976	7.44	3073	8.07		
4294	1900	2070	2.64	2109	2.81	2165	3.07	2216	3.31	2261	3.53	2303	3.74	2386	4.18	2473	4.64	2563	5.13	2654	5.64	2747	6.18	2840	6.74	2933	7.33	3026	7.94	3118	8.58		
4520	2000	2172	3.05	2209	3.23	2262	3.49	2313	3.76	2358	4.00	2398	4.22	2477	4.67	2558	5.14	2642	5.64	2728	6.17	2816	6.72	2904	7.29	2992	7.88	3081	8.50	3169	9.14		
4972	2200	2371	3.95	2416	4.22	2457	4.46	2506	4.76	2551	5.04	2591	5.31	2665	5.80	2737	6.30	2810	6.82	2886	7.37	2964	7.94	3043	8.53	3123	9.14						
5424	2400	2575	5.06	2627	5.41	2656	5.61	2700	5.93	2744	6.26	2785	6.56	2857	7.12	2923	7.66	2989	8.20	3056	8.77												
5876	2600	2794	6.46	2838	6.81	2861	7.00	2896	7.29	2938	7.65	2978	8.00	3050	8.64																		
6328	2800	3010	8.08	3043	8.39																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-216

Wheel Diameter 16-1/2"

Tip Speed = 4.320 X RPM. Max HP = .4957 X $\frac{RPM^3}{1000}$

INLET 18" OUTLET 24"

AREA 1.76 SQ FT AREA 3.14 SQ FT

CL I .2256 Max RPM CL II .2881 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
2184	800	876	.33	969	.45	1068	.58	1168	.73	1267	.90																						
2457	900	963	.44	1044	.56	1131	.70	1220	.86	1309	1.03	1397	1.22																				
2730	1000	1051	.57	1126	.71	1201	.85	1280	1.02	1360	1.19	1440	1.38	1598	1.80																		
3003	1100	1139	.72	1211	.88	1277	1.03	1347	1.20	1419	1.38	1492	1.58	1638	2.00	1781	2.48																
3276	1200	1227	.90	1298	1.08	1359	1.24	1421	1.42	1485	1.60	1562	1.8	1686	2.24	1819	2.72	1949	3.24														
3549	1300	1316	1.10	1386	1.31	1443	1.48	1499	1.67	1557	1.86	1617	2.07	1740	2.51	1864	3.00	1986	3.53	2107	4.10												
3822	1400	1407	1.34	1474	1.57	1529	1.76	1581	1.95	1633	2.16	1688	2.37	1801	2.83	1916	3.32	2030	3.86	2144	4.44	2256	5.04										
4095	1500	1500	1.63	1562	1.86	1617	2.08	1665	2.28	1713	2.49	1763	2.71	1867	3.18	1973	3.69	2080	4.23	2187	4.82	2293	5.44	2398	6.08								
4368	1600	1596	1.95	1650	2.18	1705	2.43	1751	2.65	1796	2.87	1842	3.09	1937	3.58	2036	4.10	2136	4.65	2236	5.24	2336	5.87	2436	6.53	2534	7.21	2631	7.92				
4641	1700	1692	2.33	1738	2.55	1793	2.82	1839	3.06	1881	3.29	1924	3.52	2011	4.02	2103	4.55	2196	5.12	2291	5.72	2385	6.35	2480	7.02	2573	7.72	2666	8.44	2758	9.19		
4914	1800	1788	2.74	1827	2.95	1881	3.25	1927	3.51	1968	3.76	2008	4.00	2089	4.51	2174	5.06	2261	5.64	2350	6.25	2439	6.89	2528	7.56	2617	8.27	2706	9.00	2794	9.76		
5187	1900	1882	3.20	1917	3.40	1969	3.71	2015	4.01	2055	4.27	2093	4.53	2169	5.05	2248	5.61	2330	6.21	2413	6.83	2497	7.48	2582	8.16	2667	8.87	2751	9.61	2835	10.38		
5460	2000	1975	3.69	2009	3.91	2056	4.23	2103	4.55	2143	4.83	2180	5.11	2252	5.65	2326	6.22	2402	6.83	2480	7.47	2560	8.13	2640	8.82	2720	9.54	2801	10.29	2881	11.06		
6006	2200	2156	4.79	2196	5.10	2233	5.39	2278	5.76	2319	6.1	2356	6.42	2422	7.02	2488	7.62	2555	8.25	2624	8.91	2695	9.06	2766	10.32	2839	11.06						
6552	2400	2341	6.12	2389	6.55	2414	6.79	2454	7.17	2495	7.57	2532	7.94	2597	8.62	2657	9.26	2717	9.92	2778	10.61												
7098	2600	2540	7.82	2580	8.25	2601	8.47	2632	8.82	2671	9.25	2708	9.68	2773	10.46																		
7644	2800	2736	9.78	2767	10.15																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-218

Wheel Diameter 18-1/4"

Tip Speed = 4.778 X RPM. Max HP = .7955 X $\frac{RPM^3}{1000}$

INLET 20" OUTLET 26"

AREA 2.18 SQ FT AREA 3.68 SQ FT

CL I .2140 Max RPM CL II .2638 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
2656	800	805	.41	888	.55	978	.72	1070	.91	1160	1.11	1247	1.33	1414	1.80																		
2988	900	886	.55	958	.69	1036	.87	1117	1.07	1198	1.28	1279	1.50	1434	1.99	1582	2.53																
3320	1000	966	.71	1034	.87	1101	1.05	1172	1.25	1246	1.48	1319	1.71	1463	2.22	1602	2.77	1735	3.36	1863	3.99												
3652	1100	1047	.90	1113	1.09	1172	1.27	1235	1.48	1300	1.71	1367	1.95	1500	2.48	1630	3.05	1756	3.66	1878	4.30	1995	4.98										
3984	1200	1128	1.13	1194	1.34	1247	1.53	1303	1.74	1361	1.98	1421	2.23	1544	2.77	1665	3.36	1784	3.99	1899	4.65	2012	5.35	2121	6.08								
4316	1300	1210	1.39	1275	1.63	1325	1.84	1375	2.05	1427	2.29	1482	2.55	1594	3.11	1707	3.71	1818	4.36	1928	5.04	2035	5.74	2140	6.50	2242	7.28	2341	8.08	2438	8.92		
4648	1400	1295	1.70	1355	1.96	1406	2.19	1451	2.41	1498	2.65	1547	2.92	1650	3.49	1754	4.11	1859	4.78	1963	5.47	2064	6.2	2164	6.97	2262	7.76	2358	8.58	2452	9.43		
4980	1500	1383	2.07	1436	2.33	1486	2.59	1530	2.83	1573	3.07	1617	3.34	1710	3.92	1807	4.56	1905	5.24	2003	5.96	2099	6.7	2194	7.48	2288	8.30	2380	9.13	2470	10.00		
5312	1600	1473	2.50	1516	2.74	1567	3.04	1610	3.29	1650	3.55	1690	3.81	1775	4.40	1865	5.06	1956	5.75	2048	6.49	2139	7.26	2230	8.05	2319	8.88	2408	9.74	2494	10.62		
5644	1700	1562	2.98	1597	3.20	1648	3.53	1690	3.81	1728	4.08	1766	4.35	1844	4.95	1927	5.61	2012	6.32	2098	7.08	2184	7.86	2271	8.68	2356	9.52	2440	10.39	2524	11.29		
5976	1800	1651	3.51	1679	3.71	1729	4.07	1771	4.39	1809	4.67	1844	4.96	1916	5.56	1993	6.22	2072	6.95	2152	7.72	2234	8.52	2316	9.36	2397	10.22	2477	11.11	2577	12.03		
6308	1900	1736	4.08	1763	4.29	1809	4.66	1852	5.01	1889	5.33	1924	5.62	1991	6.24	2062	6.91	2135	7.64	2211	8.42	2287	9.25	2365	10.10	2442	10.98	2519	11.89	2596	12.82		
6640	2000	1818	4.68	1849	4.95	1890	5.30	1933	5.69	1970	6.04	2004	6.36	2068	6.99	2133	7.67	2202	8.40	2273	9.20	2345	10.03	2418	10.90	2491	11.81	2565	12.73	2638	13.69		
7304	2200	1980	6.03	2026	6.50	2053	6.79	2094	7.22	2132	7.64	2166	8.02	2226	8.71	2284	9.42	2344	10.16	2406	10.97	2469	11.82	2534	12.72	2600	13.66						
7968	2400	2159	7.81	2206	8.39	2222	8.59	2255	9.01	2293	9.49	2327	9.94	2387	10.74	2441	11.49	2494	12.26	2549	13.08												
8632	2600	2347	10.06	2381	10.54	2397	10.77	2421	11.11	2454	11.61	2488	12.13	2549	13.07																		
9296	2800	2520	12.34	2549	12.90																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-220

Wheel Diameter 20"

Tip Speed = 5.236 X RPM. Max HP = 1.257 X $\frac{RPM^3}{1000}$

INLET 22" OUTLET 28"

AREA 2.64 SQ FT AREA 4.27 SQ FT

CL I .1952 Max RPM CL II .2407 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
3256	800	734	.49	810	.66	893	.86	976	1.09	1058	1.33	1138	1.59	1290	2.16																				
3663	900	808	.66	874	.83	945	1.04	1019	1.28	1094	1.53	1167	1.81	1309	2.39	1443	3.04																
4070	1000	882	.85	943	1.05	1005	1.26	1070	1.51	1137	1.77	1204	2.05	1335	2.66	1462	3.33	1583	4.04	1700	4.80												
4477	1100	965	1.08	1016	1.31	1069	1.53	1127	1.78	1186	2.05	1247	2.34	1369	2.97	1487	3.66	1602	4.39	1713	5.17	1821	5.99										
4884	1200	1029	1.35	1089	1.61	1138	1.84	1189	2.09	1242	2.37	1297	2.68	1409	3.33	1519	4.03	1628	4.79	1733	5.58	1836	6.42	1936	7.30								
5291	1300	1104	1.67	1163	1.96	1209	2.21	1255	2.47	1303	2.75	1352	3.06	1454	3.73	1557	4.46	1659	5.23	1759	6.05	1857	6.91	1952	7.81	2045	8.74	2136	9.71	2225	10.71		
5698	1400	1182	2.04	1237	2.36	1283	2.63	1324	2.90	1367	3.19	1412	3.5	1505	4.19	1601	4.94	1696	5.74	1791	6.57	1884	7.45	1975	8.37	2064	9.32	2151	10.31	2237	11.33		
6105	1500	1262	2.48	1310	2.80	1356	3.11	1396	3.40	1435	3.69	1475	4.01	1561	4.71	1649	5.48	1738	6.29	1827	7.15	1916	8.05	2002	8.99	2088	9.96	2172	10.97	2254	12.01		
6512	1600	1344	3.00	1384	3.29	1430	3.65	1469	3.96	1505	4.26	1542	4.58	1620	5.29	1702	6.07	1785	6.91	1869	7.79	1952	8.71	2035	9.67	2117	10.67	2197	11.69	2276	12.75		
6919	1700	1426	3.58	1457	3.84	1504	4.24	1542	4.58	1577	4.90	1612	5.23	1683	5.94	1758	6.74	1836	7.59	1914	8.50	1993	9.44	2072	10.42	2150	11.44	2227	12.48	2303	13.56		
7326	1800	1506	4.22	1533	4.46	1577	4.89	1616	5.27	1650	5.61	1683	5.95	1749	6.67	1818	7.48	1890	8.35	1964	9.27	2038	10.24	2113	11.24	2187	12.28	2261	13.35	2334	14.45		
7733	1900	1584	4.90	1609	5.16	1651	5.59	1690	6.02	1724	6.40	1755	6.75	1817	7.49	1881	8.30	1948	9.18	2017	10.12	2087	11.10	2158	12.13	2228	13.19	2299	14.28	2368	15.40		
8140	2000	1659	5.63	1688	5.94	1724	6.37	1764	6.84	1798	7.25	1829	7.63	1887	8.39	1947	9.21	2009	10.09	2074	11.05	2140	12.05	2206	13.10	2273	14.18	2340	15.29	2407	16.44		
8954	2200	1807	7.24	1849	7.81	1874	8.15	1910	8.67	1945	9.18	1976	9.63	2031	10.47	2084	11.31	2139	12.21	2195	13.17	2253	14.20	2313	15.28	2373	16.40						
9768	2400	1970	9.38	2013	10.07	2028	10.31	2058	10.82	2092	11.40	2124	11.94	2178	12.90	2227	13.80	2276	14.73	2326	15.71												
10582	2600	2141	12.06	2173	12.66	2188	12.94	2209	13.35	2239	13.94	2271	14.57	2326	15.7																		
11396	2800	2299	14.81	2326	15.49																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-222

Wheel Diameter 22-1/4"

Tip Speed = 5.825 X RPM. Max HP = 1.890 X $\frac{RPM^3}{1000}$

INLET 24" OUTLET 32"

AREA 3.14 SQ FT AREA 5.58 SQ FT

CL I .1760 Max RPM CL II .2243 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5"	
CFM	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
4008	800	699	.64	767	.86	835	1.08	909	1.35	988	1.64	1067	1.97																				
4509	900	770	.84	831	1.08	891	1.34	952	1.60	1019	1.90	1089	2.23	1228	2.96																		
5010	1000	843	1.10	897	1.36	952	1.64	1006	1.92	1062	2.21	1121	2.54	1247	3.28	1372	4.11																
5511	1100	916	1.40	967	1.68	1016	1.98	1066	2.30	1114	2.60	1165	2.93	1275	3.67	1390	4.51	1504	5.42														
6012	1200	991	1.77	1036	2.06	1082	2.38	1128	2.72	1173	3.06	1218	3.40	1313	4.13	1416	4.98	1522	5.90	1626	6.90												
6513	1300	1067	2.20	1109	2.51	1151	2.85	1192	3.20	1235	3.58	1276	3.94	1360	4.68	1451	5.52	1547	6.45	1645	7.46	1741	8.53										
7014	1400	1142	2.69	1181	3.02	1221	3.38	1259	3.75	1298	4.15	1338	4.54	1414	5.33	1495	6.16	1581	7.09	1670	8.10	1760	9.19	1860	10.33	1939	11.52	2025	12.74	2109	14.00		
7515	1500	1218	3.26	1255	3.61	1291	3.97	1328	4.38	1364	4.78	1401	5.21	1473	6.05	1545	6.90	1622	7.83	1703	8.84	1786	9.93	1871	11.08	1955	12.30	2038	13.55	2120	14.84		
8016	1600	1295	3.91	1329	4.27	1364	4.67	1398	5.08	1431	5.50	1465	5.94	1534	6.86	1601	7.75	1670	8.68	1743	9.68	1819	10.76	1897	11.93	1976	13.15	2056	14.43	2134	15.75		
8517	1700	1371	4.64	1404	5.02	1436	5.43	1468	5.85	1501	6.31	1532	6.76	1597	7.73	1661	8.68	1724	9.64	1790	10.64	1859	11.72	1930	12.87	2004	14.10	2078	15.39	2153	16.73		
9018	1800	1448	5.45	1479	5.86	1509	6.28	1540	6.73	1571	7.20	1600	7.68	1661	8.67	1722	9.70	1782	10.70	1842	11.72	1905	12.80	1970	13.95	2038	15.17	2107	16.46	2177	17.81		
9519	1900	1525	6.36	1555	6.80	1583	7.23	1612	7.70	1641	8.17	1670	8.69	1726	9.71	1785	10.79	1842	11.86	1899	12.92	1956	14.01	2016	15.15	2078	16.37	2142	17.65	2207	19.00		
10020	2000	1604	7.39	1630	7.83	1658	8.29	1685	8.77	1713	9.26	1740	9.79	1794	10.85	1849	11.97	1904	13.11	1958	14.23	2012	15.34	2067	16.50	2124	17.71	2182	18.99	2243	20.33		
11022	2200	1759	9.77	1783	10.21	1808	10.71	1833	11.22	1858	11.76	1883	12.31	1933	13.47	1981	14.63	2031	15.87	2082	17.13	2131	18.36	2180	19.58	2229	20.82						
12024	2400	1920	12.69	1936	13.05	1959	13.59	1982	14.15	2005	14.70	2028	15.29	2073	16.48	2119	17.78	2163	19.05	2210	20.41												
13026	2600	2071	15.93	2089	16.36	2111	16.97	2133	17.57	2154	18.16	2175	18.77	2218	20.10																		
14028	2800	2229	19.81	2245	20.28																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-224

Wheel Diameter
24-1/2"

Tip Speed = 6.414 X RPM. Max HP = 3.059 X $\frac{RPM^3}{1000}$

INLET 26"
OUTLET 34"

AREA 3.68 SQ FT
AREA 6.30 SQ FT

CL I .1599 Max RPM
CL II .2037 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.25" s.p.		1.5" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		4.5" s.p.		5" s.p.		5.5" s.p.		6" s.p.		6.5" s.p.	
CFM	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
4824	800	635	.77	697	1.04	758	1.31	826	1.63	897	1.99	969	2.39																				
5427	900	699	1.02	754	1.31	809	1.62	865	1.94	925	2.30	989	2.70	1116	3.59																		
6030	1000	765	1.33	815	1.64	865	1.99	914	2.33	964	2.68	1018	3.08	1133	3.98	1246	4.98																
6633	1100	832	1.70	878	2.04	922	2.40	968	2.78	1012	3.16	1058	3.55	1158	4.45	1263	5.47	1366	6.57														
7236	1200	900	2.14	941	2.50	982	2.89	1024	3.30	1065	3.71	1106	4.12	1193	5.01	1286	6.03	1382	7.16	1477	8.36												
7839	1300	969	2.66	1007	3.05	1045	3.45	1083	3.88	1122	4.33	1159	4.77	1236	5.68	1318	6.69	1405	7.83	1494	9.05	1581	10.35										
8442	1400	1037	3.25	1073	3.66	1109	4.10	1143	4.55	1179	5.03	1215	5.51	1285	6.46	1357	7.47	1435	8.60	1517	9.83	1599	11.14	1681	12.53	1761	13.96	1839	15.45	1915	16.97		
9045	1500	1106	3.95	1140	4.37	1172	4.82	1206	5.31	1238	5.80	1272	6.32	1338	7.34	1403	8.37	1473	9.49	1546	10.71	1622	12.04	1699	13.44	1775	14.91	1851	16.43	1925	17.99		
9648	1600	1176	4.74	1207	5.18	1239	5.66	1269	6.16	1300	6.67	1331	7.21	1394	8.31	1454	9.39	1517	10.52	1583	11.74	1652	13.05	1723	14.46	1795	15.94	1867	17.49	1938	19.09		
10251	1700	1246	5.62	1275	6.09	1304	6.58	1333	7.09	1363	7.65	1391	8.20	1450	9.37	1508	10.53	1566	11.68	1625	12.90	1688	14.21	1753	15.61	1820	17.10	1887	18.66	1955	20.29		
10854	1800	1315	6.60	1343	7.11	1371	7.62	1399	8.16	1426	8.73	1453	9.31	1509	10.52	1564	11.76	1618	12.97	1673	14.21	1730	15.52	1789	16.91	1851	18.39	1914	19.96	1977	21.59		
11457	1900	1385	7.71	1412	8.24	1438	8.77	1464	9.33	1490	9.91	1517	10.54	1568	11.77	1621	13.09	1673	14.38	1724	15.66	1777	16.98	1831	18.37	1887	19.85	1945	21.40	2004	23.04		
12060	2000	1456	8.96	1481	9.49	1506	10.05	1531	10.63	1555	11.23	1580	11.87	1629	13.15	1679	14.51	1730	15.90	1778	17.25	1827	18.60	1877	20.00	1928	21.47	1982	23.02	2037	24.65		
13266	2200	1598	11.86	1619	12.38	1642	12.99	1664	13.60	1687	14.25	1710	14.92	1755	16.33	1799	17.73	1845	19.24	1891	20.77	1936	22.26	1960	23.74	2024	25.25						
14472	2400	1743	15.39	1759	15.82	1779	16.48	1800	17.15	1821	17.82	1842	18.54	1882	19.99	1925	21.56	1965	23.10	2007	24.74												
15678	2600	1880	19.31	1897	19.83	1918	20.57	1937	21.30	1956	22.02	1975	22.76	2015	24.37																		
16884	2800	2024	24.01	2039	24.59																												

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-227

Wheel Diameter
27"

Tip Speed = 7.069 X RPM. Max HP = 3.057 X $\frac{RPM^3}{1000}$

INLET 30"
OUTLET 38"

AREA 4.90 SQ FT
AREA 7.87 SQ FT

CL I .1578 Max RPM
CL II .2509 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
3658	500	456	.27	527	.44	591	.63	652	.84																						
4390	600	518	.38	582	.58	639	.79	693	1.02	795	1.51																				
5121	700	582	.53	641	.75	693	.99	742	1.24	833	1.77	920	2.35																		
5853	800	648	.71	702	.96	751	1.22	796	1.50	880	2.08	959	2.69	1035	3.36																
6584	900	715	.94	765	1.22	811	1.51	853	1.80	931	2.43	1004	3.10	1074	3.79	1142	4.53	1209	5.31												
7316	1000	782	1.21	830	1.52	873	1.84	913	2.16	986	2.84	1055	3.55	1120	4.29	1183	5.06	1244	5.87	1305	6.72	1423	8.53								
8048	1100	850	1.54	896	1.89	936	2.23	974	2.58	1044	3.30	1108	4.07	1170	4.86	1229	5.67	1287	6.51	1343	7.39	1453	9.25	1560	11.25						
8779	1200	918	1.93	962	2.31	1000	2.68	1036	3.05	1103	3.83	1164	4.64	1223	5.48	1279	6.35	1333	7.24	1386	8.15	1489	10.06	1590	12.12	1688	14.29				
9511	1300	989	2.39	1029	2.80	1066	3.20	1100	3.60	1164	4.43	1223	5.29	1278	6.18	1332	7.10	1383	8.03	1434	8.99	1531	10.98	1626	13.08	1718	15.31	1809	17.65	1899	20.07
10242	1400	1057	2.90	1097	3.35	1132	3.79	1164	4.22	1226	5.10	1282	6.01	1336	6.94	1387	7.91	1436	8.90	1484	9.91	1577	11.99	1667	14.15	1754	16.43	1840	18.83	1925	21.33
10974	1500	1126	3.49	1165	3.98	1199	4.45	1230	4.91	1288	5.84	1343	6.81	1394	7.79	1444	8.81	1491	9.85	1537	10.91	1626	13.09	1712	15.34	1795	17.68	1877	20.12	1957	22.68
11706	1600	1196	4.17	1234	4.71	1266	5.20	1296	5.69	1352	6.68	1405	7.69	1455	8.73	1502	9.79	1548	10.88	1592	11.99	1677	14.28	1760	16.62	1840	19.04	1918	21.54	1994	24.15
12437	1700	1265	4.95	1301	5.47	1333	6.03	1363	6.56	1416	7.60	1467	8.67	1516	9.75	1562	10.87	1606	12.00	1648	13.16	1731	15.55	1810	18.00	1887	20.51	1962	23.09	2035	25.76
13169	1800	1336	5.75	1361	6.20	1401	6.95	1430	7.51	1482	8.62	1531	9.74	1578	10.88	1622	12.04	1665	13.23	1706	14.43	1786	16.92	1862	19.48	1936	22.09	2009	24.76	2079	27.50
13900	1900	1406	6.68	1440	7.36	1469	7.96	1497	8.57	1548	9.74	1595	10.91	1640	12.10	1684	13.32	1725	14.55	1765	15.81	1843	18.39	1917	21.05	1988	23.77	2058	26.54	2126	29.37
14632	2000	1478	7.74	1509	8.44	1541	9.16	1564	9.71	1614	10.97	1660	12.19	1703	13.43	1746	14.70	1786	15.99	1825	17.29	1901	19.97	1972	22.72	2042	25.55	2109	28.43	2175	31.36
16095	2200	1620	10.17	1649	10.93	1666	11.39	1700	12.34	1748	13.74	1791	15.09	1832	16.44	1872	17.81	1910	19.20	1948	20.61	2019	23.48	2087	26.43	2153	29.45	2216	32.54	2279	35.68
17558	2400	1762	13.05	1790	13.92	1813	14.66	1837	15.42	1883	16.98	1924	18.48	1963	19.95	2000	21.42	2037	22.91	2073	24.43	2141	27.50	2206	30.64	2268	33.85	2329	37.13	2388	40.48
19022	2600	1904	16.38	1930	17.36	1952	18.19	1978	19.16	2019	20.74	2058	22.36	2096	23.98	2131	25.57	2166	27.16	2199	28.78	2265	32.07	2327	35.41	2387	38.81	2445	42.28	2501	45.82
20485	2800	2045	20.24	2072	21.34	2092	22.26	2114	23.22	2159	25.22	2194	26.83	2230	28.57	2264	30.30	2297	32.00	2329	33.72	2391	37.22	2451	40.77	2509	44.38				

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-230

Wheel Diameter 30"

Tip Speed = 7.854 X RPM. Max HP = 5.177 X $\frac{RPM^3}{1000}$

INLET 32" OUTLET 42"

AREA 5.58 SQ FT AREA 9.62 SQ FT

CL I .1420 Max RPM CL II .2258 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
4515	500	411	.33	475	.55	532	.78	587	1.04																						
5417	600	466	.47	524	.72	575	.98	624	1.26	715	1.87																				
6320	700	524	.65	577	.93	624	1.22	668	1.53	750	2.18	828	2.91																		
7223	800	583	.88	632	1.19	676	1.51	716	1.85	792	2.57	863	3.32	931	4.14																
8126	900	643	1.16	689	1.50	730	1.86	768	2.23	838	3.01	904	3.82	967	4.68	1028	5.59	1088	6.56												
9029	1000	704	1.50	747	1.88	786	2.27	821	2.67	888	3.51	949	4.39	1008	5.30	1065	6.25	1120	7.25	1174	8.30	1281	10.53								
9932	1100	765	1.90	806	2.33	842	2.75	876	3.18	939	4.08	997	5.02	1053	6.00	1106	7.00	1158	8.04	1209	9.12	1307	11.42	1404	13.88						
10835	1200	827	2.38	866	2.85	900	3.31	933	3.77	993	4.73	1048	5.73	1100	6.77	1151	7.84	1200	8.93	1248	10.06	1340	12.42	1431	14.96	1519	17.64				
11738	1300	890	2.96	926	3.45	959	3.95	990	4.44	1047	5.46	1100	6.53	1150	7.63	1198	8.76	1245	9.92	1290	11.10	1378	13.55	1463	16.15	1546	18.90	1628	21.79	1709	24.78
12641	1400	951	3.58	978	4.14	1019	4.68	1048	5.20	1103	6.29	1154	7.41	1202	8.57	1248	9.77	1292	10.99	1336	12.24	1419	14.80	1500	17.48	1579	20.29	1656	23.25	1732	26.34
13544	1500	1014	4.31	1048	4.92	1079	5.50	1107	6.06	1159	7.22	1209	8.40	1255	9.62	1299	10.87	1342	12.16	1383	13.47	1463	16.16	1541	18.94	1616	21.82	1689	24.84	1761	28.00
14446	1600	1077	5.14	1111	5.82	1139	6.42	1166	7.03	1217	8.24	1264	9.49	1309	10.77	1352	12.09	1393	13.43	1433	14.81	1510	17.63	1584	20.52	1656	23.51	1726	26.60	1795	29.81
15349	1700	1141	6.11	1171	6.76	1200	7.44	1226	8.10	1275	9.38	1321	10.70	1364	12.04	1405	13.42	1445	14.82	1484	16.25	1558	19.20	1629	22.23	1698	25.33	1766	28.51	1832	31.80
16252	1800	1202	7.09	1225	7.66	1261	8.58	1287	9.28	1334	10.64	1378	12.02	1420	13.43	1460	14.86	1499	16.33	1536	17.82	1607	20.89	1676	24.04	1743	27.27	1808	30.57	1871	33.95
17155	1900	1265	8.24	1296	9.08	1322	9.82	1347	10.57	1393	12.03	1435	13.47	1476	14.94	1515	16.44	1553	17.96	1589	19.52	1658	22.70	1725	25.98	1789	29.34	1852	32.77	1913	36.26
18058	2000	1330	9.55	1358	10.42	1387	11.31	1408	11.99	1453	13.54	1494	15.05	1533	16.58	1571	18.15	1608	19.74	1643	21.35	1710	24.65	1775	28.06	1837	31.54	1898	35.10	1958	38.71
19864	2200	1458	12.56	1484	13.49	1499	14.06	1530	15.23	1573	16.96	1612	18.63	1649	20.3	1685	21.99	1719	23.71	1753	25.45	1817	28.99	1879	32.63	1938	36.36	1995	40.17	2051	44.05
21670	2400	1585	16.09	1611	17.19	1632	18.09	1653	19.04	1695	20.96	1732	22.81	1767	24.62	1800	26.44	1833	28.29	1865	30.16	1927	33.95	1985	37.83	2042	41.79	2096	45.85	2149	49.97
23475	2600	1714	20.24	1737	21.44	1757	22.45	1781	23.65	1817	25.60	1852	27.61	1886	29.61	1918	31.57	1949	33.53	1980	35.53	2038	39.59	2095	43.72	2149	47.92	2201	52.20	2251	56.57
25281	2800	1841	25.00	1865	26.35	1882	27.48	1903	28.67	1943	31.13	1974	33.12	2007	35.27	2037	37.41	2067	39.51	2096	41.63	2152	45.94	2206	50.33	2258	54.79				

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-233

Wheel Diameter 33"

Tip Speed = 8.639 X RPM. Max HP = 8.337 X $\frac{RPM^3}{1000}$

INLET 36" OUTLET 45"

AREA 7.06 SQ FT AREA 11.04 SQ FT

CL I .1291 Max RPM CL II .2053 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
5461	500	373	.40	431	.66	484	.95	534	1.25																						
6553	600	424	.57	476	.87	523	1.19	567	1.52	650	2.26																				
7645	700	476	.79	525	1.12	567	1.48	607	1.85	682	2.64	753	3.52																		
8738	800	530	1.06	575	1.44	614	1.83	651	2.24	720	3.10	784	4.02	847	5.02																
9830	900	585	1.40	626	1.82	664	2.25	696	2.70	762	3.64	822	4.62	879	5.66	935	6.76	989	7.93												
10922	1000	640	1.81	679	2.28	714	2.75	747	3.23	807	4.24	863	5.31	916	6.41	968	7.56	1018	8.77	1068	10.04	1164	12.74								
12014	1100	696	2.30	733	2.82	766	3.33	797	3.85	854	4.93	907	6.08	957	7.26	1006	8.47	1053	9.73	1099	11.04	1188	13.82	1276	16.80						
13016	1200	751	2.88	787	3.45	818	4.00	848	4.56	902	5.72	953	6.93	1000	8.19	1046	9.49	1091	10.81	1134	12.17	1219	15.03	1301	18.10	1381	21.34				
14199	1300	809	3.58	842	4.18	872	4.77	900	5.37	952	6.61	1000	7.90	1046	9.23	1089	10.60	1132	12.00	1173	13.43	1253	16.40	1330	19.54	1406	22.87	1480	26.37	1554	29.99
15291	1400	865	4.34	897	5.01	926	5.66	953	6.30	1003	7.61	1049	8.97	1093	10.37	1135	11.82	1175	13.30	1214	14.81	1290	17.91	1364	21.15	1435	24.55	1506	28.13	1575	31.87
16383	1500	922	5.22	953	5.95	981	6.65	1006	7.34	1054	8.73	1099	10.17	1141	11.64	1181	13.16	1220	14.71	1257	16.30	1330	19.56	1400	22.91	1469	26.41	1536	30.06	1601	33.86
17475	1600	979	6.22	1010	7.04	1036	7.76	1060	8.50	1106	9.97	1149	11.49	1190	13.04	1229	14.63	1266	16.25	1302	17.92	1372	21.33	1440	24.83	1505	28.44	1569	32.18	1632	36.07
18567	1700	1037	7.39	1064	8.18	1091	9.01	1115	9.80	1159	11.35	1201	12.95	1240	14.57	1278	16.23	1314	17.93	1349	19.67	1416	23.23	1481	26.89	1544	30.65	1605	34.50	1665	38.48
19660	1800	1093	8.59	1113	9.26	1146	10.38	1170	11.23	1212	12.88	1252	14.55	1291	16.25	1327	17.99	1362	19.76	1396	21.56	1461	25.27	1524	29.09	1584	33.00	1643	36.99	1701	41.08
20752	1900	1150	9.97	1178	10.99	1202	11.89	1225	12.79	1266	14.55	1305	16.30	1342	18.08	1377	19.89	1412	21.74	1444	23.61	1508	27.47	1568	31.44	1627	35.51	1684	39.65	1740	43.87
21844	2000	1209	11.55	1235	12.61	1261	13.69	1280	14.51	1321	16.38	1358	18.21	1394	20.07	1428	21.96	1462	23.88	1494	25.83	1555	29.83	1614	33.95	1670	38.17	1726	42.47	1780	46.84
24028	2200	1325	15.18	1349	16.33	1363	17.01	1391	18.43	1430	20.52	1465	22.55	1499	24.56	1531	26.61	1563	28.69	1594	30.79	1652	35.08	1708	39.48	1761	43.99	1813	48.60	1884	53.30
26213	2400	1442	14.51	1464	20.80	1484	21.89	1503	23.04	1541	25.37	1574	27.60	1606	29.8	1637	31.99	1667	34.23	1696	36.49	1752	41.08	1805	45.77	1856	50.57	1905	55.47	1954	60.47
28397	2600	1558	24.48	1579	25.94	1597	27.17	1619	26.62	1652	30.98	1684	33.41	1715	35.83	1744	38.19	1772	40.58	1800	42.99	1853	47.90	1904	52.90	1953	57.98	2001	63.17	2047	68.45
30582	2800	1673	30.23	1695	31.86	1711	33.25	1730	34.69	1767	37.67	1795	40.07	1824	42.67	1852	45.26	1879	47.81	1905	50.37	1956	55.59	2005	60.90	2053	68.29				

BHP does not include drive losses.

Performance shown is with outlet duct.

VIF-236

Wheel Diameter 36-1/2"

Tip Speed = 9.556 X RPM. Max HP = 12.54 X $\frac{RPM^3}{1000}$

INLET 42" OUTLET 50"

AREA 9.62 SQ FT AREA 13.64 SQ FT

CL I .1192 Max RPM CL II .1852 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
6700	500	344	.48	397	.78	444	1.09	487	1.42	570	2.14																				
8040	600	392	.67	439	1.03	482	1.39	521	1.77	593	2.54	662	3.40																		
9380	700	441	.92	484	1.32	523	1.75	559	2.18	625	3.05	687	3.96	746	4.94																
10720	800	491	1.23	531	1.68	567	2.16	600	2.65	662	3.63	719	4.63	773	5.67	825	6.77	877	7.93												
12060	900	542	1.61	579	2.12	612	2.65	644	3.19	702	4.29	756	5.40	806	6.52	855	7.68	901	8.90	947	10.16	1038	12.87								
13400	1000	594	2.06	629	2.65	660	3.22	689	3.81	744	5.02	794	6.25	842	7.48	888	8.73	932	10.01	975	11.33	1057	14.12	1140	17.11						
14740	1100	645	2.60	679	3.26	708	3.88	736	4.52	787	5.84	835	7.18	881	8.53	924	9.89	966	11.26	1007	12.65	1084	15.56	1160	18.63	1234	21.89				
16080	1200	697	3.23	730	3.96	758	4.66	783	5.34	832	6.75	878	8.21	921	9.68	963	11.15	1003	12.63	1042	14.12	1116	17.17	1186	20.36	1255	23.71	1324	27.22	1392	30.93
17420	1300	750	3.99	781	4.78	808	5.54	832	6.27	879	7.78	922	9.34	964	10.92	1003	12.15	1042	14.11	1079	15.71	1150	18.95	1217	22.28	1282	25.74	1346	29.34	1409	33.10
18760	1400	803	4.85	832	5.69	858	6.52	882	7.33	926	8.93	968	10.58	1007	12.27	1045	13.98	1082	15.70	1118	17.42	1186	20.88	1251	24.38	1313	27.97	1374	31.70	1433	35.55
20100	1500	856	5.82	884	6.73	909	7.63	932	8.51	974	10.21	1014	11.96	1052	13.75	1089	15.57	1124	17.40	1158	19.24	1224	22.94	1287	26.65	1347	30.41	1405	34.27	1462	38.24
21440	1600	909	6.92	935	7.90	960	8.88	983	9.81	1023	11.64	1061	13.48	1098	15.37	1133	17.29	1167	19.23	1200	21.19	1264	25.12	1324	29.06	1382	33.03	1439	37.05	1493	41.16
22780	1700	963	8.16	987	9.19	1012	10.25	1033	11.26	1073	13.22	1109	15.15	1145	17.13	1179	19.16	1211	21.20	1243	23.27	1304	27.44	1363	31.62	1420	35.81	1474	40.03	1527	44.31
24120	1800	1016	9.53	1040	10.66	1063	11.75	1084	12.85	1123	14.95	1158	16.98	1192	19.06	1225	21.18	1256	23.33	1287	25.50	1346	29.89	1403	64.32	1458	38.75	1511	43.19	1562	47.66
25460	1900	1070	11.06	1094	12.30	1115	13.44	1136	14.60	1173	16.83	1208	18.99	1240	21.16	1272	23.37	1302	25.62	1332	27.90	1390	32.51	1445	37.16	1498	41.83	1549	46.51	1599	51.20
26800	2000	1123	12.58	1146	14.08	1167	15.26	1187	16.51	1224	18.87	1257	21.18	1289	23.44	1319	25.74	1349	28.08	1378	30.46	1434	35.28	1487	40.16	1539	45.07	1589	49.99	1637	54.92
29480	2200	1236	16.78	1252	18.14	1272	19.48	1291	20.83	1326	23.5	1358	26.07	1388	28.59	1416	31.07	1444	33.60	1471	36.16	1524	41.39	1574	46.69	1623	52.05	1671	57.45	1717	62.86
32160	2400	1347	21.71	1359	22.98	1378	24.51	1394	25.88	1428	28.86	1459	31.71	1488	34.52	1515	37.25	1541	39.96	1567	42.70	1617	48.30	1665	54.02	1711	59.80	1756	65.64	1800	71.52
34840	2600	1453	27.26	1466	28.58	1484	30.28	1500	31.89	1531	35.04	1562	38.21	1589	41.25	1616	44.28	1641	47.24	1665	50.17	1712	56.13	1757	62.22	1802	68.42	1845	74.68		
37520	2800	1561	33.58	1568	34.25	1590	36.99	1606	38.78	1635	42.08	1664	45.55	1691	48.9	1716	52.18	1741	55.44	1764	58.62	1809	64.95	1852	71.41						

BHP does not include drive losses. Performance shown is with outlet duct. Minimum HP required to start fan 1-1/2 HP.

VIF-240

Wheel Diameter 40-1/4"

Tip Speed = 10.54 X RPM. Max HP = 20.45 X $\frac{RPM^3}{1000}$

INLET 46" OUTLET 56"

AREA 11.54 SQ FT AREA 17.10 SQ FT

CL I .1081 Max RPM CL II .1679 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
8082	500	312	.58	360	0.95	403	1.33	442	1.72	517	2.60																				
9698	600	355	.81	398	1.25	437	1.70	472	2.15	538	3.09	600	4.14																		
11314	700	400	1.11	439	1.61	474	2.13	507	2.65	567	3.71	623	4.82	677	6.01																
12930	800	446	1.49	481	2.05	514	2.63	544	3.22	600	4.42	652	5.63	701	6.90	749	8.23	795	9.65												
14547	900	492	1.95	525	2.58	555	3.22	584	3.88	636	5.22	685	6.56	731	7.93	775	9.35	817	10.82	859	12.36	942	15.65								
16163	1000	538	2.51	570	3.22	598	3.91	625	4.63	674	6.10	720	7.60	764	9.10	805	10.62	845	12.17	884	13.78	959	17.17	1033	20.81						
17779	1100	585	3.17	616	3.96	642	4.72	667	5.5	714	7.10	758	8.73	799	10.38	838	12.03	876	13.69	913	15.39	983	18.92	1051	22.66	1119	26.62				
19396	1200	632	3.93	662	4.82	687	5.66	710	6.49	755	8.21	796	9.98	836	11.77	873	13.56	910	15.36	945	17.17	1012	20.88	1076	24.76	1138	28.83	1200	33.1	1262	37.61
21012	1300	680	4.85	708	5.81	733	6.73	755	7.63	797	9.46	836	11.35	874	13.28	910	15.22	945	17.16	978	19.11	1043	23.04	1104	27.09	1163	31.30	1221	35.68	1278	40.25
22628	1400	728	5.89	755	6.92	778	7.93	800	8.91	840	10.85	878	12.87	914	14.92	948	17.00	981	19.09	1014	21.19	1075	25.39	1134	29.64	1191	34.02	1246	38.54	1300	43.23
24245	1500	776	7.07	801	8.18	824	9.28	845	10.35	883	12.41	820	14.54	954	16.72	987	18.93	1019	21.16	1050	23.40	1110	27.89	1167	32.40	1221	36.98	1274	41.67	1326	46.50
25861	1600	825	8.42	848	9.60	871	10.79	891	11.93	928	14.15	962	16.39	996	18.69	1028	21.02	1058	23.39	1088	25.77	1146	30.55	1201	35.34	1254	40.17	1305	45.06	1354	50.05
27477	1700	873	9.92	895	11.18	917	12.46	937	13.69	973	16.07	1006	18.42	1038	20.83	1069	23.29	1098	25.78	1127	28.30	1183	33.37	1236	38.45	1287	43.55	1337	48.68	1385	53.88
29093	1800	921	11.59	943	12.97	964	14.29	983	15.63	1018	18.18	1050	20.65	1081	23.17	1111	25.75	1139	28.37	1167	31.01	1221	36.35	1273	41.73	1322	47.12	1370	52.52	1417	57.96
30710	1900	970	13.45	992	14.96	1011	16.34	1030	17.76	1064	20.47	1095	23.10	1124	25.73	1153	28.42	1181	31.15	1208	33.92	1260	39.53	1310	45.19	1358	50.87	1405	56.56	1450	62.26
32326	2000	1018	15.28	1040	17.12	1058	18.55	1077	20.07	1110	22.95	1140	25.76	1169	28.50	1196	31.30	1223	34.15	1249	37.04	1300	42.90	1348	48.84	1395	54.81	1441	60.79	1485	66.78
35559	2200	1121	20.41	1136	22.05	1153	23.69	1170	25.33	1202	28.57	1231	31.71	1259	34.76	1284	37.78	1309	40.85	1334	43.97	1382	50.33	1428	56.78	1472	63.30	1515	69.86	1557	76.44
38791	2400	1222	26.44	1233	27.94	1250	29.81	1264	31.47	1295	35.10	1323	38.56	1350	41.98	1374	45.30	1398	48.59	1421	51.92	1466	58.74	1510	65.69	1552	72.72	1593	79.82	1632	86.97
42024	2600	1318	33.18	1330	34.76	1345	36.82	1360	38.78	1389	42.60	1416	46.46	1441	50.16	1465	53.85	1488	57.44	1510	61.01	1552	68.25	1594	75.67	1634	83.20	1673	90.81		
45256	2800	1416	40.87	1422	41.66	1442	44.98	1457	47.16	1483	51.18	1509	55.39	1533	59.46	1556	63.46	1579	67.42	1600	71.29	1640	78.99	1679	86.84						

BHP does not include drive losses. Performance shown is with outlet duct. Minimum HP required to start fan 1-1/2 HP.

VIF-244

Wheel Diameter
44-1/2"

Tip Speed = 11.65 X RPM. Max HP = 33.78 X $\frac{RPM^3}{1000}$

INLET 50"
OUTLET 62"

AREA 13.64 SQ FT
AREA 20.97 SQ FT

CL I .978 Max RPM
CL II .1519 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
9982	500	283	.71	326	1.16	364	1.62	400	2.11	467	3.18																				
11978	600	321	.99	360	1.52	395	2.07	427	2.62	487	3.78	543	5.06																		
13974	700	362	1.36	397	1.97	429	2.60	458	3.24	513	4.53	564	5.89	612	7.35																
15970	800	403	1.82	435	2.50	465	3.21	492	3.94	543	5.40	590	6.88	634	8.43	677	10.07	719	11.79												
17967	900	445	2.39	475	3.16	502	3.93	528	4.74	575	6.38	620	8.02	661	9.70	701	11.42	739	13.22	777	15.10	852	19.13								
19963	1000	487	3.07	516	3.94	541	4.78	565	5.66	610	7.46	652	9.29	691	11.12	728	12.98	764	14.88	799	16.84	867	20.98	935	25.43						
21959	1100	529	3.87	557	4.84	581	5.77	603	6.72	646	8.68	685	10.67	723	12.68	758	14.70	793	16.74	826	18.81	889	23.12	951	27.69	1012	32.54				
23956	1200	572	4.81	598	5.89	621	6.92	643	7.93	683	10.04	720	12.20	756	14.38	790	16.58	823	18.78	854	20.99	915	25.52	973	30.26	1030	35.24	1086	40.46	1142	45.97
25952	1300	615	5.93	640	7.10	663	8.23	683	9.32	721	11.56	757	13.88	790	16.23	823	18.60	854	20.98	885	23.36	943	28.17	998	33.11	1052	38.26	1104	43.62	1156	49.20
27948	1400	659	7.21	682	8.46	704	9.70	723	10.89	760	13.27	794	15.73	826	18.24	857	20.78	888	23.34	917	25.90	973	31.03	1026	36.24	1077	41.58	1127	47.11	1176	52.85
29945	1500	702	8.64	725	10.00	746	11.34	765	12.65	799	15.18	832	17.78	863	20.44	893	23.14	922	25.87	950	28.61	1004	34.09	1055	39.61	1105	45.20	1153	50.94	1199	56.84
31941	1600	746	10.29	767	11.74	788	13.19	806	14.59	839	17.30	871	20.03	901	22.84	929	25.70	957	28.59	984	31.50	1036	37.34	1086	43.20	1134	49.09	1180	55.07	1225	61.18
33937	1700	790	12.13	810	13.66	830	15.23	848	16.73	880	19.65	910	22.52	939	25.47	967	28.47	994	31.52	1020	34.59	1070	40.79	1118	47.00	1164	53.23	1209	59.50	1252	65.86
35933	1800	833	14.17	853	15.85	872	17.47	889	19.10	921	22.22	950	25.25	978	28.33	1005	31.48	1031	34.68	1056	37.91	1104	44.44	1151	51.01	1196	57.60	1239	64.20	1282	70.84
37930	1900	877	16.45	897	18.28	914	19.98	932	21.70	962	25.02	990	28.23	1017	31.45	1043	34.73	1068	38.08	1093	41.46	1140	48.32	1185	55.23	1229	62.18	1271	69.13	1312	76.10
39926	2000	921	18.70	940	20.93	957	22.68	974	24.53	1004	28.05	1031	31.48	1057	34.84	1082	38.26	1106	41.75	1130	45.28	1176	52.44	1220	59.70	1262	66.99	1303	74.31	1343	81.63
43919	2200	1014	24.95	1027	27.96	1043	28.96	1059	30.97	1087	34.93	1114	38.76	1138	42.49	1162	46.19	1184	49.94	1207	53.75	1250	61.52	1291	69.41	1331	77.37	1370	85.39	1408	93.43
47911	2400	1105	32.30	1115	34.15	1130	36.44	1144	38.47	1172	42.9	1197	47.13	1221	51.31	1243	55.37	1264	59.39	1285	63.47	1326	71.80	1366	80.29	1404	88.89	1441	97.57	1476	106.30
51904	2600	1191	40.44	1203	42.49	1217	45.00	1231	47.40	1256	52.08	1281	56.79	1303	61.31	1325	65.82	1346	70.21	1365	74.57	1404	83.42	1441	92.49	1478	101.70	1513	111.01		
55896	2800	1280	49.87	1286	50.91	1304	54.97	1318	57.64	1341	62.55	1365	67.71	1387	72.69	1408	77.56	1428	82.41	1447	87.14	1483	96.55	1519	106.14						

BHP does not include drive losses

Performance shown is with outlet duct

Minimum HP required to start fan 2 HP

VIF-249

Wheel Diameter
49"

Tip Speed = 12.83 X RPM. Max HP = 54.68 X $\frac{RPM^3}{1000}$

INLET 54"
OUTLET 66"

AREA 15.90 SQ FT
AREA 23.76 SQ FT

CL I .888 Max RPM
CL II .1380 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
12037	500	257	.86	296	1.41	331	1.97	363	2.55	424	3.85																				
14444	600	292	1.20	327	1.85	359	2.51	388	3.18	442	4.59	493	6.13																		
16852	700	329	1.65	360	2.38	389	3.15	416	3.92	466	5.49	512	7.14	556	8.91																
19259	800	366	2.21	395	3.04	422	3.89	447	4.77	493	6.55	536	8.35	576	10.22	615	12.20	653	14.30												
21667	900	404	2.90	431	3.83	456	4.77	479	5.75	523	7.73	563	9.73	601	11.76	637	13.85	671	16.03	706	18.31	774	23.19								
24074	1000	442	3.72	468	4.77	491	5.80	513	6.86	554	9.05	592	11.26	627	13.48	662	15.73	694	18.04	726	20.42	788	25.44	849	30.84						
26481	1100	481	4.69	506	5.87	527	7.00	548	8.15	586	10.52	622	12.94	656	15.38	689	17.82	720	20.29	750	22.81	808	28.04	864	33.58	919	39.45				
28889	1200	519	5.82	543	7.14	564	8.39	584	9.62	620	12.17	654	14.79	686	17.44	717	20.10	747	22.77	776	25.45	831	30.94	884	36.69	935	42.72	986	49.06	1037	55.73
31296	1300	559	7.18	582	8.61	602	9.98	620	11.30	655	14.02	687	16.82	718	19.68	747	22.55	776	25.43	804	28.32	856	34.15	907	40.15	955	46.38	1003	52.88	1050	59.66
33704	1400	598	8.74	620	10.26	639	11.76	657	13.21	690	16.09	721	19.07	750	22.12	779	25.20	806	28.30	833	31.40	883	37.62	932	43.93	978	50.42	1024	57.12	1068	64.07
36111	1500	638	10.48	658	12.13	677	13.75	694	15.33	726	18.40	755	21.55	784	24.78	811	28.06	837	31.36	863	34.68	912	41.34	958	48.02	1003	54.81	1047	61.76	1089	68.92
38518	1600	677	12.47	697	14.23	715	16.00	732	17.69	762	20.97	791	24.29	818	27.70	844	31.16	869	34.66	894	38.19	941	45.28	986	52.38	1030	59.53	1072	66.77	1112	74.18
40926	1700	717	14.71	736	16.56	753	18.47	770	20.28	799	23.82	826	27.30	853	30.88	878	34.52	902	38.21	926	41.94	972	49.45	1015	56.99	1057	64.54	1098	72.15	1137	79.85
43333	1800	757	17.18	775	19.22	792	21.18	808	23.16	837	26.94	863	30.61	888	34.35	912	38.17	936	42.04	959	45.96	1003	53.88	1045	61.85	1086	69.83	1126	77.84	1164	85.89
45741	1900	797	19.94	815	22.17	830	24.22	846	26.32	874	30.34	900	34.23	924	38.13	947	42.11	970	46.17	992	50.27	1035	58.58	1076	66.97	1116	75.39	1154	83.82	1191	92.27
48148	2000	837	22.72	854	25.37	869	27.50	884	29.75	912	34.01	937	38.17	960	42.24	983	46.39	1005	50.61	1026	54.90	1068	63.59	1108	72.38	1146	81.23	1183	90.09	1220	98.97
52963	2200	920	30.17	933	32.69	947	35.11	961	37.55	988	42.35	1012	46.99	1034	51.52	1055	56.00	1076	60.55	1096	65.17	1135	74.59	1173	84.15	1209	93.81	1244	103.54	1279	113.28
57778	2400	1003	39.10	1013	41.41	1026	44.18	1039	46.64	1064	52.02	1087	57.15	1109	62.21	1129	67.13	1148	72.01	1167	76.95	1204	87.05	1240	97.35	1275	107.78	1308	118.30	1341	128.89
62592	2600	1082	49.08	1092	51.52	1105	54.56	1118	57.47	1141	63.14	1163	68.86	1184	74.34	1203	79.81	1222	85.13	1240	90.41	1275	101.15	1309	112.14	1342	123.31	1374	134.59		
67407	2800	1162	60.40	1168	61.74	1185	66.65	1197	69.89	1218	75.84	1240	82.09	1260	88.13	1279	94.04	1297	99.91	1314	105.65	1347	117.06	1380	128.70						

BHP does not include drive losses

Performance shown is with outlet duct

Minimum HP required to start fan 5 HP

VIF-254

Wheel Diameter 54-1/4"

Tip Speed = 14.20 X RPM. Max HP = 90.96 X $\frac{RPM^3}{1000}$

INLET 60" OUTLET 72"

AREA 19.63 SQ FT AREA 28.27 SQ FT

CL I .802 Max RPM CL II .1246 Max RPM

Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	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
14735	500	232	1.05	267	1.73	299	2.41	328	3.13	383	4.72																				
17682	600	264	1.47	295	2.27	324	3.08	350	3.90	399	5.62	445	7.52																		
20629	700	297	2.02	326	2.92	352	3.86	376	4.81	421	6.73	462	8.75	502	10.92																
23576	800	331	2.71	357	3.72	381	4.77	404	5.85	445	8.03	484	10.23	520	12.53	555	14.96	590	17.52												
26523	900	365	3.55	390	4.69	412	5.85	433	7.04	472	9.48	508	11.93	542	14.41	575	16.98	606	19.65	637	22.45	699	28.43								
29470	1000	399	4.56	423	5.85	444	7.11	464	8.41	500	11.09	534	13.80	567	16.53	598	19.28	627	22.11	656	25.03	711	31.19	767	37.80						
32417	1100	434	5.75	457	7.20	476	8.58	495	9.99	530	12.89	562	15.86	593	18.85	622	21.85	650	24.87	677	27.95	730	34.37	780	41.16	830	48.36				
35364	1200	469	7.15	491	8.76	510	10.29	527	11.79	560	14.92	591	18.13	620	21.38	648	24.64	675	27.91	701	31.19	751	37.93	798	44.98	845	52.37	891	60.13	937	68.32
38311	1300	505	8.81	525	10.55	543	12.23	560	13.85	591	17.18	621	20.62	648	24.12	675	27.64	701	31.18	726	34.71	774	41.86	819	49.21	863	56.86	906	64.82	948	73.13
41258	1400	540	10.71	560	12.58	577	14.41	593	16.19	623	19.72	651	23.38	678	27.11	703	30.89	728	34.68	751	38.49	798	46.12	842	53.85	884	61.80	924	70.02	964	78.54
44205	1500	576	12.85	595	14.87	612	16.86	627	18.80	655	22.55	682	26.42	708	30.38	733	34.39	756	38.44	779	42.51	824	50.67	866	58.86	906	67.18	945	75.70	984	84.48
47125	1600	612	15.29	629	17.44	646	19.61	661	21.68	688	25.71	714	29.77	739	33.94	762	38.19	785	42.49	807	46.81	850	55.50	891	64.21	930	72.97	968	81.85	1005	90.93
50099	1700	648	18.03	664	20.30	681	22.64	695	24.86	722	29.20	746	33.46	770	37.85	793	42.32	815	46.84	836	51.41	878	60.62	917	69.85	955	79.11	992	88.43	1027	97.88
53046	1800	684	21.06	700	23.55	715	25.97	730	28.39	756	33.03	779	37.52	802	42.10	824	46.78	845	51.54	866	56.34	906	66.04	944	75.81	981	85.60	1017	95.41	1051	105.28
55993	1900	720	24.44	736	27.17	750	29.69	764	32.26	789	37.18	812	41.96	834	46.74	856	51.62	876	56.59	896	61.62	935	71.81	972	82.09	1008	92.41	1042	102.75	1076	113.11
58940	2000	756	27.85	771	31.10	785	33.70	799	36.46	823	41.69	846	46.79	867	51.78	888	56.86	908	62.04	927	67.29	965	77.94	1000	88.72	1035	99.57	1069	110.43	1102	121.31
64834	2200	832	37.12	843	40.06	856	43.04	868	46.02	892	51.91	914	57.60	934	63.15	953	68.64	972	74.22	990	79.86	1025	91.43	1059	103.15	1092	114.99	1124	126.91	1155	138.96
70728	2400	906	47.94	915	50.76	927	54.16	938	57.17	961	63.76	982	70.05	1001	76.25	1020	82.29	1037	88.27	1054	94.33	1088	106.71	1120	119.33	1151	132.11	1182	145.01	1211	157.99
76622	2600	978	60.30	986	63.15	998	66.88	1009	70.45	1030	77.40	1051	84.41	1069	91.12	1087	97.82	1104	104.35	1120	110.83	1152	123.99	1182	137.46	1212	151.14	1241	164.98		
82516	2800	1050	74.13	1055	75.69	1070	81.70	1081	85.67	1100	92.97	1120	100.63	1138	108.03	1155	115.28	1171	122.47	1187	129.50	1217	143.49	1246	157.75						

BHP does not include drive losses

Performance shown is with outlet duct

Minimum HP required to start fan 5 HP

VIF-260

Wheel Diameter 60"

Tip Speed = 15.71 X RPM. Max HP = 150.51 X $\frac{RPM^3}{1000}$

INLET 66" OUTLET 80"

AREA 23.76 SQ FT AREA 34.91 SQ FT

CL I .725 Max RPM CL II .1127 Max RPM

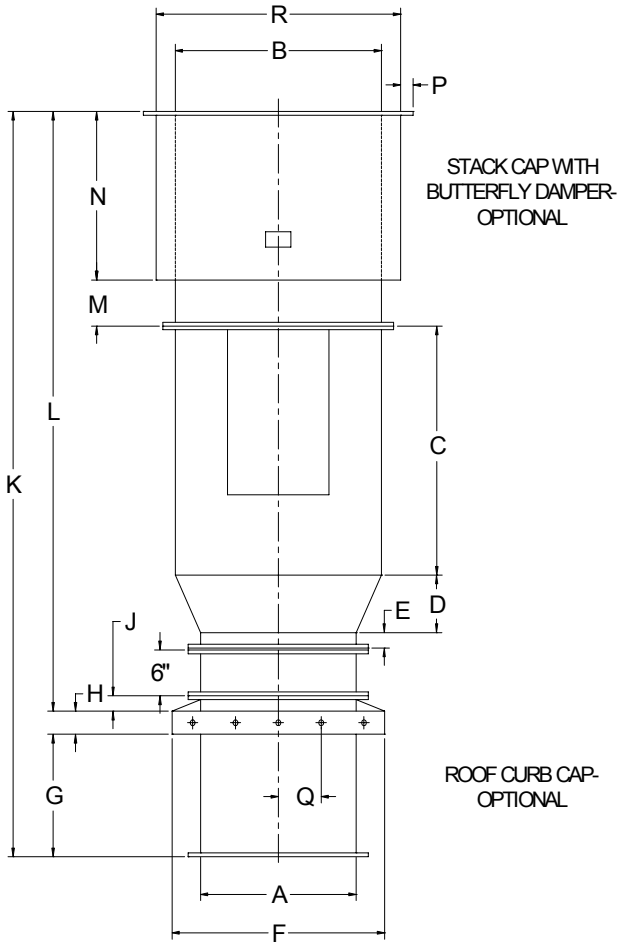
Vol.	VEL.	.25" s.p.		.5" s.p.		.75" s.p.		1" s.p.		1.50" s.p.		2" s.p.		2.5" s.p.		3" s.p.		3.5" s.p.		4" s.p.		5" s.p.		6" s.p.		7" s.p.		8" s.p.		9" s.p.	
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18060	500	210	1.29	242	2.11	270	2.95	296	3.83	347	5.78																				
21672	600	238	1.80	267	2.77	293	3.77	317	4.77	361	6.88	403	9.19																		
25284	700	268	2.48	294	3.57	318	4.72	340	5.88	380	8.23	418	10.71	454	13.36																
28896	800	299	3.31	323	4.55	345	5.84	365	7.16	403	9.82	438	12.52	470	15.33	502	18.30	533	21.43												
32508	900	330	4.34	352	5.74	373	7.15	392	8.61	427	11.59	460	14.59	490	17.63	520	20.77	548	24.04	576	27.46	632	34.77								
36120	1000	361	5.58	382	7.15	401	8.69	419	10.29	452	13.57	483	16.89	512	20.22	540	23.59	567	27.05	593	30.62	643	38.15	693	46.83						
39732	1100	393	7.04	413	8.81	431	10.50	447	12.21	479	15.77	508	19.40	536	23.06	562	26.73	588	30.42	612	34.19	660	42.04	705	50.35	751	59.16				
43344	1200	424	8.74	444	10.71	461	12.58	477	14.42	506	18.25	534	22.17	561	26.15	586	30.14	610	34.13	634	38.16	679	46.40	722	55.01	764	64.06	805	73.55	847	83.57
46956	1300	456	10.77	475	12.91	491	14.96	506	16.95	535	21.02	561	25.23	586	29.50	610	33.81	634	38.14	656	42.46	699	51.21	740	60.20	780	69.55	819	79.29	857	89.45
50568	1400	489	13.10	506	15.39	522	17.63	537	19.80	563	24.12	589	28.60	613	33.16	636	37.78	658	42.43	680	48.08	721	56.41	761	65.87	799	75.59	836	85.65	872	96.07
54180	1500	521	15.71	538	18.19	553	20.62	567	22.99	593	27.59	617	32.32	640	37.16	662	42.07	684	47.03	705	52.00	745	61.98	783	72.00	819	82.17	855	92.60	889	103.34
57792	1600	553	18.70	569	21.33	584	23.99	598	26.52	622	31.45	646	36.42	668	41.53	689	46.72	710	51.97	730	57.26	769	67.89	806	78.54	841	89.25	875	100.12	908	111.23
61404	1700	586	22.05	601	24.83	615	27.69	629	30.41	653	35.72	675	40.93	696	46.29	717	51.76	737	57.30	756	62.88	794	74.15	829	85.45	864	96.77	897	108.17	929	119.73
65016	1800	618	25.76	633	28.81	647	31.76	660	34.73	683	40.40	705	45.90	725	51.50	745	57.23	764	63.04	783	68.91	819	80.78	854	92.73	887	104.71	919	116.70	950	128.79
68628	1900	651	29.90	665	33.24	678	36.32	691	39.46	714	45.48	735	51.33	754	57.17	774	63.14	792	69.23	810	75.38	845	87.83	879	100.41	911	113.04	942	125.68	973	138.35
72240	2000	683	33.99	697	38.05	710	41.23	722	44.6	744	51.00	765	57.23	784	63.34	802	69.55	821	75.89	838	82.32	872	95.34	905	108.52	936	121.79	966	135.09	996	148.39
79464	2200	752	45.36	762	49.01	774	52.64	785	56.3	807	63.50	826	70.45	844	77.25	862	83.96	878	90.78	895	97.72	927	111.84	958	126.18	988	140.66	1016	155.24	1044	169.85
86688	2400	819	58.60	827	62.09	838	66.24	848	69.93	869	78.00	888	85.68	905	93.28	922	100.65	938	107.97	953	115.38	983	130.53	1013	145.97	1041	161.60	1068	177.38	1095	193.25
93912	2600	884	73.69	892	77.24	903	81.81	913	86.18	932	94.67	950	103.25	967	111.47	983	119.66	998	127.64	1013	135.56	1041	151.66	1069	168.14	1096	184.88	1122	201.80		
	2800	950	90.85	954	92.61	967	99.94	977	104.79	995	113.72	1012	123.09	1029	132.14	1044	141.01	1059	149.81	1073	158.41	1100	175.52	1127	192.97						

BHP does not include drive losses

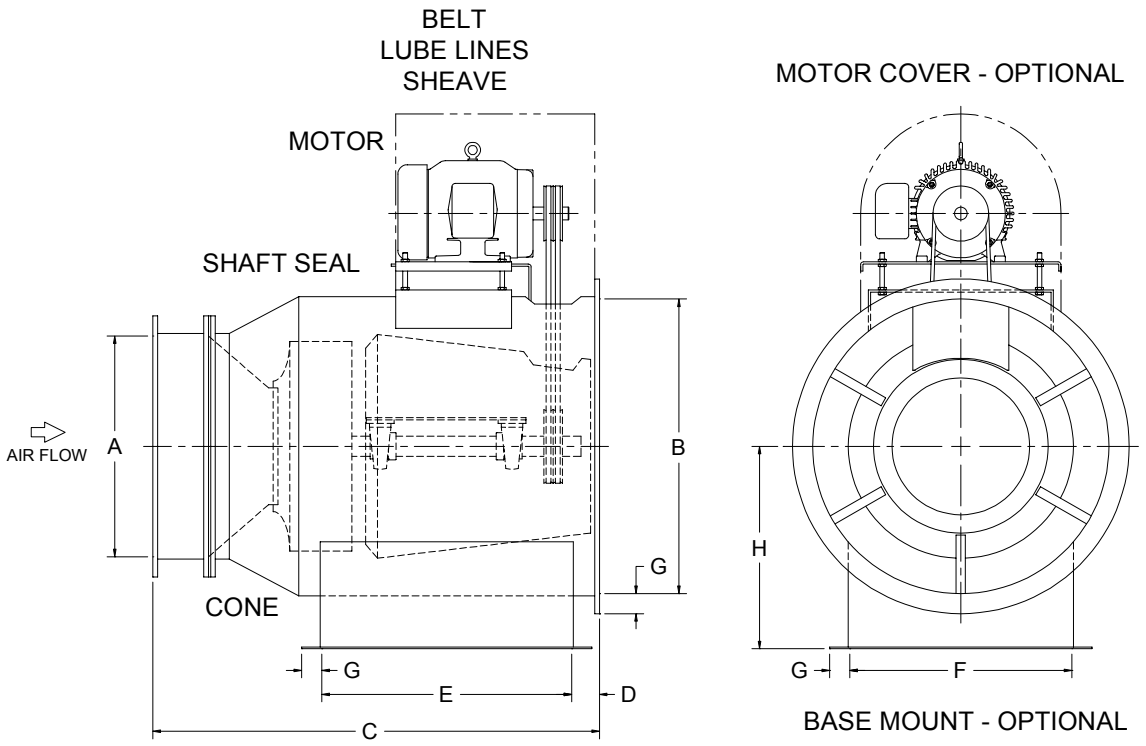
Performance shown is with outlet duct

Minimum HP required to start fan 7-1/2 HP

ARRANGEMENT #9 - ROOF MOUNTED



SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
VIF-212	14	18	17	4	1	23½	16	3	2	70½	51½	6	15	22	2	4¾	24
VIF-213	15	20	19	4	1	24½	16	3	2	73½	54½	6	16	24	2	5	26
VIF-215	16	22	22	5	1	25½	16	3	2	78½	59½	6	17	26	2	5	28
VIF-216	18	24	23	5	1	27½	16	3	2	80½	61½	6	18	28	2	5½	30
VIF-218	20	26	23¼	5½	1	29½	16	3	2	82¼	63¼	6	19	30	2	6	32
VIF-220	22	28	30	5½	2	31½	16	3	2	91	72	6	20	32	2	6¼	34
VIF-222	24	32	33	6	2	33½	16	3	2	96½	77½	6	22	36	2	6¾	38
VIF-224	26	34	40½	7	2	35½	16	4	3	108	88	6	23	40	2½	7	40
VIF-227	30	38	45	8	2	39½	16	4	3	115½	95½	6	25	44	2½	8	44
VIF-230	32	42	45¼	9	2	41½	16	4	3	118¾	98½	6	27	48	2½	8¼	46
VIF-233	36	45	48	10	3	45½	16	4	3	124½	104½	6	28	52	3	9	51
VIF-236	42	50	51¾	12	3	51½	16	4	3	134¼	114½	6	31	56	3	10¼	56
VIF-240	46	56	58	12	3	55½	16	4	3	142½	122½	6	34	62	3	11	62
VIF-244	50	62	64	14	3	59½	16	4	3	153½	133½	6	37	68	3	12	68
VIF-249	54	66	68	16	3	63½	16	4	3	161½	141½	6	39	72	3	12¾	72
VIF-254	60	72	74	18	3	69½	16	4	3	172½	152½	6	42	78	3	14	78
VIF-260	66	80	82	20	3	75½	16	4	3	186½	166½	6	46	86	3	15	86



ARRANGEMENT #9 - BASE MOUNTED

FAN SIZE	A INLET	B OUTLET	C	D	E BASE	F BASE	G	H	BEARING SIZE	WEIGHT
VIF-212	14	18	28	3	11	16	2	15	1-3/16"	150
VIF-213	15	20	30	3	13	16	2	16	1-3/16"	160
VIF-215	16	22	34	3	16	16	2	17	1-3/16"	175
VIF-216	18	24	35	3	17	20	2	18	1-3/16"	215
VIF-218	20	26	35¾	3	17½	20	2	19	1-7/16"	250
VIF-220	22	28	43½	3	24	24	2	20	1-7/16"	320
VIF-222	24	32	47	3	27	24	2	22	1-7/16"	375
VIF-224	26	34	54½	3	34½	30	2½	24	1-7/16"	425
VIF-227	30	38	61	3	39	30	2½	25	2-3/16"	515
VIF-230	32	42	62¼	3	39¼	30	2½	27	2-3/16"	620
VIF-233	36	45	67	3	42	40	3	28½	2-3/16"	690
VIF-236	42	50	72¾	3	45¾	40	3	31	2-3/16"	896
VIF-240	46	56	79	3	52	45	3	34	2-3/16"	1025
VIF-244	50	62	87	3	58	50	3	37	2-15/16"	1188
VIF-249	54	66	90	3	62	50	3	39	2-15/16"	1415
VIF-254	60	72	101	3	68	60	3	42	2-15/16"	1680
VIF-260	66	80	111	3	76	70	3	46	3-7/16"	1990

MOTOR SIZE	MOTOR WEIGHT
¾	40
1	40
1½	45
2	49
3	82
5	96
7½	145
10	165
15	270
20	316
25	362
30	398
40	546
50	610
60	802
75	840
100	1172

DIMENSIONS SHOULD NOT BE USED FOR CONSTRUCTION. CERTIFIED PRINTS AVAILABLE WHEN REQUIRED
*WEIGHT LESS MOTOR AND BASE

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
ACIDS		**GASES (cont.)**		**SALTS (cont.)**	
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	**ALKALIS**		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.	**SOLVENTS**	
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			Chlorobenzene	N.R.
Maleic	170	**SALTS**		Ethyl Acetate	F 100
Nitric to 5%	150	Aluminum Chloride	200	Ethyl Chloride	F 90
Nitric above 5%	N. R.	Aluminum Potassium Sulfate	200	Ethylene Dibromide	100
Nitric (vapor)	F 150	Aluminum Sulfate	200	Ethylene Glycol	200
Nitrous to 10%	150	Ammonium Chloride	200	n-Heptane	200
Oleic	200	Ammonium Nitrate	200	Hexane	140
Oxalic	200	Ammonium Persulfate to 25%	170	Methyl Ethyl Ketone	80
Perchloric	F 150	Ammonium Persulfate, saturated	150	Naphtha	200
Phosphoric	170	Ammonium Sulfate	200	Naphthalene	200
Phosphoric, super	150	Aniline Sulfate to 25%	200	Tetrachloroethylene	80
Phosphoric (vapor)	F 200	Aniline Sulfate, saturated	170	Toluene	80
Phthalic	200	Antimony Trichloride	170	Xylene	80
Picric to 10%	80	Barium Chloride	200		
Silicic	200	Barium Sulfide	170	**BLEACHES**	
Stearic	200	Calcium Chlorate	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 Oxychloride	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		
Trichloroacetic to 50%	170	Ferric Sulfate	200	**OTHERS**	
		Ferrous Chloride	200	Aluminum Chlorohydroxide	200
ALCOHOLS		Ferrous Nitrate	200	Ammonium Phosphate	200
Amyl	170	Ferrous Sulfate	200	Aqua Regia	F 80
Benzyl	100	Lead Acetate	200	Detergents	150
Butyl	140	Magnesium Chloride	200	Glycerin	200
Ethyl	80	Magnesium Hydroxide	170	Kerosene	200
Methyl	80	Magnesium Sulfate	200	Photographic Solutions	90
		Mercuric Chloride	200	Perchlorethylene	80
GASES AND VAPORS		Mercurous Chloride	200	Sodium Tetraborate	200
Ammonia, Dry	170	Nickel Chloride	200	Sodium Tripolyphosphate	200
Ammonia, Wet	150	Nickel Nitrate	200	Sodium Xylene Sulfonate	150
Bromine	100	Nickel Sulfate	200	Sorbital Solution	200
Carbon Dioxide	200	Potassium Chloride	200	Urea	140
Carbon Monoxide	200	Potassium Dichromate	170	Urea-Ammonium-Nitrate	120
Chlorine	200	Potassium Ferricyanide	200	8-8-8 Fertilizer	120
Fluorine	N. R.	Potassium Nitrate	200	Shell D-D	N.R.
Hydrogen Fluoride, Wet	150	Potassium Permanganate	80	Steam. Etc.	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® INTERNATIONAL warrants to the dealers and owners its VIRON® products and parts to be free from defects in workmanship and material under normal use and services for one (1) year after the date of shipment by VIRON to the first retail purchaser or first user: if and only if VIRON® is notified in writing of the defect within fourteen (14) days from date that the defect is discovered. Written notice of defects discovered within the final fourteen (14) days of the warranty period must be sent to VIRON® via facsimile or first class mail prior to the expiration of the warranty period otherwise this warranty shall be void. Our obligation under this warranty is expressly limited to repairing or replacing at our option, without cost at our factory any part or parts therof which shall be returned to and received by VIRON® within such warranty period with transportation charges both to and from VIRON® prepaid, and which our examination shall disclose to our satisfaction to have been defective. In the event a defect is discovered within the final seven days of the warranty period, the returned goods must be received by VIRON® at VIRON®'s facility within seven days following expiration of the warranty period. Any request for repair or replacement should be directed to VIRON® INTERNATIONAL, Owosso, MI.

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

• LIMITATION OF WARRANTY AND LIABILITY

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

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

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

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

VIRON® neither assumes nor authorizes any person to assume for it any other liability in connection with the sale of its products and parts. Some states do not allow the exclusion or limitation of incidental or consequential damages, so all of the above limitations or exclusions may not apply to you.