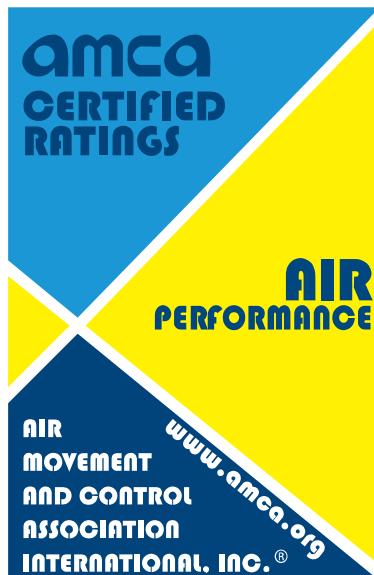




## FRP Fans:

CLUB Series 1500-7300  
Performance and  
Technical Information

Verantis Environmental Solutions Group provides solutions for most common and complex situations including repair, rebuilding, field balancing, service and installation.



VERANTIS CORPORATION CERTIFIES THAT THE CLUB SERIES CENTRIFUGAL FANS SHOWN HEREIN ARE LICENSED TO BEAR THE AMCA SEAL. THE RATINGS SHOWN ARE BASED ON TESTS MADE IN ACCORDANCE WITH AMCA PUBLICATION 211 AND COMPLY WITH THE REQUIREMENTS OF THE AMCA RATINGS PROGRAM.

**OTHER VERANTIS FANS INCLUDE:**

- CMHB Centrifugal High Efficiency Low to Medium Pressure
- CLM Centrifugal Low to Medium Pressure
- CMH Centrifugal Medium to High Pressure
- CH/CHP Centrifugal High Pressure
- FL/FLR Tube Axial Low Pressure

# FRP Centrifugal Fans



## Wide choice of sizes and performance characteristics.

The CLUB series is available in sizes 1500 through 7200 providing exhaust volumes up to 76,885 CFM and static pressures up to 10" WG.

## Every unit pretested.

Impellers are statically and dynamically balanced prior to assembly. Each fan is factory tested before shipment to ensure proper function and service. Fan performance data is obtained from tests conducted in accordance with AMCA standards.

## Using this bulletin.

The following pages include information to select a CLUB Series fan for most applications. If you require technical assistance, call your Verantis representative or the Verantis Corporate Office. Phone numbers are listed at [www.verantis.com](http://www.verantis.com).

Verantis CLUB Series fiberglass fans offer the widest range of performance from any Fiberglass Reinforced Plastic (FRP) fan on the market. For over 40 years, Verantis fans have provided industry leading reliability and service in corrosive environments.

## Designed and built to the highest standards.

Housings are made of premium corrosion-resistant, fire retardant vinyl ester resin systems. Impellers are manufactured using premium vinyl ester to assure structural integrity under the intense dynamic forces of rotation. All fiberglass components are fabricated in accordance with ASTM C582 and ASTM 4167 specifications for fiberglass laminates and fiberglass blowers.

All metal parts exposed to the process gasses are fully encapsulated in FRP to assure maximum protection against chemical attack. Fan and motor bases are heavy-gauge steel coated with polyurethane. Other Verantis protective coatings are available for other severe service conditions.

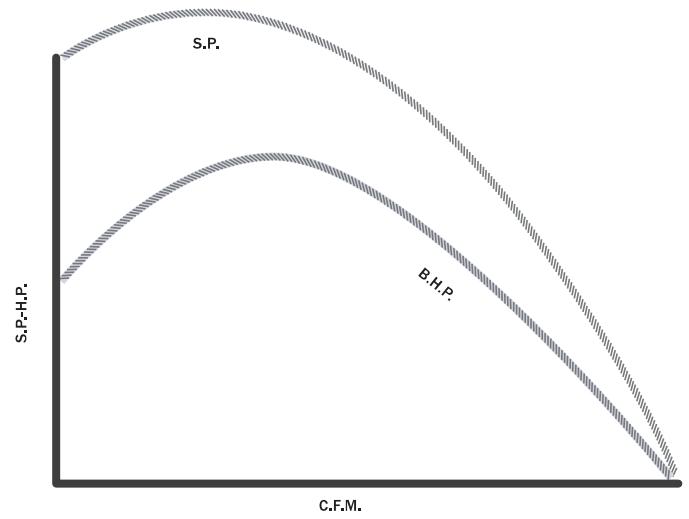
## Engineering Features

- Low noise
- Lower operating speeds for increased service life
- Oversized shafts
- Optimized impeller and housing designs for greater efficiency
- Robust base design
- Taper lock mounting of impeller to shaft for ease of service

## High Strength FRP Impellers

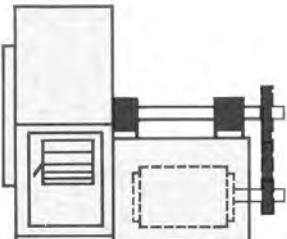
### CLUB Backward Curved Impeller

- For forced draft and non-abrasive induced draft applications
- Non-overloading horsepower characteristic
- Increased efficiency
- Stable operation



# Arrangement Versatility

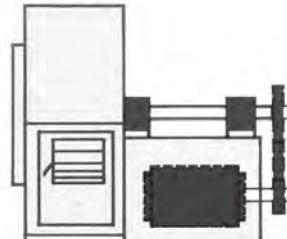
## Standard for sizes 1500 through 2550



ARR. 10 SWSI - For belt drive. Wheel over-hung, two bearings, with prime mover inside base.

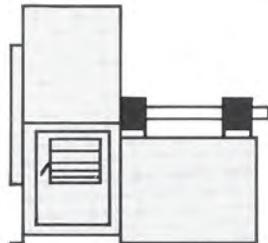
Size 1500 through 2550 are offered in Arrangement 10 as standard, while Arrangement 9 is standard in sizes 3000 through 7300. Other arrangements are available if required. Fans are available in clockwise or counter-clockwise rotation and all 8 standard discharge positions.

## Standard for sizes 3000 through 7300

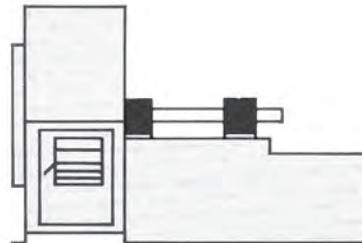


ARR. 9 SWSI - For belt drive. Wheel over-hung, two bearings, with prime mover outside base.

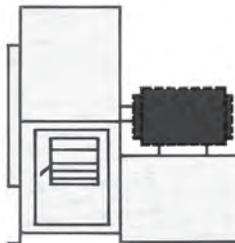
## Optional arrangements available for special requirements.



ARR. 1 SWSI - For belt drive or direct connection. Wheel over-hung. Two bearings on base.



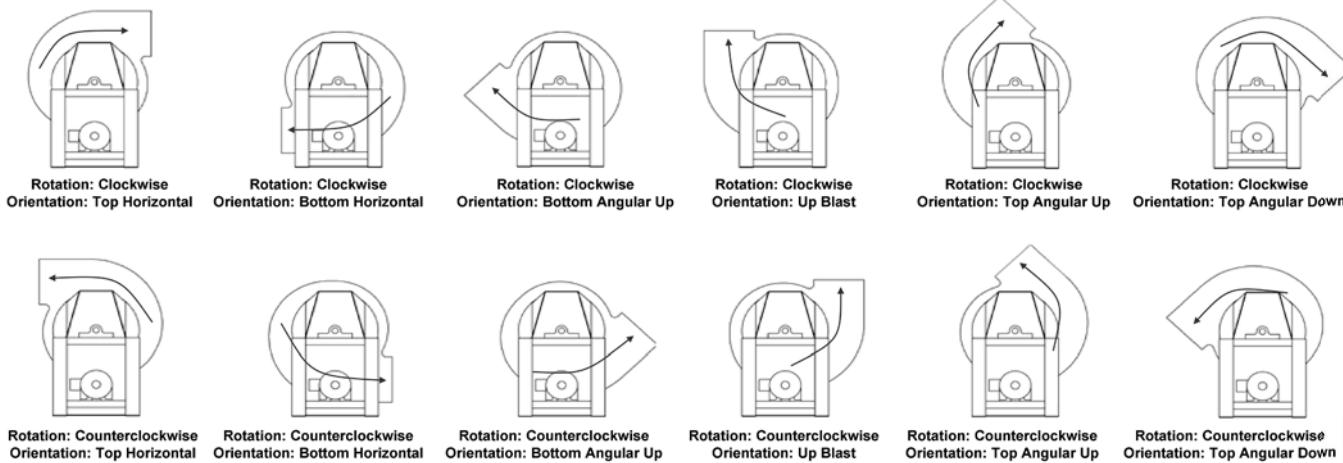
ARR. 8 SWSI - For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



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

## Rotation and Discharge Options

Direction of rotation is determined from drive side of fan. On single inlet fans, drive side is always considered as the side opposite fan inlet. Direction of discharge is determined in accordance with diagrams (below). Angle of discharge is referred to the horizontal axis of fan and designated in degrees above or below such standard reference axis. For fan inverted for ceiling suspension or side wall mounting, direction of rotation and discharge is determined when the fan is resting on floor.



# Features Available for Design Flexibility

## Carbon gel coating.

All FRP surfaces exposed to the gas stream are coated with a graphite-impregnated layer to eliminate static buildup. Grounding connectors are located externally.

## Access doors.

Stud-mounted bolted access doors available on all sizes.

## Flanges.

Standard and custom available for inlet or outlet. Drilled or undrilled.

## Drains.

PVC coupling or flanged FRP.

## Discharge transition.

Rectangular to round are available and can be made integral to the fan or separate.

## Shaft seals.

Single Teflon® is standard. Depending on application severity, other options available include double and triple Teflon, stuffing box and single or double mechanical.

Hinged & Latch access door.



Weather canopy on Arrangement 10 fan.



## Guards.

All guards are FRP constructed and can be supplied as full canopy covering motor, drive and shaft; belt drive only and shaft only. All types can be made available OSHA rated.

## Flexible connectors.

Standard connectors are EPDM sleeve type with stainless steel draw bands. Flanged flex connectors are also available.

## Shafts.

Carbon steel is standard. Stainless steel, Titanium and other alloys and coatings are available as options.

## Vibration Isolators.

Rubber vibration isolators, spring vibration isolators or other seismic restraints are available as needs dictate.

## Miscellaneous.

Bird screens, back vanes, inlet boxes, vibration monitors, disconnects, zero speed switches, speed controls, dampers, temperature monitoring, inertia bases and sound enclosures are also available.

Custom transition



Split housing for impeller removed without disconnecting ductwork



# Class Construction

Verantis fans are designed and fabricated to provide safe and reliable performance throughout the full range listed in the tables. In order to assure an adequate safety factor, we have established the following maximum speeds at 70°F. For recommendations on applications above 180°F please contact your Verantis representative.

	CL-II	CL-III	CL-IV
SFPM	10,500	13,500	18,000

# How to Select a CLUB Series Fan

## Rating table information

Performance ratings shown in the tables for CLUB Series fans are based on:

1. Standard air at the fan inlet, with a density of 0.075 pounds per cubic foot. This corresponds to 70°F and 29.92 inches barometric pressure at sea level.
2. Excluding V-belt drive losses.

## Effect of temperature and altitude

For selection of fans handling other than standard air, temperature and altitude must be taken into consideration. Since a fan is a constant volume machine, it will deliver the same volume regardless of the air density. The fan static pressure developed and horsepower required will vary directly with the density.

The density of air is inversely proportional to the absolute temperature (rise in temperature gives a lower density) and directly proportional to the absolute pressure (rise in pressure gives a higher density). For example: The ratio to standard conditions for air at 3,000 ft. altitude (26.81" Hg) and at 250°F would be 0.669.

The temperature-pressure relationship is tabulated below. For gases other than air, the gas density, in relationship to standard air density of 0.075 pound per cubic foot, must also be taken into consideration.

**Table of Air Density Factors for Various Temperatures and Altitudes**

Air Temp °F	Altitude in Feet Above Sea Level							
	0	1,000	2,000	3,000	4,000	5,000	6,000	7,000
70	1.000	0.0964	0.0930	0.0896	0.864	0.832	0.801	0.772
100	0.946	0.912	0.880	0.848	0.818	0.787	0.758	0.730
125	0.908	0.875	0.846	0.809	0.784	0.755	0.721	0.700
150	0.869	0.838	0.808	0.770	0.751	0.723	0.696	0.671
175	0.836	0.806	0.777	0.745	0.722	0.695	0.669	0.645
200	0.803	0.774	0.747	0.720	0.694	0.668	0.643	0.620
225	0.775	0.747	0.721	0.694	0.669	0.645	0.620	0.598
250*	0.747	0.720	0.720	0.669	0.645	0.622	0.598	0.576

\*Maximum allowable operating temperature for FRP construction.

## Fan selection

The cold static method is the most common system for fan selection. This method is based on the assumption that, at constant CFM and RPM, the static pressure and BHP vary inversely as the absolute temperature and directly as the air density.

4. Correct BHP to actual conditions:  $7.03 \times .72 = 5.06$  BHP.
5. BHP at cold start: density factor at 70°F at 3,000 ft. Elevation is 0.896, Therefore the cold start BHP is:  $7.03 \times 0.896 = 6.30$  BHP

Therefore we would select a CLUB-1825 fan to deliver 5000 ACFM at 5.5" SP rotating at 2574 RPM using 6.30 BHP, hence a 7.5 HP motor must be supplied.

## Example:

A fan is required to handle 5000 ACFM at 5.5" SP at 200°F and 3,000 ft. altitude.

1. Density factor from table 1 = 0.720.
2. Convert sp to standard:  $5.5" \times 0.720 = 5.85$
3. Using the fan performance tables we select a CLUB-1825 fan at a speed of 2574 RPM and 7.03 BHP.

## CLUB-1500 Catalog Table

**CLUB-1500**  
 (BACKWARD CURVED IMPELLER)

VOL CFM	VEL FPM	Impeller Dia. Tip Speed (ft/m)	15.00 " O.D. 3.93 * RPM	Inlet Dia. 14 " I.D. 1.07 sq. ft.				Outlet Size 15-3/4" x 11-3/4" 1.29 ft <sup>2</sup>							
				1" W.G. RPM	2" W.G. BHP	3" W.G. RPM	4" W.G. BHP	5" W.G. RPM	6" W.G. BHP	7" W.G. RPM	8" W.G. BHP	9" W.G. RPM	10" W.G. BHP	11" W.G. RPM	
850	661	1087	0.20	1490	0.47	1801	0.76	2062	1.06	2291	1.37	2498	1.69		
1000	778	1128	0.24	1507	0.51	1820	0.84	2082	1.19	2314	1.54	2518	1.90	2710	2.26
1150	895	1180	0.28	1528	0.56	1837	0.91	2101	1.29	2333	1.69	2541	2.10	2732	2.50
1300	1012	1250	0.34	1561	0.62	1856	0.98	2117	1.39	2351	1.82	2562	2.27	2752	2.72
1450	1128	1321	0.39	1606	0.70	1879	1.05	2136	1.48	2367	1.93	2578	2.41	2772	2.91
1600	1245	1394	0.46	1657	0.78	1914	1.14	2157	1.56	2386	2.05	2594	2.55	2789	3.07
1750	1362	1470	0.52	1725	0.89	1959	1.26	2185	1.67	2407	2.16	2613	2.69	2805	3.24
1900	1478	1546	0.60	1796	1.00	2005	1.38	2225	1.81	2431	2.27	2635	2.82	2824	3.40
2050	1595	1626	0.69	1867	1.11	2069	1.53	2271	1.97	2467	2.43	2657	2.96	2846	3.55
2200	1712	1708	0.79	1941	1.23	2141	1.69	2318	2.14	2512	2.63	2690	3.14	2867	3.71
2350	1829	1792	0.89	2015	1.36	2211	1.85	2381	2.33	2557	2.83	2733	3.36	2899	3.91
2500	1945	1877	1.02	2091	1.50	2282	2.03	2452	2.54	2608	3.05	2778	3.60	2940	4.16
2650	2062	1962	1.15	2168	1.66	2355	2.21	2523	2.76	2673	3.29	2824	3.84	2986	4.44
2800	2179	2049	1.29	2246	1.83	2429	2.40	2594	2.99	2744	3.56	2882	4.12	3031	4.72
2950	2295	2135	1.45	2327	2.01	2504	2.60	2665	3.22	2815	3.83	2949	4.43	3082	5.03
3100	2412	2224	1.63	2410	2.21	2580	2.82	2739	3.47	2885	4.12	3022	4.75	3146	5.37
3250	2529	2313	1.81	2493	2.42	2657	3.05	2813	3.72	2957	4.41	3092	5.08	3216	5.73
3400	2646	2403	2.01	2577	2.65	2736	3.31	2888	3.99	3030	4.71	3163	5.42	3288	6.12
3550	2762	2493	2.23	2662	2.89	2816	3.57	2965	4.28	3104	5.02	3234	5.77	3358	6.50
3700	2879	2584	2.47	2748	3.16	2898	3.86	3041	4.59	3178	5.35	3307	6.13	3429	6.90
3850	2996	2675	2.72	2834	3.44	2981	4.17	3119	4.92	3254	5.69	3381	6.51	3501	7.32
4000	3112	2766	2.99	2920	3.74	3064	4.49	3198	5.26	3330	6.06	3455	6.89	3574	7.74
4150	3229	2858	3.28	3007	4.06	3148	4.83	3279	5.63	3407	6.45	3531	7.29	3647	8.17
4300	3346	2950	3.60	3095	4.40	3233	5.20	3361	6.02	3484	6.86	3606	7.73	3722	8.62
4450	3463	3043	3.92	3184	4.76	3319	5.58	3444	6.43	3564	7.29	3683	8.18	3797	9.09
4600	3579	3137	4.26	3273	5.14	3404	5.99	3528	6.86	3645	7.74	3760	8.65	3873	9.58
4750	3696	3231	4.62	3363	5.53	3491	6.42	3612	7.31	3727	8.22	3838	9.15	3949	10.10
4900	3813	3325	5.01	3453	5.96	3577	6.87	3696	7.79	3809	8.72	3918	9.67	4026	10.65
5050	3929	3419	5.41	3544	6.40	3664	7.35	3782	8.29	3892	9.24	3999	10.22	4103	11.21
5200	4046	3513	5.84	3634	6.87	3751	7.85	3867	8.81	3976	9.79	4080	10.79	4182	11.81

Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantus.

**CLUB-1825**  
 (BACKWARD CURVED IMPELLER)

 Impeller Dia.  
 18.25 " O.D.  
 Tip Speed (fpm)  
 4.78 \* RPM

 Inlet Dia.  
 18 " I.D.  
 Inlet Area  
 1.77 sq. ft.

 Outlet Size  
 18-5/8" x 13-7/8"  
 Outlet Area  
 1.80 ft<sup>2</sup>

VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP
1400	780	914	0.33	1233	0.74	1491	1.21	1706	1.70	1894	2.19	2064	2.69		
1600	892	947	0.39	1248	0.80	1504	1.30	1721	1.85	1909	2.41	2081	2.97	2236	3.54
1800	1003	994	0.45	1266	0.86	1516	1.39	1733	1.97	1925	2.59	2095	3.22	2253	3.85
2000	1114	1047	0.53	1295	0.95	1532	1.48	1745	2.10	1937	2.75	2110	3.43	2268	4.14
2200	1226	1100	0.60	1329	1.06	1550	1.58	1760	2.21	1949	2.91	2123	3.62	2281	4.37
2400	1337	1155	0.69	1369	1.18	1578	1.71	1776	2.33	1963	3.05	2134	3.81	2294	4.59
2600	1449	1211	0.78	1421	1.32	1612	1.87	1797	2.48	1979	3.20	2148	3.99	2306	4.81
2800	1560	1267	0.88	1473	1.46	1646	2.03	1827	2.66	1996	3.36	2165	4.16	2320	5.02
3000	1672	1326	1.00	1526	1.62	1692	2.23	1861	2.88	2022	3.56	2180	4.34	2336	5.22
3200	1783	1387	1.13	1580	1.78	1744	2.44	1895	3.09	2054	3.81	2203	4.57	2351	5.42
3400	1895	1448	1.27	1634	1.95	1797	2.66	1938	3.34	2088	4.08	2233	4.85	2372	5.68
3600	2006	1511	1.42	1690	2.13	1849	2.88	1988	3.61	2122	4.36	2267	5.17	2400	5.98
3800	2117	1574	1.59	1747	2.33	1902	3.12	2042	3.91	2166	4.67	2300	5.49	2433	6.34
4000	2229	1637	1.77	1804	2.54	1957	3.37	2094	4.20	2217	5.01	2336	5.83	2467	6.72
4200	2340	1701	1.97	1863	2.77	2012	3.62	2146	4.51	2270	5.37	2382	6.21	2501	7.10
4400	2452	1766	2.19	1923	3.02	2068	3.90	2200	4.83	2322	5.74	2433	6.62	2541	7.52
4600	2563	1831	2.42	1984	3.28	2124	4.19	2254	5.15	2374	6.11	2487	7.06	2589	7.97
4800	2675	1897	2.67	2046	3.57	2181	4.50	2309	5.49	2427	6.51	2539	7.49	2640	8.46
5000	2786	1964	2.94	2108	3.87	2239	4.84	2365	5.85	2481	6.91	2591	7.95	2694	8.97
5200	2898	2031	3.22	2171	4.19	2298	5.19	2421	6.23	2536	7.32	2643	8.41	2746	9.48
5400	3009	2098	3.53	2234	4.54	2358	5.57	2478	6.63	2591	7.75	2697	8.89	2798	10.01
5600	3120	2165	3.86	2297	4.90	2419	5.96	2535	7.06	2647	8.20	2752	9.38	2851	10.56
5800	3232	2233	4.21	2361	5.29	2481	6.38	2593	7.51	2703	8.67	2806	9.89	2904	11.11
6000	3343	2300	4.58	2426	5.70	2543	6.82	2652	7.98	2760	9.17	2862	10.41	2959	11.68
6200	3455	2368	4.98	2490	6.14	2605	7.29	2713	8.48	2817	9.70	2918	10.96	3013	12.27
6400	3566	2436	5.40	2555	6.59	2668	7.78	2773	9.00	2874	10.25	2974	11.54	3069	12.87
6600	3678	2506	5.83	2621	7.07	2732	8.30	2835	9.55	2933	10.83	3031	12.14	3124	13.49
6800	3789	2575	6.29	2687	7.58	2795	8.84	2897	10.12	2993	11.43	3088	12.78	3181	14.15
7000	3901	2644	6.77	2754	8.11	2859	9.41	2959	10.72	3053	12.07	3145	13.44	3237	14.84
7200	4012	2714	7.28	2820	8.67	2923	10.01	3021	11.35	3114	12.73	3204	14.13	3464	15.56

 Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

**CLUB-2225**  
 (BACKWARD CURVED IMPELLER)

 Impeller Dia.    22.25 " O.D.  
 Tip Speed (ft/m)    5.83 \* RPM

 Inlet Dia.    20 " I.D.  
 Inlet Area    2.18 sq. ft.

 Outlet Size    22-5/8" x 16-7/8"  
 Outlet Area    2.65 ft<sup>2</sup>

VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP
2200	830	760	0.53	1016	1.13	1227	1.85	1404	2.62	1560	3.39	1698	4.17	1827	4.96
2500	943	791	0.61	1029	1.22	1237	1.99	1415	2.82	1571	3.70	1712	4.57	1840	5.46
2800	1056	834	0.72	1047	1.33	1249	2.12	1426	3.01	1583	3.95	1724	4.93	1852	5.91
3100	1169	877	0.83	1074	1.48	1262	2.26	1437	3.19	1593	4.18	1735	5.22	1866	6.31
3400	1282	922	0.95	1102	1.65	1281	2.43	1450	3.37	1604	4.42	1745	5.50	1876	6.63
3700	1396	967	1.08	1141	1.84	1307	2.65	1463	3.55	1616	4.63	1756	5.79	1886	6.97
4000	1509	1014	1.23	1185	2.06	1335	2.89	1485	3.80	1629	4.85	1768	6.04	1897	7.29
4300	1622	1062	1.39	1228	2.28	1367	3.15	1512	4.11	1647	5.12	1781	6.30	1909	7.59
4600	1735	1111	1.57	1272	2.52	1407	3.45	1539	4.43	1671	5.46	1796	6.60	1922	7.90
4900	1848	1162	1.77	1317	2.76	1452	3.78	1570	4.77	1699	5.86	1818	6.98	1936	8.23
5200	1961	1213	1.99	1363	3.02	1495	4.11	1609	5.16	1726	6.26	1845	7.43	1957	8.65
5500	2074	1265	2.23	1410	3.31	1538	4.46	1653	5.59	1758	6.70	1873	7.91	1982	9.15
5800	2188	1317	2.50	1457	3.62	1583	4.83	1696	6.03	1797	7.19	1901	8.41	2010	9.71
6100	2301	1370	2.78	1504	3.95	1628	5.20	1740	6.48	1841	7.72	1935	8.95	2038	10.27
6400	2414	1423	3.10	1554	4.31	1674	5.60	1783	6.95	1885	8.27	1975	9.55	2067	10.87
6700	2527	1477	3.43	1604	4.69	1721	6.02	1828	7.43	1928	8.82	2019	10.19	2105	11.53
7000	2640	1532	3.80	1655	5.11	1768	6.48	1874	7.93	1971	9.40	2063	10.84	2146	12.24
7300	2753	1587	4.18	1706	5.55	1815	6.96	1919	8.45	2015	10.00	2106	11.51	2191	13.00
7600	2866	1642	4.60	1758	6.02	1864	7.48	1966	9.01	2060	10.61	2149	12.20	2234	13.76
7900	2980	1697	5.05	1810	6.52	1913	8.03	2012	9.60	2106	11.24	2193	12.91	2277	14.55
8200	3093	1753	5.53	1863	7.05	1964	8.61	2060	10.22	2152	11.90	2238	13.64	2320	15.35
8500	3206	1809	6.04	1915	7.62	2014	9.23	2107	10.88	2198	12.60	2284	14.39	2364	16.18
8800	3319	1865	6.58	1969	8.22	2066	9.88	2156	11.58	2245	13.34	2329	15.16	2409	17.03
9100	3432	1921	7.17	2022	8.86	2117	10.56	2206	12.31	2292	14.11	2375	15.96	2454	17.89
9400	3545	1977	7.78	2075	9.54	2169	11.28	2256	13.08	2339	14.92	2422	16.82	2500	18.78
9700	3658	2034	8.43	2130	10.25	2221	12.04	2306	13.88	2388	15.77	2469	17.71	2546	19.70
10000	3772	2091	9.10	2184	10.99	2274	12.84	2357	14.73	2437	16.66	2516	18.65	2592	20.68
10300	3885	2149	9.81	2239	11.77	2327	13.68	2409	15.62	2487	17.60	2563	19.62	2639	21.70
10600	3998	2206	10.56	2295	12.59	2379	14.56	2461	16.55	2537	18.57	2611	20.64	2686	22.76
10900	4111	2264	11.35	2350	13.46	2433	15.49	2513	17.52	2588	19.59	2661	21.71	2733	23.86

 Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.


Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

CLUB-2550 Catalog Table

**CLUB-2550**  
 (BACKWARD CURVED IMPELLER)

VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP	Outlet Size 3.54 ft <sup>2</sup>	Inlet Dia. 24" I.D. 3.14 sq. ft.	Inlet Area 3.14 sq. ft.
2800	790	658	0.67	884	1.46	1069	2.39	1222	3.37	1358	4.35	1479	5.35	1592	6.37			
3200	903	683	0.78	896	1.58	1078	2.58	1233	3.66	1369	4.78	1492	5.90	1603	7.03	1706	8.18	1806
3600	1016	720	0.91	910	1.71	1087	2.76	1242	3.90	1379	5.13	1502	6.39	1614	7.65	1720	8.92	1816
4000	1129	758	1.06	933	1.91	1099	2.93	1252	4.16	1389	5.44	1512	6.79	1626	8.20	1730	9.59	1829
4400	1242	798	1.22	958	2.13	1114	3.14	1263	4.39	1398	5.75	1521	7.16	1635	8.64	1742	10.19	1839
4800	1355	838	1.39	990	2.38	1136	3.43	1275	4.62	1408	6.04	1530	7.54	1644	9.08	1750	10.68	1850
5200	1468	879	1.58	1029	2.66	1161	3.75	1293	4.94	1420	6.33	1541	7.89	1653	9.52	1759	11.18	1859
5600	1580	921	1.80	1067	2.96	1188	4.09	1316	5.34	1435	6.68	1553	8.24	1664	9.92	1769	11.68	1868
6000	1693	965	2.04	1106	3.27	1224	4.49	1341	5.77	1455	7.13	1566	8.62	1676	10.34	1779	12.14	1878
6400	1806	1010	2.30	1146	3.60	1263	4.93	1367	6.22	1480	7.65	1585	9.12	1688	10.77	1791	12.62	1888
6800	1919	1055	2.59	1186	3.94	1301	5.37	1401	6.74	1505	8.19	1608	9.72	1706	11.32	1803	13.09	1900
7200	2032	1101	2.91	1227	4.32	1340	5.83	1440	7.30	1532	8.76	1633	10.36	1728	11.98	1820	13.71	1912
7600	2145	1147	3.26	1269	4.73	1379	6.32	1479	7.89	1567	9.41	1658	11.01	1753	12.73	1841	14.44	1929
8000	2258	1194	3.64	1311	5.17	1420	6.82	1517	8.49	1605	10.12	1687	11.73	1777	13.47	1866	15.28	1950
8400	2371	1241	4.06	1355	5.65	1460	7.34	1556	9.12	1644	10.85	1723	12.53	1803	14.26	1891	16.13	1974
8800	2483	1289	4.51	1400	6.17	1501	7.91	1595	9.76	1682	11.59	1762	13.38	1836	15.14	1915	17.01	1999
9200	2596	1337	4.99	1445	6.72	1543	8.52	1635	10.43	1721	12.36	1801	14.25	1873	16.09	1945	17.97	2023
9600	2709	1386	5.51	1490	7.30	1585	9.17	1676	11.12	1760	13.16	1839	15.15	1913	17.10	1980	19.02	2050
10000	2822	1435	6.07	1536	7.93	1628	9.86	1717	11.87	1800	13.98	1877	16.07	1951	18.12	2018	20.13	2084
10400	2935	1484	6.67	1582	8.60	1672	10.59	1758	12.66	1840	14.82	1916	17.02	1989	19.17	2058	21.30	2121
10800	3048	1533	7.31	1629	9.32	1717	11.37	1800	13.49	1881	15.69	1956	17.99	2027	20.24	2096	22.47	2160
11200	3161	1583	7.99	1676	10.08	1762	12.19	1842	14.37	1922	16.63	1996	18.99	2066	21.35	2134	23.67	2199
11600	3274	1632	8.73	1723	10.89	1807	13.06	1886	15.30	1963	17.62	2037	20.02	2106	22.48	2173	24.90	2237
12000	3387	1682	9.51	1770	11.74	1853	13.98	1930	16.28	2005	18.66	2077	21.10	2146	23.64	2212	26.17	2275
12400	3499	1732	10.34	1817	12.65	1899	14.95	1974	17.32	2047	19.74	2119	22.25	2187	24.83	2251	27.47	2314
12800	3612	1782	11.20	1865	13.60	1945	15.97	2019	18.40	2090	20.89	2160	23.45	2227	26.06	2291	28.79	2353
13200	3725	1833	12.10	1914	14.60	1992	17.04	2064	19.54	2134	22.09	2202	24.70	2268	27.38	2332	30.15	2393
13600	3838	1884	13.06	1963	15.65	2038	18.17	2110	20.73	2244	26.01	2310	28.75	2373	31.54	2433	34.44	2491
14000	3951	1935	14.07	2012	16.76	2085	19.36	2156	21.98	2223	24.66	2287	27.38	2351	30.17	2414	33.02	2473
14400	4064	1986	15.13	2061	17.92	2132	20.61	2202	23.29	2268	26.03	2331	28.81	2393	31.66	2455	34.57	2514

Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

CLUB-3000 Catalog Table

**CLUB-3000**  
 (BACKWARD CURVED IMPELLER)

 Impeller Dia.  
 30.38 " O.D.  
 Tip Speed (fpm) 7.95 \* RPM

 Inlet Dia.  
 30 " I.D.  
 Inlet Area  
 4.91 sq. ft.

 Outlet Size  
 30-1/2" x 22-3/4"  
 4.82 ft<sup>2</sup>

VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP
4000	830	557	0.79	737	1.65	889	2.62	1020	3.61						
4500	934	577	0.90	748	1.80	896	2.86	1025	3.95	1141	5.07				
5000	1038	599	1.03	762	1.97	905	3.08	1031	4.28	1146	5.49	1251	6.74		
5500	1141	622	1.18	781	2.16	916	3.30	1040	4.58	1152	5.91	1256	7.24	1352	8.60
6000	1245	646	1.33	802	2.38	929	3.55	1049	4.87	1159	6.29	1261	7.74	1357	9.19
6500	1349	674	1.50	822	2.62	947	3.83	1061	5.18	1169	6.66	1269	8.21	1362	9.77
7000	1453	703	1.68	844	2.88	967	4.15	1075	5.51	1180	7.03	1278	8.65	1370	10.32
7500	1556	732	1.88	867	3.16	988	4.48	1093	5.89	1193	7.43	1289	9.09	1380	10.85
8000	1660	762	2.10	890	3.46	1009	4.84	1113	6.31	1208	7.87	1301	9.55	1390	11.35
8500	1764	794	2.34	915	3.77	1031	5.23	1134	6.76	1227	8.35	1315	10.05	1402	11.88
9000	1868	827	2.60	942	4.10	1053	5.64	1155	7.22	1247	8.88	1332	10.61	1415	12.45
9500	1972	860	2.88	971	4.45	1076	6.08	1176	7.72	1268	9.44	1351	11.21	1431	13.07
10000	2075	894	3.18	1000	4.82	1099	6.54	1198	8.25	1289	10.02	1372	11.86	1449	13.75
10500	2179	927	3.52	1028	5.22	1125	7.02	1221	8.81	1310	10.63	1393	12.53	1469	14.48
11000	2283	961	3.87	1058	5.65	1153	7.51	1244	9.40	1332	11.28	1413	13.23	1490	15.26
11500	2387	995	4.26	1090	6.11	1182	8.02	1267	10.01	1354	11.97	1435	13.97	1511	16.05
12000	2490	1031	4.68	1122	6.59	1210	8.57	1293	10.65	1377	12.69	1457	14.75	1532	16.87
12500	2594	1066	5.13	1155	7.10	1239	9.15	1320	11.30	1400	13.44	1479	15.57	1553	17.74
13000	2698	1102	5.61	1188	7.64	1268	9.77	1348	11.97	1423	14.22	1502	16.43	1575	18.66
13500	2802	1139	6.12	1221	8.21	1298	10.42	1377	12.67	1450	15.02	1525	17.31	1598	19.67
14000	2905	1175	6.66	1254	8.82	1329	11.10	1405	13.42	1477	15.83	1548	18.24	1620	20.62
14500	3009	1212	7.24	1288	9.47	1361	11.81	1434	14.20	1506	16.67	1573	19.19	1643	21.65
15000	3113	1248	7.86	1322	10.15	1394	12.56	1463	15.02	1534	17.54	1600	20.15	1666	22.71
15500	3217	1285	8.52	1355	10.87	1427	13.34	1493	15.88	1563	18.46	1627	21.13	1690	23.82
16000	3320	1322	9.22	1390	11.64	1460	14.16	1524	16.78	1591	19.42	1656	22.14	1717	24.93
16500	3424	1359	9.96	1424	12.44	1493	15.02	1556	17.72	1620	20.43	1685	23.20	1744	26.07
17000	3528	1396	10.73	1460	13.28	1526	15.93	1588	18.69	1649	21.48	1713	24.31	1772	27.24
17500	3632	1434	11.53	1495	14.17	1560	16.88	1621	19.70	1680	22.57	1742	25.47	1801	28.42
18000	3736	1472	12.37	1531	15.10	1593	17.88	1654	20.76	1711	23.71	1770	26.67	1830	29.59
18500	3839	1509	13.25	1567	16.08	1627	18.92	1687	21.85	1743	24.88	1799	27.92	1858	31.00

 Class I Fans.

 Class II Fans.

 Class III Fans.

 Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

**CLUB-3650 Catalog Table**

**CLUB-3650**  
(BACKWARD CURVED IMPELLER)

		Impeller Dia. 37.00 " O.D. Tip Speed (ftm)		36 " I.D. 9.69 * RPM		Inlet Dia. Inlet Area 7.07 sq. ft.		Outlet Size Outlet Area 7.12 ft <sup>2</sup>		37-1/8" x 27-5/8"	
VOL	VEL	1" W.G.	2" W.G.	3" W.G.	4" W.G.	5" W.G.	6" W.G.	7" W.G.	8" W.G.	9" W.G.	10" W.G.
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6250	878	500	1.35	639	2.71	756	4.28	863	6.06		
7000	983	526	1.57	657	2.99	770	4.64	870	6.46		
7750	1088	551	1.80	676	3.30	785	5.03	882	6.92		
8500	1193	577	2.05	697	3.65	803	5.45	897	7.43		
9250	1299	604	2.33	721	4.05	822	5.91	913	7.96		
10000	1404	631	2.64	747	4.49	842	6.41	931	8.54		
10750	1509	661	2.99	773	4.95	864	6.96	951	9.16		
11500	1615	694	3.37	798	5.45	889	7.58	971	9.83		
12250	1720	727	3.78	825	5.97	915	8.24	993	10.55		
13000	1825	761	4.23	851	6.53	940	8.94	1017	11.35		
13750	1931	794	4.73	879	7.13	966	9.67	1043	12.22		
14500	2036	828	5.28	906	7.79	992	10.44	1068	13.12		
15250	2141	862	5.87	937	8.49	1019	11.23	1094	14.07		
16000	2247	897	6.52	969	9.25	1046	12.08	1120	15.06		
16750	2352	931	7.22	1002	10.05	1073	12.99	1146	16.08		
17500	2457	966	7.97	1036	10.90	1100	13.96	1173	17.14		
18250	2562	1001	8.77	1070	11.80	1130	14.99	1199	18.25		
19000	2668	1036	9.64	1103	12.77	1162	16.08	1226	19.44		
19750	2773	1071	10.58	1137	13.81	1194	17.23	1254	20.69		
20500	2878	1106	11.58	1171	14.92	1227	18.44	1281	22.01		
21250	2984	1141	12.65	1205	16.09	1260	19.70	1312	23.41		
22000	3089	1177	13.79	1239	17.34	1294	21.03	1344	24.88		
22750	3194	1212	15.02	1274	18.66	1328	22.44	1376	26.41		
23500	3300	1248	16.32	1308	20.05	1362	23.94	1409	28.01		
24250	3405	1284	17.67	1343	21.52	1395	25.51	1442	29.68		
25000	3510	1320	19.07	1378	23.06	1429	27.16	1476	31.41		
25750	3616	1356	20.55	1413	24.69	1463	28.90	1510	33.22		
26500	3721	1393	22.11	1448	26.40	1498	30.73	1544	35.15		
27250	3826	1429	23.74	1483	28.20	1532	32.64	1577	37.16		
28000	3931	1466	25.46	1518	30.09	1566	34.65	1611	39.27		

Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

## CLUB-4450 Catalog Table

CLUB-4450  
(BACKWARD CURVED IMPELLER)Impeller Dia.  
45.00 " O.D.  
Tip Speed (fpm)  
11,788 \* RPMInlet Dia.  
42 " I.D.  
Inlet Area  
9,62 sq. ft.Outlet Size  
45-1/4" x 33-3/4"  
Outlet Area  
10,61 ft<sup>2</sup>

VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP
8400	792	371	1.65	495	3.52	599	5.55								
9600	905	386	1.92	503	3.87	603	6.14	692	8.47						
10800	1018	402	2.22	513	4.26	610	6.69	695	9.28	774	11.89	844	14.62		
12000	1131	419	2.56	526	4.72	618	7.22	701	10.02	777	12.90	848	15.81	912	18.80
13200	1245	437	2.93	541	5.25	628	7.81	709	10.71	783	13.83	851	17.02	916	20.21
14400	1358	457	3.33	557	5.81	641	8.49	717	11.45	790	14.71	857	18.13	920	21.60
15600	1471	479	3.77	573	6.44	656	9.26	728	12.27	798	15.61	864	19.19	926	22.90
16800	1584	500	4.27	590	7.13	671	10.08	742	13.21	808	16.58	872	20.25	933	24.14
18000	1697	523	4.81	607	7.87	687	10.96	757	14.24	820	17.68	882	21.39	941	25.37
19200	1810	547	5.40	627	8.64	703	11.92	772	15.33	835	18.89	893	22.65	950	26.68
20400	1924	571	6.05	648	9.44	720	12.94	788	16.48	850	20.21	907	24.05	961	28.11
21600	2037	596	6.77	669	10.31	737	14.03	804	17.72	865	21.57	922	25.57	974	29.70
22800	2150	621	7.55	690	11.26	755	15.17	821	19.06	881	23.02	937	27.17	989	31.42
24000	2263	646	8.40	712	12.28	776	16.34	838	20.45	897	24.57	952	28.84	1004	33.26
25200	2376	671	9.32	735	13.36	797	17.56	855	21.93	914	26.22	968	30.60	1019	35.16
26400	2489	697	10.32	759	14.52	818	18.88	874	23.45	930	27.94	984	32.47	1035	37.14
27600	2602	723	11.40	783	15.75	839	20.29	894	25.01	947	29.75	1001	34.46	1051	39.24
28800	2716	750	12.57	807	17.06	860	21.78	915	26.63	965	31.63	1018	36.52	1067	41.46
30000	2829	777	13.82	832	18.46	883	23.36	936	28.35	985	33.55	1035	38.67	1084	43.80
31200	2942	804	15.16	856	19.96	907	25.02	957	30.18	1005	35.53	1052	40.93	1100	46.21
32400	3055	831	16.60	881	21.56	930	26.78	978	32.10	1027	37.56	1071	43.21	1117	48.73
33600	3168	858	18.14	906	23.25	954	28.62	1000	34.12	1047	39.73	1091	45.55	1135	51.35
34800	3281	885	19.79	931	25.05	979	30.55	1023	36.25	1069	42.01	1112	47.95	1154	54.01
36000	3394	913	21.54	957	26.95	1003	32.59	1046	38.48	1090	44.40	1133	50.45	1174	56.73
37200	3508	940	23.37	983	28.96	1028	34.76	1070	40.80	1111	46.90	1154	53.11	1194	59.51
38400	3621	968	25.28	1009	31.09	1053	37.04	1094	43.23	1134	49.52	1175	55.88	1216	62.36
39600	3734	995	27.30	1036	33.33	1078	39.43	1118	45.76	1157	52.25	1197	58.77	1237	65.41
40800	3847	1023	29.44	1062	35.69	1103	41.95	1143	48.40	1181	55.09	1218	61.78	1258	68.57
42000	3960	1051	31.69	1089	38.17	1128	44.59	1167	51.20	1204	58.04	1241	64.92	1279	71.87
43200	4073	1079	34.06	1116	40.79	1153	47.37	1192	54.12	1229	61.11	1264	68.18	1300	75.29

Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

## CLUB-4850 Catalog Table

CLUB-4850  
(BACKWARD CURVED IMPELLER)

CLUB-4850												CLUB-4850											
Impeller Dia. Tip Speed (ft/m)				49.00 " O.D. 12.83 * RPM				48 " I.D. 12.57 sq. ft.				Inlet Dia. Inlet Area				Outlet Size Outlet Area							
VOL CFM	VEL FPM	1" W.G. BHP	2" W.G. BHP	3" W.G. BHP	4" W.G. BHP	5" W.G. BHP	6" W.G. BHP	7" W.G. BHP	8" W.G. BHP	9" W.G. BHP	10" W.G. BHP	11" W.G. BHP	12" W.G. BHP	13" W.G. BHP	14" W.G. BHP								
100000	794	341	1.97	455	4.18	550	6.60																
115000	913	356	2.30	463	4.62	554	7.34	635	10.12														
130000	1032	371	2.68	472	5.12	561	8.01	639	11.13	711	14.27	775	17.52										
145000	1151	388	3.11	486	5.71	569	8.68	645	12.04	715	15.52	779	19.02	839	22.60								
160000	1270	406	3.59	501	6.38	579	9.44	653	12.91	720	16.67	783	20.51	842	24.38								
175000	1389	426	4.10	516	7.11	592	10.33	662	13.85	727	17.75	789	21.88	847	26.08								
190000	1508	446	4.67	532	7.92	607	11.31	673	14.93	736	18.90	796	23.19	853	27.68								
205000	1627	468	5.31	548	8.80	622	12.36	687	16.15	746	20.17	805	24.56	860	29.20								
220000	1746	491	6.02	566	9.75	638	13.51	702	17.47	759	21.61	814	26.03	868	30.79								
235000	1865	514	6.80	585	10.73	654	14.75	717	18.86	774	23.20	826	27.69	877	32.49								
250000	1984	538	7.65	606	11.77	670	16.07	732	20.37	789	24.87	840	29.53	889	34.38								
265000	2103	562	8.59	626	12.92	687	17.48	748	21.99	803	26.64	855	31.50	903	36.47								
280000	2222	586	9.62	647	14.16	706	18.93	764	23.71	819	28.53	870	33.55	918	38.74								
295000	2341	610	10.75	669	15.49	727	20.43	781	25.52	835	30.55	885	35.71	932	41.08								
310000	2460	635	11.98	692	16.92	747	22.05	798	27.42	851	32.69	901	38.02	947	43.53								
325000	2579	661	13.31	715	18.44	768	23.79	818	29.36	868	34.93	917	40.47	962	46.12								
340000	2698	686	14.75	739	20.06	788	25.64	838	31.37	884	37.28	933	43.05	978	48.87								
355000	2817	712	16.31	763	21.81	810	27.60	859	33.51	903	39.67	949	45.73	994	51.79								
370000	2936	738	17.99	787	23.68	833	29.68	879	35.79	923	42.13	966	48.54	1011	54.81								
385000	3055	765	19.79	811	25.67	856	31.87	900	38.20	944	44.67	985	51.39	1027	57.95								
400000	3174	791	21.72	835	27.80	879	34.18	921	40.74	964	47.41	1004	54.33	1044	61.24								
415000	3293	817	23.80	859	30.07	903	36.61	943	43.42	985	50.28	1025	57.34	1062	64.57								
430000	3412	844	26.02	884	32.47	926	39.20	966	46.22	1005	53.29	1045	60.51	1082	67.99								
445000	3531	870	28.32	909	35.02	950	41.94	989	49.16	1026	56.46	1065	63.86	1102	71.49								
460000	3651	897	30.75	935	37.72	974	44.84	1012	52.23	1048	59.77	1086	67.37	1123	75.12								
475000	3770	924	33.33	961	40.58	998	47.89	1036	55.44	1071	63.23	1107	71.04	1143	78.98								
490000	3889	951	36.06	986	43.59	1023	51.10	1059	58.82	1094	66.84	1128	74.87	1164	83.00								
505000	4008	978	38.94	1012	46.77	1047	54.47	1083	62.39	1117	70.59	1150	78.87	1184	87.19								
520000	4127	1005	41.98	1038	50.12	1071	58.03	1107	66.13	1141	74.50	1173	83.02										
535000	4246	1032	45.18	1065	53.65	1097	61.75	1131	70.05	1164	78.56	1196	87.34										

Class I Fans.     Class II Fans.     Class III Fans.     Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.



## CLUB-6000 Catalog Table

CLUB-6000  
(BACKWARD CURVED IMPELLER)

										Inlet Dia. 60" I.D. 19.63 sq. ft.	Outlet Size 61" x 45-3/8" 19.22 ft <sup>2</sup>
										Inlet Area 19.63 sq. ft.	Outlet Area 19.22 ft <sup>2</sup>
										Impeller Dia. 60.75" O.D. 15.90 * RPM	Impeller Dia. 60.75" O.D. 15.90 * RPM
VOL	VEL	1" W.G.	2" W.G.	3" W.G.	4" W.G.	5" W.G.	6" W.G.	7" W.G.	8" W.G.	9" W.G.	10" W.G.
CFM	FPM	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15750	819	277	3.10	368	6.54	444	10.33				
18000	936	289	3.61	374	7.21	448	11.43	513	15.78	571	20.29
20250	1054	301	4.19	382	7.96	453	12.43	516	17.27	573	22.16
22500	1171	314	4.85	393	8.87	459	13.45	521	18.63	577	24.02
24750	1288	328	5.57	405	9.88	468	14.60	527	19.94	582	25.74
27000	1405	344	6.33	417	10.98	478	15.94	534	21.36	587	27.36
29250	1522	360	7.20	429	12.20	490	17.42	543	22.98	594	29.09
31500	1639	377	8.16	442	13.52	502	18.99	554	24.81	602	31.00
33750	1756	395	9.22	456	14.94	514	20.71	566	26.80	612	33.15
36000	1873	414	10.38	471	16.41	527	22.57	577	28.88	624	35.53
38250	1990	432	11.65	487	17.96	540	24.55	589	31.12	635	38.03
40500	2107	451	13.05	503	19.67	553	26.65	602	33.54	647	40.66
42750	2224	470	14.59	520	21.52	568	28.81	615	36.11	659	43.48
45000	2341	489	16.26	537	23.50	584	31.05	628	38.81	672	46.49
47250	2458	509	18.08	555	25.61	600	33.45	641	41.64	684	49.67
49500	2575	529	20.05	573	27.87	616	36.02	656	44.53	697	52.99
51750	2692	549	22.17	592	30.26	632	38.76	672	47.53	710	56.49
54000	2809	569	24.47	610	32.84	649	41.67	689	50.67	725	60.06
56250	2926	590	26.93	629	35.60	667	44.74	705	54.05	740	63.73
58500	3043	610	29.58	648	38.54	685	47.98	721	57.60	756	67.51
60750	3161	631	32.42	667	41.67	703	51.39	737	61.36	772	71.51
63000	3278	652	35.47	686	45.00	722	54.98	754	65.30	788	75.74
65250	3395	673	38.72	705	48.53	740	58.77	772	69.44	805	80.19
67500	3512	694	42.13	725	52.28	759	62.80	790	73.77	821	84.85
69750	3629	715	45.69	745	56.24	778	67.04	809	78.30	838	89.73
72000	3746	736	49.47	766	60.42	797	71.52	827	83.03	856	94.83
74250	3863	757	53.46	786	64.83	816	76.22	846	87.96	874	100.14
76500	3980	778	57.68	806	69.48	835	81.17	864	93.20	892	105.67
78750	4097	799	62.12	827	74.38	854	86.37	883	98.68	910	111.41
81000	4214	821	66.81	847	79.53	874	91.82	902	104.41	929	117.39

Class I Fans.  Class II Fans.  Class III Fans.  Class IV Fans.

Power rating (watts, kW, or BHP) does not include transmission losses.

Performance ratings do not include the effects of appurtenances (accessories).

For static pressure greater than 14", contact Verantis.

Class IV Fans.

61" x 45-3/8"

19.22 ft<sup>2</sup>



# How to Specify FRP Fans

The following construction details can be used as a guide when writing specifications which demand the highest quality equipment. These specifications are in compliance with accepted design standards.

Fan performance to be certified by the manufacturer that it meets AMCA Standards Handbook 99, Test Code for Air Moving Devices 210 and Certified Ratings Program for Air Moving Devices 211.

## Design Criteria Sizing

Axial and centrifugal fans shall be sized so an increase in speed of 10% will not exceed the maximum RPM of that class of fan.

## Performance and Sound Data Provided.

- Design RPM
- Max RPM
- Static Efficiency
- Overall Sound
- Sound Power
- Fan Performance Curve
- Static Efficiency Curve
- Horse Power Curve

## Rating.

The size and the capacity rating for each fan quoted shall be furnished.

## Laminate.

Fan housings shall be constructed of a FRP laminate consisting of an appropriate fire-retardant resin and the proper fiberglass or synthetic reinforcement capable of resisting continuous fume temperatures of 180°F for standard resins. Other options available up to 230°F.

The fire-retardant qualities which equal or exceed the ASTME-84 Tunnel Test Rating of less than 25. For optimum structural integrity, the impeller shall be constructed of vinyl ester resin.

All interior surfaces exposed to the corrosive air stream shall be resin rich and contain not more than 20% of the appropriate surface veil, such as "C" grade fiberglass veil for most service conditions and Nexus surface veil when fluorides are present.

All surfaces exposed to the atmosphere shall be resin rich of a paraffinized resin stabilized against ultraviolet degradation and include a reinforcement not to exceed more than 20% of "C" grade fiberglass, to serve as protection against weathering, fumes, spillage and ultraviolet attack.

Immediately beneath the surfacing veil of the interior and exterior surfaces, the laminate shall be layers of chopped strand mat of Type E glass.

When conductivity is required, the interior of the fan housing and the impeller shall have a carbon gel coat that has a surface conductivity range of 0-30,000 ohms resistance. A grounding lug shall be provided to facilitate the discharging of static electricity to an external ground.

## Metal Parts.

No metal parts shall be exposed to the corrosive air stream.

## Shaft.

The shaft shall be of such design and size so as to operate below its first critical speed.

## Bearings.

Fan to be equipped with heavy-duty bearings, rated for a L-10 life of 100,000 hours, grease packed and sealed against dust and moisture.

## Belt drives.

Fan to be equipped with belt drives using matched "deep V" type V-belts sized to handle 1.5 times the rated brake horsepower of the fan motor and incorporating industrial type companion sheaves.

## Balancing.

Fan shall be statically and dynamically balanced at its rated operating speed and a certificate of compliance supplied at the time of delivery.

## Guards & Canopies.

Provide OSHA approved FRP belt, shaft, and bearing guards, properly ventilated for drive belt and bearing cooling for Arrangement 9. Provide OSHA approved one piece FRP Canopy for Arrangement 10. FRP guards to be supplied with UV resistant top coat.

## Impeller.

The fan impeller shall be constructed of premium-grade vinyl ester resin in accordance with ASTM D4167 and the laminate shall meet or exceed the requirements for defects per ASTM D2563 Level II. Customer inspections are available to ensure compliance. The fan impellers shall be made using a non-fire retardant vinyl ester resin chosen for strength characteristics. Resin for the fan impellers is to be DION 9800 or approved equal. Steel impeller hub shall be encapsulated in FRP to ensure corrosion resistant integrity and constructed so that the shaft remains outside of the airstream. Metal-constructed impellers coated with FRP, or impellers permanently bonded to shaft are not acceptable.

## Hardware.

- All hardware to be Type 316 Stainless Steel.

## Contact Verantis

For more information about incineration systems  
and thermal treatment technologies that can meet  
all your waste processing needs.



[www.verantis.com](http://www.verantis.com)  
[sales@verantis.com](mailto:sales@verantis.com)