



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.

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.

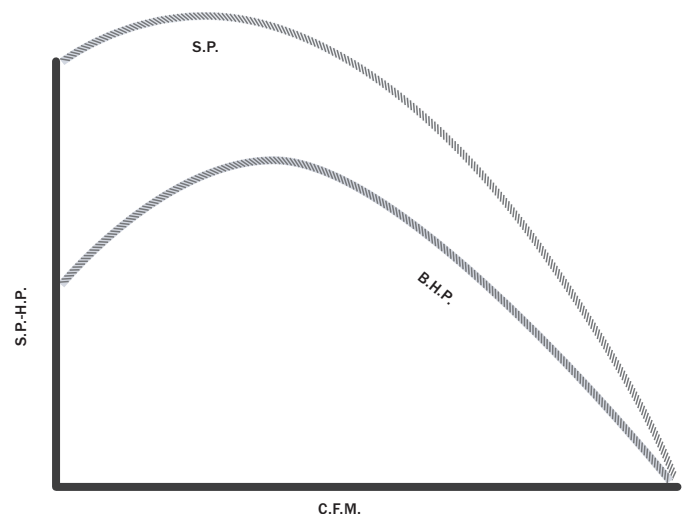
Engineering Features

- 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

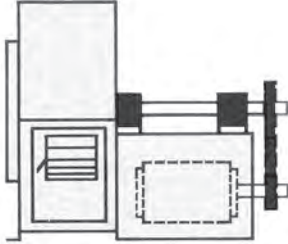
CLUB Backward Curved Impeller

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



Arrangement Versatility

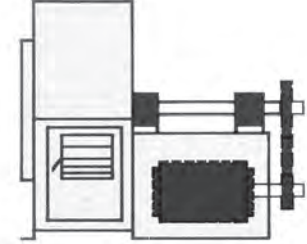
Standard for sizes 1500 through 2550



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

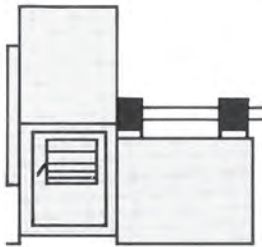
Size 1500 through 2550 are offered in Arrangement 10 as standard, while Arrangement 9 is standard in sizes 3000 through 7300. Other arrangements are available if required. Fans are available in clockwise or counterclockwise rotation and all 8 standard discharge positions.

Standard for sizes 3000 through 7300

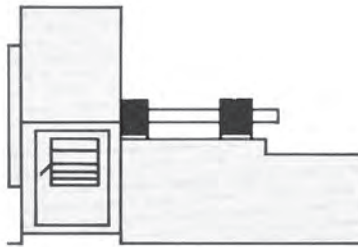


ARR. 9 SWSI - For belt drive. Wheel over-hung, two bearings, with prime mover outside base.

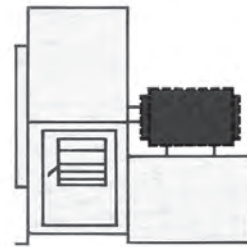
Optional arrangements available for special requirements.



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



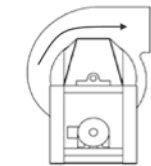
ARR. 8 SWSI - For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



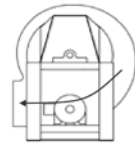
ARR. 4 SWSI - For direct drive. Wheel overhung on prime mover shaft. No bearings on fan. Prime mover base mounted or directly connected.

Rotation and Discharge Options

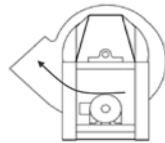
Direction of rotation is determined from drive side of fan. On single inlet fans, drive side is always considered as the side opposite fan inlet. Direction of discharge is determined in accordance with diagrams (below). Angle of discharge is referred to the horizontal axis of fan and designated in degrees 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.



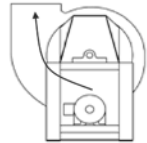
Rotation: Clockwise
Orientation: Top Horizontal



Rotation: Clockwise
Orientation: Bottom Horizontal



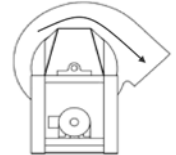
Rotation: Clockwise
Orientation: Bottom Angular Up



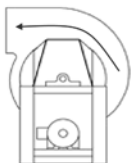
Rotation: Clockwise
Orientation: Up Blast



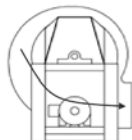
Rotation: Clockwise
Orientation: Top Angular Up



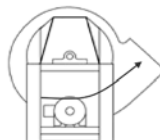
Rotation: Clockwise
Orientation: Top Angular Down



Rotation: Counterclockwise
Orientation: Top Horizontal



Rotation: Counterclockwise
Orientation: Bottom Horizontal



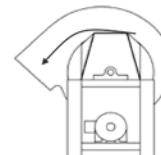
Rotation: Counterclockwise
Orientation: Bottom Angular Up



Rotation: Counterclockwise
Orientation: Up Blast



Rotation: Counterclockwise
Orientation: Top Angular Up



Rotation: Counterclockwise
Orientation: Top Angular Down

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.

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.

Hinged & Latch
access door.



Weather canopy
on Arrangement 10 fan.



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
	Barometric Pressure in inches of Mercury							
	29.29	28.86	27.82	26.82	25.84	24.90	23.98	23.09
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.

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" 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.

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.

CLUB-4450 Catalog Table

CLUB-4450

(BACKWARD CURVED IMPELLER)

Impeller Dia. 45.00 " O.D.
Tip Speed (fpm) 11.78 * RPM

Inlet Dia.
Inlet Area

42 " I.D.
9.62 sq. ft.

Outlet Size 45-1/4" x 33-3/4"
Outlet Area 10.61 ft²

VOL CFM	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.		11" W.G.		12" W.G.		13" W.G.		14" W.G.			
	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		
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	977	23.45													
14400	1358	457	3.33	557	5.81	641	8.49	717	11.45	790	14.71	857	18.13	920	21.60	980	25.08	1038	28.58	1091	32.19									
15600	1471	479	3.77	573	6.44	656	9.26	728	12.27	798	15.61	864	19.19	926	22.90	985	26.66	1040	30.42	1094	34.20	1146	38.03	1194	41.97					
16800	1584	500	4.27	590	7.13	671	10.08	742	13.21	808	16.58	872	20.25	933	24.14	991	28.12	1046	32.16	1098	36.22	1149	40.28	1198	44.36	1245	48.53	1290	52.78	
18000	1697	523	4.81	607	7.87	687	10.96	757	14.24	820	17.68	882	21.39	941	25.37	998	29.53	1052	33.80	1103	38.11	1153	42.47	1201	46.81	1248	51.17	1294	55.54	
19200	1810	547	5.40	627	8.64	703	11.92	772	15.33	835	18.89	893	22.65	950	26.68	1006	30.94	1059	35.38	1110	39.93	1159	44.51	1206	49.15	1252	53.78	1297	58.42	
20400	1924	571	6.05	648	9.44	720	12.94	788	16.48	850	20.21	907	24.05	961	28.11	1015	32.43	1067	36.97	1117	41.66	1166	46.50	1212	51.34	1258	56.24	1302	61.19	
21600	2037	596	6.77	669	10.31	737	14.03	804	17.72	865	21.57	922	25.57	974	29.70	1025	34.05	1076	38.64	1125	43.44	1173	48.39	1220	53.51	1264	58.62	1307	63.78	
22800	2150	621	7.55	690	11.26	755	15.17	821	19.06	881	23.02	937	27.17	989	31.42	1038	35.83	1086	40.45	1134	45.31	1182	50.37	1227	55.56	1271	60.91	1314	66.32	
24000	2263	646	8.40	712	12.28	776	16.34	838	20.45	897	24.57	952	28.84	1004	33.26	1052	37.76	1099	42.44	1145	47.32	1191	52.43	1235	57.74	1279	63.16	1321	68.74	
25200	2376	671	9.32	735	13.36	797	17.56	855	21.93	914	26.22	968	30.60	1019	35.16	1068	39.83	1113	44.58	1157	49.51	1201	54.65	1245	60.00	1288	65.55	1329	71.20	
26400	2489	697	10.32	759	14.52	818	18.88	874	23.45	930	27.94	984	32.47	1035	37.14	1083	41.97	1128	46.87	1171	51.87	1213	57.06	1255	62.44	1297	68.01	1338	73.79	
27600	2602	723	11.40	783	15.75	839	20.29	894	25.01	947	29.75	1001	34.46	1051	39.24	1098	44.18	1144	49.27	1186	54.40	1227	59.65	1268	65.08	1308	70.68	1347	76.48	
28800	2716	750	12.57	807	17.06	860	21.78	915	26.63	965	31.63	1018	36.52	1067	41.46	1114	46.51	1159	51.72	1202	57.05	1242	62.41	1281	67.90	1320	73.56			
30000	2829	777	13.82	832	18.46	883	23.36	936	28.35	985	33.55	1035	38.67	1084	43.80	1130	48.97	1174	54.28	1217	59.75	1258	65.32	1296	70.90	1334	76.62			
31200	2942	804	15.16	856	19.96	907	25.02	957	30.18	1005	35.53	1052	40.93	1100	46.21	1146	51.55	1190	56.98	1232	62.56	1273	68.27	1312	74.07	1349	79.88			
32400	3055	831	16.60	881	21.56	930	26.78	978	32.10	1027	37.56	1071	43.21	1117	48.73	1163	54.26	1206	59.82	1248	65.50	1288	71.33	1327	77.28					
33600	3168	858	18.14	906	23.25	954	28.62	1000	34.12	1047	39.73	1091	45.55	1135	51.35	1180	57.04	1223	62.78	1264	68.59	1304	74.52	1342	80.60					
34800	3281	885	19.79	931	25.05	979	30.55	1023	36.25	1069	42.01	1112	47.95	1154	54.01	1197	59.93	1240	65.86	1280	71.82	1320	77.87							
36000	3394	913	21.54	957	26.95	1003	32.59	1046	38.48	1090	44.40	1133	50.45	1174	56.73	1214	62.94	1257	69.03	1297	75.19	1336	81.36							
37200	3508	940	23.37	983	28.96	1028	34.76	1070	40.80	1111	46.90	1154	53.11	1194	59.51	1233	65.98	1274	72.32	1314	78.64									
38400	3621	968	25.28	1009	31.09	1053	37.04	1094	43.23	1134	49.52	1175	55.88	1216	62.36	1253	69.09	1291	75.72	1331	82.21									
39600	3734	995	27.30	1036	33.33	1078	39.43	1118	45.76	1157	52.25	1197	58.77	1237	65.41	1274	72.26	1310	79.14	1348	85.91									
40800	3847	1023	29.44	1062	35.69	1103	41.95	1143	48.40	1181	55.09	1218	61.78	1258	68.57	1295	75.51	1330	82.64											
42000	3960	1051	31.69	1089	38.17	1128	44.59	1167	51.20	1204	58.04	1241	64.92	1279	71.87	1316	78.93													
43200	4073	1079	34.06	1116	40.79	1153	47.37	1192	54.12	1229	61.11	1264	68.18	1300	75.29	1337	82.50													

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)

Impeller Dia. 49.00 " O.D.
Tip Speed (fpm) 12.83 * RPM

Inlet Dia.
Inlet Area

48 " I.D.
12.57 sq. ft.

Outlet Size 49-3/8" x 36-3/4"
Outlet Area 12.60 ft²

VOL CFM	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.		11" W.G.		12" W.G.		13" W.G.		14" W.G.			
	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		
10000	794	341	1.97	4.18	455	6.60	550	6.60	635	10.12																				
11500	913	356	2.30	4.62	463	7.34	554	8.01	639	11.13	711	14.27	775	17.52																
13000	1032	371	2.68	5.12	472	8.01	561	8.68	645	12.04	715	15.52	779	19.02	839	22.60														
14500	1151	388	3.11	5.71	486	8.68	569	9.44	653	12.04	715	15.52	779	19.02	839	22.60														
16000	1270	406	3.59	6.38	501	9.44	579	9.44	653	12.91	720	16.67	783	20.51	842	24.38	898	28.27												
17500	1389	426	4.10	7.11	516	10.33	592	10.33	662	13.85	727	17.75	789	21.88	847	26.08	901	30.31	953	34.55	1003	38.87								
19000	1508	446	4.67	7.92	532	11.31	607	11.31	673	14.93	736	18.90	796	23.19	853	27.68	906	32.22	957	36.82	1006	41.41	1054	46.02	1098	50.76				
20500	1627	468	5.31	8.80	548	12.36	622	12.36	687	16.15	746	20.17	805	24.56	860	29.20	913	34.05	962	38.93	1010	43.89	1057	48.83	1101	53.80	1145	58.78		
22000	1746	491	6.02	9.75	566	13.51	638	13.51	702	17.47	759	21.61	814	26.03	868	30.79	919	35.77	969	40.97	1016	46.19	1061	51.49	1105	56.80	1148	62.12	1189	67.45
23500	1865	514	6.80	10.73	585	14.75	654	14.75	717	18.86	774	23.20	826	27.69	877	32.49	928	37.60	976	42.90	1023	48.43	1068	54.00	1111	59.62	1153	65.31	1193	70.98
25000	1984	538	7.65	11.77	606	16.07	672	16.07	732	20.37	789	24.87	840	29.53	889	34.38	937	39.52	985	44.96	1030	50.59	1074	56.42	1117	62.35	1158	68.30	1198	74.31
26500	2103	562	8.59	12.92	626	17.48	687	17.48	748	21.99	803	26.64	855	31.50	903	36.47	949	41.67	994	47.14	1039	52.89	1082	58.82	1124	64.94	1165	71.24		
28000	2222	586	9.62	14.16	647	18.93	706	18.93	764	23.71	819	28.53	870	33.55	918	38.74	962	44.02	1005	49.54	1048	55.32	1091	61.37	1132	67.61	1172	74.01		
29500	2341	610	10.75	15.49	669	20.43	727	20.43	781	25.52	835	30.55	885	35.71	932	41.08	977	46.56	1019	52.16	1060	58.00	1100	64.07	1141	70.41	1180	76.95		
31000	2460	635	11.98	16.92	692	22.05	747	22.05	798	27.42	851	32.69	901	38.02	947	43.53	992	49.22	1033	54.98	1073	60.90	1112	67.03	1151	73.40	1189	80.00		
32500	2579	661	13.31	18.44	715	23.79	768	23.79	818	29.36	868	34.93	917	40.47	962	46.12	1006	51.97	1048	57.96	1087	64.02	1125	70.23	1162	76.65	1199	83.29		
34000	2698	686	14.75	20.06	739	25.64	788	25.64	838	31.37	884	37.28	933	43.05	978	48.87	1021	54.85	1063	61.02	1102	67.32	1139	73.65	1175	80.15				
35500	2817	712	16.31	21.81	763	27.60	810	27.60	859	33.51	903	39.67	949	45.73	994	51.79	1037	57.91	1077	64.21	1117	70.69	1154	77.28	1190	83.89				
37000	2936	738	17.99	23.68	787	29.68	833	29.68	879	35.79	923	42.13	966	48.54	1011	54.81	1053	61.14	1093	67.58	1132	74.19	1169	80.97						
38500	3055	765	19.79	25.67	811	31.87	856	31.87	900	38.20	944	44.67	985	51.39	1027	57.95	1069	64.52	1109	71.12	1147	77.88	1184	84.80						
40000	3174	791	21.72	27.80	835	34.18	879	34.18	921	40.74	964	47.41	1004	54.33	1044	61.24	1085	68.01	1125	74.85	1162	81.75	1199	88.80						
41500	3293	817	23.80	30.07	859	36.61	903	36.61	943	43.42	985	50.28	1025	57.34	1062	64.57	1102	71.65	1141	78.71	1178	85.81								
43000	3412	844	26.02	32.47	884	39.20	926	39.20	966	46.22	1005	53.29	1045	60.51	1082	67.99	1119	75.42	1157	82.70	1195	90.05								
44500	3531	870	28.32	35.02	909	41.94	949	41.94	989	49.16	1026	56.46	1065	63.86	1102	71.49	1138	79.24	1174	86.85										
46000	3651	897	30.75	37.72	935	44.84	974	44.84	1012	52.23	1048	59.77	1086	67.37	1123	75.12	1157	83.15	1191	91.11										
47500	3770	924	33.33	40.58	961	47.89	998	47.89	1036	55.44	1071	63.23	1107	71.04	1143	78.98	1177	87.15												
49000	3889	951	36.06	43.59	986	51.10	1023	51.10	1059	58.82	1094	66.84	1128	74.87	1164	83.00	1198	91.27												
50500	4008	978	38.94	46.77	1012	54.47	1047	54.47	1083	62.39	1117	70.59	1150	78.87	1184	87.19														
52000	4127	1005	41.98	50.12	1038	58.03	1071	58.03	1107	66.13	1141	74.50	1173	83.02																
53500	4246	1032	45.18	53.65	1065	61.75	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-5425 Catalog Table

CLUB-5425

(BACKWARD CURVED IMPELLER)

Impeller Dia. 55.00 " O.D.
Tip Speed (fpm) 14.40 * RPM

Inlet Dia.
Inlet Area

54 " I.D.
15.90 sq. ft.

Outlet Size 55-1/4" x 41-1/8"
Outlet Area 15.78 ft²

VOL CFM	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.		11" W.G.		12" W.G.		13" W.G.		14" W.G.	
	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
13000	824	307	2.56	5.39	491	8.52	563	11.77																				
14750	935	319	2.96	4.13	495	9.37	566	12.93	630	16.63																		
16500	1046	332	3.41	6.49	500	10.15	570	14.09	633	18.08	691	22.19																
18250	1157	345	3.92	7.19	507	10.93	575	15.16	637	19.54	694	23.95	747	28.45														
20000	1268	360	4.47	7.97	515	11.81	581	16.17	641	20.88	697	25.69	750	30.52	800	35.41	846	40.46										
21750	1378	377	5.06	8.81	526	12.83	588	17.26	647	22.15	702	27.30	754	32.54	802	37.79	849	43.06	893	48.48								
23500	1489	393	5.71	9.74	538	13.96	597	18.48	654	23.48	708	28.84	758	34.41	806	40.06	852	45.74	896	51.43	938	57.17	978	63.09				
25250	1600	411	6.44	10.74	550	15.16	608	19.86	662	24.91	714	30.40	764	36.21	811	42.20	856	48.25	899	54.36	940	60.46	981	66.58	1019	72.82	1056	79.19
27000	1711	429	7.24	11.82	563	16.45	620	21.38	672	26.52	722	32.06	770	38.01	817	44.24	861	50.65	903	57.10	944	63.63	983	70.15	1021	76.68	1059	83.24
28750	1822	448	8.11	12.95	576	17.86	633	22.96	683	28.30	731	33.92	778	39.93	823	46.30	867	52.93	909	59.76	948	66.60	987	73.54	1025	80.49	1061	87.43
30500	1933	468	9.05	14.12	589	19.36	645	24.64	696	30.22	742	35.96	786	42.03	830	48.48	873	55.26	914	62.28	954	69.51	992	76.75	1029	84.07	1065	91.46
32250	2044	487	10.10	15.39	603	20.95	658	26.46	708	32.21	754	38.18	797	44.34	839	50.84	880	57.70	921	64.87	960	72.26	998	79.91	1034	87.53	1069	95.23
34000	2155	507	11.23	16.77	618	22.61	671	28.40	720	34.31	766	40.51	808	46.85	849	53.43	889	60.34	928	67.59	966	75.14	1003	82.89	1040	90.88		
35750	2266	527	12.47	18.25	634	24.31	685	30.43	733	36.57	778	42.93	821	49.53	860	56.23	899	63.22	936	70.51	974	78.14	1010	86.06	1046	94.15		
37500	2377	547	13.81	19.83	651	26.08	698	32.57	746	38.96	791	45.49	833	52.29	873	59.25	910	66.32	946	73.69	982	81.36	1018	89.34	1053	97.63		
39250	2488	568	15.26	21.51	667	28.00	713	34.79	760	41.47	804	48.21	845	55.16	885	62.35	922	69.65	957	77.11	992	84.85	1026	92.88	1060	101.20		
41000	2598	589	16.82	23.29	684	30.03	729	37.06	773	44.09	817	51.08	858	58.20	897	65.57	934	73.13	969	80.77	1003	88.60	1036	96.69	1069	105.06		
42750	2709	610	18.50	25.17	701	32.19	746	39.41	787	46.83	830	54.08	871	61.41	909	68.94	946	76.70	981	84.62	1014	92.59	1047	100.77				
44500	2820	632	20.31	27.20	719	34.47	763	41.88	803	49.61	844	57.20	884	64.80	922	72.49	958	80.41	993	88.54	1027	96.82	1058	105.11				
46250	2931	653	22.24	29.36	738	36.87	780	44.52	819	52.48	858	60.45	898	68.30	935	76.22	971	84.30	1006	92.61	1039	101.09						
48000	3042	675	24.31	31.66	757	39.40	797	47.30	836	55.42	873	63.78	911	71.94	948	80.14	984	88.39	1018	96.85	1051	105.52						
49750	3153	697	26.52	34.09	776	42.06	814	50.21	853	58.53	889	67.17	925	75.72	962	84.17	997	92.67	1031	101.30	1063	110.12						
51500	3264	718	28.88	36.67	795	44.84	832	53.28	870	61.82	905	70.65	939	79.60	975	88.34	1010	97.13	1044	105.95								
53250	3375	740	31.39	39.40	815	47.76	850	56.48	887	65.26	922	74.23	955	83.54	989	92.68	1024	101.71	1057	110.81								
55000	3486	762	34.03	42.29	835	50.87	869	59.83	904	68.86	939	78.05	972	87.57	1004	97.11	1038	106.45										
56750	3597	784	36.77	45.34	854	54.14	888	63.32	921	72.62	956	82.04	989	91.69	1020	101.60	1051	111.36										
58500	3707	806	39.67	48.54	874	57.58	908	66.96	940	76.54	973	86.19	1006	96.02	1036	106.20	1066	116.34										
60250	3818	828	42.72	51.92	894	61.18	927	70.74	958	80.62	990	90.52	1022	100.57	1053	110.89												
62000	3929	851	45.93	55.47	914	64.96	947	74.73	977	84.86	1008	95.02	1039	105.30														
63750	4040	873	49.32	59.20	934	68.92	966	78.91	997	89.26	1026	99.70	1056	110.21														

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)

Impeller Dia. 60.75" O.D.
Tip Speed (fpm) 15.90 * RPM

Inlet Dia.
Inlet Area 60" I.D.
19.63 sq. ft.

Outlet Size
Outlet Area 61" x 45-3/8"
19.22 ft²

VOL CFM	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.		11" W.G.		12" W.G.		13" W.G.		14" W.G.	
	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
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	626	27.19															
22500	1171	314	4.85	393	8.87	459	13.45	521	18.63	577	24.02	628	29.46	677	34.98													
24750	1288	328	5.57	405	9.88	468	14.60	527	19.94	582	25.74	632	31.67	679	37.65	725	43.66	766	49.87									
27000	1405	344	6.33	417	10.98	478	15.94	534	21.36	587	27.36	637	33.73	683	40.20	727	46.72	769	53.26	809	59.91	847	66.74					
29250	1522	360	7.20	429	12.20	490	17.42	543	22.98	594	29.09	642	35.68	688	42.59	731	49.59	772	56.66	811	63.73	850	70.82	886	78.10	920	85.53	
31500	1639	377	8.16	442	13.52	502	18.99	554	24.81	602	31.00	649	37.73	693	44.87	736	52.32	776	59.82	815	67.44	852	75.04	888	82.67	924	90.32	957
33750	1756	395	9.22	456	14.94	514	20.71	566	26.80	612	33.15	656	39.95	700	47.26	741	54.91	782	62.89	819	70.90	856	79.03	891	87.18	926	95.34	959
36000	1873	414	10.38	471	16.41	527	22.57	577	28.88	624	35.53	666	42.43	707	49.79	748	57.64	787	65.78	825	74.28	861	82.80	896	91.42	929	100.14	962
38250	1990	432	11.65	487	17.96	540	24.55	589	31.12	635	38.03	677	45.16	716	52.62	755	60.51	794	68.87	830	77.49	866	86.45	901	95.52	934	104.63	966
40500	2107	451	13.05	503	19.67	553	26.65	602	33.54	647	40.66	689	48.11	727	55.72	764	63.70	801	72.10	837	80.94	872	90.03	906	99.43	939	109.05	
42750	2224	470	14.59	520	21.52	568	28.81	615	36.11	659	43.48	700	51.16	739	59.09	775	67.19	810	75.67	844	84.54	879	93.84	912	103.40	944	113.22	
45000	2341	489	16.26	537	23.50	584	31.05	628	38.81	672	46.49	712	54.38	750	62.59	786	70.96	820	79.55	853	88.51	886	97.84	919	107.57	951	117.59	
47250	2458	509	18.08	555	25.61	600	33.45	641	41.64	684	49.67	724	57.81	762	66.24	798	74.93	831	83.74	863	92.80	895	102.22	927	111.99	958	122.14	
49500	2575	529	20.05	573	27.87	616	36.02	656	44.53	697	52.99	737	61.45	774	70.08	809	79.03	843	88.19	874	97.42	905	106.95	936	116.80	966	126.99	
51750	2692	549	22.17	592	30.26	632	38.76	672	47.53	710	56.49	750	65.28	786	74.17	821	83.30	855	92.73	886	102.35	916	112.01	946	121.97			
54000	2809	569	24.47	610	32.84	649	41.67	689	50.67	725	60.06	762	69.25	799	78.48	833	87.84	866	97.47	898	107.36	928	117.41	957	127.50			
56250	2926	590	26.93	629	35.60	667	44.74	705	54.05	740	63.73	775	73.42	812	82.97	846	92.61	878	102.45	910	112.57	940	122.90	969	133.37			
58500	3043	610	29.58	648	38.54	685	47.98	721	57.60	756	67.51	790	77.69	825	87.64	858	97.63	890	107.69	921	118.00	951	128.59					
60750	3161	631	32.42	667	41.67	703	51.39	737	61.36	772	71.51	805	82.06	838	92.50	871	102.81	903	113.20	934	123.73	963	134.49					
63000	3278	652	35.47	686	45.00	722	54.98	754	65.30	788	75.74	821	86.54	852	97.49	884	108.19	916	118.94	946	129.72							
65250	3395	673	38.72	705	48.53	740	58.77	772	69.44	805	80.19	837	91.17	867	102.56	897	113.79	929	124.84	959	136.00							
67500	3512	694	42.13	725	52.28	759	62.80	790	73.77	821	84.85	853	96.12	883	107.77	911	119.49	942	130.97									
69750	3629	715	45.69	745	56.24	778	67.04	809	78.30	838	89.73	869	101.29	899	113.10	927	125.30	955	137.33									
72000	3746	736	49.47	766	60.42	797	71.52	827	83.03	856	94.83	885	106.69	915	118.76	942	131.24											
74250	3863	757	53.46	786	64.83	816	76.22	846	87.96	874	100.14	902	112.32	931	124.68	959	137.31											
76500	3980	778	57.68	806	69.48	835	81.17	864	93.20	892	105.67	919	118.20	947	130.85													
78750	4097	799	62.12	827	74.38	854	86.37	883	98.68	910	111.41	936	124.31	963	137.27													
81000	4214	821	66.81	847	79.53	874	91.82	902	104.41	929	117.39	954	130.66															

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.

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 ASTM E-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 paraffinated 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.



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Contact Verantis

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

www.verantis.com
sales@verantis.com