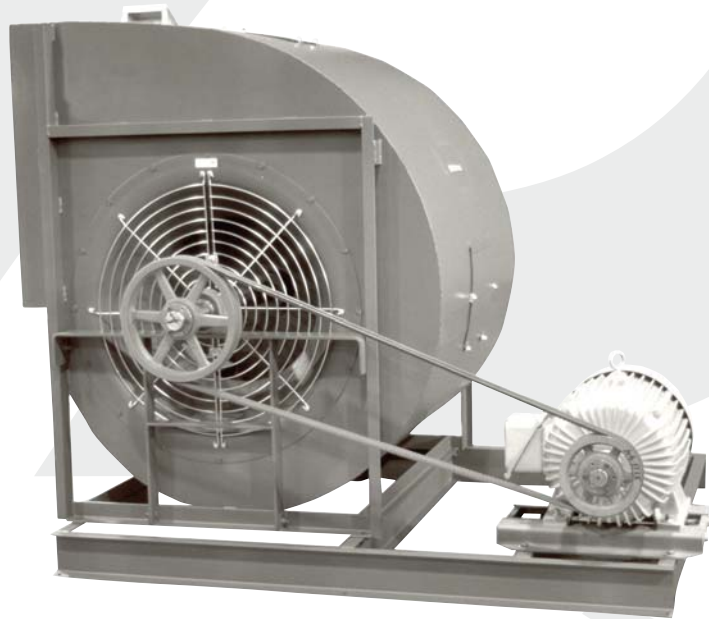




VCR | Free Standing Centrifugal Fan

CERTIFIED RATINGS



PennBarry certifies that the VCR Backward Inclined and Airfoil Fans shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

FANSIZER®

Product Selection Software

FanSizer software allows you to select the best centrifugal or axial unit for your application. Input CFM and static pressure, and FanSizer will make the optimum selection. It allows you to complete job schedules which you can store, modify and print in seconds. Features include: on-line help, on-screen product drawings and dimensions, and complete text specifications. In addition, you can convert job schedules to ASCII code for use with other programs like word processing.

FANCAD®

Library of CAD Drawings

FanCad is a library of drawings for use with computer-aided design (CAD) systems. FanCad's pre-drawn details can save hours of drafting time. Included are all popular PennBarry fans and related items.

Visit Our Web Site

Point your internet web browser to www.PennBarry.com for up-to-the-minute information including:

- On-line catalog
- List of nearest PennBarry representatives
- What's New
- HVAC "Hot Links"

FanSizer and FanCad are registered trademarks.

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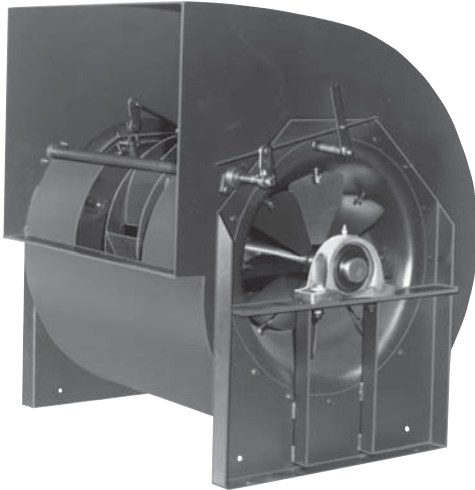
General Information

VCR Fan

PennBarry products are backed by extensive research and testing in an AMCA Accredited Laboratory. These tests assure the customer that PennBarry products are of the highest quality in design, construction and performance. Before leaving the plant, each fan is carefully subjected to a test at the field operating rpm. Dynamic balancing is performed by experienced personnel using electronic equipment to ensure smooth and trouble-free operation.

Commercial

The high volume capacities of the VCR backward inclined and VCR airfoil fans make them excellent for use in hotels, office buildings, manufacturing plants and hospitals. Variable inlet vanes and discharge dampers make it easy to adjust the airflow for the greatest comfort and efficiency.



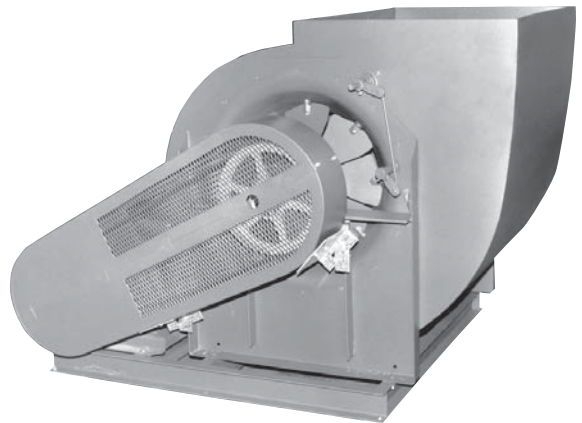
Arrangement 3 DWDI with Vanes

Industrial

PennBarry VCR backward inclined fans are heavy-duty and can handle a variety of atmospheric conditions including fumes, abrasives and high temperatures. Customers from industries as diverse as paper, automotive and textiles have found PennBarry backward inclined fans to be suited for their industrial process applications. Because of their high efficiencies and low sound power levels, these fans are recommended for clean air and lower temperatures only. A wide range of accessories are available to expand the versatility of both fans.

Original Equipment Manufacturers

High quality PennBarry component parts are offered for unitary HVAC and process equipment systems. Available in a variety of materials and wheel diameters, fans and parts can be specially constructed to meet the specifications of HVAC and process equipment. Backward inclined wheels are furnished in diameters from 10.5" to 89" and airfoil wheels are available in 18.25" to 89" diameters.



SWSI on Unitary Base with Variable Inlet Vanes and a Belt Guard

Quality is built into every PennBarry product

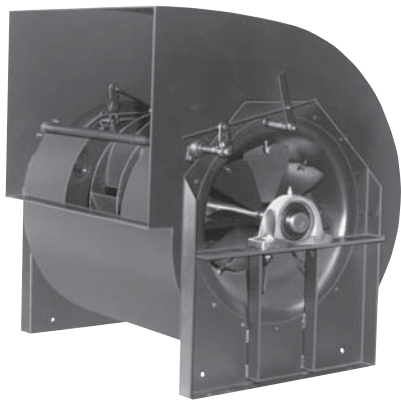
All PennBarry fans are ruggedly built for long, dependable service. VCR fans are no exception. VCR fans offer many construction features not found on other fans.

Housings

VCR housings use heavy-gauge steel, continuously welded to assure no air leakage. They are rigidly braced to prevent vibration and pulsation. Side bracing on most VCR fans is achieved by steel angle which is welded to the fan housing. Class I and II fans, size 660 and larger, and Class III and IV, size 542 and larger, are braced across the scroll with angle or channel. Housings on sizes 105 through 270 are field rotatable.

Bearing Pedestals

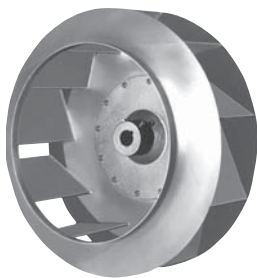
Bearing supports are rigid and properly braced to provide a firm foundation for the shaft and bearings. Bearing pedestals for Class I and II VCR fans in Arrangements 1, 9 and 10 through size 600 are the "open" design. The open pedestal weighs less without sacrificing structural integrity. Class I and II fans above size 600 and all Class III and IV fans have the traditional enclosed trapezoidal pedestal constructed of heavy steel plate.



Arrangement 3 DWDI
with "Open" Bearing Pedestal Design

Wheels

VCR fans are available with backward inclined or airfoil wheels on a standard basis. Backward inclined (BI) and Airfoil (AF) type wheels are very efficient and non-overloading.



Single Width
Backward Inclined Wheel

Backward inclined wheels are designed to provide optimum performance for most operating conditions. The solid, single thickness blades are firmly attached to the backplate using welds. A spun wheel cone is then welded to the blades. The wheel cone is matched to the inlet cone providing the exact overlap to maximize the fan's efficiency. The double width wheel is constructed as one integral assembly.

Backward inclined wheels are available in diameters from 10.5" through 89" for air volumes up to

464,000 cfm and static pressure up to 18" W.G. The maximum operating temperature is 1000°F. Standard construction

material is mild steel, but wheels can also be manufactured in aluminum, abrasion resistant steel, stainless steel, Corten and other materials.

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The blades are die cut and carefully formed to provide aerodynamically efficient airflow into the fan. Double width wheels are constructed as one assembly.

Airfoil wheels can be provided in wheel diameters ranging from 18.25" through 89" for air volumes up to 460,000 cfm and static pressures up to 18" W.G. The maximum operating temperature is 750°F. Mild steel is the standard construction material with aluminum and stainless steel wheels available upon request.

Shafts

Only the finest turned, ground and polished shafting is used in PennBarry VCR fans. First critical shaft speed on Class I and II fans is at least 125% of the fan's maximum operating speed. For all Class III and IV fans the first critical speed is at least 142% of the originally specified operating speed.

Bearings

VCR fans are equipped with heavy-duty, self-aligning pillowblock bearings from the most respected American manufacturers. The most commonly supplied types are single row ball bearings in a one-piece cast iron pillowblock (shown at left), double row spherical roller bearings in a one-piece cast iron pillowblock, and double row spherical roller bearings in a two-piece split pillowblock.



Single Row Ball Bearing

The standard L_{10} bearing life on Class I and II VCR fans is 20,000 hours; optional bearings are available that increase the L_{10} life to 40,000 hours and 80,000 hours. Standard L_{10} bearing life in Class III and IV VCR fans is 40,000 hours, and 80,000 hour bearings are optional.

Balancing

All PennBarry fans are statically and dynamically balanced using precision instruments to guarantee minimum vibration during operation. Each wheel is individually balanced and a final balance test is performed on the completed fan assembly. Before shipment the exact vibration for the entire assembly is recorded on the fan as proof of the final dynamic balance at the factory.

Fan Arrangements

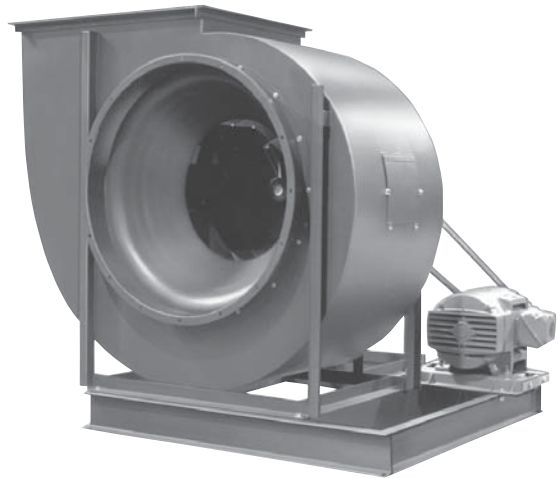
VCR Fan

Arrangement 1

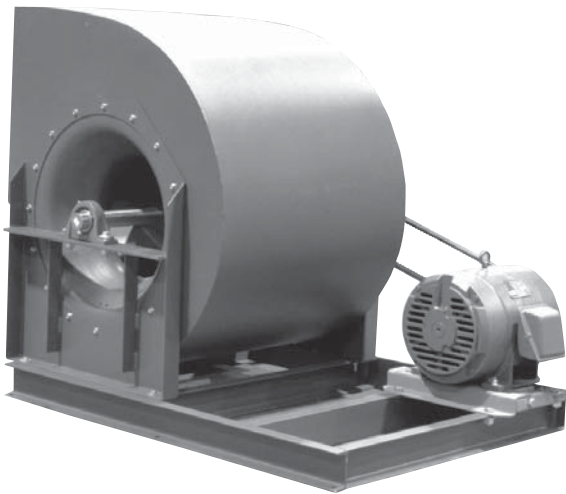
This arrangement is popular for industrial applications and for applications where single width fans are required. Two bearings are mounted on a sturdy pedestal and the fan wheel is overhung into the housing. With appropriate accessories, this fan can handle temperatures up to 1000°F with the backward inclined wheel. Arrangement 1 is suitable for either belt drive or direct drive. It is available for all class VCR fans and all sizes except 105.

Arrangement 3 SWSI

This arrangement is most often used for general air handling and ventilation applications. The fan wheel is suspended between bearings on either side of the fan housing. One bearing is located in the fan inlet and one in the airstream. Arrangement 3 SWSI is suitable for either belt drive or direct drive and is offered for all class VCR fans and all sizes except 105. Maximum operating temperature for Arrangement 3 SWSI fans is limited to 180°F, due to the bearings in the airstream.



Unitary Base Assembly Package
Arrangement 1 Backward Inclined



Arrangement 3 SWSI on Unitary Base

Arrangement 3 DWDI

Double width fans approximately double the air volume capacities of single width fans and allow maximum air handling with minimum unit size. Air enters the fan from both sides, exposing both bearings to the airstream. Arrangement 3 DWDI can be either belt drive or direct drive and is offered on all VCR fans except size 105. Maximum operating temperature is 180°F, due to the bearings in the airstream.

Arrangement 4

On Arrangement 4 fans the fan wheel is mounted directly on the motor shaft. There are no separate fan bearings so the motor bearings carry the fullweight of the wheel. Arrangement 4 fans are offered in sizes up to 365 and in Class I, II, or III construction. Maximum operating temperature is 180°F, due to the bearings in the airstream.

Arrangement 7 SWSI & DWDI

These arrangements can be either belt drive or direct drive, but direct drive is more common. Arrangement 7 is very similar to Arrangement 3 except that Arrangement 7 fans have an integral motor mounting pedestal. On single width versions one bearing is in the airstream. On double width fans both bearings are in the airstream. Arrangement 7 is offered for single and double width fans (except size 105) in Class I, II and III. Maximum operating temperature is 180°F, due to the bearings in the airstream.

Arrangement 8

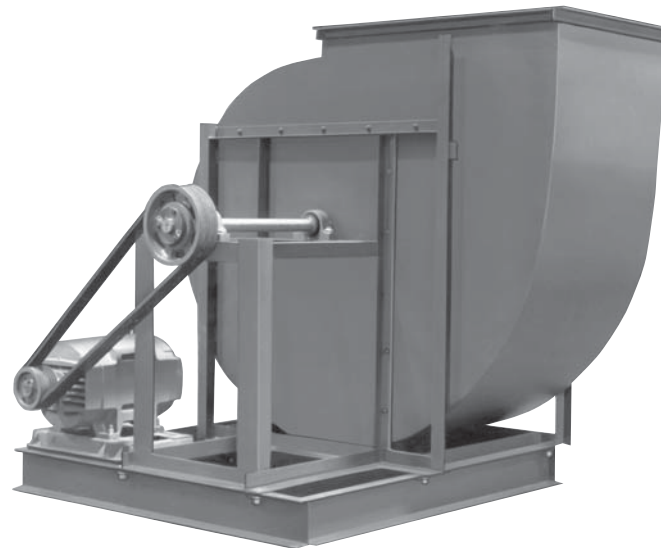
Arrangement 8 is similar to Arrangement 1 with the addition of an integral motor mounting pedestal. Direct drive is the most common version, but belt drive Arrangement 8 VCR fans are also available. This configuration is offered for single width VCR fans (except size 105) in Class I, II and III. With appropriate accessories, this fan can handle temperatures up to 1000°F with the backward inclined wheel.

Arrangement 9

Similar to Arrangement 1, Arrangement 9 is offered for all classes of VCR fans and for all sizes except 105. Arrangement 9 fans are for belt drive only and the motor is mounted on the side of the bearing pedestal. Arrangement 9 is suitable for operating temperatures up to 750°F.

Arrangement 10

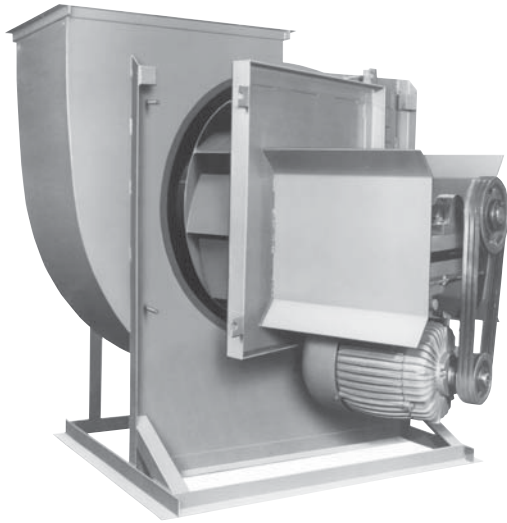
Arrangement 10 is usually used for general ventilation applications. The motor is mounted on the inside of an open type bearing pedestal. This space saving configuration is offered for all Class I, II and III VCR fans. Arrangement 10 can be used for operating temperatures up to 750°F.



Unitary Base Assembly Package
Arrangement 10 Open Jack Stand

Options and Accessories

VCR Fan



SwingOut Fan

SwingOut Fan

PennBarry SwingOut fans offer superior accessibility for air handling systems that must be cleaned or serviced regularly. Ductwork does not need to be disturbed so downtime is minimized.

On a SwingOut fan the entire rotating assembly and power train is mounted on a hinged access door which is reinforced with angle iron framing. Hinges employ ball type thrust bearings to assure proper wheel alignment. Door latches are hand opened without tools. Gaskets on the swing out assembly assure a tight seal.

SwingOut fans are available with backward inclined and airfoil wheels, in wheel diameters from 22 1/4" through 49".

Access Doors



Access doors are designed to provide easy inspection or cleaning of the fan interior and wheel. The standard type door on PennBarry VCR fans is the hinged, quick opening type. Hardware is stainless steel to resist corrosion.

Raised access doors are available for when high operating temperatures require the fan to be insulated. The interior part of the door holds 4" of insulation. To prevent turbulence in the airstream, the inside surface of the raised door is flush with the inside surface of the fan scroll. Like the standard type door, the raised door is hinged and hardware is stainless steel.

Spark Resistant Construction

AMCA Standards define three types of spark resistant construction:

- Type A — All parts of the fan in contact with the airstream must be made of non-ferrous material.
- Type B — The fan shall have a non-ferrous impeller and non-ferrous ring about the opening through which the shaft passes. Ferrous hubs, shafts, and hardware are allowed if construction is such that a shift of impeller or shaft will not permit two ferrous parts of the fan to rub or strike.
- Type C — The fan must be so constructed that a shift of the wheel will not permit two ferrous parts of the fan to rub or strike.

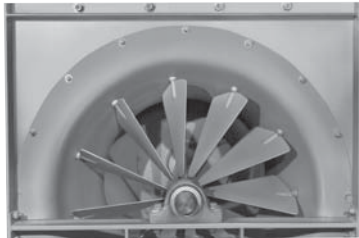
All three types of spark resistant construction are offered on VCR fans. Aluminum and monel are used to manufacture parts that must be non-ferrous. Arrangements 3 and 7 cannot have spark resistant construction because bearings are not allowed in the airstream of spark resistant fans. All airstream accessories must also be non-ferrous on Type A construction.

Drains

Drains are available on all fans except those with bottom horizontal or bottom angular down discharges. Drains are located at the lowest point of the scroll. Standard type is 3/4" NPT external threads.

Variable and Fixed Inlet Vanes

Regulating the airflow at the fan inlet with variable inlet vanes is much more efficient than regulating airflow at the fan discharge with dampers. When inlet vanes are partially closed, incoming air is prespun in the direction of the wheel rotation.



Nested Inlet Vane

Three types of inlet vanes are offered on VCR fans. Nested variable inlet vanes — mounted within the fan inlet cone—are available on Class I, II, and III fans, size 165 and larger, and on Class IV fans, size 490 and larger.

Externally mounted variable inlet vanes are bolted to the fan's inlet flange. External vanes are available on all class VCR fans and on all sizes except 105.

Fixed inlet vanes—welded to the fan inlet cone—are available on Class 1 and II fans, size 270 through 600.

Standard construction of both nested and external inlet vanes are suitable for operating temperatures to 200°F. Both types feature stainless steel rods and bronze oilite bushings. High temperature inlet vanes, nested and external, can be used up to 600°F. The high temperature design has powdered metal bushings rather than the bronze oilite type. Inlet vanes are suitable for either manual or automatic control.



Fan with Fixed Inlet Vane

Discharge Dampers

Discharge dampers are more heavily constructed than shutters. Dampers can be used to control air in addition to keeping out weather and backdrafts. Both parallel blade and opposed blade types can be supplied. The latter should be specified for most volume control applications, because the opposed blade design distributes airflow more uniformly than the parallel blade design.



Discharge Damper

Discharge dampers are suitable for either manual or automatic control and can be used with all discharge positions. Dampers are flanged on both sides and mount to the discharge flange of the fan. Standard construction can be used when the operating temperature is up to 200°F, but a high temperature design is supplied for temperatures to 600°F.

Belt Guards

The standard, totally enclosed belt guards have a solid sheet metal back and removable front. Belt guards are normally shipped loose with required mounting clips. On Arrangement 9 and 10 fans, when the motor and drive are mounted at the factory, belt guards are shipped mounted on the fan.

Weather Covers

Weather resistant covers enclosing the drive assembly, motor, shaft and bearings are available for Arrangement 10 VCR fans. These covers protect the shaft, bearings and drive from moisture and excessive dirt. Standard weather covers can be used for operating temperatures up to 300°F. Specially vented weather covers are available for temperatures up to 500°F.

Discharge Shutters



Discharge Shutter

Gravity operated discharge shutters open when the fan is running and close when the fan is not running. They shut out weather and backdrafts, but do not control airflow. Motorized shutters are available for tighter shutoff. The gravity shutters are not suitable for downblast or angular down discharge positions. Gravity and motorized shutters are limited to 200°F.

Inlet and Discharge Screens

Screens are recommended whenever there is an unducted inlet or discharge. They protect personnel from injury and guard against foreign objects entering the fan. Inlet screens are heavy-gauge zinc plated steel wire. Discharge screens are heavy-gauge wire.

Options and Accessories

VCR Fan

Inlet Boxes

Inlet boxes are frequently requested for some applications and we offer inlet boxes for both single and double width fans. Inlet boxes are designed to be aerodynamically efficient. On all Arrangement 3 SWSI and Arrangement 3 DWDI fans with inlet boxes, independent bearing pedestals are required because bearings must be mounted outside the inlet box.

Flanges

Discharge flanges, unpunched, are standard equipment on Class I and II VCR fans, size 402 and larger, and on all Class III and IV VCR fans. Discharge flanges are available as options on smaller size Class I and II fans. Inlet flanges are available on all fans, as are companion flanges for inlets and discharges.

Special Coatings

The standard paint on PennBarry VCR fans is a tough, corrosion resistant enamel, but special coatings are often required to protect fans in difficult conditions. Please consult your representative for additional coatings offered.

Bolted Construction

In some cases, especially in retrofit projects, limited space may prevent the installation of a fully assembled fan. For these difficult-to-fit applications, Arrangement 3 fans are offered with totally bolted construction. The housing and frame can be assembled right at the jobsite. Bolted construction is available for all classes in sizes 245 and larger.

Split Housings

To facilitate handling, split housing construction is available on all VCR fans, size 270 and larger. Scroll sections are bolted together and can be easily separated for cleaning or repair. Fans can be split vertically or horizontally. They can have pie splits for wheel removal or they can be split into three sections.

Shaft Seals

Shaft seals are available on all single width VCR fans, and are standard equipment on fans with heat fan packages. The aluminum retainer plate is bolted to the fan housing. A heat resistant material is used for the seal on the standard shaft seal. Neoprene, teflon, and stuffing box shaft seals are also supplied.

Heat Fan Packages

Arrangements 1, 8, 9 and 10 VCR fans in standard construction are suitable for operating temperatures to 300°F. Heat fan packages are available on these arrangements for temperatures of 500°F, 750°F and 1000°F. The 500°F package includes a shaft cooler and guard, a shaft seal, high temperature grease bearings and a motor heat shield on Arrangements 9 and 10. The 750°F package adds high temperature paint. On applications to 1000°F, consult your representative.

Vibration Isolation Equipment

VCR fans can be supplied with vibration rails, unitary bases or inertia frames.

Other Available Extras

Special Bearings - Contact Factory

Scroll Volume Dampers

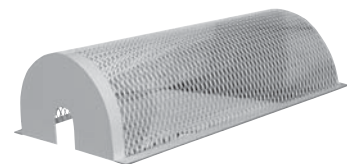
Weep Holes on
Airfoil Blades

Shaft Guards

Narrow Width Fans

Dual Shaft Extensions

Special Nameplates



Shaft Guard

Consult your representative for details.

Dimensional Data for Backward Inclined Fans

VCR Fan

Wheel Weights, WR², Maximum RPM

In selecting small motors for use with relatively large fans, care should be used to ensure sufficient motor torque. The starting torque capability of the motor should be compared to the WR² value for the given fan wheel.

Single Width – Single Inlet

Size	CLASS I				CLASS II				CLASS III				CLASS IV			
	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM
105	11	0.80	3820	3920	13	1.1	4391	4417	—	—	—	—	—	—	—	—
122	13	1.65	3195	3663	18	2.5	4168	4729	22	2.8	5241	5645	25	3.3	5760	6435
135	15	2.45	2895	3166	21	3.7	3786	4080	26	4.2	4774	5562	29	4.8	5222	5562
150	19	3.95	2589	2858	25	5.5	3384	3871	30	6.2	4288	4749	33	7.0	4707	4749
165	27	6.5	2376	2797	33	8.7	3100	3611	36	9.1	3887	4117	40	10.5	4276	4796
182	33	10.5	2084	2405	40	13.0	2722	3104	42	13.6	3425	3539	57	17.0	3763	4123
200	39	15.0	1904	2096	49	19.5	2475	2706	52	20.9	3121	3594	65	24.0	3434	3594
222	64	27.5	1708	1786	73	33.0	2228	2306	82	38.0	2810	3063	106	46.0	3083	3943
245	73	39.0	1551	1996	83	46.0	2028	2275	110	57.5	2555	2650	132	73.0	2801	3413
270	84	56.0	1384	1725	97	68.0	1803	1967	128	81.5	2276	2950	158	108.0	2540	2950
300	703	89.0	1247	1473	118	106.0	1622	1697	149	127.0	2049	2519	184	160.0	2288	2519
330	135	128.0	1131	1277	150	151.0	1470	1696	177	188.0	1864	2183	217	233.0	2078	2183
365	169	212.0	1011	1098	196	238.0	1322	1458	232	308.0	1669	1877	292	378.0	1882	2186
402	257	353.0	914	948	287	414.0	1201	1259	320	480.0	1512	1621	394	590.0	1696	1888
445	294	505.0	832	929	331	590.0	1086	1083	392	700.0	1368	1394	457	850.0	1537	1624
490	335	722.0	752	937	402	860.0	985	1207	453	1010.0	1240	1406	530	1220.0	1397	1532
542	530	1310.0	679	804	584	1510.0	889	1036	679	1875.0	1122	1207	705	1930.0	1257	1315
600	644	2055.0	618	754	684	2220.0	802	1037	790	2720.0	1015	1037	858	2960.0	1125	1130
660	743	3040.0	562	653	790	3190.0	729	899	924	3930.0	922	980	1120	4370.0	974	980
730	926	4700.0	507	562	996	5170.0	657	773	1091	5800.0	832	842	1295	6400.0	937	1028
807	1170	7500.0	453	589	1256	8200.0	558	664	1405	8700.0	732	786	1527	9450.0	848	884
890	1385	11150.0	416	509	1488	12000.0	543	574	1648	12750.0	625	713	1788	13600.0	764	764

Double Width – Double Inlet

Size	CLASS I				CLASS II				CLASS III				CLASS IV			
	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR ² (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM
122	20	2.7	3495	3663	27	4.0	4730	4729	35	4.6	5753	5645	40	5.5	-	6435
135	23	4.0	3167	3166	37	6.1	4294	4080	40	7.0	5238	5562	44	8.1	-	5562
150	28	6.3	2830	2858	42	9.0	3871	3871	52	10.5	4687	4749	58	12.1	-	4749
165	44	10.5	2590	2797	58	14.3	3518	3611	73	16.0	4278	4117	80	18.7	-	4796
182	56	17.5	2100	2405	68	20.3	2731	3104	84	23.7	3465	3539	95	28.5	3746	4123
200	63	24.8	1923	2096	95	33.5	2504	2706	100	36.3	3114	3594	110	40.5	3746	3594
222	114	43.0	1725	1786	131	54.0	2252	2306	143	61.0	2821	3063	170	77.0	2884	3943
245	127	61.0	1563	1996	146	75.0	2030	2275	177	94.0	2565	2650	207	118.0	2803	3413
270	144	88.0	1180	1725	170	112.0	1844	1967	207	133.0	2303	2950	242	176.0	2529	2950
300	174	143.0	1264	1473	212	178.0	1660	1697	239	210.0	2091	2519	313	268.0	2267	2519
330	210	211.0	1151	1277	250	259.0	1506	1696	315	318.0	1893	2183	400	410.0	2078	2183
365	270	388.0	1056	1098	312	385.0	1391	1458	380	490.0	1735	1877	476	630.0	1880	2186
402	393	570.0	948	948	435	650.0	1247	1259	483	755.0	1575	1621	555	915.0	1698	1888
445	449	820.0	866	929	503	945.0	1130	1083	562	1100.0	1414	1394	650	1330.0	1545	1624
490	515	1180.0	784	937	583	1380.0	1026	1207	656	1600.0	1294	1406	768	1940.0	1386	1532
542	806	2050.0	706	804	885	2340.0	926	1036	1072	2980.0	1166	1207	1100	3070.0	1258	1315
600	998	3310.0	643	754	1036	3470.0	835	1037	1240	4300.0	1056	1037	1300	4600.0	1128	1130
660	1151	5050.0	585	653	1225	5000.0	761	899	1445	6300.0	961	980	1520	6650.0	977	980
730	2135	8950.0	528	562	2270	9900.0	688	773	2500	10800.0	868	842	2560	11300.0	933	1028
807	2450	13000.0	477	589	2620	14500.0	618	664	2800	15400.0	782	786	2900	16000.0	849	884
890	2750	18400.0	432	509	3000	20500.0	564	574	3170	22000.0	713	713	3300	23000.0	750	764

① WR² is for complete rotating assembly. See Engineering Data 16000.

② Maximum fan RPM is based on AMCA Fan Class Operating Limits (see page 107) – See Catalog Tabular Data.

③ Maximum wheel RPM to be used for high temperature/material derate – see page 111.

NOTES: On Class I, II and III fans, shaft and bearing sizes are based on the fan's maximum cataloged operating speed. Since "Class IV" is not defined by AMCA, shaft and bearing sizes on "Class IV" fans are designed to meet or exceed specified conditions.

Dimensional Data for Airfoil Fans

VCR Fan

Wheel Weights, WR^2 , Maximum RPM

In selecting small motors for use with relatively large fans, care should be used to ensure sufficient motor torque. The starting torque capability of the motor should be compared to the WR^2 value for the given fan wheel.

Single Width – Single Inlet

Size	CLASS I				CLASS II				CLASS III				CLASS IV			
	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM
182	38	11.3	2256	2339	39	11.3	2959	3039	54	16.7	3735	3818	74	22.7	4071	4079
200	46	16.2	2077	2135	46	16.2	2703	2773	64	25.7	3409	3483	85	32.0	3714	3728
222	69	27.3	1875	1919	69	27.4	2413	2493	96	43.8	3065	3131	118	48.8	3341	3344
245	78	38.3	1691	1742	79	38.5	2199	2264	123	62.7	2780	2844	148	78.5	3038	3042
270	101	63.0	1479	1545	102	63.5	1928	2007	144	87.0	2423	2524	178	110.0	2748	2756
300	124	100.0	1328	1390	125	101.0	1730	1806	169	139.0	2182	2271	210	175.0	2479	2480
330	158	144.0	1209	1264	159	145.0	1579	1642	193	201.0	1984	2065	247	254.0	2250	2254
365	184	211.0	1073	1124	185	212.0	1401	1458	255	319.0	1759	1833	322	390.0	2038	2039
402	297	387.0	972	1119	298	388.0	1264	1322	372	536.0	1598	1662	431	602.0	1847	1848
445	343	558.0	882	922	345	562.0	1150	1196	453	784.0	1447	1503	502	873.0	1667	1673
490	397	808.0	799	837	419	816.0	1043	1086	525	1110.0	1314	1365	578	1248.0	1516	1517
542	575	1319.0	719	756	606	1422.0	940	981	730	1889.0	1186	1233	786	2038.0	1361	1364
600	657	1891.0	651	683	697	2048.0	847	887	851	2740.0	1071	1115	954	3150.0	1237	1241
660	753	2793.0	594	621	805	3030.0	769	806	991	3940.0	972	1013	1233	4548.0	1124	1127
730	939	4280.0	537	562	943	4300.0	700	729	1173	5827.0	879	916	1473	6888.0	1012	1018
807	1277	7562.0	484	508	1283	7598.0	631	659	1506	8733.0	796	828	1728	10154.0	920	922
890	1514	11088.0	440	461	1521	11141.0	575	598	1683	12765.0	723	751	2031	14826.0	834	836

Double Width – Double Inlet

Size	CLASS I				CLASS II				CLASS III				CLASS IV			
	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM	Wheel Weight	① WR^2 (lb-ft ²)	② Max. Fan RPM	③ Max. Wheel RPM
182	62	18.3	2285	2339	66	18.4	2949	3039	108	31.8	3720	3818	128	39.8	4067	4079
200	72	26.1	2086	2135	89	27.1	2694	2773	126	46.2	3401	3483	147	56.0	3712	3728
222	122	43.0	1872	1919	122	43.4	2416	2493	171	73.4	3049	3131	191	83.2	3313	3344
245	137	60.0	1691	1742	137	61.2	2197	2264	202	105.0	2776	2844	237	131.0	3025	3042
270	167	97.0	1473	1545	168	97.5	1911	2007	235	146.0	2409	2524	278	182.0	2747	2756
300	203	157.0	1330	1390	211	159.0	1719	1806	276	236.0	2164	2271	360	299.0	2474	2480
330	242	230.0	1202	1264	250	232.0	1564	1642	353	346.0	1972	2065	455	456.0	2352	2254
365	279	333.0	1080	1124	287	337.0	1406	1458	421	522.0	1758	1833	529	662.0	1960	2039
402	417	608.0	980	1119	419	611.0	1263	1322	577	879.0	1586	1662	615	958.0	1781	1848
445	516	887.0	884	922	519	891.0	1146	1196	667	1283.0	1421	1503	721	1358.0	1670	1673
490	600	1291.0	805	837	603	1298.0	1040	1086	788	1857.0	1308	1365	846	2020.0	1495	1517
542	883	2084.0	725	756	915	2191.0	938	981	1160	3042.0	1178	1233	1222	3303.0	1340	1364
600	1008	3009.0	657	683	1050	3172.0	850	887	1346	4417.0	1071	1115	1463	4938.0	1273	1241
660	1155	4504.0	596	621	1235	4762.0	772	806	1560	6364.0	974	1013	1702	7105.0	1110	1127
730	2222	8274.0	520	562	2232	8313.0	699	729	2665	10904.0	879	916	2892	12399.0	1007	1018
807	2732	13335.0	486	508	2744	13398.0	631	659	3000	15652.0	794	828	3282	17683.0	921	922
890	3070	18776.0	441	461	3085	18865.0	571	598	3413	21972.0	717	751	3742	25215.0	834	836

① WR^2 is for complete rotating assembly. See Engineering Data 16000.

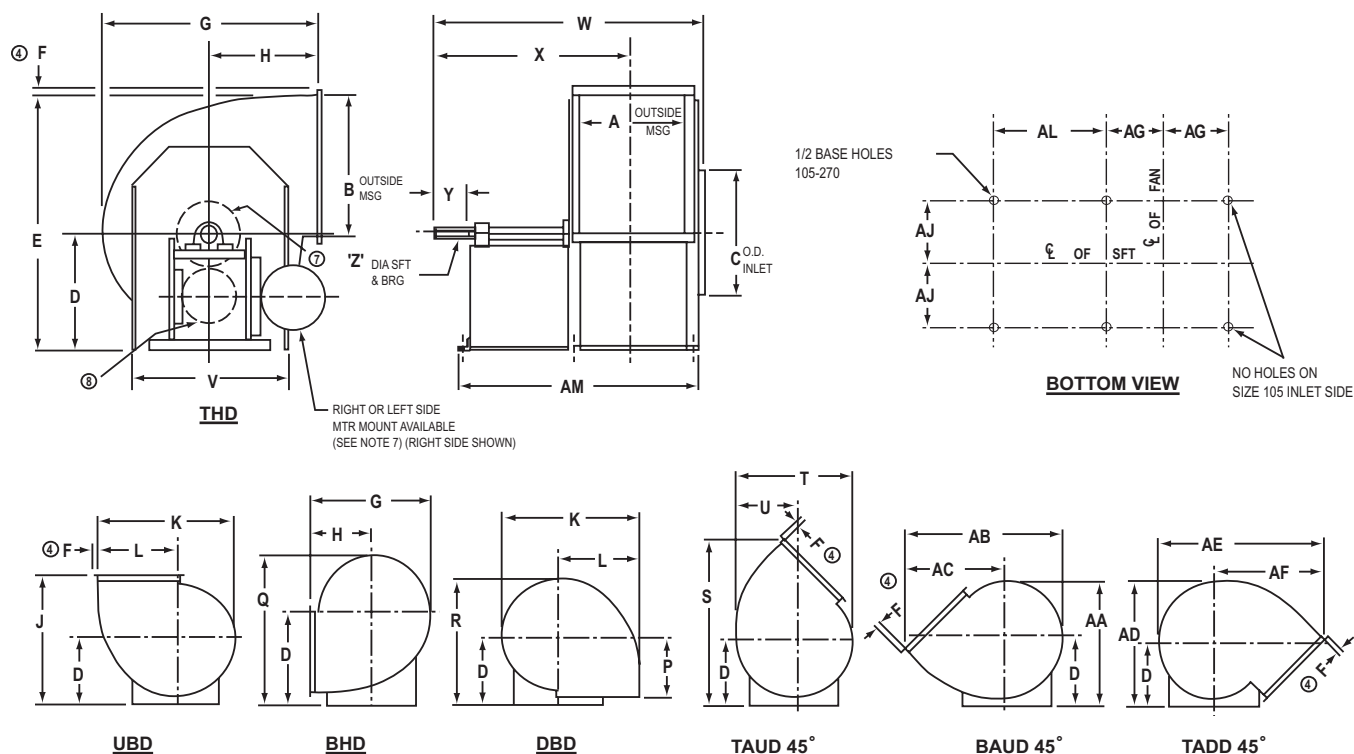
② Maximum fan RPM is based on AMCA Fan Class Operating Limits (see page 107) – See Catalog Tabular Data.

③ Maximum wheel RPM to be used for high temperature/material derate – see page 111.

NOTES: On Class I, II and III fans, shaft and bearing sizes are based on the fan's maximum cataloged operating speed. Since "Class IV" is not defined by AMCA, shaft and bearing sizes on "Class IV" fans are designed to meet or exceed specified conditions.

VCR Dimensional Data

BI & AF – Arrangement 1, 4, 9 & 10, SWSI, Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 182 through 270.
3. BI available in sizes 105 through 270.
4. Discharge angles optional on all sizes. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.
6. On Arrangement 9, the standing motor position is left side for CW units and right side for CCW units.
7. Dimensions for Arrangement 4 are the same as shown except motor is mounted on pedestal in lieu of shaft and bearings.
8. On Arrangement 10, the motor is located within the pedestal.
9. Housing is field rotatable to the discharges shown.
10. Unit size 105 has no inlet stand.

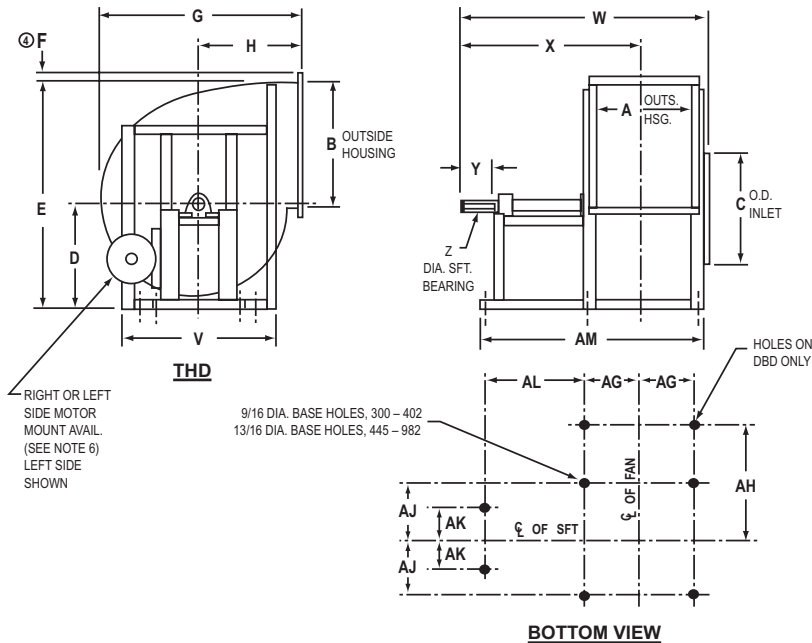
Size	A	B	C	"D" Centerline of Fan							E	④ F	G	H	J	K	L	P	Q	R	S	T
				THD	UBD	BHD	DBD	TAUD	BAUD	TADD												
105	8 3/8	11 3/16	11 1/8	18	18	18	18	18	18	18	29 1/8	1 1/4	17 11/16	8 5/8	26 5/8	19 1/8	11 1/8	8 5/8	26	27 1/16	32	17
122	9 3/4	13	13 1/4	20	20	20	20	20	20	20	32 15/16	1 1/4	20 13/16	10 1/4	30 1/4	22 1/4	12 15/16	10 1/4	29 5/16	30 9/16	36 7/16	19 7/8
135	10 13/16	14 5/16	14 9/16	20	20	20	20	20	20	20	34 1/4	1 1/4	22 7/8	11 1/4	31 1/4	24 1/2	14 1/4	11 1/4	30 1/4	31 5/8	38	21 7/8
150	11 15/16	15 7/8	16 3/16	22	22	22	22	22	22	22	37 13/16	1 1/4	25 7/16	12 1/2	34 1/2	27 1/4	15 13/16	12 1/2	33 7/16	34 15/16	42	24 5/16
165	13 3/16	17 3/8	17 3/4	23	23	23	23	23	23	23	40 5/16	1 1/4	28	13 3/4	36 3/4	29 7/8	17 5/16	13 3/4	35 9/16	37 1/4	45	26 3/4
182	14 3/8	19 3/8	19 1/2	23	23	23	23	23	23	23	42 5/16	1 1/4	30 3/16	14 1/2	37 1/2	33 1/8	19 5/16	14 1/2	36 13/16	38 11/16	46 15/16	29 5/8
200	16	21 1/4	21 3/8	26	26	26	26	26	26	26	47 3/16	1 1/4	32 7/8	15 5/8	41 5/8	36 3/8	21 3/16	15 5/8	41 3/16	43 1/4	52 1/16	32 1/2
222	17 1/2	23 5/8	23 3/4	26	26	26	26	26	26	26	49 9/16	1 1/4	36 5/8	17 1/2	43 1/2	40 7/16	23 9/16	17 1/2	42 7/8	45 1/8	55	36
245	19 1/2	25 15/16	26 1/16	28	28	28	28	28	28	28	53 7/8	1 1/4	40 5/16	19 1/4	47 1/4	44 7/16	25 7/8	19 1/4	46 9/16	49 1/16	60	39 3/4
270	21 9/16	28 5/8	28 1/2	31	31	31	31	31	31	31	59 9/16	1 1/4	44 5/16	21 1/8	52 1/8	49	28 9/16	21 1/8	51 7/16	54 3/16	67	43 3/4

Size	U	V	W	X	Y	Z - CLASS I		Z - CLASS II		AA	AB	AC	AD	AE	AF	AG	AJ	AL	AM	Max Mtr. Frame
						SFT	KWY	SFT	KWY											ARR. 9 & 10
																				ODP & TEFC
105	9 9/16	13 7/16	25 9/16	20 1/16	2	1	1/4 x 1/8	-	-	25 7/16	22 1/2	14	27 9/16	24 3/8	15 7/8	5 1/16	6 1/8	13 1/2	24 5/8	145T
122	11 3/16	17 3/16	32	23 7/8	2 1/2	1	1/4 x 1/8	1 3/16	1/4 x 1/8	28 11/16	26 3/8	16 7/16	31 3/16	31 11/16	21 3/4	5 7/8	7 3/4	16	29	184T
135	12 5/16	17 11/16	33 1/8	24 7/16	2 1/2	1	1/4 x 1/8	1 3/16	1/4 x 1/8	29 9/16	28 15/16	18	32 5/16	34 5/16	23 3/8	6 7/16	7 3/4	16	30 1/8	184T
150	13 11/16	19 11/16	37 3/4	28 1/2	3	1	1/4 x 1/8	1 3/16	1/4 x 1/8	32 5/8	32 3/16	20	35 11/16	37 7/16	25 1/4	6 15/16	8 3/4	19	34 1/8	213T
165	15 1/16	20 11/16	39	29 1/8	3	1 3/16	1/4 x 1/8	1 7/16	3/8 x 3/16	34 11/16	35 3/8	22	38 11/16	40 3/8	27	7 9/16	9 1/4	19	35 3/8	215T
182	16 5/8	22 11/16	41 1/8	30 3/16	3 1/2	1 3/16	1/4 x 1/8	1 7/16	3/8 x 3/16	36	38 11/16	23 15/16	39 5/8	44 1/8	29 3/8	8 3/16	9 1/4	19	36 5/8	215T
200	18 1/4	25 3/16	47 3/4	36	3 1/2	1 3/16	1/4 x 1/8	1 7/16	3/8 x 3/16	40 1/4	42 1/4	26 1/16	44 1/4	47 5/8	31 7/16	9 1/4	11	24	44 1/4	254T
222	20 3/8	27 3/16	49 1/2	37	4	1 7/16	3/8 x 3/16	1 11/16	3/8 x 3/16	41 5/8	47	29	46 3/8	52 1/2	34 1/2	10	11	24	45 3/4	254T
245	22 3/8	29 15/16	53	39 1/2	4 1/2	1 7/16	3/8 x 3/16	1 11/16	3/8 x 3/16	45 3/8	51 3/4	32	50 3/8	57 7/16	37 5/8	11	12	25	48 3/4	256T
270	24 3/4	33 3/16	55 1/8	40 9/16	4 1/2	1 7/16	3/8 x 3/16	1 11/16	3/8 x 3/16	50	56 15/16	35 1/8	55 3/4	62 7/16	40 5/8	12	12 1/2	25	50 3/4	256T

TOLERANCE ± 1/8 Not to be used for construction. Certified drawings available upon request.

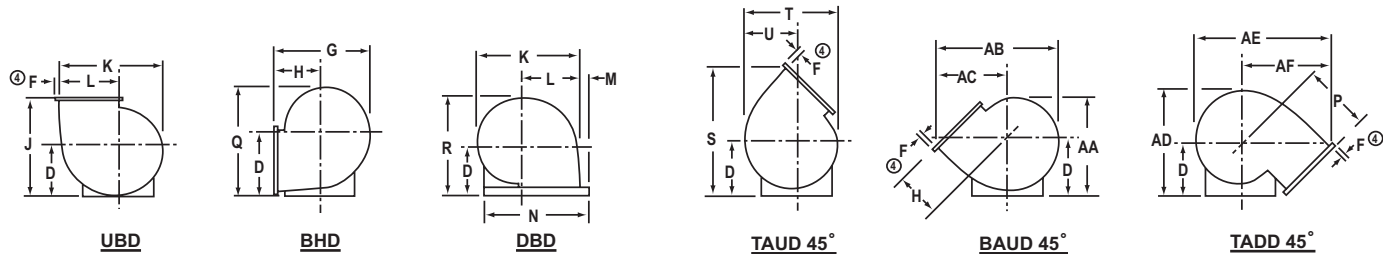
VCR Dimensional Data

BI & AF – Arrangement 1, 4, & 9, SWSI, Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 300 through 890.
3. BI available in sizes 300 through 890.
4. Discharge angles standard on sizes 402 thru 890 only. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.
6. On Arrangement 9, the standing motor position is left side for CW units and right side for CCW units.
7. Dimensions for Arrangement 4 through size 365 are the same as shown except motor is mounted on pedestal in lieu of shaft and bearings.
8. On DBD sizes 300 through 890, discharge is extended to base.



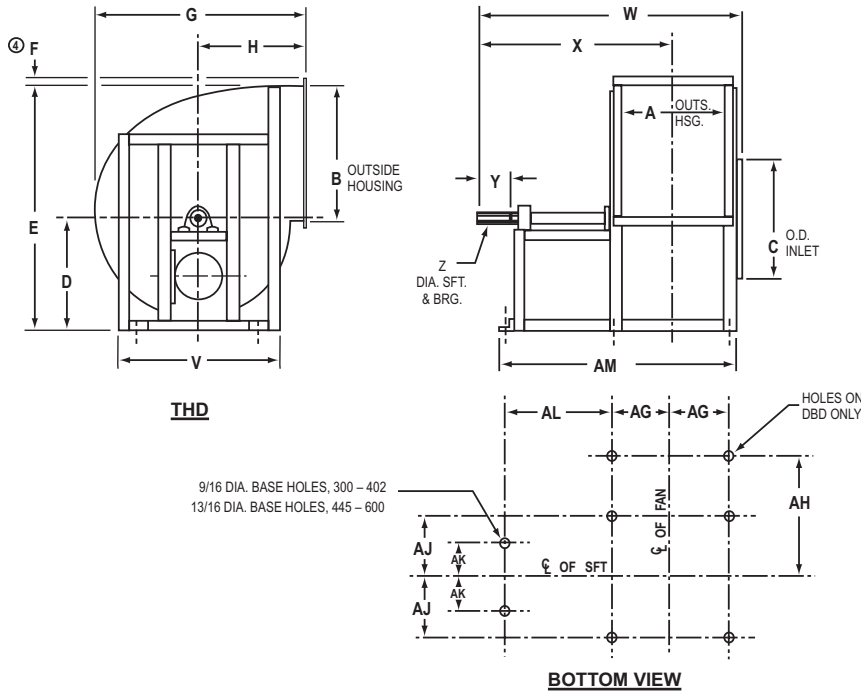
Size	A	B	C	"D" Centerline of Fan							E	F	G	H	J	K	L	M	N	P	Q	R	S
				THD	UBD	BHD	DBD	TAUD	BAUD	TADD													
300	23 11/16	31 13/16	31 5/8	27	27	35	27	27	35	27	58 3/4	1 1/2	49 1/4	23 7/16	50 7/16	54 1/2	31 3/4	2 1/2	54 3/4	32 7/16	57 3/4	52 13/16	66 1/8
330	26 1/4	34 15/16	34 3/4	27	35	38	27	35	38	35	61 7/8	1 1/2	54 3/16	25 13/16	60 13/16	59 7/8	34 7/8	2 1/2	59 7/8	34 9/16	63	55 3/8	77 7/8
365	28 7/8	38 11/16	38 1/2	35	35	41	35	35	41	35	73 5/8	1 1/2	60 1/8	28 5/8	63 5/8	66 5/16	38 5/8	2 1/2	65 1/8	37 1/8	68 11/16	66 1/2	82 5/8
402	32 1/16	42 9/16	42 7/16	37	37	45 1/2	37	37	45 1/2	37	79 1/2	2	66 11/16	32	69	73 1/16	42 1/2	2 1/2	71	41	76 1/16	71 11/16	89 3/8
445	35 1/4	47 3/16	46 7/8	37	41	50	37	41	50	37	84 1/16	2	72 1/8	33 3/4	74 3/4	80 7/8	47 1/16	3	78 7/8	44	83 13/16	75 3/8	98 1/4
490	39	51 13/16	51 5/8	39	44	55	39	44	55	39	90 3/4	2	79 11/16	37 1/2	81 1/2	88 7/8	51 3/4	3	85 3/4	47 3/4	92 1/8	81 3/16	107 1/8
542	42 3/4	57 7/16	57 1/8	44	49	60	44	49	60	44	101 3/8	2	87 1/4	40 1/2	89 1/2	98 9/16	57 3/8	4	95 7/8	51 3/4	101 3/16	90 3/4	118 1/4
600	47 3/8	63 7/16	63 1/8	48	54	66 1/2	48	54	66 1/2	48	111 3/8	2	96 3/16	44 1/2	98 1/2	108 7/8	63 3/8	4	104 7/8	56	112	99 11/16	130 3/8
660	52 1/2	69 13/16	69 3/8	52 1/2	59	73 1/4	49	55 3/4	63	49 1/2	122 1/4	2 1/2	105 3/4	49	108	119 5/8	69 3/4	5	114 3/4	61 1/2	123 1/8	105 3/4	139 3/4
730	57 7/8	77 1/4	76 3/4	57	64 1/2	80 3/4	57 3/4	61 3/4	69 1/2	54 1/4	134 1/8	2 1/2	120 5/8	57 3/4	122 1/4	132 1/2	77 1/8	5	126 1/8	67	136 1/8	120 5/8	157 1/8
807	63 13/16	85 7/16	84 7/8	63	72	89	63 3/4	67 1/2	76 1/2	59 1/2	148 5/16	2 1/2	133 5/16	63 3/4	135 3/4	146 9/16	85 5/16	5	138 1/8	72 3/4	150 1/4	133 5/16	172 7/8
890	70 1/8	94 1/4	93 3/8	69 1/4	78 1/4	97 3/4	70 1/2	73 3/4	85	65 1/2	163 3/8	2 1/2	147 1/8	70 1/2	148 3/4	161 5/8	94 1/8	5	152 3/8	85	165 1/4	147 1/8	190 1/4

Size	T	U	V	W	X	Y	Z - CLASS I		Z - CLASS II		AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	Max. Mtr. Frame ARR. 9 & 10
							SFT	KWY	SFT	KWY													ODP & TEFC
300	48 3/4	27 1/2	41	63 3/8	45 7/8	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	56 1/4	63 5/16	39	54 1/2	69 5/8	45 1/4	13 1/4	33 1/8	16 3/8	13 3/8	28	56 3/4	284T
330	53 1/2	30 1/4	45	64 7/8	47 1/8	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	61 1/4	69 9/16	42 7/8	65 1/4	75 5/8	49	14 1/2	36 1/4	18 3/8	13 3/8	28	59 1/4	286T
365	59 1/2	33 1/2	48	68 7/16	5 1/2	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	67	77 1/8	47 1/2	68 1/2	83 1/8	53 1/2	15 13/16	40	19 7/8	13 3/8	28	61 7/8	286T
402	65 1/2	37	52	73 3/4	53 1/16	5 1/2	1 15/16	1/2 x 1/4	2 3/16	1/2 x 1/4	74	85 1/4	52 5/8	74	91 5/8	59	17 7/16	43 7/8	21 7/8	14 3/8	31	68 1/8	326T
445	72 3/8	40 7/8	57 1/2	77 3/8	54 5/8	5 1/2	2 3/16	1/2 x 1/4	2 7/16	5/8 x 5/16	81 1/2	93 1/4	57 1/8	77 7/8	100 3/4	64 5/8	19 1/4	48 3/4	23 7/8	15 5/8	31	72 1/4	326T
490	79 5/8	44 7/8	62	85 5/8	60	6	2 3/16	1/2 x 1/4	2 7/16	5/8 x 5/16	89 3/4	102 7/8	63 1/8	83 7/8	110 3/8	70 5/8	21 1/8	53 3/8	26 1/8	16 5/8	34	79	364T
542	88 1/4	49 3/4	69	92 3/8	64 7/8	6	2 7/16	5/8 x 5/16	2 11/16	5/8 x 5/16	98 1/2	113 1/4	69 1/4	93 3/4	121	77	23 1/2	59 1/2	28 5/8	18 1/8	37	87 3/4	365T
600	97 1/2	55	75	98 1/4	68 7/16	7	2 7/16	5/8 x 5/16	2 11/16	5/8 x 5/16	109	124 7/8	76 1/4	103	133	84 3/8	25 13/16	65 1/2	31 5/8	18 1/8	37	92 3/8	404T
660	107	60 1/2	80	104 3/4	72 1/2	7	2 7/16	5/8 x 5/16	2 15/16	3/4 x 3/8	109 1/2	137 3/8	84	110	146 1/8	92 3/4	28 7/8	72 3/8	33 1/8	33 1/8	39	10 11/2	444T
730	118 5/8	67	88	113 3/4	78 13/16	7 1/2	2 11/16	5/8 x 5/16	3 7/16	7/8 x 7/16	121 1/8	154 1/2	95 3/8	121 1/4	161 1/8	102	31 9/16	79 3/4	37 1/8	37 1/8	42	109 7/8	445T
807	130 7/8	73 3/4	95 1/2	123 1/4	85 5/16	8	2 15/16	3/4 x 3/8	3 7/16	7/8 x 7/16	133 5/8	170 5/8	105 3/8	133 1/4	176 7/8	111 5/8	34 9/16	87 15/16	40 7/8	40 7/8	45	118 7/8	445T
890	144 5/8	81 5/8	106 1/2	132 1/2	91 7/16	8	3 7/16	7/8 x 7/16	3 7/16	7/8 x 7/16	148	188 1/2	116 1/2	147 1/8	198 7/8	126 7/8	37 11/16	96 3/8	46 3/8	46 3/8	48	128 1/8	445T

TOLERANCE ± 1/8 Not to be used for construction. Certified drawings available upon request.

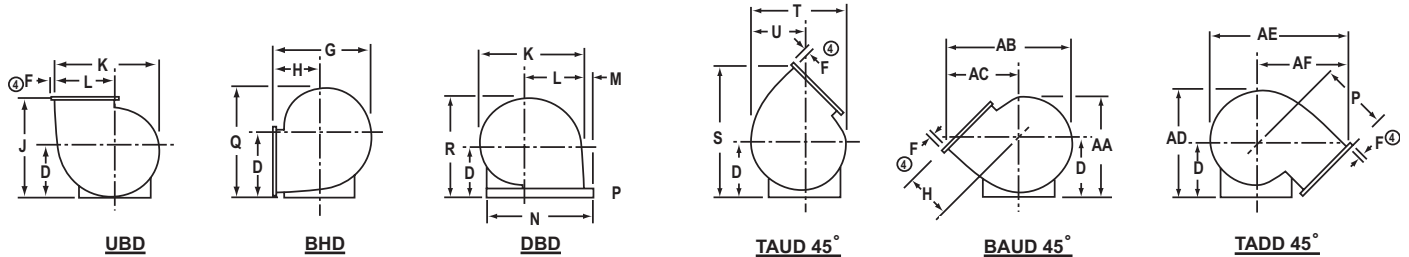
VCR Dimensional Data

BI & AF – Arrangement 10, SWSI, Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 300 through 600.
3. BI available in sizes 300 through 600.
4. Discharge angles standard on sizes 402 through 600 only. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.
6. On DBD sizes 300 through 600, discharge is extended to base.



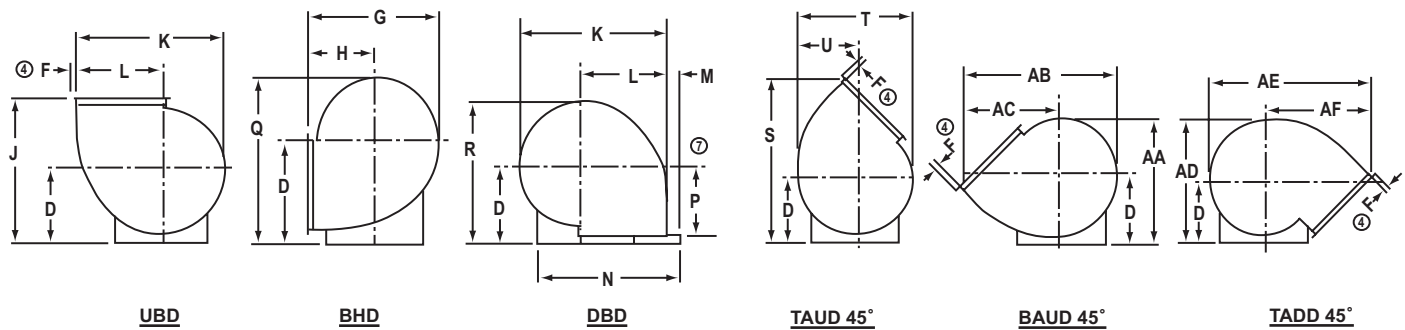
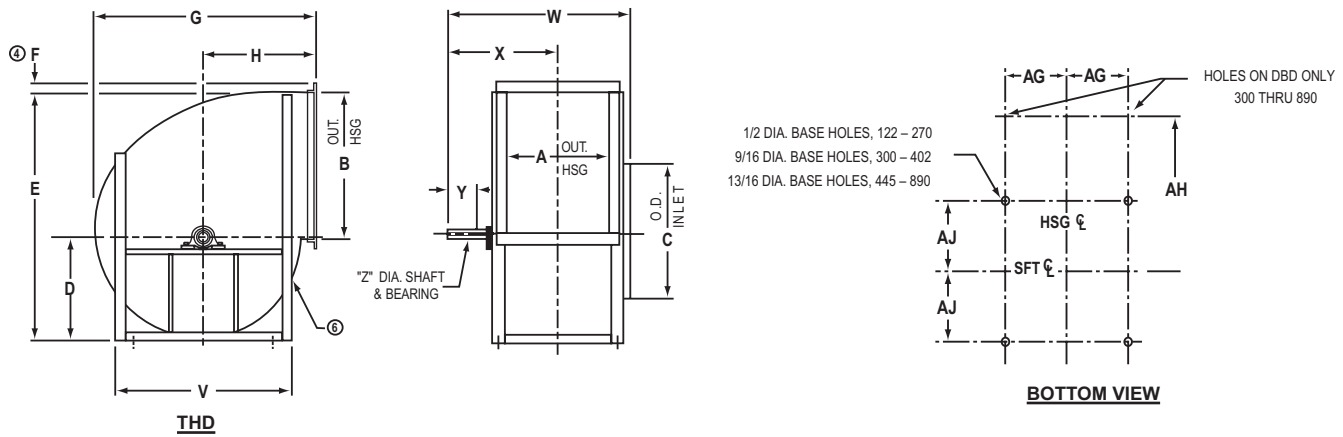
Size	A	B	C	"D" Centerline of Fan							E	④ F	G	H	J	K	L	M	N	P	Q	R	S
				THD	UBD	BHD	DBD	TAUD	BAUD	TADD													
300	23 11/16	31 13/16	31 5/8	35	35	35	35	35	35	35	66 3/4	1 1/2	49 1/4	23 7/16	58 7/16	54 1/2	31 3/4	2 1/2	54 3/4	32 7/8	57 3/4	60 13/16	74 1/8
330	26 1/4	34 15/16	34 3/4	35	35	38	35	35	38	35	69 7/8	1 1/2	54 3/16	25 13/16	60 13/16	59 7/8	34 7/8	2 1/2	59 7/8	34 9/16	63	633/8	77 7/8
365	28 7/8	38 11/16	38 1/2	35	35	41	35	35	41	35	73 5/8	1 1/2	60 1/8	28 5/8	63 5/8	66 5/16	38 5/8	2 1/2	65 1/8	37 1/8	68 11/16	66 1/2	82 5/8
402	32 1/16	42 9/16	42 7/16	37	37	45 1/2	37	37	45 1/2	37	79 1/2	2	66 11/16	32	69	73 1/16	42 1/2	2 1/2	71	41	76 1/16	71 11/16	89 3/8
445	35 1/4	47 3/16	46 7/8	41	41	50	41	41	50	41	88 1/16	2	72 1/8	33 3/4	74 3/4	80 7/8	47 1/16	3	78 7/8	44	83 13/16	79 3/8	98 1/4
490	39	51 13/16	51 5/8	44	44	55	44	44	55	44	95 3/4	2	79 11/16	37 1/2	81 1/2	88 7/8	51 3/4	3	85 3/4	47 3/4	92 1/8	86 3/16	107 1/8
542	42 3/4	57 7/16	57 1/8	44	49	60	44	49	60	44	101 3/8	2	87 1/4	40 1/2	89 1/2	98 9/16	57 3/8	4	95 7/8	51 3/4	101 3/16	90 3/4	118 1/4
600	47 3/8	63 7/16	63 1/8	48	54	66 1/2	48	54	66 1/2	48	111 3/8	2	96 3/16	44 1/2	98 1/2	108 7/16	63 3/8	4	104 7/8	56	112	99 11/16	130 3/8

Size	T	U	V	W	X	Y	Z - CLASS I		Z - CLASS II		AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK	AL	AM	Max Mtr. Frame ARR. 9 & 10 ODP & TEFC
							SFT	KWY	SFT	KWY													
300	48 3/4	27 1/2	41	63 3/8	45 7/8	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	56 1/4	63 5/16	39	54 1/2	69 5/8	45 1/4	13 1/4	33 1/8	16 3/8	13 3/8	28	56 3/4	284T
330	53 1/2	30 1/4	45	64 7/8	47 1/8	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	61 1/4	69 9/16	42 7/8	65 1/4	75 5/8	49	14 1/2	36 1/4	18 3/8	13 3/8	28	59 1/4	286T
365	59 1/2	33 1/2	48	68	48 7/16	5 1/2	1 11/16	3/8 x 3/16	1 15/16	1/2 x 1/4	67	77 1/8	47 1/2	68 1/2	83 1/8	53 1/2	15 13/16	40	19 7/8	13 3/8	28	61 7/8	286T
402	65 1/2	37	52	73 3/4	53 1/16	5 1/2	1 15/16	1/2 x 1/4	2 3/16	1/2 x 1/4	74	85 1/4	52 5/8	74	91 5/8	59	17 7/16	43 7/8	21 7/8	14 3/8	31	68 1/8	326T
445	72 3/8	40 7/8	57 1/2	77 3/8	54 5/8	5 1/2	2 3/16	1/2 x 1/4	2 7/16	5/8 x 5/16	81 1/2	93 1/4	57 1/8	77 7/8	100 3/4	64 5/8	19 1/4	48 3/4	23 7/8	15 5/8	31	72 1/4	326T
490	79 5/8	44 7/8	62	85 5/8	60	6	2 3/16	1/2 x 1/4	2 7/16	5/8 x 5/16	89 3/4	102 7/8	63 1/8	83 7/8	110 3/8	70 5/8	21 1/8	53 3/8	26 1/8	16 5/8	34	79	364T
542	88 1/4	49 1/4	69	92 3/8	64 7/8	6	2 7/16	5/8 x 5/16	2 11/16	5/8 x 5/16	98 1/2	113 1/4	69 1/4	93 3/4	121	77	23 1/2	59 1/2	28 5/8	18 1/8	37	87 3/4	365T
600	97 1/2	55	75	98 1/4	68 7/16	7	2 7/16	5/8 x 5/16	2 11/16	5/8 x 5/16	109	124 7/8	76 1/4	103	133	84 3/8	25 13/16	65 1/2	31 5/8	18 1/8	37	92 3/8	404T

Tolerance $\pm 1/8$ Not to be used for construction. Certified drawings available upon request.

VCR Dimensional Data

BI & AF – Arrangement 3, SWSI, Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 182 through 890.
3. BI available in sizes 122 through 890.
4. Discharge angles standard on sizes 402 thru 890 only. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.
6. On sizes 300 through 890, side bracing is steel angle as shown.
On sizes 122 through 270, side bracing is formed by 90 breaks in drive side plates and inlet side plates.
7. On DBD sizes 300 thru 890, discharge is extended to base.

VCR Dimensional Data

BI & AF – Arrangement 3, SWSI, Class I & II / Cont.

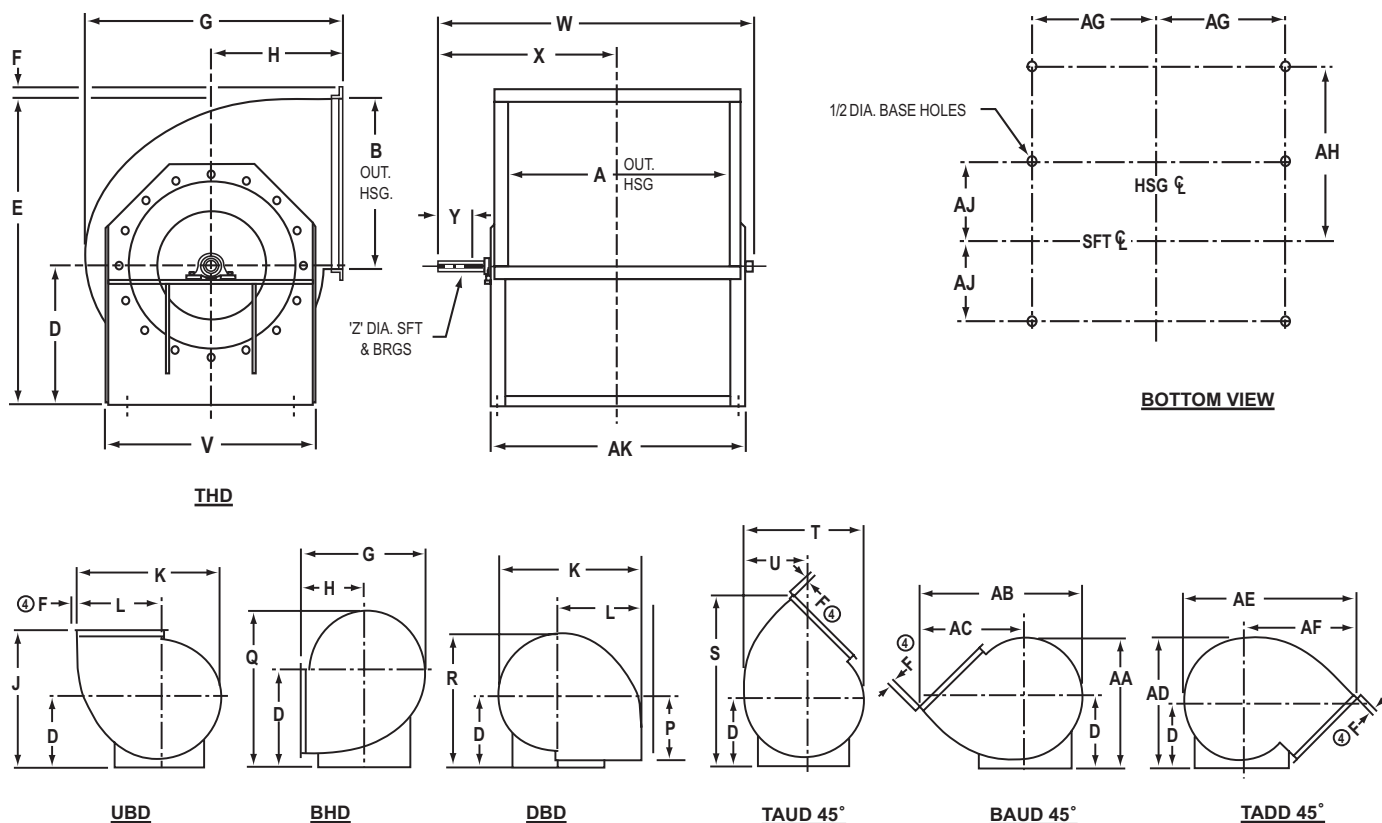
Size	A	B	C	"D" Centerline of Fan							E	④ F	G	H	J	K	L	M	N	⑦ P	Q	R
				THD	UBD	BHD	DBD	TAUD	BAUD	TADD												
122	9 3/4	13	13 1/4	11 1/2	11 1/2	15	11 1/2	11 1/2	15	15	24 7/16	1 1/4	20 13/16	10 1/4	21 3/4	22 1/4	12 15/16	-	-	10 1/4	24 5/16	22 1/16
135	10 13/16	14 5/16	14 9/16	12 3/4	12 3/4	16 1/4	12 3/4	12 3/4	16 1/4	16 1/4	27	1 1/4	22 7/8	11 1/4	24	24 1/2	14 1/4	-	-	11 1/4	26 1/2	24 3/8
150	11 15/16	15 7/8	16 3/16	12 3/4	14	18	12 3/4	14	18	18	28 9/16	1 1/4	25 7/16	12 1/2	26 1/2	27 1/4	15 13/16	-	-	12 1/2	29 7/16	25 11/16
165	13 3/16	17 3/8	17 3/4	14	15 1/4	19 1/2	14	15 1/4	19 1/2	19 1/2	31 5/16	1 1/4	28	13 3/4	29	29 7/8	17 5/16	-	-	13 3/4	32 1/16	28 1/4
182	14 3/8	19 3/8	19 1/2	15	17	21 1/2	15	17	21 1/2	21 1/2	34 5/16	1 1/4	30 3/16	14 1/2	31 1/2	33 1/8	19 5/16	-	-	14 1/2	35 5/16	30 11/16
200	16	21 1/4	21 3/8	16 1/4	20	23 1/2	16 1/4	20	20	20	37 7/16	1 1/4	32 7/8	15 5/8	35 5/8	36 3/8	21 3/16	-	-	15 5/8	38 11/16	33 1/2
222	17 1/2	23 5/8	23 3/4	18	20 1/2	26	18	20 1/2	26	20 1/2	41 9/16	1 1/4	36 5/8	17 1/2	38	40 7/16	23 9/16	-	-	17 1/2	42 7/8	37 1/8
245	19 1/2	25 15/16	26 1/16	20	22 1/2	28	20	22 1/2	28	22 1/2	45 7/8	1 1/4	40 5/16	19 1/4	41 3/4	44 7/16	25 7/8	-	-	19 1/4	46 9/16	41 1/16
270	21 9/16	28 5/8	28 1/2	22	24 3/4	31	22	24 3/4	31	24 3/4	50 9/16	1 1/4	44 5/16	21 1/8	45 7/8	49	28 9/16	-	-	21 1/8	51 7/16	45 3/16
300	23 11/16	31 13/16	31 5/8	24	27	35	24	26	29 1/2	26	55 3/4	1 1/2	49 1/4	23 7/16	50 7/16	54 1/2	31 3/4	2 1/2	54 1/4	24	57 3/4	49 13/16
330	26 1/4	34 15/16	34 3/4	27	30	38	26 1/2	28 1/2	32 1/2	28	61 7/8	1 1/2	54 3/16	25 13/16	55 13/16	59 7/8	34 7/8	2 1/2	59 3/8	26 1/2	63	54 7/8
365	28 7/8	38 11/16	38 1/2	29 1/2	33 1/2	41	29	31 1/2	35 1/2	29 1/2	68 1/8	1 1/2	60 1/8	28 5/8	62 1/8	66 5/16	38 5/8	2 1/2	64 5/8	29	68 11/16	60 1/2
402	32 1/16	42 9/16	42 7/16	32 1/2	36 1/2	45 1/2	32	35	39 1/2	32	75	2	66 11/16	32	68 1/2	73 1/16	42 1/2	2 1/2	70 1/2	32	76 1/16	66 11/16
445	35 1/4	47 3/16	46 7/8	35 1/2	40	50	34	38	43	36	82 9/16	2	72 1/8	33 3/4	73 3/4	80 7/8	47 1/16	3 1/2	79 5/16	34	83 13/16	72 3/8
490	39	51 13/16	51 5/8	39	44	55	37 1/2	42	47	38	90 3/4	2	79 11/16	37 1/2	81 1/2	88 7/8	51 3/4	3 1/2	86 1/4	37 1/2	92 1/8	79 11/16
542	42 3/4	57 7/16	57 1/8	43 1/2	49	60	40 1/2	46	52	42	100 7/8	2	87 1/4	40 1/2	89 1/2	98 9/16	57 3/8	3 1/2	94 7/8	40 1/2	10 13/16	87 1/4
600	47 3/8	63 7/16	63 1/8	48	54	66 1/2	44 1/2	51	57	45	111 3/8	2	96 3/16	44 1/2	98 1/2	108 7/8	63 3/8	3 1/2	103 7/8	44 1/2	112	96 3/16
660	52 1/2	69 13/16	69 3/8	52 1/2	59	73 1/4	49	55 3/4	63	49 1/2	122 1/4	2 1/2	105 3/4	49	108	119 5/8	69 3/4	5	114 3/4	49	123 1/8	105 3/4
730	57 7/8	77 1/4	76 3/4	57	64 1/4	80 3/4	57 3/4	61 3/4	69 1/2	54 1/4	134 1/8	2 1/2	120 5/8	57 3/4	122 1/4	132 1/2	77 1/8	5	126 1/8	57 3/4	136 1/8	120 5/8
807	63 13/16	85 7/16	84 7/8	63	72	89	63 3/4	67 1/2	76 1/2	59 1/2	148 5/16	2 1/2	133 5/16	63 3/4	135 3/4	146 9/16	85 5/16	5	138 1/8	63 3/4	150 1/4	133 5/16
890	70 1/8	94 1/4	93 3/8	69 1/4	78 1/4	97 3/4	70 1/2	73 3/4	85	65 1/2	163 3/8	2 1/2	147 1/8	70 1/2	148 3/4	161 5/8	94 1/8	5	152 3/8	70 1/2	165 1/4	147 1/8

Size	S	T	U	V	CLASS I		CLASS II		Y	"Z" - CLASS I		"Z" - CLASS II		AA	AB	AC	AD	AE	AF	AG	AH	AJ
					W	X	W	X		SFT	KWY	SFT	KWY									
122	27 15/16	19 7/8	11 3/16	16	19 1/2	101 5/16	21 7/8	12 1/8	2 1/2	1	1/4 x 1/8	1 3/16	1/4 x 1/8	23 11/16	26 3/8	16 7/16	26 3/16	31 11/16	21 3/4	6 1/8	-	6 5/8
135	30 3/4	21 7/8	12 5/16	17 1/2	20 1/2	11 7/16	22 7/8	12 5/8	2 1/2	1	1/4 x 1/8	1 3/16	1/4 x 1/8	25 13/16	28 15/16	18	28 9/16	34 5/16	23 3/8	6 11/16	-	7 1/4
150	34	24 5/16	13 11/16	19	22 1/8	12 1/2	24 1/2	13 3/4	3	1	1/4 x 1/8	13/16	1/4 x 1/8	28 5/8	32 3/16	20	31 11/16	37 7/16	25 1/4	7 1/4	-	8
165	37 1/4	26 3/4	15 1/16	20 1/2	23 7/8	13 3/8	26 7/8	15	3	1	1/4 x 1/8	1 7/16	3/8 x 3/16	31 3/16	35 3/8	22	34 1/16	40 3/8	27	7 7/8	-	8 5/8
182	40 15/16	29 5/8	16 5/8	22 1/2	28	15 3/4	28 1/2	16 1/16	3 1/2	1 3/16	1/4 x 1/8	1 11/16	3/8 x 3/16	34 1/2	38 11/16	23 15/16	38 1/8	44 1/8	29 3/8	8 11/16	-	9 5/8
200	46 1/16	32 1/2	18 1/4	25	29 5/8	16 1/2	30 1/8	16 7/8	3 1/2	1 3/16	1/4 x 1/8	1 11/16	3/8 x 3/16	34 1/4	42 1/4	26 1/16	38 1/4	47 5/8	31 7/16	9 1/2	-	10 7/8
222	49 1/2	36	20 3/8	27 1/4	31 5/8	17 3/4	32 1/8	18 1/8	4	1 3/16	1/4 x 1/8	1 11/16	3/8 x 3/16	41 5/8	47	29	40 7/8	52 1/2	34 1/2	10 1/4	-	11 1/8
245	54 1/2	39 3/4	22 3/8	29 3/4	34 1/4	19 1/8	34 1/8	19 1/8	4	1 7/16	3/8 x 3/16	1 11/16	3/8 x 3/16	45 3/8	51 3/4	32	44 7/8	57 7/16	37 5/8	11 1/4	-	11 1/8
270	60 3/4	43 3/4	24 3/4	33	36 1/4	20 3/16	36 1/4	20 3/16	4	1 11/16	3/8 x 3/16	1 11/16	3/8 x 3/16	50	56 15/16	35 1/8	49 1/2	62 7/16	40 5/8	12 5/16	-	13 1/8
300	65 1/8	48 3/4	27 1/2	40	38 1/4	21 1/8	38 5/8	21 3/8	4	1 11/16	3/8 x 3/16	1 5/16	1/2 x 1/4	50 3/4	63 5/16	39	53 1/2	69 5/8	45 1/4	13 1/4	33 1/8	16 7/8
330	71 3/8	53 1/2	30 1/4	44	40 7/8	22 3/8	41 1/4	22 5/8	4	1 11/16	3/8 x 3/16	1 5/16	1/2 x 1/4	55 3/4	69 9/16	42 7/8	58 1/4	75 5/8	49	141 1/2	36 1/4	18 7/8
365	79 1/8	59 1/2	33 1/2	47	44 1/2	24 3/4	44 7/8	25	5	1 11/16	3/8 x 3/16	1 5/16	1/2 x 1/4	61 1/2	77 1/4	47 5/8	63	83 1/8	53 1/2	15 13/16	40	20 3/8
402	87 3/8	65 1/2	37	51	49	27	49 5/8	27 3/8	5	1 5/16	1/2 x 1/4	2 3/16	1/2 x 1/4	68	85 3/8	52 3/4	69	92 1/4	59 5/8	17 7/16	43 7/8	22 3/8
445	95 1/4	72 3/8	40 7/8	57 1/2	52 3/4	29 1/8	53 3/8	29 1/2	5 1/2	1 5/16	1/2 x 1/4	2 3/16	1/2 x 1/4	74 1/2	93 3/8	57 1/4	76 7/8	100 3/4	64 5/8	19 1/2	48 15/16	23 5/8
490	105 1/8	79 5/8	44 7/8	62	57	31 3/8	57 3/4	31 7/8	5 1/2	2 3/16	1/2 x 1/4	2 7/16	5/8 x 5/16	81 3/4	102 7/8	63 1/8	82 7/8	110 3/8	70 5/8	21 3/8	53 5/8	25 7/8
542	115 1/4	88 1/4	49 3/4	68	62	34 3/16	62 1/8	34 1/4	6	2 7/16	5/8 x 5/16	2 11/16	5/8 x 5/16	90 1/2	113 1/4	69 1/4	91 3/4	121	77	23 1/4	59 1/4	28 7/8
600	127 3/8	97 1/2	55	74	67 5/8	37	67 7/8	37 1/4	6	2 7/16	5/8 x 5/16	2 15/16	3/4 x 3/8	99 1/2	125	76 3/8	100	133 1/8	84 1/2	25 9/16	65 1/4	31 7/8
660	139 3/4	107	60 1/2	80	75 7/8	41 5/8	77 5/8	42 3/4	7	2 11/16	5/8 x 5/16	3 7/16	7/8 x 7/16	109 1/2	137 3/8	84	110	146 1/8	92 3/4	28 7/8	72 3/8	33 1/8
730	157 1/8	118 5/8	67	88	81 7/8	45	83 1/2	46	7 1/2	2 15/16	3/4 x 3/8	3 7/16	7/8 x 7/16	121 1/8	154 1/2	95 3/8	121 1/4	161 1/8	102	31 9/16	79 3/4	37 1/8
807	172 7/8	130 7/8	73 3/4	95 1/2	88 3/8	48 1/2	89 7/8	49 1/2	8	2 15/16	3/4 x 3/8	3 7/16	7/8 x 7/16	133 5/8	170 5/8	105 3/8	133 1/4	176 7/8	111 5/8	34 9/16	87 15/16	40 7/8
890	190 1/4	144 5/8	81 5/8	106 1/2	96 1/4	52 5/8	96 5/8	52 3/4	8	3 7/16	7/8 x 7/16	3 15/16	1 x 1/2	148	188 3/8	116 1/2	147 1/8	198 7/8	126 7/8	37 11/16	96 3/4	46 3/8

TOLERANCE ± 1/8 Not to be used for construction. Certified drawings available upon request.

VCR Dimensional Data

BI & AF – Arrangement 3, DWDI, Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 182 through 270.
3. BI available in sizes 122 through 170.
4. Discharge angles standard on sizes 122 thru 270 only. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.

Size	A	B	"D" CENTERLINE OF FAN							E	F	G	H	J	K	L	M	N	P	Q	R	S	T
			THD	UBD	BHD	DBD	TAUD	BAUD	TADD														
122	17 1/2	13	11 1/2	11 1/2	15	11 1/2	11 1/2	15	15	24 7/16	1 1/4	20 13/16	10 1/4	21 3/4	22 1/4	12 15/16	—	—	10 1/4	24 5/16	22 1/16	27 15/16	19 7/8
135	19 3/8	14 5/16	12 3/4	12 3/4	16 1/4	12 3/4	12 3/4	16 1/4	16 1/4	27	1 1/4	22 7/8	11 1/4	24	24 1/2	14 1/4	—	—	11 1/4	26 1/2	24 3/8	30 3/4	21 7/8
150	21 1/4	15 7/8	12 3/4	14	18	12 3/4	14	18	18	28 9/16	1 1/4	25 7/16	12 1/2	26 1/2	27 1/4	15 13/16	—	—	12 1/2	29 7/16	25 11/16	34	24 5/16
165	23 5/8	17 3/8	14	15 1/4	19 1/2	14	15 1/4	19 1/2	19 1/2	31 5/16	1 1/4	28	13 3/4	29	29 7/8	17 5/16	—	—	13 3/4	32 1/16	28 1/4	37 1/4	26 3/4
182	25 13/16	19 3/8	15	17	21 1/2	15	17	21 1/2	21 1/2	34 5/16	1 1/4	30 3/16	14 1/2	31 1/2	33 1/8	19 5/16	—	—	14 1/2	35 5/16	30 11/16	40 15/16	29 5/8
200	28 11/16	21 1/4	16 1/4	20	23 1/2	16 1/4	20	20	20	37 7/16	1 1/4	32 7/8	15 5/8	35 5/8	36 3/8	21 3/16	—	—	15 5/8	38 11/16	33 1/2	46 1/16	32 1/2
222	31 3/8	23 5/8	18	20 1/2	26	18	20 1/2	26	20 1/2	41 9/16	1 1/4	36 5/8	17 1/2	38	40 7/16	23 9/16	—	—	17 1/2	42 7/8	37 1/8	49 1/2	36
245	34 7/8	25 15/16	20	22 1/2	28	20	22 1/2	28	22 1/2	45 7/8	1 1/4	40 5/16	19 1/4	41 3/4	44 7/16	25 7/8	—	—	19 1/4	46 9/16	41 1/16	54 1/2	39 3/4
270	38 5/16	28 5/8	22	24 3/4	31	22	24 3/4	31	24 3/4	50 9/16	1 1/4	44 5/16	21 1/8	45 7/8	49	28 9/16	—	—	21 1/8	51 7/16	45 3/16	60 3/4	43 3/4

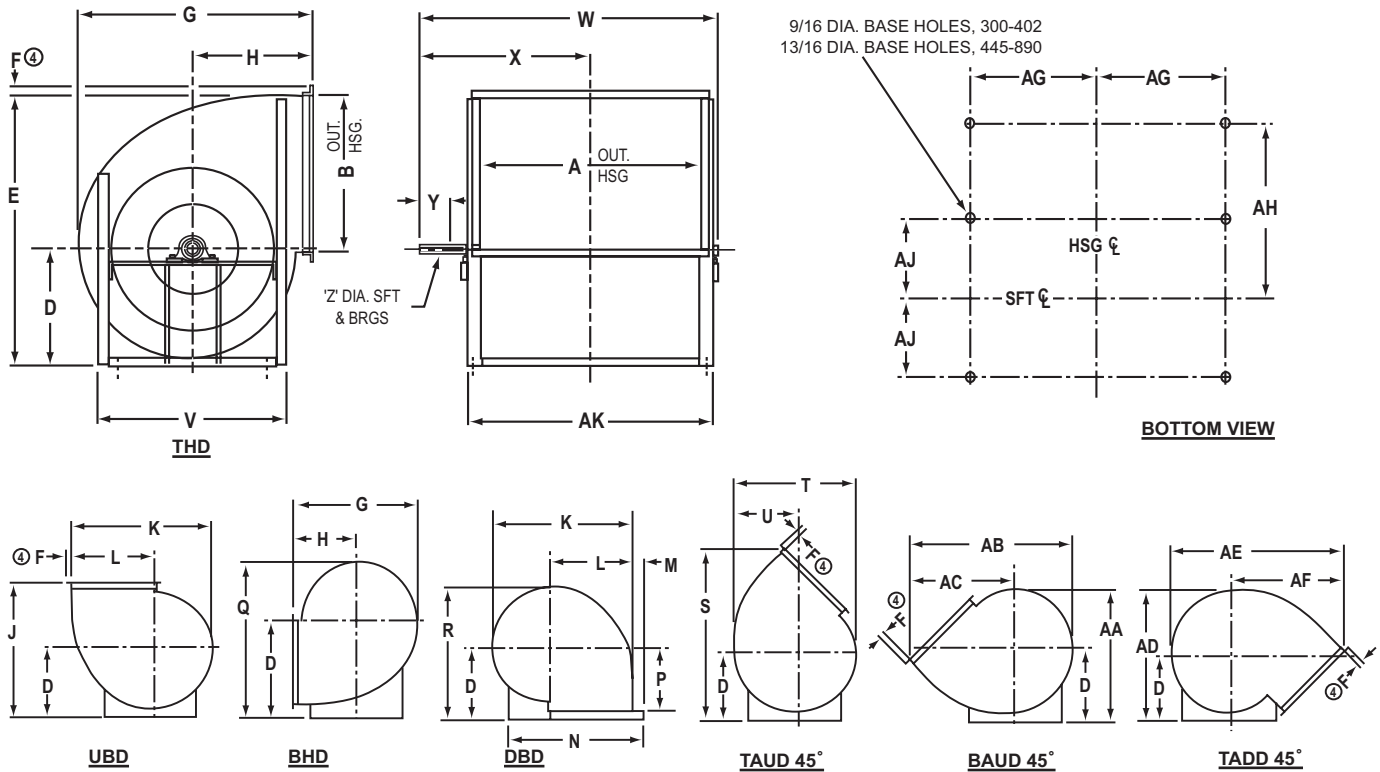
Size	U	V	CLASS I		CLASS II		Y	"Z" CLASS I			"Z" CLASS II			AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK
			W	X	W	X		SFT	DR. EXT.	KWY	SFT	DR. EXT.	KWY										
122	11 3/16	16	26 1/2	15 3/8	28 5/8	16 5/8	3	1 3/16	1 3/16	1/4 x 1/8	1 7/16	1 7/16	3/8 x 3/16	23 11/16	26 3/8	16 7/16	26 3/16	31 11/16	21 3/4	10	—	6 5/8	21 3/4
135	12 5/16	17 1/2	28 1/4	16 1/4	30 1/2	17 1/2	3	1 3/16	1 3/16	1/4 x 1/8	1 11/16	1 11/16	3/8 x 3/16	25 13/16	28 15/16	18	28 9/16	34 5/16	23 3/8	11	—	7 1/4	23 3/4
150	13 11/16	19	33 3/8	19 1/4	33 3/8	19 1/4	3 1/2	1 7/16	1 7/16	3/8 x 3/16	1 11/16	1 11/16	3/8 x 3/16	28 5/8	32 3/16	20	31 11/16	37 7/16	25 1/4	11 15/16	—	8	25 5/8
165	15 1/16	20 1/2	35 3/4	20 3/8	36 1/8	20 5/8	3 1/2	1 7/16	1 7/16	3/8 x 3/16	1 15/16	1 15/16	1/2 x 1/4	31 3/16	35 3/8	22	34 9/16	40 3/8	27	13 1/8	—	8 5/8	28
182	16 5/8	22 1/2	39	22 1/4	40	22 7/8	4	1 11/16	1 11/16	3/8 x 3/16	2 3/16	2 3/16	1/2 x 1/4	34 1/2	38 11/16	23 15/16	38 1/8	44 1/8	29 3/8	14 1/2	—	9 5/8	31 1/4
200	18 1/4	25	41 7/8	23 3/4	42 7/8	24 1/4	4	1 11/16	1 11/16	3/8 x 3/16	2 3/16	2 3/16	1/2 x 1/4	34 1/4	42 1/4	26 1/16	38 1/4	47 5/8	31 7/16	15 15/16	—	10 7/8	34 1/8
222	20 3/8	27 1/4	45 3/8	25 3/4	46 5/8	26 5/8	4 1/2	1 15/16	1 15/16	1/2 x 1/4	2 7/16	2 7/16	5/8 x 5/16	41 5/8	47	29	40 7/8	52 1/2	34 1/2	17 1/4	—	11 1/8	36 3/4
245	22 3/8	29 3/4	50 1/2	28 5/8	51 1/8	29 1/8	5	2 3/16	2 3/16	1/2 x 1/4	2 7/16	2 7/16	5/8 x 5/16	45 3/8	51 3/4	32	44 7/8	57 7/16	37 5/8	19	—	11 1/8	40 1/4
270	24 3/4	33	54	30 3/8	54 5/8	30 7/8	5	2 3/16	2 3/16	1/2 x 1/4	2 11/16	2 11/16	5/8 x 5/16	50	56 15/16	35 1/8	49 1/2	62 7/16	40 5/8	20 3/4	—	13 1/8	43 3/4

Tolerance ± 1/8

Not to be used for construction. Certified drawings available upon request.

VCR Dimensional Data

BI & AF – Arrangement 3, DWDI Class I & II



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 182 through 890.
3. BI available in sizes 122 through 890.
4. Discharge angles standard on sizes 402 thru 890 only. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.
6. On DBD, discharge is extended to base.
7. *Shaft smaller on BI.

Size	A	B	"D" CENTERLINE OF FAN							E	F	G	H	J	K	L	M	N	P	Q	R	S	T
			THD	UBD	BHD	DBD	TAUD	BAUD	TADD														
300	42 7/16	31 13/16	24	27	35	24	26	29 1/2	26	55 3/4	1 1/2	49 1/4	23 7/16	50 7/16	54 1/2	31 3/4	2 1/2	54 1/4	24	57 3/4	49 13/16	65 1/8	48 3/4
330	47 3/16	34 15/16	27	30	38	26 1/2	28 1/2	32 1/2	28	61 7/8	1 1/2	54 3/16	25 13/16	55 13/16	59 7/8	34 7/8	2 1/2	59 3/8	26 1/2	63	54 7/8	71 3/8	53 1/2
365	51 3/4	38 11/16	29 1/2	33 1/2	41	29	31 1/2	35 1/2	29 1/2	68 1/8	1 1/2	60 1/8	28 5/8	62 1/8	66 5/16	38 5/8	2 1/2	64 5/8	29	68 11/16	60 1/2	79 1/8	59 1/2
402	57 1/2	42 9/16	32 1/2	36 1/2	45 1/2	32	35	39 1/2	32	75	2	66 11/16	32	68 1/2	73 1/16	42 1/2	2 1/2	70 1/2	32	76 1/16	66 11/16	87 3/8	65 1/2
445	63 1/4	47 3/16	35 1/2	40	50	34	38	43	36	82 9/16	2	72 1/8	33 3/4	73 3/4	80 7/8	47 1/16	3 1/2	79 5/16	34	83 13/16	72 3/8	95 1/4	72 3/8
490	70	51 13/16	39	44	55	37 1/2	42	47	38	90 3/4	2	79 11/16	37 1/2	81 1/2	88 7/8	51 3/4	3 1/2	86 1/4	37 1/2	92 1/8	79 11/16	105 1/8	79 5/8
542	77	57 7/16	43 1/2	49	60	40 1/2	46	52	42	100 7/8	2	87 1/4	40 1/2	89 1/2	98 9/16	57 3/8	3 1/2	94 7/8	40 1/2	101 3/16	87 1/4	115 1/4	88 1/4
600	85 1/8	63 7/16	48	54	66 1/2	44 1/2	51	57	45	111 3/8	2	96 3/16	44 1/2	98 1/2	108 7/8	63 3/8	3 1/2	103 7/8	44 1/2	112	96 3/16	127 3/8	97 1/2
660	94 1/4	69 13/16	52 1/2	59	73 1/4	49	55 3/4	63	49 1/2	122 1/4	2 1/2	105 3/4	49	108	119 5/8	69 3/4	5	114 3/4	49	123 1/8	105 3/4	139 3/4	107
730	104	77 1/4	57	64 1/4	80 3/4	57 3/4	61 3/4	69 1/2	54 1/4	134 1/8	2 1/2	120 5/8	57 3/4	122 1/4	132 1/2	77 1/8	5	126 1/8	57 3/4	136 1/8	120 5/8	157 1/8	118 5/8
807	114 11/16	85 7/16	63	72	89	63 3/4	67 1/2	76 1/2	59 1/2	148 5/16	2 1/2	133 5/16	63 3/4	135 3/4	146 9/16	85 5/16	5	138 1/8	63 3/4	150 1/4	133 5/16	172 7/8	130 7/8
890	126 3/8	94 1/4	69 1/4	78 1/4	97 3/4	70 1/2	73 3/4	85	65 1/2	163 3/8	2 1/2	147 1/8	70 1/2	148 3/4	161 5/8	94 1/8	5	152 3/8	70 1/2	165 1/4	147 1/8	190 1/4	144 5/8

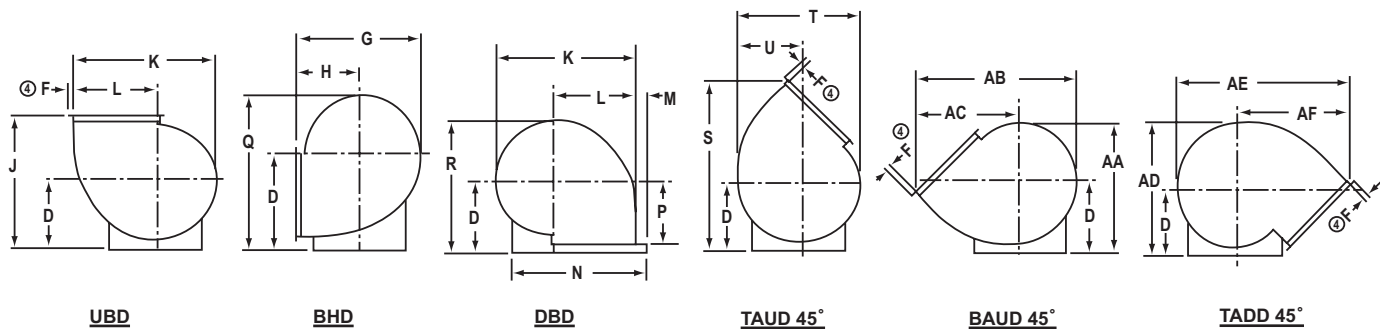
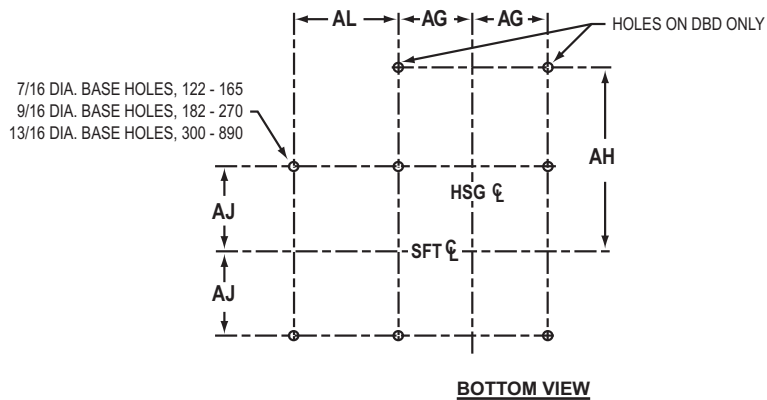
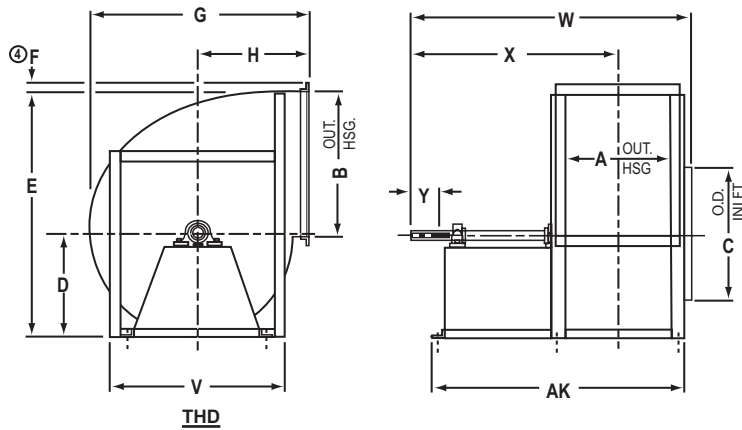
Size	U	V	CLASS I		CLASS II		Y	"Z" CLASS I			"Z" CLASS II			AA	AB	AC	AD	AE	AF	AG	AH	AJ	AK
			W	X	W	X		SFT	DR. EXT.	KWY	SFT	DR. EXT.	KWY										
300	27 1/2	40	59 7/8	33 3/4	60	33 3/4	5 1/2	2 7/16	2 7/16	5/8 x 5/16	2 11/16	2 11/16	5/8 x 5/16	50 3/4	63 5/16	39	53 1/2	69 5/8	45 1/4	22 5/8	33 1/8	16 7/8	47 7/16
330	30 1/4	44	63 5/8	35 5/8	63 5/8	35 5/8	5 1/2	2 7/16	2 7/16	5/8 x 5/16	2 15/16	2 7/16	5/8 x 5/16	55 3/4	69 9/16	42 7/8	58 1/4	75 5/8	49	25	36 1/4	18 7/8	52 3/16
365	33 1/2	47	68 5/8	38 1/8	68 5/8	38 1/8	5 1/2	2 11/16	2 11/16	5/8 x 5/16	3 7/16	2 7/16	5/8 x 5/16	61 1/2	77 1/4	47 5/8	63	83 1/8	53 1/2	27 1/4	40	20 3/8	56 3/4
402	37	51	74 7/8	41 5/8	74 3/8	41 1/4	6	2 15/16	2 15/16	3/4 x 3/8	3 7/16	2 7/16	5/8 x 5/16	68	85 3/8	52 3/4	69	92 1/4	59 5/8	30 1/8	43 7/8	22 3/8	62 1/2
445	40 7/8	57 1/2	80	43 7/8	80 3/4	44 3/8	6	3 3/16	2 3/16	1/2 x 1/4	3 15/16	2 11/16	5/8 x 5/16	74 1/2	93 3/8	57 1/4	76 7/8	100 3/4	64 5/8	33 1/2	48 15/16	23 5/8	70 1/4
490	44 7/8	62	88 3/8	48 3/4	91 1/2	50 5/8	7	3 7/16	2 7/16	5/8 x 5/16	3 15/16	3 7/16	7/8 x 7/16	81 3/4	102 7/8	63 1/8	82 7/8	110 3/8	70 5/8	36 7/8	53 5/8	25 7/8	77
542	49 3/4	68	96 1/2	52 3/4	98 1/2	54 1/8	7	3 15/16	2 11/16	5/8 x 5/16	4 7/16	3 7/16	7/8 x 7/16	90 1/2	113 1/4	69 1/4	91 3/4	121	77	40 3/8	59 1/4	28 7/8	84
600	55	74	105 5/8	57 7/8	107 5/8	59 1/4	8	3 15/16	2 11/16	5/8 x 5/16	4 15/16	3 7/16	7/8 x 7/16	99 1/2	125	76 3/8	100	133 1/8	84 1/2	44 1/2	65 1/4	31 7/8	92 1/8
660	60 1/2	80	115 1/8	62 3/4	116 3/4	63 3/4	8	4 7/16	2 15/16	3/4 x 3/8	4 15/16	3 7/16	7/8 x 7/16	109 1/2	137 3/8	84	110	146 1/8	92 3/4	49 3/4	72 3/8	33 1/8	104 1/4
730	67	88	127 1/2	69 5/8	127 1/2	69 5/8	9	4 15/16	3 7/16	7/8 x 7/16	5 15/16	3 15/16	1 x 1/2	121 1/8	154 1/2	95 3/8	121 1/4	161 1/8	102	54 5/8	79 3/4	37 1/8	114
807	73 3/4	95 1/2	138 1/4	75	139 7/8	75 5/8	9	5 15/16	3 15/16	1 x 1/2	6 7/16	4 7/16	1 x 1/2	133 5/8	170 5/8	105 3/8	133 1/4	176 7/8	111 5/8	60	87 15/16	40 7/8	124 11/16
890	81 5/8	106 1/2	153	82 1/2	153	82 1/2	9	6 7/16	4 7/16	1 x 1/2	*6 11/16	4 7/16	1 x 1/2	148	188 3/8	116 1/2	147 1/8	198 7/8	126 7/8	65 13/16	96 3/4	46 3/8	136 3/8

Tolerance ± 1/8

Not to be used for construction. Certified drawings available upon request.

VCR Dimensional Data

BI & AF – Arrangement 1, SWSI, Class III



Notes

1. CW rotation shown; CCW rotation similar but opposite.
2. AF available in sizes 182 through 890.
3. BI available in sizes 182 through 890.
4. Discharge angles standard on all sizes. (Hole punching optional on all sizes.)
5. On specific sales orders, see Fan Data Schedule for performance and accessory information.

VCR Dimensional Data

BI & AF – Arrangement 1, SWSI Class III / Cont.

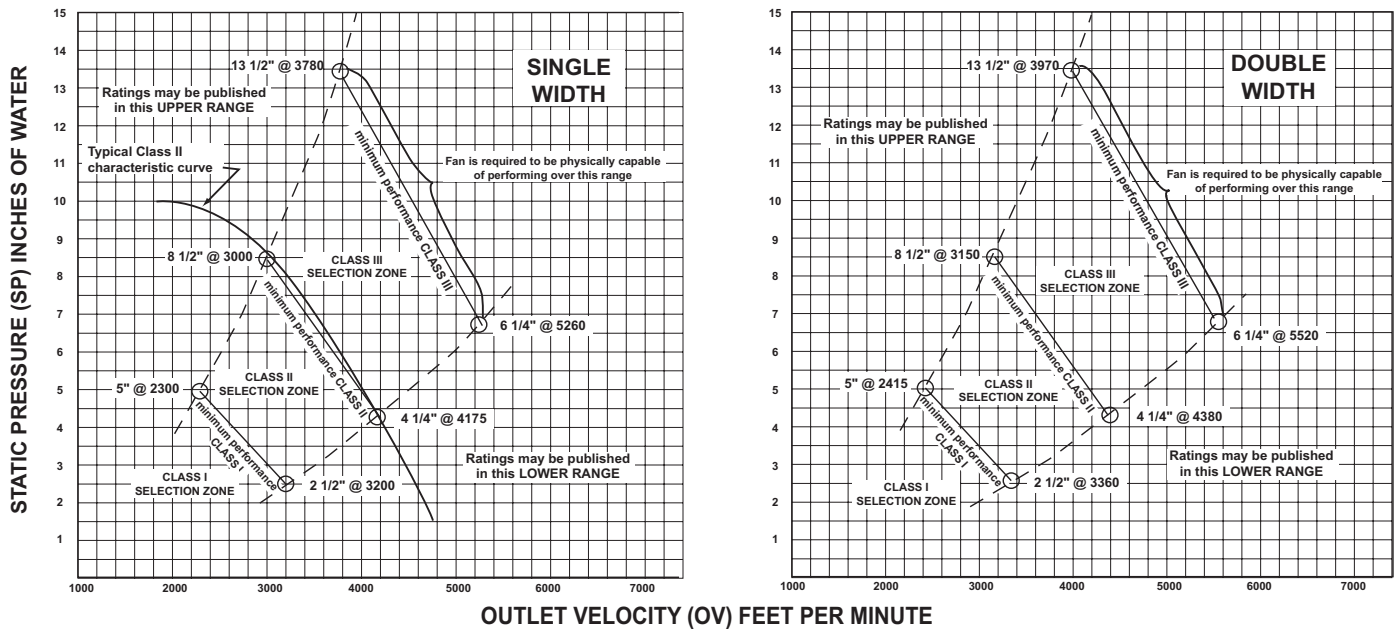
Size	A	B	C	"D" Centerline of Fan							E	④ F	G	H	J	K	L	M	N	P	Q	R	S
				THD	UBD	BHD	DBD	TAUD	BAUD	TADD													
122	9 13/16	13 1/8	13 1/4	10 1/4	11 1/2	15	10 1/4	11	12 1/4	15 1/4	23 1/4	1 1/4	21	10 3/8	21 7/8	22 3/8	13	2	24 7/8	10 1/4	24 3/8	20 7/8	28 1/2
135	10 7/8	14 7/16	14 9/16	11 1/4	12 3/4	16 1/4	11 1/4	12	13 1/4	16	25 9/16	1 1/4	23 1/16	11 3/8	24 1/8	24 5/8	14 5/16	2	26 13/16	11 1/4	26 9/16	22 15/16	31 1/8
150	12	16	16 3/16	12 1/4	14	18	12 1/2	13 1/4	14 3/4	16 3/4	28 1/8	1 1/4	25 5/8	12 5/8	26 5/8	27 3/8	15 7/8	2	29 1/4	12 1/2	29 1/2	25 1/2	34 5/16
165	13 1/4	17 1/2	17 3/4	13 1/2	15 1/4	19 1/2	13 3/4	14 1/2	16 1/4	17 1/2	30 7/8	1 1/2	28 3/16	13 7/8	29 1/8	30	17 3/8	2	31 1/2	13 3/4	32 1/8	28 1/16	37 11/16
182	14 7/16	19 1/2	19 1/2	14 3/4	16 3/4	22	14 1/2	15 3/4	17 3/4	18 1/2	34 1/8	1 1/2	30 3/8	14 5/8	31 3/8	33 1/4	19 3/8	2	34 7/8	14 1/2	35 7/8	30 1/4	41 1/16
200	16 1/16	21 1/2	21 3/8	16 1/4	18 1/4	24	16	17 1/4	19 1/4	19 1/2	37 9/16	1 1/2	33 3/8	16	34 1/4	36 5/8	21 5/16	2	37 13/16	16	39 5/16	33 3/8	45 7/16
222	17 9/16	23 7/8	23 3/4	18	20 1/2	26 1/2	18	19 1/4	22	21	41 11/16	2	37 5/16	18	38 1/2	40 11/16	23 11/16	2 1/2	42 5/16	18	43 1/2	37 5/16	50 3/8
245	19 11/16	26 3/16	26 1/16	20	22 1/2	28 3/4	19 1/2	21 1/4	24	22	46	2	40 11/16	19 1/2	42	44 11/16	26	2 1/2	45 3/4	19 1/2	47 7/16	40 11/16	55
270	21 3/4	28 7/8	28 1/2	22	24 3/4	31 1/2	21 1/2	23 1/2	26 1/4	23 1/2	50 11/16	2	44 13/16	21 1/2	46 1/4	49 1/4	28 11/16	2 1/2	49 11/16	21 1/2	52 1/16	44 13/16	60 11/16
300	23 13/16	32	31 5/8	24 1/2	27 1/2	34 3/4	24	26	29 1/2	26	56 5/16	2	49 15/16	24	51 1/2	54 11/16	31 13/16	3	55 13/16	24	57 5/8	49 15/16	67 5/16
330	26 3/8	35 1/8	34 3/4	27	30	37 3/4	26 1/2	28 1/2	32 1/4	27 3/4	61 15/16	2	55	26 1/2	56 1/2	60 1/16	34 15/16	3	60 7/16	26 1/2	62 7/8	55	73 13/16
365	29	38 7/8	38 1/2	29 1/2	33 1/2	41 1/2	29	31 1/2	35 1/2	29 1/4	68 3/16	2	60 9/16	29	62 1/2	66 1/2	38 11/16	3	65 11/16	29	69 5/16	60 9/16	81 1/16
402	32 3/16	42 3/4	42 7/16	33	37	45 1/2	32	35 1/4	39 1/2	31 3/4	75 9/16	2	66 13/16	32	69	73 1/4	42 9/16	4	72 13/16	32	76 3/16	66 13/16	89 5/8
445	35 3/8	47 3/8	46 7/8	35 1/2	40	50	33 3/4	38 1/2	43 1/4	36 1/4	82 11/16	2	72 3/16	33 3/4	73 3/4	81 1/16	47 3/16	4	79 7/16	33 3/4	83 7/8	72 3/16	97 5/8
490	39 1/8	52	51 5/8	39	44	54 3/4	37 1/2	42 1/4	47 1/2	38 3/4	90 13/16	2	79 3/4	37 1/2	81 1/2	89 1/16	51 13/16	4	86 9/16	37 1/2	92	79 3/4	107 7/16
542	42 7/8	57 5/8	57 1/8	43 1/2	49	60 3/4	40 1/2	46 1/2	52 1/4	42 1/4	101 15/16	2 1/2	87 3/8	40 1/2	89 1/2	98 3/4	57 7/16	5	96 7/16	40 1/2	102 1/16	87 3/8	118 1/16
600	47 1/2	63 5/8	63 1/8	48	54	66 3/4	44 1/2	51 1/4	57 1/2	45	111 1/2	2 1/2	96 1/4	44 1/2	98 1/2	109 1/16	63 7/16	5	105 7/16	44 1/2	112 3/8	96 1/4	129 11/16
660	52 5/8	70	69 3/8	52 1/2	59	73 3/4	49	55 3/4	63	49 1/2	123 5/16	3	105 13/16	49	108	119 13/16	69 13/16	6	116 5/16	49	123 3/4	105 13/16	142 3/4
730	58	77 3/4	76 3/4	57	64 1/2	81 1/4	57 3/4	61 3/4	69 1/2	54 1/4	135 3/16	3	120 11/16	57 3/4	122 1/4	132 5/8	77 3/16	6	127 11/16	57 3/4	136 11/16	120 11/16	159 5/8
807	63 15/16	85 9/16	84 7/8	63	72	89 1/2	63 3/4	67 1/2	76 1/2	59 1/2	149 3/8	3	133 3/8	63 3/4	135 3/4	146 11/16	85 3/8	6	139 5/8	63 3/4	150 13/16	133 3/8	175 9/16
890	70 1/8	94 3/8	93 3/8	69 1/4	78 1/4	98 1/4	70 1/2	73 3/4	85	65 1/2	164 7/16	3	174 3/16	70 1/2	148 3/4	161 3/4	94 3/16	6	153 15/16	70 1/2	165 13/16	147 3/16	192 1/2

Size	T	U	V	W	X	Y	"Z" - BI		"Z" - AF		AA	AB	AC	AD	AE	AF	AG	AH	AJ	AL	AM
							SFT	KWY	SFT	KWY											
122	20	11 1/4	19 3/4	26 3/4	18 13/16	3	1 11/16	3/8 x 3/16	--	--	21	27 1/2	17 1/2	26 1/2	32 3/4	22 3/4	6 1/16	14 1/8	6 1/2	10 1/2	24 3/8
135	22	12 3/8	21	28 1/4	19 13/16	3	1 11/16	3/8 x 3/16	--	--	22 7/8	30 1/8	19 1/8	28 3/8	35 7/16	24 7/16	6 9/16	15 7/16	7 1/8	11	25 7/8
150	24 7/16	13 3/4	22 3/4	31 3/8	22 3/8	3 1/2	1 11/16	3/8 x 3/16	--	--	25 7/16	33 5/16	21 1/16	30 1/2	38 5/8	26 3/8	7 1/8	17	8	12 1/2	28 1/2
165	26 7/8	15 1/8	24 1/4	33 1/8	23 1/2	3 1/2	1 11/16	3/8 x 3/16	--	--	28	36 5/8	23 3/16	32 5/8	41 3/4	28 5/16	7 3/4	18 1/2	8 3/4	13	30 1/4
182	29 11/16	16 3/4	27	36 3/8	26 1/8	4 1/2	1 11/16	3/8 x 3/16	1 11/16	3/8 x 3/16	30 11/16	40 1/8	25 5/16	35 1/4	45 1/2	30 11/16	8 3/8	20 1/2	9 5/8	14	32 1/2
200	32 11/16	18 7/16	29	39	27 15/16	4 1/2	1 11/16	3/8 x 3/16	1 11/16	3/8 x 3/16	33 1/2	44 1/16	28 3/16	37 15/16	49 1/2	33 3/16	9 3/16	22 7/16	10 5/8	15	35 1/8
222	36 5/16	20 1/2	32 1/4	43 1/2	31 3/16	5	1 15/16	1/2 x 1/4	1 15/16	1/2 x 1/4	37 13/16	49 1/4	31 1/8	41 1/2	55 1/16	36 15/16	10 3/16	25 1/16	11 1/2	17	39 5/8
245	40	22 9/16	34 1/2	48	34 5/8	6	2 3/16	1/2 x 1/4	2 3/16	1/2 x 1/4	41 7/16	53 11/16	33 3/4	44 9/16	59 3/8	39 7/16	11 1/4	27 3/8	12 5/8	18 1/2	43 1/4
270	44	24 13/16	37	52	37 5/8	6	2 3/16	1/2 x 1/4	2 3/16	1/2 x 1/4	45 7/16	59 1/8	37 3/16	48 5/16	64 9/16	42 5/8	12 1/4	30 1/16	13 7/8	20 1/2	47 1/4
300	48 15/16	27 9/16	42	58 1/8	42 3/16	7	2 7/16	5/8 x 5/16	2 7/16	5/8 x 5/16	50 7/8	65 3/4	41 5/16	53 9/16	72	47 9/16	13 9/16	33 7/16	15 5/8	22 1/2	52 3/8
330	53 3/4	30 5/16	45	62 5/8	45 7/16	7	2 11/16	5/8 x 5/16	2 11/16	5/8 x 5/16	55 11/16	72 1/8	45 5/16	58 1/16	78 3/8	51 9/16	14 13/16	36 5/16	17 1/8	24 1/2	56 7/8
365	59 5/8	33 5/8	48	66 3/4	48 1/4	7	2 11/16	5/8 x 5/16	2 11/16	5/8 x 5/16	61 1/2	79 5/16	49 9/16	62 7/8	85 5/16	55 9/16	16 1/8	40 5/16	18 5/8	26	61
402	65 11/16	37 1/16	52 1/2	73 3/4	52 5/8	8	2 11/16	5/8 x 5/16	2 11/16	5/8 x 5/16	68 1/8	87 1/8	54 3/8	68 13/16	93 1/2	60 3/4	18 1/4	44 11/16	20 3/8	28	68 1/4
445	72 9/16	40 15/16	56 1/2	80 1/4	57 9/16	8	3 7/16	7/8 x 7/16	3 7/16	7/8 x 7/16	74 7/8	95 5/16	59 1/8	77 3/16	102 9/16	66 3/8	19 13/16	49 5/16	22 3/8	31	74 3/8
490	79 13/16	45	61 1/2	86 3/4	62 3/16	9	3 7/16	7/8 x 7/16	3 7/16	7/8 x 7/16	82 5/16	105	65 3/16	83 3/4	112 1/4	72 7/16	21 11/16	53 15/16	24 7/8	33	80 1/8
542	88 7/16	49 7/8	68	92 1/2	65 1/16	9	3 15/16	1 x 1/2	3 15/16	1 x 1/2	90 13/16	115 11/16	71 9/16	92 1/8	123 5/8	79 1/2	24 1/16	60 1/16	27 1/8	34	86 7/8
600	97 3/4	55 1/8	74	100 1/2	70 3/4	9 1/2	4 15/16	1 1/4 x 5/8	4 15/16	1 1/4 x 5/8	100 1/8	127 3/16	78 7/16	100 1/8	135 1/4	86 1/2	26 3/8	66 1/16	30 1/8	37	94 1/2
660	107 3/16	60 9/16	81	110 1/8	76 13/16	10	4 15/16	1 1/4 x 5/8	4 15/16	1 1/4 x 5/8	109 5/8	140 7/16	87	110 1/16	149 3/16	95 3/4	29 7/16	72 15/16	32 5/8	40	104 5/8
730	119	67 1/4	89	119 1/4	83 1/4	10 1/2	4 15/16	1 1/4 x 5/8	4 15/16	1 1/4 x 5/8	121 1/4	157 1/8	97 7/8	121 1/2	163 5/8	104 3/8	32 1/8	80 5/16	36 5/8	43	113
807	131 11/16	74 3/16	96 1/2	128 1/4	89 1/4	10 1/2	5 7/16	1 1/4 x 5/8	5 7/16	1 1/4 x 5/8	134	173 13/16	108 1/16	133 11/16	180 7/16	114 11/16	35 1/8	88 1/2	40 3/8	46	122
890	145 5/8	81 11/16	107 1/2	137 7/8	95 13/16	11	5 7/16	1 1/4 x 5/8	5 7/16	1 1/4 x 5/8	148 15/16	191	118 3/4	147 3/16	191 3/16	128 15/16	38 3/16	97 5/16	45 7/8	49	131 1/8

Tolerance ± 1/8

Not to be used for construction. Certified drawings available upon request.

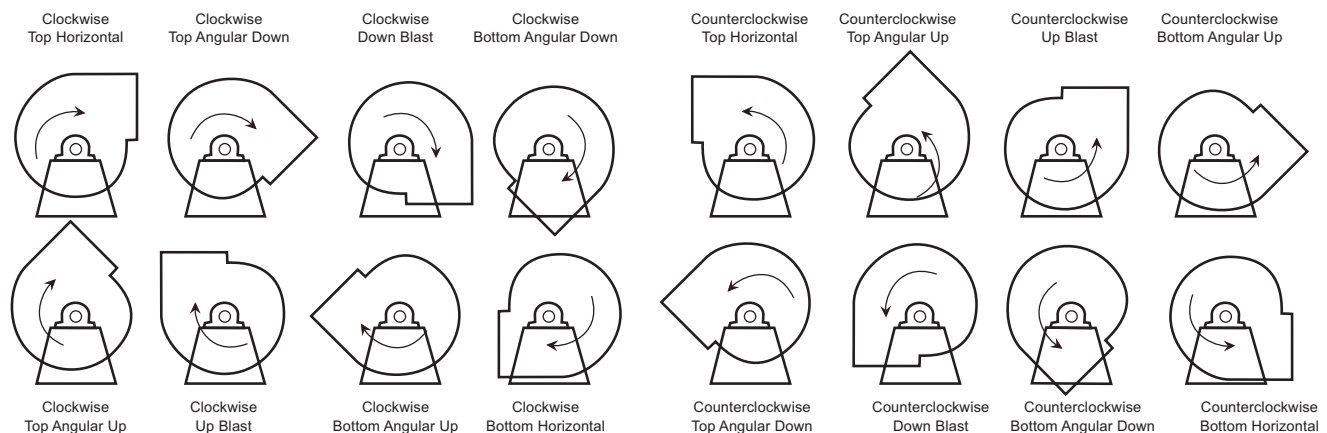
AMCA Fan Class Operating Limits



The diagram above is a reproduction of AMCA Standard 2408-69 which indicates the operating limits for Classes I, II and III centrifugal fans. Since fans are selected on the basis of outlet velocity and static pressure, class selection for a fan can easily be made by locating the fan's desired performance on the chart. All values are based on air handled at 70°F and 29.92" barometer.

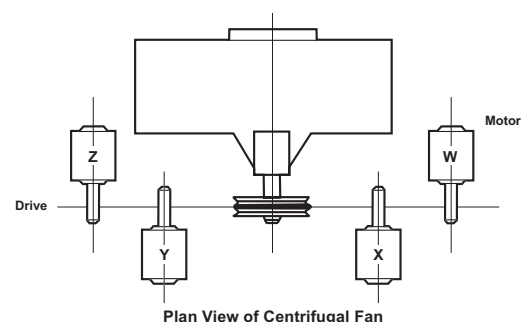
Rotation and Discharge

The direction of rotation is determined from the drive side of the fan. On single inlet fans, drive side is always opposite the fan inlet. On double inlet fans, drive side is the side with the extended shaft. The direction of discharge is determined in accordance with the diagrams below. The angle of discharge is referred to the horizontal axis of fan and designated in degrees above or below such standard reference axis.



Motor Positions

The diagram on the right indicates the standard terms for identifying motor position on the drive side of the fan. The location of the motor is determined by facing the drive side of the fan and designating the position by the letters, W, X, Y and Z. These positions are commonly used with Arrangements 1 and 3.

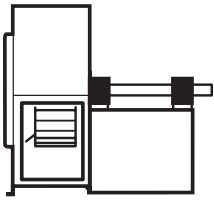


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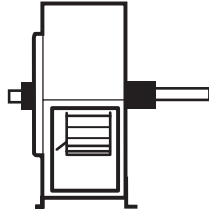
Engineering Notes

VCR Fan

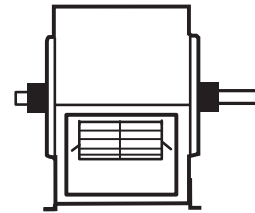
Drive Arrangements for Centrifigbual Fans



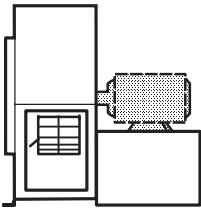
ARR. 1 SWSI For belt drive or direct connection. Impeller overhung. Two bearings on base.



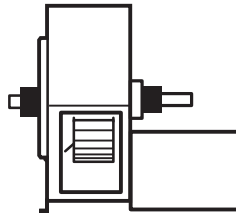
ARR. 3 SWSI For belt drive or direct connection. One bearing on each side and supported by fan housing.



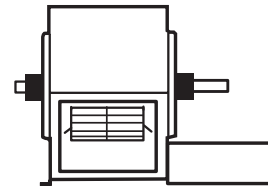
ARR. 3 DWDI For belt drive or direct connection. One bearing on each side and supported by fan housing.



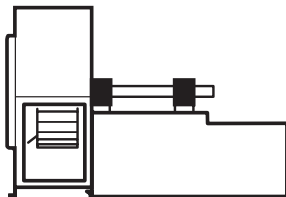
ARR. 4 SWSI For direct drive. Impeller overhung on prime mover shaft. No bearings on fan. Prime mover base mounted or integrally direct connected.



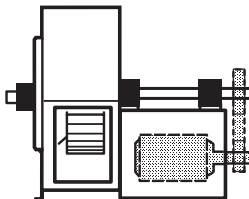
ARR. 7 SWSI For belt drive or direct connection. Arrangement 3 plus base for prime mover.



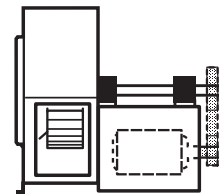
ARR. 7 DWDI For belt drive or direct connection. Arrangement 3 plus base for prime mover.



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

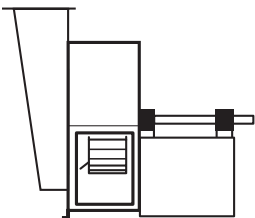


ARR. 9 SWSI For belt drive. Impeller overhung, two bearings, with prime mover outside base.

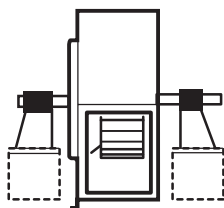


ARR. 10 SWSI For belt drive. Impeller overhung, two bearings, with prime mover inside base.

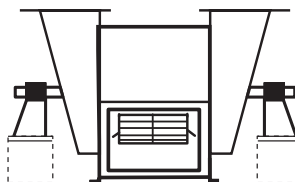
Inlet Boxes and Bearing Pedestals



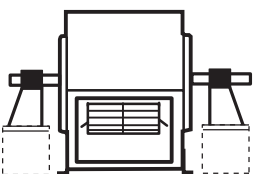
ARR. 1 SWSI with Inlet Box For belt drive or direct connection. Impeller overhung, two bearings on base. Inlet box may be self-supporting.



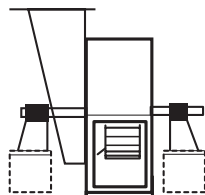
ARR. 3 SWSI with Independent Pedestals For belt drive or direct connection fan. Housing is self-supporting. One bearing on each side supported by independent pedestals.



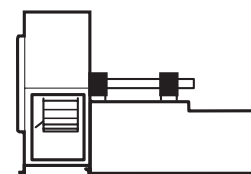
ARR. 3 DWDI with Inlet Box and Independent Pedestals For belt drive or direct connection fan. Housing is self supporting. One bearing on each side supported by independent pedestals with shaft



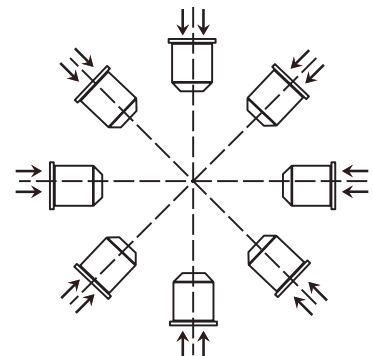
ARR. 3 DWDI with Independent Pedestals For belt drive or direct connection fan. Housing is self-supporting. One bearing on each side supported by independent pedestals.



ARR. 3 SWSI with Inlet Box and Independent Pedestals For belt drive or direct connection fan. Housing is self-supporting. One bearing on each side is supported by independent pedestals with shaft extending through inlet box.



ARR. 8 SWSI with Inlet Box For belt drive or direct connection. Impeller overhung, two bearings on base plus extended base for prime mover. Inlet box may be self-supporting.



1. Reference line is the top vertical axis through center of fan shaft.
2. Position of inlet box and air entry to inlet box is determined from DRIVE SIDE OF FAN.
3. Position of inlet box is designated in degrees clockwise from top vertical axis as shown, and may be any intermediate angle as required.
4. Positions 135° to 225° in same cases interfere with floor structure.

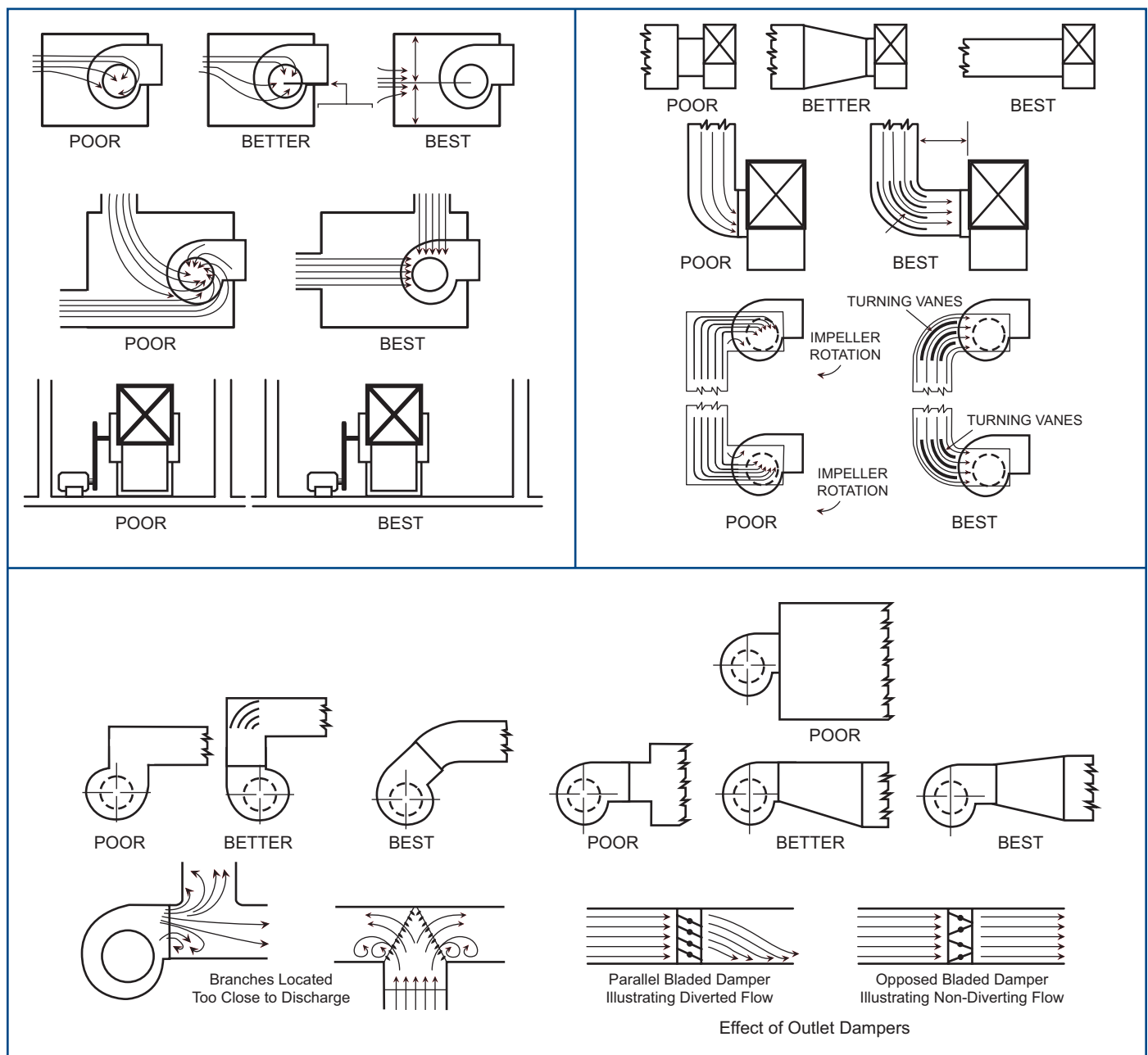
Special attention should be paid to **Fan Installation**. Improper installation will adversely affect fan and system performance resulting in increased energy usage. Improper installation will also increase noise levels. The ideal fan installation has long sections of straight duct attached to the fan inlet and discharge. However, ideal conditions are frequently not possible.

Duct elbows and branches located too close to the fan, and abrupt changes in duct size are some features that cause airstream turbulence. The impact of these features can be minimized by proper placement, use of turning vanes and use of smooth transition sections. Fan inlets should not be

obstructed; fans should be installed at least one inlet diameter from walls. In addition, pre-spin of inlet air should be avoided. Inlet pre-spin always reduces fan efficiency, no matter whether the pre-spin is with the fan rotation or against fan rotation.

The sketches below are intended to show correct and incorrect methods for handling the most common fan installations.

Several good references are available on the subjects of fan performance and fan installation. Some of these references are published by AMCA and ASHRAE. Another excellent source of information is your PennBarry representative.



Engineering Notes

VCR Fan

A fan operating at any given speed has the potential for delivering numerous different combinations of volumes and static pressures. Volume is normally expressed in cubic feet per minute (CFM); static pressure (SP) is normally expressed in inches of water gauge. Plotting all the potential combinations, or operating points, results in a smooth pressure-volume curve. See "Typical Performance Curve" on the next page. The specific point of operation for a fan running at a given RPM is determined by the system in which the fan is running. The relative position of that operating point on the curve can be expressed as a percent of free delivery.

Fan laws are a set of simple mathematical equations which are used to determine the effects of various changes on a fan operating under a given set of circumstances. For example, if the speed of a fan in a fixed system is increased, the following results will occur:

- Air volume will increase in a direct proportion to the increase in speed,
- Static pressure will increase as the square of the increase in speed, and
- Brake horsepower will increase as the cube of the increase in speed.

The following fan laws will cover most application questions. Equations can be combined if, for example, the effects of changing both air volume and air density must be calculated.

Effect of Varying Speed

Fan size and gas density remain constant.

$$CFM_c = CFM \times \left(\frac{RPM_c}{RPM} \right) \quad SP_c = SP \times \left(\frac{RPM_c}{RPM} \right)^2$$

$$TP_c = TP \times \left(\frac{RPM_c}{RPM} \right)^2 \quad VP_c = VP \times \left(\frac{RPM_c}{RPM} \right)^2$$

$$BHP_c = BHP \times \left(\frac{RPM_c}{RPM} \right)^3$$

Effect of Changing Density

Fan size and speed remain constant.

$$CFM_c = CFM \quad SP_c = SP \times d_c / d$$

$$TP_c = TP \times d_c / d \quad VP_c = VP \times d_c / d$$

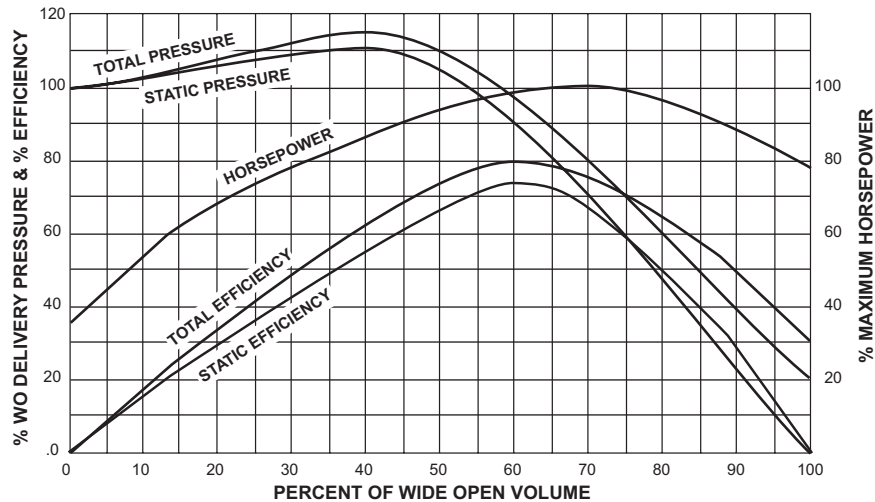
$$BHP_c = BHP \times d_c / d$$

Metric and Imperial Conversion Factors

MEASUREMENT	IMPERIAL UNIT	METRIC UNIT	CONVERSION FACTOR*
Volume Flow Rate	cfm (ft ³ /min)	cubic meters per second (m ³ /sec)	4.7195 x 10 ⁻⁴
	cfm (ft ³ /min)	cubic meters per hour (m ³ /h)	1.6990
	cfm (ft ³ /min)	liters per second (l/s)	4.7195 x 10 ⁻¹
	cfs (ft ³ /sec)	cubic meters per second (m ³ /s)	2.8316 x 10 ⁻²
Pressure	inches w.g.	pascal (pa or N/m ²)	2.4909 x 10 ²
	inches w.g.	kilopascal (kPa)	2.4909 x 10 ⁻¹
	inches w.g.	millibar (mbar)	2.4909
	inches Hg.	kilopascal (kPa)	3.3864
Power	hp (bhp or ahp)	watt (W or J/s)	7.4570 x 10 ²
	hp	kilowatt (kW)	7.4570 x 10 ⁻¹
Torque	lbf-in (lb-force-in)	newton meter (Nm)	1.1298 x 10 ⁻¹
	lbf-ft (lb-force-ft)	newton meter (Nm)	1.3558
Density	lb/ft ³	kilogram per cubic meter (kg/m ³)	1.6018 x 10
Tip Speed Outlet Velocity or Duct Velocity	fpm (ft/min)	meters per second (m/s)	5.0800 x 10 ⁻³
	fps (ft/sec)	meters per second (m/s)	3.0480 x 10 ⁻¹
	mph (miles/hr)	meters per second (m/s)	4.4704 x 10 ⁻¹
Dimensions	inches	millimeters (mm)	2.5400 x 10
	feet	meter (m)	3.0480 x 10 ⁻¹
	thou (mil) = .001 in	micrometer (μm)	2.5400 x 10
Moment of Inertia	lb-ft ²	kilogram meter squared (kg m ²)	4.2140 x 10 ⁻²
	slug-ft ²	kilogram meter squared (kg m ²)	1.3558
Energy (Work or Heat Equivalent)	hp hr (horsepower hour)	megajoule (MJ)	2.6845
	Btu (British thermal unit)	Kilojoule (kJ)	1.0551
	ft-lbf	joule (J)	1.3558
	kW hr	megajoule (MJ)	3.6000
Temperature	°F	kelvin	(°F + 459.67) ÷ 1.8
	°F	celsius (°C)	(°F - 32) ÷ 1.8

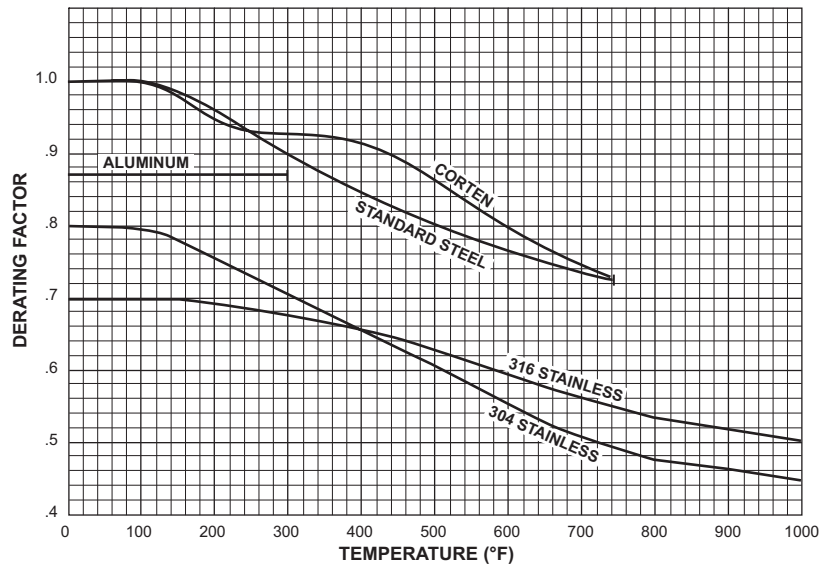
*Multiply imperial unit by this factor to obtain metric unit, except on temperature conversions.

Typical Performance Curve for Backward Inclined and Airfoil Fans

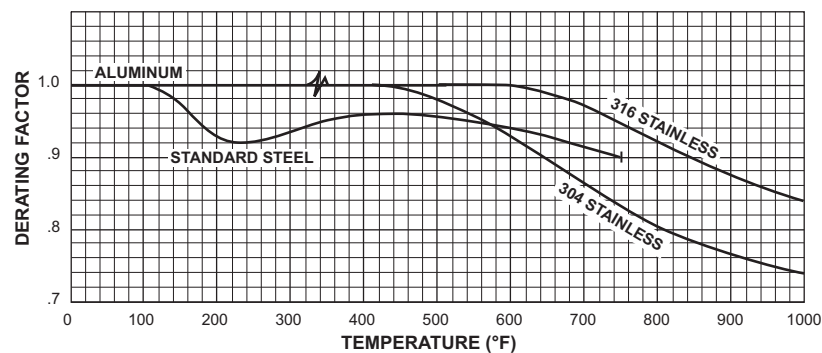


RPM Reduction Factors for High Temperature Operation

BACKWARD INCLINED WHEELS



AIRFOIL WHEELS



Engineering Notes

VCR Fan

Density Correction and Fan Selection

The performance tables which begin on page 20 enable you to determine precise speed and power requirements. Note that maximum efficiency points are in bold. For sound information refer to the backward inclined and airfoil "Sound Power Levels" section.

In accordance with AMCA standards, VCR performance tables are based on the standard air density of .075 lbs./cu. ft. This is the density of dry air at 70°F at 29.92" Hg barometric pressure (sea level).

To use the performance tables for densities other than .075:

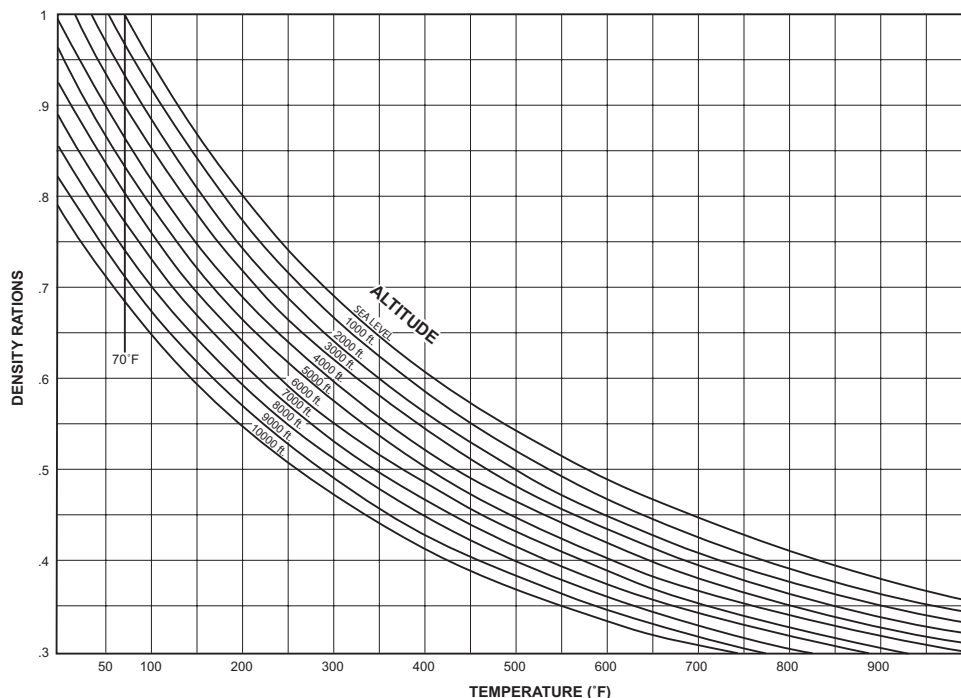
1. Determine the density ratio from the graph on this page using the actual temperature and altitude.
2. Divide the actual static pressure by the density ratio to establish the standard (equivalent) static pressure.
3. Use the standard static pressure and actual CFM to determine the fan RPM and brake horsepower (BHP) from the appropriate performance table.
4. Multiply the BHP from the table by the density ratio to find the actual BHP. It should be noted that a high temperature fan is often started up moving cold air. In such cases, motor starting requirements should reflect the actual air density at start up conditions.

Fan Selection Example: A single width airfoil fan is specified for the following job requirements: 15,000 CFM; 2.75" SP; 350°F air temperature; 2,000 feet above sea level; maximum outlet velocity (OV) 2,000 feet per minute.

1. From the graph below, the air density ratio is determined to be 0.61.

2. Divide the 2.75" actual static pressure by the air density ratio. The resulting standard (equivalent) static pressure is 4.5".
3. A quick examination of SWSI airfoil tables reveals that five different size fans, 270 through 402, can handle 15,000 CFM at 4.5" SP. However, the 2,000 FPM maximum outlet velocity reduces the possible fan selections to sizes 365 and 402 only. Since the 365 is more efficient, has a lower first cost, and takes up less space than the 402, the 365 is obviously the best selection.
4. The performance table indicates that the 365 AF will run at 993 RPM at 13.21 BHP. However, the BHP shown is based on a density of .075 lbs./cu. ft. and should be adjusted to actual conditions. Multiplying 13.21 BHP by the density ratio 0.61 gives the actual BHP of 8.06. While the fan is running at the specified conditions, a 10 horsepower motor will be sufficient, but cold air startup may require the use of a larger motor.
5. To be sure the 365 AF Class I fan is suitable for this application, the maximum wheel RPM must be checked at the operating temperature. From page 10 the maximum RPM for steel wheel at standard temperatures is found to be 1124. By using the bottom table on page 111, the de-rating factor for steel at 350°F is .955. Therefore, the maximum RPM at 350°F is $1124 \times .955 = 1073$, well above the 993 RPM required in this example.
6. The maximum allowable operating temperature for a single width VCR fan with standard construction is 300°F. Therefore, in this example situation, a 500°F heat fan package (see page 8) must be ordered on the fan selected.

Air Density Ratios at various altitudes and air temperatures



Furnish and install as shown on the plans the VCR airfoil and backward inclined fans as manufactured by PennBarry of Richardson, TX 75081. Unless otherwise noted, all fans shall conform to the layout shown on the drawings. Motor horsepower and outlet velocities shall not be exceeded.

Fans shall be constructed of low carbon steel and painted with an approved corrosion resistant coating. Each fan shall receive a documented inspection by a qualified inspector before leaving the factory. The inspection will include welding, dimensions, bearings and overall workmanship.

Wheels and Housings

The wheel diameters and discharge areas shall be in accordance with the standard sizes adopted by AMCA for non-overloading fans. Wheels shall be the efficient, non-overloading airfoil or backward inclined types only. Inlets shall be fully streamlined and housings shall be suitably braced to prevent vibration or pulsation. Housings shall be constructed of heavy-gauge steel and shall be continuously welded throughout. The standard coating shall be durable and heat resistant up to 500°F.

Shaft and Bearings

The first critical shaft speed of Class I or II fans shall be at least 125% of the fan's maximum operating speed. The first critical speed of Class III and IV fans shall be at least 142% of the fan's maximum operating speed. Bearings shall be designed for heavy-duty service with a minimum L_{10} life of 20,000, 40,000 or 80,000 hours. Bearings ratings are based on the fan's maximum cataloged operating speed. Bearings shall be either single row or double row spherical roller type in a one-piece cast iron housing, or a double row spherical roller type in a split cast iron pillowblock. Bearings shall be rigidly supported on heavy structural supports.

Accessories

Accessories shall be provided as called for in the plans and specifications. Required accessories include special bearings, spark resistant construction, access door, drain, variable inlet vanes with stainless steel rods, discharge shutter, discharge screen, shaft seal, inlet flange, discharge flange, companion flanges, belt guard, weather cover, and split housing.

Performance

Fan performance shall be based on tests conducted in accordance with AMCA Standard Test Code for Air Moving Devices. All fans shall have a sharply rising pressure characteristic extending through the operating range and continuing to rise well beyond the efficiency peak to assure quiet and stable operation under all conditions. Horsepower characteristics shall be truly non-overloading and shall reach a peak in the normal selection area. Fan manufacturer shall provide sound power ratings in the eight octave bands which shall be based on AMCA Standard 300-05, test setup number 1. Sound power ratings shall be in decibels referenced 10^{-12} watts.

Balancing

A factory dynamic balance shall be made on all fans after their assembly. An IRD or PMC analyzer shall be used to measure velocity, and the final reading shall not exceed 0.1 inches per second.

Submittals

Submittals for approval of equipment shall include _____ copies of outline drawings, sound power ratings, and pressure-volume performance curves showing point of operation.

One Year Limited Warranty

Centrifugal Fan – VCR

What Products Are Covered

PennBarry Commercial and Industrial Fans (each, a “PennBarry Product”)

One Year Limited Warranty For PennBarry Products

PennBarry warrants to the original commercial purchaser that the PennBarry Products will be free from defects in material and workmanship for a period of one (1) year from the date of shipment.

Exclusive Remedy

PennBarry will, at its option, repair or replace (without removal or installation) the affected components of any defective PennBarry Product; repair or replace (without removal or installation) the entire defective PennBarry Product; or refund the invoiced price of the PennBarry Product. In all cases, a reasonable time period must be allowed for warranty repairs to be completed.

What You Must Do

In order to make a claim under these warranties:

1. You must be the original commercial purchaser of the PennBarry Product.
2. You must promptly notify us within the warranty period of any defect and provide us with any substantiation that we may reasonably request.
3. The PennBarry Product must have been installed and maintained in accordance with good industry practice and any specific PennBarry recommendations.

Exclusions

These warranties do not cover defects caused by:

1. Improper design or operation of the system into which the PennBarry Product is incorporated.
2. Improper installation.
3. Accident, abuse or misuse.
4. Unreasonable use (including any use for non-commercial purposes, failure to provide reasonable and necessary maintenance as specified by PennBarry, misapplication and operation in excess of stated performance characteristics).
5. Components not manufactured by PennBarry.

Limitations

1. In all cases, PennBarry reserves the right to fully satisfy its obligations under the Limited Warranties by refunding the invoiced price of the defective PennBarry Product (or, if the PennBarry Product has been discontinued, of the most nearly comparable current product).
2. PennBarry reserves the right to furnish a substitute or replacement component or product in the event a PennBarry Product or any component of the product is discontinued or otherwise unavailable.
3. PennBarry's only obligation with respect to components not manufactured by PennBarry shall be to pass through the warranty made by the manufacturer of the defective component.

General

The foregoing warranties are exclusive and in lieu of all other warranties except that of title, whether written, oral or implied, in fact or in law (including any warranty of merchantability or fitness for a particular purpose).

PennBarry hereby disclaims any liability for special, punitive, indirect, incidental or consequential damages, including without limitation lost profits or revenues, loss of use of equipment, cost of capital, cost of substitute products, facilities or services, downtime, shutdown or slowdown costs.

The remedies of the original commercial purchaser set forth herein are exclusive and the liability of PennBarry with respect to the PennBarry Products, whether in contract, tort, warranty, strict liability or other legal theory shall not exceed the invoiced price charged by PennBarry to its customer for the affected PennBarry Product at the time the claim is made.

Inquiries regarding these warranties should be sent to: PennBarry, 1401 North Plano Road, Richardson, TX 75081.

OTHER PENNBARRY PRODUCTS

CENTRIFUGAL PRODUCTS



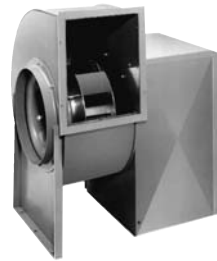
Domex
Centrifugal
Roof Exhausters



Fumex Fatrap
Kitchen Hood Centrifugal
Roof Exhausters



Zephyr
Ceiling and Inline Fans



Dynamo
Centrifugal Blowers



Centrex Inliner
Centrifugal Inline Fans



LC Dynafan
Low Contour Centrifugal
Roof Exhausters

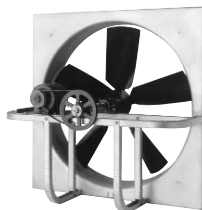


ESI
Efficient Silent
Inline Fan



Fume Exhaust
Curb Mounted
Centrifugal Fans

AXIAL / GRAVITY PRODUCTS



Breezeway
Propeller Wall Fans



HI-EX
Power Roof Ventilator



Tubeaxial
Inline Fans



Vaneaxial
Inline Fans



Powered Airette
Axial Roof Ventilators



Airette
Gravity Intake/Relief Hood



Domex Axial
Axial Roof Ventilators



Axcentrix
Bifurcator Fan

For more information contact your local PennBarry Sales
Manufacturer Representative or visit us at www.PennBarry.com

Performance Data

VCR Fan

105

BI SWSI

Wheel Diameter = 10.50 in.	Discharge Area = .63 sq. ft.
Inlet Area = .677 sq. ft.	Tip Speed, FPM = 2.75 x RPM
Maximum BHP = .036 (RPM / 1000) ³	

White area is Class I
Light blue area is Class II

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1-1/2" SP		1-3/4" SP		2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
300	476	851	0.07	1027	0.03																		
400	635	912	0.03	1057	0.04	1196	0.06	1328	0.08	1450	0.10	1468	0.11										
500	794	1007	0.04	1125	0.06	1242	0.07	1357	0.09	1468	0.11	1576	0.13	1679	0.15	1870	0.20						
600	952	1119	0.05	1221	0.07	1319	0.09	1417	0.11	1514	0.13	1609	0.15	1703	0.17	1884	0.22	2054	0.28	2214	0.34		
700	1111	1241	0.07	1330	0.09	1417	0.11	1502	0.13	1586	0.15	1669	0.18	1752	0.20	1915	0.25	2074	0.31	2227	0.37	2373	0.43
800	1270	1369	0.10	1449	0.12	1527	0.14	1602	0.16	1677	0.18	1751	0.21	1824	0.23	1970	0.29	2114	0.34	2255	0.41	2393	0.47
900	1429	1500	0.12	1574	0.15	1645	0.17	1713	0.20	1781	0.22	1847	0.25	1913	0.27	2044	0.33	2174	0.39	2302	0.45	2429	0.52
1000	1587	1635	0.16	1703	0.18	1768	0.21	1831	0.24	1893	0.26	1954	0.29	2014	0.32	2133	0.38	2251	0.44	2368	0.51	2484	0.57
1100	1746	1771	0.20	1834	0.23	1895	0.25	1954	0.28	2011	0.31	2068	0.34	2124	0.37	2233	0.44	2341	0.50	2448	0.57	2555	0.64
1200	1905	1910	0.25	1969	0.28	2025	0.31	2080	0.34	2134	0.37	2187	0.40	2239	0.43	2341	0.50	2441	0.57	2540	0.64	2639	0.71
1300	2063	2050	0.30	2105	0.33	2158	0.37	2210	0.40	2260	0.43	2310	0.47	2359	0.50	2454	0.57	2548	0.65	2641	0.72	2732	0.80
1400	2222	2191	0.37	2242	0.40	2293	0.43	2341	0.47	2389	0.51	2436	0.54	2482	0.58	2573	0.65	2661	0.73	2748	0.81	2834	0.89
1500	2381	2333	0.44	2381	0.48	2429	0.51	2475	0.55	2520	0.59	2565	0.63	2609	0.67	2694	0.75	2778	0.83	2860	0.91	2941	0.99
1600	2540	2476	0.53	2522	0.56	2566	0.60	2610	0.64	2653	0.68	2696	0.72	2737	0.76	2819	0.85	2898	0.93	2977	1.02	3053	1.11
1700	2698	2619	0.62	2663	0.66	2705	0.70	2747	0.74	2788	0.78	2828	0.83	2868	0.87	2946	0.96	3022	1.05	3096	1.14	3170	1.23
1800	2857	2763	0.73	2804	0.77	2845	0.81	2885	0.85	2924	0.90	2962	0.94	3000	0.99	3075	1.08	3148	1.17	3219	1.27	3289	1.37
1900	3016	2908	0.85	2947	0.89	2986	0.93	3024	0.98	3061	1.02	3098	1.07	3134	1.12	3206	1.21	3276	1.31	3344	1.41	3411	1.51
2000	3175	3053	0.98	3090	1.02	3127	1.07	3163	1.11	3199	1.16	3235	1.21	3269	1.26	3338	1.36	3405	1.46	3471	1.57	3536	1.67
2100	3333	3198	1.12	3234	1.17	3269	1.21	3304	1.26	3338	1.31	3372	1.36	3406	1.41	3472	1.52	3536	1.63	3600	1.73	3662	1.84
2200	3492	3343	1.28	3378	1.33	3411	1.38	3445	1.43	3478	1.48	3511	1.53	3543	1.58	3606	1.69	3669	1.80	3730	1.92	3790	2.03

CFM	OV	2 1/4" SP		2 1/2" SP		2 3/4" SP		3" SP		3 1/2"SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
800	1270	2526	0.54	2655	0.61	2780	0.69	2900	0.76														
900	1429	2554	0.59	2677	0.66	2796	0.74	2913	0.82	3136	0.98	3346	1.16										
1000	1587	2599	0.65	2713	0.72	2826	0.80	2936	0.88	3151	1.05	3357	1.23	3554	1.42	3741	1.61						
1100	1746	2661	0.71	2766	0.79	2871	0.87	2974	0.95	3178	1.12	3376	1.31	3567	1.50	3751	1.70	3928	1.91	4098	2.12		
1200	1905	2736	0.79	2834	0.87	2931	0.95	3027	1.03	3218	1.21	3406	1.40	3589	1.59	3768	1.80	3941	2.01	4108	2.23	4271	2.46
1300	2063	2823	0.88	2914	0.96	3004	1.04	3094	1.13	3272	1.30	3449	1.49	3623	1.69	3794	1.90	3961	2.12	4124	2.35	4283	2.58
1400	2222	2919	0.97	3003	1.06	3088	1.14	3171	1.23	3338	1.41	3504	1.61	3668	1.81	3831	2.02	3991	2.24	4148	2.47	4303	2.71
1500	2381	3021	1.08	3101	1.17	3180	1.26	3259	1.35	3416	1.53	3571	1.73	3726	1.94	3880	2.15	4032	2.37	4183	2.61	4331	2.85
1600	2540	3129	1.20	3205	1.29	3280	1.38	3354	1.47	3502	1.67	3648	1.87	3795	2.08	3940	2.30	4084	2.52	4227	2.76	4369	3.00
1700	2698	3242	1.32	3314	1.42	3385	1.52	3455	1.61	3595	1.81	3734	2.02	3872	2.24	4010	2.46	4147	2.69	4283	2.92		
1800	2857	3358	1.46	3427	1.56	3494	1.66	3562	1.77	3695	1.97	3827	2.19	3958	2.41	4088	2.63	4218	2.87	4348	3.11		
1900	3016	3478	1.62	3543	1.72	3608	1.82	3672	1.93	3799	2.14	3925	2.37	4050	2.59	4174	2.82	4298	3.06				
2000	3175	3599	1.78	3662	1.89	3725	2.00	3786	2.11	3908	2.33	4028	2.56	4148	2.79	4266	3.03	4384	3.27				
2100	3333	3723	1.96	3784	2.07	3844	2.18	3903	2.30	4020	2.53	4136	2.76	4250	3.00	4364	3.25						
2200	3492	3849	2.15	3908	2.26	3966	2.38	4023	2.50	4136	2.74	4247	2.98	4357	3.23								
2300	3651	3977	2.35	4033	2.47	4089	2.59	4145	2.72	4254	2.97	4361	3.22										
2400	3810	4105	2.57	4161	2.70	4215	2.82	4268	2.95	4374	3.21												
2500	3968	4236	2.81	4289	2.94	4342	3.07	4394	3.20														
2600	4127	4368	3.06																				

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

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BI SWSI

Wheel Diameter = 12.25 in.	Discharge Area = .86 sq. ft.
Inlet Area = .920 sq. ft.	Tip Speed, FPM = 3.21 x RPM
Maximum BHP = .079 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
660	767	840	0.05	937	0.06	1026	0.08	1110	0.10	1189	0.12	1265	0.14	1338	0.16	1478	0.20						
720	837	880	0.05	973	0.07	1058	0.08	1138	0.11	1214	0.13	1287	0.15	1357	0.17	1492	0.22	1619	0.27				
780	907	922	0.06	1011	0.08	1093	0.10	1170	0.12	1243	0.14	1313	0.16	1380	0.17	1509	0.22	1632	0.29				
840	977	966	0.07	1050	0.08	1129	0.11	1203	0.13	1274	0.15	1341	0.17	1406	0.20	1530	0.25	1649	0.30	1871	0.41		
900	1047	1011	0.08	1091	0.10	1167	0.12	1238	0.14	1306	0.17	1372	0.19	1435	0.20	1555	0.27	1669	0.32	1884	0.44	2085	0.58
960	1116	1057	0.08	1133	0.11	1206	0.14	1275	0.16	1341	0.17	1404	0.20	1465	0.22	1582	0.28	1692	0.34	1901	0.45	2096	0.60
1020	1186	1104	0.11	1176	0.13	1246	0.15	1313	0.17	1377	0.20	1439	0.22	1498	0.25	1611	0.30	1718	0.35	1920	0.48	2110	0.63
1080	1256	1152	0.12	1221	0.14	1288	0.17	1353	0.19	1415	0.22	1474	0.24	1532	0.27	1642	0.32	1746	0.38	1942	0.51	2127	0.64
1140	1326	1200	0.14	1267	0.16	1331	0.17	1393	0.20	1453	0.24	1511	0.26	1567	0.29	1674	0.34	1776	0.40	1967	0.54	2147	0.68
1200	1395	1249	0.15	1313	0.17	1375	0.20	1435	0.22	1493	0.26	1549	0.28	1604	0.30	1708	0.36	1808	0.43	1994	0.56	2169	0.70
1260	1465	1299	0.17	1360	0.20	1420	0.22	1477	0.25	1534	0.28	1588	0.30	1642	0.34	1744	0.40	1840	0.45	2023	0.60	2193	0.73
1320	1535	1350	0.19	1408	0.22	1465	0.25	1521	0.28	1576	0.30	1629	0.32	1680	0.35	1780	0.43	1875	0.48	2053	0.63	2219	0.78
1380	1605	1400	0.20	1457	0.24	1512	0.27	1566	0.30	1618	0.32	1670	0.35	1720	0.39	1817	0.45	1910	0.52	2084	0.65	2247	0.81
1580	1837	1572	0.30	1622	0.32	1671	0.36	1719	0.40	1766	0.43	1813	0.46	1859	0.50	1948	0.56	2034	0.64	2197	0.79	2350	0.94
1780	2070	1746	0.40	1792	0.44	1836	0.48	1879	0.52	1922	0.56	1964	0.60	2006	0.63	2088	0.70	2168	0.79	2320	0.94	2465	1.12
1980	2302	1923	0.54	1964	0.58	2005	0.63	2044	0.66	2083	0.70	2122	0.75	2160	0.79	2235	0.88	2309	0.96	2452	1.13	2588	1.31
2180	2535	2100	0.69	2139	0.75	2176	0.80	2212	0.83	2248	0.88	2284	0.93	2319	0.97	2389	1.06	2457	1.16	2590	1.36	2718	1.54
2380	2767	2279	0.89	2315	0.94	2350	1.00	2383	1.04	2417	1.10	2450	1.14	2482	1.20	2547	1.29	2610	1.39	2735	1.60	2855	1.81
2580	3000	2459	1.12	2492	1.18	2525	1.22	2556	1.29	2588	1.33	2618	1.39	2649	1.45	2709	1.56	2768	1.67	2885	1.88	2998	2.11
2780	3233	2639	1.38	2671	1.45	2701	1.50	2731	1.56	2760	1.62	2789	1.67	2818	1.73	2874	1.86	2930	1.97	3039	2.20	3146	2.45

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1020	1186	2290	0.78																				
1080	1256	2302	0.80	2470	0.96																		
1140	1326	2317	0.83	2481	1.00	2638	1.16																
1200	1395	2335	0.86	2495	1.03	2648	1.20	2797	1.38														
1260	1465	2356	0.89	2511	1.06	2661	1.25	2807	1.43	2947	1.62												
1320	1535	2378	0.93	2530	1.11	2677	1.29	2819	1.47	2957	1.67	3091	1.87										
1380	1605	2402	0.97	2551	1.14	2695	1.33	2834	1.52	2969	1.72	3100	1.92	3228	2.13								
1580	1837	2495	1.12	2634	1.29	2768	1.48	2898	1.68	3025	1.88	3148	2.11	3269	2.33	3387	2.56	3502	2.79	3615	3.02	3726	3.27
1780	2070	2602	1.29	2733	1.48	2859	1.67	2982	1.88	3101	2.09	3217	2.32	3331	2.54	3442	2.77	3551	3.02	3658	3.27	3763	3.52
1980	2302	2718	1.51	2843	1.70	2963	1.91	3079	2.12	3192	2.33	3302	2.56	3410	2.79	3515	3.04	3618	3.29	3720	3.54	3820	3.79
2180	2535	2842	1.75	2961	1.95	3075	2.16	3186	2.38	3294	2.62	3399	2.84	3502	3.08	3602	3.34	3701	3.59	3798	3.84	3893	4.12
2380	2767	2972	2.02	3086	2.25	3195	2.47	3302	2.70	3405	2.93	3506	3.17	3604	3.42	3701	3.67	3795	3.94	3888	4.20	3979	4.48
2580	3000	3109	2.33	3217	2.57	3322	2.81	3424	3.04	3523	3.29	3620	3.54	3715	3.79	3807	4.07	3998	4.33	3987	4.60	4075	4.89
2780	3233	3251	2.68	3353	2.92	3454	3.17	3551	3.44	3647	3.69	3740	3.95	3832	4.23	3921	4.50	4009	4.77	4095	5.05	4179	5.34
2980	3465	3398	3.08	3495	3.34	3591	3.59	3684	3.87	3776	4.14	3866	4.41	3954	4.69	4040	4.98	4125	5.26	4208	5.55	4290	5.85
3180	3698	3548	3.52	3641	3.79	3732	4.07	3822	4.34	3910	4.62	3996	4.91	4081	5.20	4165	5.50	4247	5.80	4327	6.10	4406	6.41
3380	3930	3703	4.00	3791	4.29	3878	4.58	3964	4.87	4048	5.16	4131	5.47	4213	5.76	4294	6.08	4373	6.39	4451	6.70	4528	7.03
3580	4163	3860	4.52	3944	4.83	4027	5.14	4109	5.44	4190	5.75	4270	6.07	4349	6.39	4427	6.70	4504	7.04	4579	7.35	4653	7.69
3780	4395	4020	5.10	4101	5.42	4180	5.75	4259	6.07	4336	6.40	4413	6.73	4489	7.05	4564	7.40	4638	7.73	4711	8.07	4783	8.41

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1780	2070	3867	3.79	3969	4.05	4168	4.59																
1980	2302	3918	4.07	4015	4.33	4205	4.91	4390	5.50	4570	6.09												
2180	2535	3987	4.39	4079	4.66	4260	5.25	4437	5.84	4609	6.46	4778	7.11	4943	7.78	5104	8.46						
2380	2767	4068	4.75	4157	5.05	4330	5.64	4499	6.25	4664	6.89	4826	7.54	4985	8.21	5140	8.91	5293	9.61	5443	10.35	5590	11.10
2580	3000	4161	5.17	4246	5.47	4412	6.08	4574	6.69	4733	7.34	4888	8.00	5041	8.69	5191	9.41	5338	10.13	5483	10.88	5625	11.64
2780	3233	4262	5.65	4344	5.94	4504	6.55	4661	7.19	4813	7.85	4963	8.53	5110	9.24	5254	9.96	5396	10.69	5535	11.44	5673	12.21
2980	3465	4370	6.16	4449	6.46	4605	7.09	4756	7.75	4903	8.42	5048	9.11	5189	9.83	5329	10.55	5466	11.30	5600	12.08	5733	12.86
3180	3698	4484	6.73	4561	7.05	4711	7.69	4858	8.36	5001	9.05	5141	9.75	5278	10.49	5413	11.23	5545	11.99	5676	12.76		
3380	3930	4603	7.34	4678	7.68	4824	8.35	4966	9.03	5105	9.74	5241	10.46	5374	11.19	5505	11.96	5633	12.74	5760	13.53		
3580	4163	4727	8.03	4799	8.36	4941	9.05	5079	9.76	5215	10.49	5347	11.23	5476	11.98	5604	12.75	5729	13.55				
3780	4395	4854	8.75	4925	9.11	5063	9.83	5197	10.55	5329	11.30	5458	12.05	5584	12.83	5708	13.61						
3980	4628	4986	9.55	5054	9.91	5188	10.66	5319	11.41	5448	12.16	5573	12.94	5697	13.73								
4180	4860	5121	10.41	5187	10.78	5318	11.55	5445	12.32	5570	13.11	5693	13.91										
4380	5093	5259	11.33	5323	11.71	5450	12.50	5574	13.30	5696	14.11												
4580	5326	5401	12.30	5463	12.71	5586	13.53	5707	14.35														
4780	5558	5545	13.36	5605	13.78	5725	14.61																
4980	5791	5692	14.48	5751	14.91																		

Performance Data

VCR Fan

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BI SWSI

Wheel Diameter = 13.50 in.	Discharge Area = 1.05 sq. ft.
Inlet Area = 1.120 sq. ft.	Tip Speed, FPM = 3.53 x RPM
Maximum BHP = .128 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
800	762	762	0.06	850	0.07	931	0.10	1006	0.12	1078	0.14	1148	0.17	1214	0.20	1341	0.25						
880	838	802	0.07	885	0.08	963	0.11	1035	0.13	1104	0.16	1170	0.17	1233	0.20	1355	0.27	1470	0.32				
960	914	844	0.08	923	0.10	997	0.12	1067	0.15	1132	0.17	1195	0.20	1256	0.22	1373	0.29	1483	0.34	1691	0.50		
1040	990	887	0.08	963	0.11	1033	0.14	1100	0.16	1164	0.19	1224	0.22	1283	0.25	1394	0.30	1501	0.36	1701	0.52		
1120	1067	932	0.10	1004	0.13	1072	0.15	1136	0.17	1197	0.20	1255	0.24	1312	0.27	1420	0.32	1522	0.40	1715	0.55	1895	0.70
1200	1143	979	0.12	1046	0.15	1111	0.17	1173	0.20	1232	0.22	1289	0.26	1343	0.29	1447	0.34	1546	0.41	1733	0.58	1907	0.73
1400	1333	1098	0.17	1158	0.20	1216	0.22	1272	0.26	1326	0.29	1379	0.32	1429	0.35	1526	0.43	1618	0.50	1790	0.65	1952	0.83
1600	1524	1223	0.22	1276	0.27	1328	0.30	1378	0.32	1428	0.36	1476	0.40	1523	0.44	1614	0.52	1700	0.59	1861	0.76	2013	0.93
1800	1714	1350	0.30	1398	0.34	1445	0.39	1491	0.41	1536	0.45	1581	0.50	1624	0.54	1708	0.61	1789	0.70	1942	0.88	2085	1.06
2000	1905	1479	0.40	1523	0.44	1566	0.48	1608	0.53	1649	0.56	1690	0.61	1731	0.65	1809	0.75	1885	0.83	2030	1.03	2166	1.21
2200	2095	1610	0.52	1650	0.56	1690	0.60	1729	0.65	1767	0.70	1805	0.75	1842	0.80	1915	0.88	1987	0.98	2124	1.18	2253	1.39
2400	2286	1741	0.65	1779	0.70	1816	0.76	1852	0.81	1887	0.86	1923	0.91	1957	0.96	2026	1.06	2093	1.16	2222	1.37	2346	1.60
2600	2476	1874	0.81	1909	0.86	1944	0.91	1977	0.97	2011	1.03	2043	1.08	2076	1.13	2140	1.25	2203	1.37	2325	1.58	2443	1.82
2800	2667	2008	1.00	2041	1.06	2073	1.12	2105	1.18	2136	1.22	2167	1.29	2197	1.35	2257	1.46	2316	1.58	2432	1.82	2544	2.08
3000	2857	2142	1.20	2173	1.27	2203	1.33	2233	1.39	2263	1.45	2292	1.53	2320	1.58	2377	1.72	2433	1.83	2542	2.09	2649	2.36
3200	3048	2276	1.45	2306	1.52	2335	1.58	2363	1.64	2391	1.72	2418	1.79	2445	1.85	2499	1.98	2552	2.12	2656	2.40	2757	2.66
3400	3238	2411	1.72	2439	1.79	2467	1.86	2494	1.92	2520	2.00	2546	2.08	2572	2.15	2623	2.29	2673	2.43	2771	2.72	2868	3.02
3600	3429	2546	2.02	2573	2.09	2599	2.16	2625	2.25	2650	2.33	2675	2.40	2700	2.47	2748	2.62	2796	2.77	2890	3.08	2982	3.39
3800	3619	2682	2.34	2707	2.43	2732	2.52	2757	2.59	2781	2.67	2805	2.75	2828	2.83	2875	3.00	2920	3.16	3010	3.47	3098	3.79
4000	3810	2817	2.72	2842	2.81	2866	2.90	2890	2.99	2913	3.07	2935	3.16	2958	3.24	3002	3.40	3046	3.58	3132	3.91	3216	4.25

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	1143	2073	0.93			2396	1.43																
1400	1333	2106	1.02	2254	1.21	2428	1.56																
1600	1524	2157	1.13	2295	1.33	2477	1.70	2557	1.79	2683	2.02	2804	2.27										
1800	1714	2221	1.27	2351	1.48	2477	1.70	2599	1.95	2717	2.18	2833	2.45	2946	2.70	3056	2.97	3163	3.27				
2000	1905	2295	1.43	2419	1.64	2538	1.87	2654	2.12	2766	2.37	2876	2.63	2983	2.91	3088	3.18	3190	3.47	3291	3.77	3390	4.08
2200	2095	2377	1.62	2495	1.85	2609	2.08	2719	2.33	2826	2.58	2930	2.86	3033	3.13	3133	3.41	3231	3.72	3327	4.01	3422	4.33
2400	2286	2464	1.82	2577	2.07	2686	2.31	2792	2.57	2895	2.83	2995	3.11	3092	3.39	3188	3.67	3282	3.97	3374	4.29	3465	4.60
2600	2476	2556	2.07	2665	2.31	2770	2.57	2872	2.83	2970	3.11	3067	3.39	3161	3.67	3252	3.97	3343	4.29	3431	4.59	3518	4.91
2800	2667	2652	2.33	2757	2.58	2858	2.86	2956	3.12	3052	3.41	3144	3.70	3235	4.00	3324	4.30	3411	4.62	3496	4.94	3580	5.27
3000	2857	2752	2.62	2853	2.90	2951	3.17	3045	3.45	3137	3.75	3227	4.05	3315	4.35	3401	4.67	3485	5.00	3567	5.33	3649	5.66
3200	3048	2856	2.95	2952	3.24	3046	3.52	3138	3.83	3227	4.12	3314	4.44	3399	4.75	3482	5.08	3564	5.41	3644	5.75	3723	6.08
3400	3238	2963	3.30	3055	3.60	3146	3.90	3234	4.22	3320	4.54	3405	4.85	3487	5.19	3568	5.51	3647	5.85	3725	6.19	3802	6.55
3600	3429	3072	3.70	3161	4.01	3248	4.33	3333	4.66	3417	4.98	3499	5.32	3579	5.65	3657	6.00	3734	6.34	3810	6.69	3885	7.05
3800	3619	3184	4.12	3270	4.45	3353	4.79	3436	5.12	3516	5.47	3596	5.80	3673	6.16	3750	6.51	3825	6.88	3898	7.24	3971	7.60
4000	3810	3299	4.58	3381	4.94	3461	5.27	3541	5.62	3619	5.99	3695	6.34	3771	6.70	3845	7.08	3918	7.44	3990	7.83	4060	8.21
4200	4000	3415	5.09	3494	5.45	3571	5.82	3648	6.17	3723	6.55	3798	6.91	3871	7.30	3943	7.68	4014	8.05	4084	8.44	4153	8.85
4400	4190	3534	5.64	3609	6.01	3684	6.39	3758	6.76	3831	7.15	3902	7.54	3973	7.93	4043	8.32	4112	8.71	4180	9.11	4248	9.53
4600	4781	3654	6.23	3726	6.61	3798	7.00	3870	7.41	3940	7.80	4010	8.19	4078	8.60	4146	9.00	4213	9.01	4280	9.83	4345	10.25
4800	4571	3775	6.85	3845	7.26	3915	7.68	3983	8.08	4051	8.50	4119	8.91	4185	9.33	4251	9.75	4316	10.17	4381	10.60	4445	11.03
5000	4762	3898	7.54	3965	7.95	4032	8.39	4099	8.80	4165	9.24	4230	9.66	4294	10.10	4358	10.53	4422	10.98	4484	11.41	4546	11.85

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	2095	3515	4.65	3607	4.97	3786	5.65																
2400	2286	3555	4.94	3643	5.26	3815	5.94	3983	6.66	4146	7.41												
2600	2476	3604	5.25	3689	5.58	3855	6.29	4016	7.01	4174	7.76	4328	8.55	4479	9.35								
2800	2667	3663	5.60	3744	5.95	3904	6.66	4060	7.41	4212	8.16	4361	8.96	4507	9.76	4651	10.60	4791	11.46	4929	12.35		
3000	2857	3729	6.00	3807	6.35	3961	7.08	4112	7.83	4259	8.60	4403	9.41	4544	10.24	4683	11.08	4820	11.96	4954	12.85	5085	13.76
3200	3048	3800	6.44	3876	6.80	4026	7.53	4171	8.30	4314	9.08	4453	9.89	4590	10.74	4725	11.60	4857	12.49	4987	13.38	5115	14.32
3400	3238	3877	6.91	3951	7.28	4096	8.03	4237	8.80	4375	9.60	4511	10.44	4643	11.28	4774	12.16	4902	13.06	5028	13.98	5153	14.91
3600	3429	3958	7.43	4030	7.80	4171	8.57	4308	9.35	4442	10.17	4574	11.01	4703	11.88	4829	12.76	4954	13.67	5077	14.61	5198	15.56
3800	3619	4042	7.99	4112	8.38	4250	9.16	4384	9.96	4514	10.80	4642	11.64	4768	12.53	4891	13.42	5013	14.35	5132	15.28		
4000	3810	4130	8.60	4198	8.99	4332	9.78	4463	10.61	4591	11.46	4716	12.33	4838	13.21	4958	14.13	5076	15.07	5193	16.03		
4200	4000	4220	9.24	4287	9.64	4418	10.46	4546	11.30	4671	12.17	4793	13.06	4912	13.96	5029	14.89	5145	15.83				
4400	4190	4314	9.94	4379	10.35	4507	11.19	4632	12.05	4754	12.93	4873	13.85	4990	14.76	5105	15.71	5217	16.67				
4600	4381	4409	10.67	4473	11.10	4598	11.96	4720	12.86	4840	13.76	4956	14.67	5071	15.61	5183	16.57						
4800	4571	4508	11.46	4570	11.91	4692	12.80	4811	13.69	4928	14.63	5043	15.57	5155	16.53								
5000	4762	4608	12.30	4668	12.75	4788	13.67	4905	14.61	5019	15.55	5131	16.51										
5200	4952	4710	13.19	4769	13.66	4886	14.61	5000	15.56	5112	16.53	5222	17.51										
5400	5143	4815	14.13	4872	14.61	4986	15.58	5098	16.57	5208	17.56												
5600	5333	4921	15.13	4977	15.63	5088	16.63	5197	17.63														
5800	5524	5029	16.20	5084	16.70	5192	17.73																
6000	5714	5138	17.31	5192	17.82																		

150

BI SWSI

Wheel Diameter = 15 in.	Discharge Area = 1.29 sq. ft.
Inlet Area = 1.390 sq. ft.	Tip Speed, FPM = 3.93 x RPM
Maximum BHP = .217 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	775	690	0.07	769	0.08	841	0.12	909	0.15	973	0.17	1035	0.20	1095	0.24	1208	0.32						
1100	853	727	0.08	801	0.11	871	0.13	935	0.16	997	0.19	1056	0.22	1112	0.26	1221	0.34	1324	0.41				
1200	930	765	0.10	836	0.12	902	0.15	964	0.17	1023	0.20	1080	0.25	1134	0.28	1238	0.35	1337	0.44	1523	0.61		
1300	1008	805	0.11	872	0.14	936	0.17	995	0.20	1052	0.24	1106	0.27	1159	0.30	1258	0.38	1353	0.46	1532	0.64		
1400	1085	846	0.13	910	0.16	971	0.19	1028	0.22	1083	0.26	1135	0.30	1185	0.32	1282	0.40	1373	0.50	1546	0.68	1708	0.88
1500	1163	889	0.15	949	0.17	1007	0.22	1062	0.25	1115	0.29	1166	0.32	1214	0.35	1308	0.44	1396	0.53	1563	0.71	1719	0.93
1600	1240	932	0.17	989	0.20	1044	0.24	1098	0.28	1149	0.32	1198	0.35	1245	0.40	1335	0.48	1421	0.56	1582	0.76	1734	0.96
1700	1318	976	0.20	1030	0.24	1083	0.27	1134	0.30	1183	0.34	1231	0.39	1277	0.43	1365	0.52	1448	0.60	1604	0.80	1751	1.02
1800	1395	1021	0.22	1073	0.27	1123	0.30	1172	0.34	1219	0.39	1265	0.43	1310	0.46	1395	0.56	1476	0.64	1629	0.85	1771	1.06
1900	1473	1066	0.26	1115	0.30	1164	0.34	1211	0.38	1257	0.41	1301	0.46	1344	0.51	1427	0.60	1506	0.69	1655	0.89	1794	1.12
2000	1550	1112	0.29	1159	0.34	1205	0.38	1251	0.41	1295	0.46	1338	0.51	1380	0.56	1461	0.64	1537	0.75	1682	0.94	1818	1.18
2100	1628	1158	0.32	1203	0.38	1248	0.41	1291	0.46	1334	0.51	1375	0.56	1416	0.60	1495	0.69	1570	0.80	1711	1.01	1843	1.23
2200	1705	1204	0.36	1248	0.41	1291	0.46	1333	0.51	1374	0.56	1414	0.60	1453	0.65	1530	0.76	1603	0.86	1741	1.08	1871	1.31
2500	1938	1346	0.52	1385	0.56	1423	0.61	1461	0.66	1498	0.72	1534	0.78	1570	0.83	1640	0.94	1708	1.06	1837	1.29	1959	1.54
2800	2171	1489	0.69	1525	0.75	1559	0.81	1593	0.86	1627	0.93	1660	0.98	1693	1.04	1757	1.16	1820	1.29	1941	1.54	2056	1.81
3100	2403	1633	0.91	1666	0.97	1698	1.04	1729	1.11	1760	1.18	1790	1.23	1820	1.31	1880	1.43	1938	1.56	2051	1.83	2159	2.12
3400	2636	1779	1.18	1809	1.25	1839	1.31	1868	1.38	1896	1.45	1924	1.54	1952	1.61	2007	1.75	2061	1.89	2166	2.18	2268	2.49
3700	2868	1926	1.48	1954	1.56	1981	1.63	2008	1.72	2035	1.79	2061	1.87	2087	1.95	2138	2.11	2188	2.27	2287	2.58	2383	2.91
4000	3101	2073	1.85	2099	1.93	2125	2.02	2150	2.11	2175	2.18	2199	2.27	2224	2.36	2271	2.52	2318	2.70	2411	3.04	2501	3.37
4300	3333	2220	2.27	2245	2.36	2269	2.45	2293	2.54	2317	2.63	2340	2.72	2362	2.82	2407	3.00	2451	3.17	2538	3.54	2623	3.90

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	1163	1867	1.14																				
1600	1240	1878	1.20	2015	1.43																		
1700	1318	1891	1.25	2025	1.48	2154	1.75																
1800	1395	1907	1.29	2038	1.54	2163	1.81	2284	2.08														
1900	1473	1926	1.36	2053	1.61	2175	1.87	2293	2.16	2408	2.45												
2000	1550	1947	1.41	2070	1.67	2189	1.93	2305	2.22	2417	2.52	2526	2.83										
2100	1628	1969	1.47	2090	1.73	2206	2.02	2319	2.29	2428	2.59	2535	2.91	2639	3.24								
2200	1705	1993	1.54	2111	1.82	2225	2.08	2335	2.37	2442	2.68	2547	3.00	2649	3.33	2748	3.65						
2500	1938	2075	1.79	2185	2.07	2292	2.34	2395	2.65	2496	2.97	2594	3.29	2690	3.62	2783	3.97	2875	4.33	2966	4.69	3054	5.07
2800	2171	2165	2.08	2270	2.37	2371	2.66	2469	2.97	2564	3.29	2656	3.62	2747	3.97	2835	4.33	2922	4.69	3008	5.07	3092	5.45
3100	2403	2263	2.41	2363	2.72	2459	3.02	2552	3.34	2642	3.67	2730	4.02	2816	4.37	2901	4.75	2983	5.12	3064	5.50	3144	5.90
3400	2636	2367	2.79	2462	3.12	2554	3.44	2643	3.77	2729	4.12	2813	4.48	2896	4.84	2976	5.20	3055	5.60	3133	6.00	3209	6.41
3700	2868	2476	3.24	2566	3.57	2654	3.91	2739	4.26	2822	4.62	2903	5.00	2982	5.37	3060	5.76	3135	6.16	3210	6.56	3283	6.98
4000	3101	2589	3.72	2676	4.08	2759	4.44	2841	4.82	2921	5.19	2999	5.58	3075	5.97	3149	6.37	3222	6.78	3294	7.19	3364	7.63
4300	3333	2707	4.27	2789	4.66	2869	5.04	2947	5.42	3024	5.82	3099	6.23	3172	6.64	3244	7.05	3315	7.48	3384	7.91	3452	8.35
4600	3566	2828	4.90	2906	5.30	2983	5.69	3058	6.10	3131	6.51	3204	6.94	3274	7.36	3344	7.80	3412	8.24	3479	8.69	3545	9.14
4900	3798	2953	5.58	3027	6.00	3100	6.41	3172	6.84	3242	7.29	3312	7.73	3380	8.16	3447	8.63	3513	9.08	3578	9.55	3642	10.01
5200	4031	3080	6.33	3151	6.78	3220	7.21	3289	7.66	3357	8.13	3424	8.58	3489	9.05	3554	9.53	3618	10.00	3681	10.48	3742	10.96
5500	4264	3210	7.16	3277	7.63	3344	8.10	3409	8.57	3474	9.05	3539	9.53	3602	10.00	3664	10.50	3726	11.00	3787	11.50	3847	12.00
5800	4496	3342	8.07	3406	8.55	3470	9.05	3533	9.55	3595	10.05	3657	10.55	3717	11.05	3778	11.57	3837	12.08	3896	12.60	3954	13.13

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1938	3141	5.45																				
2800	2171	3175	5.85	3256	6.25	3415	7.09	3570	7.96														
3100	2403	3223	6.30	3300	6.71	3452	7.58	3600	8.46	3744	9.39	3885	10.33										
3400	2636	3284	6.81	3358	7.25	3503	8.11	3644	9.03	3782	9.96	3918	10.94	4050	11.94	4180	12.96	4307	14.03				
3700	2868	3355	7.41	3426	7.83	3564	8.73	3700	9.66	3832	10.61	3962	11.60	4089	12.63	4214	13.67	4337	14.75	4458	15.86	4577	16.98
4000	3101	3434	8.05	3502	8.50	3635	9.41	3766	10.36	3893	11.33	4018	12.35	4140	13.38	4260	14.46	4379	15.55	4495	16.67	4610	17.82
4300	3333	3519	8.80	3585	9.25	3714	10.19	3839	11.14	3962	12.14	4083	13.17	4201	14.23	4316	15.32	4430	16.42	4543	17.57	4653	18.73
4600	3566	3609	9.60	3673	10.07	3798	11.03	3920	12.01	4039	13.03	4155	14.08	4269	15.16	4381	16.26	4491	17.39	4600	18.56	4707	19.73
4900	3798	3704	10.49	3766	10.98	3888	11.96	4006	12.98	4121	14.01	4234	15.08	4344	16.18	4453	17.31	4559	18.46	4665	19.64		
5200	4031	3803	11.46	3863	11.96	3981	12.98	4096	14.01	4208	15.08	4318	16.17	4425	17.29	4530	18.45	4634	19.61				
5500	4264	3906	12.51	3964	13.03	4079	14.08	4190	15.14	4299	16.25	4406	17.36	4511	18.51	4613	19.68						
5800	4496	4011	13.66	4068	14.18	4179	15.26	4288	16.38	4394	17.50	4498	18.64	4600	19.82	4701	21.01						
6100	4729	4120	14.88	4175	15.43	4283	16.56	4389	17.70	4493	18.85	4594	20.03	4694	21.23								
6400	4961	4232	16.21	4285	16.78	4390	17.93	4493	19.10	4594	20.31	4693	21.51										
6700	5194	4346	17.63	4398	18.21	4500	19.42	4600	20.63	4698	21.85												
7000	5426	4462	19.14	4513	19.76	4612	21.00																
7300	5659	4581	20.76	4630	21.39																		

Performance Data

VCR Fan

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BI SWSI

Wheel Diameter = 16.50 in.	Discharge Area = 1.57 sq. ft.
Inlet Area = 1.607 sq. ft.	Tip Speed, FPM = 4.32 x RPM
Maximum BHP = .349 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	764	624	0.08	696	0.11	763	0.14	824	0.17	883	0.20	940	0.25	994	0.29	1098	0.38	1210	0.52				
1400	892	680	0.11	746	0.14	808	0.17	865	0.20	920	0.25	972	0.29	1022	0.32	1118	0.41						
1600	1019	740	0.14	801	0.17	858	0.20	911	0.25	962	0.29	1011	0.32	1059	0.38	1149	0.46	1234	0.56	1396	0.79	1546	1.04
1800	1146	803	0.17	858	0.22	911	0.26	962	0.30	1010	0.34	1056	0.39	1101	0.43	1186	0.53	1266	0.64	1419	0.86	1561	1.11
2000	1274	868	0.22	919	0.27	968	0.30	1015	0.35	1061	0.40	1105	0.44	1147	0.50	1228	0.60	1304	0.70	1449	0.93	1584	1.20
2200	1401	935	0.28	982	0.32	1028	0.38	1072	0.43	1115	0.46	1156	0.53	1197	0.58	1274	0.68	1347	0.80	1485	1.04	1614	1.29
2400	1529	1004	0.34	1047	0.40	1089	0.44	1131	0.50	1171	0.56	1211	0.60	1249	0.65	1323	0.78	1393	0.88	1525	1.13	1649	1.41
2600	1656	1073	0.43	1114	0.48	1153	0.54	1192	0.59	1230	0.64	1267	0.69	1304	0.76	1374	0.88	1442	1.00	1569	1.26	1688	1.54
2800	1783	1144	0.51	1182	0.56	1219	0.63	1255	0.68	1291	0.75	1326	0.81	1361	0.86	1428	1.00	1493	1.12	1615	1.38	1730	1.67
3000	1911	1214	0.60	1250	0.66	1285	0.73	1320	0.80	1353	0.86	1387	0.93	1420	0.98	1484	1.12	1546	1.26	1664	1.54	1775	1.83
3200	2038	1286	0.71	1320	0.79	1353	0.86	1385	0.93	1418	0.98	1449	1.06	1480	1.12	1542	1.27	1601	1.41	1715	1.70	1823	2.00
3400	2166	1358	0.85	1390	0.91	1422	0.98	1452	1.06	1483	1.13	1513	1.20	1543	1.28	1601	1.43	1658	1.58	1768	1.87	1872	2.20
3600	2293	1430	0.98	1461	1.06	1491	1.13	1520	1.21	1549	1.29	1578	1.37	1606	1.45	1662	1.60	1717	1.76	1822	2.08	1923	2.41
3800	2420	1503	1.14	1532	1.22	1561	1.31	1589	1.38	1617	1.46	1644	1.54	1671	1.62	1724	1.79	1777	1.95	1878	2.29	1976	2.62
4000	2548	1576	1.31	1604	1.39	1631	1.48	1658	1.56	1685	1.66	1711	1.73	1737	1.82	1788	1.98	1838	2.16	1936	2.50	2031	2.87
4200	2675	1649	1.51	1676	1.60	1702	1.68	1728	1.77	1753	1.86	1779	1.95	1803	2.04	1852	2.22	1901	2.40	1995	2.75	2086	3.12
4400	2803	1722	1.70	1748	1.81	1774	1.89	1798	1.98	1823	2.08	1847	2.17	1871	2.27	1918	2.45	1964	2.63	2055	3.02	2144	3.40
4800	3057	1869	2.18	1894	2.29	1917	2.38	1940	2.49	1963	2.58	1985	2.70	2008	2.79	2051	3.00	2094	3.20	2179	3.60	2262	4.01
5200	3312	2017	2.74	2040	2.84	2062	2.95	2084	3.07	2105	3.17	2126	3.29	2146	3.40	2187	3.62	2227	3.84	2307	4.27	2384	4.73
5600	3567	2166	3.37	2187	3.50	2208	3.62	2228	3.75	2248	3.85	2268	3.97	2287	4.09	2325	4.33	2363	4.57	2437	5.04	2510	5.51

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	1274	1713	1.47	1836	1.77																		
2200	1401	1737	1.58	1855	1.88	1968	2.20	2078	2.54														
2400	1529	1766	1.70	1879	2.00	1988	2.33	2093	2.67	2196	3.04	2295	3.40										
2600	1656	1801	1.83	1909	2.15	2014	2.47	2115	2.83	2214	3.20	2310	3.58	2403	3.97	2494	4.37						
2800	1783	1839	1.98	1944	2.31	2044	2.65	2142	3.00	2237	3.37	2330	3.75	2420	4.16	2508	4.57	2595	4.99	2680	5.42		
3000	1911	1881	2.15	1982	2.47	2079	2.83	2173	3.18	2265	3.55	2354	3.95	2442	4.35	2528	4.77	2612	5.20	2694	5.65	2775	6.10
3200	2038	1925	2.33	2023	2.66	2117	3.02	2208	3.39	2297	3.77	2384	4.16	2468	4.58	2551	5.00	2633	5.44	2713	5.89	2791	6.35
3400	2166	1971	2.52	2066	2.87	2158	3.24	2247	3.60	2333	4.00	2417	4.41	2499	4.82	2579	5.25	2658	5.69	2736	6.15	2812	6.61
3600	2293	2020	2.75	2112	3.09	2201	3.47	2288	3.85	2371	4.25	2453	4.66	2533	5.08	2611	5.51	2688	5.97	2763	6.44	2837	6.91
3800	2420	2070	2.97	2160	3.34	2247	3.72	2331	4.12	2412	4.51	2492	4.94	2570	5.37	2646	5.82	2720	6.26	2794	6.74	2866	7.21
4000	2548	2122	3.24	2209	3.60	2294	4.00	2376	4.40	2456	4.82	2533	5.24	2609	5.67	2683	6.12	2756	6.58	2827	7.06	2898	7.55
4200	2675	2175	3.50	2260	3.90	2343	4.30	2423	4.70	2501	5.12	2577	5.55	2651	6.00	2723	6.46	2794	6.94	2864	7.41	2932	7.91
4400	2803	2229	3.79	2313	4.19	2393	4.60	2471	5.02	2547	5.47	2622	5.91	2694	6.35	2765	6.83	2834	7.30	2902	7.80	2969	8.30
4800	3057	2342	4.44	2421	4.87	2498	5.30	2573	5.75	2645	6.20	2716	6.66	2786	7.14	2854	7.63	2920	8.11	2986	8.63	3050	9.14
5200	3312	2460	5.17	2535	5.62	2607	6.08	2679	6.55	2748	7.04	2817	7.53	2883	8.01	2949	8.53	3013	9.03	3076	9.55	3138	10.08
5600	3567	2582	6.00	2652	6.48	2721	6.96	2789	7.46	2856	7.96	2921	8.48	2985	9.00	3048	9.53	3110	10.05	3171	10.60	3231	11.16
6000	3822	2707	6.91	2774	7.44	2839	7.95	2904	8.48	2968	9.00	3030	9.55	3092	10.08	3152	10.64	3212	11.19	3271	11.75	3328	12.33
6400	4076	2835	7.94	2898	8.50	2961	9.03	3022	9.60	3083	10.16	3143	10.71	3202	11.28	3260	11.86	3318	12.44	3374	13.03	3430	13.63
6800	4331	2966	9.08	3026	9.66	3085	10.25	3144	10.83	3202	11.41	3259	12.00	3316	12.60	3372	13.21	3427	13.82	3482	14.42	3536	15.05
7200	4586	3098	10.35	3156	10.96	3212	11.57	3268	12.17	3324	12.80	3379	13.41	3433	14.05	3487	14.67	3540	15.32	3593	15.96	3645	16.60

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3200	2038	2868	6.83	2944	7.30	3093	8.30																
3400	2166	2887	7.09	2961	7.58	3106	8.60	3246	9.66														
3600	2293	2910	7.40	2982	7.89	3123	8.91	3260	9.98	3393	11.08												
3800	2420	2937	7.70	3007	8.21	3144	9.25	3278	10.33	3408	11.44	3535	12.60	3660	13.78								
4000	2548	2967	8.05	3035	8.55	3169	9.60	3299	10.69	3426	11.83	3551	13.00	3673	14.21	3792	15.43						
4200	2675	3000	8.41	3066	8.92	3197	9.99	3324	11.10	3448	12.24	3570	13.41	3689	14.63	3806	15.88	3921	17.17	4034	18.48		
4400	2803	3035	8.80	3100	9.33	3228	10.39	3352	11.51	3474	12.66	3593	13.86	3709	15.10	3824	16.35	3936	17.66	4047	18.98	4155	20.35
4800	3057	3113	9.66	3176	10.19	3297	11.30	3416	12.44	3533	13.61	3647	14.83	3758	16.10	3868	17.38	3976	18.71	4082	20.06	4187	21.45
5200	3312	3198	10.64	3258	11.19	3376	12.32	3490	13.48	3601	14.68	3711	15.92	3818	17.21	3924	18.53	4027	19.86	4129	21.25	4230	22.67
5600	3567	3289	11.71	3347	12.28	3460	13.44	3571	14.64	3678	15.88	3784	17.16	3887	18.46	3989	19.79	4088	21.17	4187	22.57		
6000	3822	3385	12.91	3441	13.51	3550	14.71	3657	15.93	3761	17.21	3863	18.51	3963	19.83	4061	21.21	4158	22.60	4253	24.03		
6400	4076	3485	14.23	3539	14.85	3645	16.08	3749	17.35	3850	18.66	3949	20.00	4045	21.35	4141	22.76	4234	24.17				
6800	4331	3589	15.67	3641	16.31	3744	17.60	3845	18.91	3943	20.25	4039	21.61	4133	23.01	4225	24.45						
7200	4586	3696	17.25	3747	17.91	3847	19.23	3944	20.60	4039	21.98	4133	23.39	4224	24.82								
7600	4841	3806	18.96	3856	19.64	3952	21.03	4047	22.42	4140	23.85	4231	25.31										
8000	5096	3920	20.81	3967	21.51	4061	22.95	4153	24.41	4243	25.87												
8400	5350	4036	22.79	4082	23.53	4173	25.03	4262	26.52														
8800	5605	4155	24.93	4199	25.71																		
9200	5860	4276	27.23																				

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BI SWSI

Wheel Diameter = 18.25 in.	Discharge Area = 1.92 sq. ft.
Inlet Area = 2.025 sq. ft.	Tip Speed, FPM = 4.78 x RPM
Maximum BHP = .570 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1400	733	535	0.08	600	0.12	661	0.15	719	0.19	774	0.22	828	0.27	880	0.32	978	0.40						
1600	838	574	0.11	634	0.14	690	0.17	743	0.22	795	0.26	844	0.30	893	0.34	985	0.44	1073	0.56				
1800	942	616	0.13	671	0.17	724	0.20	773	0.25	821	0.29	867	0.34	912	0.38	999	0.48	1082	0.60	1238	0.85		
2000	1047	660	0.16	711	0.20	760	0.25	807	0.29	852	0.34	895	0.38	937	0.43	1019	0.53	1097	0.64	1245	0.89	1384	1.18
2200	1152	705	0.20	753	0.25	799	0.29	843	0.34	885	0.39	926	0.44	966	0.48	1043	0.59	1117	0.70	1258	0.96	1390	1.23
2400	1257	751	0.24	797	0.29	840	0.34	882	0.39	922	0.44	961	0.48	998	0.55	1071	0.65	1141	0.77	1275	1.03	1402	1.31
2600	1361	799	0.28	842	0.34	883	0.39	922	0.44	960	0.51	997	0.56	1033	0.61	1102	0.72	1169	0.85	1296	1.11	1418	1.39
2800	1466	848	0.32	888	0.39	927	0.44	964	0.51	1000	0.56	1036	0.63	1070	0.68	1136	0.81	1200	0.93	1321	1.20	1437	1.50
3000	1571	897	0.39	935	0.44	972	0.52	1007	0.58	1042	0.64	1076	0.70	1108	0.78	1172	0.91	1233	1.04	1349	1.31	1461	1.61
3200	1675	947	0.44	982	0.52	1017	0.59	1051	0.65	1085	0.72	1117	0.80	1148	0.86	1209	1.00	1268	1.13	1380	1.43	1487	1.72
3400	1780	997	0.52	1031	0.60	1064	0.66	1097	0.75	1128	0.81	1159	0.88	1190	0.96	1248	1.11	1305	1.26	1413	1.54	1515	1.86
3600	1885	1048	0.60	1080	0.68	1112	0.76	1143	0.83	1173	0.91	1203	0.98	1232	1.06	1288	1.22	1343	1.37	1447	1.68	1546	2.00
3800	1990	1099	0.68	1130	0.77	1160	0.86	1189	0.93	1219	1.02	1247	1.10	1275	1.18	1330	1.35	1382	1.51	1483	1.83	1579	2.16
4000	2094	1150	0.79	1180	0.86	1208	0.96	1237	1.04	1265	1.13	1292	1.21	1319	1.31	1372	1.47	1423	1.64	1521	1.98	1614	2.33
4500	2356	1280	1.06	1306	1.16	1332	1.26	1358	1.36	1383	1.45	1408	1.56	1433	1.66	1481	1.85	1528	2.04	1619	2.42	1705	2.81
5000	2618	1412	1.43	1435	1.53	1458	1.62	1482	1.73	1505	1.85	1528	1.95	1550	2.07	1595	2.29	1638	2.50	1723	2.92	1804	3.35
5500	2880	1544	1.85	1565	1.95	1587	2.08	1608	2.18	1629	2.31	1650	2.42	1671	2.54	1712	2.79	1752	3.02	1831	3.50	1907	3.97
6000	3141	1677	2.36	1696	2.47	1716	2.59	1735	2.72	1755	2.86	1774	2.97	1793	3.11	1832	3.37	1869	3.64	1943	4.16	2014	4.67
6500	3403	1810	2.95	1828	3.08	1846	3.22	1864	3.34	1882	3.49	1900	3.62	1918	3.75	1954	4.04	1989	4.33	2058	4.89	2125	5.45
7000	3665	1944	3.65	1961	3.79	1978	3.92	1994	4.07	2011	4.20	2028	4.35	2045	4.50	2078	4.80	2111	5.10	2176	5.72	2239	6.33

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	1257	1523	1.62	1638	1.97																		
2600	1361	1534	1.70	1645	2.04	1752	2.41																
2800	1466	1549	1.81	1656	2.16	1759	2.52	1859	2.91	1956	3.32												
3000	1571	1567	1.92	1671	2.27	1771	2.63	1868	3.02	1962	3.44	2053	3.87										
3200	1675	1589	2.04	1689	2.40	1785	2.77	1879	3.16	1971	3.57	2059	4.00										
3400	1780	1614	2.18	1710	2.54	1803	2.91	1894	3.30	1983	3.72	2069	4.16	2154	4.60	2236	5.08	2316	5.55				
3600	1885	1642	2.34	1734	2.70	1824	3.08	1912	3.47	1998	3.89	2082	4.32	2164	4.77	2244	5.25	2323	5.74	2400	6.24	2476	6.75
3800	1990	1672	2.52	1761	2.87	1848	3.25	1933	3.65	2016	4.07	2098	4.50	2177	4.97	2256	5.44	2332	5.92	2408	6.44	2482	6.95
4000	2094	1703	2.70	1790	3.07	1874	3.45	1956	3.84	2037	4.27	2116	4.72	2194	5.16	2270	5.65	2344	6.14	2418	6.65	2490	7.18
4500	2356	1789	3.20	1869	3.59	1948	4.00	2024	4.41	2099	4.85	2173	5.30	2245	5.76	2316	6.25	2386	6.75	2455	7.26	2523	7.80
5000	2618	1882	3.79	1957	4.22	2031	4.65	2102	5.09	2173	5.55	2241	6.01	2309	6.50	2376	6.99	2441	7.50	2506	8.01	2570	8.55
5500	2880	1980	4.44	2052	4.91	2121	5.39	2188	5.85	2255	6.34	2320	6.83	2383	7.33	2446	7.84	2508	8.36	2569	8.89	2630	9.44
6000	3141	2084	5.19	2151	5.69	2217	6.22	2281	6.73	2344	7.24	2405	7.75	2466	8.28	2525	8.83	2584	9.36	2642	9.91	2699	10.49
6500	3403	2191	6.01	2255	6.58	2317	7.13	2378	7.69	2438	8.24	2496	8.80	2554	9.35	2611	9.91	2666	10.49	2722	11.07	2776	11.66
7000	3665	2301	6.94	2362	7.55	2421	8.14	2479	8.74	2536	9.33	2592	9.94	2647	10.53	2701	11.13	2755	11.74	2807	12.35	2859	12.96
7500	3927	2414	7.95	2472	8.60	2529	9.25	2584	9.89	2639	10.53	2692	11.17	2745	11.82	2797	12.46	2848	13.10	2898	13.73	2948	14.38
8000	4188	2530	9.08	2585	9.78	2639	10.46	2692	11.16	2744	11.85	2795	12.53	2846	13.21	2896	13.89	2945	14.58	2993	15.26	3041	15.94
8500	4450	2647	10.32	2700	11.05	2751	11.80	2802	12.53	2852	13.26	2901	14.01	2950	14.73	2998	15.46	3045	16.17	3092	16.91	3138	17.63
9000	4712	2766	11.67	2816	12.46	2866	13.25	2915	14.03	2963	14.82	3010	15.58	3057	16.36	3103	17.14	3148	17.91	3193	18.67	3238	19.43
9500	4974	2887	13.16	2935	14.00	2982	14.83	3029	15.66	3075	16.48	3121	17.31	3166	18.13	3210	18.95	3254	19.76	3297	20.57	3340	21.39

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3800	1990	2554	7.50	2625	8.05																		
4000	2094	2561	7.71	2631	8.26	2767	9.41																
4500	2356	2590	8.33	2656	8.89	2786	10.07	2912	11.28	3034	12.55												
5000	2618	2633	9.10	2696	9.66	2818	10.83	2938	12.07	3055	13.36	3170	14.68	3282	16.07	3392	17.48						
5500	2880	2689	10.00	2748	10.58	2864	11.76	2978	13.01	3089	14.30	3198	15.63	3306	17.03	3411	18.46	3514	19.95	3616	21.48	3716	23.04
6000	3141	2755	11.05	2811	11.64	2921	12.86	3029	14.11	3135	15.41	3239	16.76	3341	18.17	3442	19.60	3541	21.10	3639	22.64	3735	24.21
6500	3403	2830	12.25	2883	12.86	2987	14.10	3090	15.38	3191	16.70	3290	18.07	3388	19.48	3484	20.92	3579	22.43	3673	23.98		
7000	3665	2911	13.58	2961	14.21	3061	15.48	3159	16.79	3256	18.14	3351	19.53	3444	20.98	3536	22.45	3627	23.96	3717	25.51		
7500	3927	2997	15.03	3046	15.69	3142	17.03	3236	18.39	3328	19.78	3419	21.20	3508	22.66	3597	24.16	3684	25.68				
8000	4188	3088	16.63	3135	17.32	3227	18.71	3317	20.13	3406	21.57	3493	23.03	3579	24.51	3664	26.04	3748	27.60				
8500	4450	3183	18.35	3228	19.07	3317	20.53	3404	22.01	3489	23.51	3573	25.03	3656	26.57	3738	28.12						
9000	4712	3282	20.21	3325	20.98	3411	22.51	3495	24.06	3577	25.62	3658	27.18	3738	28.78								
9500	4974	3383	22.20	3425	23.01	3508	24.63	3589	26.25	3669	27.87	3747	29.52										
10000	5236	3487	24.32	3527	25.17	3607	26.87	3686	28.58	3763	30.28												
10500	5497	3593	26.58	3632	27.48	3709	29.28																
11000	5759	3701	29.01	3739	29.95																		

Performance Data

VCR Fan

200 BI SWSI

Wheel Diameter = 20 in.	Discharge Area = 2.30 sq. ft.
Inlet Area = 2.440 sq. ft.	Tip Speed, FPM = 5.23 x RPM
Maximum BHP = .900 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	783	505	0.12	562	0.16	615	0.20	666	0.24	715	0.29	762	0.34	808	0.40	895	0.52						
2000	870	536	0.14	589	0.17	639	0.22	687	0.27	732	0.32	777	0.36	820	0.43	903	0.55	981	0.68				
2200	957	568	0.17	618	0.20	665	0.26	710	0.30	753	0.35	795	0.40	836	0.46	914	0.59	989	0.72	1130	1.02		
2400	1043	602	0.20	649	0.25	693	0.30	736	0.34	777	0.40	816	0.45	855	0.52	929	0.64	1001	0.78	1136	1.08	1262	1.41
2600	1130	636	0.22	681	0.29	723	0.34	763	0.40	802	0.44	840	0.51	877	0.56	947	0.69	1016	0.83	1145	1.13	1267	1.47
2800	1217	671	0.27	713	0.32	754	0.39	792	0.44	830	0.51	865	0.56	900	0.63	968	0.76	1033	0.89	1157	1.20	1275	1.54
3200	1391	743	0.35	782	0.43	818	0.50	854	0.56	888	0.63	921	0.69	953	0.77	1015	0.91	1075	1.06	1190	1.37	1299	1.72
3600	1565	818	0.46	852	0.54	886	0.61	919	0.69	950	0.78	981	0.86	1011	0.93	1069	1.08	1125	1.23	1231	1.56	1332	1.92
4000	1739	894	0.60	925	0.68	956	0.77	986	0.86	1016	0.94	1044	1.03	1072	1.12	1127	1.29	1179	1.45	1278	1.81	1374	2.17
4400	1913	971	0.76	1000	0.85	1028	0.94	1056	1.04	1084	1.13	1110	1.23	1137	1.33	1188	1.52	1237	1.70	1331	2.08	1420	2.47
4800	2087	1049	0.94	1076	1.04	1102	1.14	1128	1.26	1153	1.36	1179	1.46	1203	1.56	1251	1.77	1298	1.97	1387	2.38	1472	2.81
5200	2261	1128	1.16	1152	1.27	1177	1.38	1201	1.50	1225	1.61	1249	1.72	1272	1.83	1317	2.06	1361	2.29	1446	2.72	1527	3.17
5600	2435	1207	1.41	1230	1.54	1253	1.64	1276	1.77	1298	1.89	1320	2.02	1342	2.13	1385	2.38	1427	2.62	1508	3.11	1585	3.58
6000	2609	1287	1.70	1309	1.82	1330	1.95	1351	2.08	1372	2.22	1393	2.34	1414	2.47	1454	2.74	1494	3.00	1571	3.52	1645	4.02
6400	2783	1367	2.04	1388	2.16	1408	2.29	1428	2.43	1447	2.58	1467	2.72	1487	2.84	1525	3.12	1563	3.40	1637	3.97	1707	4.51
6800	2957	1448	2.41	1467	2.54	1486	2.68	1505	2.83	1523	2.97	1542	3.12	1561	3.27	1597	3.57	1633	3.85	1704	4.45	1772	5.04
7200	3130	1529	2.83	1547	2.97	1565	3.12	1582	3.27	1600	3.41	1618	3.58	1635	3.72	1670	4.04	1705	4.35	1772	4.99	1837	5.60
7600	3304	1610	3.29	1627	3.44	1644	3.59	1661	3.75	1678	3.90	1694	4.08	1711	4.24	1744	4.57	1777	4.90	1842	5.55	1904	6.22
8000	3478	1691	3.79	1707	3.95	1723	4.12	1739	4.29	1755	4.45	1771	4.62	1787	4.80	1819	5.14	1850	5.49	1912	6.19	1973	6.88
8400	3652	1773	4.37	1788	4.54	1803	4.69	1819	4.87	1834	5.05	1849	5.23	1864	5.40	1895	5.75	1925	6.12	1984	6.85	2042	7.58

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	1217	1387	1.92																				
3200	1391	1403	2.09	1504	2.50	1600	2.93	1693	3.40														
3600	1565	1430	2.31	1524	2.72	1616	3.16	1704	3.62	1790	4.12	1873	4.64										
4000	1739	1465	2.57	1554	2.99	1640	3.44	1723	3.90	1805	4.41	1885	4.92	1962	5.47	2038	6.02	2112	6.60				
4400	1913	1507	2.87	1590	3.30	1671	3.75	1751	4.24	1828	4.74	1904	5.25	1978	5.80	2051	6.37	2122	6.95	2192	7.56	2260	8.19
4800	2087	1554	3.22	1633	3.67	1710	4.14	1785	4.62	1858	5.12	1931	5.66	2001	6.20	2071	6.78	2139	7.36	2206	7.98	2272	8.60
5200	2261	1605	3.62	1680	4.08	1753	4.57	1825	5.07	1895	5.58	1964	6.12	2031	6.66	2097	7.25	2163	7.83	2227	8.46	2290	9.08
5600	2435	1659	4.05	1731	4.55	1801	5.05	1869	5.55	1936	6.08	2002	6.64	2066	7.19	2130	7.78	2192	8.38	2254	9.00	2315	9.64
6000	2609	1716	4.54	1785	5.05	1852	5.58	1918	6.10	1982	6.66	2045	7.21	2107	7.79	2167	8.39	2227	9.00	2287	9.61	2345	10.26
6400	2783	1776	5.05	1842	5.60	1906	6.16	1969	6.70	2031	7.28	2091	7.85	2151	8.44	2209	9.05	2267	9.67	2324	10.30	2380	10.96
6800	2957	1837	5.62	1901	6.19	1963	6.78	2024	7.36	2083	7.95	2141	8.55	2198	9.16	2255	9.78	2310	10.42	2365	11.07	2419	11.74
7200	3130	1900	6.23	1962	6.83	2022	7.44	2080	8.07	2138	8.69	2194	9.30	2249	9.94	2303	10.58	2357	11.24	2410	11.91	2462	12.58
7600	3304	1965	6.88	2025	7.53	2082	8.17	2139	8.82	2194	9.46	2249	10.13	2302	10.78	2355	11.44	2407	12.11	2458	12.81	2508	13.50
8000	3478	2031	7.58	2089	8.25	2145	8.94	2199	9.63	2253	10.30	2306	10.99	2358	11.67	2408	12.36	2459	13.07	2508	13.78	2557	14.48
8400	3652	2099	8.32	2154	9.05	2208	9.76	2261	10.49	2313	11.19	2365	11.91	2415	12.63	2464	13.35	2513	14.08	2561	14.81	2608	15.55
8800	3826	2167	9.11	2221	9.89	2273	10.64	2325	11.39	2375	12.14	2425	12.89	2474	13.64	2522	14.39	2569	15.14	2616	15.91	2662	16.67
9200	4000	2237	9.98	2288	10.78	2339	11.57	2389	12.35	2438	13.14	2487	13.93	2534	14.71	2581	15.50	2627	16.28	2672	17.07	2717	17.86
9600	4174	2307	10.89	2357	11.73	2406	12.55	2455	13.38	2503	14.21	2550	15.03	2596	15.85	2641	16.67	2686	17.48	2730	18.31	2774	19.13
10000	4348	2378	11.85	2427	12.74	2475	13.61	2522	14.46	2568	15.33	2614	16.18	2659	17.04	2703	17.89	2747	18.75	2790	19.60	2832	20.46
10400	4522	2450	12.89	2497	13.81	2544	14.71	2589	15.61	2634	16.51	2679	17.41	2723	18.29	2766	19.18	2808	20.07	2851	20.96	2892	21.85

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800	2087	2337	9.25	2401	9.92	2525	11.30																
5200	2261	2353	9.75	2414	10.41	2535	11.80	2651	13.26														
5600	2435	2375	10.30	2434	10.96	2550	12.38	2663	13.83	2774	15.38	2881	16.96										
6000	2609	2403	10.92	2459	11.60	2571	13.01	2681	14.48	2788	16.03	2892	17.63	2995	19.28	3095	21.00						
6400	2783	2435	11.63	2490	12.32	2598	13.73	2703	15.21	2807	16.76	2908	18.36	3008	20.03	3105	21.76	3201	23.53	3295	25.35	3387	27.23
6800	2957	2472	12.41	2525	13.11	2629	14.53	2731	16.03	2831	17.58	2929	19.20	3026	20.88	3121	22.60	3214	24.39	3305	26.22	3395	28.10
7200	3130	2514	13.26	2565	13.98	2665	15.42	2763	16.92	2860	18.50	2955	20.11	3049	21.79	3141	23.53	3231	25.32	3320	27.17	3408	29.07
7600	3304	2558	14.21	2607	14.91	2704	16.39	2800	17.92	2893	19.50	2985	21.14	3076	22.82	3165	24.57	3253	26.37	3340	28.22	3425	30.12
8000	3478	2605	15.21	2653	15.94	2747	17.45	2839	19.00	2930	20.60	3019	22.25	3107	23.95	3194	25.70	3279	27.51	3364	29.37		
8400	3652	2655	16.28	2701	17.04	2793	18.57	2882	20.16	2970	21.78	3057	23.45	3142	25.17	3226	26.93	3309	28.76	3391	30.62		
8800	3826	2707	17.43	2752	18.21	2841	19.78	2928	21.41	3013	23.06	3097	24.75	3180	26.48	3262	28.27	3343	30.10	3423	31.98		
9200	4000	2761	18.66	2805	19.46	2891	21.07	2976	22.73	3059	24.42	3141	26.14	3221	27.91	3301	29.72	3380	31.57				
9600	4174	2817	19.95	2860	20.78	2944	22.45	3026	24.14	3107	25.87	3187	27.62	3265	29.42	3343	31.26	3419	33.12				
10000	4348	2874	21.31	2916	22.17	2998	23.89	3078	25.64	3157	27.41	3235	29.20	3312	31.02	3387	32.90						
10400	4522	2933	22.73	2974	23.63	3054	25.41	3132	27.21	3209	29.02	3285	30.87	3360	32.73	3434	34.62						
10800	4696	2993	24.23	3033	25.16	3111	27.00	3188	28.85	3263	30.72	3337	32.62	3410	34.53								
11200	4870	3054	25.81	3093	26.76	3170	28.67	3244	30.58	3318	32.51	3391	34.45										
11600	5043	3117	27.45	3155	28.43	3229	30.42	3303	32.40	3375	34.37												
12000	5217	3180	29.17	3217	30.18	3290	32.23	3362	34.28	3433	36.32												
12400	5391	3244	30.96	3280	32.02	3352	34.14	3422	36.25														

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BI SWSI

Wheel Diameter = 22.25 in.	Discharge Area = 2.85 sq. ft.
Inlet Area = 3.020 sq. ft.	Tip Speed, FPM = 5.83 x RPM
Maximum BHP = 1.535 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	772	451	0.14	503	0.19	551	0.24	597	0.29	641	0.34	684	0.41	725	0.48	804	0.63						
2400	842	473	0.16	522	0.22	568	0.27	611	0.32	653	0.39	694	0.44	733	0.52	809	0.66	880	0.83				
2600	912	496	0.19	543	0.24	586	0.30	628	0.35	668	0.41	706	0.48	744	0.56	816	0.70	885	0.86				
2800	982	520	0.22	564	0.28	606	0.34	645	0.40	683	0.45	720	0.53	756	0.60	826	0.75	892	0.91	1017	1.29		
3000	1053	544	0.25	587	0.30	626	0.38	664	0.44	701	0.51	736	0.58	771	0.64	837	0.80	901	0.96	1022	1.33	1135	1.76
3500	1228	608	0.34	645	0.40	682	0.48	716	0.56	749	0.64	781	0.70	813	0.79	873	0.94	931	1.12	1042	1.50	1147	1.92
4000	1404	673	0.44	708	0.54	740	0.63	772	0.70	802	0.80	832	0.88	861	0.96	916	1.13	970	1.31	1072	1.70	1170	2.13
4500	1579	741	0.59	772	0.68	802	0.79	831	0.88	859	0.97	887	1.08	914	1.16	965	1.37	1015	1.56	1110	1.97	1201	2.41
5000	1754	810	0.76	838	0.86	866	0.97	893	1.08	919	1.18	945	1.29	970	1.41	1018	1.62	1065	1.83	1154	2.27	1239	2.72
5500	1930	880	0.96	906	1.08	931	1.20	956	1.31	981	1.43	1005	1.56	1028	1.67	1074	1.91	1118	2.15	1202	2.62	1282	3.11
6000	2105	951	1.20	975	1.33	999	1.45	1022	1.58	1044	1.72	1067	1.85	1089	1.97	1132	2.24	1173	2.50	1253	3.00	1329	3.52
6500	2281	1023	1.47	1045	1.62	1067	1.76	1088	1.89	1110	2.04	1131	2.17	1151	2.32	1192	2.59	1231	2.87	1307	3.44	1379	3.99
7000	2456	1095	1.79	1116	1.95	1136	2.09	1156	2.25	1176	2.40	1196	2.54	1215	2.70	1254	3.00	1291	3.30	1363	3.90	1432	4.50
7500	2632	1168	2.16	1187	2.33	1206	2.49	1225	2.65	1243	2.81	1262	2.97	1281	3.12	1317	3.45	1352	3.79	1421	4.42	1487	5.07
8000	2807	1241	2.58	1259	2.75	1276	2.91	1294	3.08	1312	3.25	1329	3.44	1347	3.60	1381	3.95	1415	4.30	1481	5.00	1544	5.69
8500	2982	1314	3.07	1331	3.24	1348	3.40	1364	3.59	1381	3.77	1398	3.95	1414	4.14	1447	4.50	1479	4.87	1542	5.62	1602	6.34
9000	3158	1387	3.59	1403	3.77	1419	3.95	1435	4.15	1451	4.33	1467	4.52	1482	4.73	1513	5.12	1544	5.50	1604	6.30	1662	7.06
9500	3333	1461	4.19	1476	4.37	1491	4.57	1506	4.76	1521	4.97	1536	5.16	1551	5.37	1581	5.77	1610	6.19	1667	7.03	1723	7.84
10000	3509	1535	4.83	1549	5.04	1563	5.24	1578	5.44	1592	5.66	1606	5.87	1620	6.08	1649	6.50	1677	6.94	1732	7.81	1785	8.69
10500	3684	1609	5.55	1622	5.76	1636	5.98	1650	6.19	1663	6.41	1677	6.63	1690	6.85	1717	7.30	1744	7.75	1797	8.66	1849	9.58

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	1228	1247	2.38	1343	2.88			1439	3.65	1523	4.23												
4000	1404	1263	2.61	1353	2.12	1439	3.65	1523	4.23	1610	5.14	1684	5.76										
4500	1579	1288	2.88	1372	3.40	1454	3.95	1533	4.52														
5000	1754	1320	3.22	1399	3.74	1476	4.29	1551	4.87	1624	5.49	1696	6.12	1765	6.80	1833	7.50	1899	8.21				
5500	1930	1359	3.60	1433	4.15	1506	4.70	1577	5.30	1646	5.91	1714	6.55	1780	7.24	1845	7.94	1909	8.66	1971	9.41	2033	10.19
6000	2105	1402	4.05	1472	4.60	1541	5.19	1608	5.79	1674	6.41	1739	7.06	1802	7.75	1864	8.46	1925	9.19	1985	9.94	2044	10.73
6500	2281	1449	4.55	1516	5.12	1581	5.73	1645	6.34	1708	6.99	1769	7.65	1830	8.33	1889	9.05	1947	9.78	2005	10.55	2061	11.33
7000	2456	1498	5.10	1563	5.72	1625	6.33	1686	6.98	1746	7.63	1805	8.30	1862	9.00	1919	9.73	1975	10.48	2030	11.25	2084	12.03
7500	2632	1551	5.70	1612	6.35	1672	7.00	1731	7.66	1788	8.35	1844	9.05	1899	9.75	1954	10.50	2007	11.25	2060	12.03	2112	12.83
8000	2807	1605	6.37	1664	7.05	1722	7.74	1778	8.42	1833	9.14	1887	9.85	1940	10.60	1992	11.35	2044	12.11	2094	12.91	2145	13.71
8500	2982	1661	7.08	1718	7.80	1773	8.53	1828	9.25	1881	10.00	1933	10.75	1984	11.50	2034	12.28	2084	13.07	2132	13.86	2181	14.69
9000	3158	1719	7.84	1774	8.61	1827	9.38	1879	10.14	1931	10.91	1981	11.69	2030	12.49	2079	13.28	2126	14.10	2174	14.92	2220	15.76
9500	3333	1778	8.66	1831	9.48	1882	10.28	1933	11.10	1982	11.91	2031	12.73	2079	13.55	2126	14.38	2172	15.21	2218	16.07	2263	16.93
10000	3509	1838	9.55	1889	10.41	1939	11.26	1988	12.11	2036	12.96	2083	13.83	2129	14.68	2175	15.55	2220	16.42	2264	17.29	2307	18.18
10500	3684	1899	10.50	1949	11.41	1997	12.30	2045	13.21	2091	14.10	2137	15.00	2182	15.88	2226	16.78	2269	17.70	2312	18.60	2354	19.53
11000	3860	1962	11.51	2009	12.46	2056	13.41	2102	14.36	2147	15.30	2192	16.23	2235	17.17	2278	18.10	2320	19.06	2362	20.00	2403	20.95
11500	4035	2025	12.60	2071	13.60	2117	14.60	2161	15.58	2205	16.57	2248	17.54	2290	18.53	2332	19.51	2373	20.48	2414	21.48	2454	22.46
12000	4211	2089	13.76	2134	14.81	2178	15.85	2221	16.88	2264	17.92	2305	18.93	2347	19.96	2387	20.98	2427	22.01	2467	23.03	2506	24.06
12500	4386	2154	15.00	2197	16.08	2240	17.17	2282	18.26	2323	19.33	2364	20.41	2404	21.48	2444	22.54	2483	23.60	2521	24.67	2559	25.73
13000	4561	2219	16.31	2261	17.45	2303	18.57	2343	19.71	2384	20.83	2423	21.96	2462	23.07	2501	24.17	2539	25.28	2577	26.39	2614	27.51

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	2105	2102	11.53	2159	12.35	2270	14.07																
6500	2281	2117	12.14	2172	12.98	2280	14.69	2384	16.51	2486	18.39												
7000	2456	2138	12.85	2191	13.68	2295	15.41	2396	17.23	2495	19.14	2591	21.10	2685	23.14								
7500	2632	2164	13.64	2215	14.48	2315	16.23	2412	18.06	2508	19.96	2602	21.95	2693	24.01	2783	26.12	2871	28.31				
8000	2807	2194	14.53	2243	15.38	2339	17.14	2434	18.98	2526	20.89	2617	22.89	2706	24.96	2793	27.08	2879	29.28	2963	31.56	3045	33.87
8500	2982	2228	15.53	2276	16.39	2369	18.17	2460	20.01	2549	21.95	2637	23.95	2723	26.02	2808	28.17	2891	30.37	2973	32.65	3054	34.98
9000	3158	2266	16.63	2312	17.50	2402	19.29	2490	21.17	2576	23.10	2661	25.11	2744	27.20	2827	29.35	2908	31.57	2988	33.85	3066	36.21
9500	3333	2307	17.81	2351	18.70	2438	20.53	2523	22.42	2607	24.38	2689	26.41	2770	28.50	2850	30.67	2928	32.89	3006	35.18	3082	37.53
10000	3509	2351	19.08	2393	20.00	2477	21.86	2560	23.78	2641	25.77	2720	27.82	2799	29.92	2876	32.10	2953	34.34	3028	36.65		
10500	3684	2396	20.46	2438	21.39	2519	23.29	2599	25.26	2678	27.27	2755	29.35	2831	31.47	2907	33.67	2981	35.92	3054	38.25		
11000	3860	2444	21.91	2484	22.88	2563	24.83	2641	26.85	2717	28.89	2793	31.00	2867	33.15	2940	35.37	3012	37.65	3083	39.97		
11500	4035	2493	23.46	2533	24.45	2610	26.47	2685	28.52	2759	30.62	2833	32.77	2905	34.96	2976	37.20	3046	39.50				
12000	4211	2544	25.08	2583	26.12	2658	28.20	2731	30.32	2804	32.46	2875	34.65	2945	36.87	3014	39.15	3082	41.48				
12500	4386	2597	26.81	2634	27.87	2707	30.02	2779	32.21	2849	34.40	2919	36.65	2987	38.92	3055	41.23						
13000	4561	2650	28.62	2687	29.72	2758	31.95	2828	34.18	2897	36.46	2965	38.75	3032	41.07								
13500	4737	2705	30.51	2741	31.66	2810	33.96	2879	36.28	2946	38.62	3012	40.96	3078	43.34								
14000	4912	2761	32.50	2796	33.68	2864	36.07	2931	38.46	2997	40.87	3061	43.29										
14500	5088	2818	34.57	2852	35.82	2918	38.28	2984	40.76	3048	43.23												
15000	5263	2876	36.76	2909	38.03	2974	40.59	3038	43.15														
15500	5439	2934	39.03	2966	40.34	3030	43.00																

Performance Data

VCR Fan

245 BI SWSI

Wheel Diameter = 24.50 in.	Discharge Area = 3.45 sq. ft.
Inlet Area = 3.640 sq. ft.	Tip Speed, FPM = 6.41 x RPM
Maximum BHP = 2.485 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	725	397	0.15	445	0.20	491	0.27	534	0.32	576	0.40	616	0.48	655	0.56								
3000	870	438	0.20	481	0.27	522	0.34	561	0.40	598	0.48	634	0.56	669	0.64	737	0.83	801	1.03				
3500	1014	482	0.28	521	0.34	558	0.43	593	0.50	627	0.58	660	0.66	692	0.75	754	0.93	813	1.13	925	1.58		
4000	1159	528	0.35	564	0.44	598	0.53	631	0.61	662	0.70	692	0.79	722	0.88	779	1.08	833	1.28	938	1.73	1036	2.25
4500	1304	577	0.45	610	0.56	641	0.65	671	0.76	700	0.85	729	0.94	756	1.04	809	1.25	860	1.45	957	1.92	1049	2.43
5000	1449	627	0.59	657	0.69	686	0.80	714	0.91	741	1.02	768	1.12	793	1.22	843	1.45	891	1.67	982	2.15	1069	2.66
5500	1594	678	0.72	705	0.85	732	0.96	759	1.08	784	1.20	809	1.31	833	1.43	880	1.67	925	1.92	1011	2.41	1093	2.95
6000	1739	729	0.89	755	1.03	780	1.16	805	1.29	829	1.41	852	1.54	875	1.67	919	1.92	962	2.18	1043	2.72	1121	3.27
6500	1884	782	1.08	806	1.22	829	1.37	852	1.52	875	1.66	897	1.79	919	1.93	961	2.22	1001	2.49	1079	3.04	1153	3.62
7000	2029	835	1.31	857	1.46	879	1.62	901	1.77	922	1.92	943	2.08	964	2.22	1004	2.52	1042	2.83	1116	3.42	1187	4.04
7500	2174	888	1.58	909	1.73	930	1.89	950	2.06	970	2.22	990	2.38	1010	2.54	1048	2.87	1085	3.20	1156	3.83	1223	4.48
8000	2319	942	1.87	962	2.04	981	2.20	1000	2.37	1019	2.54	1038	2.72	1057	2.90	1093	3.25	1129	3.59	1197	4.27	1262	4.95
8500	2464	996	2.20	1015	2.37	1033	2.54	1051	2.74	1069	2.91	1087	3.11	1105	3.29	1140	3.65	1174	4.02	1239	4.75	1301	5.48
9000	2609	1050	2.56	1068	2.75	1085	2.93	1103	3.12	1120	3.32	1137	3.52	1154	3.72	1187	4.10	1219	4.50	1282	5.27	1343	6.04
9500	2754	1105	2.97	1122	3.16	1138	3.35	1154	3.55	1171	3.77	1187	3.97	1203	4.17	1235	4.59	1266	5.00	1327	5.83	1385	6.65
10000	2899	1160	3.41	1175	3.62	1191	3.83	1207	4.04	1222	4.25	1238	4.47	1253	4.69	1284	5.12	1314	5.55	1372	6.43	1428	7.29
10500	3043	1215	3.91	1230	4.12	1245	4.33	1260	4.55	1274	4.79	1289	5.00	1304	5.24	1333	5.69	1362	6.16	1418	7.06	1472	7.98
11000	3188	1270	4.45	1284	4.67	1298	4.91	1313	5.14	1327	5.37	1341	5.59	1355	5.83	1383	6.32	1411	6.80	1465	7.75	1517	8.71
11500	3333	1325	5.05	1339	5.27	1352	5.51	1366	5.75	1380	6.00	1393	6.24	1407	6.49	1434	6.99	1460	7.49	1512	8.49	1563	9.49
12000	3478	1380	5.69	1393	5.94	1406	6.17	1419	6.43	1433	6.68	1446	6.93	1459	7.19	1484	7.70	1510	8.23	1561	9.28	1610	10.32

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	1304	1138	3.00	1222	3.62																		
5000	1449	1152	3.24	1232	3.85	1310	4.51	1384	5.22														
5500	1594	1172	3.52	1248	4.15	1322	4.80	1393	5.51	1463	6.25	1530	7.03										
6000	1739	1196	3.85	1268	4.49	1338	5.16	1407	5.87	1473	6.60	1539	7.39	1602	8.19	1664	9.05	1724	9.91				
6500	1884	1224	4.24	1293	4.87	1360	5.55	1425	6.26	1489	7.01	1551	7.80	1612	8.61	1672	9.46	1731	10.35	1788	11.25	1844	12.19
7000	2029	1255	4.66	1321	5.33	1385	6.00	1447	6.74	1508	7.49	1568	8.28	1627	9.10	1684	9.96	1741	10.83	1796	11.75	1851	12.69
7500	2174	1288	5.14	1351	5.82	1413	6.51	1473	7.25	1531	8.01	1589	8.82	1645	9.64	1701	10.50	1755	11.39	1809	12.32	1862	13.26
8000	2319	1324	5.65	1385	6.35	1444	7.08	1501	7.83	1557	8.61	1613	9.42	1667	10.25	1720	11.13	1773	12.01	1825	12.94	1876	13.89
8500	2464	1362	6.20	1420	6.94	1477	7.69	1532	8.48	1586	9.26	1640	10.08	1692	10.94	1743	11.82	1794	12.71	1844	13.64	1893	14.61
9000	2609	1401	6.80	1457	7.58	1512	8.36	1565	9.16	1618	9.99	1669	10.83	1719	11.69	1769	12.58	1818	13.48	1866	14.42	1914	15.39
9500	2754	1441	7.44	1496	8.26	1548	9.08	1600	9.91	1651	10.75	1700	11.61	1749	12.50	1797	13.41	1845	14.33	1891	15.28	1938	16.26
10000	2899	1483	8.14	1535	8.99	1587	9.85	1637	10.71	1686	11.58	1734	12.48	1781	13.38	1828	14.31	1874	15.25	1919	16.21	1963	17.21
10500	3043	1525	8.88	1576	9.76	1626	10.66	1675	11.55	1722	12.46	1769	13.38	1815	14.32	1860	15.26	1904	16.23	1948	17.21	1992	18.23
11000	3188	1568	9.64	1618	10.58	1666	11.53	1714	12.46	1760	13.41	1805	14.36	1850	15.33	1894	16.29	1937	17.28	1980	18.29	2022	19.32
11500	3333	1613	10.48	1661	11.46	1708	12.44	1754	13.42	1799	14.41	1843	15.39	1886	16.39	1929	17.39	1971	18.41	2013	19.43	2054	20.48
12000	3478	1658	11.35	1705	12.39	1750	13.41	1795	14.43	1839	15.46	1882	16.48	1924	17.51	1966	18.54	2007	19.60	2047	20.66	2087	21.73
13000	3768	1750	13.26	1794	14.38	1837	15.51	1880	16.63	1922	17.73	1962	18.83	2003	19.95	2042	21.06	2081	22.17	2120	23.29	2158	24.42
14000	4058	1844	15.41	1886	16.61	1927	17.83	1968	19.03	2007	20.23	2046	21.43	2085	22.63	2123	23.82	2160	25.01	2197	26.21	2233	27.41
15000	4348	1941	17.78	1980	19.10	2019	20.39	2058	21.70	2096	22.98	2133	24.28	2170	25.56	2206	26.83	2242	28.12	2277	29.39	2312	30.67
16000	4638	2039	20.42	2077	21.82	2114	23.23	2150	24.61	2187	26.00	2222	27.37	2257	28.76	2292	30.12	2326	31.50	2360	32.85	2393	34.21

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	2174	1913	14.25	1965	15.25	2064	17.33	2161	19.51														
8000	2319	1926	14.88	1976	15.88	2073	17.98	2167	20.18	2259	22.46												
8500	2464	1942	15.60	1990	16.60	2084	18.71	2176	20.92	2266	23.21	2353	25.60	2439	28.08								
9000	2609	1961	16.39	2008	17.41	2099	19.51	2188	21.73	2276	24.04	2361	26.45	2444	28.93	2526	31.51						
9500	2754	1983	17.26	2028	18.28	2117	20.42	2203	22.64	2288	24.96	2372	27.37	2453	29.87	2533	32.45	2612	35.10	2689	37.84		
10000	2899	2008	18.21	2051	19.25	2137	21.39	2221	23.63	2304	25.96	2385	28.37	2465	30.87	2543	33.47	2619	36.15	2695	38.90	2769	41.72
10500	3043	2034	19.25	2077	20.29	2160	22.46	2242	24.71	2322	27.04	2401	29.47	2479	31.98	2555	34.59	2630	37.28	2704	40.03	2776	42.87
11000	3188	2063	20.35	2105	21.42	2186	23.60	2265	25.87	2343	28.22	2420	30.67	2496	33.20	2570	35.81	2643	38.50	2715	41.28	2786	44.12
11500	3333	2094	21.54	2134	22.63	2213	24.85	2290	27.14	2366	29.52	2441	31.97	2515	34.51	2587	37.12	2659	39.82	2729	42.60	2799	45.46
12000	3478	2126	22.82	2165	23.92	2242	26.17	2318	28.48	2392	30.89	2464	33.37	2536	35.92	2607	38.56	2677	41.27	2746	44.06		
13000	3768	2195	25.57	2232	26.72	2305	29.07	2377	31.47	2448	33.92	2517	36.46	2585	39.06	2653	41.72	2719	44.46	2785	47.28		
14000	4058	2269	28.62	2304	29.82	2374	32.28	2442	34.78	2510	37.34	2576	39.93	2641	42.59	2706	45.32	2769	48.10				
15000	4348	2346	31.96	2380	33.23	2447	35.82	2512	38.45	2577	41.09	2640	43.79	2703	46.53	2765	49.34						
16000	4638	2426	35.59	2459	36.95	2523	39.68	2586	42.43	2648	45.21	2709	48.03	2769	50.87								
17000	4928	2510	39.51	2541	40.96	2603	43.85	2664	46.76	2723	49.67	2782	52.62										
18000	5217	2595	43.73	2625	45.28	2685	48.34	2744	51.40	2801	54.47												
19000	5507	2683	48.28	2712	49.90	2770	53.15																
20000	5797	2772	53.15	2801	54.87																		

270

BI SWSI

Wheel Diameter = 27 in.	Discharge Area = 4.19 sq. ft.
Inlet Area = 4.350 sq. ft.	Tip Speed, FPM = 7.075 x RPM
Maximum BHP = 4.200 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3300	788	364	0.20	407	0.27	447	0.34	486	0.44	523	0.53	558	0.61	592	0.71	656	0.91						
3600	859	381	0.22	422	0.30	460	0.39	497	0.48	532	0.56	565	0.66	598	0.77	660	0.98	719	1.20				
3900	931	400	0.27	438	0.34	474	0.44	509	0.53	542	0.61	575	0.72	606	0.83	666	1.04	722	1.29				
4200	1002	419	0.30	455	0.39	489	0.48	522	0.58	554	0.68	585	0.78	615	0.88	673	1.12	728	1.36	831	1.87		
4500	1074	439	0.34	472	0.44	505	0.54	537	0.64	567	0.73	597	0.85	626	0.96	682	1.20	735	1.45	834	1.97	927	2.54
4800	1146	460	0.40	491	0.50	522	0.60	552	0.69	582	0.81	610	0.91	638	1.03	692	1.28	743	1.53	839	2.08	930	2.66
5100	1217	481	0.45	511	0.56	540	0.65	568	0.77	597	0.88	624	0.98	651	1.11	703	1.36	752	1.62	846	2.18	934	2.79
5400	1289	503	0.52	531	0.63	558	0.72	586	0.83	612	0.96	639	1.06	665	1.20	715	1.45	763	1.72	854	2.29	939	2.91
5700	1360	525	0.59	551	0.69	577	0.81	603	0.91	629	1.04	654	1.16	679	1.29	728	1.54	774	1.82	862	2.42	946	3.06
6000	1432	547	0.66	572	0.78	597	0.88	622	1.01	646	1.12	671	1.26	695	1.38	741	1.66	786	1.93	872	2.54	953	3.20
6300	1504	569	0.75	593	0.86	617	0.97	641	1.10	664	1.22	688	1.36	711	1.48	756	1.77	800	2.07	883	2.68	962	3.34
6600	1575	592	0.83	615	0.96	638	1.08	660	1.20	683	1.33	705	1.46	727	1.61	771	1.88	813	2.18	895	2.83	972	3.50
6900	1647	615	0.93	637	1.06	658	1.18	680	1.31	702	1.45	723	1.58	745	1.72	787	2.02	828	2.33	907	2.97	982	3.66
7900	1885	692	1.31	711	1.45	730	1.60	749	1.75	768	1.88	787	2.04	806	2.20	844	2.52	881	2.84	953	3.54	1022	4.29
8900	2124	770	1.79	787	1.95	804	2.12	821	2.27	838	2.43	855	2.59	872	2.77	906	3.12	939	3.47	1005	4.22	1068	5.00
9900	2363	849	2.40	865	2.57	880	2.74	896	2.91	911	3.09	926	3.27	941	3.45	971	3.84	1002	4.22	1062	5.01	1120	5.84
10900	2601	929	3.12	943	3.30	957	3.50	971	3.69	985	3.89	999	4.08	1013	4.27	1040	4.67	1068	5.08	1123	5.94	1177	6.83
11900	2840	1009	3.97	1022	4.19	1035	4.40	1048	4.59	1061	4.80	1074	5.01	1086	5.24	1112	5.66	1137	6.10	1187	7.01	1237	7.95
12900	3079	1089	5.00	1102	5.22	1114	5.44	1126	5.66	1138	5.89	1149	6.12	1161	6.34	1185	6.80	1208	7.28	1254	8.25	1301	9.24
13900	3317	1170	6.17	1181	6.41	1193	6.65	1204	6.89	1215	7.14	1226	7.38	1237	7.61	1259	8.11	1281	8.61	1324	9.64	1367	10.69

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800	1146	1015	3.29																				
5100	1217	1017	3.42																				
5400	1289	1020	3.58	1097	4.25																		
5700	1360	1025	3.72	1100	4.42	1173	5.16																
6000	1432	1030	3.89	1104	4.60	1175	5.34	1244	6.12														
6300	1504	1037	4.05	1109	4.79	1179	5.55	1246	6.33	1311	7.15												
6600	1575	1045	4.23	1116	4.98	1184	5.75	1249	6.55	1313	7.39	1375	8.24										
6900	1647	1054	4.41	1123	5.16	1189	5.97	1254	6.79	1316	7.64	1377	8.50	1436	9.39								
7900	1885	1089	5.07	1153	5.87	1215	6.73	1275	7.60	1334	8.50	1391	9.44	1446	10.39	1501	11.35	1554	12.35	1606	13.36	1657	14.38
8900	2124	1130	5.83	1190	6.69	1248	7.58	1305	8.51	1360	9.46	1414	10.44	1467	11.46	1518	12.49	1569	13.53	1618	14.60	1667	15.68
9900	2363	1178	6.71	1234	7.63	1289	8.58	1342	9.55	1394	10.55	1445	11.58	1495	12.64	1543	13.71	1591	14.82	1639	15.93	1685	17.08
10900	2601	1230	7.75	1283	8.71	1334	9.69	1384	10.71	1434	11.76	1482	12.83	1529	13.94	1575	15.07	1621	16.23	1666	17.39	1710	18.60
11900	2840	1287	8.92	1336	9.92	1384	10.96	1432	12.03	1478	13.13	1524	14.25	1569	15.39	1613	16.57	1656	17.78	1699	19.00	1741	20.25
12900	3079	1347	10.25	1393	11.32	1438	12.39	1483	13.51	1527	14.66	1570	15.83	1613	17.03	1655	18.25	1696	19.50	1737	20.76	1778	22.06
13900	3317	1410	11.76	1453	12.88	1495	14.01	1537	15.17	1579	16.36	1620	17.58	1661	18.82	1701	20.10	1741	21.39	1780	22.71	1818	24.04
14900	3556	1476	13.46	1516	14.61	1556	15.81	1595	17.01	1635	18.26	1674	19.53	1712	20.82	1750	22.14	1788	23.48	1826	24.83	1863	26.22
15900	3795	1543	15.35	1581	16.56	1619	17.81	1656	19.07	1693	20.35	1730	21.67	1767	23.01	1803	24.38	1839	25.77	1875	27.17	1910	28.60
16900	4033	1613	17.43	1648	18.71	1684	20.01	1719	21.32	1754	22.67	1789	24.03	1824	25.42	1859	26.83	1893	28.27	1927	29.73	1961	31.22
17900	4272	1684	19.75	1717	21.07	1751	22.43	1784	23.81	1817	25.21	1851	26.62	1884	28.07	1917	29.52	1950	31.02	1982	32.53	2015	34.04
18900	4511	1756	22.28	1788	23.68	1819	25.10	1851	26.52	1883	27.97	1914	29.45	1946	30.95	1977	32.46	2009	34.00	2040	35.56	2071	37.12

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8900	2124	1715	16.79	1762	17.92	1853	20.21																
9900	2363	1730	18.25	1775	19.42	1863	21.83	1948	24.32	2031	26.85												
10900	2601	1753	19.81	1796	21.04	1880	23.57	1962	26.17	2042	28.82	2119	31.53	2196	34.31	2270	37.12						
11900	2840	1783	21.51	1824	22.79	1904	25.42	1982	28.12	2059	30.89	2134	33.72	2207	36.62	2279	39.57	2349	42.56	2419	45.59	2486	48.68
12900	3079	1817	23.36	1856	24.71	1933	27.43	2009	30.23	2082	33.12	2154	36.06	2225	39.06	2294	42.12	2362	45.22	2429	48.39	2495	51.60
13900	3317	1856	25.41	1894	26.78	1968	29.60	2040	32.52	2111	35.48	2180	38.53	2248	41.64	2315	44.81	2381	48.03	2445	51.30	2509	54.64
14900	3556	1899	27.62	1935	29.06	2006	31.97	2076	34.97	2144	38.04	2211	41.18	2276	44.40	2341	47.67	2404	51.00	2467	54.39	2528	57.82
15900	3795	1945	30.06	1980	31.53	2048	34.54	2115	37.64	2181	40.81	2245	44.04	2309	47.34	2371	50.71	2433	54.15	2493	57.64		
16900	4033	1995	32.71	2028	34.23	2094	37.34	2158	40.53	2222	43.78	2284	47.12	2345	50.52	2405	53.99	2465	57.50	2523	61.09		
17900	4272	2047	35.59	2079	37.17	2142	40.37	2204	43.65	2265	47.00	2325	50.42	2385	53.92	2443	57.47	2501	61.09				
18900	4511	2102	38.72	2132	40.34	2193	43.64	2253	47.01	2312	50.46	2370	53.97	2427	57.55	2484	61.21	2540	64.93				
19900	4749	2159	42.12	2188	43.78	2246	47.17	2304	50.64	2361	54.17	2417	57.79	2473	61.46	2528	65.21						
20900	4988	2218	45.77	2246	47.48	2302	50.97	2357	54.54	2412	58.17	2467	61.87	2521	65.65								
21900	5227	2279	49.70	2306	51.46	2360	55.05	2413	58.72	2466	62.45	2519	66.25										
22900	5465	2342	53.92	2368	55.75	2419	59.44	2471	63.20	2522	67.04												
23900	5704	2406	58.45	2431	60.32	2481	64.12	2530	68.00														

Performance Data

VCR Fan

300 BI SWSI

Wheel Diameter = 30 in.	Discharge Area = 5.17 sq. ft.
Inlet Area = 5.355 sq. ft.	Tip Speed, FPM = 7.86 x RPM
Maximum BHP = 7.111 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	774	324	0.24	364	0.32	400	0.43	435	0.53	469	0.64	501	0.76	532	0.88	590	1.12						
4400	851	341	0.28	378	0.38	413	0.48	446	0.59	477	0.69	508	0.81	537	0.94	594	1.20	647	1.47				
4800	928	359	0.32	393	0.43	426	0.54	457	0.64	488	0.77	517	0.88	545	1.02	599	1.29	650	1.58				
5200	1006	378	0.38	410	0.48	441	0.60	471	0.71	499	0.83	527	0.96	554	1.11	606	1.38	655	1.68	748	2.32		
5600	1083	398	0.44	427	0.55	456	0.66	485	0.79	512	0.91	539	1.06	565	1.20	614	1.48	662	1.79	751	2.45	835	3.16
6000	1161	418	0.51	446	0.63	473	0.75	500	0.88	526	1.01	552	1.14	576	1.29	624	1.60	670	1.92	756	2.59	837	3.32
6400	1238	439	0.59	465	0.70	490	0.83	516	0.96	541	1.11	565	1.25	589	1.39	635	1.70	680	2.04	763	2.74	842	3.49
7400	1431	492	0.81	514	0.96	537	1.10	559	1.23	581	1.38	603	1.54	625	1.70	667	2.04	708	2.40	785	3.15	858	3.95
8400	1625	547	1.12	567	1.27	587	1.41	606	1.58	626	1.75	646	1.91	665	2.08	704	2.45	741	2.82	813	3.62	881	4.47
9400	1818	603	1.47	621	1.64	638	1.82	656	1.98	674	2.16	692	2.34	709	2.54	744	2.91	778	3.32	845	4.16	909	5.05
10400	2012	659	1.92	676	2.11	692	2.29	708	2.47	724	2.66	740	2.87	756	3.07	788	3.47	819	3.90	881	4.80	941	5.74
11400	2205	717	2.45	732	2.65	747	2.84	761	3.06	776	3.27	791	3.47	805	3.69	834	4.12	863	4.58	921	5.51	977	6.50
12400	2398	774	3.08	788	3.29	802	3.50	816	3.72	829	3.95	843	4.17	856	4.41	883	4.87	910	5.34	963	6.34	1015	7.39
13400	2592	833	3.80	846	4.04	858	4.26	871	4.50	884	4.75	896	4.99	909	5.23	933	5.73	958	6.24	1008	7.28	1057	8.36
14400	2785	891	4.65	903	4.90	915	5.15	927	5.40	939	5.66	950	5.91	962	6.16	985	6.69	1008	7.23	1055	8.33	1100	9.48
15400	2979	949	5.60	961	5.87	972	6.14	983	6.41	994	6.68	1005	6.95	1016	7.23	1038	7.79	1060	8.35	1103	9.50	1146	10.71
16400	3172	1008	6.69	1019	6.99	1030	7.26	1040	7.55	1051	7.83	1061	8.13	1071	8.41	1092	9.00	1112	9.60	1153	10.82	1193	12.07
17400	3366	1067	7.93	1077	8.23	1087	8.53	1097	8.83	1107	9.13	1117	9.44	1127	9.74	1146	10.35	1165	10.99	1204	12.25	1242	13.57
18400	3559	1126	9.30	1136	9.61	1145	9.94	1155	10.25	1164	10.57	1174	10.89	1183	11.21	1201	11.86	1219	12.51	1256	13.86	1292	15.23
19400	3752	1185	10.83	1195	11.16	1204	11.50	1213	11.83	1222	12.16	1230	12.50	1239	12.83	1257	13.51	1274	14.21	1309	15.61	1343	17.03

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	1161	914	4.08																				
6400	1238	916	4.27	987	5.10																		
7400	1431	927	4.80	994	5.67																		
8400	1625	946	5.37	1008	6.30	1069	7.28	1127	8.28	1183	9.33	1238	10.39	1292	11.49								
9400	1818	970	6.00	1029	7.00	1086	8.03	1141	9.08	1195	10.19	1247	11.30	1298	12.46	1348	13.63	1397	14.85	1444	16.07		
10400	2012	999	6.73	1054	7.76	1108	8.85	1161	9.96	1212	11.10	1262	12.28	1310	13.50	1358	14.73	1405	16.00	1450	17.28	1495	18.58
11400	2205	1031	7.55	1084	8.64	1135	9.75	1185	10.91	1234	12.11	1281	13.35	1328	14.61	1373	15.91	1418	17.21	1462	18.57	1505	19.92
12400	2398	1067	8.46	1117	9.60	1165	10.78	1213	11.99	1259	13.23	1305	14.51	1349	15.82	1393	17.16	1436	18.53	1478	19.92	1519	21.35
13400	2592	1105	9.50	1152	10.69	1199	11.89	1244	13.16	1288	14.44	1332	15.78	1375	17.14	1416	18.53	1458	19.95	1498	21.39	1538	22.86
14400	2785	1146	10.66	1191	11.89	1235	13.14	1278	14.46	1320	15.80	1362	17.17	1403	18.57	1443	20.01	1483	21.48	1522	22.98	1560	24.50
15400	2979	1189	11.94	1231	13.21	1273	14.53	1314	15.88	1355	17.26	1395	18.68	1434	20.14	1473	21.63	1511	23.14	1548	24.67	1585	26.25
16400	3172	1234	13.36	1274	14.68	1314	16.04	1353	17.45	1392	18.88	1430	20.35	1468	21.85	1505	23.38	1542	24.93	1578	26.52	1613	28.14
17400	3366	1280	14.91	1318	16.29	1356	17.71	1394	19.16	1431	20.64	1467	22.16	1504	23.70	1539	25.28	1575	26.89	1609	28.52	1644	30.18
18400	3559	1328	16.63	1364	18.06	1400	19.53	1436	21.03	1471	22.56	1506	24.11	1541	25.72	1576	27.33	1610	28.98	1643	30.67	1676	32.39
19400	3752	1378	18.50	1412	19.98	1446	21.50	1480	23.06	1514	24.64	1547	26.25	1581	27.89	1614	29.57	1647	31.27	1679	33.00	1711	34.75
20400	3946	1428	20.53	1460	22.07	1493	23.64	1526	25.25	1558	26.89	1590	28.54	1622	30.23	1654	31.96	1685	33.71	1717	35.48	1748	37.29
21400	4139	1479	22.73	1510	24.33	1541	25.97	1572	27.62	1603	29.32	1634	31.02	1665	32.77	1695	34.54	1726	36.34	1756	38.17	1786	40.02
22400	4333	1531	25.11	1561	26.78	1591	28.47	1620	30.18	1650	31.92	1679	33.70	1709	35.48	1738	37.32	1767	39.15	1796	41.03	1825	42.93
23400	4526	1584	27.70	1612	29.42	1641	31.17	1669	32.93	1698	34.73	1726	36.56	1754	38.40	1783	40.28	1811	42.17	1839	44.10	1866	46.06
24400	4720	1637	30.47	1664	32.26	1692	34.06	1719	35.89	1746	37.75	1774	39.62	1801	41.53	1828	43.45	1855	45.40	1882	47.37	1909	49.37

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10400	2012	1539	19.92	1582	21.26																		
11400	2205	1547	21.32	1589	22.73																		
12400	2398	1560	22.79	1600	24.26	1679	27.27	1755	30.35	1829	33.50	1901	36.71										
13400	2592	1577	24.36	1616	25.89	1691	29.00	1765	32.20	1837	35.46	1907	38.82	1976	42.22	2043	45.70						
14400	2785	1598	26.04	1635	27.62	1708	30.83	1779	34.15	1849	37.53	1917	40.98	1983	44.53	2049	48.12	2113	51.79	2175	55.50		
15400	2979	1622	27.85	1658	29.47	1728	32.78	1797	36.20	1864	39.70	1930	43.27	1995	46.92	2058	50.64	2120	54.42	2181	58.25	2241	62.15
16400	3172	1649	29.78	1683	31.46	1751	34.87	1818	38.39	1883	41.98	1947	45.67	2010	49.42	2071	53.25	2132	57.15	2191	61.10	2250	65.12
17400	3366	1678	31.87	1711	33.59	1777	37.10	1842	40.71	1905	44.40	1967	48.18	2028	52.04	2088	55.99	2146	60.00	2204	64.06	2261	68.20
18400	3559	1709	34.12	1742	35.89	1806	39.48	1868	43.20	1930	46.98	1990	50.87	2049	54.82	2107	58.87	2164	62.97	2220	67.15	2276	71.40
19400	3752	1743	36.53	1774	38.34	1836	42.04	1897	45.84	1956	49.72	2015	53.70	2072	57.75	2129	61.90	2184	66.10	2239	70.40		
20400	3946	1778	39.12	1809	40.97	1869	44.78	1927	48.65	1985	52.64	2042	56.70	2098	60.87	2153	65.09	2207	69.40	2260	73.80		
21400	4139	1815	41.90	1845	43.81	1903	47.68	1960	51.67	2016	55.74	2071	59.90	2126	64.15	2179	68.47	2232	72.89	2284	77.37		
22400	4333	1854	44.87	1882	46.82	1939	50.79	1994	54.87	2049	59.04	2102	63.29	2155	67.62	2208	72.06	2259	76.56				
23400	4526	1894	48.03	1922	50.03	1976	54.10	2030	58.28	2083	62.54	2135	66.87	2187	71.31	2238	75.82	2288	80.43				
24400	4720	1936	51.40	1962	53.45	2015	57.62	2067	61.89	2119	66.25	2170	70.68	2220	75.20	2269	79.81						
25400	4913	1978	55.00	2004	57.09	2055	61.37	2106	65.72	2156	70.18	2205	74.70	2254	79.32								
26400	5106	2022	58.80	2047	60.95	2097	65.32	2146	69.79	2194	74.34	2242	78.96										
27400	5300	2067	62.85	2091	65.06	2139	69.53	2187	74.09	2234	78.72	2281	83.45										
28400	5493	2113	67.14	2137	69.40	2183	73.96	2229	78.62	2275	83.37												
29400	5687	2160	71.67	2183	73.97	2228	78.65	2273	83.42														

330

BI SWSI

Wheel Diameter = 33 in.

Discharge Area = 6.26 sq. ft.

Inlet Area = 6.49 sq. ft.

Tip Speed, FPM = 8.65 x RPM

Maximum BHP = 11.45 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	799	300	0.30	335	0.41	368	0.54	399	0.65	429	0.80	457	0.93	485	1.08	537	1.38	593	1.97	678	2.72		
6000	958	333	0.41	363	0.55	392	0.68	420	0.81	447	0.96	473	1.12	499	1.28	547	1.61	605	2.24	685	3.04	760	3.91
7000	1118	370	0.58	396	0.70	422	0.86	447	1.01	471	1.16	495	1.33	518	1.50	563	1.86	605	2.24	685	3.04	760	3.91
8000	1278	409	0.77	432	0.91	454	1.08	477	1.23	499	1.41	521	1.58	542	1.77	583	2.15	623	2.56	697	3.41	768	4.33
9000	1438	449	1.01	469	1.16	490	1.33	510	1.52	530	1.70	550	1.88	569	2.08	608	2.49	644	2.91	714	3.83	781	4.80
10000	1597	490	1.29	509	1.47	527	1.66	545	1.85	564	2.04	582	2.25	600	2.45	635	2.88	669	3.34	735	4.30	798	5.32
11000	1757	532	1.64	549	1.83	566	2.04	582	2.25	599	2.45	616	2.66	632	2.88	665	3.34	697	3.82	759	4.82	818	5.89
12000	1917	574	2.06	590	2.27	605	2.47	621	2.70	636	2.92	651	3.16	666	3.39	697	3.87	727	4.37	785	5.41	841	6.54
13000	2077	617	2.54	632	2.75	646	3.00	660	3.22	674	3.47	688	3.70	703	3.95	731	4.47	758	4.99	813	6.08	866	7.25
14000	2236	660	3.08	674	3.33	687	3.58	700	3.83	714	4.08	727	4.33	740	4.60	766	5.14	792	5.69	843	6.83	894	8.05
15000	2396	704	3.72	717	3.97	729	4.25	741	4.50	754	4.77	766	5.05	778	5.33	803	5.90	827	6.48	875	7.68	923	8.92
16000	2556	748	4.44	759	4.72	771	5.00	783	5.27	794	5.57	806	5.85	817	6.15	840	6.74	863	7.34	909	8.60	954	9.91
17000	2716	791	5.25	803	5.55	814	5.83	825	6.14	836	6.44	847	6.75	857	7.05	879	7.68	901	8.30	944	9.61	986	10.98
18000	2875	835	6.16	846	6.46	856	6.78	867	7.09	877	7.41	888	7.74	898	8.05	918	8.71	939	9.38	979	10.74	1020	12.16
19000	3035	879	7.16	889	7.50	900	7.83	909	8.16	919	8.49	929	8.83	939	9.16	958	9.85	978	10.53	1016	11.96	1055	13.43
20000	3195	923	8.28	933	8.64	943	8.98	952	9.33	962	9.67	971	10.03	980	10.38	999	11.10	1017	11.82	1054	13.30	1091	14.83
21000	3355	968	9.53	977	9.89	986	10.25	995	10.60	1004	10.98	1013	11.33	1022	11.71	1040	12.46	1057	13.21	1092	14.76	1127	16.33
22000	3514	1012	10.88	1021	11.25	1030	11.64	1038	12.01	1047	12.39	1056	12.78	1064	13.16	1081	13.93	1098	14.73	1131	16.32	1165	17.96
23000	3674	1056	12.35	1065	12.75	1073	13.14	1082	13.53	1090	13.93	1098	14.33	1106	14.73	1123	15.55	1139	16.36	1171	18.03	1203	19.73
24000	3834	1101	13.96	1109	14.38	1117	14.78	1125	15.19	1133	15.61	1141	16.03	1149	16.45	1165	17.29	1180	18.14	1211	19.86	1241	21.63

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	1597	857	6.40	914	7.53	970	8.69	1023	9.91	1075	11.16	1125	12.44										
11000	1757	875	7.01	929	8.19	982	9.42	1033	10.69	1082	12.00	1131	13.33	1178	14.71	1224	16.10	1268	17.54				
12000	1917	895	7.70	947	8.94	997	10.21	1046	11.53	1094	12.88	1140	14.28	1185	15.71	1230	17.17	1273	18.67	1315	20.20	1357	21.73
13000	2077	918	8.46	967	9.75	1016	11.07	1062	12.44	1108	13.85	1153	15.30	1196	16.78	1239	18.31	1281	19.85	1322	21.43	1362	23.03
14000	2236	943	9.32	990	10.64	1036	12.00	1081	13.42	1125	14.88	1168	16.39	1210	17.92	1251	19.50	1291	21.10	1331	22.73	1370	24.39
15000	2396	970	10.25	1015	11.61	1059	13.03	1103	14.50	1145	16.01	1186	17.54	1227	19.14	1266	20.76	1305	22.42	1343	24.10	1381	25.82
16000	2556	998	11.26	1042	12.69	1084	14.14	1126	15.66	1166	17.21	1206	18.81	1245	20.45	1284	22.11	1321	23.82	1358	25.57	1395	27.33
17000	2716	1028	12.39	1070	13.86	1111	15.36	1151	16.92	1190	18.53	1228	20.17	1266	21.85	1303	23.57	1340	25.32	1375	27.10	1411	28.93
18000	2875	1060	13.61	1100	15.13	1139	16.68	1177	18.28	1215	19.93	1252	21.63	1289	23.35	1325	25.11	1360	26.92	1395	28.76	1429	30.64
19000	3035	1093	14.94	1131	16.51	1168	18.11	1205	19.76	1242	21.46	1278	23.20	1313	24.98	1348	26.78	1382	28.64	1415	30.52	1449	32.43
20000	3195	1127	16.39	1163	18.01	1199	19.67	1235	21.36	1270	23.10	1304	24.89	1338	26.72	1372	28.57	1405	30.47	1438	32.40	1470	34.37
21000	3355	1162	17.96	1197	19.63	1231	21.33	1265	23.08	1299	24.88	1332	26.71	1365	28.57	1398	30.47	1430	32.42	1462	34.40	1493	36.40
22000	3514	1198	19.64	1231	21.36	1264	23.13	1297	24.92	1329	26.77	1362	28.64	1393	30.57	1425	32.52	1456	34.51	1487	36.53	1517	38.59
23000	3674	1235	21.46	1266	23.25	1298	25.06	1330	26.91	1361	28.79	1392	30.72	1423	32.68	1453	34.68	1484	36.72	1513	38.79	1543	40.90
24000	3834	1272	23.42	1303	25.26	1333	27.12	1363	29.02	1393	30.97	1423	32.95	1453	34.96	1483	37.01	1512	39.09	1541	41.21	1570	43.35
25000	3994	1310	25.51	1339	27.39	1369	29.32	1398	31.28	1427	33.28	1456	35.31	1485	37.37	1513	39.46	1542	41.59	1570	43.77	1598	45.96
26000	4153	1349	27.75	1377	29.70	1405	31.67	1433	33.68	1461	35.73	1489	37.82	1517	39.93	1545	42.07	1572	44.27	1599	46.47	1626	48.72
27000	4313	1388	30.14	1415	32.15	1442	34.17	1469	36.25	1496	38.34	1523	40.48	1550	42.65	1577	44.84	1603	47.09	1630	49.34	1656	51.65
28000	4473	1427	32.68	1454	34.75	1480	36.84	1506	38.96	1532	41.12	1558	43.32	1584	45.53	1610	47.78	1636	50.07	1661	52.37	1687	54.72
29000	4633	1467	35.39	1493	37.52	1518	39.67	1543	41.84	1568	44.07	1594	46.31	1619	48.57	1644	50.89	1669	53.21	1694	55.59	1718	57.97

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	2396	1418	27.57	1455	29.35	1526	32.98	1595	36.71	1663	40.53	1729	44.42										
16000	2556	1431	29.14	1466	30.97	1535	34.71	1603	38.56	1668	42.48	1733	46.51	1795	50.60								
17000	2716	1446	30.78	1480	32.67	1547	36.52	1613	40.47	1676	44.53	1739	48.67	1800	52.89	1860	57.19	1919	61.57				
18000	2875	1463	32.53	1496	34.46	1561	38.42	1625	42.47	1687	46.64	1748	50.90	1808	55.24	1866	59.65	1923	64.15	1980	68.74	2035	73.37
19000	3035	1481	34.39	1514	36.37	1577	40.42	1639	44.59	1700	48.85	1759	53.21	1817	57.67	1874	62.20	1930	66.82	1985	71.52	2040	76.29
20000	3195	1502	36.35	1533	38.39	1595	42.53	1655	46.79	1714	51.17	1772	55.64	1829	60.20	1885	64.84	1939	69.57	1993	74.39	2046	79.28
21000	3355	1524	38.46	1555	40.53	1615	44.78	1673	49.14	1731	53.59	1787	58.17	1843	62.84	1897	67.59	1951	72.43	2003	77.35	2055	82.35
22000	3514	1548	40.67	1577	42.79	1636	47.14	1693	51.59	1749	56.15	1804	60.82	1858	65.59	1911	70.45	1963	75.40	2015	80.43	2066	85.54
23000	3674	1572	43.03	1601	45.21	1658	49.64	1714	54.19	1769	58.84	1822	63.60	1875	68.47	1927	73.43	1978	78.49	2028	83.62	2078	88.84
24000	3834	1598	45.54	1626	47.76	1682	52.29	1736	56.92	1790	61.67	1842	66.54	1894	71.50	1944	76.56	1994	81.70	2044	86.94		
25000	3994	1625	48.20	1653	50.46	1707	55.07	1760	59.80	1812	64.65	1863	69.60	1914	74.67	1963	79.81	2012	85.06	2060	90.40		
26000	4153	1653	51.01	1680	53.30	1733	58.02	1784	62.84	1835	67.79	1885	72.84	1935	77.99	1983	83.22	2031	88.57	2078	94.00		
27000	4313	1682	53.96	1708	56.32	1760	61.12	1810	66.05	1860	71.07	1909	76.21	1957	81.46	2005	86.81	2051	92.25				
28000	4473	1712	57.09	1738	59.50	1788	64.40	1837	69.42	1885	74.55	1933	79.78	1980	85.10	2027	90.55	2073	96.07				
29000	4633	1743	60.40	1768	62.85	1816	67.84	1864	72.95	1912	78.18	1959	83.50	2005	88.93	2050	94.45						
30000	4792	1775	63.87	1799	66.39	1846	71.47	1893	76.68	1939	82.00	1985	87.42	2030	92.93	2075	98.56						
31000	4952	1807	67.54	1830	70.09	1877	75.29	1922	80.59	1967	86.00	2012	91.50	2056	97.12								
32000	5112	1840	71.37	1863	73.99	1908	79.28	1952	84.68	1997	90.18	2040	95.80										
33000	5272	1874	75.42	1896	78.07	1940	83.46	1983	88.96	2028	94.56	2069	100.28										
34000	5431	1909	79.65	1930	82.35	1973	87.85	2015	93.45	2057	99.15												

Performance Data

VCR Fan

365 BI SWSI

Wheel Diameter = 36.50 in.	Discharge Area = 7.66 sq. ft.
Inlet Area = 7.98 sq. ft.	Tip Speed, FPM = 9.56 x RPM
Maximum BHP = 18.84 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	783	269	0.36	299	0.48	328	0.61	356	0.77	384	0.93	410	1.08	436	1.27	486	1.63						
7000	914	295	0.48	322	0.61	347	0.76	372	0.91	396	1.08	420	1.25	444	1.43	490	1.82	533	2.25				
8000	1044	322	0.63	346	0.78	369	0.93	392	1.10	414	1.27	435	1.45	456	1.63	498	2.04	538	2.49	616	3.44	687	4.47
9000	1175	351	0.80	373	0.96	394	1.14	414	1.33	434	1.51	454	1.70	473	1.88	511	2.31	548	2.75	620	3.75	688	4.83
10000	1305	380	1.00	400	1.20	420	1.38	439	1.58	457	1.77	475	1.98	493	2.18	528	2.62	562	3.08	629	4.09	693	5.22
11000	1436	410	1.23	429	1.45	447	1.67	465	1.88	482	2.09	499	2.32	515	2.54	547	2.99	579	3.47	641	4.50	701	5.65
12000	1567	440	1.52	458	1.76	475	1.98	492	2.22	508	2.45	524	2.70	539	2.92	569	3.40	599	3.90	656	4.98	712	6.14
13000	1697	471	1.85	487	2.09	504	2.36	519	2.61	535	2.87	549	3.12	564	3.37	592	3.87	620	4.41	674	5.50	727	6.69
14000	1828	502	2.22	518	2.49	533	2.77	548	3.04	562	3.32	576	3.59	590	3.85	617	4.41	643	4.95	694	6.10	744	7.33
15000	1958	534	2.65	548	2.92	562	3.22	577	3.52	590	3.82	604	4.10	617	4.41	643	4.99	668	5.58	716	6.78	763	8.03
16000	2089	566	3.12	579	3.42	593	3.74	606	4.05	619	4.37	632	4.69	644	5.00	669	5.62	693	6.25	739	7.50	783	8.82
17000	2219	598	3.66	611	3.99	623	4.32	636	4.65	648	4.99	660	5.32	672	5.66	696	6.32	719	6.99	763	8.32	806	9.67
18000	2350	630	4.27	642	4.60	654	4.95	666	5.30	678	5.66	689	6.01	701	6.37	724	7.08	746	7.78	788	9.19	829	10.60
19000	2480	663	4.95	674	5.30	685	5.66	697	6.02	708	6.40	719	6.78	730	7.15	752	7.90	773	8.64	814	10.13	853	11.61
20000	2611	695	5.69	706	6.07	717	6.44	727	6.81	738	7.20	749	7.60	759	8.00	780	8.78	801	9.57	840	11.14	878	12.69
21000	2742	728	6.51	738	6.90	748	7.29	759	7.69	769	8.10	779	8.50	789	8.91	809	9.75	829	10.58	867	12.21	903	13.86
22000	2872	761	7.43	770	7.81	780	8.21	790	8.64	800	9.05	809	9.49	819	9.91	838	10.78	857	11.66	894	13.38	929	15.10
23000	3003	794	8.41	803	8.82	812	9.24	821	9.66	831	10.10	840	10.55	849	11.00	868	11.91	886	12.81	922	14.61	956	16.42
25000	3264	860	10.64	868	11.08	877	11.53	885	11.99	894	12.46	902	12.93	911	13.41	928	14.39	945	15.38	978	17.35	1011	19.31
27000	3525	926	13.26	934	13.71	941	14.19	949	14.68	957	15.18	965	15.69	973	16.21	989	17.26	1005	18.31	1036	20.43	1067	22.57

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	1436	759	6.88	816	8.19	870	9.55	922	10.96														
12000	1567	767	7.40	821	8.74	873	10.14	923	11.61	972	13.13	1019	14.68										
13000	1697	779	7.98	829	9.35	879	10.80	927	12.30	974	13.86	1020	15.48	1064	17.14	1108	18.82						
14000	1828	792	8.64	840	10.03	888	11.50	934	13.03	979	14.64	1023	16.31	1067	18.01	1109	19.76	1150	21.54	1190	23.36		
15000	1958	809	9.36	854	10.78	899	12.28	943	13.85	986	15.48	1029	17.17	1071	18.92	1112	20.73	1152	22.57	1191	24.46	1229	26.37
16000	2089	827	10.19	870	11.63	913	13.14	955	14.73	996	16.39	1037	18.13	1077	19.91	1117	21.75	1155	23.64	1194	25.57	1231	27.53
17000	2219	847	11.08	888	12.55	928	14.11	968	15.71	1008	17.39	1047	19.14	1086	20.96	1124	22.83	1161	24.76	1198	26.72	1235	28.75
18000	2350	869	12.07	908	13.58	946	15.16	984	16.79	1022	18.50	1059	20.28	1096	22.10	1133	24.01	1169	25.96	1205	27.97	1240	30.02
19000	2480	891	13.13	928	14.68	965	16.29	1002	17.96	1038	19.71	1074	21.50	1109	23.35	1144	25.28	1179	27.26	1214	29.28	1248	31.37
20000	2611	915	14.28	951	15.88	986	17.53	1021	19.25	1056	21.01	1090	22.83	1124	24.71	1158	26.66	1191	28.66	1224	30.72	1257	32.82
21000	2742	939	15.51	974	17.17	1008	18.88	1041	20.63	1075	22.42	1107	24.28	1140	26.18	1173	28.14	1205	30.17	1237	32.26	1269	34.39
22000	2872	964	16.82	997	18.54	1030	20.31	1063	22.10	1095	23.95	1126	25.82	1158	27.77	1189	29.77	1220	31.81	1251	33.92	1282	36.07
23000	3003	989	18.21	1022	20.01	1054	21.82	1085	23.67	1116	25.57	1147	27.50	1177	29.47	1207	31.50	1237	33.57	1267	35.70	1296	37.87
25000	3264	1042	21.26	1073	23.21	1103	25.17	1132	27.14	1161	29.14	1190	31.16	1218	33.21	1246	35.32	1274	37.46	1302	39.65	1330	41.89
27000	3525	1096	24.67	1126	26.78	1154	28.89	1182	31.01	1209	33.12	1236	35.27	1263	37.42	1290	39.62	1316	41.85	1342	44.12	1368	46.42
29000	3786	1152	28.48	1180	30.76	1207	33.02	1232	35.28	1260	37.54	1285	39.82	1311	42.10	1336	44.42	1361	46.75	1385	49.10	1410	51.50
31000	4047	1209	32.71	1235	35.15	1261	37.57	1287	40.00	1311	42.40	1336	44.82	1360	47.26	1384	49.68	1408	52.15	1431	54.62	1454	57.10
33000	4308	1267	37.39	1292	39.98	1317	42.57	1341	45.15	1365	47.73	1388	50.31	1412	52.87	1434	55.45	1457	58.04	1479	60.65	1502	63.25
35000	4569	1326	42.53	1350	45.29	1373	48.04	1397	50.79	1419	53.54	1442	56.27	1464	59.00	1486	61.72	1508	64.45	1529	67.19	1551	69.94
37000	4830	1386	48.20	1408	51.10	1431	54.03	1453	56.94	1475	59.84	1497	62.75	1518	65.64	1539	68.52	1560	71.40	1581	74.29	1601	77.18

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	2089	1268	29.54	1304	31.57	1374	35.73																
17000	2219	1271	30.81	1306	32.90	1375	37.18	1441	41.57														
18000	2350	1275	32.12	1309	34.26	1377	38.65	1442	43.17	1505	47.79												
19000	2480	1282	33.51	1315	35.68	1380	40.17	1444	44.79	1506	49.53	1567	54.40	1625	59.34								
20000	2611	1290	34.98	1322	37.20	1386	41.76	1448	46.46	1509	51.32	1568	56.29	1626	61.37	1683	66.54						
21000	2742	1300	36.57	1331	38.81	1393	43.42	1454	48.21	1513	53.15	1571	58.21	1628	63.40	1684	68.70	1738	74.09	1791	79.56		
22000	2872	1312	38.28	1342	40.53	1402	45.21	1461	50.06	1519	55.07	1576	60.21	1631	65.50	1686	70.90	1739	76.42	1792	82.02	1843	87.69
23000	3003	1326	40.10	1355	42.39	1413	47.10	1470	52.00	1526	57.07	1581	62.30	1636	67.68	1689	73.18	1742	78.79	1794	84.50	1844	90

Performance Data

VCR Fan

402

BI SWSI

Wheel Diameter = 40.25 in.	Discharge Area = 9.31 sq. ft.
Inlet Area = 9.72 sq. ft.	Tip Speed, FPM = 10.55 x RPM
Maximum BHP = 30.72 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7700	827	252	0.48	278	0.64	303	0.81	327	0.98	351	1.18	375	1.38	397	1.61	441	2.07	483	2.56				
8400	902	265	0.56	290	0.73	313	0.91	336	1.10	358	1.29	380	1.50	402	1.72	443	2.20	483	2.70				
9100	977	279	0.66	302	0.83	324	1.03	346	1.21	366	1.41	387	1.63	407	1.86	447	2.34	485	2.87	557	4.00		
9800	1053	294	0.77	316	0.96	336	1.16	356	1.36	376	1.56	395	1.77	415	2.02	452	2.50	489	3.04	558	4.20	623	5.45
10500	1128	308	0.88	329	1.08	349	1.29	368	1.51	387	1.72	405	1.95	423	2.18	459	2.68	493	3.22	560	4.41	623	5.70
11200	1203	323	1.02	343	1.23	362	1.45	380	1.67	398	1.89	415	2.12	433	2.37	466	2.88	499	3.44	564	4.65	625	5.97
11900	1278	339	1.16	358	1.38	376	1.62	393	1.86	410	2.08	427	2.33	443	2.58	475	3.11	507	3.66	568	4.89	627	6.24
12600	1353	354	1.31	372	1.56	390	1.81	406	2.06	423	2.29	438	2.56	454	2.81	485	3.34	515	3.91	574	5.16	631	6.53
13300	1429	370	1.48	387	1.75	404	2.00	420	2.27	436	2.52	451	2.79	466	3.06	495	3.60	524	4.19	580	5.44	635	6.83
14000	1504	386	1.67	402	1.95	418	2.22	434	2.50	449	2.77	464	3.04	478	3.33	506	3.89	534	4.49	588	5.76	641	7.16
14700	1579	401	1.87	417	2.16	433	2.45	448	2.75	463	3.02	477	3.32	491	3.60	518	4.19	544	4.80	596	6.10	647	7.53
16700	1794	448	2.57	462	2.90	476	3.22	490	3.54	503	3.87	516	4.20	529	4.52	554	5.19	578	5.84	624	7.23	670	8.69
18700	2009	495	3.42	508	3.79	520	4.15	533	4.51	545	4.89	557	5.25	569	5.62	592	6.34	614	7.08	657	8.57	699	10.13
20700	2223	543	4.48	554	4.87	566	5.26	577	5.66	588	6.08	599	6.49	610	6.90	632	7.70	652	8.51	692	10.14	731	11.78
22700	2438	591	5.74	602	6.16	612	6.58	622	7.03	633	7.48	643	7.91	653	8.36	673	9.26	693	10.14	730	11.91	766	13.71
24700	2653	640	7.24	649	7.68	659	8.14	668	8.61	678	9.10	688	9.58	697	10.07	716	11.03	734	12.00	769	13.93	803	15.86
26700	2868	689	8.98	697	9.46	706	9.94	715	10.44	724	10.96	733	11.49	742	12.00	759	13.06	776	14.11	810	16.21	842	18.28
28700	3083	738	11.00	746	11.50	754	12.03	762	12.55	770	13.11	779	13.66	787	14.21	803	15.33	820	16.46	851	18.73	882	20.98
30700	3298	787	13.31	794	13.85	802	14.39	810	14.96	817	15.53	825	16.11	833	16.71	848	17.91	864	19.11	894	21.53	923	23.95
32700	3512	836	15.93	843	16.50	850	17.07	858	17.67	865	18.28	872	18.89	879	19.51	894	20.78	908	22.06	937	24.64	964	27.21

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11200	1203	683	7.38																				
11900	1278	684	7.68	737	9.19																		
12600	1353	685	8.00	738	9.55	788	11.16																
13300	1429	688	8.33	739	9.91	789	11.57	836	13.28														
14000	1504	692	8.67	742	10.30	790	11.99	836	13.73	881	15.53												
14700	1579	697	9.05	745	10.69	792	12.41	837	14.19	881	16.04	924	17.93										
16700	1794	715	10.28	759	11.96	803	13.75	845	15.61	886	17.54	927	19.56	966	21.61	1005	23.73	1042	25.87				
18700	2009	740	11.75	780	13.48	820	15.32	859	17.23	897	19.23	935	21.32	973	23.46	1009	25.67	1045	27.93	1081	30.25	1115	32.59
20700	2223	769	13.51	806	15.31	842	17.17	878	19.14	914	21.18	950	23.32	985	25.53	1019	27.79	1053	30.14	1087	32.53	1120	35.00
22700	2438	801	15.53	836	17.41	869	19.35	903	21.36	936	23.46	969	25.64	1002	27.89	1034	30.21	1066	32.60	1098	35.07	1129	37.59
24700	2653	836	17.82	868	19.79	900	21.82	931	23.92	962	26.07	993	28.29	1024	30.60	1054	32.96	1084	35.40	1114	37.92	1143	40.50
26700	2868	873	20.38	904	22.48	933	24.61	963	26.79	992	29.03	1021	31.32	1049	33.68	1078	36.10	1106	38.59	1134	41.15	1162	43.77
28700	3083	911	23.21	940	25.46	969	27.72	997	30.01	1024	32.34	1051	34.71	1078	37.15	1105	39.64	1131	42.17	1158	44.78	1184	47.76
30700	3298	951	26.33	979	28.73	1006	31.14	1032	33.56	1058	36.00	1084	38.47	1110	41.00	1135	43.57	1160	46.17	1185	48.84	1210	51.57
32700	3512	992	29.77	1018	32.32	1044	34.87	1069	37.42	1094	40.01	1119	42.59	1143	45.22	1167	47.89	1191	50.59	1215	53.34	1238	56.14
34700	3727	1033	33.53	1058	36.23	1083	38.95	1107	41.65	1131	44.37	1155	47.09	1178	49.84	1201	52.60	1224	55.40	1247	58.25	1269	61.14
36700	3942	1075	37.60	1100	40.48	1123	43.35	1147	46.21	1170	49.09	1192	51.95	1215	54.82	1237	57.72	1259	60.65	1281	63.59	1302	66.56
38700	4157	1118	42.06	1141	45.09	1164	48.14	1187	51.15	1209	54.17	1231	57.19	1252	60.21	1274	63.25	1295	66.30	1316	69.35	1336	72.44
40700	4372	1161	46.87	1184	50.09	1206	53.28	1228	56.46	1249	59.65	1270	62.82	1291	66.00	1312	69.18	1332	72.35	1352	75.56	1372	78.77
42700	4586	1205	52.09	1227	55.46	1248	58.82	1269	62.17	1290	65.53	1310	68.85	1331	72.18	1350	75.52	1370	78.84	1390	82.18	1409	85.54

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18700	2009	1149	34.98	1182	37.42																		
20700	2223	1152	37.50	1184	40.04	1246	45.26	1307	50.60														
22700	2438	1160	40.17	1191	42.81	1251	48.22	1309	53.80	1365	59.54	1421	65.39										
24700	2653	1172	43.14	1201	45.84	1259	51.40	1315	57.15	1369	63.09	1423	69.18	1475	75.39	1526	81.72	1576	88.17				
26700	2868	1189	46.46	1217	49.21	1271	54.87	1324	60.77	1377	66.85	1429	73.12	1479	79.55	1529	86.10	1577	92.80	1625	99.59	1672	106.50
28700	3083	1210	50.18	1236	52.97	1288	58.75	1338	64.74	1388	70.94	1438	77.34	1487	83.93	1535	90.68	1582	97.56	1628	104.59	1674	111.74
30700	3298	1235	54.35	1259	57.20	1308	63.05	1356	69.14	1404	75.44	1451	81.95	1498	88.65	1544	95.55	1589	102.59	1634	109.80	1678	117.14
32700	3512	1262	58.97	1285	61.87	1331	67.84	1377	74.02	1423	80.40	1468	87.02	1512	93.81	1557	100.81	1600	107.99	1644	115.33	1686	122.83
34700	3727	1292	64.06	1314	67.03	1358	73.10	1402	79.40	1445	85.87	1488	92.57	1530	99.46	1573	106.56	1615	113.84	1656	121.29	1698	128.90
36700	3942	1323	69.59	1345	72.64	1387	78.87	1428	85.28	1470	91.87	1511	98.68	1552	105.65	1592	112.84	1632	120.20	1672	127.75		
38700	4157	1357	75.56	1377	78.71	1418	85.12	1458	91.68	1497	98.42	1536	105.31	1575	112.40	1614	119.68	1653	127.14	1691	134.78		
40700	4372	1392	82.00	1411	85.27	1450	91.87	1489	98.60	1527	105.49	1564	112.53	1602	119.74	1639	127.11	1676	134.66				
42700	4586	1428	88.90	1447	92.28	1484	99.10	1521	106.05	1558	113.10	1594	120.30	1630	127.65	1666	135.14						
44700	4801	1465	96.25	1483	99.77	1519	106.84	1555	114.00	1590	121.25	1625	128.62	1660	136.13	1695	143.79						
46700	5016	1503	104.08	1521	107.23	1556	115.06	1590	122.46	1625	129.94	1658	137.51	1692	145.20								
48700	5231	1542	112.38	1559	116.18	1593	123.80	1627	131.45	1660	139.18	1692	146.98										
50700	5446	1581	121.16	1598	125.13	1631	133.04	1664	140.96	1696	148.94												
52700	5661	1621	130.46	1638	134.58	1670	142.79																

Performance Data

VCR Fan

445 BI SWSI

Wheel Diameter = 44.50 in.	Discharge Area = 11.39 sq. ft.
Inlet Area = 11.86 sq. ft.	Tip Speed, FPM = 11.65 x RPM
Maximum BHP = 50.74 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	790	222	0.55	246	0.73	270	0.93	293	1.14	315	1.38	337	1.63	358	1.89	399	2.45						
10000	878	236	0.66	259	0.86	280	1.06	301	1.29	322	1.54	342	1.79	362	2.06	400	2.63	437	3.25				
11000	966	251	0.80	272	1.01	292	1.22	311	1.46	330	1.70	349	1.97	368	2.25	404	2.84	439	3.47	504	4.85		
12000	1054	266	0.94	286	1.18	304	1.41	323	1.66	340	1.92	358	2.18	375	2.47	409	3.07	442	3.72	505	5.15	563	6.68
13000	1141	282	1.11	300	1.37	318	1.62	335	1.87	352	2.15	368	2.42	384	2.70	416	3.33	447	4.00	507	5.45	564	7.04
14000	1229	297	1.29	315	1.58	332	1.85	348	2.12	364	2.41	379	2.70	395	2.99	425	3.62	454	4.30	511	5.79	566	7.41
15000	1317	314	1.52	330	1.81	346	2.11	362	2.40	377	2.68	392	2.99	406	3.29	434	3.95	462	4.64	516	6.15	569	7.80
16000	1405	330	1.75	346	2.07	361	2.37	376	2.68	390	3.00	404	3.32	418	3.65	445	4.30	471	5.01	523	6.55	573	8.24
18000	1580	364	2.31	378	2.66	392	3.02	406	3.37	419	3.72	432	4.07	444	4.42	469	5.15	493	5.89	540	7.48	586	9.21
20000	1756	398	2.99	411	3.37	424	3.77	436	4.16	449	4.55	461	4.94	472	5.33	495	6.12	517	6.91	560	8.58	602	10.38
22000	1932	433	3.79	445	4.22	456	4.65	468	5.08	480	5.51	491	5.94	502	6.37	523	7.24	544	8.10	584	9.86	622	11.73
24000	2107	468	4.75	479	5.22	490	5.67	501	6.16	511	6.63	522	7.09	532	7.56	552	8.50	571	9.44	609	11.33	645	13.28
26000	2283	503	5.89	513	6.37	524	6.88	534	7.38	544	7.89	553	8.41	563	8.91	582	9.94	600	10.94	636	12.98	670	15.05
28000	2458	539	7.19	549	7.70	558	8.24	567	8.78	577	9.33	586	9.88	595	10.44	613	11.53	630	12.63	664	14.82	696	17.01
30000	2634	575	8.69	584	9.23	593	9.80	601	10.36	610	10.96	619	11.53	627	12.14	644	13.32	661	14.50	693	16.83	724	19.17
32000	2809	611	10.39	619	10.96	628	11.55	636	12.16	644	12.78	652	13.39	660	14.03	676	15.28	692	16.54	723	19.06	752	21.56
34000	2985	648	12.30	655	12.91	663	13.53	670	14.16	678	14.82	686	15.48	694	16.14	709	17.48	724	18.82	753	21.48	781	24.14
36000	3161	684	14.46	691	15.10	698	15.75	706	16.41	713	17.08	720	17.78	727	18.48	742	19.89	756	21.31	784	24.14	811	26.97
38000	3336	720	16.85	727	17.51	734	18.20	741	18.89	748	19.60	755	20.32	761	21.06	775	22.53	789	24.03	816	27.02	842	30.02
40000	3512	757	19.51	763	20.21	770	20.92	776	21.64	783	22.39	789	23.14	796	23.89	809	25.45	822	27.01	848	30.17	873	33.32

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	1141	617	8.71																				
14000	1229	618	9.14	667	10.96																		
15000	1317	619	9.60	667	11.46	713	13.41																
16000	1405	622	10.05	668	11.99	713	13.98	756	16.07														
18000	1580	630	11.08	674	13.08	716	15.18	758	17.38	797	19.64	836	21.96										
20000	1756	644	12.30	684	14.35	724	16.51	763	18.78	801	21.13	838	23.57	874	26.06	909	28.62	943	31.22				
22000	1932	661	13.71	698	15.80	735	18.01	772	20.33	808	22.76	843	25.26	877	27.87	911	30.52	944	33.25	976	36.03	1008	38.84
24000	2107	681	15.33	716	17.48	750	19.73	784	22.10	818	24.58	851	27.16	884	29.82	917	32.56	948	35.37	979	38.26	1010	41.20
26000	2283	703	17.18	736	19.39	768	21.71	801	24.14	832	26.64	864	29.27	895	31.97	925	34.78	955	37.67	985	40.62	1015	43.65
28000	2458	728	19.59	759	21.56	789	23.95	819	26.42	849	28.98	879	31.64	908	34.40	937	37.26	966	40.18	994	43.21	1022	46.29
30000	2634	754	21.54	783	23.96	812	26.42	840	28.97	869	31.60	896	34.32	924	37.12	952	40.02	979	43.00	1006	46.06	1033	49.21
32000	2809	781	24.06	809	26.58	836	29.17	863	31.79	890	34.51	916	37.28	943	40.15	969	43.09	995	46.12	1020	49.22	1046	52.42
34000	2985	809	26.79	836	29.47	862	32.15	888	34.90	913	37.70	938	40.54	963	43.47	988	46.47	1013	49.56	1037	52.71	1062	55.95
36000	3161	838	29.77	863	32.57	889	35.40	913	38.27	938	41.17	962	44.12	986	47.12	1009	50.20	1033	53.34	1056	56.54	1079	59.84
38000	3336	867	32.98	892	35.95	916	38.92	940	41.90	963	44.92	987	47.97	1009	51.07	1032	54.24	1055	57.45	1077	60.74	1099	64.09
40000	3512	897	36.45	921	39.57	945	42.68	968	45.82	990	48.96	1012	52.14	1034	55.34	1056	58.59	1078	61.90	1099	65.27	1120	68.68
42000	3687	928	40.17	951	43.46	974	46.72	996	50.01	1018	53.29	1039	56.59	1060	59.92	1081	63.29	1102	66.69	1123	70.15	1143	73.65
44000	3863	959	44.17	981	47.62	1003	51.06	1025	54.49	1046	57.92	1067	61.35	1087	64.81	1107	68.31	1127	71.82	1147	75.37	1167	78.97
46000	4039	990	48.45	1012	52.07	1033	55.67	1054	59.25	1075	62.84	1095	66.43	1115	70.03	1134	73.65	1154	77.29	1173	80.95	1192	84.65
48000	4214	1022	53.04	1043	56.82	1064	60.57	1084	64.32	1104	68.07	1123	71.81	1143	75.56	1162	79.31	1181	83.09	1199	86.89	1218	90.70

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	1932	1039	41.72																				
24000	2107	1040	44.18	1070	47.22	1127	53.44																
26000	2283	1044	46.73	1072	49.89	1128	56.34	1182	62.96	1234	69.75												
28000	2458	1050	49.46	1078	52.70	1132	59.34	1184	66.18	1235	73.21	1285	80.40	1333	87.72								
30000	2634	1059	52.42	1086	55.71	1138	62.50	1189	69.54	1238	76.77	1287	84.18	1334	91.77	1380	99.49	1425	107.34				
32000	2809	1071	55.67	1097	59.03	1146	65.93	1195	73.09	1243	80.50	1290	88.09	1337	95.89	1382	103.84	1426	111.94	1469	120.18	1512	128.54
34000	2985	1086	59.27	1110	62.05	1157	69.65	1205	76.93	1251	84.45	1296	92.21	1341	100.18	1385	108.34	1429	116.65	1471	125.13	1513	133.74
36000	3161	1103	63.20	1126	66.64	1171	73.71	1216	81.09	1261	88.72	1305	96.60	1348	104.71	1391	113.03	1433	121.53	1474	130.20	1515	139.03
38000	3336	1121	67.50	1143	70.99	1187	78.71	1230	85.62	1273	93.34	1315	101.34	1357	109.56	1398	118.00	1439	126.65	1480	135.49	1519	144.50
40000	3512	1142	72.17	1163	75.71	1205	83.00	1246	90.55	1287	98.37	1328	106.43	1368	114.75	1408	123.31	1448	132.08	1487	141.06	1525	150.23
42000	3687	1164	77.20	1184	80.81	1224	88.22	1264	95.89	1303	103.80	1342	111.95	1381	120.36	1420	129.01	1458	137.88	1496	146.98	1534	156.26
44000	3863	1187	82.62	1206	86.31	1245	93.87	1283	101.64	1321	109.65	1359	117.91	1396	126.41	1434	135.14	1471	144.12	1507	153.30	1544	162.69
46000	4039	1211	88.40	1230	92.18	1267	99.90	1304	107.81	1341	115.95	1377	124.31	1413	132.91	1449	141.74	1485	150.80	1520	160.06		
48000	4214	1236	94.56	1254	98.44	1290	106.34	1326	114.41	1362	122.68	1397	131.18	1432	139.87	1466	148.81	1501	157.94	1535	167.31		
52000	4565	1289	107.98	1306	112.09	1340	120.43	1373	128.87	1407	137.49	1440	146.26	1472	155.24	1505	164.39	1537	173.75				
56000	4917	1344	122.91	1360	127.30	1393	136.12	1424	145.03	1456	154.05	1487	163.19	1517	172.50								
60000	5268	1401	139.39	1417	144.08	1447	153.45	1478	162.87	1507	172.37	1537	181.96										
64000	5619	1460	157.49	1475	162.48	1504	172.45	1533	182.45														
66000	5795	1490	167.15	1505	172.31	1533	182.61																

490

BI SWSI

Wheel Diameter = 49 in.

Discharge Area = 13.80 sq. ft.

Inlet Area = 14.42 sq. ft.

Tip Speed, FPM = 12.85 x RPM

Maximum BHP = 82.15 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	797	203	0.68	225	0.89	246	1.13	266	1.41	287	1.68	306	2.00	326	2.32	362	2.99						
12000	870	213	0.79	234	1.03	253	1.28	273	1.54	292	1.83	310	2.15	328	2.47	363	3.17	397	3.91				
13000	942	224	0.91	243	1.18	262	1.43	280	1.72	298	2.00	315	2.33	332	2.66	366	3.37	398	4.15	458	5.79		
14000	1014	235	1.06	254	1.33	271	1.61	288	1.89	305	2.20	321	2.52	337	2.87	369	3.59	400	4.37	458	6.08		
15000	1087	247	1.21	264	1.51	281	1.81	297	2.11	313	2.41	328	2.75	344	3.09	374	3.84	403	4.64	459	6.37	512	8.25
16000	1159	258	1.38	275	1.70	291	2.02	307	2.33	321	2.66	336	3.00	351	3.35	379	4.10	407	4.91	461	6.69	512	8.63
17000	1232	270	1.58	286	1.92	302	2.25	316	2.58	331	2.92	345	3.27	359	3.64	386	4.40	412	5.22	464	7.03	514	9.00
18000	1304	283	1.79	298	2.15	313	2.50	327	2.84	340	3.20	354	3.57	367	3.95	393	4.73	418	5.55	468	7.39	516	9.39
19000	1377	295	2.02	310	2.40	324	2.77	337	3.15	350	3.52	363	3.89	376	4.27	401	5.08	425	5.92	473	7.78	519	9.82
20000	1449	307	2.27	321	2.67	335	3.07	348	3.45	361	3.84	373	4.24	385	4.64	409	5.45	433	6.33	478	8.19	523	10.26
21000	1522	320	2.56	333	2.97	346	3.37	359	3.79	371	4.19	383	4.60	395	5.02	418	5.87	441	6.75	485	8.66	527	10.75
24000	1739	358	3.52	370	4.00	382	4.47	393	4.94	405	5.41	416	5.87	426	6.34	447	7.29	467	8.25	507	10.25	545	12.41
27000	1957	397	4.75	408	5.26	419	5.80	429	6.33	439	6.85	449	7.39	459	7.91	478	8.96	497	10.03	533	12.19	568	14.46
30000	2174	437	6.25	447	6.81	456	7.40	466	7.99	475	8.58	484	9.17	493	9.76	511	10.94	529	12.10	562	14.46	594	16.88
33000	2391	477	8.08	486	8.69	494	9.32	503	9.96	512	10.60	520	11.25	529	11.91	545	13.19	562	14.48	593	17.07	623	19.67
36000	2609	517	10.24	525	10.89	533	11.57	541	12.25	549	12.96	557	13.66	565	14.38	581	15.80	596	17.21	625	20.01	653	22.83
39000	2826	558	12.78	565	13.48	573	14.19	580	14.93	587	15.68	595	16.45	602	17.21	617	18.75	631	20.28	659	23.35	685	26.39
42000	3043	599	15.73	605	16.46	612	17.23	619	18.01	626	18.82	633	19.63	640	20.45	653	22.10	667	23.76	693	27.06	718	30.33
45000	3261	640	19.11	646	19.89	652	20.71	659	21.53	665	22.39	671	23.25	678	24.11	691	25.87	703	27.64	728	31.18	752	34.71
48000	3478	681	22.98	686	23.81	692	24.66	698	25.53	704	26.42	710	27.32	716	28.25	728	30.10	740	31.98	764	35.77	787	39.54

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	1159	561	10.66																				
17000	1232	561	11.10	605	13.31																		
18000	1304	562	11.55	606	13.81																		
19000	1377	564	12.00	606	14.33	647	16.73																
20000	1449	566	12.49	608	14.85	648	17.32	687	19.86														
21000	1522	569	13.00	610	15.39	649	17.91	687	20.51	724	23.21												
24000	1739	583	14.75	620	17.23	657	19.83	692	22.58	727	25.42	760	28.37	793	31.37	825	34.46	856	37.59				
27000	1957	602	16.86	636	19.42	669	22.10	702	24.92	735	27.87	766	30.93	797	34.09	828	37.32	858	40.65	887	44.03	916	47.48
30000	2174	626	19.39	657	22.03	687	24.78	718	27.68	747	30.70	777	33.84	806	37.09	835	40.45	863	43.90	891	47.42	919	51.03
33000	2391	652	22.32	681	25.08	709	27.93	737	30.91	765	34.00	792	37.21	819	40.53	846	43.96	873	47.50	899	51.12	925	54.84
36000	2609	681	25.67	708	28.57	734	31.56	760	34.64	786	37.81	811	41.09	837	44.47	862	47.97	887	51.59	912	55.29	936	59.09
39000	2826	711	29.43	736	32.52	761	35.65	786	38.85	810	42.15	834	45.53	858	49.00	881	52.57	905	56.25	928	60.02	951	63.89
42000	3043	743	33.62	767	36.90	790	40.21	814	43.59	836	47.01	859	50.51	881	54.09	903	57.75	925	61.50	947	65.35	969	69.30
45000	3261	776	38.22	798	41.73	821	45.26	843	48.81	864	52.40	886	56.04	907	59.75	928	63.54	949	67.40	970	71.34	990	75.37
48000	3478	809	43.29	831	47.04	852	50.78	873	54.54	894	58.32	914	62.15	935	66.00	955	69.93	974	73.92	994	77.96	1013	82.09
51000	3696	844	48.85	865	52.84	885	56.82	905	60.79	925	64.79	944	68.80	964	72.84	983	76.93	1002	81.06	1020	85.25	1039	89.50
54000	3913	879	54.92	899	59.15	918	63.37	938	67.57	957	71.79	975	76.00	994	80.25	1012	84.52	1030	88.82	1048	93.17	1066	97.56
57000	4130	914	61.50	933	66.00	952	70.45	971	74.90	989	79.35	1007	83.80	1025	88.25	1043	92.72	1060	97.21	1077	101.74	1094	106.30
60000	4348	950	68.68	969	73.40	987	78.12	1005	82.81	1023	87.50	1040	92.18	1057	96.85	1074	101.55	1091	106.25	1107	110.95	1124	115.70
63000	4565	987	76.44	1005	81.42	1022	86.37	1039	91.31	1056	96.25	1073	101.18	1090	106.09	1106	111.00	1122	115.91	1138	120.84	1154	125.79

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
27000	1957	943	50.98																				
30000	2174	946	54.70	972	58.45	1024	66.09																
33000	2391	951	58.65	977	62.54	1026	70.50	1074	78.70	1121	87.12	1167	95.70										
36000	2609	961	62.99	985	66.97	1032	75.18	1079	83.67	1124	92.40	1168	101.35	1211	110.50	1253	119.81						
39000	2826	974	67.85	997	71.92	1042	80.30	1086	89.00	1130	97.97	1172	107.21	1214	116.68	1255	126.35	1295	136.20	1335	146.21	1373	156.37
42000	3043	991	73.34	1012	77.46	1055	85.99	1097	94.84	1139	104.01	1180	113.48	1220	123.18	1259	133.14	1298	143.31	1337	153.65	1374	164.18
45000	3261	1011	79.47	1031	83.68	1071	92.32	1111	101.32	1151	110.65	1190	120.26	1229	130.18	1267	140.36	1304	150.76	1341	161.39	1378	172.24
48000	3478	1033	86.30	1052	90.59	1090	99.39	1128	108.51	1166	117.98	1203	127.74	1240	137.81	1277	148.14	1313	158.75	1349	169.61	1384	180.68
51000	3696	1057	93.81	1076	98.19	1112	107.18	1148	116.46	1184	126.06	1220	135.96	1255	146.16	1290	156.65	1325	167.41	1359	178.43	1393	189.70
54000	3913	1084	102.02	1101	106.51	1136	115.73	1170	125.19	1204	134.95	1238	145.00	1272	155.34	1306	165.95	1339	176.86	1372	188.03		
57000	4130	1111	110.90	1128	115.55	1161	125.01	1194	134.70	1227	144.65	1259	154.87	1292	165.36	1324	176.12	1356	187.14	1387	198.44		
60000	4348	1140	120.48	1156	125.30	1188	135.05	1220	145.00	1251	155.18	1282	165.59	1313	176.25	1344	187.16	1375	198.35				
63000	4565	1170	130.75	1186	135.75	1216	145.83	1247	156.08	1277	166.50	1307	177.15	1337	188.01	1366	199.12	1395	210.46				
66000	4783	1201	141.71	1216	146.90	1246	157.36	1275	167.93	1304	178.66	1333	189.58	1362	200.68	1390	212.00						
69000	5000	1232	153.39	1247	158.80	1276	169.63	1304	180.58	1332	191.63	1360	202.85	1388	214.23								
72000	5217	1265	165.81	1279	171.43	1307	182.68	1334	194.01	1362	205.43	1389	216.96										
75000	5435	1297	178.94	1311	184.80	1338	196.50	1365	208.25	1392	220.05												
78000	5652	1331	192.86	1344	198.93	1371	211.11	1397	223.28														

Performance Data

VCR Fan

542

BI SWSI

Wheel Diameter = 54.25 in.	Discharge Area = 16.92 sq. ft.
Inlet Area = 17.61 sq. ft.	Tip Speed, FPM = 14.29 x RPM
Maximum BHP = 136.68 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	827	187	0.88	206	1.16	225	1.46	243	1.79	261	2.15	278	2.52	295	2.91	327	3.75	358	4.65				
15000	887	195	1.01	213	1.29	231	1.62	248	1.95	265	2.31	281	2.68	297	3.08	329	3.95	358	4.87				
16000	946	203	1.13	220	1.45	237	1.77	253	2.12	269	2.47	285	2.87	300	3.27	330	4.15	359	5.09	413	7.11		
17000	1005	211	1.28	228	1.61	244	1.95	259	2.29	274	2.66	289	3.07	304	3.47	333	4.37	361	5.33	414	7.41		
18000	1064	220	1.43	236	1.77	251	2.13	266	2.50	280	2.88	294	3.29	309	3.70	336	4.60	363	5.58	414	7.69	462	9.99
19000	1123	228	1.60	244	1.97	258	2.33	273	2.72	286	3.12	300	3.52	313	3.95	340	4.85	366	5.84	416	8.00	462	10.35
20000	1182	237	1.77	252	2.16	266	2.56	280	2.95	293	3.35	306	3.77	319	4.22	344	5.14	369	6.14	417	8.33	463	10.71
21000	1241	246	1.97	260	2.38	274	2.79	287	3.20	300	3.62	312	4.05	325	4.50	349	5.44	373	6.45	420	8.66	464	11.10
22000	1300	255	2.18	269	2.62	282	3.04	295	3.47	307	3.91	319	4.35	331	4.82	355	5.76	378	6.79	423	9.03	466	11.49
23000	1359	264	2.41	277	2.87	290	3.32	302	3.77	314	4.22	326	4.67	338	5.15	360	6.12	383	7.16	426	9.41	468	11.91
24000	1418	273	2.66	286	3.13	298	3.60	310	4.07	322	4.54	333	5.01	344	5.50	366	6.50	388	7.55	430	9.83	471	12.35
28000	1655	310	3.83	321	4.37	332	4.92	343	5.48	354	6.02	364	6.58	374	7.11	393	8.23	412	9.36	449	11.76	486	14.38
32000	1891	348	5.34	358	5.95	368	6.58	378	7.21	387	7.84	397	8.48	406	9.10	423	10.35	441	11.60	474	14.19	506	16.93
36000	2128	387	7.25	396	7.93	405	8.63	414	9.33	422	10.05	431	10.75	439	11.46	455	12.86	471	14.28	502	17.10	531	20.03
40000	2364	426	9.60	434	10.35	442	11.10	450	11.89	458	12.67	466	13.46	474	14.25	489	15.82	504	17.39	532	20.51	559	23.67
44000	2600	466	12.44	473	13.25	480	14.08	488	14.92	495	15.78	502	16.64	509	17.51	523	19.25	537	20.98	564	24.41	589	27.85
48000	2837	506	15.85	512	16.71	519	17.58	526	18.50	532	19.42	539	20.35	546	21.29	559	23.18	572	25.07	596	28.85	621	32.59
52000	3073	546	19.52	552	20.75	558	21.70	564	22.66	570	23.64	576	24.64	583	25.67	595	27.71	607	29.76	630	33.84	653	37.92
56000	3310	586	24.46	592	25.43	597	26.43	603	27.47	609	28.52	614	29.58	620	30.66	632	32.84	643	35.04	665	39.46	687	43.85
60000	3546	627	29.78	632	30.82	637	31.87	642	32.96	647	34.07	653	35.21	658	36.34	669	38.67	679	41.01	700	45.73	721	50.46

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	1182	506	13.25																				
21000	1241	507	13.68	547	16.39																		
22000	1300	508	14.13	547	16.89																		
23000	1359	509	14.58	548	17.41	585	20.35																
24000	1418	510	15.06	548	17.92	585	20.92	620	24.01														
28000	1655	521	17.20	556	20.20	590	23.36	623	26.67	655	30.10	686	33.62	716	37.22								
32000	1891	538	19.85	570	22.95	601	26.22	631	29.66	661	33.23	690	36.95	719	40.77	747	44.68	774	48.70	801	52.79	827	56.94
36000	2128	560	23.07	589	26.28	617	29.64	645	33.17	672	36.85	699	40.68	726	44.65	752	48.73	778	52.94	804	57.24	829	61.62
40000	2364	586	26.91	612	30.26	638	33.75	663	37.37	689	41.15	714	45.07	739	49.12	763	53.32	787	57.65	811	62.09	835	66.64
44000	2600	614	31.32	638	34.87	662	38.52	686	42.28	709	46.17	732	50.18	755	54.34	778	58.62	801	63.04	823	67.59	845	72.25
48000	2837	644	36.34	667	40.12	689	43.98	711	47.92	733	51.95	754	56.10	776	60.37	797	64.75	818	69.27	839	73.90	860	78.65
52000	3073	675	41.96	697	46.03	718	50.14	738	54.29	759	58.52	779	62.82	799	67.24	819	71.75	839	76.37	858	81.09	878	85.94
56000	3310	707	48.23	728	52.59	748	56.97	768	61.39	787	65.84	806	70.35	825	74.93	844	79.62	862	84.37	881	89.24	899	94.19
60000	3546	741	55.17	760	59.84	779	64.53	798	69.21	816	73.93	834	78.68	852	83.49	870	88.35	888	93.29	905	98.31	922	103.41
64000	3783	775	62.80	793	67.81	811	72.81	829	77.81	847	82.80	864	87.81	881	92.87	898	97.96	915	103.10	932	108.31	948	113.59
68000	4019	809	71.20	827	76.55	845	81.87	862	87.17	878	92.47	895	97.78	911	103.10	928	108.45	944	113.84	959	119.26	975	124.75
72000	4255	844	80.40	862	86.06	878	91.71	895	97.35	911	102.98	927	108.59	943	114.20	958	119.83	973	125.48	989	131.15	1004	136.87
76000	4492	880	90.45	897	96.44	913	102.43	928	108.39	944	114.34	959	120.26	974	126.18	989	132.12	1004	138.06	1019	144.00	1033	149.98
80000	4728	916	101.40	932	107.71	947	114.03	963	120.31	978	126.59	992	132.85	1007	139.10	1022	145.34	1036	151.56	1050	157.81	1064	164.06

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	2128	853	66.09	878	70.62	924	79.90																
40000	2364	858	71.28	881	76.02	926	85.74	970	95.75	1013	106.00												
44000	2600	867	77.02	889	81.90	932	91.94	974	102.34	1015	113.04	1055	124.00	1094	135.18	1132	146.59						
48000	2837	880	83.52	901	88.50	942	98.78	981	109.44	1021	120.48	1059	131.81	1097	143.44	1134	155.31	1170	167.40	1205	179.70	1240	192.18
52000	3073	897	90.90	917	95.97	955	106.43	993	117.33	1030	128.60	1067	140.21	1103	152.16	1138	164.40	1173	176.91	1208	189.66	1242	202.62
56000	3310	917	99.25	935	104.43	971	115.08	1007	126.14	1042	137.60	1077	149.43	1112	161.63	1146	174.15	1180	186.98	1223	200.08	1246	213.43
60000	3546	940	108.60	957	113.89	991	124.75	1025	136.00	1058	147.64	1091	159.66	1124	172.06	1157	184.80	1189	197.86	1221	211.23	1252	224.89
64000	3783	964	118.95	981	124.39	1013	135.50	1045	146.98	1077	158.81	1108	171.01	1139	183.59	1170	196.50	1201	209.76	1232	223.36		
68000	4019	991	130.30	1006	135.90	1037	147.34	1068	159.08	1098	171.14	1128	183.56	1157	196.31	1187	209.41	1216	222.86	1246	236.62		
72000	4255	1019	142.63	1033	148.45	1063	160.25	1092	172.31	1121	184.66	1149	197.31	1178	210.30	1206	223.60	1234	237.21				
76000	4492	1048	155.99	1062	162.03	1090	174.25	1118	186.68	1146	199.37	1173	212.31	1200	225.55	1227	239.08	1254	252.91				
80000	4728	1078	170.35	1091	176.64	1119	189.34	1145	202.19	1172	215.26	1198	228.55	1224	242.08	1250	255.88						
84000	4965	1109	185.73	1122	192.30	1148	205.51	1174	218.85	1199	232.33	1225	246.01	1250	259.91								
88000	5201	1140	202.15	1153	209.01	1178	222.78	1203	236.63	1228	250.61	1252	264.72										
92000	5437	1172	219.66	1185	226.83	1209	241.18	1234	255.58	1257	270.06												
96000	5674	1205	238.26	1217	245.75	1241	260.72																
100000	5910	1238	258.01	1250	265.83																		

600

BI SWSI

Wheel Diameter = 60 in.	Discharge Area = 20.70 sq. ft.
Inlet Area = 21.55 sq. ft.	Tip Speed, FPM = 15.71 x RPM
Maximum BHP = 226.18 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	821	168	1.08	186	1.41	203	1.77	219	2.17	235	2.61	251	3.07	266	3.54	296	4.58	324	5.66				
18000	870	174	1.18	191	1.54	207	1.92	223	2.33	238	2.77	253	3.22	268	3.72	297	4.76	324	5.87				
19000	918	180	1.31	196	1.68	212	2.08	227	2.49	241	2.92	256	3.40	270	3.90	298	4.95	324	6.09				
20000	966	186	1.45	202	1.83	216	2.24	231	2.66	245	3.12	259	3.59	273	4.08	300	5.16	325	6.33	374	8.83		
21000	1014	192	1.60	207	2.00	222	2.41	235	2.86	249	3.30	262	3.79	276	4.30	301	5.39	327	6.56	374	9.11		
22000	1063	198	1.75	213	2.17	227	2.61	240	3.06	253	3.52	266	4.01	279	4.52	304	5.62	328	6.81	375	9.41	418	12.21
23000	1111	205	1.92	219	2.37	232	2.82	245	3.27	258	3.75	270	4.25	283	4.76	307	5.89	330	7.08	376	9.71	418	12.57
24000	1159	211	2.08	225	2.56	238	3.02	250	3.50	263	4.00	275	4.50	286	5.02	310	6.16	333	7.36	377	10.03	419	12.93
25000	1208	218	2.27	231	2.77	244	3.25	256	3.75	268	4.25	279	4.76	291	5.30	313	6.44	335	7.68	378	10.36	419	13.31
26000	1256	224	2.47	237	2.99	249	3.50	261	4.00	273	4.52	284	5.05	295	5.60	317	6.75	338	8.00	380	10.71	420	13.69
27000	1304	231	2.70	243	3.22	255	3.75	267	4.27	278	4.82	289	5.35	300	5.91	321	7.08	342	8.33	382	11.08	422	14.10
28000	1353	238	2.92	250	3.47	261	4.01	273	4.57	283	5.12	294	5.67	305	6.25	325	7.44	345	8.69	385	11.46	423	14.51
33000	1594	272	4.29	282	4.92	293	5.58	303	6.23	612	6.86	322	7.51	331	8.16	349	9.48	367	10.83	401	13.73	435	16.89
38000	1836	307	6.07	316	6.80	325	7.55	334	8.30	343	9.03	352	9.78	360	10.53	376	12.00	392	13.51	423	16.61	453	19.92
43000	2077	342	8.33	351	9.14	359	9.99	367	10.83	375	11.67	383	12.53	391	13.36	406	15.05	420	16.73	448	20.13	475	23.64
48000	2319	379	11.16	386	12.05	393	12.96	401	13.91	408	14.85	415	15.50	422	16.75	436	18.63	450	20.50	476	24.25	501	28.06
53000	2560	415	14.61	422	15.57	429	16.57	435	17.58	442	18.61	448	19.67	455	20.71	468	22.79	480	24.88	505	29.02	528	33.15
58000	2802	452	18.73	458	19.76	464	20.85	470	21.95	476	23.07	482	24.20	488	25.33	500	27.62	512	29.91	535	34.45	557	38.96
63000	3043	489	23.61	495	24.73	500	25.87	506	27.04	511	28.25	517	29.47	523	30.68	534	33.17	545	35.65	566	40.60	587	45.53
68000	3285	526	29.31	531	30.48	536	31.71	542	32.96	547	34.23	552	35.53	557	36.84	568	39.50	578	42.17	598	47.53	618	52.87

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	1159	458	16.01																				
25000	1208	458	16.43																				
26000	1256	458	16.88	494	20.21																		
27000	1304	459	17.32	495	20.71																		
28000	1353	460	17.78	495	21.23	529	24.81																
33000	1594	468	20.32	500	23.96	532	27.78	562	31.77	591	35.90	620	40.14										
38000	1836	483	23.46	512	27.22	540	31.20	568	35.37	596	39.71	623	44.21	649	48.84	675	53.57	699	58.40	724	63.34		
43000	2077	502	27.33	528	31.22	554	35.32	580	39.60	605	44.09	630	48.75	655	53.57	679	58.53	703	63.62	726	68.82	749	74.14
48000	2319	525	31.97	549	36.03	573	40.26	596	44.67	620	49.27	643	54.04	665	58.99	688	64.09	710	69.37	732	74.77	754	80.30
53000	2560	551	37.35	573	41.65	595	46.07	616	50.65	638	55.39	659	60.28	680	65.34	701	70.56	722	75.94	742	81.47	762	87.15
58000	2802	578	43.51	599	48.09	619	52.78	639	57.55	659	62.46	679	67.52	699	72.70	718	78.06	737	83.55	756	89.19	775	95.00
63000	3043	607	50.43	626	55.37	646	60.34	665	65.40	683	70.54	702	75.78	720	81.15	738	86.65	756	92.28	774	98.05	792	103.95
68000	3285	637	58.17	655	63.47	673	68.80	691	74.15	709	79.57	726	85.06	743	90.65	760	96.35	777	102.15	794	108.09	811	114.14
73000	3527	667	66.77	685	72.46	702	78.15	719	83.87	736	89.59	752	95.39	769	101.25	785	107.18	801	113.19	817	119.31	832	125.55
78000	3768	699	76.25	715	82.37	732	88.44	748	94.53	764	100.62	780	106.74	795	112.90	811	119.11	826	125.40	841	131.75	856	138.19
83000	4010	731	86.70	747	93.22	762	99.71	778	106.19	793	112.66	808	119.15	823	125.65	838	132.18	852	138.75	867	145.38	881	152.09
88000	4251	763	98.18	778	105.10	794	112.01	809	118.90	823	125.76	838	132.62	852	139.49	866	146.37	880	153.28	894	160.21	907	167.20
93000	4493	796	110.74	811	118.06	825	125.39	840	132.68	854	139.95	868	147.21	881	154.46	895	161.71	908	168.99	921	176.26	934	183.58
98000	4734	829	124.46	844	132.19	858	139.91	871	147.62	885	155.31	898	162.98	911	170.63	924	178.27	937	185.91	950	193.56	963	201.22
103000	4976	863	139.41	877	147.52	890	155.64	903	163.76	917	171.86	929	179.94	942	188.00	955	196.04	967	204.08	980	212.11	992	220.14

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
43000	2077	771	79.55	793	85.04	836	96.25																
48000	2319	775	85.94	796	91.69	837	103.50	877	115.64	916	128.06												
53000	2560	783	92.97	802	98.92	842	111.15	880	123.80	917	136.80	954	150.12	989	163.70	1024	177.54						
58000	2802	794	100.93	813	107.00	850	119.55	886	132.56	922	146.00	957	159.81	991	173.95	1025	188.40	1058	203.12	1090	218.06	1121	233.23
63000	3043	809	110.00	827	116.19	862	128.98	896	142.25	930	156.01	963	170.19	996	184.76	1029	199.69	1060	214.93	1092	230.46	1122	246.26
68000	3285	827	120.31	844	126.63	877	139.62	909	153.13	941	167.13	973	181.60	1004	196.49	1035	211.76	1066	227.41	1096	243.41	1126	259.70
73000	3527	848	131.88	864	138.34	894	151.60	925	165.35	955	179.56	986	194.25	1015	209.38	1045	224.96	1074	240.91	1103	257.25		
78000	3768	871	144.74	885	151.37	915	164.94	944	178.95	972	193.43	1001	208.33	1029	223.69	1058	239.50	1085	255.71	1113	272.31		
83000	4010	895	158.86	909	165.70	937	179.68	964	194.01	992	208.78	1019	223.94	1046	239.53	1073	255.56	1099	271.99	1126	288.83		
88000	4251	921	174.25	934	181.36	961	195.79	987	210.53	1013	225.63	1039	241.11	1065	256.98	1090	273.24	1116	289.89				
93000	4493	947	190.93	960	198.33	986	213.28	1011	228.50	1036	244.01	1061	259.85	1085	276.03	1110	292.58						
98000	4734	975	208.89	988	216.62	1012	232.16	1036	247.91	1060	263.91	1084	280.16	1108	296.74								
103000	4976	1004	228.18	1016	236.23	1039	252.43	1063	268.77	1086	285.31	1109	302.06										
108000	5217	1033	248.80	1045	257.23	1067	274.12	1090	291.11	1112	308.24												
113000	5459	1063	270.78	1074	279.60	1096	297.23	1118	314.91														
118000	5700	1093	294.20	1104	303.39	1125	321.79																

Performance Data

VCR Fan

660

BI SWSI

Wheel Diameter = 66 in.	Discharge Area = 25.05 sq. ft.
Inlet Area = 26.15 sq. ft.	Tip Speed, FPM = 17.30 x RPM
Maximum BHP = 364.29 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	798	151	1.23	167	1.63	183	2.08	198	2.56	213	3.08	227	3.62	242	4.20	269	5.44						
22000	878	159	1.46	174	1.89	189	2.36	203	2.84	217	3.37	231	3.94	244	4.54	270	5.80	295	7.16				
24000	958	168	1.72	182	2.20	196	2.67	209	3.18	222	3.72	235	4.30	247	4.91	272	6.22	296	7.61	340	10.63		
26000	1038	177	2.02	191	2.52	204	3.04	216	3.57	228	4.12	240	4.72	252	5.33	275	6.66	298	8.10	340	11.21		
28000	1118	187	2.34	200	2.88	212	3.44	224	4.00	235	4.58	246	5.19	257	5.82	279	7.16	301	8.63	342	11.82	380	15.26
30000	1198	197	2.70	209	3.29	220	3.89	231	4.48	242	5.08	253	5.70	263	6.35	284	7.73	304	9.21	344	12.46	381	16.01
32000	1277	207	3.12	218	3.75	229	4.37	240	5.00	250	5.62	260	6.27	270	6.94	290	8.35	309	9.85	346	13.16	383	16.78
34000	1357	217	3.57	228	4.24	238	4.90	248	5.57	258	6.23	268	6.91	277	7.59	296	9.05	314	10.58	350	13.91	385	17.60
36000	1437	227	4.05	237	4.76	247	5.48	257	6.17	267	6.88	276	7.58	285	8.30	303	9.80	320	11.35	354	14.76	388	18.48
38000	1517	237	4.60	247	5.35	257	6.09	266	6.84	275	7.58	284	8.33	293	9.08	310	10.61	327	12.21	359	15.66	391	19.45
40000	1597	247	5.20	257	5.99	266	6.78	275	7.55	284	8.33	293	9.11	301	9.91	318	11.50	334	13.14	365	16.66	396	20.48
42000	1677	258	5.85	267	6.68	276	7.50	285	8.33	293	9.16	302	9.96	310	10.78	326	12.44	341	14.14	371	17.73	401	21.60
44000	1756	268	6.56	277	7.43	286	8.30	294	9.16	303	10.01	311	10.88	318	11.74	334	13.46	349	15.21	378	18.89	406	22.82
46000	1836	279	7.34	287	8.24	296	9.14	304	10.05	312	10.94	320	11.85	327	12.75	342	14.55	357	16.35	385	20.13	412	24.13
52000	2076	311	10.07	319	11.05	326	12.07	334	13.08	341	14.11	348	15.13	355	16.16	369	18.18	382	20.21	407	24.32	432	28.58
58000	2315	344	13.44	351	14.53	357	15.63	364	16.78	371	17.92	377	19.06	384	20.20	396	22.48	408	24.73	432	29.27	455	33.87
64000	2555	377	17.57	383	18.73	389	19.95	395	21.17	401	22.42	407	23.68	413	24.95	425	27.47	436	29.97	458	34.97	480	39.97
70000	2794	410	22.51	415	23.76	421	25.06	427	26.39	432	27.73	438	29.10	443	30.47	454	33.23	465	35.98	485	41.47	505	46.93
76000	3034	443	28.32	448	29.67	453	31.06	459	32.47	464	33.92	469	35.39	474	36.87	484	39.85	494	42.85	514	48.82	532	54.77
82000	3273	477	35.12	481	36.54	486	38.02	491	39.53	496	41.07	500	42.64	505	44.21	515	47.42	524	50.64	542	57.10	560	63.54

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	1198	416	19.78																				
32000	1277	417	20.66	450	24.73																		
34000	1357	418	21.57	450	25.75																		
36000	1437	420	22.51	451	26.78	481	31.25	510	35.87														
38000	1517	423	23.53	453	27.87	482	32.43	510	37.17	537	42.03												
40000	1597	426	24.61	455	29.02	483	33.67	511	38.50	538	43.48	564	48.62										
42000	1677	430	25.78	458	30.25	485	34.96	512	39.87	539	44.96	564	50.21	589	55.59	613	61.07						
44000	1756	434	27.04	461	31.56	488	36.32	514	41.31	540	46.48	565	51.84	589	57.32	613	62.95	636	68.68				
46000	1836	439	28.39	465	32.96	491	37.77	517	42.82	542	48.07	566	53.50	590	59.10	613	64.84	636	70.69	658	76.65		
52000	2076	456	33.04	480	37.76	504	42.71	527	47.90	550	53.32	573	58.95	595	64.79	617	70.79	639	76.94	660	83.25	681	89.68
58000	2315	477	38.59	499	43.52	521	48.62	542	53.96	563	59.53	584	65.31	605	71.29	625	77.46	645	83.84	665	90.37	685	97.06
64000	2555	500	45.06	520	50.25	540	55.59	560	61.12	579	66.84	599	72.75	618	78.87	637	85.19	656	91.70	674	98.40	693	105.26
70000	2794	525	52.42	544	57.95	562	63.60	581	69.37	599	75.31	617	81.42	634	87.69	652	94.15	670	100.81	687	107.64	704	114.64
76000	3034	551	60.70	569	66.65	586	72.65	603	78.75	620	84.95	637	91.29	654	97.78	670	104.43	686	111.23	703	118.20	719	125.35
82000	3273	577	69.93	594	76.34	611	82.75	627	89.21	643	95.75	659	102.39	675	109.14	690	116.01	706	123.03	721	130.18	736	137.50
88000	3513	605	80.19	621	87.06	637	93.93	652	100.81	668	107.73	683	114.70	697	121.78	712	128.93	727	136.20	741	143.60	756	151.12
94000	3752	633	91.52	649	98.87	664	106.20	678	113.54	693	120.88	707	128.25	721	135.68	735	143.18	749	150.75	763	158.43	777	166.21
100000	3992	662	103.98	677	111.83	691	119.65	705	127.45	719	135.25	733	143.06	746	150.88	760	158.76	773	166.69	786	174.69	799	182.78
106000	4232	691	117.65	705	125.99	719	134.31	733	142.60	746	150.87	759	159.13	772	167.40	785	175.69	798	184.01	810	192.38	823	200.81
112000	4471	721	132.61	735	141.43	748	150.25	761	159.04	774	167.80	786	176.54	799	185.26	811	194.00	823	202.75	835	211.53	847	220.33

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
52000	2076	701	96.20	721	102.85																		
58000	2315	704	103.89	724	110.84	761	125.11	797	139.80	832	154.81												
64000	2555	711	112.31	729	119.49	765	134.29	800	149.58	834	165.30	867	181.39	899	197.83	930	214.55						
70000	2794	722	121.81	739	129.16	772	144.33	805	160.06	838	176.31	870	193.01	901	210.12	932	227.58	961	245.35				
76000	3034	735	132.66	751	140.14	783	155.60	814	171.66	845	188.30	875	205.43	905	223.06	935	241.10	964	259.51				
82000	3273	751	144.96	766	152.60	796	168.31	826	184.64	855	201.58	884	219.06	913	237.06	941	255.53	969	274.46				
88000	3513	770	158.78	784	166.58	812	182.61	840	199.21	868	216.41	895	234.16	922	252.46	949	271.28	976	290.58				
94000	3752	790	174.11	804	182.12	830	198.51	857	215.46	883	232.93	909	250.96	935	269.53	961	288.62						
100000	3992	812	190.94	825	199.21	850	216.08	875	233.41	900	251.23	925	269.56	950	288.41	974	307.77						
106000	4232	835	209.31	847	217.88	872	235.30	896	253.10	919	271.33	943	290.02	966	309.20								
112000	4471	859	229.19	871	238.12	894	256.14	917	274.50	940	293.23	962	312.36										
118000	4711	884	250.62	895	259.91	918	278.66	940	297.64	962	316.93												
124000	4950	910	273.60	921	283.29	942	302.81	964	322.50														
130000	5190	936	298.16	947	308.31	967	328.64																
136000	5429	963	324.36	973	334.96																		

730

BI SWSI

Wheel Diameter = 73 in.	Discharge Area = 30.64 sq. ft.
Inlet Area = 31.95 sq. ft.	Tip Speed, FPM = 19.15 x RPM
Maximum BHP = 603.10 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	783	135	1.46	150	1.95	164	2.49	178	3.07	192	3.70	205	4.37	218	5.08	243	6.56						
26000	849	141	1.68	155	2.20	169	2.75	182	3.34	195	3.99	207	4.67	220	5.40	244	6.94	266	8.57				
28000	914	148	1.92	161	2.47	174	3.06	186	3.66	198	4.32	210	5.01	222	5.75	245	7.31	267	9.00				
30000	979	154	2.20	167	2.79	179	3.39	191	4.01	202	4.69	214	5.39	225	6.14	247	7.74	268	9.46	307	13.18		
32000	1044	161	2.50	173	3.12	185	3.75	196	4.41	207	5.09	218	5.82	228	6.56	249	8.19	269	9.96	308	13.76	343	17.86
34000	1110	168	2.83	180	3.49	191	4.16	201	4.83	212	5.55	222	6.27	232	7.05	252	8.69	271	10.48	309	14.38	344	18.58
36000	1175	175	3.18	186	3.89	197	4.58	207	5.30	217	6.04	227	6.79	237	7.58	255	9.25	274	11.05	310	15.01	344	19.32
38000	1240	182	3.58	193	4.32	203	5.05	213	5.80	223	6.56	232	7.34	241	8.14	259	9.85	277	11.67	312	15.68	345	20.08
40000	1305	190	4.00	200	4.79	210	5.57	219	6.34	229	7.14	238	7.94	246	8.76	264	10.50	281	12.35	314	16.41	346	20.88
46000	1501	212	5.50	222	6.41	230	7.30	239	8.21	247	9.10	255	10.00	263	10.91	279	12.78	294	14.73	324	18.93	353	23.54
52000	1697	235	7.38	244	8.39	252	9.41	260	10.44	267	11.46	275	12.48	282	13.48	296	15.53	310	17.64	337	22.03	363	26.81
58000	1893	259	9.71	266	10.82	274	11.96	281	13.10	288	14.25	295	15.38	302	16.51	315	18.76	328	21.06	352	25.75	377	30.71
64000	2089	283	12.51	290	13.73	296	14.98	303	16.23	309	17.50	316	18.76	322	20.01	334	22.51	346	25.00	369	30.06	392	35.28
70000	2285	307	15.86	313	17.17	319	18.51	325	19.89	331	21.26	337	22.64	343	24.03	355	26.77	366	29.50	388	34.96	409	40.53
76000	2480	331	19.82	337	21.21	343	22.66	348	24.13	354	25.60	359	27.10	365	28.60	376	31.60	386	34.57	407	40.50	426	46.46
82000	2676	356	24.42	361	25.89	366	27.42	371	29.00	377	30.58	382	32.20	387	33.81	397	37.03	407	40.27	427	46.67	445	53.07
88000	2872	380	29.71	385	31.27	390	32.90	395	34.56	400	36.25	405	37.96	410	39.68	419	43.15	429	46.62	447	53.52	465	60.39
94000	3068	405	35.75	410	37.40	414	39.10	419	40.85	423	42.65	428	44.46	432	46.28	441	49.97	450	53.69	468	61.07	485	68.43
100000	3264	430	42.59	434	44.32	438	46.12	443	47.96	447	49.84	451	51.75	455	53.67	464	57.59	472	61.52	489	69.40	505	77.25
106000	3460	455	50.27	459	52.09	463	53.99	467	55.92	471	57.87	475	59.89	479	61.90	487	66.02	495	70.18	511	78.53	526	86.87

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	1175	376	23.89																				
38000	1240	377	24.76	406	29.67																		
40000	1305	377	25.66	407	30.67																		
46000	1501	381	28.53	409	33.84	436	39.39	461	45.15	486	51.07												
52000	1697	389	31.92	415	37.40	439	43.17	464	49.21	487	55.47	510	61.92	532	68.55	554	75.30						
58000	1893	400	35.98	423	41.59	446	47.52	469	53.75	491	60.22	513	66.94	534	73.87	555	80.97	575	88.24	595	95.65	614	103.16
64000	2089	414	40.77	435	46.53	456	52.59	477	58.95	498	65.59	518	72.50	538	79.65	558	87.00	578	94.56	597	102.28	616	110.15
70000	2285	429	46.28	449	52.25	469	58.47	488	64.99	507	71.75	526	78.81	545	86.10	564	93.65	582	101.40	601	109.36	619	117.50
76000	2480	446	52.53	464	58.77	483	65.21	501	71.90	519	78.82	537	86.00	555	93.43	572	101.12	590	109.03	607	117.16	624	125.50
82000	2676	463	59.52	481	66.09	498	72.80	515	79.70	532	86.82	549	94.17	566	101.75	582	109.56	599	117.60	615	125.89	631	134.37
88000	2872	482	67.25	499	74.19	515	81.24	531	88.42	547	95.78	563	103.33	579	111.09	595	119.06	610	127.25	625	135.65	641	144.29
94000	3068	501	75.75	517	83.10	533	90.53	548	98.04	564	105.68	579	113.49	593	121.46	608	129.62	623	137.99	638	146.56	652	155.31
100000	3264	521	85.06	536	92.84	551	100.68	566	108.56	581	116.55	595	124.65	609	132.88	623	141.29	637	149.86	651	158.61	665	167.54
106000	3460	542	95.17	556	103.43	570	111.70	585	120.00	599	128.36	612	136.80	626	145.35	639	154.03	653	162.85	666	171.81	679	180.95
112000	3655	562	106.14	576	114.90	590	123.63	604	132.37	617	141.13	630	149.95	643	158.86	656	167.86	669	176.96	682	186.20	694	195.59
118000	3851	583	118.01	597	127.26	610	136.49	623	145.68	636	154.88	649	164.12	661	173.40	674	182.76	686	192.20	698	201.75	710	211.41
124000	4047	605	130.86	618	140.60	631	150.31	643	159.99	656	169.65	668	179.33	680	189.03	692	198.78	704	208.58	716	218.46	727	228.44
130000	4243	626	144.69	639	154.93	651	165.13	664	175.30	676	185.44	688	195.36	699	205.73	711	215.88	722	226.10	734	236.36	745	246.68
136000	4439	648	159.60	660	170.31	672	181.00	684	191.68	696	202.31	708	212.91	719	223.51	730	234.12	741	244.76	752	255.41	763	266.13

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
64000	2089	634	118.18	652	126.33	687	142.96																
70000	2285	636	125.83	654	134.30	688	151.65	721	169.50	752	187.75												
76000	2480	641	134.05	657	142.75	690	160.68	722	179.18	753	198.16	783	217.58	813	237.38								
82000	2676	647	143.08	663	151.98	695	170.31	725	189.33	755	208.91	785	229.00	813	249.53	842	270.47	869	291.75				
88000	2872	656	153.12	671	162.16	701	180.84	730	200.23	759	220.26	788	240.89	816	262.03	843	283.64	870	305.66	896	328.06	922	350.79
94000	3068	666	164.30	681	173.46	709	192.41	737	212.12	765	232.51	792	253.56	819	275.18	846	297.33	872	319.97	898	343.02	923	366.49
100000	3264	679	176.66	692	185.99	719	205.21	746	225.18	773	245.87	799	267.24	825	289.24	850	311.83	876	334.95	900	358.56	925	382.62
106000	3460	692	190.26	705	199.75	731	219.28	756	239.51	782	260.48	807	282.12	832	304.43	856	327.37	881	350.88	905	374.93	929	399.49
112000	3655	707	205.12	719	214.81	744	234.68	768	255.21	792	276.46	817	298.37	840	320.96	864	344.18	888	368.01	911	392.41	934	417.37
118000	3851	722	221.21	734	231.12	758	251.41	781	272.31	805	293.87	828	316.06	850	338.91	873	362.41	896	386.51	918	411.22		
124000	4047	739	238.53	750	248.73	773	269.50	795	290.81	818	312.73	840	335.25	862	358.39	884	382.16	905	406.52	927	431.50		
130000	4243	756	257.10	767	267.61	789	288.93	811	310.74	832	333.06	853	355.96	874	379.43	895	403.49	916	428.14	937	453.38		
136000	4439	774	276.91	784	287.75	806	309.71	826	332.06	847	354.88	868	378.21	888	402.04	908	426.45	928	451.42				
142000	4634	792	297.98	802	309.20	823	331.83	843	354.81	863	378.18	883	401.98	903	426.27	922	451.04						
148000	4830	811	320.31	821	331.93	841	355.31	860	378.96	880	402.93	899	427.29	918	452.07	937	477.31						
154000	5026	830	343.91	840	355.96	859	380.14	878	404.52	897	429.17	915	454.14	934	479.47								
160000	5222	849	368.85	859	381.33	878	406.36	896	431.52	915	456.89	933	482.52										
166000	5418	869	395.11	879	408.04	897	433.96	915	459.95	933	486.10												

Performance Data

VCR Fan

807

BI SWSI

Wheel Diameter = 80.75 in.	Discharge Area = 37.49 sq. ft.
Inlet Area = 39.02 sq. ft.	Tip Speed, FPM = 21.14 x RPM
Maximum BHP = 998.73 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	800	123	1.86	137	2.47	149	3.12	162	3.84	174	4.62	186	5.44	198	6.30	220	8.14						
32000	854	128	2.08	141	2.72	153	3.40	165	4.12	176	4.91	188	5.75	199	6.64	220	8.51	241	10.51				
34000	907	133	2.33	145	3.00	156	3.70	168	4.44	179	5.24	190	6.08	200	6.99	221	8.91	241	10.96				
36000	960	138	2.59	149	3.29	160	4.02	171	4.79	182	5.59	192	6.45	202	7.36	222	9.32	242	11.41	278	15.92		
38000	1014	143	2.87	154	3.62	165	4.37	175	5.16	185	5.99	195	6.86	205	7.79	224	9.75	243	11.89	278	16.51		
40000	1067	148	3.18	159	3.97	169	4.75	179	5.57	188	6.41	198	7.30	207	8.24	226	10.24	244	12.39	278	17.10	311	22.17
42000	1120	153	3.52	163	4.34	173	5.16	183	6.00	192	6.88	201	7.78	210	8.73	228	10.75	246	12.93	279	17.71	311	22.89
44000	1174	158	3.89	168	4.75	178	5.60	187	6.48	196	7.36	205	8.30	214	9.25	231	11.30	248	13.51	280	18.35	311	23.63
46000	1227	164	4.27	173	5.17	183	6.08	192	6.98	200	7.90	209	8.85	217	9.83	234	11.89	250	14.13	282	19.01	312	24.39
48000	1280	169	4.69	178	5.62	188	6.56	196	7.50	205	8.46	213	9.42	221	10.42	237	12.53	253	14.78	283	19.73	313	25.17
50000	1334	175	5.12	184	6.12	192	7.08	201	8.07	209	9.05	217	10.05	225	11.08	240	13.21	256	15.50	285	20.48	314	25.97
52000	1387	180	5.60	189	6.63	197	7.65	206	8.66	214	9.67	221	10.71	229	11.75	244	13.94	259	16.26	287	21.28	315	26.82
61000	1627	205	8.14	213	9.35	221	10.55	228	11.75	235	12.93	242	14.13	249	15.32	262	17.73	275	20.23	300	25.53	325	31.28
70000	1867	231	11.46	238	12.82	245	14.18	251	15.57	258	16.95	264	18.32	270	19.67	282	22.42	294	25.17	317	30.87	339	36.90
79000	2107	258	15.66	264	17.17	270	18.70	276	20.26	282	21.81	287	23.36	293	24.92	304	28.00	315	31.07	335	37.31	356	43.75
88000	2347	285	20.88	290	22.51	295	24.20	301	25.91	306	27.64	311	29.37	317	31.10	327	34.57	337	38.01	356	44.87	374	51.82
97000	2587	312	27.22	316	28.97	321	30.81	326	32.67	331	34.56	336	36.46	341	38.37	350	42.20	360	46.01	377	53.57	395	61.15
106000	2827	339	34.78	343	36.68	348	38.65	352	40.65	357	42.70	361	44.76	366	46.84	374	51.02	383	55.19	400	63.50	416	71.77
115000	3067	366	43.71	370	45.75	374	47.84	378	49.97	383	52.17	387	54.37	391	56.62	399	61.14	407	65.67	423	74.71	438	83.70
124000	3308	394	54.12	397	56.27	401	58.49	405	60.77	409	63.09	413	65.45	416	67.84	424	72.68	432	77.55	447	87.32	461	97.06

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
44000	1174	340	29.22																				
46000	1227	340	30.08																				
48000	1280	341	30.97	367	37.07																		
50000	1334	341	31.87	368	38.07	393	44.53																
52000	1387	342	32.81	368	39.10	393	45.67																
61000	1627	349	37.50	373	44.12	396	51.12	418	58.40	440	65.93	461	73.67	481	81.59								
70000	1867	360	43.32	382	50.17	403	57.40	423	64.99	443	72.90	463	81.07	483	89.50	501	98.15	520	106.99	538	115.98	555	125.13
79000	2107	375	50.47	394	57.54	413	64.99	432	72.79	451	80.93	469	89.40	487	98.15	505	107.18	523	116.44	540	125.93	557	135.62
88000	2347	392	58.97	410	66.37	427	74.07	445	82.09	462	90.44	479	99.12	495	108.10	512	117.39	528	126.94	545	136.75	561	146.81
97000	2587	411	68.84	428	76.68	444	84.72	460	93.05	476	101.65	491	110.54	507	119.73	522	129.21	537	138.99	552	149.04	567	159.35
106000	2827	432	80.06	447	88.43	462	96.94	477	105.65	492	114.59	506	123.76	521	133.20	535	142.91	549	152.88	563	163.13	577	173.65
115000	3067	453	92.68	468	101.67	482	110.74	496	119.93	509	129.29	523	138.84	536	148.59	550	158.58	563	168.81	576	179.29	589	190.01
124000	3308	475	106.75	489	116.41	502	126.10	515	135.87	528	145.73	541	155.74	554	165.89	567	176.25	579	186.80	591	197.56	604	208.55
133000	3548	498	122.34	511	132.73	524	143.10	536	153.49	549	163.93	561	174.46	573	185.12	585	195.90	597	206.85	608	217.98	620	229.28
142000	3788	521	139.56	533	150.68	546	161.76	558	172.84	569	183.93	581	195.06	593	206.26	604	217.56	615	228.18	626	240.53	637	252.23
151000	4028	545	158.50	557	170.37	568	182.18	580	193.98	591	205.75	602	217.53	613	229.35	624	241.23	635	253.18	645	265.23	656	277.39
160000	4268	569	179.29	580	191.88	591	204.44	602	216.96	613	229.46	624	241.93	634	254.41	645	266.91	655	279.47	665	292.08	675	304.78
169000	4508	593	202.03	604	215.36	615	228.66	625	241.91	636	255.13	646	268.33	656	281.50	666	294.68	676	307.88	686	321.12	696	334.39
178000	4748	618	226.86	628	240.89	639	254.92	649	268.92	659	282.89	669	296.82	678	310.72	688	324.60	698	338.47	707	352.36	717	366.27
187000	4988	643	253.88	653	268.60	663	283.35	672	298.09	682	312.80	692	327.47	701	342.10	711	356.71	720	371.29	729	385.87	738	400.45

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
79000	2107	573	145.46	589	155.48	621	175.93																
88000	2347	576	157.09	592	167.56	622	189.04	652	211.14	680	233.78												
97000	2587	582	169.90	597	180.69	626	202.93	654	225.93	682	249.58	709	273.81	735	298.54	761	323.74						
106000	2827	591	184.43	605	195.45	632	218.21	659	241.86	686	266.26	711	291.37	737	317.08	762	343.35						
115000	3067	602	201.00	615	212.23	641	235.41	667	259.50	692	284.47	716	310.22	741	336.68	765	363.77	788	391.47	811	419.68	834	448.37
124000	3308	616	219.76	628	231.21	652	254.80	676	279.31	700	304.70	724	330.93	747	357.93	770	385.68	792	414.08	815	443.11	837	472.68
133000	3548	631	240.78	643	252.51	666	276.56	688	301.50	711	327.29	733	353.93	755	381.38	777	409.61	799	438.57	820	468.20	841	498.47
142000	3788	648	264.11	659	276.14	681	300.79	702	326.23	724	352.46	745	379.50	766	407.37	787	436.00	807	465.39	828	495.50	848	526.30
151000	4028	666	289.70	677	302.13	697	327.50	718	353.52	738	380.29	758	407.81	778	436.08	798	465.12	818	494.92	837	525.45		
160000	4268	685	317.58	695	330.49	715	356.58	735	383.43	754	410.83	773	438.91	792	467.67	811	497.17	830	527.37	848	558.30		
169000	4508	705	347.75	715	361.18	734	388.33	752	415.93	771	444.08	789	472.82	807	502.17	825	532.20	843	562.88				
178000	4748	726	380.23	735	394.23	753	422.46	771	451.03	789	480.04	806	509.56	824	539.62	841	570.25						
187000	4988	747	415.04	756	429.67	773	459.07	791	488.74	808	518.73	825	549.12	841	579.98								
196000	5228	768	452.27	777	467.57	794	498.22	811	529.04	827	560.12	844	591.50										
205000	5468	790	491.96	799	507.93	815	539.92	831	572.00	847	604.24												
214000	5708	813	534.17	821	550.87	837	584.24																

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BI SWSI

Wheel Diameter = 89 in.	Discharge Area = 45.54 sq. ft.
Inlet Area = 47.30 sq. ft.	Tip Speed, FPM = 23.30 x RPM
Maximum BHP = 1624.33 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	791	111	2.20	123	2.95	135	3.74	146	4.60	158	5.55	169	6.54	179	7.59	199	9.82	218	12.81				
39000	856	116	2.54	128	3.32	139	4.15	149	5.02	160	5.99	170	7.00	180	8.08	200	10.38	219	13.48				
42000	922	122	2.91	133	3.75	143	4.59	153	5.50	163	6.49	173	7.51	182	8.61	201	10.96	219	13.48				
45000	988	127	3.33	138	4.20	147	5.10	157	6.05	166	7.05	176	8.10	185	9.21	202	11.60	220	14.16	252	19.71		
48000	1054	133	3.79	143	4.72	152	5.66	161	6.65	170	7.66	179	8.74	188	9.86	205	12.28	221	14.91	253	20.60	282	26.72
51000	1120	139	4.27	148	5.27	157	6.27	166	7.30	174	8.35	183	9.44	191	10.60	207	13.06	223	15.71	253	21.51	282	27.79
54000	1186	145	4.83	154	5.89	162	6.94	171	8.00	179	9.10	187	10.23	195	11.39	210	13.88	225	16.57	255	22.46	282	28.91
57000	1252	151	5.41	159	6.54	168	7.65	176	8.76	184	9.89	191	11.07	199	12.26	213	14.81	228	17.53	256	23.50	283	30.06
60000	1318	157	6.07	165	7.25	173	8.41	181	9.58	188	10.76	196	11.98	203	13.21	217	15.80	231	18.56	258	24.60	284	31.26
63000	1383	163	6.76	171	8.00	179	9.24	186	10.46	193	11.71	201	12.96	208	14.23	221	16.88	234	19.67	261	25.78	286	32.52
66000	1449	169	7.53	177	8.83	184	10.13	192	11.41	199	12.69	206	14.00	212	15.32	225	18.03	238	20.89	263	27.07	288	33.87
76000	1669	190	10.53	197	12.01	204	13.51	210	15.01	217	16.48	223	17.96	229	19.46	241	22.46	252	25.53	275	32.03	297	39.07
86000	1888	212	14.33	218	15.98	224	17.67	230	19.38	236	21.07	242	22.75	247	24.42	258	27.77	268	31.17	289	38.14	309	45.50
96000	2108	234	19.06	239	20.86	245	22.73	250	24.63	256	26.52	261	28.41	266	30.28	276	34.03	286	37.78	304	45.34	323	43.17
106000	2328	256	24.79	261	26.77	266	28.79	271	30.87	276	32.95	281	35.03	285	37.12	295	41.28	304	45.42	321	53.70	338	62.09
116000	2547	279	31.67	283	33.78	288	35.97	292	38.21	297	40.47	301	42.76	306	45.04	314	49.62	323	54.17	339	63.21	355	72.29
126000	2767	301	39.78	305	42.04	309	44.39	314	46.78	318	49.21	322	51.67	326	54.15	334	59.12	342	64.07	358	73.94	372	83.78
136000	2986	324	49.25	328	51.65	331	54.14	335	56.69	339	59.29	343	61.92	347	64.56	354	69.92	362	75.28	377	85.96	391	96.59
146000	3206	347	60.15	350	62.70	354	65.34	357	68.04	361	70.80	364	73.59	368	76.42	375	82.12	382	87.87	396	99.37	409	110.81
156000	3426	369	72.64	373	75.32	376	78.10	379	80.94	383	83.85	386	86.81	389	89.80	396	95.84	403	101.96	416	114.26	429	126.54

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
54000	1186	309	35.73																				
57000	1252	309	37.04	333	44.37																		
60000	1318	310	38.39	334	45.87	356	53.67																
63000	1383	310	39.77	334	47.42	356	55.40																
66000	1449	312	41.21	335	49.01	357	57.14	378	65.56														
76000	1669	318	46.67	339	54.78	360	63.32	380	72.25	399	81.50	418	91.02	436	100.77								
86000	1888	328	53.34	347	61.67	366	70.46	385	79.71	403	89.34	421	99.32	438	109.61	455	120.16	472	130.94	488	141.93	504	153.11
96000	2108	340	61.34	358	69.93	375	78.97	392	88.44	409	98.34	426	108.63	442	119.26	458	130.24	474	141.50	490	153.01	505	164.78
106000	2328	355	70.72	371	79.68	387	89.00	402	98.72	418	108.84	434	119.35	449	130.25	464	141.50	479	153.10	494	165.00	508	177.18
116000	2547	370	81.50	385	90.92	400	100.62	415	110.66	429	121.05	444	131.81	458	142.93	472	154.40	486	166.24	500	178.39	514	190.87
126000	2767	387	93.65	401	103.65	415	113.84	429	124.29	442	135.03	456	146.08	469	157.45	482	169.18	495	181.23	508	193.62	521	206.33
136000	2986	404	107.19	418	117.85	431	128.63	444	139.60	457	150.78	469	162.20	482	173.91	494	185.93	506	198.25	519	210.87	531	223.81
146000	3206	423	122.20	435	133.60	448	145.05	460	156.60	472	168.31	484	180.20	496	192.34	507	204.70	519	217.35	531	230.26	542	243.48
156000	3426	441	138.74	453	150.90	465	163.08	477	175.30	488	187.62	500	200.08	511	212.69	522	225.51	533	238.56	544	251.83	555	265.37
166000	3645	460	156.87	472	169.84	483	182.79	494	195.74	505	208.76	516	221.81	527	235.01	537	248.36	548	261.87	558	275.58	569	289.51
176000	3865	480	176.68	491	190.48	502	204.21	512	217.94	523	231.68	533	245.44	544	259.28	554	273.23	564	287.29	574	301.51	584	315.91
186000	4084	499	198.28	510	212.89	520	227.46	531	242.00	541	256.50	551	271.00	561	285.53	571	300.14	580	314.83	590	329.62	599	344.56
196000	4304	519	221.78	530	237.21	540	252.61	550	267.96	559	283.25	569	298.53	579	313.81	588	329.12	597	344.50	606	359.93	615	375.46
206000	4523	539	247.28	549	263.52	559	279.75	569	295.91	578	312.02	587	328.12	597	344.18	606	360.24	615	376.31	624	392.43	632	408.62

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
96000	2108	520	176.75	535	188.91	563	213.76																
106000	2328	523	189.62	537	202.31	564	228.31	591	255.06	617	282.45												
116000	2547	527	203.65	541	216.71	567	243.58	593	271.36	618	299.91	643	329.13	667	358.96	690	389.31						
126000	2767	534	219.36	547	232.68	572	260.20	597	288.73	621	318.18	645	348.43	668	379.39	691	411.00	713	443.17	735	475.85		
136000	2986	543	237.06	555	250.62	579	278.62	602	307.72	625	337.83	648	368.87	671	400.74	693	433.35	714	466.62	736	500.52	756	534.96
146000	3206	554	256.97	565	270.75	587	299.20	610	328.76	632	359.39	654	391.02	675	423.57	696	456.97	717	491.14	738	526.01	758	561.52
156000	3426	566	279.16	576	293.21	598	322.13	619	352.16	640	383.24	661	415.36	681	448.43	702	482.45	722	517.29	741	552.94	761	589.32
166000	3645	579	303.66	589	318.04	609	347.54	630	378.06	650	409.61	669	442.17	689	475.71	708	510.21	728	545.61	747	581.86		
176000	3865	593	330.49	603	345.25	622	375.46	642	406.58	661	438.63	679	471.67	698	505.66	717	540.61	735	576.47	754	613.22		
186000	4084	609	359.62	618	374.87	636	405.89	655	437.72	673	470.39	691	503.97	709	538.45	727	573.86	744	610.16	762	647.36		
196000	4304	625	391.10	633	406.86	651	438.85	669	471.50	686	504.91	703	539.12	721	574.17	738	610.08	755	646.87				
206000	4523	641	424.88	650	441.24	667	474.31	684	507.92	700	542.17	717	577.13	733	612.86	750	649.36						
216000	4743	658	461.02	666	478.02	683	512.28	699	546.98	715	582.21	731	618.02	747	654.51	763	691.72						
226000	4963	676	499.56	684	517.25	700	552.79	715	588.67	731	624.99	746	661.78	762	699.16								
236000	5182	693	540.51	701	558.94	717	595.87	732	633.03	747	670.52	762	708.42										
246000	5402	712	583.96	719	603.13	734	641.53	749	680.07	764	718.83												

Performance Data

VCR Fan

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BI DWDI

Wheel Diameter = 12.25 in.	Discharge Area = 1.55 sq. ft.
Inlet Area = 1.840 sq. ft.	Tip Speed, FPM = 3.21 x RPM
Maximum BHP = .1418 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	774	894	0.10	975	0.13	1050	0.16	1124	0.20	1196	0.22	1267	0.28	1337	0.32	1475	0.40	1607	0.52
1300	839	941	0.11	1018	0.14	1090	0.17	1159	0.20	1226	0.25	1293	0.30	1359	0.34	1488	0.44	1614	0.54
1400	903	988	0.13	1063	0.16	1132	0.20	1197	0.24	1260	0.28	1323	0.32	1385	0.35	1507	0.45	1627	0.56
1500	968	1036	0.15	1109	0.17	1175	0.22	1238	0.26	1298	0.30	1357	0.34	1415	0.39	1530	0.48	1644	0.60
1600	1032	1084	0.17	1156	0.20	1220	0.25	1280	0.29	1338	0.32	1394	0.36	1450	0.41	1558	0.52	1666	0.63
1700	1097	1132	0.19	1203	0.22	1266	0.27	1324	0.32	1380	0.35	1434	0.40	1486	0.44	1590	0.55	1692	0.65
1800	1161	1181	0.22	1251	0.26	1313	0.30	1369	0.34	1423	0.39	1475	0.44	1526	0.48	1625	0.59	1722	0.69
1900	1226	1230	0.25	1299	0.29	1360	0.34	1415	0.38	1468	0.43	1518	0.48	1567	0.53	1662	0.63	1754	0.73
2000	1290	1278	0.28	1347	0.32	1407	0.36	1462	0.41	1513	0.46	1562	0.52	1609	0.56	1701	0.68	1790	0.79
2100	1355	1327	0.30	1396	0.35	1455	0.40	1509	0.45	1559	0.51	1607	0.56	1653	0.61	1741	0.71	1827	0.83
2200	1419	1375	0.34	1444	0.40	1503	0.44	1556	0.51	1605	0.56	1652	0.60	1697	0.65	1784	0.78	1867	0.88
2300	1484	1424	0.39	1493	0.44	1551	0.50	1604	0.55	1652	0.60	1698	0.65	1743	0.71	1827	0.83	1908	0.94
2400	1548	1473	0.43	1541	0.48	1600	0.55	1652	0.60	1700	0.65	1745	0.71	1788	0.77	1871	0.88	1950	1.01
2500	1613	1522	0.48	1590	0.54	1648	0.60	1700	0.65	1748	0.70	1792	0.77	1835	0.83	1916	0.94	1993	1.08
2600	1677	1570	0.53	1639	0.59	1697	0.64	1748	0.70	1795	0.77	1840	0.83	1882	0.89	1961	1.02	2037	1.14
3000	1935	1766	0.75	1833	0.83	1891	0.91	1942	0.97	1988	1.04	2032	1.12	2072	1.18	2148	1.33	2219	1.46
3400	294	1963	1.04	2028	1.13	2086	1.22	2137	1.31	2183	1.38	2225	1.46	2265	1.54	2339	1.70	2407	1.87
3800	2452	2161	1.39	2224	1.51	2281	1.61	2331	1.70	2377	1.81	2420	1.89	2459	1.98	2532	2.16	2598	2.34
4200	2710	2362	1.83	2422	1.95	2476	2.08	2526	2.18	2572	2.29	2614	2.40	2654	2.50	2726	2.70	2791	2.91
4600	2968	2565	2.36	2620	2.50	2673	2.62	2722	2.75	2767	2.87	2809	3.00	2848	3.11	2920	3.34	2985	3.55

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1700	1097	1892	0.89	2086	1.16	2273	1.46												
1800	1161	1912	0.94	2099	1.21	2280	1.51	2454	1.82										
1900	1226	1937	0.98	2115	1.26	2290	1.56	2459	1.87										
2000	1290	1964	1.04	2135	1.31	2303	1.62	2467	1.93	2627	2.27								
2100	1355	1995	1.08	2159	1.37	2321	1.67	2479	2.00	2634	2.33	2785	2.70						
2200	1419	2028	1.14	2186	1.43	2341	1.72	2494	2.06	2645	2.41	2792	2.77	2935	3.16				
2300	1484	2063	1.20	2215	1.48	2365	1.79	2513	2.12	2658	2.47	2801	2.84	2941	3.24	3078	3.64		
2400	1548	2101	1.28	2247	1.56	2392	1.87	2534	2.20	2675	2.56	2814	2.92	2950	3.32	3084	3.72	3215	4.15
2500	1613	2139	1.35	2281	1.63	2421	1.95	2558	2.27	2695	2.63	2829	3.00	2962	3.40	3092	3.80	3221	4.24
2600	1677	2180	1.41	2317	1.72	2452	2.02	2585	2.37	2717	2.72	2847	3.09	2976	3.49	3104	3.90	3229	4.33
3000	1935	2351	1.77	2475	2.08	2596	2.41	2714	2.75	2831	3.12	2946	3.50	3061	3.90	3175	4.33	3288	4.76
3400	2194	2532	2.18	2648	2.52	2760	2.87	2867	3.24	2973	3.62	3077	4.01	3180	4.42	3282	4.85	3384	5.30
3800	2452	2719	2.70	2830	3.06	2935	3.44	3036	3.82	3133	4.22	3229	4.62	3323	5.05	3417	5.50	3509	5.94
4200	2710	2910	3.29	3017	3.69	3118	4.08	3213	4.50	3305	4.91	3395	5.34	3483	5.80	3569	6.25	3655	6.71
4600	3968	3102	3.99	3208	4.41	3305	4.84	3397	5.29	3485	5.73	3570	6.19	3654	6.66	3735	7.13	3815	7.61
5000	3226	3296	4.79	3400	5.25	3495	5.72	3585	6.19	3670	6.66	3752	7.14	3832	7.63	3909	8.13	3985	8.64
5400	3484	3490	5.69	3593	6.19	3687	6.69	3775	7.20	3858	7.70	3938	8.21	4015	8.74	4089	9.25	4162	9.80
5800	3742	3685	6.70	3787	7.25	3880	7.80	3967	8.35	4048	8.89	4126	9.42	4201	9.98	4274	10.53	4345	11.08
6200	4000	3879	7.84	3981	8.44	4074	9.03	4160	9.61	4240	10.19	4317	10.76	4391	11.35	4461	11.94	4530	12.53
6600	4258	4074	9.11	4176	9.76	4268	10.39	4353	11.03	4433	11.64	4509	12.25	4581	12.86	4651	13.48	4719	14.11

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1613	3346	4.67																
2600	1677	3352	4.77	3473	5.23														
3000	1935	3399	5.22	3510	5.69	3620	6.16	3728	6.66	3940	7.69								
3400	2194	3485	5.75	3585	6.24	3685	6.73	3784	7.24	3980	8.28	4173	9.39	4362	10.55	4547	11.74		
3800	2452	3601	6.41	3692	6.91	3783	7.41	3873	7.91	4053	8.99	4230	10.10	4406	11.28	4579	12.50	4750	13.76
4200	2710	3739	7.20	3823	7.69	3907	8.21	3990	8.74	4154	9.82	4318	10.96	4480	12.14	4641	13.38	4801	14.66
4600	2968	3894	8.11	3972	8.63	4050	9.14	4127	9.69	4279	10.80	4430	11.94	4581	13.14	4730	14.39	4878	15.69
5000	3226	4060	9.16	4134	9.69	4207	10.23	4279	10.78	4422	11.91	4563	13.08	4703	14.32	4841	15.58	4979	16.89
5400	3484	4234	10.33	4304	10.89	4374	11.44	4442	12.01	4577	13.17	4710	14.38	4841	15.63	4971	16.92	5101	18.26
5800	3742	4414	11.66	4481	12.23	4548	12.81	4613	13.39	4742	14.61	4868	15.85	4993	17.13	5116	18.45	5237	19.81
6200	4000	4597	13.11	4663	13.71	4727	14.33	4790	14.93	4914	16.18	5035	17.46	5154	18.78	5271	20.14	5387	21.53
6600	4258	4784	14.73	4848	15.36	4911	16.00	4972	16.64	5092	17.93	5208	19.26	5323	20.61	5435	22.01	5545	23.42
7000	4516	4973	16.51	5036	17.17	5097	17.82	5157	18.50	5273	19.85	5387	21.23	5497	22.63	5605	24.06	5712	25.51
7400	4774	5164	18.43	5225	19.13	5285	19.82	5344	20.53	5458	21.93	5568	23.36	5676	24.82				
7800	5032	5356	20.54	5416	21.26	5476	22.00	5533	22.73	5645	24.20	5753	25.68						
8200	5290	5548	22.82	5608	23.58	5667	24.35	5724	25.11										

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

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BI DWDI

Wheel Diameter = 13.50 in.	Discharge Area = 1.89 sq. ft.
Inlet Area = 2.240 sq. ft.	Tip Speed, FPM = 3.53 x RPM
Maximum BHP = .2305 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	794	826	0.12	898	0.16	965	0.20	1030	0.25	1094	0.29	1157	0.34	1220	0.40	1342	0.51	1460	0.64
1600	847	861	0.14	931	0.17	995	0.22	1057	0.26	1118	0.30	1177	0.35	1237	0.41	1353	0.54	1467	0.65
1700	899	897	0.16	965	0.20	1027	0.24	1086	0.29	1144	0.34	1200	0.39	1257	0.44	1367	0.56	1476	0.68
1800	952	932	0.17	999	0.22	1059	0.26	1116	0.30	1172	0.35	1226	0.40	1279	0.46	1385	0.59	1488	0.71
1900	1005	968	0.20	1034	0.24	1093	0.29	1148	0.34	1201	0.39	1253	0.44	1304	0.50	1405	0.61	1504	0.75
2000	1058	1004	0.22	1069	0.27	1127	0.30	1180	0.35	1232	0.41	1282	0.46	1331	0.53	1427	0.64	1522	0.78
2100	1111	1040	0.24	1105	0.29	1161	0.34	1213	0.39	1263	0.45	1312	0.50	1359	0.56	1452	0.69	1543	0.82
2200	1164	1077	0.27	1140	0.32	1196	0.36	1247	0.43	1296	0.48	1343	0.54	1389	0.60	1478	0.71	1566	0.86
2300	1217	1113	0.30	1176	0.34	1231	0.40	1282	0.45	1329	0.52	1375	0.58	1419	0.64	1506	0.76	1590	0.89
2400	1270	1149	0.32	1212	0.39	1267	0.44	1316	0.50	1363	0.56	1408	0.61	1451	0.68	1535	0.81	1616	0.94
2500	1323	1186	0.35	1248	0.41	1302	0.48	1351	0.54	1397	0.60	1441	0.65	1483	0.71	1565	0.86	1644	1.00
2600	1376	1222	0.40	1284	0.45	1338	0.52	1386	0.58	1432	0.64	1475	0.70	1516	0.77	1596	0.91	1673	1.04
2700	1429	1258	0.44	1321	0.50	1374	0.56	1422	0.63	1467	0.68	1509	0.76	1550	0.81	1627	0.96	1702	1.10
2800	1481	1295	0.48	1357	0.54	1410	0.60	1458	0.66	1502	0.73	1544	0.81	1583	0.86	1660	1.01	1733	1.16
3300	1746	1477	0.70	1539	0.80	1591	0.88	1638	0.94	1680	1.03	1720	1.11	1758	1.18	1829	1.33	1896	1.50
3800	2011	1660	1.02	1721	1.12	1773	1.21	1819	1.31	1861	1.39	1900	1.48	1936	1.58	2004	1.76	2068	1.92
4300	2275	1844	1.41	1903	1.53	1955	1.63	2001	1.75	2043	1.86	2081	1.95	2117	2.06	2184	2.25	2245	2.45
4800	2540	2030	1.88	2086	2.02	2137	2.16	2183	2.29	2224	2.41	2263	2.52	2298	2.63	2361	2.87	2424	3.09
5300	2804	2219	2.47	2271	2.62	2320	2.77	2365	2.92	2406	3.07	2445	3.20	2480	3.33	2546	3.59	2605	3.84
5800	3069	2409	3.17	2457	3.34	2504	3.52	2548	3.67	2589	3.84	2627	3.99	2662	4.14	2727	4.42	2786	4.70

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	1058	1709	1.06	1889	1.39														
2100	1111	1722	1.11	1896	1.43	2064	1.79												
2200	1164	1738	1.14	1906	1.47	2070	1.83	2227	2.22										
2300	1217	1756	1.20	1918	1.53	2077	1.88	2231	2.27										
2400	1270	1776	1.25	1933	1.58	2087	1.95	2237	2.33	2383	2.75								
2500	1323	1798	1.29	1950	1.63	2099	2.00	2245	2.40	2387	2.81	2525	3.25						
2600	1376	1822	1.35	1969	1.68	2113	2.06	2255	2.45	2394	2.87	2529	3.32	2661	3.79				
2700	1429	1847	1.41	1989	1.75	2129	2.12	2267	2.52	2402	2.95	2535	3.39	2664	3.85				
2800	1481	1874	1.47	2012	1.82	2147	2.18	2281	2.58	2413	3.02	2542	3.47	2669	3.94	2793	4.42		
3300	1746	2022	1.83	2143	2.20	2261	2.58	2377	3.00	2492	3.44	2606	3.90	2719	4.37	2831	4.87	2942	5.41
3800	2011	2185	2.29	2296	2.68	2402	3.09	2506	3.52	2608	3.97	2709	4.44	2809	4.94	2909	5.44	3008	5.98
4300	2275	2357	2.87	2461	3.29	2559	3.72	2654	4.16	2747	4.64	2839	5.12	2929	5.62	3019	6.16	3108	6.69
4800	2540	2533	3.54	2632	4.00	2726	4.45	2815	4.94	2902	5.42	2986	5.94	3069	6.46	3151	7.00	3233	7.56
5300	2804	2712	4.33	2808	4.83	2898	5.33	2984	5.83	3066	6.37	3145	6.90	3223	7.44	3299	8.01	3375	8.58
5800	3069	2892	5.25	2987	5.80	3074	6.33	3157	6.89	3236	7.44	3312	8.00	3386	8.58	3458	9.17	3529	9.78
6300	3333	3073	6.30	3167	6.90	3253	7.49	3333	8.08	3410	8.66	3483	9.26	3554	9.88	3623	10.50	3691	11.13
6800	3598	3255	7.50	3348	8.14	3433	8.78	3512	9.41	3587	10.05	3658	10.69	3727	11.33	3794	12.00	3859	12.66
7300	3862	3437	8.85	3529	9.55	3613	10.25	3692	10.92	3765	11.60	3835	12.28	3903	12.98	3968	13.66	4031	14.36
7800	4127	3618	10.36	3711	11.13	3795	11.88	3872	12.60	3945	13.33	4014	14.07	4080	14.78	4144	15.51	4206	16.26
8300	4392	3800	12.05	3892	12.88	3976	13.67	4053	14.46	4126	15.25	4194	16.03	4259	16.79	4322	17.57	4383	18.35

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3300	1746	3051	5.94	3158	6.50	3263	7.08	3366	7.66										
3800	2011	3106	6.54	3204	7.10	3300	7.69	3396	8.30	3584	9.57	3767	10.89						
4300	2275	3196	7.26	3284	7.84	3372	8.44	3459	9.07	3631	10.35	3802	11.69	3969	13.11	4133	14.57	4294	16.07
4800	2540	3313	8.14	3393	8.74	3473	9.35	3552	9.98	3710	11.28	3866	12.64	4021	14.08	4174	15.57	4325	17.10
5300	2804	3449	9.19	3523	9.80	3596	10.41	3669	11.05	3814	12.39	3957	13.78	4100	15.23	4242	16.73	4382	18.29
5800	3069	3599	10.39	3668	11.03	3736	11.66	3804	12.33	3938	13.68	4071	15.10	4203	16.57	4334	18.10	4464	19.67
6300	3333	3757	11.76	3823	12.42	3887	13.10	3951	13.76	4077	15.16	4201	16.61	4324	18.11	4447	19.67	4568	21.26
6800	3598	3922	13.33	3985	14.01	4047	14.71	4107	15.41	4227	16.85	4344	18.33	4460	19.86	4575	21.46	4689	23.08
7300	3862	4092	15.07	4153	15.78	4212	16.51	4270	17.23	4385	18.73	4496	20.26	4606	21.83	4715	23.46	4823	25.13
7800	4127	4266	17.00	4324	17.75	4382	18.50	4438	19.26	4548	20.82	4656	22.41	4761	24.03	4865	25.70	4967	27.39
8300	4392	4441	19.13	4499	19.92	4555	20.71	4610	21.50	4716	23.11	4820	24.76	4922	26.45	5021	28.16	5119	29.91
8800	4656	4619	21.46	4675	22.28	4730	23.11	4784	23.95	4888	25.64	4989	27.35	5087	29.08	5184	30.85		
9300	4921	4798	24.01	4853	24.89	4907	25.76	4960	26.62	5062	28.39	5161	30.17						
9800	5185	4977	26.78	5032	27.71	5085	28.62	5137	29.53	5238	31.37								
10300	5450	5158	29.79	5212	30.76														

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

Performance Data

VCR Fan

150

BI DWDI

Wheel Diameter = 15 in.	Discharge Area = 2.33 sq. ft.
Inlet Area = 2.780 sq. ft.	Tip Speed, FPM = 3.93 x RPM
Maximum BHP = .3903 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1900	815	756	0.16	820	0.20	879	0.26	937	0.30	993	0.36	1048	0.43	1103	0.50	1211	0.64	1316	0.80
2000	858	781	0.17	844	0.22	901	0.28	957	0.32	1010	0.39	1064	0.44	1116	0.52	1220	0.66	1321	0.81
2100	901	807	0.19	869	0.24	924	0.30	978	0.34	1030	0.40	1081	0.48	1131	0.55	1231	0.68	1328	0.85
2200	944	833	0.20	894	0.27	948	0.32	1000	0.38	1050	0.44	1099	0.50	1147	0.56	1243	0.71	1337	0.88
2300	987	859	0.22	919	0.29	972	0.34	1022	0.40	1071	0.46	1118	0.53	1165	0.60	1257	0.75	1348	0.91
2400	1030	886	0.26	944	0.30	997	0.36	1046	0.43	1093	0.48	1139	0.56	1184	0.63	1273	0.78	1360	0.93
2500	1073	912	0.28	970	0.34	1022	0.40	1070	0.45	1116	0.52	1160	0.59	1204	0.65	1290	0.81	1374	0.97
2600	1116	938	0.30	996	0.35	1047	0.43	1094	0.48	1139	0.56	1182	0.61	1225	0.69	1308	0.85	1390	1.01
2700	1159	965	0.32	1022	0.39	1072	0.45	1119	0.52	1162	0.59	1205	0.65	1246	0.72	1327	0.88	1406	1.04
2800	1202	991	0.35	1048	0.41	1098	0.48	1143	0.56	1187	0.63	1228	0.69	1268	0.77	1347	0.93	1424	1.08
2900	1245	1018	0.39	1074	0.45	1124	0.52	1169	0.59	1211	0.65	1252	0.73	1291	0.81	1368	0.96	1442	1.13
3000	1288	1044	0.41	1101	0.48	1149	0.56	1194	0.63	1236	0.69	1276	0.78	1314	0.85	1389	1.02	1462	1.18
3100	1330	1071	0.44	1127	0.53	1176	0.60	1220	0.66	1261	0.75	1300	0.81	1338	0.89	1411	1.06	1482	1.23
3700	1588	1230	0.68	1286	0.78	1333	0.86	1375	0.96	1415	1.04	1451	1.12	1486	1.21	1553	1.39	1616	1.58
4300	1845	1389	1.01	1445	1.12	1492	1.22	1534	1.33	1572	1.43	1607	1.53	1641	1.62	1703	1.82	1762	2.04
4900	2103	1550	1.41	1604	1.54	1651	1.67	1692	1.79	1730	1.91	1765	2.02	1798	2.13	1858	2.37	1914	2.59
5500	2361	1712	1.91	1764	2.07	1810	2.20	1851	2.36	1889	2.49	1924	2.62	1956	2.75	2015	3.00	2070	3.27
6100	2618	1875	2.52	1924	2.70	1970	2.87	2011	3.02	2048	3.18	2083	3.34	2115	3.49	2174	3.77	2228	4.07
6700	2876	2040	3.27	2086	3.45	2130	3.65	2170	3.84	2207	4.00	2242	4.19	2274	4.34	2333	4.67	2386	5.00
7300	3133	2207	4.15	2250	4.32	2291	4.57	2330	4.77	2367	4.98	2401	5.16	2433	5.35	2492	5.72	2545	6.08

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	1030	1532	1.29	1697	1.70														
2500	1073	1540	1.33	1701	1.73	1855	2.17												
2600	1116	1550	1.37	1707	1.77	1858	2.22												
2700	1159	1562	1.41	1714	1.82	1862	2.27	2004	2.74										
2800	1202	1575	1.45	1723	1.87	1867	2.32	2007	2.79										
2900	1245	1589	1.51	1733	1.92	1873	2.37	2010	2.84	2143	3.35								
3000	1288	1604	1.56	1744	1.97	1881	2.41	2015	2.91	2145	3.41								
3100	1330	1621	1.61	1757	2.02	1890	2.47	2021	2.97	2149	3.47	2273	4.02						
3700	1588	1737	1.98	1854	2.41	1969	2.87	2083	3.37	2195	3.90	2306	4.47	2416	5.05	2523	5.66	2628	6.30
4300	1845	1872	2.47	1977	2.91	2079	3.40	2179	3.91	2278	4.47	2376	5.04	2473	5.64	2570	6.26	2665	6.91
4900	2103	2018	3.07	2115	3.54	2208	4.07	2299	4.59	2388	5.16	2475	5.75	2562	6.37	2649	7.00	2734	7.66
5500	2361	2170	3.77	2262	4.30	2349	4.85	2433	5.42	2514	6.00	2595	6.61	2674	7.25	2752	7.91	2830	8.58
6100	2618	2325	4.64	2414	5.20	2497	5.80	2576	6.40	2652	7.01	2727	7.65	2800	8.30	2873	8.99	2944	9.67
6700	2876	2482	5.62	2568	6.25	2648	6.88	2724	7.51	2797	8.17	2868	8.85	2937	9.53	3005	10.24	3072	10.96
7300	3133	2640	6.76	2725	7.44	2803	8.13	2877	8.82	2947	9.50	3015	10.21	3081	10.94	3145	11.67	3208	12.42
7900	3391	2798	8.07	2882	8.80	2959	9.55	3032	10.28	3100	11.03	3166	11.78	3229	12.53	3291	13.31	3351	14.10
8500	3648	2957	9.53	3041	10.35	3117	11.14	3188	11.92	3255	12.73	3319	13.51	3381	14.33	3441	15.13	3499	15.96
9100	3906	3116	11.19	3199	12.07	3275	12.91	3345	13.76	3412	14.61	3474	15.46	3535	16.32	3593	17.17	3650	18.04
9700	4163	3275	13.03	3358	13.98	3434	14.91	3503	15.82	3569	16.73	3631	17.63	3690	18.53	3748	19.43	3803	20.35
10300	4421	3434	15.07	3517	16.10	3593	17.10	3662	18.07	3727	19.03	3788	20.01	3847	20.96	3904	21.92	3958	22.89

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3700	1588	2732	6.96																
4300	1845	2760	7.58	2853	8.28	2945	9.00	3036	9.75										
4900	2103	2820	8.35	2904	9.07	2989	9.80	3072	10.55	3237	12.11	3398	13.76	3556	15.48				
5500	2361	2907	9.28	2984	10.00	3060	10.75	3136	11.51	3287	13.11	3436	14.78	3584	16.53	3728	18.35	3871	20.23
6100	2618	3015	10.39	3085	11.14	3155	11.89	3225	12.67	3363	14.30	3500	15.98	3636	17.76	3771	19.60	3904	21.51
6700	2876	3137	11.69	3203	12.46	3267	13.23	3332	14.03	3459	15.67	3586	17.41	3712	19.20	3837	21.07	3961	23.00
7300	3133	3270	13.19	3332	13.98	3392	14.78	3453	15.60	3572	17.28	3689	19.09	3806	20.86	3922	22.76	4037	24.71
7900	3391	3411	14.89	3469	15.71	3526	16.53	3583	17.39	3695	19.11	3806	20.92	3915	22.78	4024	24.70	4131	26.68
8500	3648	3556	16.81	3612	17.64	3667	18.51	3721	19.39	3828	21.17	3933	23.01	4036	24.92	4138	26.89	4239	28.91
9100	3906	3705	18.92	3759	19.82	3812	20.71	3864	21.61	3967	23.46	4067	25.38	4165	27.32	4262	29.33	4358	31.39
9700	4163	3857	21.28	3910	22.20	3961	23.14	4012	24.08	4111	26.01	4207	27.97	4301	29.98	4394	32.06	4486	34.17
10300	4421	4011	23.85	4062	24.82	4113	25.81	4162	26.79	4258	28.79	4351	30.83	4442	32.92	4532	35.03	4620	37.21
10900	4678	4166	26.67	4217	27.70	4266	28.72	4314	29.76	4408	31.83	4499	33.96	4587	36.10	4674	38.31		
11500	4936	4323	29.75	4373	30.82	4421	31.89	4469	32.97	4560	35.15	4649	37.35						
12100	5193	4480	33.09	4529	34.21	4577	35.34	4624	36.46										
12700	5451	4638	36.68	4687	37.87														

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

Performance Data

VCR Fan

165

BI DWDI

Wheel Diameter = 16.50 in.	Discharge Area = 2.82 sq. ft.
Inlet Area = 3.340 sq. ft.	Tip Speed, FPM = 4.32 x RPM
Maximum BHP = .6287 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	780	668	0.17	728	0.22	783	0.29	837	0.35	890	0.43	943	0.50	995	0.58	1096	0.76	1194	0.94
2400	851	707	0.20	764	0.27	816	0.32	867	0.40	916	0.46	965	0.55	1013	0.63	1108	0.80	1200	0.98
2600	922	745	0.25	807	0.30	851	0.36	898	0.44	945	0.52	990	0.59	1035	0.68	1124	0.85	1211	1.04
2800	993	785	0.29	839	0.34	887	0.41	932	0.48	976	0.56	1019	0.64	1062	0.72	1145	0.91	1227	1.11
3000	1064	824	0.32	877	0.40	924	0.46	968	0.55	1010	0.63	1051	0.70	1091	0.79	1169	0.96	1247	1.16
3200	1135	864	0.38	916	0.45	962	0.53	1004	0.60	1045	0.68	1084	0.77	1122	0.86	1197	1.04	1270	1.25
3400	1206	903	0.44	955	0.52	1000	0.60	1042	0.68	1081	0.76	1119	0.85	1155	0.93	1226	1.12	1296	1.33
3600	1277	943	0.50	995	0.58	1039	0.66	1080	0.75	1118	0.83	1154	0.93	1190	1.02	1258	1.20	1325	1.41
3800	1348	983	0.56	1034	0.65	1078	0.73	1118	0.83	1155	0.91	1191	1.02	1225	1.11	1291	1.31	1355	1.52
4000	1418	1023	0.64	1074	0.72	1118	0.83	1157	0.91	1194	1.02	1228	1.11	1262	1.20	1326	1.41	1387	1.62
4200	1489	1063	0.71	1114	0.81	1157	0.91	1196	1.02	1232	1.11	1266	1.20	1299	1.31	1361	1.53	1421	1.73
4400	1560	1103	0.80	1153	0.91	1197	1.02	1235	1.12	1271	1.21	1304	1.31	1336	1.43	1397	1.64	1455	1.87
4600	1631	1142	0.89	1193	1.01	1236	1.12	1275	1.22	1310	1.33	1343	1.43	1375	1.54	1434	1.77	1491	2.00
4800	1702	1182	1.00	1233	1.12	1276	1.22	1314	1.33	1349	1.45	1382	1.56	1413	1.67	1472	1.91	1527	2.15
5500	1950	1322	1.39	1373	1.54	1415	1.68	1453	1.82	1488	1.95	1520	2.08	1550	2.20	1606	2.45	1658	2.72
6200	2199	1464	1.92	1512	2.08	1555	2.25	1593	2.41	1627	2.56	1658	2.70	1688	2.84	1743	3.13	1793	3.42
6900	2447	1606	2.54	1653	2.74	1694	2.92	1732	3.11	1766	3.27	1797	3.45	1827	3.62	1881	3.94	1930	4.25
7600	2695	1750	3.30	1794	3.52	1835	3.74	1872	3.95	1906	4.14	1937	4.33	1966	4.51	2020	4.89	2068	5.24
8300	2943	1895	4.22	1936	4.45	1975	4.69	2012	4.92	2045	5.15	2076	5.35	2106	5.57	2159	5.98	2207	6.37
9000	3191	2041	5.29	2079	5.55	2117	5.80	2152	6.07	2185	6.30	2216	6.55	2245	6.79	2298	7.24	2347	7.68

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3200	1135	1414	1.68	1555	2.17	1691	2.70												
3400	1206	1433	1.77	1567	2.27	1698	2.81	1824	3.39										
3600	1277	1455	1.87	1583	2.37	1708	2.91	1831	3.50	1950	4.12								
3800	1348	1480	1.97	1602	2.47	1722	3.02	1840	3.62	1955	4.25	2068	4.91						
4000	1418	1507	2.08	1624	2.59	1739	3.15	1852	3.75	1964	4.37	2073	5.04	2179	5.74				
4200	1489	1536	2.20	1648	2.72	1759	3.29	1868	3.87	1975	4.51	2081	5.19	2185	5.90	2286	6.63		
4400	1560	1567	2.34	1675	2.87	1781	3.42	1886	4.02	1989	4.66	2092	5.34	2192	6.05	2291	6.80	2388	7.55
4600	1631	1599	2.49	1703	3.02	1805	3.59	1906	4.19	2006	4.83	2105	5.51	2203	6.23	2299	6.98	2393	7.75
4800	1702	1632	2.65	1733	3.17	1832	3.75	1929	4.35	2025	5.00	2121	5.69	2215	6.41	2309	7.16	2401	7.94
5500	1950	1756	3.25	1848	3.83	1937	4.42	2024	5.05	2109	5.73	2194	6.43	2279	7.16	2362	7.91	2445	8.71
6200	2199	1886	4.01	1972	4.62	2054	5.25	2134	5.91	2212	6.60	2289	7.33	2365	8.08	2441	8.85	2516	9.66
6900	2447	2020	4.91	2102	5.57	2180	6.24	2255	6.94	2327	7.66	2398	8.41	2468	9.17	2537	9.99	2606	10.80
7600	2695	2157	5.94	2236	6.66	2311	7.39	2382	8.13	2450	8.89	2517	9.66	2582	10.48	2647	11.30	2710	12.16
8300	2943	2294	7.16	2372	7.93	2445	8.71	2513	9.50	2579	10.30	2642	11.13	2704	11.96	2765	12.83	2825	13.71
9000	3191	2433	8.53	2510	9.36	2581	10.21	2648	11.05	2711	11.91	2772	12.78	2831	13.66	2889	14.57	2946	15.48
9700	3400	2572	10.08	2648	11.00	2718	11.91	2784	12.81	2845	13.71	2905	14.63	2962	15.57	3018	16.51	3072	17.48
10400	3688	2711	11.83	2787	12.83	2856	13.81	2921	14.78	2982	15.75	3040	16.71	3096	17.70	3150	18.70	3202	19.71
11100	3936	2851	13.80	2926	14.86	2995	15.91	3059	16.96	3119	17.98	3176	19.03	3231	20.07	3284	21.10	3335	22.17
11800	4184	2990	15.96	3066	17.13	3134	18.26	3197	19.36	3257	20.46	3313	21.57	3367	22.67	3419	23.76	3470	24.88
12500	4433	3130	18.35	3205	19.61	3273	20.82	3336	22.01	3395	23.18	3451	24.35	3505	25.51	3556	26.68	3605	27.85

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4600	1631	2486	8.55	2576	9.36														
4800	1702	2491	8.75	2580	9.58	2667	10.44												
5500	1950	2528	9.53	2610	10.39	2690	11.26	2770	12.16	2927	14.05	3079	16.01						
6200	2199	2590	1.50	2665	11.36	2738	12.25	2812	13.17	2957	15.08	3099	17.10	3239	19.18	3376	21.35		
6900	2447	2674	1.66	2742	12.55	2809	13.44	2876	14.38	3009	16.32	3141	18.35	3272	20.48	3400	22.68	3527	24.98
7600	2695	2773	13.03	2836	13.93	2898	14.86	2959	15.81	3082	17.78	3204	19.83	3324	21.98	3444	24.23	3563	26.54
8300	2943	2884	14.61	2942	15.53	3000	16.48	3057	17.46	3171	19.46	3284	21.56	3396	23.73	3507	26.01	3617	28.35
9000	3191	3002	16.42	3057	17.38	3111	18.35	3165	19.35	3272	21.41	3377	23.53	3482	25.76	3586	28.04	3689	30.42
9700	34040	3126	18.46	3178	19.45	3230	20.46	3281	21.48	3382	23.60	3482	25.77	3580	28.03	3677	30.37	3774	32.78
10400	3688	3254	20.71	3305	21.76	3354	22.81	3403	23.86	3499	26.04	3594	28.28	3687	30.60	3779	32.98	3871	35.43
11100	3936	3385	23.23	3434	24.32	3482	25.41	3529	26.51	3622	28.76	3712	31.07	3801	33.45	3889	35.89	3976	38.39
11800	4184	3518	26.00	3566	27.12	3613	28.27	3659	29.42	3748	31.75	3836	34.14	3921	36.59	4005	39.09	4088	41.65
12500	4433	3653	29.02	3700	30.21	3746	31.39	3791	32.59	3878	35.03	3962	37.50	4045	40.02	4126	42.59	4206	45.21
13200	4681	3790	32.32	3836	33.57	3880	34.81	3924	36.06	4009	38.59	4092	41.15	4172	43.76	4251	46.40		
13900	4929	3927	35.92	3972	37.21	4016	38.52	4059	39.82	4143	42.45	4224	45.10						
14600	5177	4065	39.79	4109	41.15	4153	42.52	4196	43.87	4278	46.62								
15300	5426	4203	43.97	4247	45.40														

- Notes:** 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
2) Power rating (BHP) does not include transmission losses.
3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
4) Bold figures indicate maximum static efficiency.

Performance Data

VCR Fan

182

BI DWDI

Wheel Diameter = 18.25 in.	Discharge Area = 3.45 sq. ft.
Inlet Area = 4.050 sq. ft.	Tip Speed, FPM = 4.78 x RPM
Maximum BHP = 1.200 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	812	563	0.20	624	0.27	678	0.34	729	0.40	778	0.48	825	0.58	871	0.65	959	0.85	1055	1.14
3200	928	607	0.26	665	0.32	717	0.40	765	0.48	810	0.56	853	0.65	896	0.75	977	0.94	1076	1.27
3600	1043	652	0.32	709	0.40	758	0.48	804	0.58	847	0.66	887	0.76	927	0.86	1003	1.06	1108	1.73
4000	1159	697	0.40	752	0.50	801	0.59	845	0.68	886	0.78	925	0.86	963	0.96	1034	1.18	1103	1.41
4400	1275	744	0.48	797	0.60	845	0.69	888	0.80	928	0.89	965	1.01	1001	1.11	1070	1.33	1135	1.56
4800	1391	791	0.59	842	0.70	889	0.81	931	0.93	970	1.04	1007	1.14	1042	1.27	1108	1.50	1170	1.73
5200	1507	840	0.70	889	0.83	934	0.96	975	1.08	1014	1.20	1050	1.31	1084	1.43	1148	1.68	1208	1.93
5600	1623	890	0.85	936	0.97	979	1.12	1020	1.25	1058	1.37	1093	1.51	1127	1.63	1189	1.89	1248	2.16
6000	1739	941	1.00	984	1.13	1026	1.29	1065	1.43	1102	1.56	1137	1.70	1170	1.85	1232	2.12	1289	2.40
6400	1855	993	1.16	1033	1.31	1073	1.47	1111	1.62	1147	1.77	1182	1.92	1214	2.08	1275	2.37	1331	2.66
6800	1971	1046	1.37	1083	1.53	1120	1.68	1157	1.85	1193	2.02	1227	2.17	1259	2.33	1318	2.65	1374	2.95
7200	2087	4099	1.58	1134	1.75	1169	1.92	1204	2.09	1239	2.27	1272	2.43	1303	2.61	1362	2.93	1417	3.27
7600	2203	1153	1.82	1185	2.00	1219	2.17	1252	2.36	1285	2.54	1318	2.72	1349	2.91	1407	3.25	1461	3.60
8000	2319	1208	2.09	1238	2.27	1269	2.45	1301	2.65	1333	2.83	1364	3.02	1394	3.22	1452	3.59	1505	3.97
8400	2435	1263	2.40	1290	2.57	1320	2.75	1350	2.95	1381	3.16	1411	3.37	1440	3.57	1497	3.97	1549	4.35
8800	2551	1318	2.72	1344	2.90	1372	3.09	1400	3.29	1429	3.50	1459	3.72	1487	3.94	1542	4.35	1594	4.77
9200	2667	1373	3.08	1398	3.25	1424	3.45	1451	3.66	1479	3.89	1507	4.10	1534	4.33	1588	4.77	1639	5.22
9600	2783	1429	3.45	1452	3.65	1477	3.85	1503	4.07	1529	4.30	1556	4.52	1582	4.75	1635	5.22	1685	5.67
10000	2899	1485	3.87	1507	4.08	1530	4.29	1555	4.50	1580	4.74	1605	4.97	1631	5.20	1682	5.69	1731	6.17
10400	3014	1541	4.33	1562	4.52	1584	4.75	1607	4.98	1631	5.20	1655	5.44	1680	5.69	1729	6.19	1777	6.70

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	1275	1258	2.07	1375	2.61	1488	3.19												
4800	1391	1287	2.25	1399	2.82	1505	3.41	1609	4.05	1708	4.69								
5200	1507	1320	2.47	1426	3.06	1528	3.66	1627	4.32	1722	5.00								
5600	1623	1356	2.72	1458	3.32	1555	3.95	1650	4.62	1741	5.30	1831	6.02	1918	6.78	2002	7.55		
6000	1739	1394	2.99	1492	3.59	1586	4.25	1677	4.94	1764	5.65	1850	6.39	1934	7.16	2016	7.94	2096	8.75
6400	1855	1434	3.27	1529	3.90	1620	4.58	1707	5.27	1791	6.01	1874	6.78	1954	7.56	2033	8.38	2111	9.21
6800	1971	1475	3.59	1568	4.25	1656	4.94	1740	5.66	1821	6.41	1901	7.19	1979	8.00	2055	8.83	2130	9.69
7200	2087	1517	3.94	1608	4.62	1693	5.33	1775	6.07	1854	6.83	1931	7.64	2006	8.46	2080	9.30	2152	10.19
7600	2203	1559	4.30	1649	5.01	1732	5.75	1812	6.50	1889	7.30	1963	8.11	2036	8.96	2107	9.83	2177	10.71
8000	2319	1602	4.70	1690	5.44	1772	6.20	1850	6.99	1925	7.80	1998	8.63	2069	9.49	2138	10.38	2206	11.28
8400	2435	1646	5.12	1733	5.91	1814	6.69	1890	7.50	1963	8.33	2034	9.17	2103	10.05	2170	10.96	2236	11.89
8800	2551	1689	5.58	1776	6.40	1855	7.20	1931	8.03	2003	8.89	2072	9.76	2139	10.66	2205	11.58	2269	12.53
9200	2667	1734	6.07	1819	6.91	1898	7.75	1972	8.61	2043	9.50	2111	10.39	2177	11.30	2241	12.25	2304	13.21
9600	2783	1778	6.58	1863	7.46	1941	8.35	2014	9.24	2084	10.14	2151	11.05	2215	12.00	2278	12.96	2340	13.94
10000	2899	1823	7.11	1907	8.05	1984	8.96	2057	9.89	2126	10.82	2191	11.75	2255	12.73	2317	13.71	2377	14.71
10400	3014	1868	7.69	1951	8.66	2028	9.61	2100	10.57	2168	11.53	2233	12.50	2296	13.50	2356	14.50	2416	15.53
10800	3130	1913	8.30	1995	9.30	2072	10.30	2143	11.30	2210	12.28	2275	13.28	2337	14.31	2397	15.33	2455	16.39
11200	3246	1959	8.94	2040	9.99	2116	11.03	2187	12.05	2253	13.08	2317	14.11	2378	15.16	2438	16.21	2495	17.28
12200	3536	2074	10.67	2153	11.83	2227	12.98	2297	14.11	2362	15.23	2425	16.35	2485	17.48	2542	18.60	2598	19.75
13200	3826	2193	12.64	2268	13.92	2340	15.18	2408	16.42	2473	17.64	2534	18.85	2593	20.07	2650	21.28	2704	22.50

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6800	1971	2203	10.55	2275	11.46	2347	12.38	2416	13.31										
7200	2087	2223	11.08	2293	12.00	2362	12.93	2430	13.89	2563	15.86								
7600	2203	2246	11.64	2314	12.57	2381	13.53	2447	14.51	2576	16.51	2702	18.58						
8000	2319	2272	12.21	2338	13.17	2403	14.16	2467	15.16	2592	17.21	2715	19.32						
8400	2435	2301	12.80	2365	13.82	2428	14.82	2490	15.83	2612	17.92	2731	20.08	2848	22.32	2962	24.60		
8800	2551	2332	13.51	2394	14.50	2455	15.51	2516	16.54	2634	18.67	2750	20.89	2864	23.16	2975	25.48	3084	27.87
9200	2667	2365	14.21	2426	15.21	2485	16.25	2544	17.29	2659	19.46	2772	21.71	2883	24.03	2992	26.41	3098	28.83
9600	2783	2400	14.94	2459	15.98	2517	17.03	2574	18.10	2687	20.31	2797	22.58	2905	24.93	3011	27.35	3115	29.83
10000	2899	2436	15.73	2494	16.78	2551	17.85	2607	18.95	2716	21.18	2824	23.50	2929	25.89	3033	28.35	3134	30.87
10400	3014	2473	16.57	2530	17.64	2586	18.73	2640	19.83	2748	22.10	2853	24.46	2956	26.89	3057	29.37	3156	31.93
10800	3130	2512	17.46	2567	18.53	2622	19.64	2676	20.78	2781	23.08	2884	25.46	2984	27.92	3083	30.46	3180	33.06
11200	3246	2551	18.38	2606	19.48	2660	20.61	2712	21.76	2815	24.10	2916	26.52	3014	29.02	3111	31.58	3206	34.22
12200	3536	2653	20.89	2705	22.07	2757	23.25	2808	24.45	2907	26.89	3003	29.41	3097	32.00	3189	34.65	3279	37.37
13200	3826	2757	23.71	2809	24.96	2859	26.20	2908	27.46	3004	30.02	3097	32.64	3187	35.32	3275	38.07	3361	40.87
14200	4116	2864	26.85	2915	28.16	2964	29.47	3012	30.79	3105	33.47	3195	36.21	3282	39.01	3367	41.85	3450	44.76
15200	4406	2973	30.28	3023	31.67	3071	33.07	3118	34.47	3209	37.29	3297	40.17	3382	43.07	3465	46.03	3545	49.03
16200	4696	3083	34.03	3132	35.53	3179	37.01	3226	38.50	3316	41.47	3402	44.47	3485	47.52	3565	50.60	3644	53.72
17200	4986	3194	38.12	3242	39.70	3289	41.28	3335	42.85	3423	46.02	3508	49.17	3590	52.37	3669	55.57	3746	58.84
18200	5275	3305	42.53	3353	44.21	3400	45.90	3445	47.57	3533	50.92	3616	54.25	3697	57.60				
19200	5565	3418	47.28	3465	49.09	3511	50.87	3556	52.67	3643	56.20	3725	59.72						

200

BI DWDI

Wheel Diameter = 20 in.	Discharge Area = 4.14 sq. ft.
Inlet Area = 4.880 sq. ft.	Tip Speed, FPM = 5.23 x RPM
Maximum BHP = 1.897 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	845	525	0.26	580	0.34	629	0.43	674	0.52	717	0.61	759	0.71	800	0.83	879	1.04	954	1.29
4000	966	567	0.34	620	0.43	666	0.52	709	0.61	750	0.71	788	0.83	826	0.93	899	1.18	968	1.43
4500	1087	610	0.41	661	0.53	706	0.63	747	0.73	786	0.85	822	0.96	857	1.08	925	1.31	990	1.58
5000	1208	653	0.53	703	0.64	747	0.76	787	0.86	824	0.98	859	1.11	893	1.23	957	1.48	1018	1.77
5500	1329	698	0.64	746	0.78	789	0.89	828	1.03	864	1.16	898	1.29	930	1.41	991	1.68	1049	1.97
6000	1449	744	0.78	789	0.93	831	1.06	869	1.20	905	1.33	938	1.47	969	1.62	1029	1.91	1084	2.20
6500	1570	791	0.93	834	1.10	874	1.25	912	1.39	946	1.54	979	1.70	1010	1.85	1067	2.16	1121	2.47
7000	1691	839	1.12	879	1.29	918	1.45	954	1.62	988	1.79	1020	1.95	1051	2.11	1107	2.42	1160	2.75
7500	1812	888	1.33	925	1.50	962	1.68	997	1.87	1031	2.04	1063	2.22	1092	2.38	1148	2.72	1199	3.08
8000	1932	938	1.56	972	1.75	1007	1.93	1041	2.12	1074	2.32	1105	2.50	1134	2.70	1189	3.06	1240	3.42
8500	2053	988	1.82	1020	2.02	1053	2.22	1086	2.41	1118	2.62	1148	2.83	1177	3.02	1231	3.41	1281	3.80
9000	2174	1039	2.12	1069	2.32	1100	2.52	1131	2.75	1162	2.95	1191	3.17	1220	3.39	1273	3.80	1322	4.23
9500	2295	1091	2.45	1118	2.65	1147	2.87	1177	3.09	1206	3.33	1235	3.55	1263	3.79	1315	4.23	1364	4.66
10000	2415	1143	2.81	1169	3.02	1196	3.25	1224	3.47	1252	3.72	1280	3.97	1307	4.20	1358	4.67	1406	5.15
10500	2536	1195	3.20	1219	3.42	1245	3.65	1271	3.90	1298	4.16	1325	4.41	1351	4.66	1401	5.16	1449	5.66
11000	2657	1248	3.65	1271	3.87	1295	4.10	1319	4.35	1345	4.62	1370	4.89	1396	5.16	1445	5.69	1492	6.20
11500	2778	1301	4.12	1322	4.35	1345	4.59	1368	4.85	1392	5.12	1417	5.41	1441	5.67	1489	6.24	1535	6.79
12000	2899	1354	4.65	1374	4.89	1395	5.14	1418	5.40	1441	5.67	1464	5.95	1487	6.25	1534	6.83	1579	7.41
12500	3019	1407	5.22	1426	5.45	1446	5.72	1467	5.99	1489	6.26	1511	6.55	1534	6.85	1579	7.45	1623	8.07
13500	3261	1514	6.49	1531	6.74	1549	7.00	1569	7.30	1588	7.58	1608	7.90	1629	8.21	1671	8.85	1712	9.50

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1208	1134	2.36	1245	2.99	1350	3.67												
5500	1329	1159	2.59	1264	3.25	1364	3.95	1461	4.69										
6000	1449	1189	2.83	1288	3.52	1383	4.25	1475	5.01	1565	5.82								
6500	1570	1222	3.12	1316	3.83	1407	4.58	1495	5.37	1580	6.19	1663	7.05	1744	7.94				
7000	1691	1257	3.45	1348	4.16	1435	4.94	1519	5.75	1601	6.60	1680	7.49	1758	8.39	1834	9.33	1908	10.30
7500	1812	1294	3.79	1382	4.55	1466	5.34	1546	6.17	1625	7.05	1701	7.95	1776	8.89	1849	9.85	1921	10.85
8000	1932	1333	4.17	1418	4.95	1499	5.77	1577	6.64	1652	7.53	1726	8.46	1797	9.41	1868	10.41	1937	11.42
8500	2053	1372	4.59	1456	5.41	1534	6.25	1610	7.14	1682	8.05	1753	9.00	1822	9.99	1890	11.00	1957	12.05
9000	2174	1412	5.05	1494	5.90	1571	6.76	1644	7.68	1715	8.61	1783	9.58	1850	10.60	1916	11.63	1980	12.69
9500	2295	1453	5.54	1534	6.43	1609	7.33	1681	8.25	1749	9.23	1816	10.21	1881	11.25	1944	12.30	2007	13.39
10000	2415	1494	6.07	1574	6.99	1642	7.93	1718	8.89	1785	9.88	1850	10.89	1913	11.94	1975	13.03	2035	14.14
10500	2536	1536	6.63	1615	7.59	1688	8.57	1756	9.55	1822	10.58	1886	11.63	1947	12.69	2007	13.81	2066	14.93
11000	2657	1578	7.23	1656	8.24	1728	9.25	1796	10.28	1860	11.33	1923	12.41	1983	13.51	2041	14.63	2099	15.78
11500	2778	1620	7.86	1697	8.92	1769	9.98	1836	11.05	1899	12.13	1960	13.23	2019	14.36	2077	15.51	2133	16.70
12000	2899	1662	8.53	1739	9.64	1810	10.75	1876	11.85	1939	12.98	1999	14.11	2057	15.26	2113	16.45	2168	17.66
12500	3019	1705	9.25	1781	10.41	1851	11.57	1917	12.71	1979	13.86	2038	15.03	2096	16.23	2151	17.43	2205	18.67
13500	3261	1792	10.80	1866	12.08	1935	13.33	1999	14.57	2060	15.81	2118	17.06	2174	18.32	2228	19.58	2281	20.88
14500	3502	1879	12.53	1952	13.92	2019	15.28	2083	16.63	2143	17.96	2200	19.28	2255	20.61	2308	21.96	2359	23.32
15500	3744	1969	14.46	2039	15.96	2105	17.42	2167	18.88	2227	20.31	2283	21.73	2337	23.16	2389	24.57	2439	26.01
16500	3986	2060	16.60	2127	18.20	2191	19.78	2253	21.33	2311	22.88	2367	24.39	2420	25.92	2471	27.42	2521	28.95

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8500	2053	2023	13.11	2087	14.21	2151	15.33	2213	16.46	2335	18.81								
9000	2174	2044	13.80	2106	14.91	2168	16.06	2228	17.23	2347	19.63	2462	22.10						
9500	2295	2068	14.51	2128	15.60	2188	16.82	2247	18.01	2362	20.48	2474	23.01	2584	25.62				
10000	2415	2095	15.28	2153	16.45	2211	17.64	2268	18.85	2380	21.36	2489	23.96	2596	26.62	2700	29.35		
10500	2536	2124	16.10	2181	17.28	2237	18.51	2292	19.75	2401	22.29	2507	24.93	2611	27.67	2713	30.46	2813	33.32
11000	2657	2155	16.98	2210	18.18	2265	19.42	2319	20.68	2424	23.28	2528	25.97	2629	28.75	2728	31.60	2826	34.52
11500	2778	2188	17.89	2242	19.14	2295	20.39	2347	21.67	2450	24.32	2551	27.06	2649	29.87	2746	32.78	2841	35.76
12000	2899	2222	18.89	2275	20.14	2327	21.42	2378	22.73	2478	25.42	2576	28.20	2672	31.07	2767	34.02	2860	37.04
12500	3019	2258	19.92	2309	21.21	2360	22.51	2410	23.85	2508	26.57	2604	29.39	2697	32.32	2790	35.31	2880	38.39
13500	3261	2332	22.18	2381	23.53	2430	24.88	2478	26.26	2572	29.07	2664	32.00	2753	35.00	2841	38.09	2928	41.25
14500	3502	2409	24.70	2457	26.08	2504	27.50	2551	28.92	2642	31.85	2730	34.87	2816	37.96	2900	41.12	2983	44.39
15500	3744	2488	27.46	2535	28.91	2581	30.39	2627	31.87	2715	34.90	2800	38.02	2883	41.20	2964	44.46	3044	47.81
16500	3986	2568	30.47	2615	32.00	2660	33.53	2705	35.09	2791	38.23	2874	41.46	2954	44.75	3033	48.10	3110	51.54
17500	4227	2650	33.72	2696	35.34	2741	36.96	2784	38.57	2869	41.87	2950	45.21	3028	48.60	3105	52.07	3180	55.60
18500	4469	2733	37.26	2778	38.96	2822	40.65	2865	42.35	2948	45.78	3028	49.26	3105	52.78	3180	56.37	3253	60.00
19500	4710	2817	41.04	2861	42.84	2905	44.62	2947	46.42	3029	50.01	3105	53.62	3183	57.28	3257	60.99	3328	64.75
20500	4952	2901	45.12	2945	47.01	2988	48.89	3030	50.77	3111	54.53	3188	58.29	3263	62.10	3335	65.94	3406	69.82
21500	5193	2986	49.46	3030	51.45	3072	53.44	3114	55.40	3194	59.35	3270	63.29	3344	67.25	3415	71.25	3485	75.32
22500	5435	3071	54.07	3114	56.17	3157	58.28	3198	60.35	3277	64.50	3353	68.62	3426	72.75				
23500	5676	3157	59.00	3200	61.21	3242	63.42	3282	65.59	3361	69.94	3436	74.27						

Performance Data

VCR Fan

222 BI DWDI

Wheel Diameter = 22.25 in.	Discharge Area = 5.12 sq. ft.
Inlet Area = 6.040 sq. ft.	Tip Speed, FPM = 5.83 x RPM
Maximum BHP = 3.232 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	820	464	0.30	514	0.40	558	0.51	600	0.61	639	0.73	678	0.86	715	0.98	787	1.27	954	1.29
4800	938	501	0.39	548	0.50	590	0.61	629	0.73	666	0.86	702	0.98	736	1.12	803	1.41	867	1.72
5400	1055	538	0.48	584	0.61	625	0.73	662	0.86	697	1.00	730	1.13	763	1.28	825	1.58	884	1.91
6000	1172	575	0.60	621	0.75	660	0.88	696	1.03	730	1.16	762	1.31	792	1.46	851	1.77	907	2.12
6600	1289	614	0.75	658	0.89	697	1.06	732	1.20	764	1.36	795	1.52	825	1.67	880	2.00	933	2.34
7200	1406	653	0.89	695	1.08	733	1.23	768	1.41	800	1.58	830	1.73	858	1.91	912	2.25	963	2.62
7800	1523	694	1.08	733	1.27	770	1.45	804	1.63	836	1.82	865	2.00	893	2.17	945	2.54	994	2.91
8400	1641	735	1.29	772	1.48	808	1.68	841	1.88	872	2.08	901	2.27	929	2.47	980	2.86	1028	3.25
9000	1758	778	1.52	812	1.73	846	1.95	879	2.16	909	2.37	938	2.58	965	2.79	1015	3.20	1062	3.62
9600	1875	821	1.79	853	2.00	885	2.24	917	2.47	947	2.70	975	2.92	1001	3.15	1051	3.59	1097	4.02
10200	1992	865	2.08	894	2.32	925	2.56	955	2.81	984	3.04	1012	3.29	1038	3.52	1087	4.00	1132	4.47
11200	2188	939	2.66	965	2.91	993	3.16	1021	3.44	1048	3.70	1075	3.97	1100	4.25	1148	4.76	1192	5.27
12200	2383	1014	3.34	1038	3.59	1062	3.87	1088	4.16	1114	4.47	1139	4.75	1163	5.05	1210	5.62	1253	6.19
13200	2578	1090	4.15	1111	4.41	1134	4.70	1157	5.01	1181	5.33	1204	5.65	1228	5.97	1273	6.59	1315	7.23
14200	2773	1167	5.08	1186	5.35	1206	5.66	1228	5.98	1249	6.32	1271	6.65	1293	7.00	1336	7.69	1378	8.35
15200	2969	1244	6.14	1261	6.44	1280	6.75	1299	7.08	1319	7.43	1340	7.79	1360	8.14	1401	8.89	1441	9.61
16200	3164	1321	7.34	1337	7.66	1355	7.99	1372	8.33	1391	8.69	1410	9.07	1429	9.44	1468	10.23	1506	11.00
17200	3359	1399	8.71	1414	9.03	1430	9.38	1446	9.74	1463	10.10	1481	10.50	1499	10.89	1535	11.71	1571	12.55
18200	3555	1477	10.25	1491	10.58	1506	10.94	1521	11.30	1537	11.69	1553	12.10	1570	12.50	1604	13.36	1638	14.23
19200	3750	1555	11.96	1568	12.30	1582	12.67	1596	13.06	1611	13.46	1626	13.86	1642	14.28	1674	15.16	1706	16.07

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	1172	1013	2.84	1115	3.62														
6600	1289	1034	3.10	1130	3.91	1221	4.77	1310	5.67										
7200	1406	1059	3.40	1149	4.23	1237	5.12	1321	6.05	1402	7.03								
7800	1523	1086	3.72	1173	4.58	1256	5.50	1336	6.46	1414	7.48	1490	8.51	1744	7.94				
8400	1641	1116	4.08	1199	4.98	1279	5.92	1356	6.91	1431	7.95	1503	9.03	1574	10.14	1644	11.28	1908	10.30
9000	1758	1148	4.50	1228	5.41	1305	6.37	1378	7.41	1450	8.46	1520	9.58	1588	10.73	1655	11.91	1721	13.11
9600	1875	1181	4.94	1259	5.89	1333	6.89	1404	7.93	1473	9.03	1540	10.16	1606	11.33	1670	12.55	1733	13.80
10200	1992	1215	5.41	1291	6.40	1363	7.43	1431	8.50	1498	9.63	1563	10.78	1626	11.99	1688	13.23	1749	14.51
11200	2188	1273	6.30	1347	7.35	1416	8.44	1481	9.57	1544	10.74	1606	11.94	1666	13.18	1725	14.48	1782	15.80
12200	2383	1333	7.31	1404	8.44	1471	9.60	1535	10.78	1595	11.99	1654	13.25	1711	14.53	1767	15.86	1822	17.23
13200	2578	1393	8.44	1464	9.66	1529	10.88	1590	12.11	1649	13.39	1706	14.69	1761	16.03	1814	17.42	1867	18.82
14200	2773	1454	9.69	1524	11.00	1588	12.30	1648	13.61	1705	14.96	1760	16.32	1813	17.71	1865	19.14	1916	20.60
15200	2969	1516	11.70	1584	12.46	1648	13.86	1707	15.26	1763	16.67	1817	18.10	1868	19.56	1919	21.03	1967	22.54
16200	3164	1578	12.57	1646	14.08	1708	15.58	1767	17.06	1822	18.54	1874	20.06	1925	21.57	1974	23.11	2022	24.68
17200	3359	1642	14.21	1708	15.83	1769	17.43	1827	19.01	1881	20.60	1933	22.17	1983	23.76	2031	25.38	2078	27.01
18200	3555	1706	15.98	1770	17.73	1831	19.45	1888	21.13	1942	22.79	1993	24.46	2042	26.14	2089	27.82	2135	29.52
19200	3750	1771	17.93	1834	19.78	1893	21.60	1949	23.41	2002	25.17	2053	26.93	2101	28.70	2148	30.47	2193	32.23
20200	3945	1837	20.04	1898	22.01	1956	23.93	2011	25.85	2064	27.72	2114	29.58	2162	31.45	2208	33.29	2252	35.15
21200	4141	1904	22.35	1962	24.39	2019	26.45	2074	28.46	2125	30.46	2175	32.42	2223	34.37	2268	36.32	2312	38.27
22200	4336	1972	24.83	2028	26.97	2083	29.12	2137	31.26	2188	33.35	2237	35.43	2284	37.50	2329	39.54	2373	41.57

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10200	1992	1809	15.82	1868	17.16	1926	18.51	1984	19.91	2095	22.76								
11200	2188	1839	17.16	1895	18.54	1950	19.96	2004	21.42	2111	24.39	2214	27.46						
12200	2383	1876	18.64	1929	20.07	1981	21.54	2033	23.03	2134	26.12	2233	29.31	2330	32.59	2425	35.95		
13200	2578	1918	20.28	1969	21.76	2019	23.26	2068	24.82	2165	28.00	2259	31.28	2352	34.67	2443	38.15	2532	41.71
14200	2773	1965	22.10	2014	23.61	2061	25.17	2109	26.77	2201	30.03	2292	33.42	2380	36.90	2468	40.50	2553	44.17
15200	2969	2015	24.08	2062	25.67	2108	27.27	2154	28.89	2242	32.26	2329	35.72	2415	39.31	2498	43.00	2581	46.78
16200	3164	2068	26.27	2114	27.89	2158	29.56	2202	31.23	2288	34.67	2372	38.25	2454	41.92	2534	45.68	2613	49.56
17200	3359	2123	28.66	2167	30.33	2211	32.04	2253	33.78	2336	37.32	2417	40.96	2497	44.72	2574	48.59	2651	52.55
18200	3555	2179	31.25	2223	32.97	2265	34.75	2307	36.53	2388	40.17	2466	43.92	2543	47.77	2618	51.71	2692	55.78
19200	3750	2237	34.03	2280	35.82	2321	37.65	2362	39.50	2441	43.26	2518	47.09	2592	51.04	2665	55.09	2737	59.22
20200	3945	2296	37.02	2338	38.89	2378	40.78	2418	42.68	2496	46.57	2571	50.53	2644	54.57	2715	58.70	2785	62.95
21200	4141	2355	40.21	2396	42.17	2437	44.12	2476	46.10	2552	50.10	2626	54.19	2697	58.34	2767	62.59	2835	66.92
22200	4336	2415	43.62	2456	45.65	2496	47.70	2534	49.75	2610	53.89	2682	58.09	2752	62.37	2820	66.71	2887	71.15
23200	4531	2475	47.23	2516	49.35	2555	51.49	2594	53.62	2668	57.92	2739	62.25	2808	66.65	2875	71.12	2940	75.67
24200	4727	2536	51.07	2576	53.29	2615	55.50	2653	57.72	2727	62.17	2797	66.67	2865	71.19	2931	75.80	2995	80.45
25200	4922	2597	55.12	2637	57.44	2676	59.75	2713	62.05	2786	66.68	2856	71.32	2923	76.00	2988	80.74	3052	85.53

245

BI DWDI

Wheel Diameter = 24.50 in.	Discharge Area = 6.21 sq. ft.
Inlet Area = 7.280 sq. ft.	Tip Speed, FPM = 6.41 x RPM
Maximum BHP = 5.232 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4900	789	413	0.34	459	0.46	500	0.59	538	0.71	575	0.86	611	1.01	645	1.16	712	1.48	789	2.11
5900	950	458	0.48	502	0.63	540	0.76	575	0.91	608	1.06	640	1.21	671	1.38	731	1.73	812	2.42
6900	1111	505	0.65	546	0.81	583	0.97	616	1.13	647	1.31	677	1.47	705	1.66	760	2.02	844	2.81
7900	1272	552	0.88	592	1.06	628	1.25	660	1.43	690	1.61	718	1.79	745	1.98	796	2.38	881	3.25
8900	1433	602	1.13	639	1.36	674	1.56	705	1.77	734	1.97	761	2.17	787	2.38	835	2.82	921	3.79
9900	1594	653	1.45	688	1.70	720	1.93	751	2.16	779	2.40	806	2.62	831	2.84	878	3.30	964	4.39
10900	1755	706	1.83	737	2.09	768	2.36	798	2.62	825	2.87	851	3.12	876	3.37	921	3.87	1007	5.07
11900	1916	760	2.29	788	2.57	817	2.84	845	3.13	872	3.41	897	3.70	921	3.97	966	4.52	1052	5.83
12900	2077	815	2.82	840	3.11	867	3.41	893	3.72	919	4.04	944	4.34	967	4.65	1011	5.25	1097	6.69
13900	2238	870	3.42	894	3.74	918	4.05	943	4.39	967	4.73	991	5.05	1014	5.40	1057	6.05	1143	7.61
14900	2399	927	4.14	948	4.44	971	4.79	994	5.14	1017	5.50	1039	5.85	1062	6.22	1104	6.93	1189	8.64
15900	2560	984	4.94	1003	5.26	1024	5.62	1045	5.99	1067	6.37	1088	6.75	1110	7.14	1151	7.90	1236	9.76
16900	2721	1041	5.83	1059	6.17	1078	6.55	1098	6.93	1118	7.33	1138	7.74	1159	8.14	1198	8.96	1284	10.98
17900	2882	1099	6.85	1116	7.20	1133	7.58	1151	7.99	1170	8.39	1189	8.82	1209	9.25	1247	10.11	1331	12.30
18900	3043	1157	8.00	1172	8.35	1189	8.75	1206	9.16	1223	9.58	1241	10.03	1259	10.48	1296	11.39	1380	13.73
19900	3205	1215	9.25	1229	9.63	1245	10.03	1261	10.44	1277	10.89	1294	11.35	1311	11.82	1346	12.76	1429	15.28
20900	3366	1273	10.64	1287	11.03	1301	11.44	1316	11.88	1332	12.33	1347	12.80	1364	13.28	1396	14.26	1479	16.96
21900	3527	1331	12.16	1344	12.57	1358	12.98	1372	13.43	1387	13.91	1401	14.38	1417	14.88	1448	15.91	1530	18.76
22900	3688	1390	13.83	1402	14.25	1415	14.68	1428	15.14	1442	15.61	1456	16.11	1470	16.63	1500	17.68	1581	20.73
23900	3849	1449	15.64	1460	16.07	1472	16.53	1485	17.00	1498	17.48	1511	18.00	1525	18.51	1553	19.60		

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7900	1272	936	3.71	1024	4.69	1108	5.73												
8900	1433	967	4.21	1049	5.23	1127	6.32	1203	7.46	1276	8.65								
9900	1594	1003	4.77	1080	5.84	1153	6.98	1224	8.16	1293	9.41	1360	10.71	1426	12.03				
10900	1755	1042	5.44	1115	6.55	1184	7.73	1251	8.96	1317	10.25	1380	11.60	1442	12.98	1503	14.41	1563	15.88
11900	1916	1083	6.19	1154	7.35	1220	8.58	1284	9.85	1345	11.19	1406	12.58	1465	14.03	1522	15.51	1579	17.03
12900	2077	1126	7.03	1194	8.25	1258	9.53	1319	10.85	1378	12.24	1436	13.67	1492	15.16	1547	16.68	1601	18.26
13900	2238	1170	7.95	1237	9.25	1299	10.58	1358	11.96	1414	13.39	1470	14.88	1523	16.41	1576	17.98	1628	19.60
14900	2399	1215	8.99	1280	10.36	1341	11.76	1398	13.19	1453	14.67	1506	16.21	1558	17.78	1608	19.39	1658	21.06
15900	2560	1260	10.11	1324	11.58	1384	13.05	1440	14.55	1493	16.08	1545	17.67	1595	19.28	1644	20.95	1692	22.66
16900	2721	1306	11.33	1369	12.89	1428	14.44	1483	16.01	1535	17.61	1585	19.26	1634	20.92	1681	22.64	1728	24.39
17900	2882	1352	12.66	1415	14.32	1472	15.96	1527	17.60	1578	19.28	1627	20.98	1675	22.71	1721	24.48	1766	26.27
18900	3043	1399	14.10	1460	15.86	1518	17.60	1571	19.32	1622	21.07	1670	22.83	1717	24.64	1762	26.46	1806	28.32
19900	3205	1446	15.64	1507	17.51	1563	19.35	1616	21.17	1666	23.01	1714	24.85	1759	26.71	1804	28.58	1847	30.51
20900	3366	1493	17.29	1553	19.28	1609	21.23	1661	23.14	1711	25.07	1758	26.98	1803	28.92	1847	30.87	1889	32.85
21900	3527	1541	19.07	1600	21.17	1655	23.23	17070	25.26	1756	27.27	1802	29.27	1847	31.28	1890	33.32	1932	35.37
22900	3688	1590	20.98	1647	23.18	1701	25.35	1753	27.50	1801	29.60	1847	31.71	1892	33.81	1934	35.92	1975	38.03
23900	3849	1639	23.03	1695	25.35	1748	27.62	1799	29.87	1847	32.09	1893	34.28	1937	36.47	1979	38.67	2019	40.87
24900	4010	1689	25.21	1743	27.64	1795	30.02	1845	32.37	1893	34.71	1938	37.01	1982	39.29	2024	41.57	2064	43.87
25900	4171	1739	27.57	1792	30.07	1843	32.57	1892	35.03	1939	37.47	1984	39.89	2027	42.28	2069	44.65	2109	47.03
26900	4332	1790	30.07	1841	32.67	1891	35.27	1940	37.84	1986	40.40	2031	42.92	2073	45.42	2114	47.89	2154	50.35

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14900	2399	1707	22.76	1755	24.51	1802	26.29	1849	28.12	1941	31.87	2030	35.75	2118	39.72	2203	43.82		
15900	2560	1739	24.41	1785	26.20	1830	28.02	1875	29.89	1963	33.73	2050	37.71	2134	41.82	2217	46.03	2298	50.34
16900	2721	1773	26.18	1818	28.02	1862	29.89	1905	31.82	1990	35.75	2073	39.82	2155	44.02	2235	48.34	2313	52.75
17900	2882	1810	28.12	1853	30.01	1896	31.92	1938	33.87	2020	37.90	2100	42.07	2179	46.37	2256	50.78	2332	55.30
18900	3043	1849	30.21	1891	32.14	1932	34.10	1973	36.10	2052	40.21	2130	44.47	2206	48.85	2281	53.37	2355	58.00
19900	3205	1889	32.46	1930	34.43	1970	36.46	2010	38.51	2087	42.71	2162	47.04	2236	51.53	2309	56.12	2380	60.84
20900	3366	1930	34.87	1970	36.90	2009	38.96	2048	41.07	2124	45.37	2197	49.81	2269	54.37	2339	59.05	2409	63.85
21900	3527	1972	37.43	2012	39.53	2050	41.65	2088	43.82	2162	48.21	2234	52.75	2304	57.40	2372	62.17	2440	67.06
22900	3688	2015	40.17	2054	42.34	2092	44.53	2129	46.73	2202	51.25	2272	55.87	2340	60.62	2407	65.49	2473	70.47
23900	3849	2059	43.07	2097	45.31	2135	47.57	2171	49.84	2242	54.46	2311	59.20	2378	64.05	2443	69.00	2508	74.07
24900	4010	2103	46.15	2141	48.46	2178	50.78	2214	53.12	2284	57.87	2351	62.71	2417	67.67	2481	72.72	2544	77.90
25900	4171	2147	49.40	2185	51.79	2221	54.19	2257	56.59	2326	61.47	2393	66.44	2457	71.50	2520	76.67	2582	81.93
26900	4332	2192	52.82	2229	55.29	2266	57.77	2301	60.25	2369	65.28	2435	70.37	2499	75.55	2561	80.82	2621	86.19
27900	4493	2237	56.42	2274	58.97	2310	61.54	2345	64.10	2413	69.28	2478	74.50	2541	79.81	2602	85.19	2661	90.68
28900	4654	2283	60.20	2319	62.84	2355	65.50	2390	68.15	2457	73.46	2521	78.84	2583	84.28	2643	89.80	2702	95.4

Performance Data

VCR Fan

270

BI DWDI

Wheel Diameter = 27 in.	Discharge Area = 7.54 sq. ft.
Inlet Area = 8.700 sq. ft.	Tip Speed, FPM = 7.075 x RPM
Maximum BHP = 8.193 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	796	364	0.39	409	0.53	451	0.68	492	0.83	532	0.98	569	1.16						
6600	875	383	0.45	424	0.60	464	0.76	503	0.93	540	1.10	576	1.28	610	1.45				
7200	955	403	0.53	441	0.68	479	0.86	515	1.03	550	1.20	584	1.39	617	1.58	680	1.98		
7800	1034	424	0.61	460	0.79	495	0.96	529	1.14	562	1.33	595	1.53	626	1.72	687	2.15	744	2.58
8400	1114	445	0.71	479	0.89	512	1.08	544	1.27	576	1.46	607	1.67	637	1.88	695	2.33	751	2.77
9000	1194	467	0.83	500	1.02	531	1.20	561	1.41	591	1.62	620	1.82	649	2.04	705	2.50	759	2.99
9600	1273	490	0.96	520	1.14	550	1.35	579	1.56	607	1.77	635	2.00	663	2.22	716	2.70	768	3.20
10200	1353	513	1.08	542	1.29	570	1.51	598	1.72	625	1.95	651	2.18	677	2.42	729	2.91	778	3.42
10800	1432	536	1.25	564	1.45	591	1.68	617	1.91	643	2.15	668	2.38	693	2.63	742	3.15	790	3.67
11400	1512	560	1.41	586	1.63	612	1.87	637	2.11	662	2.36	686	2.61	710	2.86	757	3.39	803	3.94
12000	1592	584	1.60	609	1.83	634	2.08	658	2.33	682	2.58	705	2.83	728	3.11	773	3.65	817	4.22
12600	1671	608	1.79	632	2.04	656	2.29	679	2.56	702	2.82	725	3.08	747	3.37	790	3.92	833	4.51
13200	1751	632	2.02	655	2.27	678	2.54	701	2.81	723	3.08	744	3.35	766	3.65	808	4.23	849	4.83
13800	1830	657	2.25	679	2.52	701	2.79	723	3.08	744	3.35	765	3.65	785	3.95	826	4.55	865	5.16
14400	1910	682	2.52	703	2.79	724	3.08	745	3.37	765	3.65	786	3.95	806	4.26	845	4.89	883	5.51
15000	1989	707	2.79	727	3.08	747	3.37	767	3.67	787	3.97	807	4.29	826	4.60	864	5.24	901	5.90
17000	2255	791	3.90	809	4.22	827	4.54	845	4.87	862	5.20	880	5.55	897	5.90	932	6.60	965	7.33
19000	2520	876	5.26	892	5.62	908	5.98	924	6.34	940	6.71	956	7.08	972	7.46	1003	8.24	1034	9.03
21000	2785	962	6.94	976	7.33	991	7.71	1005	8.11	1020	8.51	1034	8.92	1049	9.35	1077	10.17	1106	11.03
23000	3050	1049	8.96	1061	9.38	1075	9.80	1088	10.24	1101	10.66	1114	11.10	1127	11.55	1154	12.46	1180	13.38

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	1194	859	3.99																
9600	1273	866	4.24																
10200	1353	873	4.50		5.64														
10800	1432	882	4.79	969	5.95														
11400	1512	892	5.08	976	6.30	1056	7.55												
12000	1592	903	5.41	985	6.65	1063	7.94	1137	9.28										
12600	1671	915	5.74	995	7.01	1071	8.35	1144	9.74	1214	11.16								
13200	1751	928	6.08	1005	7.41	1080	8.78	1151	10.21	1220	11.66								
13800	1830	942	6.45	1017	7.81	1090	9.23	1159	10.69	1227	12.19	1292	13.73						
14400	1910	957	6.84	1030	8.24	1100	9.69	1169	11.19	1235	12.73	1298	14.31	1360	15.92				
15000	1989	973	7.26	1044	8.69	1112	10.17	1178	11.71	1243	13.28	1306	14.91	1367	16.57	1425	18.26		
17000	2255	1031	8.80	1094	10.35	1157	11.96	1218	13.61	1278	15.32	1336	17.07	1393	18.85	1449	20.67	1504	22.53
19000	2520	1095	10.64	1152	12.30	1209	14.03	1265	15.80	1321	17.63	1375	19.48	1428	21.39	1481	23.35	1532	25.33
21000	2785	1161	12.78	1215	14.57	1268	16.42	1320	18.31	1371	20.25	1421	22.23	1471	24.26	1520	26.32	1568	28.43
23000	3050	1231	15.23	1282	17.17	1331	19.14	1379	21.16	1427	23.21	1474	25.32	1520	27.47	1566	29.66	1611	31.89
25000	3316	1304	18.10	1351	20.16	1397	22.23	1442	24.39	1487	26.57	1531	28.81	1574	31.07	1617	33.37	1660	35.71
27000	3581	1379	21.35	1423	23.53	1467	25.77	1509	28.03	1551	30.35	1592	32.70	1633	35.09	1674	37.51	1714	39.96
29000	3846	1456	25.03	1497	27.35	1538	29.72	1578	32.12	1618	34.56	1657	37.03	1696	39.54	1734	42.09	1772	44.67
31000	4111	1534	29.18	1573	31.64	1612	34.14	1650	36.67	1687	39.23	1724	41.84	1761	44.47	1797	47.15	1833	49.85
33000	4377	1613	33.84	1650	36.42	1687	39.04	1723	41.71	1758	44.42	1794	47.15	1829	49.92	1863	52.72	1897	55.55

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	2255	1557	24.42	1609	26.32														
19000	2520	1583	27.35	1633	29.39	1681	31.47	1729	33.57	1821	37.87								
21000	2785	1616	30.57	1663	32.76	1709	34.96	1755	37.20	1844	41.75	1930	46.40	2014	51.15				
23000	3050	1656	34.15	1700	36.45	1744	38.78	1787	41.14	1872	45.95	1955	50.87	2036	55.89	2114	60.99	2191	66.18
25000	3316	1702	38.09	1744	40.52	1785	42.96	1826	45.45	1907	50.51	1986	55.67	2063	60.95	2139	66.32	2213	71.79
27000	3581	1753	42.46	1793	45.01	1832	47.57	1871	50.17	1947	55.46	2022	60.89	2096	66.42	2169	72.04	2240	77.75
29000	3846	1809	47.29	1847	49.95	1883	52.62	1920	55.34	1993	60.89	2064	66.54	2135	72.31	2204	78.18	2273	84.15
31000	4111	1869	52.59	1904	55.37	1939	58.17	1974	61.02	2043	66.79	2111	72.68	2178	76.68	2245	84.80	2310	91.02
33000	4377	1931	58.42	1965	61.32	1998	64.24	2031	67.19	2097	73.20	2162	79.32	2226	85.57	2289	91.93	2352	98.37
35000	4642	1996	64.78	2028	67.80	2060	70.84	2092	73.93	2155	80.18	2216	86.54	2278	93.02	2338	99.60	2398	106.30
37000	4907	2064	71.70	2094	74.85	2125	78.03	2155	81.24	2215	87.72	2274	94.34	2333	101.05	2391	107.88	2449	114.80
39000	5172	2133	79.24	2162	82.52	2191	85.81	2220	89.15	2278	95.90	2335	102.75	2391	109.70	2447	116.76	2502	123.93
41000	5438	2203	87.40	2232	90.81	2260	94.24	2288	97.69	2343	104.69	2398	111.80	2452	119.00	2505	126.31		
43000	5703	2275	96.21	2303	99.75	2330	103.33	2357	106.91	2410	114.16	2463	121.53	2515	128.98				
45000	5968	2349	105.73	2375	109.40	2401	113.10	2427	116.82	2478	124.34	2529	131.95						
47000	6233	2423	115.97	2449	119.77	2474	123.60	2499	127.46										

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

300

BI DWDI

Wheel Diameter = 30 in.	Discharge Area = 9.31 sq. ft.
Inlet Area = 10.71 sq. ft.	Tip Speed, FPM = 7.86 x RPM
Maximum BHP = 13.88 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1-1/4" SP		1-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7700	827	334	0.51	373	0.68	411	0.86	447	1.06	481	1.28	514	1.48						
8400	902	351	0.59	387	0.78	422	0.97	456	1.18	489	1.39	521	1.62	551	1.86				
9100	977	368	0.68	402	0.88	435	1.08	467	1.31	498	1.54	528	1.77	558	2.00	614	2.50		
9800	1053	386	0.79	418	1.00	449	1.21	479	1.45	509	1.68	538	1.92	566	2.17	620	2.70	671	3.25
10500	1128	404	0.91	434	1.12	464	1.36	493	1.60	521	1.85	548	2.09	575	2.37	627	2.91	677	3.47
11200	1203	423	1.04	452	1.28	480	1.52	507	1.76	534	2.02	560	2.29	586	2.56	636	3.12	684	3.72
11900	1278	442	1.18	470	1.43	496	1.67	522	1.93	548	2.20	573	2.49	597	2.77	645	3.35	692	3.97
12600	1353	462	1.35	488	1.61	513	1.87	538	2.13	563	2.41	586	2.70	610	3.00	656	3.60	701	4.24
13300	1429	481	1.53	507	1.79	531	2.07	555	2.34	578	2.63	601	2.93	623	3.24	668	3.87	711	4.52
14000	1504	502	1.72	526	2.00	549	2.29	572	2.58	594	2.87	616	3.18	638	3.50	680	4.16	722	4.83
14700	1579	522	1.93	545	2.22	567	2.52	589	2.83	611	3.13	632	3.45	653	3.79	694	4.45	734	5.15
16700	1794	581	2.66	601	2.97	622	3.30	641	3.65	661	3.99	680	4.33	699	4.69	736	5.42	772	6.19
18700	2009	642	3.54	660	3.90	678	4.26	696	4.64	713	5.01	731	5.40	748	5.79	782	6.58	815	7.40
20700	2223	703	4.64	719	5.02	736	5.42	752	5.83	768	6.24	784	6.66	800	7.08	831	7.94	862	8.82
22700	2438	765	5.94	780	6.37	795	6.80	809	7.24	824	7.68	839	8.14	854	8.58	883	9.51	911	10.46
24700	2653	827	7.50	841	7.95	854	8.41	868	8.89	882	9.36	896	9.85	909	10.33	936	11.33	963	12.33
26700	2868	890	9.30	903	9.80	915	10.28	928	10.80	940	11.30	953	11.82	966	12.35	991	13.41	1016	14.48
28700	3083	953	11.41	965	11.92	976	12.44	988	12.98	1000	13.53	1012	14.08	1024	14.63	1047	15.76	1070	16.91
30700	3298	1017	13.80	1027	14.35	1038	14.91	1049	15.48	1060	16.06	1071	16.64	1082	17.23	1104	18.42	1126	19.63
32700	3512	1080	16.51	1090	17.10	1100	17.70	1111	18.29	1121	18.91	1131	19.53	1141	20.14	1162	21.41	1183	22.67

CFM	OV	2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11200	1203	774	4.95																
11900	1278	779	5.25																
12600	1353	786	5.57	866	6.96														
13300	1429	793	5.90	871	7.33														
14000	1504	802	6.25	878	7.74	950	9.28												
14700	1579	811	6.60	885	8.14	956	9.74	1023	11.39										
16700	1794	842	7.75	911	9.41	977	11.14	1040	12.91	1101	14.76	1160	16.64						
18700	2009	880	9.10	942	10.86	1003	12.71	1063	14.61	1121	16.58	1177	18.60	1231	20.64	1284	22.75		
20700	2223	921	10.64	979	12.53	1036	14.48	1091	16.51	1146	18.60	1199	20.75	1251	22.92	1301	25.16	1351	27.42
22700	2438	967	12.39	1020	14.41	1073	16.50	1125	18.64	1176	20.85	1226	23.10	1275	25.42	1323	27.77	1370	30.17
24700	2653	1014	14.41	1065	16.54	1114	18.75	1163	21.01	1210	23.33	1258	25.72	1304	28.14	1350	30.62	1395	33.15
26700	2868	1064	16.68	1112	18.95	1158	21.28	1204	23.66	1249	26.10	1293	28.60	1337	31.14	1380	33.75	1423	36.40
28700	3083	1116	19.23	1161	21.64	1205	24.08	1248	26.60	1290	29.16	1332	31.77	1374	34.43	1415	37.15	1455	39.92
30700	3298	1169	22.10	1212	24.63	1253	27.21	1294	29.83	1335	32.53	1374	35.26	1414	38.04	1452	40.89	1491	43.77
32700	3512	1224	25.28	1264	27.93	1304	30.66	1343	33.42	1381	36.22	1419	39.09	1456	41.98	1493	44.95	1530	47.95
34700	3727	1279	28.81	1318	31.60	1355	34.45	1392	37.34	1429	40.28	1465	43.26	1501	46.29	1536	49.37	1571	52.49
36700	3942	1336	32.71	1372	35.62	1408	38.60	1444	41.62	1479	44.70	1513	47.81	1547	50.96	1581	54.17	1614	57.40
38700	4157	1393	36.98	1428	40.03	1462	43.15	1496	46.31	1529	49.51	1563	52.75	1595	56.04	1628	59.35	1660	62.72
40700	4372	1451	41.67	1484	44.87	1517	48.10	1549	51.40	1582	54.72	1613	58.10	1645	61.52	1676	64.96	1707	68.46
42700	4586	1509	46.78	1541	50.12	1572	53.49	1604	56.92	1635	60.37	1665	63.89	1695	67.43	1725	71.02	1755	74.64

CFM	OV	6-1/2" SP		7" SP		7-1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20700	2223	1399	29.73	1446	32.09														
22700	2438	1417	32.62	1462	35.09	1506	37.60	1550	40.15										
24700	2653	1439	35.72	1482	38.32	1525	40.97	1567	43.65	1649	49.12	1728	54.70						
26700	2868	1465	39.09	1507	41.82	1548	44.59	1588	47.40	1667	53.12	1744	58.97	1818	64.94				
28700	3083	1495	42.73	1535	45.59	1574	48.48	1613	51.42	1689	57.40	1763	63.50	1835	69.74	1905	76.09	1974	82.54
30700	3298	1529	46.70	1567	49.67	1604	52.69	1641	55.74	1714	61.96	1785	68.32	1855	74.81	1924	81.43	1990	88.15
32700	3512	1566	51.00	1602	54.09	1637	57.21	1673	60.40	1743	66.85	1811	73.46	1879	80.21	1945	87.07	2010	94.06
34700	3727	1605	55.65	1640	58.87	1674	62.12	1708	65.40	1775	72.10	1840	78.95	1905	85.94	1969	93.06	2032	100.31
36700	3942	1647	60.70	1680	64.03	1713	67.40	1745	70.81	1809	77.75	1873	84.82	1935	92.06	1997	99.42	2057	106.90
38700	4157	1691	66.14	1723	69.59	1754	73.07	1785	76.60	1847	83.78	1908	91.09	1968	98.56	2027	106.16	2085	113.90
40700	4372	1737	72.00	1767	75.56	1798	79.18	1827	82.82	1886	90.24	1945	97.80	2003	105.50	2060	113.34	2116	121.30
42700	4586	1784	78.30	1814	82.00	1843	85.72	1871	89.50	1928	97.15	1984	104.94	2040	112.88	2095	120.95	2150	129.15
44700	4801	1833	85.05	1861	88.87	1889	92.74	1917	96.62	1972	104.53	2026	112.56	2080	120.74	2133	129.04	2185	137.48
46700	5016	1883	92.28	1910	96.24	1937	100.21	1964	104.24	2017	112.39	2069	120.66	2121	129.08	2172	137.62	2223	146.30
48700	5231	1933	100.00	1960	104.09	1986	108.20	2012	112.35	2063	120.75	2114	129.28	2164	137.93	2214	146.71	2263	155.62
50700	5446	1985	108.25	2011	112.46	2036	116.70	2061	120.99	2111	129.63	2160	138.40	2208	147.31	2257	156.34		
52700	5661	2038	117.03	2062	121.38	2087	125.75	2111	130.15	2159	139.06	2207	148.10	2254	157.25				
54700	5875	2091	126.36	2115	130.84	2139	135.35	2162	139.89	2209	149.06	2255	158.34						
56700	6090	2145	136.28	2168	140.89	2191	145.53	2214	150.20	2260	159.63								
58700	6305	2199	146.78	2222	151.53	2244	156.30	2267	161.11										

Performance Data

VCR Fan

330

BI DWDI

Wheel Diameter = 33 in.	Discharge Area = 11.27 sq. ft.
Inlet Area = 12.98 sq. ft.	Tip Speed, FPM = 8.65 x RPM
Maximum BHP = 22.35 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	799	298	0.58	335	0.79	370	1.01	403	1.25	435	1.48	465	1.73						
9900	878	314	0.68	348	0.91	380	1.13	412	1.38	442	1.64	471	1.91	499	2.18				
10800	958	330	0.80	362	1.04	392	1.29	422	1.54	451	1.82	478	2.09	505	2.38	557	2.99		
11700	1038	347	0.93	377	1.18	406	1.45	433	1.72	461	2.00	487	2.29	513	2.59	562	3.22	609	3.87
12600	1118	365	1.08	393	1.35	420	1.62	446	1.91	472	2.20	497	2.52	522	2.83	569	3.49	615	4.16
13500	1198	383	1.25	410	1.53	435	1.82	460	2.12	484	2.42	508	2.75	532	3.08	577	3.77	621	4.48
14400	1278	402	1.43	427	1.72	451	2.04	475	2.34	498	2.67	521	3.00	543	3.35	587	4.07	629	4.80
15300	1358	421	1.64	445	1.95	468	2.27	490	2.61	512	2.93	534	3.29	555	3.65	597	4.39	637	5.16
16200	1437	440	1.87	463	2.20	485	2.54	506	2.87	527	3.22	548	3.59	568	3.95	608	4.73	647	5.51
17100	1517	459	2.12	481	2.47	502	2.82	523	3.17	543	3.54	563	3.91	582	4.30	621	5.09	658	5.91
18000	1597	479	2.41	500	2.77	520	3.12	540	3.50	559	3.89	578	4.26	597	4.66	634	5.49	670	6.33
18900	1677	499	2.72	519	3.08	538	3.47	557	3.85	576	4.25	594	4.65	612	5.07	648	5.91	682	6.79
19800	1757	519	3.04	538	3.44	557	3.83	575	4.23	593	4.64	611	5.05	628	5.49	662	6.35	696	7.25
20700	1837	539	3.41	557	3.80	575	4.22	593	4.64	610	5.07	627	5.50	644	5.94	677	6.83	709	7.76
21600	1917	560	3.80	577	4.22	594	4.65	611	5.08	628	5.51	644	5.97	661	6.41	693	7.34	724	8.30
22500	1996	580	4.23	597	4.66	613	5.09	630	5.55	646	6.00	662	6.45	678	6.93	709	7.89	739	8.88
23400	2076	601	4.69	617	5.12	633	5.58	649	6.05	664	6.51	680	7.00	695	7.48	725	8.46	754	9.48
26400	2343	670	6.46	684	6.95	699	7.45	713	7.98	727	8.50	741	9.01	754	9.55	782	10.64	808	11.75
29400	2609	741	8.67	753	9.21	766	9.76	778	10.33	791	10.89	804	11.48	816	12.05	841	13.25	866	14.44
32400	2875	812	11.35	823	11.94	834	12.55	846	13.16	857	13.78	869	14.41	880	15.03	903	16.32	925	17.63

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13500	1198	703	5.98																
14400	1278	709	6.35																
15300	1358	715	6.76																
16200	1437	722	7.19	793	8.94	859	10.76												
17100	1517	730	7.64	799	9.44	864	11.33												
18000	1597	740	8.11	806	9.98	870	11.92	931	13.93										
18900	1677	750	8.61	815	10.53	877	12.53	936	14.61	993	16.73								
19800	1757	761	9.14	823	11.11	884	13.17	943	15.31	999	17.50	1052	19.75						
20700	1837	772	9.69	833	11.74	892	13.85	949	16.03	1004	18.28	1057	20.60						
21600	1917	785	10.30	844	12.38	901	14.55	957	16.79	1011	19.10	1063	21.46	1113	23.89				
22500	1996	798	10.91	855	13.06	911	15.28	965	17.57	1018	19.95	1069	22.36	1119	24.85	1167	27.37		
23400	2076	811	11.58	867	13.76	921	16.04	974	18.39	1026	20.82	1076	23.31	1125	25.85	1172	28.43	1218	31.07
26400	2343	860	14.03	911	16.39	960	18.85	1009	21.39	1056	24.00	1103	26.67	1149	29.39	1194	32.17	1238	35.02
29400	2609	913	16.92	960	19.48	1005	22.11	1050	24.82	1094	27.60	1137	30.46	1180	33.37	1222	36.34	1263	39.37
32400	2875	969	20.29	1013	23.04	1055	25.87	1096	28.76	1137	31.72	1177	34.75	1217	37.84	1256	40.98	1295	44.20
35400	3141	1028	24.21	1068	27.14	1107	30.16	1146	33.23	1184	36.37	1222	39.57	1259	42.84	1295	46.17	1332	49.56
38400	3407	1089	28.68	1126	31.82	1163	35.03	1199	38.29	1235	41.62	1270	45.01	1305	48.46	1339	51.96	1373	55.53
41400	3673	1151	33.78	1186	37.12	1221	40.53	1255	43.98	1288	47.51	1321	51.07	1354	54.70	1387	58.40	1419	62.14
44400	3940	1214	39.56	1247	43.09	1280	46.70	1312	50.35	1344	54.07	1375	57.84	1406	61.65	1437	65.53	1467	69.44
47400	4206	1279	46.04	1310	49.78	1341	53.59	1371	57.45	1402	61.35	1431	65.31	1461	69.32	1490	73.39	1519	77.50

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26400	2343	1280	37.90	1322	40.82	1363	43.79	1403	46.82										
29400	2609	1304	42.45	1344	45.57	1383	48.73	1421	51.95	1496	58.50								
32400	2875	1333	47.46	1371	50.77	1408	54.12	1444	57.54	1516	64.47	1586	71.56	1653	78.80	1719	86.17		
35400	3141	1367	53.00	1403	56.50	1438	60.04	1473	63.64	1541	70.94	1608	78.43	1673	86.06	1736	93.82	1798	101.72
38400	3407	1407	59.15	1440	62.82	1474	66.54	1506	70.31	1571	78.00	1635	85.84	1697	93.87	1758	102.03	1818	110.31
41400	3673	1451	65.93	1482	69.79	1513	73.68	1545	77.62	1606	85.68	1666	93.89	1726	102.28	1785	110.81	1842	119.50
44400	3940	1498	73.43	1527	77.45	1557	81.53	1587	85.65	1645	94.05	1702	102.63	1759	111.36	1815	120.28	1870	129.33
47400	4206	1547	81.65	1576	85.87	1604	90.12	1632	94.43	1687	103.18	1742	112.10	1796	121.20	1849	130.46	1902	139.88
50400	4472	1600	90.68	1627	95.07	1653	99.52	1680	104.00	1733	113.10	1785	122.39	1837	131.84	1888	141.45	1938	151.24
53400	4738	1654	100.54	1680	105.11	1705	109.75	1731	114.41	1781	123.89	1831	133.53	1880	143.34	1929	153.31	1977	163.43
56400	5004	1710	111.25	1734	116.04	1759	120.85	1783	125.70	1832	135.56	1879	145.56	1926	155.73	1973	166.05	2020	176.53
59400	5271	1767	122.90	1791	127.88	1814	132.88	1838	137.93	1884	148.15	1930	158.54	1975	169.06	2020	179.75	2064	190.59
62400	5537	1825	135.53	1848	140.68	1871	145.89	1893	151.13	1938	161.74	1982	172.50	2026	183.39	2069	194.44		
65400	5803	1885	149.15	1907	154.52	1929	159.92	1950	165.36	1993	176.35	2036	187.49	2078	198.77				
68400	6069	1946	163.84	1967	169.40	1988	175.01	2009	180.65	2050	192.03								
71400	6335	2007	179.63	2028	185.40	2048	191.20	2068	197.04										

- Notes:
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

365

BI DWDI

Wheel Diameter = 36.50 in.	Discharge Area = 13.79 sq. ft.
Inlet Area = 15.96 sq. ft.	Tip Speed, FPM = 9.56 x RPM
Maximum BHP = 35.39 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	798	271	0.72	303	0.98	338	1.27	368	1.57	395	1.87										
12000	870	285	0.84	314	1.10	344	1.40	375	1.73	403	2.05										
13000	943	300	0.98	326	1.25	353	1.55	382	1.89	410	2.24	458	2.95								
14000	1015	315	1.13	339	1.41	364	1.72	390	2.06	417	2.43	466	3.19	510	3.97						
15000	1088	330	1.30	354	1.60	376	1.92	399	2.26	424	2.64	474	3.45	516	4.26	559	5.13				
16000	1160	345	1.49	368	1.81	390	2.14	411	2.48	433	2.86	480	3.70	524	4.57	562	5.44				
17000	1233	361	1.70	383	2.04	404	2.38	424	2.74	444	3.12	487	3.97	531	4.89	569	5.81	605	6.74		
18000	1305	377	1.93	398	2.29	418	2.65	437	3.02	456	3.40	496	4.26	538	5.21	577	6.19	612	7.16	646	8.16
19000	1378	394	2.18	414	2.56	433	2.94	451	3.33	469	3.72	506	4.58	545	5.55	584	6.57	620	7.60	652	8.63
20000	1450	410	2.45	429	2.86	448	3.26	466	3.66	483	4.07	517	4.94	553	5.90	591	6.96	628	8.05	661	9.13
21000	1523	427	2.75	445	3.18	463	3.60	481	4.02	497	4.45	529	5.33	563	6.30	598	7.37	635	8.50	668	9.64
24000	1740	479	3.81	494	4.29	510	4.78	526	5.27	541	5.75	570	6.71	599	7.72	627	8.80	657	9.96	689	11.21
27000	1958	532	5.15	545	5.68	559	6.22	573	6.78	587	7.32	614	8.41	640	9.49	665	10.61	690	11.79	716	13.04
30000	2175	586	6.79	597	7.37	609	7.97	622	8.58	634	9.19	660	10.40	684	11.61	707	12.81	730	14.04	752	15.32
33000	2393	640	8.79	650	9.41	661	10.05	672	10.71	683	11.38	707	12.73	729	14.06	751	15.38	773	16.70	793	18.05
36000	2611	694	11.16	704	11.82	713	12.51	723	13.22	734	13.94	755	15.41	776	16.87	797	18.33	817	19.77	837	21.21
39000	2828	749	13.95	758	14.65	767	15.38	776	16.14	785	16.91	804	18.48	823	20.08	843	21.66	862	23.24	881	24.80
42000	3046	804	17.18	812	17.93	820	18.71	829	19.50	837	20.32	854	21.99	872	23.70	890	25.42	909	27.13	927	28.82
45000	3263	859	20.91	867	21.70	875	22.51	882	23.35	890	24.21	906	25.98	922	27.79	939	29.63	956	31.47	973	33.30
48000	3481	915	25.14	922	25.98	929	26.84	936	27.72	943	28.63	958	30.48	973	32.39	989	34.34	1004	36.30	1020	38.26

CFM	OV	2 1/4" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
19000	1378	684	9.70																		
20000	1450	691	10.21	721	11.34																
21000	1523	699	10.77	728	11.91																
22000	1595	707	11.34	736	12.53	791	14.97														
23000	1668	714	11.92	744	13.17	797	15.65	853	18.34												
24000	1740	721	12.50	751	13.81	805	16.39	855	19.04												
27000	1958	743	14.37	772	15.78	827	18.70	878	21.62	924	24.53	968	27.55								
30000	2175	775	16.66	799	18.07	848	21.09	899	24.32	947	27.58	991	30.81	1031	34.05	1071	37.40	1117	41.07		
33000	2393	814	19.43	834	20.86	877	23.89	921	27.18	968	30.68	1013	34.27	1055	37.84	1094	41.39	1131	44.96	1167	48.62
36000	2611	856	22.66	874	24.15	912	27.23	951	30.53	991	34.07	1033	37.82	1076	41.71	1117	45.62	1155	49.52	1190	53.39
39000	2828	899	26.35	917	27.92	952	31.13	987	34.48	1022	38.03	1059	41.79	1098	45.77	1137	49.92	1176	54.15	1213	58.39
42000	3046	944	30.50	961	32.18	994	35.56	1026	39.03	1059	42.63	1091	46.41	1125	50.39	1160	54.58	1197	58.95	1233	63.45
45000	3263	990	35.12	1006	36.92	1038	40.52	1069	44.15	1099	47.87	1129	51.71	1159	55.71	1190	59.90	1223	64.28	1256	68.85
48000	3481	1036	40.22	1052	42.15	1083	46.00	1112	49.84	1141	53.72	1169	57.68	1197	61.76	1226	65.98	1255	70.37	1284	74.93
51000	3698	1084	45.83	1099	47.91	1128	52.02	1157	56.10	1184	60.18	1211	64.30	1238	68.50	1264	72.81	1291	77.24	1318	81.82
54000	3916	1132	52.00	1146	54.20	1174	58.59	1202	62.93	1229	67.25	1255	71.57	1280	75.94	1305	80.37	1330	84.90	1355	89.54
57000	4133	1181	58.76	1194	61.09	1221	65.74	1248	70.36	1274	74.93	1299	79.49	1324	84.05	1348	88.65	1372	93.31	1396	98.06
60000	4351	1231	66.16	1244	68.60	1269	73.51	1294	78.39	1320	83.24	1344	88.05	1368	92.84	1392	97.65	1415	102.48	1437	107.37
63000	4569	1282	74.23	1293	76.78	1317	81.93	1342	87.07	1366	92.19	1390	97.27	1413	102.32	1436	107.35	1458	112.39	1480	117.46

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		10" SP		10 1/2" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35000	2538	1216	55.57	1251	59.51	1289	63.70														
36000	2611	1224	57.27	1257	61.22	1291	65.30	1329	69.65												
39000	2828	1248	62.61	1281	66.80	1313	71.00	1344	75.24	1374	79.56	1441	88.80								
42000	3046	1269	68.01	1304	72.57	1337	77.12	1368	81.64	1398	86.16	1455	95.28	1484	99.95	1513	104.78				
45000	3263	1290	73.57	1324	78.41	1357	83.30	1390	88.19	1421	93.07	1479	102.76	1507	107.61	1534	112.47	1587	122.40	1643	132.88
48000	3481	1315	79.68	1346	84.60	1378	89.66	1410	94.81	1441	100.02	1502	110.46	1530	115.65	1558	120.82	1610	131.14	1660	141.58
51000	3698	1346	86.57	1374	91.49	1403	96.58	1432	101.82	1462	107.20	1522	118.20	1551	123.75	1580	129.29	1634	140.33	1684	151.30
54000	3916	1381	94.32	1406	99.25	1433	104.33	1460	109.58	1487	114.99	1543	126.22	1571	131.99	1600	137.83	1655	149.58	1707	161.29
57000	4133	1419	102.92	1443	107.89	1467	113.00	1492	118.25	1517	123.65	1568	134.91	1594	140.76	1621	146.73	1675	158.94	1728	171.32
60000	4351	1460	112.34	1482	117.40	1505	122.57	1528	127.86	1551	133.27	1598	144.54	1622	150.39	1647	156.38	1697	168.76	1748	181.54
63000	4569	1502	122.58	1524	127.77	1545	133.04	1566	138.40	1588	143.87	1632	155.18	1654	161.03	1677	167.02	1723	179.41	1771	192.32
66000	4786	1545	133.63	1566	138.98	1587	144.38	1607	149.86	1628	155.42	1669	166.84	1689	172.72	1710	178.72	1753	191.11	1797	204.03
69000	5004	1589	145.48	1609	151.02	1629	156.59	1649	162.21	1669	167.90	1708	179.51	1728	185.45	1747	191.50	1787	203.93	1828	216.85
72000	5221	1634	158.13	1654	163.89	1673	169.66	1692	175.46	1711	181.30	1749	193.17	1768	199.20	1786	205.33	1824	217.87	1862	230.83
75000	5439	1679	171.59	1698	177.59	1717	183.58	1736	189.59	1755	195.62	1791	207.79	1809	213.97	1827	220.20	1863	232.91		
78000	5656	1725	185.88	1744	192.13	1762	198.37	1780	204.60	1799	210.84	1834	223.39	1852	229.71	1869	236.09				
79000	5729	1740	190.83	1759	197.17	1777	203.49	1795	209.80	1813	216.12	1849	228.79	1866	235.18						
80000	5801	1755	195.87	1774	202.30	1792	208.71	1810	215.10	1828	221.49	1863	234.32								
82000	5946	1786	206.25	1804	212.86	1823	219.44	1840	226.00	1858	232.56										

Performance Data

VCR Fan

402

BI DWDI

Wheel Diameter = 40.25 in.	Discharge Area = 16.77 sq. ft.
Inlet Area = 19.44 sq. ft.	Tip Speed, FPM = 10.55 x RPM
Maximum BHP = 57.71 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13000	775	242	0.83	273	1.14	304	1.50	331	1.85												
14000	835	252	0.95	280	1.26	309	1.62	337	2.00												
15000	894	263	1.07	288	1.39	315	1.76	343	2.16	413	3.42										
16000	954	274	1.22	297	1.54	322	1.91	348	2.33	416	3.63										
17000	1014	285	1.37	308	1.71	330	2.09	353	2.50	422	3.87	462	4.83								
18000	1073	296	1.54	318	1.90	339	2.28	360	2.70	428	4.13	466	5.10								
19000	1133	308	1.72	329	2.10	349	2.49	369	2.91	433	4.39	472	5.41	507	6.46						
20000	1193	320	1.92	340	2.32	359	2.73	378	3.15	438	4.65	478	5.73	512	6.81						
21000	1252	331	2.14	351	2.56	370	2.98	387	3.42	444	4.92	483	6.05	518	7.19	550	8.33	585	9.59		
22000	1312	343	2.37	363	2.81	381	3.25	398	3.70	450	5.21	488	6.38	524	7.57	556	8.75	586	9.97		
23000	1371	356	2.62	374	3.09	392	3.55	408	4.01	458	5.53	494	6.71	530	7.96	562	9.20	591	10.44		
24000	1431	368	2.89	386	3.38	403	3.86	419	4.34	466	5.88	499	7.06	534	8.34	568	9.65	597	10.94	620	11.74
25000	1491	381	3.18	397	3.69	414	4.19	430	4.69	475	6.26	506	7.44	540	8.74	573	10.10	603	11.45	631	12.79
29000	1729	432	4.56	446	5.14	460	5.74	475	6.32	515	8.07	541	9.29	567	10.60	595	12.01	624	13.53	653	15.10
33000	1968	485	6.34	496	6.99	509	7.66	522	8.33	559	10.33	582	11.65	605	13.02	628	14.45	651	15.97	675	17.59
37000	2206	538	8.58	548	9.29	559	10.02	570	10.77	604	13.03	626	14.51	647	15.99	667	17.51	687	19.07	708	20.70
41000	2445	592	11.33	601	12.09	611	12.89	620	13.71	651	16.21	671	17.87	691	19.52	710	21.16	729	22.82	747	24.51
45000	2683	646	14.65	655	15.47	663	16.32	672	17.20	699	19.93	718	21.77	736	23.59	755	25.39	772	27.19	789	29.00
49000	2922	701	18.59	709	19.47	716	20.38	724	21.32	749	24.25	766	26.25	783	28.25	800	30.23	817	32.20	833	34.16
53000	3160	756	23.21	763	24.15	770	25.12	777	26.11	799	29.23	815	31.38	831	33.54	847	35.71	862	37.85	878	39.98

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	1431	653	13.63																		
25000	1491	657	14.17	685	15.64																
26000	1550	663	14.76	688	16.21	716	17.76														
27000	1610	669	15.39	693	16.85	718	18.36														
28000	1670	674	16.03	699	17.54	723	19.06	773	22.33												
29000	1729	680	16.67	705	18.23	729	19.80	775	23.01												
30000	1789	685	17.31	711	18.94	735	20.55	779	23.81	827	27.32										
33000	1968	701	19.30	726	21.07	751	22.87	797	26.44	839	29.99	879	33.66	926	37.69						
37000	2206	729	22.41	750	24.21	773	26.10	818	30.04	862	34.07	902	38.06	938	42.05	974	46.12	1012	50.47		
41000	2445	765	26.26	783	28.07	802	29.96	841	33.96	882	38.25	923	42.68	962	47.14	997	51.56	1031	55.97	1063	60.44
45000	2683	806	30.84	822	32.71	839	34.63	873	38.66	908	42.96	944	47.54	982	52.32	1019	57.21	1054	62.10	1087	66.95
49000	2922	849	36.12	864	38.10	880	40.10	910	44.23	941	48.56	972	53.14	1005	57.99	1039	63.06	1074	68.31	1108	73.64
51000	3041	871	39.02	886	41.07	901	43.13	930	47.34	959	51.72	989	56.31	1020	61.15	1052	66.25	1085	71.56	1118	77.03
53000	3160	893	42.10	908	44.22	922	46.35	951	50.66	979	55.11	1007	59.73	1036	64.58	1066	69.67	1097	75.00	1128	80.54
57000	3399	938	48.80	952	51.08	966	53.36	994	57.93	1020	62.56	1046	67.32	1072	72.24	1099	77.35	1126	82.68	1154	88.23
61000	3637	984	56.24	998	58.70	1011	61.15	1038	66.03	1063	70.92	1088	75.87	1112	80.93	1137	86.13	1161	91.50	1186	97.06
65000	3876	1031	64.47	1044	67.11	1057	69.74	1082	74.96	1107	80.16	1131	85.37	1154	90.63	1177	95.99	1200	101.47	1223	107.10
69000	4114	1079	73.54	1092	76.36	1104	79.17	1128	84.75	1152	90.29	1175	95.80	1197	101.33	1219	106.90	1241	112.56	1262	118.32
73000	4353	1128	83.52	1140	86.51	1151	89.49	1174	95.43	1197	101.33	1219	107.18	1241	113.02	1262	118.86	1283	124.74	1304	130.69
75000	4472	1153	88.88	1164	91.94	1175	95.00	1198	101.13	1220	107.20	1242	113.23	1263	119.23	1284	125.23	1305	131.24	1325	137.31

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
41000	2445	1096	65.07	1132	70.05																
45000	2683	1118	71.79	1147	76.66	1177	81.61	1207	86.74	1240	92.21										
49000	2922	1140	78.96	1171	84.26	1200	89.53	1228	94.80	1255	100.12	1282	105.53	1309	111.09	1375	123.37				
53000	3160	1160	86.22	1192	91.98	1222	97.74	1251	103.48	1279	109.20	1306	114.90	1331	120.61	1381	132.18	1432	144.32		
57000	3399	1183	94.00	1213	99.96	1242	106.07	1272	112.24	1300	118.45	1328	124.64	1355	130.80	1405	143.07	1452	155.38	1498	167.96
61000	3637	1212	102.83	1238	108.81	1265	115.00	1293	121.37	1320	127.87	1348	134.46	1375	141.09	1427	154.35	1476	167.51	1521	180.63
65000	3876	1246	112.90	1270	118.88	1294	125.07	1319	131.45	1344	138.03	1370	144.77	1396	151.66	1447	165.69	1497	179.83	1545	193.91
69000	4114	1284	124.21	1306	130.25	1328	136.46	1350	142.84	1373	149.41	1396	156.17	1420	163.11	1468	177.47	1517	192.28	1565	207.28
73000	4353	1324	136.74	1345	142.89	1365	149.18	1386	155.60	1407	162.20	1428	168.96	1449	175.89	1493	190.29	1539	205.34	1585	220.89
77000	4592	1366	150.45	1386	156.78	1405	163.20	1424	169.74	1444	176.40	1463	183.20	1483	190.16	1523	204.56	1565	219.63	1608	235.34
81000	4830	1409	165.35	1428	171.89	1447	178.51	1465	185.20	1483	191.99	1502	198.89	1520	205.92	1558	220.39	1596	235.46	1635	251.17
85000	5069	1453	181.42	1471	188.23	1489	195.07	1507	201.97	1525	208.94	1542	215.99	1560	223.14	1595	237.77	1631	252.92	1667	268.64
89000	5307	1498	198.66	1516	205.77	1533	212.89	1550	220.04	1567	227.23	1584	234.48	1601	241.80	1634	256.70	1668	272.02		
93000	5546	1543	217.10	1560	224.54	1577	231.97	1594	239.41	1611	246.86	1627	254.35	1643	261.88	1676	277.14				
97000	5784	1589	236.76	1605	244.55	1622	252.31	1639	260.06	1655	267.81	1671	275.58	1687	283.36						
101000	6023	1635	257.66	1651	265.82	1667	273.93	1683	282.02												
105000	6261	1681	279.88	1697	288.40																

Performance Data

VCR Fan

445

BI DWDI

Wheel Diameter = 44.50 in.	Discharge Area = 20.49 sq. ft.
Inlet Area = 23.72 sq. ft.	Tip Speed, FPM = 11.65 x RPM
Maximum BHP = 95.33 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	781	220	1.03	247	1.41	276	1.84	324	2.73												
17000	830	227	1.14	252	1.53	279	1.97	326	2.89												
18000	878	235	1.27	258	1.66	283	2.10	331	3.08												
19000	927	243	1.40	265	1.80	288	2.25	335	3.27	375	4.31										
20000	976	251	1.55	272	1.96	293	2.41	339	3.46	379	4.54										
21000	1025	260	1.71	280	2.13	300	2.59	343	3.66	383	4.79	418	5.95								
22000	1074	268	1.88	288	2.32	307	2.79	347	3.86	387	5.05	422	6.24								
23000	1122	277	2.06	296	2.52	314	3.00	351	4.07	391	5.30	426	6.54	458	7.83						
24000	1171	285	2.26	304	2.74	321	3.23	356	4.31	395	5.56	431	6.86	462	8.16	495	9.59				
25000	1220	294	2.46	312	2.97	329	3.47	362	4.56	399	5.83	435	7.18	466	8.53	495	9.92				
26000	1269	303	2.69	320	3.21	337	3.73	369	4.84	403	6.11	438	7.51	470	8.91	499	10.32	529	11.83		
27000	1318	312	2.92	329	3.47	345	4.01	376	5.13	408	6.41	442	7.83	475	9.29	503	10.75	530	12.24		
32000	1562	358	4.34	372	4.99	387	5.64	414	6.92	440	8.25	466	9.70	494	11.29	523	12.99	551	14.73	577	16.46
37000	1806	406	6.21	418	6.95	430	7.70	455	9.20	478	10.68	501	12.20	523	13.82	546	15.55	571	17.41	596	19.37
42000	2050	455	8.62	465	9.43	476	10.28	498	11.99	519	13.68	540	15.36	560	17.07	579	18.85	599	20.72	620	22.70
47000	2294	504	11.63	513	12.52	523	13.45	542	15.35	562	17.27	581	19.16	600	21.04	617	22.93	635	24.88	653	26.90
52000	2538	554	15.33	562	16.29	571	17.29	588	19.37	605	21.49	623	23.60	641	25.69	658	27.77	674	29.86	690	31.98
57000	2782	605	19.78	612	20.81	619	21.88	635	24.12	651	26.42	667	28.75	683	31.07	699	33.36	715	35.64	730	37.92
62000	3026	655	25.05	662	26.15	669	27.30	682	29.68	697	32.16	712	34.68	727	37.22	742	39.74	756	42.24	771	44.72
67000	3270	706	31.22	712	32.40	718	33.62	731	36.15	744	38.78	757	41.48	771	44.21	785	46.95	799	49.67	813	52.38

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
29000	1415	591	16.51																		
30000	1464	592	17.00	621	18.87																
31000	1513	596	17.57	620	19.35																
32000	1562	600	18.18	623	19.95	647	21.82														
33000	1611	605	18.81	627	20.60	649	22.44														
34000	1659	609	19.45	631	21.28	653	23.13	700	27.17												
35000	1708	613	20.09	636	21.97	657	23.86	700	27.80												
36000	1757	617	20.73	640	22.68	662	24.61	702	28.56												
37000	1806	621	21.38	644	23.38	666	25.38	706	29.38	748	33.63										
42000	2050	641	24.79	663	26.99	686	29.24	728	33.81	766	38.33	801	42.88	837	47.63						
47000	2294	670	29.00	689	31.20	708	33.50	747	38.38	786	43.47	823	48.57	857	53.63	888	58.70	919	63.92	953	69.47
52000	2538	706	34.15	722	36.39	738	38.70	771	43.60	806	48.86	842	54.39	877	60.04	910	65.68	941	71.28	970	76.88
57000	2782	744	40.22	759	42.56	773	44.94	803	49.90	832	55.16	864	60.76	896	66.67	929	72.78	961	78.98	991	85.17
62000	3026	785	47.19	799	49.68	812	52.19	839	57.32	865	62.66	893	68.28	921	74.19	950	80.42	980	86.91	1010	93.57
67000	3270	826	55.07	839	57.74	852	60.42	877	65.82	902	71.35	927	77.07	952	83.02	977	89.25	1003	95.76	1031	102.55
72000	3514	868	63.86	881	66.76	893	69.64	918	75.39	941	81.20	964	87.12	987	93.20	1010	99.49	1033	106.01	1057	112.80
77000	3758	911	73.63	923	76.75	935	79.85	959	86.02	981	92.18	1003	98.38	1025	104.68	1046	111.12	1067	117.74	1089	124.58
82000	4002	955	84.44	967	87.79	978	91.12	1000	97.73	1022	104.29	1043	110.85	1064	117.44	1084	124.12	1104	130.92	1124	137.88
87000	4246	1000	96.38	1011	99.94	1022	103.49	1043	110.56	1064	117.56	1084	124.52	1104	131.47	1124	138.46	1143	145.52	1162	152.68
92000	4490	1046	109.53	1056	113.28	1066	117.05	1086	124.56	1106	132.02	1126	139.42	1145	146.78	1164	154.13	1183	161.50	1201	168.94

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP					
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP				
58000	2831	1024	93.11	1051	99.35	1077	105.60	1102	111.90	1127	118.32	1153	124.97	1182	132.04	1243	150.96	1302	182.24	1348	197.80				
59000	2879	1028	94.91	1055	101.27	1082	107.62	1107	113.98	1131	120.43	1156	127.04	1182	133.92										
60000	2928	1032	96.71	1060	103.19	1086	109.65	1111	116.11	1136	122.61	1160	129.22	1185	136.02										
61000	2977	1036	98.51	1064	105.12	1090	111.70	1116	118.26	1140	124.84	1164	131.48	1188	138.26										
62000	3026	1039	100.31	1068	107.05	1095	113.75	1120	120.42	1145	127.09	1168	133.80	1192	140.60	1240	152.66	1302	182.24	1348	197.80				
67000	3270	1058	109.58	1086	116.77	1114	124.04	1140	131.33	1166	138.60	1190	145.82	1214	153.03	1258	167.48								
72000	3514	1082	119.86	1107	127.17	1133	134.70	1159	142.40	1185	150.20	1210	158.03	1234	165.86	1281	181.42					1324	196.91	1364	212.50
77000	3758	1111	131.64	1134	138.95	1157	146.51	1180	154.31	1204	162.33	1229	170.51	1253	178.81	1300	195.56					1345	212.26	1387	228.85
82000	4002	1145	145.02	1165	152.36	1186	159.92	1207	167.73	1229	175.76	1251	184.02	1273	192.49	1319	209.92	1364	227.70	1407	245.54				
87000	4246	1181	159.97	1200	167.42	1219	175.05	1238	182.87	1258	190.91	1278	199.17	1298	207.65	1340	225.25	1383	243.57	1426	262.33				
92000	4490	1219	176.46	1237	184.09	1255	191.86	1273	199.79	1291	207.88	1309	216.17	1328	224.65	1366	242.25	1405	260.67	1445	279.82				
97000	4734	1259	194.46	1276	202.34	1293	210.32	1310	218.41	1327	226.64	1344	235.02	1361	243.57	1396	261.20	1432	279.62	1468	298.82				
102000	4978	1299	213.96	1316	222.15	1332	230.40	1348	238.73	1364	247.15	1381	255.70	1397	264.37	1429	282.17	1462	300.63	1496	319.83				
107000	5222	1340	234.96	1356	243.51	1372	252.09	1388	260.71	1403	269.39	1419	278.16	1434	287.02	1465	305.11	1496	323.74	1527	343.01				
112000	5466	1382	257.47	1397	266.42	1413	275.37	1428	284.33	1443	293.33	1458	302.38	1473	311.49	1503	329.99	1532	348.90						
117000	5710	1424	281.53	1439	290.92	1454	300.27	1469	309.62	1484	318.97	1498	328.35	1513	337.76	1541	356.77								
120000	5857	1449	296.73	1464	306.38	1479	315.99	1494	325.59	1508	335.17	1523	344.77	1537	354.39										
122000	5954	1466	307.18	1481	317.01	1496	326.80	1511	336.57	1525	346.32	1539	356.06												
127000	6198	1509	334.47	1524	344.76	1538	355.01																		

Performance Data

VCR Fan

490 BI DWDI

Wheel Diameter = 49 in.

Discharge Area = 24.85 sq. ft.

Inlet Area = 28.84 sq. ft.

Tip Speed, FPM = 12.85 x RPM

Maximum BHP = 154.3 (RPM / 1000)³

- White area is Class I
Light blue area is Class II
Medium blue area is Class III
Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	805	203	1.32	227	1.78	252	2.31	295	3.40												
21000	845	209	1.43	231	1.90	255	2.44	298	3.58												
22000	885	215	1.56	235	2.03	258	2.58	301	3.76	340	5.03										
23000	926	221	1.70	241	2.18	261	2.72	304	3.96	340	5.21										
24000	966	227	1.84	246	2.34	265	2.88	307	4.15	343	5.45										
25000	1006	233	2.00	252	2.51	270	3.06	310	4.34	346	5.69	380	7.11								
26000	1046	239	2.16	257	2.69	275	3.24	313	4.54	350	5.95	381	7.37								
27000	1087	246	2.34	263	2.88	280	3.44	316	4.75	353	6.20	384	7.66	416	9.24						
28000	1127	252	2.52	269	3.08	286	3.66	319	4.96	356	6.46	387	7.97	416	9.52						
29000	1167	258	2.72	275	3.30	291	3.89	323	5.20	358	6.72	391	8.29	419	9.86	450	11.61				
30000	1207	265	2.92	281	3.53	297	4.13	328	5.45	361	6.98	394	8.61	422	10.23	449	11.91				
31000	1247	271	3.14	288	3.76	303	4.39	332	5.72	364	7.26	397	8.93	425	10.60	451	12.30	481	14.19		
37000	1489	312	4.70	326	5.45	340	6.20	365	7.69	390	9.26	416	11.01	443	12.93	470	14.94	495	16.94	518	18.93
43000	1730	355	6.77	366	7.63	378	8.51	402	10.24	423	11.97	445	13.78	466	15.72	489	17.81	512	20.06	536	22.39
49000	1972	399	9.45	408	10.41	419	11.40	440	13.39	460	15.36	479	17.33	497	19.35	516	21.48	535	23.74	555	26.14
55000	2213	443	12.82	452	13.87	460	14.96	479	17.20	497	19.43	515	21.63	532	23.84	549	26.08	566	28.40	582	30.82
61000	2455	488	16.97	496	18.11	503	19.29	520	21.74	536	24.23	553	26.71	569	29.15	585	31.59	600	34.06	615	36.57
67000	2696	533	21.99	540	23.21	547	24.48	561	27.13	576	29.85	592	32.59	607	35.30	622	37.99	636	40.66	650	43.35
73000	2938	579	27.96	585	29.27	591	30.62	604	33.45	618	36.38	632	39.36	646	42.34	660	45.30	673	48.23	687	51.15
79000	3179	624	34.96	630	36.36	636	37.80	648	40.80	660	43.93	672	47.12	685	50.35	698	53.58	711	56.78	724	59.96

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35000	1408	537	19.94																		
39000	1569	546	22.17	566	24.31	588	26.57														
43000	1730	559	24.72	579	27.04	599	29.35														
47000	1891	570	27.31	591	29.86	612	32.42	636	34.12												
51000	2052	583	30.12	603	32.78	623	35.52	661	41.06	696	46.56	728	52.08	760	57.84						
55000	2213	599	33.36	617	36.03	635	38.82	672	44.68	708	50.66	741	56.59	771	62.52	800	68.57	832	74.98		
59000	2374	619	37.11	635	39.78	651	42.57	685	48.51	719	54.80	753	61.21	785	67.60	813	73.94	841	80.34	868	86.93
63000	2535	641	41.35	655	44.06	670	46.87	700	52.81	732	59.18	764	65.89	796	72.73	826	79.57	854	86.35	880	93.14
67000	2696	664	46.08	677	48.86	691	51.72	718	57.69	747	64.06	777	70.85	807	77.96	838	85.23	867	92.51	894	99.74
71000	2857	687	51.29	700	54.17	713	57.10	739	63.16	765	69.56	792	76.35	820	83.52	849	91.02	878	98.70	906	106.42
75000	3018	712	56.96	724	59.97	736	63.01	761	69.22	785	75.70	810	82.50	835	89.68	862	97.22	889	105.09	917	113.16
79000	3179	736	63.12	748	66.27	760	69.44	784	75.86	807	82.46	830	89.34	853	96.53	878	104.07	903	111.97	928	120.18
83000	3340	761	69.75	773	73.07	785	76.39	807	83.05	829	89.85	851	96.84	873	104.09	896	111.65	919	119.54	942	127.77
87000	3501	787	76.88	798	80.37	809	83.85	831	90.81	853	97.83	874	104.99	894	112.36	915	119.97	937	127.89	959	136.12
91000	3662	812	84.52	824	88.19	835	91.85	856	99.13	877	106.42	897	113.79	917	121.31	937	129.04	957	137.01	977	145.26
95000	3823	838	92.69	849	96.55	860	100.39	881	108.01	901	115.60	921	123.23	940	130.96	959	138.83	978	146.91	997	155.22
99000	3984	865	101.43	875	105.47	886	109.48	906	117.46	926	125.38	945	133.30	964	141.27	982	149.34	1000	157.57	1019	165.99
103000	4145	892	110.75	902	114.96	911	119.16	931	127.50	951	135.77	969	144.01	988	152.25	1006	160.56	1023	168.98	1041	177.55
107000	4306	919	120.70	928	125.08	938	129.45	957	138.15	976	146.78	994	155.35	1012	163.90	1030	172.48	1047	181.12	1064	189.88
111000	4467	946	131.30	955	135.83	964	140.37	983	149.43	1001	158.42	1019	167.34	1037	176.22	1054	185.09	1071	194.00	1088	202.98

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
68000	2736	922	108.73	947	116.05	970	123.44	994	131.00	1019	138.88	1047	147.41								
73000	2938	938	117.71	963	125.61	987	133.46	1010	141.32	1032	149.22	1054	157.24	1076	165.47	1128	183.40				
78000	3139	952	126.77	978	135.25	1002	143.73	1026	152.17	1049	160.57	1071	168.96	1092	177.37	1133	194.49	1176	212.58		
83000	3340	967	136.32	992	145.12	1016	154.08	1041	163.10	1064	172.12	1087	181.11	1108	190.06	1149	207.92	1188	225.96	1227	244.60
88000	3541	985	146.88	1008	155.75	1031	164.90	1055	174.26	1078	183.77	1101	193.33	1123	202.90	1165	221.96	1204	240.88	1241	259.89
93000	3742	1007	158.70	1028	167.57	1049	176.74	1071	186.20	1093	195.91	1115	205.82	1137	215.86	1180	236.09	1220	256.24	1258	276.28
98000	3944	1032	171.85	1051	180.74	1070	189.90	1090	199.36	1110	209.10	1131	219.12	1152	229.36	1194	250.36	1235	271.68	1274	292.95
103000	4145	1059	186.30	1076	195.27	1094	204.48	1112	213.94	1131	223.68	1150	233.69	1169	243.98	1208	265.28	1248	287.31	1288	309.68
108000	4346	1087	202.03	1104	211.14	1120	220.45	1137	229.98	1154	239.74	1172	249.76	1190	260.04	1226	281.38	1264	303.68	1302	326.71
113000	4547	1116	219.01	1132	228.33	1148	237.81	1164	247.45	1180	257.30	1196	267.37	1213	277.67	1246	299.00	1281	321.34	1317	344.61
118000	4748	1145	237.24	1161	246.82	1176	256.51	1192	266.34	1207	276.34	1223	286.50	1238	296.87	1270	318.26	1302	340.59	1335	363.88
123000	4950	1176	256.71	1191	266.59	1206	276.56	1221	286.62	1235	296.81	1250	307.14	1265	317.64	1295	339.18	1325	361.56	1356	384.83
128000	5151	1206	277.41	1221	287.64	1236	297.92	1250	308.27	1264	318.70	1279	329.25	1293	339.92	1321	361.73	1350	384.24	1379	407.57
133000	5352	1237	299.35	1252	309.98	1266	320.61	1280	331.28	1294	342.01	1308	352.81	1321	363.72	1349	385.89	1376	408.66		
138000	5553	1268	322.56	1283	333.60	1297	344.63	1310	355.65	1324	366.72	1338	377.82	1351	389.00	1377	411.63				
143000	5755	1300	347.06	1314	358.53	1328	369.97	1341	381.40	1355	392.82	1368	404.28	1381	415.77						
148000	5956	1332	372.87	1346	384.79	1359	396.67	1372	408.51	1385	420.34										
153000	6157	1364	400.03	1377	412.41																

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BI DWDI

Wheel Diameter = 54.25 in.	Discharge Area = 30.46 sq. ft.
Inlet Area = 35.22 sq. ft.	Tip Speed, FPM = 14.29 x RPM
Maximum BHP = 256.7 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	788	181	1.56	203	2.12	227	2.77	266	4.09												
26000	854	190	1.79	209	2.36	231	3.03	270	4.43												
28000	919	198	2.05	217	2.64	235	3.31	274	4.81	307	6.35										
30000	985	207	2.35	225	2.96	242	3.63	279	5.20	311	6.82	344	8.58								
32000	1051	217	2.67	233	3.32	249	4.00	283	5.59	316	7.32	344	9.07								
34000	1116	226	3.03	242	3.71	257	4.42	288	6.01	321	7.84	349	9.67	376	11.57						
36000	1182	236	3.42	251	4.14	265	4.87	293	6.48	325	8.35	354	10.31	379	12.25	406	14.35				
38000	1248	245	3.85	260	4.61	274	5.38	300	7.01	329	8.89	358	10.95	384	13.00	408	15.07	435	17.39		
40000	1313	255	4.31	269	5.12	282	5.92	308	7.59	334	9.48	362	11.59	389	13.76	412	15.92	435	18.13		
42000	1379	265	4.81	279	5.67	291	6.51	316	8.23	340	10.13	367	12.26	393	14.54	417	16.80	439	19.07	461	21.43
44000	1445	275	5.36	288	6.26	301	7.14	324	8.92	347	10.84	372	12.98	397	15.31	422	17.70	444	20.07	464	22.46
46000	1510	285	5.95	298	6.89	310	7.82	333	9.67	355	11.61	377	13.75	402	16.12	426	18.60	449	21.09	469	23.57
48000	1576	296	6.59	307	7.57	319	8.54	342	10.47	363	12.45	384	14.60	407	16.97	430	19.51	453	22.12	474	24.72
50000	1641	306	7.28	317	8.29	329	9.31	350	11.32	371	13.35	391	15.53	412	17.89	435	20.46	457	23.15	479	25.87
52000	1707	317	8.02	327	9.07	338	10.13	360	12.22	379	14.32	399	16.52	419	18.89	440	21.46	461	24.21	483	27.03
60000	1970	360	11.55	369	12.72	378	13.94	397	16.38	415	18.79	432	21.20	449	23.68	466	26.29	483	29.05	501	32.00
68000	2232	403	16.08	411	17.37	419	18.72	435	21.49	452	24.25	468	26.98	484	29.70	498	32.47	513	35.32	528	38.29
76000	2495	448	21.75	454	23.16	461	24.63	475	27.68	490	30.78	505	33.87	520	36.92	534	39.95	547	43.02	560	46.13
84000	2758	492	28.70	498	30.23	504	31.81	517	35.11	530	38.52	544	41.95	557	45.36	570	48.74	583	52.09	595	55.46
92000	3020	537	37.06	542	38.70	548	40.40	559	43.94	571	47.62	583	51.36	595	55.12	608	58.86	620	62.57	632	66.25

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
44000	1445	485	24.96																		
49000	1609	496	27.93	514	30.58	533	33.32														
54000	1773	507	31.13	526	34.05	544	36.96	577	42.84	614	49.32										
59000	1937	518	34.41	537	37.60	555	40.80	589	47.17	620	53.56	651	60.24								
64000	2101	530	38.06	548	41.33	566	44.72	600	51.67	632	58.58	661	65.48	689	72.53	719	80.11				
69000	2265	547	42.31	562	45.58	578	49.00	611	56.23	643	63.72	673	71.19	701	78.62	727	86.11				
74000	2429	566	47.20	579	50.49	593	53.91	623	61.19	653	68.96	684	76.98	712	85.01	739	92.98	753	93.86	782	102.32
79000	2594	586	52.72	599	56.07	612	59.53	638	66.81	665	74.63	694	82.91	723	91.45	750	100.04	776	108.57	800	117.07
84000	2758	608	58.86	620	62.31	632	65.84	656	73.19	680	81.01	706	89.33	733	98.10	760	107.14	787	116.28	811	125.39
89000	2922	630	65.59	641	69.19	653	72.83	675	80.32	698	88.20	721	96.52	746	105.32	771	114.54	797	124.08	822	133.74
94000	3086	652	72.93	663	76.70	674	80.48	696	88.20	717	96.19	739	104.56	761	113.36	784	122.61	808	132.28	832	142.27
99000	3250	675	80.88	686	84.84	696	88.80	717	96.79	738	104.98	758	113.46	778	122.30	800	131.55	821	141.23	844	151.32
104000	3414	698	89.45	709	93.62	719	97.77	739	106.11	759	114.55	778	123.21	797	132.16	817	141.45	837	151.13	858	161.22
109000	3578	722	98.66	732	103.05	742	107.42	762	116.13	781	124.89	799	133.79	818	142.90	836	152.30	855	162.02	874	172.11
114000	3743	746	108.53	755	113.15	765	117.74	784	126.87	803	135.99	821	145.18	839	154.52	856	164.08	874	173.90	892	184.05
119000	3907	770	119.11	779	123.95	789	128.77	807	138.34	825	147.85	843	157.38	860	167.00	877	176.78	894	186.77	911	197.02
124000	4071	794	130.41	803	135.47	812	140.52	831	150.54	848	160.48	865	170.39	882	180.34	899	190.38	915	200.59	931	211.00
129000	4235	819	142.49	828	147.77	837	153.03	854	163.51	871	173.89	888	184.21	905	194.52	921	204.88	936	215.35	952	225.98
134000	4399	844	155.38	852	160.86	861	166.34	878	177.26	895	188.10	911	198.85	927	209.56	943	220.28	958	231.06	973	241.95
139000	4563	869	169.13	877	174.79	886	180.48	902	191.84	918	203.12	934	214.33	950	225.47	965	236.57	980	247.70	995	258.88

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
75000	2462	814	119.00	840	127.92																
80000	2626	825	127.34	847	136.08	870	145.07	894	154.59												
85000	2791	837	136.23	859	145.37	881	154.54	901	163.85	923	173.40	945	183.42	972	194.44						
90000	2955	848	145.22	871	154.96	893	164.66	914	174.34	934	184.06	953	193.91	973	203.98	1017	225.66				
95000	3119	858	154.27	882	164.60	904	174.93	926	185.19	946	195.42	965	205.64	984	215.90	1022	236.85	1062	259.18		
100000	3283	869	163.67	892	174.39	914	185.23	936	196.11	957	206.97	977	217.76	997	228.52	1033	250.07	1069	272.03	1106	295.07
105000	3447	882	173.80	903	184.66	925	195.80	946	207.13	968	218.54	988	229.97	1008	241.35	1046	263.98	1081	286.59	1114	309.53
110000	3611	897	184.90	916	195.77	937	207.01	957	218.55	978	230.32	999	242.24	1019	254.21	1057	278.09	1093	301.80	1127	325.48
115000	3775	913	197.06	932	207.93	950	219.16	970	230.76	989	242.68	1009	254.86	1029	267.24	1068	292.23	1104	317.19	1139	341.99
120000	3940	932	210.30	949	221.19	966	232.43	984	244.02	1002	255.96	1021	268.24	1040	280.80	1078	306.53	1115	332.62	1150	358.67
125000	4104	951	224.61	967	235.57	984	246.84	1000	258.44	1017	270.37	1035	282.65	1052	295.26	1089	321.33	1125	348.20	1161	375.39
130000	4268	972	239.96	987	251.05	1003	262.41	1018	274.05	1034	286.00	1050	298.27	1067	310.87	1101	337.04	1136	364.29	1171	392.27
135000	4432	993	256.34	1008	267.61	1022	279.10	1037	290.83	1052	302.84	1068	315.13	1083	327.74	1115	353.89	1148	381.26	1181	409.67
140000	4596	1014	273.74	1029	285.24	1043	296.91	1057	308.79	1072	320.89	1086	333.26	1101	345.89	1131	372.06	1162	399.43	1193	427.97
145000	4760	1036	292.16	1050	303.92	1064	315.82	1078	327.89	1092	340.15	1106	352.62	1120	365.33	1148	391.56	1177	418.94	1207	447.48
150000	4924	1058	311.58	1072	323.65	1086	335.83	1099	348.12	1113	360.57	1126	373.21	1139	386.04	1166	412.43	1194	439.84	1222	468.37
155000	5089	1081	332.01	1094	344.43	1108	356.90	1121	369.47	1134	382.16	1147	394.99	1160	408.01	1186	434.63	1212	462.16	1239	490.72
160000	5253	1104	353.46	1117	366.25	1130	379.06	1143	391.94	1155	404.89	1168	417.98	1181	431.19	1206	458.14	1231	485.88	1257	514.54
165000	5417	1127	375.92	1140	389.11	1152	402.30	1165	415.51	1177	428.79	1190	442.15	1202	455.61	1226	482.95	1251	510.99		

Performance Data

VCR Fan

600 BI DWDI

Wheel Diameter = 60 in.	Discharge Area = 37.26 sq. ft.
Inlet Area = 43.10 sq. ft.	Tip Speed, FPM = 15.71 x RPM
Maximum BHP = 424.8 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	805	166	1.98	185	2.67	206	3.47	241	5.10												
32000	859	172	2.21	190	2.91	209	3.73	244	5.46												
34000	913	179	2.48	195	3.19	212	4.01	248	5.84	277	7.72										
36000	966	185	2.77	201	3.51	217	4.32	251	6.22	280	8.17										
38000	1020	192	3.08	207	3.85	222	4.68	254	6.61	284	8.67	310	10.78								
40000	1074	199	3.42	213	4.22	227	5.07	257	7.01	287	9.18	313	11.34								
42000	1127	206	3.79	220	4.63	233	5.49	261	7.45	290	9.69	316	11.96	340	14.29						
44000	1181	213	4.18	227	5.06	239	5.95	265	7.92	293	10.21	320	12.59	343	14.97	367	17.54				
46000	1235	220	4.60	233	5.53	246	6.45	270	8.44	297	10.75	323	13.24	347	15.72	368	18.25				
48000	1288	227	5.05	240	6.02	252	6.99	276	9.01	300	11.32	326	13.88	350	16.48	371	19.07	392	21.79		
50000	1342	235	5.54	247	6.55	259	7.55	281	9.62	304	11.93	329	14.53	353	17.25	375	19.94	395	22.67		
52000	1396	242	6.06	254	7.11	266	8.16	287	10.28	309	12.60	333	15.22	357	18.02	378	20.84	398	23.64	416	25.61
54000	1449	249	6.61	261	7.71	272	8.80	294	10.98	314	13.32	336	15.94	360	18.80	382	21.73	402	24.64	420	27.57
63000	1691	284	9.58	294	10.85	304	12.14	323	14.67	341	17.22	359	19.90	377	22.80	396	25.94	416	29.29	436	32.71
72000	1932	320	13.44	328	14.86	336	16.32	354	19.25	371	22.13	386	25.03	402	28.04	417	31.21	433	34.59	450	38.19
81000	2174	356	18.32	363	19.87	370	21.48	386	24.78	401	28.07	416	31.31	430	34.56	444	37.89	458	41.35	472	44.96
90000	2415	393	24.35	399	26.03	405	27.78	419	31.41	433	35.09	447	38.73	460	42.33	473	45.93	485	49.59	498	53.33
99000	2657	429	31.66	435	33.47	441	35.35	453	39.27	465	43.30	478	47.34	491	51.35	503	55.31	515	59.27	526	63.25
108000	2899	467	40.37	472	42.31	477	44.33	488	48.52	499	52.87	510	57.28	522	61.68	534	66.05	545	70.38	556	74.69
117000	3140	504	50.62	509	52.69	513	54.83	523	59.29	533	63.93	544	68.67	554	73.45	565	78.23	576	82.96	586	87.66

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
52000	1396	439	29.73																		
58000	1557	445	32.95	462	36.15	480	39.57														
64000	1718	455	36.76	472	40.21	488	43.66														
70000	1879	465	40.64	482	44.45	499	48.24	519	50.80												
76000	2040	475	44.81	491	48.79	508	52.89	539	61.14	568	69.33	594	77.58	620	86.23						
82000	2201	488	49.62	503	53.62	518	57.80	548	66.56	578	75.48	604	84.32	629	93.16	653	102.22	679	111.91		
88000	2362	504	55.18	517	59.19	530	63.37	558	72.27	587	81.68	614	91.25	640	100.76	663	110.22	686	119.79	708	129.67
94000	2523	522	61.49	534	65.55	546	69.75	571	78.65	597	88.21	623	98.25	650	108.46	674	118.65	697	128.77	718	138.90
100000	2684	541	68.53	552	72.69	563	76.96	585	85.90	609	95.46	633	105.64	659	116.28	683	127.13	707	138.00	729	148.79
106000	2845	560	76.28	570	80.59	581	84.97	602	94.05	623	103.64	646	113.81	669	124.57	693	135.79	716	147.27	739	158.80
112000	3006	580	84.74	590	89.24	600	93.78	620	103.07	640	112.77	660	122.97	681	133.73	703	145.04	725	156.82	748	168.89
118000	3167	600	93.92	610	98.63	619	103.36	639	112.96	657	122.85	676	133.14	696	143.92	716	155.23	736	167.07	757	179.38
124000	3328	620	103.81	630	108.77	639	113.73	658	123.70	676	133.85	694	144.32	712	155.18	730	166.51	749	178.35	769	190.69
130000	3489	641	114.45	650	119.67	660	124.87	678	135.27	695	145.76	712	156.48	729	167.51	746	178.92	764	190.78	782	203.12
136000	3650	662	125.85	671	131.34	680	136.81	698	147.68	715	158.58	731	169.61	747	180.87	764	192.44	780	204.38	797	216.75
142000	3811	683	138.05	692	143.82	701	149.55	718	160.94	734	172.29	750	183.69	766	195.26	782	207.05	798	219.15	813	231.61
148000	3972	705	151.09	713	157.13	722	163.14	738	175.05	754	186.90	770	198.73	786	210.65	801	222.74	816	235.06	831	247.67
154000	4133	726	165.02	735	171.31	743	177.59	759	190.05	775	202.42	790	214.72	805	227.05	820	239.48	834	252.08	849	264.91
160000	4294	749	179.87	756	186.41	764	192.95	780	205.96	795	218.86	810	231.67	825	244.45	840	257.28	854	270.22	868	283.33

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90000	2415	734	142.95	761	154.44																
96000	2576	742	152.56	763	163.19	784	174.31	810	186.54												
102000	2738	753	163.10	773	174.08	793	185.17	812	196.51	832	208.31	855	221.09								
108000	2899	764	173.87	784	185.53	804	197.15	822	208.78	840	220.54	859	232.55								
114000	3060	773	184.69	794	197.09	814	209.44	833	221.72	851	233.98	869	246.28	886	258.69	921	284.32	962	312.81		
120000	3221	782	195.76	803	208.73	823	221.78	843	234.81	862	247.79	880	260.72	897	273.62	930	299.60	963	326.40	1000	355.31
126000	3382	792	207.53	812	220.77	832	234.29	852	247.96	871	261.67	890	275.35	908	288.96	941	316.07	973	343.33	1004	371.25
132000	3543	805	220.35	823	233.65	842	247.36	861	261.41	880	275.66	899	290.01	917	304.37	952	332.95	984	361.35	1014	389.85
138000	3704	819	234.39	836	247.68	854	261.43	872	275.61	890	290.13	908	304.93	926	319.88	961	349.90	994	379.76	1025	409.46
144000	3865	835	249.71	851	263.01	867	276.75	884	290.93	901	305.54	918	320.52	936	335.81	970	366.94	1004	398.26	1035	429.43
150000	4026	852	266.28	867	279.64	882	293.40	897	307.58	913	322.18	929	337.21	946	352.61	980	384.36	1013	416.84	1045	449.48
156000	4187	869	284.09	884	297.58	898	311.41	913	325.62	927	340.22	943	355.23	958	370.65	990	402.63	1022	435.79	1054	469.59
162000	4348	888	303.14	901	316.81	915	330.76	929	345.05	943	359.70	957	374.71	972	390.13	1001	422.12	1032	455.57	1063	490.10
168000	4509	907	323.38	920	337.29	933	351.44	946	365.87	960	380.61	973	395.67	987	411.11	1015	443.09	1043	476.59	1073	511.44
174000	4670	926	344.83	939	359.03	952	373.43	964	388.05	977	402.93	990	418.11	1003	433.61	1029	465.62	1056	499.11	1084	534.02
180000	4831	945	367.45	958	382.00	970	396.70	983	411.57	995	426.66	1008	441.99	1020	457.61	1045	489.76	1071	523.25	1097	558.15
186000	4992	965	391.27	978	406.20	990	421.23	1002	436.41	1014	451.75	1026	467.31	1038	483.09	1062	515.46	1086	549.04	1111	583.95
192000	5153	985	416.28	997	431.64	1009	447.06	1021	462.57	1033	478.22	1044	494.03	1056	510.04	1079	542.74	1102	576.51	1126	611.47
198000	5314	1006	442.48	1017	458.29	1029	474.14	1041	490.04	1052	506.04	1063	522.16	1075	538.43	1097	571.57	1120	605.62		
204000	5475	1026	469.89	1038	486.19	1049	502.49	1061	518.82	1072	535.20	1083	551.68	1094	568.25	1116	601.91				

Performance Data

VCR Fan

660

BI DWDI

Wheel Diameter = 66 in.	Discharge Area = 45.08 sq. ft.
Inlet Area = 52.30 sq. ft.	Tip Speed, FPM = 17.30 x RPM
Maximum BHP = 684.1 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	799	150	2.36	168	3.19	187	4.15	219	6.12												
39000	865	157	2.71	173	3.56	190	4.55	222	6.66												
42000	932	165	3.12	179	3.99	194	4.98	226	7.23	253	9.52										
45000	998	172	3.57	186	4.48	200	5.48	230	7.81	257	10.24	282	12.81								
48000	1065	180	4.07	193	5.03	206	6.05	233	8.40	261	11.00	284	13.60								
51000	1131	188	4.61	200	5.64	212	6.68	237	9.05	264	11.77	288	14.53	309	17.34						
54000	1198	196	5.21	208	6.30	219	7.39	242	9.78	268	12.55	292	15.48	313	18.40	333	21.46				
57000	1264	204	5.86	216	7.02	227	8.16	248	10.59	271	13.38	295	16.45	317	19.53	336	22.62	356	25.96		
60000	1331	212	6.58	223	7.79	234	8.99	255	11.48	276	14.28	299	17.42	321	20.68	340	23.91	358	27.20	378	30.81
63000	1398	220	7.35	231	8.63	242	9.90	261	12.46	281	15.27	302	18.44	324	21.84	344	25.25	362	28.64	379	32.13
66000	1464	229	8.19	239	9.53	249	10.86	268	13.52	287	16.37	307	19.54	328	23.01	348	26.60	366	30.15	383	33.72
76000	1686	258	11.50	266	13.04	276	14.59	293	17.64	310	20.72	326	23.96	342	27.47	360	31.27	378	35.31	396	39.44
86000	1908	287	15.73	295	17.42	303	19.17	319	22.67	334	26.11	349	29.59	363	33.20	377	37.03	392	41.12	408	45.48
96000	2130	317	20.98	324	22.82	331	24.74	345	28.66	359	32.54	373	36.38	386	40.25	399	44.23	412	48.38	425	52.75
106000	2351	348	27.38	354	29.37	360	31.44	373	35.73	386	40.06	398	44.33	411	48.57	423	52.83	434	57.17	446	61.65
116000	2573	379	35.04	384	37.18	389	39.40	401	44.03	413	48.76	425	53.48	436	58.15	447	62.79	458	67.44	469	72.15
126000	2795	410	44.10	415	46.38	419	48.75	430	53.69	440	58.78	451	63.93	462	69.06	473	74.13	483	79.17	494	84.21
136000	3017	441	54.67	445	57.09	450	59.60	459	64.84	469	70.27	479	75.81	489	81.37	499	86.89	509	92.37	519	97.81
146000	3239	472	66.86	476	69.43	480	72.09	489	77.61	498	83.36	507	89.25	516	95.21	526	101.18	535	107.11	544	112.99
156000	3461	503	80.80	507	83.52	511	86.32	519	92.13	527	98.18	535	104.40	544	110.73	553	117.10	562	123.47	571	129.82

CFM	OV	2 1/2" SP		2 3/4" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
63000	1398	399	36.00																		
70000	1553	404	39.76	420	43.63	437	47.79														
77000	1708	414	44.20	429	48.34	443	52.50														
84000	1863	422	48.71	438	53.28	453	57.83	480	66.88	506	76.16										
91000	2019	430	53.51	446	58.32	461	63.24	489	73.12	515	82.91	538	92.84	564	103.40						
98000	2174	442	59.00	455	63.84	469	68.90	497	79.43	524	90.07	548	100.62	570	111.23	592	122.18	618	134.20		
105000	2329	455	65.32	467	70.16	480	75.23	506	85.98	532	97.28	557	108.70	580	120.02	601	131.33	622	142.83	643	154.86
112000	2484	470	72.49	481	77.38	493	82.46	516	93.22	540	104.77	565	116.82	589	129.01	611	141.11	631	153.16	650	165.28
119000	2640	487	80.48	497	85.48	507	90.62	528	101.42	550	112.98	573	125.28	596	138.06	619	151.00	640	163.89	660	176.71
126000	2795	503	89.29	513	94.44	523	99.70	542	110.62	562	122.20	583	134.51	605	147.51	627	161.00	648	174.69	669	188.38
133000	2950	521	98.89	530	104.25	539	109.67	558	120.81	576	132.49	595	144.81	615	157.83	636	171.50	656	185.67	677	200.09
140000	3106	538	109.29	547	114.89	556	120.52	574	131.98	591	143.85	609	156.24	627	169.27	646	182.96	665	197.27	685	212.09
147000	3261	556	120.49	565	126.37	574	132.24	591	144.11	607	156.25	624	168.82	641	181.91	658	195.59	676	209.92	694	224.85
154000	3416	574	132.52	583	138.69	591	144.85	608	157.18	624	169.69	640	182.51	656	195.75	672	209.50	688	223.83	705	238.76
161000	3571	592	145.40	601	151.88	609	158.33	625	171.20	641	184.14	656	197.29	671	210.77	686	224.67	702	239.05	718	253.99
168000	3727	611	159.15	619	165.95	627	172.72	643	186.17	658	199.60	673	213.16	688	226.95	702	241.07	717	255.59	731	270.60
175000	3882	630	173.83	637	180.95	645	188.03	661	202.09	676	216.07	690	230.10	704	244.27	718	258.68	732	273.43	746	288.58
182000	4037	649	189.47	656	196.90	664	204.30	679	218.99	693	233.56	707	248.11	721	262.72	735	277.51	748	292.54	762	307.89
189000	4193	668	206.12	675	213.85	682	221.56	697	236.89	711	252.08	725	267.19	739	282.30	752	297.52	765	312.91	778	328.54
196000	4348	687	223.83	694	231.85	701	239.86	715	255.82	729	271.65	743	287.36	756	303.02	769	318.71	782	334.51	794	350.50

CFM	OV	7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		9 1/2" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110000	2440	668	174.59	691	188.05																
117000	2595	676	186.04	695	198.92	714	212.29	735	226.74												
124000	2751	686	198.39	704	211.73	721	225.18	739	238.90	757	253.14	777	268.38								
131000	2906	695	210.96	713	225.11	731	239.19	748	253.31	764	267.55	781	282.08								
138000	3061	703	223.58	722	238.60	740	253.54	757	268.42	774	283.25	790	298.13	806	313.15	837	344.18	875	378.59		
145000	3217	711	236.49	730	252.17	748	267.94	766	283.69	783	299.37	800	314.98	815	330.57	845	361.99	875	394.41	909	429.50
152000	3372	720	250.18	738	266.18	756	282.52	774	299.01	792	315.55	808	332.04	825	348.46	855	381.16	884	414.07	912	447.86
159000	3527	730	265.02	747	281.11	765	297.69	782	314.66	799	331.86	816	349.15	833	366.45	864	400.83	893	435.03	921	469.41
166000	3682	743	281.24	758	297.32	775	313.96	791	331.10	808	348.65	824	366.49	841	384.50	873	420.61	903	456.50	930	492.20
173000	3838	756	298.87	771	314.96	786	331.59	801	348.75	817	366.42	833	384.53	849	402.98	881	440.45	911	478.07	940	515.48
180000	3993	771	317.93	785	334.08	799	350.72	813	367.87	828	385.55	843	403.72	858	422.35	889	460.65	919	499.71	948	538.84
187000	4148	786	338.39	799	354.67	813	371.37	826	388.54	840	406.21	854	424.38	868	443.05	897	481.70	927	521.68	956	562.27
194000	4303	802	360.24	815	376.71	828	393.54	840	410.80	853	428.50	866	446.67	880	465.32	907	504.04	936	544.44	964	586.04
201000	4459	819	383.45	831	400.17	843	417.21	855	434.62	868	452.40	880	470.61	893	489.26	918	527.98	945	568.50	973	610.58
208000	4614	836	407.99	847	425.06	859	442.36	871	459.97	883	477.91	894	496.22	906	514.92	931	553.65	956	594.17		
215000	4769	853	433.89	864	451.32	876	468.95	887	486.82	898	504.98	910	523.46	921	542.29	944	581.12	968	621.62		
222000	4925	870	461.11	881	478.98	892	496.99	903	515.18	914	533.62	925	552.33	936	571.33	959	610.36				
229000	5080	887	489.69	899	508.03	909	526.45	920	545.03	931	563.80	942	582.77	952	602.03	974	641.39				
236000	5235	905	519.58	916	538.44	927	557.36	937	576.36	948	595.49	958	614.82	969	634.35						
243000	5390	923	550.84	934	570.26	944	589.67	955	609.15	965	628.72	975	648.42								

Performance Data

VCR Fan

730

BI DWDI

Wheel Diameter = 73 in.	Discharge Area = 55.15 sq. ft.
Inlet Area = 63.90 sq. ft.	Tip Speed, FPM = 19.15 x RPM
Maximum BHP = 1132 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
44000	798	136	2.88	169	5.08	198	7.48														
48000	870	143	3.36	172	5.60	201	8.20														
52000	943	150	3.90	177	6.19	205	8.96	229	11.79												
56000	1015	157	4.52	182	6.88	209	9.74	233	12.76	255	15.89										
60000	1088	165	5.20	188	7.66	212	10.55	237	13.79	258	17.03	279	20.53								
70000	1269	185	7.24	205	10.05	225	13.03	246	16.44	267	20.21	287	23.99	304	27.78	322	31.85				
80000	1451	205	9.80	224	13.04	241	16.27	258	19.74	277	23.62	296	27.85	314	32.20	330	36.51	345	40.84	361	45.36
90000	1632	226	12.99	243	16.65	259	20.26	275	23.93	290	27.86	306	32.14	322	36.79	339	41.65	355	46.53	370	51.38
100000	1813	248	16.89	263	20.93	278	24.98	292	28.98	306	33.09	320	37.43	334	42.09	348	47.09	364	52.38	379	57.80
110000	1995	270	21.60	284	25.97	297	30.45	311	34.87	324	39.28	336	43.81	348	48.55	361	53.56	374	58.88	388	64.51
120000	2176	293	27.18	305	31.86	317	36.75	330	41.62	342	46.42	354	51.24	365	56.17	376	61.28	388	66.64	399	72.27
130000	2357	315	33.72	326	38.70	338	43.96	349	49.27	361	54.51	372	59.71	383	64.93	393	70.25	404	75.73	414	81.42
140000	2539	338	41.30	348	46.58	358	52.17	369	57.89	380	63.58	391	69.21	401	74.80	411	80.42	421	86.13	430	91.98
150000	2720	361	50.00	370	55.57	380	61.48	390	67.57	400	73.70	410	79.78	420	85.80	429	91.79	439	97.81	448	103.90
160000	2901	384	59.90	392	65.76	401	71.97	410	78.41	420	84.94	429	91.47	439	97.94	448	104.35	457	110.75	466	117.16
170000	3083	407	71.08	415	77.22	423	83.73	431	90.50	440	97.40	449	104.35	458	111.27	467	118.14	476	124.96	484	131.75
180000	3264	430	83.62	437	90.05	445	96.85	453	103.93	461	111.18	469	118.52	478	125.88	486	133.20	495	140.46	503	147.68
190000	3445	453	97.60	460	104.32	467	111.41	475	118.78	482	126.37	490	134.08	498	141.84	506	149.60	514	157.32	522	164.99
200000	3626	476	113.10	483	120.11	490	127.49	496	135.16	504	143.05	511	151.10	519	159.25	526	167.43	534	175.60	541	183.72
210000	3808	499	130.20	505	137.50	512	145.16	519	153.12	525	161.32	532	169.70	539	178.21	547	186.78	554	195.37	561	203.93

CFM	OV	2 3/4" SP		3" SP		3 1/4" SP		3 1/2" SP		3 3/4" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100000	1813	393	63.23	407	68.62	419	74.00	431	79.43	443	84.99	456	90.84								
108000	1958	400	68.92	414	74.79	427	80.65	439	86.46	451	92.27	462	98.12	484	110.19						
116000	2103	407	74.92	420	81.07	434	87.35	446	93.65	458	99.94	470	106.20	491	118.69						
124000	2248	417	81.68	428	87.88	441	94.32	453	100.95	465	107.67	477	114.42	499	127.83	520	141.17	539	154.67	559	168.74
132000	2393	428	89.36	438	95.56	449	102.02	461	108.73	472	115.66	484	122.74	506	137.08	528	151.38	547	165.58	565	179.85
140000	2539	440	98.00	450	104.22	460	110.69	470	117.40	481	124.36	491	131.55	513	146.45	535	161.65	555	176.84	574	191.92
148000	2684	453	107.57	462	113.89	472	120.40	481	127.12	491	134.08	500	141.27	521	156.33	541	172.09	562	188.16	581	204.23
156000	2829	467	118.05	476	124.52	485	131.13	493	137.93	502	144.91	511	152.11	530	167.17	549	183.09	568	199.67	588	216.59
164000	2974	482	129.43	490	136.10	498	142.87	506	149.78	515	156.85	523	164.09	540	179.17	558	195.10	576	211.84	595	229.22
172000	3119	496	141.70	504	148.62	512	155.60	520	162.68	528	169.88	536	177.22	552	192.40	568	208.33	585	225.08	602	242.60
180000	3264	511	154.87	519	162.07	527	169.30	534	176.59	542	183.97	549	191.46	564	206.84	580	222.85	595	239.60	611	257.12
188000	3409	526	168.95	534	176.46	541	183.98	549	191.52	556	199.12	563	206.80	578	222.46	592	238.65	607	255.47	622	273.00
196000	3554	541	183.94	549	191.79	556	199.62	563	207.45	571	215.31	578	223.23	591	239.26	605	255.71	619	272.69	633	290.28
204000	3699	557	199.87	564	208.08	571	216.25	578	224.40	585	232.55	592	240.73	606	257.21	619	274.01	632	291.23	645	308.97
212000	3844	572	216.78	579	225.35	586	233.87	593	242.37	600	250.84	607	259.31	620	276.32	633	293.53	646	311.07	659	329.04
220000	3989	588	234.70	595	243.63	602	252.52	609	261.37	615	270.18	622	278.97	635	296.56	647	314.27	660	332.20	672	350.48
228000	4134	604	253.68	611	262.97	617	272.22	624	281.43	630	290.60	637	299.73	650	317.95	662	336.21	674	354.60	686	373.25
236000	4279	620	273.75	626	283.40	633	293.00	639	302.58	646	312.10	652	321.60	665	340.49	677	359.35	688	378.27	700	397.38
244000	4424	636	294.98	643	304.96	649	314.92	655	324.85	661	334.75	667	344.60	680	364.19	692	383.70	703	403.21	715	422.81
252000	4569	653	317.41	659	327.71	665	338.01	671	348.29	677	358.55	683	368.76	695	389.08	707	409.27	718	429.40	729	449.57

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
130000	2357	582	191.57	603	207.42																
140000	2539	591	206.99	608	222.27	626	238.02	644	254.81												
150000	2720	601	223.54	618	239.67	635	255.83	651	272.20	667	288.98	684	306.58								
160000	2901	610	240.24	628	257.62	645	274.89	661	292.09	676	309.34	691	326.75								
170000	3083	618	257.24	636	275.65	654	294.15	670	312.59	686	330.93	701	349.22	730	385.96	758	423.87	790	465.17		
180000	3264	628	275.40	645	294.29	662	313.64	679	333.19	695	352.76	710	372.27	740	411.06	767	449.89	793	489.59	822	531.53
190000	3445	640	295.45	655	314.44	671	334.10	687	354.27	703	374.77	719	395.43	749	436.69	777	477.64	803	518.57	828	560.08
200000	3626	653	317.74	667	336.72	682	356.40	697	376.75	712	397.68	727	419.03	758	462.41	786	505.86	813	549.00	838	592.03
210000	3808	668	342.32	681	361.35	695	381.03	709	401.37	723	422.38	737	443.98	766	488.58	795	534.16	822	579.80	848	625.13
220000	3989	684	369.17	697	388.37	709	408.12	722	428.47	735	449.46	748	471.08	775	516.10	803	562.95	831	610.69	857	658.52
230000	4170	701	398.24	713	417.72	725	437.65	737	458.11	749	479.13	761	500.75	786	545.80	813	593.11	839	642.12	866	692.00
240000	4352	719	429.50	730	449.37	741	469.61	752	490.28	764	511.43	775	533.10	799	578.15	823	625.52	848	675.03	874	726.15
250000	4533	737	462.91	747	483.28	758	503.93	769	524.92	780	546.32	791	568.15	813	613.34	836	660.69	859	710.27	883	761.89
260000	4714	755	498.48	765	519.43	776	540.59	786	562.01	797	583.76	807	605.87	828	651.36	849	698.81	871	748.36	894	800.04
270000	4896	773	536.19	784	557.82	794	579.57	804	601.50	814	623.69	824	646.18	844	692.20	864	739.90	885	789.51	906	841.19
280000	5077	792	576.05	802	598.43	812	620.86	822	643.40	832	666.12	841	689.06	861	735.81	880	783.96	900	833.80	920	885.51
290000	5258	811	618.09	821	641.28	831	664.45	840	687.67	850	711.01	859	734.49	878	782.15	897	830.95	915	881.18		
300000	5440	830	662.35	840	686.37	849	710.35	859	734.33	868	758.34	877	782.47	896	831.17	914	880.80	932	931.64		
310000	5621	849	708.86	858	733.78	868	758.60	877	783.38	887	808.14	896	832.95	913	882.88	931	933.49				
320000	5802	868	757.69	878	783.50	887	809.20	896	834.83	905	860.39	914	885.98	932	937.26						

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BI DWDI

Wheel Diameter = 80.75 in.	Discharge Area = 67.48 sq. ft.
Inlet Area = 78.04 sq. ft.	Tip Speed, FPM = 21.14 x RPM
Maximum BHP = 1876 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
55000	815	124	3.65	153	6.36	179	9.35														
60000	889	131	4.27	157	7.03	183	10.27	206	13.69												
65000	963	137	4.98	161	7.80	186	11.23	208	14.75												
70000	1037	144	5.77	166	8.69	189	12.21	212	15.99	231	19.83										
75000	1111	151	6.65	172	9.71	193	13.25	215	17.28	234	21.32	252	25.55								
80000	1186	159	7.63	178	10.86	197	14.42	218	18.57	238	22.91	255	27.23	273	31.86						
85000	1260	166	8.71	185	12.13	203	15.76	222	19.93	241	24.52	259	29.10	274	33.72	291	38.75				
90000	1334	173	9.89	192	13.52	208	17.25	226	21.43	244	26.14	262	31.03	278	35.87	293	40.80	309	46.19		
95000	1408	181	11.19	199	15.03	215	18.89	231	23.11	248	27.85	265	32.96	282	38.10	296	43.22	310	48.45	326	54.15
100000	1482	189	12.61	205	16.67	221	20.69	236	24.97	252	29.71	269	34.92	285	40.35	300	45.75	314	51.14	327	56.66
105000	1556	197	14.16	213	18.43	228	22.64	242	27.01	257	31.77	272	37.01	288	42.61	304	48.32	318	53.98	330	59.64
110000	1630	205	15.85	220	20.32	234	24.73	248	29.23	262	34.03	276	39.27	291	44.95	307	50.90	321	56.87	334	62.79
115000	1704	213	17.69	227	22.36	241	26.98	255	31.62	268	36.49	281	41.75	295	47.44	310	53.52	324	59.76	338	65.99
120000	1778	221	19.68	234	24.53	248	29.38	261	34.19	274	39.16	286	44.45	299	50.15	313	56.26	327	62.68	341	69.21
125000	1852	229	21.83	242	26.86	255	31.93	268	36.93	280	42.02	292	47.37	304	53.08	317	59.20	331	65.70	344	72.44
130000	1926	237	24.14	249	29.34	262	34.63	275	39.84	287	45.08	298	50.52	310	56.26	322	62.39	334	68.90	347	75.75
135000	2001	245	26.63	257	32.00	270	37.50	282	42.92	293	48.34	304	53.89	315	59.69	327	65.82	339	72.34	351	79.23
140000	2075	253	29.30	265	34.82	277	40.54	289	46.18	300	51.78	311	57.46	321	63.35	332	69.52	343	76.04	355	82.93
160000	2371	287	41.92	296	48.05	307	54.51	317	61.04	328	67.50	338	73.90	347	80.32	357	86.86	366	93.58	375	100.55
180000	2667	320	57.95	329	64.66	338	71.78	347	79.11	356	86.46	366	93.74	375	100.95	383	108.14	392	115.39	400	122.74

CFM	OV	2 3/4" SP		3" SP		3 1/4" SP		3 1/2" SP		3 3/4" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
100000	1482	342	62.63																		
105000	1556	343	65.45	357	71.65																
110000	1630	347	68.73	359	74.80	371	81.22														
115000	1704	350	72.18	362	78.39	374	84.72	386	91.35	400	98.45										
120000	1778	354	75.70	366	82.16	377	88.63	388	95.22	399	102.06	412	109.48								
125000	1852	357	79.24	369	86.00	381	92.73	392	99.46	402	106.30	413	113.35								
130000	1926	360	82.78	373	89.85	384	96.88	395	103.88	406	110.88	416	117.96	437	132.82						
135000	2001	363	86.40	376	93.72	388	101.06	399	108.36	410	115.62	420	122.89	439	137.70	461	153.68				
140000	2075	367	90.16	379	97.64	391	105.24	402	112.85	413	120.43	423	127.96	443	143.07	462	158.68	484	175.95		
150000	2223	375	98.40	386	105.99	397	113.85	408	121.92	420	130.07	430	138.22	450	154.42	469	170.57	486	187.02	505	204.36
160000	2371	385	107.81	395	115.39	405	123.29	415	131.51	426	139.96	436	148.58	457	165.97	476	183.28	493	200.49	510	217.85
170000	2519	396	118.43	405	126.05	414	133.95	424	142.16	433	150.68	443	159.47	463	177.64	482	196.13	501	214.54	518	232.83
180000	2667	408	130.25	417	137.97	425	145.93	434	154.16	442	162.67	451	171.47	470	189.89	489	209.12	507	228.67	525	248.21
200000	2964	434	157.38	442	165.52	450	173.80	457	182.24	464	190.88	472	199.74	488	218.19	504	237.67	520	258.15	537	279.39
220000	3260	462	189.08	469	197.88	476	206.72	483	215.63	490	224.66	496	233.81	510	252.61	524	272.21	538	292.70	552	314.15
240000	3557	490	225.41	496	235.02	503	244.61	510	254.20	516	263.83	522	273.51	535	293.14	547	313.28	560	334.05	573	355.58
260000	3853	518	266.56	525	277.07	531	287.53	537	297.94	543	308.33	549	318.71	561	339.57	573	360.67	585	382.16	596	404.17
280000	4149	547	312.90	554	324.31	560	335.68	565	346.99	571	358.25	577	369.47	589	391.85	600	414.26	611	436.84	621	459.72

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
160000	2371	527	235.73	545	254.90																
175000	2593	537	259.33	552	278.25	568	297.52	583	317.55	601	339.23										
190000	2816	548	284.30	564	304.84	579	325.27	593	345.74	607	366.42	621	387.57	652	433.16						
205000	3038	557	309.56	573	331.83	589	354.12	604	376.29	618	398.37	631	420.41	657	464.97	684	511.53				
220000	3260	567	336.50	583	359.62	598	383.27	613	407.17	628	431.10	642	454.95	668	502.34	693	549.82	717	598.38	743	649.77
235000	3483	581	366.89	594	390.13	609	414.19	623	438.96	637	464.21	652	489.71	679	540.79	704	591.52	728	642.09	750	693.16
250000	3705	596	401.42	609	424.66	621	448.74	634	473.64	648	499.30	661	525.62	688	579.50	714	633.90	739	687.99	762	741.80
265000	3927	614	440.16	625	463.56	637	487.68	648	512.57	660	538.25	673	564.71	698	619.70	724	676.62	748	734.26	772	791.77
280000	4149	632	483.00	643	506.79	654	531.14	664	556.14	675	581.86	687	608.30	710	663.44	734	721.29	758	781.14	782	841.94
295000	4372	651	529.87	662	554.24	672	579.05	682	604.39	692	630.30	702	656.83	724	711.96	745	769.92	768	830.52	791	893.18
310000	4594	671	580.71	681	605.86	691	631.32	700	657.16	710	683.48	720	710.30	739	765.67	759	823.63	780	884.29	802	947.51
325000	4816	692	635.49	701	661.59	710	687.88	720	714.42	729	741.33	738	768.61	757	824.61	775	882.82	794	943.47	814	1006.71
340000	5039	712	694.23	721	721.41	731	748.68	740	776.09	748	803.75	757	831.68	775	888.68	793	947.47	810	1008.38	829	1071.63
355000	5261	733	756.97	742	785.35	751	813.71	760	842.15	768	870.71	777	899.47	794	957.77	811	1017.50	828	1078.98	845	1142.50
370000	5483	754	823.79	763	853.43	772	883.01	780	912.58	789	942.18	797	971.89	813	1031.84	830	1092.83	846	1155.21		
385000	5705	776	894.74	784	925.75	793	956.63	801	987.42	809	1018.18	817	1048.94	833	1110.80						
400000	5928	797	970.05	805	1002.41	814	1034.61	822	1066.71	830	1098.70	838	1130.66								
415000	6150	819	1049.81	827	1083.53	835	1117.11	843	1150.57												
430000	6372	841	1134.25	849	1169.33																

Performance Data

VCR Fan

890

BI DWDI

Wheel Diameter = 89 in.	Discharge Area = 81.98 sq. ft.
Inlet Area = 94.60 sq. ft.	Tip Speed, FPM = 23.30 x RPM
Maximum BHP = 3050 (RPM / 1000) ³	

- White area is Class I
Light blue area is Class II
Medium blue area is Class III
Dark blue area is Class IV

CFM	OV	1/4" SP		1/2" SP		3/4" SP		1" SP		1 1/4" SP		1 1/2" SP		1 3/4" SP		2" SP		2 1/4" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
66000	805	112	4.35	139	7.62	162	11.22														
72000	878	118	5.07	142	8.42	165	12.31														
78000	951	124	5.91	145	9.32	169	13.46	188	17.68												
84000	1025	130	6.84	150	10.36	171	14.62	192	19.17	209	23.82										
90000	1098	136	7.88	155	11.56	174	15.85	195	20.70	212	25.56	229	30.72								
96000	1171	143	9.03	161	12.91	178	17.23	197	22.25	215	27.45	231	32.65	248	38.38						
102000	1244	149	10.30	167	14.40	183	18.79	200	23.86	218	29.38	234	34.88	248	40.46	265	46.55				
108000	1317	156	11.69	173	16.04	188	20.54	204	25.62	221	31.32	237	37.18	252	42.99	265	48.96				
114000	1391	163	13.21	179	17.82	193	22.47	208	27.58	224	33.33	240	39.49	255	45.66	268	51.80	281	58.14	296	64.99
120000	1464	170	14.88	185	19.75	199	24.59	213	29.76	227	35.52	243	41.83	258	48.35	272	54.83	284	61.31	296	68.01
126000	1537	177	16.70	191	21.83	205	26.88	218	32.15	232	37.93	246	44.29	261	51.06	275	57.90	287	64.69	299	71.50
132000	1610	184	18.69	198	24.06	211	29.35	224	34.76	236	40.57	250	46.94	264	53.83	278	60.99	290	68.14	302	75.24
138000	1683	191	20.85	204	26.45	217	31.99	229	37.58	241	43.47	254	49.84	267	56.76	280	64.11	293	71.61	306	79.08
144000	1757	198	23.18	211	29.01	223	34.82	235	40.60	247	46.60	258	53.01	270	59.93	283	67.35	296	75.10	309	82.93
164000	2000	222	32.35	233	38.87	245	45.56	256	52.15	266	58.72	276	65.46	286	72.51	296	79.96	307	87.88	318	96.24
184000	2244	247	43.90	257	51.04	266	58.52	277	66.01	286	73.39	296	80.75	305	88.23	314	95.93	323	103.94	332	112.33
204000	2488	272	58.12	280	65.85	289	74.03	298	82.36	307	90.64	316	98.82	325	106.98	333	115.20	341	123.58	349	132.18
224000	2732	297	75.29	305	83.59	313	92.41	321	101.50	329	110.66	337	119.74	345	128.74	353	137.69	361	146.67	368	155.75
244000	2976	323	95.70	329	104.59	336	114.00	344	123.78	351	133.72	359	143.69	367	153.59	374	163.40	381	173.16	388	182.91
264000	3220	348	119.65	354	129.11	361	139.11	367	149.52	374	160.18	381	170.96	388	181.75	395	192.46	402	203.10	409	213.67

CFM	OV	2 3/4" SP		3" SP		3 1/4" SP		3 1/2" SP		3 3/4" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
120000	1464	311	75.48																		
132000	1610	314	82.39	325	89.76	337	97.71														
144000	1757	320	90.71	331	98.45	341	106.25	351	114.23	362	122.62										
156000	1903	326	99.19	337	107.67	348	116.09	358	124.48	367	132.91	376	141.47	396	159.73						
168000	2049	332	107.94	343	116.98	354	126.11	364	135.23	374	144.30	383	153.33	401	171.53	418	190.54				
180000	2196	339	117.61	349	126.82	359	136.35	370	146.07	380	155.86	389	165.63	407	185.04	424	204.45	440	224.38	458	245.78
192000	2342	347	128.62	356	137.83	366	147.44	375	157.40	385	167.62	395	178.02	413	198.89	431	219.61	446	240.28	462	261.23
204000	2488	357	141.08	366	150.31	374	159.91	383	169.90	392	180.24	401	190.89	419	212.83	437	235.02	453	257.07	468	279.01
216000	2635	368	154.96	376	164.30	384	173.95	391	183.93	400	194.27	408	204.97	425	227.31	442	250.53	459	274.02	475	297.42
228000	2781	380	170.24	387	179.77	394	189.55	401	199.60	409	209.96	416	220.65	432	243.05	448	266.67	464	291.14	480	315.93
250000	3050	401	201.78	408	211.88	415	222.10	421	232.49	428	243.08	434	253.92	448	276.39	462	300.07	476	324.96	491	350.95
262000	3196	414	220.90	420	231.39	426	241.96	433	252.65	439	263.48	445	274.50	458	297.20	471	320.93	484	345.82	498	371.87
274000	3342	426	241.38	432	252.33	438	263.30	445	274.34	451	285.47	457	296.75	469	319.82	481	343.74	493	368.68	506	394.73
286000	3489	438	263.24	445	274.68	451	286.11	457	297.55	463	309.05	468	320.65	480	344.22	492	368.49	503	393.60	515	419.69
298000	3635	451	286.51	457	298.47	463	310.40	469	322.29	475	334.21	480	346.19	492	370.39	503	395.12	514	420.53	525	446.78
300000	3659	453	290.53	459	302.58	465	314.58	471	326.57	477	338.57	482	350.60	494	374.92	505	399.73	516	425.21	527	451.51
312000	3806	466	315.50	472	328.09	478	340.62	483	353.11	489	365.57	495	378.04	505	403.11	516	428.53	527	454.46	537	481.06
324000	3952	479	341.98	485	355.12	490	368.20	496	381.21	502	394.17	507	407.11	518	433.04	528	459.16	538	485.67	548	512.69
336000	4099	492	370.04	498	383.73	503	397.35	509	410.90	514	424.39	519	437.85	530	464.69	540	491.62	550	518.79	560	546.38
348000	4245	505	399.75	511	413.97	516	428.13	521	442.23	527	456.26	532	470.25	542	498.09	552	525.91	562	553.85	572	582.06

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
184000	2244	477	273.26																		
204000	2488	483	301.09	497	323.66	512	347.36	529	372.40												
224000	2732	494	333.99	508	358.10	521	382.23	534	406.59	547	431.54	561	457.57								
244000	2976	503	367.48	518	394.03	532	420.49	545	446.79	558	473.03	570	499.34	594	553.03	620	610.64				
264000	3220	513	402.67	527	430.67	541	459.19	555	487.91	568	516.59	581	545.14	605	601.96	627	659.12	649	718.09	674	781.71
284000	3464	526	442.53	538	470.76	551	499.98	564	530.02	578	560.60	591	591.46	615	653.16	638	714.41	660	775.56	680	837.42
304000	3708	541	488.39	552	516.62	564	545.86	576	576.11	588	607.30	600	639.28	625	704.76	648	770.90	670	836.70	691	902.11
324000	3952	559	540.40	569	568.86	579	598.18	590	628.42	601	659.62	612	691.77	634	758.62	657	827.98	680	898.40	702	968.78
344000	4196	577	598.40	587	627.42	596	657.11	606	687.55	616	718.81	626	750.95	646	817.91	668	888.27	689	961.27	711	1035.79
364000	4440	597	662.28	606	692.16	615	722.52	624	753.46	633	785.04	642	817.38	661	884.40	680	954.79	700	1028.48	720	1104.92
384000	4684	617	731.96	625	762.96	634	794.26	643	825.99	651	858.20	660	891.00	677	958.53	695	1028.99	713	1102.65	732	1179.49
404000	4928	637	807.40	645	839.75	654	872.26	662	905.01	670	938.13	678	971.65	695	1040.25	711	1111.26	728	1185.04	745	1261.82
424000	5172	658	888.67	666	922.55	674	956.45	682	990.48	690	1024.70	698	1059.23	713	1129.37	729	1201.42	745	1275.81		
444000	5416	679	975.84	687	1011.38	695	1046.87	702	1082.35	710	1117.90	718	1153.64	733	1225.82	748	1299.42				
464000	5660	700	1069.07	708	1106.38	715	1143.56	723	1180.66	730	1217.72	738	1254.83								

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AF SWSI

Wheel Diameter = 18.25 in.	Discharge Area = 1.92 sq. ft.
Inlet Area = 2.025 sq. ft.	Tip Speed, FPM = 4.78 x RPM
Maximum BHP = .409 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	838	633	0.10	692	0.14	749	0.17	804	0.20	857	0.25	908	0.29	958	0.32	1054	0.43						
1800	942	683	0.13	737	0.16	789	0.20	839	0.24	888	0.28	936	0.32	983	0.36	1073	0.46	1158	0.56				
2000	1047	735	0.15	785	0.19	833	0.24	880	0.28	925	0.32	969	0.36	1013	0.41	1097	0.52	1178	0.63	1331	0.86		
2200	1152	789	0.19	835	0.22	880	0.28	923	0.32	966	0.36	1007	0.41	1047	0.46	1127	0.56	1203	0.68	1349	0.91	1485	1.18
2400	1257	845	0.22	888	0.27	929	0.32	970	0.36	1009	0.41	1048	0.46	1086	0.52	1160	0.63	1232	0.75	1371	1.00	1502	1.27
2600	1361	901	0.27	941	0.32	980	0.36	1018	0.41	1055	0.48	1092	0.53	1128	0.59	1198	0.69	1266	0.81	1397	1.08	1523	1.35
2800	1466	958	0.32	996	0.36	1032	0.43	1068	0.48	1103	0.54	1138	0.60	1172	0.65	1238	0.78	1303	0.89	1428	1.16	1548	1.45
3000	1571	1016	0.38	1051	0.43	1086	0.48	1120	0.55	1153	0.60	1186	0.66	1218	0.72	1281	0.86	1342	0.98	1461	1.26	1576	1.54
3200	1675	1075	0.44	1108	0.50	1141	0.56	1173	0.61	1204	0.68	1235	0.75	1266	0.81	1326	0.94	1384	1.08	1498	1.37	1608	1.67
3400	1780	1134	0.52	1165	0.58	1196	0.64	1227	0.69	1257	0.77	1286	0.83	1315	0.91	1373	1.04	1428	1.18	1537	1.48	1642	1.79
3600	1885	1194	0.60	1223	0.65	1252	0.72	1281	0.79	1310	0.86	1338	0.93	1366	1.01	1421	1.14	1474	1.29	1578	1.61	1679	1.92
3800	1990	1253	0.68	1281	0.75	1309	0.81	1337	0.88	1364	0.96	1391	1.04	1418	1.12	1470	1.27	1522	1.41	1621	1.73	1718	2.08
4200	2199	1374	0.89	1400	0.96	1425	1.04	1450	1.12	1475	1.20	1500	1.28	1524	1.36	1573	1.52	1620	1.68	1712	2.04	1802	2.40
4600	2408	1496	1.14	1519	1.21	1542	1.29	1565	1.37	1588	1.46	1611	1.54	1634	1.63	1678	1.82	1723	2.00	1809	2.37	1892	2.75
5000	2618	1618	1.45	1639	1.53	1661	1.61	1682	1.70	1703	1.79	1724	1.87	1745	1.97	1787	2.16	1828	2.36	1909	2.75	1987	3.16
5400	2827	1741	1.79	1761	1.87	1780	1.97	1800	2.06	1820	2.15	1840	2.25	1859	2.34	1898	2.54	1936	2.75	2012	3.17	2086	3.62
5800	3037	1864	2.20	1883	2.29	1901	2.37	1919	2.47	1938	2.58	1956	2.67	1974	2.77	2011	2.99	2047	3.20	2118	3.65	2188	4.12
6200	3246	1988	2.66	2005	2.75	2022	2.84	2040	2.95	2057	3.06	2074	3.16	2091	3.27	2125	3.49	2159	3.72	2226	4.19	2292	4.67
6600	3455	2112	3.17	2128	3.27	2144	3.37	2160	3.49	2177	3.59	2193	3.70	2209	3.82	2241	4.05	2273	4.29	2337	4.79	2399	5.30
7000	3665	2236	3.77	2251	3.87	2267	3.97	2282	4.08	2297	4.20	2312	4.32	2327	4.44	2358	4.67	2388	4.92	2448	5.44	2508	5.98

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2600	1361	1643	1.64	1757	1.97																		
2800	1466	1663	1.75	1774	2.08	1880	2.41																
3000	1571	1687	1.86	1794	2.18	1897	2.54	1996	2.91	2093	3.27												
3200	1675	1714	1.98	1817	2.32	1917	2.67	2013	3.04	2107	3.42	2198	3.83										
3400	1780	1744	2.12	1843	2.45	1940	2.82	2034	3.20	2125	3.59	2214	3.99	2300	4.41								
3600	1885	1777	2.25	1872	2.61	1966	2.97	2057	3.35	2145	3.75	2232	4.16	2316	4.59	2399	5.04	2479	5.49				
3800	1990	1812	2.41	1904	2.77	1994	3.15	2082	3.54	2168	3.94	2253	4.35	2335	4.79	2416	5.24	2495	5.69	2572	6.16	2647	6.65
4200	2199	1890	2.75	1975	3.13	2059	3.52	2142	3.92	2222	4.34	2302	4.77	2380	5.22	2457	5.67	2532	6.15	2606	6.64	2679	7.13
4600	2408	1974	3.15	2054	3.54	2133	3.95	2210	4.37	2286	4.80	2361	5.25	2434	5.72	2507	6.19	2579	6.66	2649	7.16	2719	7.66
5000	2618	2064	3.58	2139	4.00	2213	4.44	2286	4.87	2357	5.33	2428	5.80	2497	6.26	2566	6.75	2634	7.25	2701	7.75	2767	8.28
5400	2827	2158	4.05	2229	4.50	2299	4.97	2367	5.44	2435	5.91	2502	6.39	2568	6.89	2633	7.39	2697	7.90	2761	8.41	2824	8.96
5800	3037	2256	4.58	2323	5.07	2389	5.55	2454	6.05	2518	6.54	2582	7.05	2644	7.55	2706	8.08	2768	8.61	2828	9.16	2888	9.71
6200	3246	2357	5.17	2421	5.67	2484	6.19	2545	6.70	2606	7.24	2667	7.76	2726	8.30	2785	8.85	2843	9.39	2901	9.96	2959	10.53
6600	3455	2461	5.82	2521	6.35	2581	6.89	2640	7.44	2698	7.99	2756	8.53	2812	9.10	2869	9.66	2924	10.25	2980	10.83	3034	11.41
7000	3665	2566	6.53	2624	7.08	2681	7.65	2738	8.21	2793	8.80	2848	9.38	2892	9.96	2956	10.55	3010	11.16	3062	11.76	3115	12.38
7400	3874	2674	7.30	2729	7.89	2784	8.48	2838	9.08	2891	9.67	2944	10.28	2996	10.89	3047	11.51	3098	12.14	3149	12.78	3199	13.41
7800	4084	2783	8.14	2836	8.75	2888	9.38	2940	10.00	2991	10.63	3042	11.26	3092	11.91	3141	12.55	3190	13.21	3239	13.86	3287	14.51
8200	4293	2894	9.08	2945	9.71	2995	10.35	3044	11.00	3093	11.66	3142	12.32	3190	12.98	3238	13.66	3285	14.33	3332	15.01	3378	15.71
8600	4503	3006	10.08	3055	10.74	3103	11.39	3150	12.08	3198	12.75	3244	13.44	3291	14.13	3337	14.83	3382	15.55	3427	16.25	3472	16.96
9000	4712	3119	11.16	3166	11.85	3212	12.53	3258	13.23	3303	13.93	3349	14.66	3393	15.38	3437	16.10	3481	16.82	3525	17.57	3568	18.31

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	2199	2750	7.64		2820	8.16																	
4600	2408	2787	8.19	2855	8.71	2986	9.82	3114	10.96														
5000	2618	2833	8.80	2897	9.35	3024	10.46	3148	11.63	3268	12.83	3386	14.07										
5400	2827	2887	9.50	2948	10.05	3070	11.19	3189	12.38	3305	13.61	3419	14.86	3530	16.17	3639	17.51	3746	18.88				
5800	3037	2948	10.26	3007	10.83	3123	12.00	3237	13.21	3349	14.46	3459	15.75	3566	17.07	3672	18.42	3776	19.82	3878	21.25	3978	22.71
6200	3246	3015	11.10	3072	11.69	3183	12.88	3292	14.11	3400	15.39	3505	16.71	3610	18.04	3712	19.43	3813	20.85	3912	22.31	4009	23.78
6600	3455	3089	12.00	3142	12.61	3249	13.85	3354	15.11	3457	16.42	3559	17.76	3659	19.13	3758	20.53	3856	21.96	3952	23.45	4046	24.96
7000	3665	3167	13.00	3218	13.61	3320	14.89	3421	16.20	3520	17.53	3618	18.89	3715	20.29	3810	21.73	3904	23.18	3997	24.68		
7400	3874	3249	14.06	3299	14.69	3397	16.01	3493	17.35	3589	18.73	3683	20.13	3776	21.56	3868	23.01	3959	24.51	4049	26.02		
7800	4084	3335	15.18	3383	15.86	3477	17.21	3570	18.60	3662	20.01	3753	21.45	3842	22.91	3931	24.41	4019	25.92				
8200	4293	3425	16.39	3470	17.08	3561	18.50	3651	19.92	3739	21.39	3827	22.85	3913	24.35	3999	25.89						
8600	4503	3517	17.68	3561	18.41	3648	19.86	3735	21.35	3820	22.83	3905	24.35	3989	25.91	4071	27.47						
9000	4712	3611	19.06	3654	19.81	3739	21.32	3822	22.83	3905	24.39	3986	25.96	4067	27.54								
9400	4921	3708	20.51	3749	21.28	3831	22.85	3912	24.42	3992	26.02	4071	27.64										
9800	5131	3807	22.06	3847	22.85	3926	24.48	4004	26.10														
10200	5340	3908	23.68	3946	24.51	4023	26.18																
10600	5550	4010	25.42	4047	26.27																		

Performance Data

VCR Fan

200 AF SWSI

Wheel Diameter = 20 in.	Discharge Area = 2.30 sq. ft.
Inlet Area = 2.440 sq. ft.	Tip Speed, FPM = 5.23 x RPM
Maximum BHP = .647 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	783	555	0.11	612	0.15	667	0.19	719	0.22	769	0.28	818	0.32	865	0.38	955	0.48						
2100	913	611	0.14	662	0.19	710	0.22	757	0.28	803	0.32	847	0.38	891	0.43	974	0.55	1053	0.68				
2400	1043	671	0.17	716	0.22	760	0.28	802	0.32	844	0.39	884	0.44	924	0.50	1001	0.61	1075	0.75	1214	1.03		
2700	1174	732	0.22	774	0.29	841	0.34	852	0.40	890	0.45	928	0.52	964	0.58	1035	0.69	1104	0.83	1235	1.12	1359	1.45
3000	1304	796	0.30	834	0.34	870	0.40	906	0.46	941	0.54	976	0.60	1009	0.66	1075	0.80	1139	0.93	1262	1.23	1380	1.56
3300	1435	861	0.36	895	0.43	929	0.48	963	0.56	995	0.63	1027	0.69	1059	0.77	1120	0.91	1180	1.06	1295	1.37	1406	1.70
3600	1565	927	0.44	959	0.52	990	0.59	1021	0.65	1052	0.72	1082	0.81	1111	0.88	1168	1.03	1224	1.18	1333	1.52	1438	1.87
3900	1696	994	0.55	1023	0.61	1053	0.68	1082	0.77	1110	0.85	1138	0.93	1166	1.01	1220	1.16	1273	1.33	1375	1.67	1474	2.04
4200	1826	1061	0.66	1089	0.73	1116	0.81	1143	0.89	1170	0.97	1197	1.06	1223	1.14	1274	1.31	1324	1.48	1421	1.86	1514	2.22
4500	1957	1129	0.80	1155	0.86	1181	0.94	1206	1.04	1232	1.12	1257	1.20	1281	1.29	1330	1.48	1377	1.67	1469	2.04	1558	2.45
4800	2087	1198	0.93	1222	1.02	1246	1.11	1270	1.20	1294	1.29	1318	1.37	1341	1.47	1387	1.67	1432	1.86	1520	2.25	1605	2.67
5100	2217	1267	1.11	1290	1.20	1313	1.28	1335	1.37	1358	1.46	1380	1.56	1402	1.67	1446	1.87	1489	2.08	1573	2.50	1654	2.92
5400	2348	1336	1.29	1358	1.38	1379	1.47	1401	1.56	1422	1.67	1444	1.77	1465	1.87	1506	2.08	1547	2.29	1627	2.50	1705	3.20
5700	2478	1406	1.51	1426	1.60	1447	1.68	1467	1.79	1487	1.89	1508	2.00	1528	2.11	1568	2.33	1607	2.54	1683	3.00	1758	3.49
6200	2696	1522	1.89	1541	2.00	1560	2.09	1579	2.20	1597	2.32	1616	2.42	1635	2.54	1672	2.77	1708	3.02	1780	3.50	1850	4.01
6700	2913	1639	2.37	1656	2.47	1674	2.58	1691	2.68	1709	2.81	1726	2.91	1743	3.04	1778	3.29	1812	3.54	1879	4.07	1945	4.60
7200	3130	1756	2.90	1772	3.00	1789	3.12	1805	3.24	1821	3.37	1837	3.49	1853	3.62	1886	3.87	1918	4.15	1981	4.69	2043	5.26
7700	3348	1874	3.52	1889	3.62	1904	3.75	1919	3.87	1934	4.00	1950	4.14	1965	4.26	1995	4.54	2025	4.82	2085	5.41	2143	6.00
8200	3565	1992	4.22	2006	4.33	2020	4.45	2034	4.58	2049	4.73	2063	4.85	2077	5.00	2106	5.29	2134	5.58	2190	6.19	2245	6.81
8700	3783	2110	5.00	2123	5.12	2137	5.25	2150	5.40	2163	5.54	2177	5.67	2190	5.83	2217	6.12	2244	6.43	2297	7.06	2350	7.73

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3300	1435	1512	2.07	1614	2.45	1712	2.87																
3600	1565	1539	2.24	1636	2.62	1731	3.04	1822	3.49	1909	3.94												
3900	1696	1570	2.41	1663	2.83	1754	3.25	1841	3.70	1927	4.16												
4200	1826	1606	2.62	1694	3.04	1781	3.47	1865	3.92	1948	4.41	2028	4.90										
4500	1957	1645	2.86	1730	3.27	1813	3.72	1894	4.19	1973	4.66	2050	5.16	2126	5.69	2200	6.23	2272	6.78	2343	7.33		
4800	2087	1688	3.09	1769	3.54	1848	4.00	1926	4.48	2002	4.97	2077	5.48	2150	6.00	2222	6.54	2292	7.09	2361	7.68		
5100	2217	1733	3.37	1810	3.83	1886	4.30	1961	4.77	2034	5.29	2106	5.80	2177	6.33	2247	6.89	2315	7.45	2382	8.03	2448	8.64
5400	2348	1781	3.65	1855	4.12	1928	4.62	2000	5.12	2070	5.62	2139	6.16	2208	6.70	2275	7.26	2341	7.83	2406	8.42	2471	9.03
5700	2478	1831	3.97	1902	4.45	1972	4.95	2041	5.47	2109	6.00	2176	6.54	2242	7.09	2307	7.66	2371	8.25	2434	8.85	2496	9.46
6200	2696	1918	4.52	1985	5.05	2051	5.58	2115	6.12	2179	6.68	2242	7.25	2304	7.81	2366	8.41	2426	9.01	2486	9.63	2546	10.25
6700	2913	2009	5.16	2072	5.70	2134	6.27	2195	6.84	2255	7.43	2315	8.01	2374	8.63	2432	9.24	2489	9.85	2546	10.50	2602	11.14
7200	3130	2103	5.84	2163	6.44	2222	7.04	2280	7.64	2337	8.25	2393	8.88	2449	9.50	2504	10.14	2559	10.80	2613	11.46	2666	12.13
7700	3348	2201	6.61	2257	7.24	2313	7.86	2368	8.50	2422	9.16	2476	9.80	2529	10.46	2581	11.14	2633	11.82	2685	12.50	2736	13.19
8200	3565	2300	7.46	2354	8.13	2407	8.78	2459	9.46	2511	10.14	2562	10.83	2613	11.51	2663	12.21	2712	12.91	2761	13.63	2810	14.36
8700	3783	2402	8.39	2453	9.08	2504	9.78	2554	10.49	2603	11.21	2652	11.91	2700	12.64	2748	13.38	2795	14.11	2842	14.86	2889	15.61
9200	4000	2505	9.42	2554	10.14	2602	10.88	2650	11.60	2697	12.35	2744	13.11	2790	13.86	2836	14.63	2882	15.41	2927	16.17	2971	16.96
9700	4217	2610	10.55	2656	11.30	2703	12.05	2748	12.83	2794	13.61	2839	14.39	2883	15.18	2927	15.98	2971	16.78	3014	17.60	3057	18.41
10200	4435	2716	11.78	2760	12.55	2805	13.33	2849	14.14	2892	14.96	2935	15.78	2978	16.60	3020	17.42	3062	18.26	3104	19.11	3145	19.96
10700	4652	2823	13.11	2866	13.91	2908	14.73	2951	15.57	2992	16.41	3034	17.26	3075	18.11	3116	18.98	3156	19.85	3196	20.73	3236	21.61
11200	4870	2931	14.56	2972	15.38	3013	16.23	3054	17.10	3094	17.98	3134	18.85	3174	19.75	3213	20.64	3252	21.54	3291	22.46	3329	23.38

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800	2087	2495	8.86																				
5100	2217	2513	9.25	2577	9.86	2701	11.16																
5400	2348	2534	9.66	2596	10.28	2717	11.60	2835	12.96														
5700	2478	2558	10.10	2618	10.74	2737	12.07	2852	13.43	2964	14.86												
6200	2696	2604	10.91	2662	11.57	2776	12.91	2887	14.32	2995	15.78	3101	17.28	3204	18.82								
6700	2913	2658	11.80	2713	12.49	2822	13.86	2928	15.30	3033	16.78	3135	18.32	3235	19.89	3333	21.51	3430	23.17	3524	24.86		
7200	3130	2719	12.81	2772	13.50	2876	14.91	2977	16.39	3078	17.89	3176	19.46	3273	21.06	3368	22.71	3461	24.39	3553	26.12	3643	27.89
7700	3348	2786	13.89	2836	14.61	2935	16.07	3033	17.57	3129	19.13	3224	20.71	3317	22.35	3409	24.03	3499	25.73	3588	27.50	3676	29.29
8200	3565	2858	15.08	2906	15.83	3001	17.33	3095	18.88	3187	20.46	3278	22.08	3367	23.76	3456	25.46	3543	27.21	3629	29.00	3714	30.82
8700	3783	2935	16.38	2981	17.14	3072	18.70	3161	20.28	3250	21.92	3337	23.57	3423	25.28	3508	27.02	3593	28.81	3676	30.62		
9200	4000	3016	17.76	3060	18.54	3147	20.17	3233	21.81	3318	23.48	3402	25.18	3485	26.93	3567	28.72	3648	30.52				
9700	4217	3099	19.23	3142	20.06	3225	21.73	3308	23.43	3390	25.16	3471	26.92	3551	28.71	3630	30.52	3708	32.39				
10200	4435	3186	20.82	3227	21.67	3308	23.41	3387	25.17	3466	26.96	3544	28.77	3621	30.60	3697	32.47						
10700	4652	3276	22.50	3315	23.39	3393	25.20	3469	27.02	3545	28.85	3620	30.72	3695	32.62								
11200	4870	3367	24.29	3405	25.23	3480	27.08	3554	28.97	3628	30.89	3700	32.82										
11700	5087	3461	26.21	3497	27.17	3570	29.10	3642	31.06	3713	33.03												
12200	5304	3556	28.23	3592	29.23	3662	31.23																
12700	5522	3653	30.39	3687	31.42																		

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AF SWSI

Wheel Diameter = 22.25 in.	Discharge Area = 2.85 sq. ft.
Inlet Area = 3.020 sq. ft.	Tip Speed, FPM = 5.83 x RPM
Maximum BHP = 1.102 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2200	772	497	0.14	547	0.19	593	0.24	637	0.28	678	0.33	718	0.39	756	0.44	833	0.58						
2400	842	524	0.16	571	0.22	615	0.27	657	0.32	697	0.37	735	0.43	771	0.48	841	0.61	912	0.76				
2600	912	551	0.19	596	0.24	638	0.30	678	0.36	717	0.41	753	0.47	789	0.53	856	0.65	920	0.80				
2800	982	580	0.22	623	0.28	663	0.34	701	0.40	738	0.46	773	0.52	807	0.58	872	0.71	934	0.84	1054	1.18		
3000	1053	609	0.25	650	0.31	688	0.38	725	0.44	760	0.51	794	0.57	827	0.64	890	0.77	950	0.91	1062	1.23	1179	1.62
3500	1228	684	0.34	720	0.41	755	0.49	788	0.56	820	0.64	852	0.72	882	0.80	940	0.95	996	1.10	1100	1.41	1197	1.77
4000	1404	761	0.46	794	0.54	826	0.62	856	0.71	886	0.80	914	0.88	942	0.97	996	1.15	1048	1.32	1146	1.66	1237	2.02
4500	1579	840	0.61	870	0.70	899	0.79	927	0.88	955	0.98	981	1.07	1007	1.17	1057	1.37	1105	1.57	1197	1.96	1284	2.35
5000	1754	921	0.80	948	0.89	975	0.99	1001	1.09	1026	1.19	1051	1.30	1075	1.40	1122	1.62	1167	1.84	1253	2.28	1335	2.72
5500	1930	1002	1.01	1027	1.12	1052	1.23	1076	1.34	1100	1.45	1123	1.56	1145	1.67	1189	1.91	1232	2.15	1313	2.63	1390	3.12
6000	2105	1084	1.27	1108	1.39	1131	1.51	1153	1.63	1175	1.74	1197	1.86	1218	1.99	1259	2.23	1299	2.49	1376	3.01	1449	3.54
6500	2281	1166	1.57	1188	1.70	1210	1.83	1231	1.96	1252	2.08	1272	2.21	1292	2.34	1331	2.61	1369	2.88	1442	3.43	1512	4.01
7000	2456	1249	1.92	1270	2.06	1290	2.20	1310	2.33	1330	2.47	1349	2.61	1368	2.75	1405	3.03	1441	3.31	1510	3.90	1577	4.51
7500	2632	1332	2.31	1352	2.47	1371	2.61	1390	2.76	1409	2.91	1427	3.06	1445	3.20	1480	3.50	1514	3.80	1580	4.42	1644	5.06
8000	2807	1415	2.76	1434	2.93	1453	3.09	1471	3.24	1488	3.40	1506	3.56	1523	3.71	1556	4.03	1589	4.35	1652	5.00	1713	5.67
8500	2982	1499	3.27	1517	3.44	1535	3.61	1552	3.78	1569	3.95	1585	4.12	1601	4.28	1633	4.62	1664	4.95	1725	5.64	1783	6.34
9000	3158	1583	3.84	1600	4.02	1617	4.20	1633	4.38	1649	4.56	1665	4.74	1681	4.91	1711	5.27	1741	5.62	1799	6.34	1855	7.07
9500	3333	1667	4.47	1684	4.66	1700	4.85	1715	5.05	1731	5.23	1746	5.42	1761	5.61	1790	5.98	1818	6.35	1874	7.10	1928	7.87
10000	3509	1751	5.17	1767	5.37	1783	5.58	1798	5.78	1812	5.98	1827	6.17	1841	6.37	1869	6.76	1897	7.16	1950	7.94	2002	8.74
10500	3684	1835	5.94	1851	6.15	1866	6.37	1880	6.58	1894	6.79	1908	7.00	1922	7.21	1949	7.62	1975	8.03	2027	8.85	2077	9.69

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	1228	1293	2.19																				
4000	1404	1323	2.41	1407	2.85	1491	3.35	1581	3.88														
4500	1579	1366	2.74	1444	3.16	1519	3.63	1593	4.14	1668	4.69	1748	5.30										
5000	1754	1413	3.14	1488	3.58	1560	4.03	1629	4.52	1696	5.04	1763	5.61	1830	6.22	1899	6.87	1974	7.55				
5500	1930	1465	3.59	1536	4.06	1605	4.54	1672	5.02	1736	5.53	1798	6.07	1860	6.65	1920	7.26	1981	7.92	2043	8.61	2107	9.34
6000	2105	1520	4.07	1589	4.59	1655	5.10	1719	5.62	1781	6.14	1841	6.68	1900	7.24	1957	7.83	2013	8.45	2069	9.11	2124	9.80
6500	2281	1579	4.58	1644	5.15	1707	5.72	1769	6.27	1829	6.83	1887	7.39	1944	7.96	1999	8.55	2053	9.15	2106	9.79	2158	10.45
7000	2456	1641	5.13	1703	5.75	1764	6.36	1823	6.97	1880	7.57	1937	8.17	1992	8.77	2045	9.38	2098	9.99	2149	10.62	2200	11.27
7500	2632	1705	5.72	1765	6.38	1823	7.05	1879	7.71	1935	8.36	1989	9.01	2042	9.65	2094	10.29	2145	10.93	2195	11.58	2244	12.24
8000	2807	1771	6.36	1829	7.06	1884	7.77	1939	8.48	1992	9.18	2044	9.88	2096	10.58	2146	11.26	2195	11.95	2244	12.63	2292	13.32
8500	2982	1840	7.06	1895	7.80	1948	8.55	2000	9.30	2052	10.05	2102	10.80	2152	11.54	2200	12.28	2248	13.02	2295	13.75	2342	14.47
9000	3158	1909	7.82	1962	8.59	2014	9.38	2064	10.17	2114	10.96	2162	11.76	2210	12.56	2257	13.35	2303	14.13	2349	14.91	2394	15.69
9500	3333	1980	8.65	2031	9.46	2081	10.27	2130	11.10	2178	11.94	2224	12.78	2271	13.62	2316	14.46	2361	15.29	2405	16.12	2449	16.95
10000	3509	2052	9.56	2102	10.39	2150	11.24	2197	12.10	2243	12.97	2289	13.85	2333	14.74	2377	15.62	2421	16.50	2463	17.39	2506	18.26
10500	3684	2126	10.53	2173	11.40	2220	12.28	2265	13.17	2310	14.08	2354	14.99	2398	15.92	2440	16.84	2482	17.77	2524	18.70	2565	19.63
11000	3860	2200	11.59	2246	12.49	2291	13.40	2335	14.32	2379	15.26	2421	16.21	2463	17.17	2505	18.14	2546	19.11	2586	20.08	2626	21.05
11500	4035	2275	12.73	2319	13.66	2363	14.60	2406	15.55	2448	16.52	2490	17.51	2530	18.50	2571	19.50	2610	20.51	2650	21.53	2688	22.54
12000	4211	2350	13.95	2394	14.91	2436	15.88	2478	16.87	2519	17.87	2559	18.89	2599	19.91	2638	20.95	2676	22.00	2715	23.05	2752	24.10
12500	4386	2427	15.27	2469	16.26	2510	17.26	2550	18.28	2590	19.31	2629	20.36	2668	21.42	2706	22.49	2744	23.56	2781	24.65	2818	25.75
13000	4561	2504	16.67	2545	17.70	2585	18.73	2624	19.78	2663	20.85	2701	21.92	2738	23.01	2776	24.11	2812	25.22	2848	26.35	2884	27.48

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5800	2035	2173	10.34	2235	11.12																		
6300	2211	2196	10.88	2249	11.62	2357	13.21	2473	14.91														
6800	2386	2233	11.61	2282	12.32	2380	13.83	2479	15.47	2581	17.24	2688	19.06										
7300	2561	2275	12.51	2322	13.21	2416	14.67	2507	16.24	2599	17.93	2691	19.74	2787	21.66	2886	23.58						
7800	2737	2320	13.56	2366	14.26	2457	15.70	2545	17.23	2631	18.85	2717	20.59	2802	22.44	2889	24.40	2980	26.46	3076	28.60		
8300	2912	2367	14.71	2413	15.43	2501	16.89	2587	18.41	2671	20.00	2753	21.68	2833	23.46	2913	25.35	2994	27.34	3076	29.43	3160	31.62
8800	3088	2418	15.95	2462	16.70	2548	18.21	2632	19.76	2714	21.34	2793	23.00	2871	24.73	2948	26.56	3024	28.48	3100	30.49	3175	32.61
9300	3263	2470	17.24	2513	18.04	2597	19.63	2679	21.23	2759	22.85	2837	24.51	2913	26.23	2988	28.02	3061	29.88	3133	31.84	3205	33.88
9800	3439	2525	18.59	2567	19.43	2649	21.12	2729	22.79	2807	24.47	2883	26.17	2958	27.91	3031	29.69	3102	31.54	3172	33.45	3242	35.44
10300	3614	2582	19.98	2622	20.88	2702	22.67	2780	24.44	2857	26.20	2931	27.96	3004	29.74	3076	31.55	3146	33.40	3215	35.30	3282	37.26
10800	3789	2641	21.43	2680	22.38	2758	24.27	2834	26.14	2908	28.00	2981	29.84	3053	31.69	3123	33.55	3192	35.43	3259	37.35	3326	39.31
11300	3965	2702	22.94	2740	23.94	2815	25.93	2889	27.90	2962	29.86	3033	31.80	3103	33.74	3172	35.67	3240	37.61	3306	39.57		
11800	4140	2764	24.51	2801	25.56	2875	27.65	2947	29.72	3018	31.78	3087	33.83	3156	35.86	3223	37.88	3289	39.90				
12300	4316	2828	26.16	2864	27.25	2936	29.43	3006	31.60	3075	33.77	3143	35.91	3210	38.05	3276	40.16	3340	42.27				
12800	4491	2893	27.90	2929	29.02	2998	31.29	3067	33.55	3134	35.81	3200	38.06	3266	40.30	3330	42.52						
13300	4667	2960	29.72	2994	30.88	3062	33.22	3129	35.58	3195	37.93	3259	40.28	3323	42.62								
13800	4842	3027	31.63	3061	32.83	3127	35.25	3192	37.68	3257	40.13	3320	42.57										
14300	5018	3095	33.65	3128	34.88	3193	37.37	3257	39.88	3320	42.41												
14800	5193	3165	35.77	3197	37.04	3260	39.59	3323	42.18														
15300	5368	3235	38.00	3266	39.30	3329	41.92																

Performance Data

VCR Fan

245 AF SWSI

Wheel Diameter = 24.50 in.	Discharge Area = 3.45 sq. ft.
Inlet Area = 3.640 sq. ft.	Tip Speed, FPM = 6.41 x RPM
Maximum BHP = 1.785 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	870	483	0.20	526	0.26	567	0.32	607	0.39	645	0.46	683	0.54	719	0.61	789	0.80	855	0.97				
3500	1014	536	0.26	574	0.32	611	0.40	646	0.48	681	0.56	715	0.64	748	0.72	812	0.91	873	1.10	988	1.52		
4000	1159	592	0.34	626	0.41	659	0.50	691	0.59	722	0.66	753	0.76	783	0.85	841	1.04	898	1.23	1006	1.67	1107	2.16
4500	1304	649	0.44	680	0.53	710	0.61	740	0.70	768	0.81	796	0.89	824	1.00	877	1.20	930	1.41	1030	1.86	1126	2.36
5000	1449	708	0.56	736	0.65	764	0.76	791	0.86	817	0.96	843	1.06	869	1.16	918	1.37	967	1.61	1060	2.08	1150	2.58
5500	1594	768	0.70	794	0.81	819	0.91	844	1.02	869	1.12	893	1.25	916	1.36	963	1.58	1008	1.82	1095	2.33	1180	2.84
6000	1739	829	0.88	853	0.98	876	1.10	899	1.21	922	1.33	945	1.45	967	1.58	1010	1.82	1052	2.08	1134	2.59	1214	3.15
6500	1884	891	1.08	913	1.18	934	1.31	956	1.43	977	1.56	998	1.68	1019	1.82	1060	2.08	1099	2.36	1177	2.91	1252	3.49
7000	2029	953	1.31	973	1.43	993	1.56	1013	1.68	1033	1.82	1053	1.95	1073	2.09	1111	2.37	1149	2.66	1222	3.25	1293	3.85
7500	2174	1015	1.58	1034	1.70	1053	1.83	1072	1.97	1091	2.11	1109	2.25	1128	2.40	1164	2.70	1200	3.00	1269	3.62	1336	4.25
8000	2319	1078	1.87	1096	2.00	1113	2.15	1131	2.29	1149	2.43	1166	2.58	1184	2.74	1218	3.06	1252	3.37	1318	4.02	1382	4.69
8500	2464	1141	2.22	1158	2.36	1174	2.50	1191	2.65	1208	2.79	1224	2.95	1241	3.12	1274	3.45	1306	3.79	1369	4.47	1430	5.17
9000	2609	1204	2.59	1220	2.74	1236	2.88	1252	3.04	1267	3.20	1283	3.37	1299	3.54	1330	3.89	1361	4.24	1421	4.95	1479	5.69
9500	2754	1267	3.02	1282	3.17	1297	3.33	1313	3.49	1328	3.65	1343	3.83	1357	4.00	1387	4.35	1416	4.73	1474	5.48	1530	6.25
10000	2899	1331	3.50	1345	3.65	1360	3.80	1374	3.97	1388	4.15	1402	4.33	1417	4.50	1445	4.87	1473	5.25	1528	6.05	1582	6.84
10500	3043	1395	4.01	1408	4.17	1422	4.33	1436	4.51	1449	4.69	1463	4.87	1476	5.07	1503	5.44	1530	5.84	1583	6.66	1635	7.49
11000	3188	1459	4.58	1472	4.75	1485	4.92	1498	5.10	1511	5.29	1524	5.48	1537	5.66	1562	6.07	1588	6.48	1639	7.31	1689	8.19
11500	3333	1523	5.20	1535	5.37	1548	5.55	1560	5.75	1572	5.94	1585	6.12	1597	6.33	1622	6.74	1647	7.16	1695	8.03	1743	8.92
12000	3478	1587	5.89	1599	6.05	1611	6.25	1622	6.44	1634	6.64	1646	6.83	1658	7.04	1682	7.46	1706	7.90	1753	8.80	1799	9.73
12500	3623	1651	6.61	1662	6.80	1674	7.00	1685	7.19	1697	7.40	1708	7.59	1720	7.81	1742	8.25	1765	8.69	1810	9.61	1855	10.58

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5500	1594	1261	3.41	1340	4.00	1417	4.64	1490	5.30	1561	5.99												
6000	1739	1291	3.72	1366	4.34	1439	4.99	1509	5.66	1578	6.35	1645	7.08	1710	7.84								
6500	1884	1324	4.08	1395	4.72	1465	5.37	1533	6.07	1599	6.78	1663	7.53	1726	8.30	1787	9.08	1847	9.91				
7000	2029	1362	4.48	1429	5.14	1495	5.80	1560	6.51	1623	7.25	1685	8.00	1746	8.78	1805	9.60	1863	10.42	1920	11.28	1976	12.16
7500	2174	1402	4.91	1466	5.58	1529	6.29	1591	7.01	1651	7.75	1711	8.53	1769	9.33	1827	10.16	1883	11.00	1938	11.86	1993	12.76
8000	2319	1445	5.39	1506	6.08	1566	6.80	1625	7.55	1683	8.33	1740	9.11	1796	9.92	1852	10.76	1906	11.63	1960	12.51	2012	13.41
8500	2464	1490	5.89	1548	6.63	1605	7.38	1662	8.14	1718	8.94	1772	9.75	1826	10.58	1880	11.44	1932	12.30	1984	13.21	2035	14.13
9000	2609	1536	6.44	1592	7.20	1647	7.99	1702	8.78	1755	9.60	1808	10.42	1860	11.28	1911	12.16	1961	13.05	2011	13.96	2061	14.89
9500	2754	1585	7.03	1639	7.83	1691	8.64	1743	9.46	1795	10.30	1845	11.16	1895	12.03	1945	12.93	1994	13.85	2042	14.78	2090	15.73
10000	2899	1635	7.66	1686	8.50	1737	9.33	1787	10.19	1837	11.07	1885	11.94	1933	12.85	1981	13.76	2028	14.71	2075	15.66	2121	16.63
10500	3043	1685	8.33	1735	9.21	1784	10.08	1833	10.96	1880	11.86	1927	12.78	1974	13.71	2020	14.66	2065	15.61	2110	16.58	2155	17.58
11000	3188	1738	9.07	1786	9.96	1833	10.88	1879	11.80	1925	12.73	1971	13.67	2016	14.63	2060	15.60	2104	16.58	2148	17.58	2191	18.60
11500	3333	1791	9.85	1837	10.78	1883	11.71	1928	12.66	1972	13.63	2016	14.61	2059	15.60	2102	16.60	2145	17.61	2187	18.64	2229	19.67
12000	3478	1844	10.67	1889	11.64	1933	12.61	1977	13.60	2020	14.60	2063	15.61	2105	16.63	2146	17.66	2187	18.70	2228	19.76	2269	20.82
12500	3623	1899	11.55	1942	12.55	1985	13.57	2027	14.58	2069	15.61	2110	16.66	2151	17.71	2191	18.76	2231	19.85	2271	20.92	2310	22.03
13000	3768	1954	12.50	1996	13.53	2038	14.57	2079	15.63	2119	16.68	2159	17.76	2199	18.85	2238	19.95	2277	21.04	2315	22.16	2353	23.28
13500	3913	2010	13.50	2051	14.56	2091	15.63	2131	16.73	2170	17.82	2209	18.92	2248	20.04	2286	21.17	2323	22.32	2361	23.46	2398	24.61
14000	4058	2067	14.57	2106	15.66	2145	16.76	2184	17.89	2222	19.01	2260	20.16	2297	21.31	2334	22.46	2371	23.64	2407	24.82	2443	26.01
15000	4348	2181	16.89	2219	18.04	2255	19.21	2292	20.39	2328	21.60	2364	22.81	2399	24.03	2434	25.26	2469	26.48	2504	27.73	2538	28.98
16000	4638	2298	19.51	2333	20.71	2368	21.95	2402	23.20	2437	24.46	2470	25.72	2504	27.02	2538	28.31	2571	29.60	2603	30.92	2636	32.25

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	2319	2064	14.35	2115	15.30	2215	17.25	2312	19.28														
8500	2464	2085	15.07	2135	16.03	2232	18.01	2327	20.08	2418	22.21												
9000	2609	2110	15.86	2158	16.83	2252	18.85	2344	20.93	2434	23.10	2522	25.33										
9500	2754	2137	16.71	2183	17.70	2275	19.75	2365	21.86	2452	24.06	2538	26.32	2622	28.64	2704	31.04						
10000	2899	2167	17.61	2212	18.63	2301	20.71	2388	22.85	2473	25.07	2557	27.37	2639	29.72	2719	32.15	2798	34.64	2875	37.18		
10500	3043	2199	18.60	2243	19.61	2329	21.73	2414	23.91	2497	26.16	2578	28.48	2659	30.87	2737	33.32	2814	35.84	2890	38.42	2965	41.06
11000	3188	2234	19.64	2276	20.67	2360	22.82	2442	25.03	2523	27.32	2602	29.67	2681	32.09	2757	34.57	2833	37.12	2907	39.72	2980	42.39
11500	3333	2270	20.73	2311	21.81	2393	24.00	2472	26.25	2551	28.56	2629	30.95	2705	33.39	2780	35.90	2854	38.47	2927	41.10	2998	43.79
12000	3478	2309	21.89	2349	23.00	2428	25.23	2505	27.52	2582	29.87	2657	32.28	2731	34.77	2805	37.31	2877	39.90	2948	42.57	3018	45.29
12500	3623	2349	23.13	2388	24.25	2464	26.52	2540	28.87	2614	31.26	2688	33.71	2760	36.22	2832	38.79	2902	41.42	2972	44.12	3041	46.87
13000	3768	2391	24.42	2429	25.57	2503	27.91	2576	30.28	2649	32.72	2720	35.21	2791	37.77	2861	40.37	2930	43.03	2998	45.76		
13500	3913	2435	25.77	2471	26.96	2543	29.35	2615	31.77	2685	34.27	2755	36.79	2824	39.39	2892	42.03	2959	44.73	3026	47.48		
14000	4058	2479	27.21	2515	28.41	2585	30.85	2655	33.34	2723	35.87	2791	38.46	2858	41.09	2925	43.78	2990	46.52				
15000	4348	2572	30.25	2606	31.52	2672	34.09	2738	36.68	2804	39.32	2868	42.02	2932	44.75	2995	47.52						
16000	4638	2668	33.57	2701	34.90	2764	37.59	2827	40.32	2889	43.09	2951	45.89	3012	48.71								
17000	4928	2768	37.18	2799	38.59	2860	41.42	2920	44.27	2979	47.15	3038	50.07										
18000	5217	2871	41.10	2900	42.57	2958	45.53	3016	48.53														
19000	5507	2976	45.35	3004	46.90																		

270

AF SWSI

Wheel Diameter = 27 in.

Discharge Area = 4.19 sq. ft.

Inlet Area = 4.350 sq. ft.

Tip Speed, FPM = 7.075 x RPM

Maximum BHP = 3.155 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	835	413	0.22	454	0.29	491	0.35	527	0.44	562	0.52	596	0.60	628	0.68	691	0.88						
4000	955	449	0.28	486	0.35	521	0.44	554	0.53	586	0.61	614	0.71	647	0.79	705	0.98	761	1.20				
4500	1074	487	0.34	521	0.44	554	0.53	584	0.61	614	0.71	643	0.81	671	0.91	725	1.12	777	1.33	876	1.81		
5000	1193	526	0.43	558	0.53	588	0.63	617	0.72	645	0.83	671	0.93	698	1.04	748	1.26	797	1.48	890	1.97	978	2.50
5500	1313	566	0.53	596	0.64	624	0.75	651	0.86	677	0.96	703	1.08	727	1.20	775	1.43	821	1.67	909	2.17	992	2.72
6000	1432	606	0.64	634	0.76	661	0.88	687	1.00	712	1.12	736	1.25	759	1.37	804	1.62	847	1.87	931	2.40	1010	2.97
6500	1551	647	0.77	674	0.89	699	1.03	724	1.16	747	1.29	770	1.41	792	1.56	835	1.82	876	2.08	955	2.65	1031	3.22
7000	1671	689	0.91	714	1.04	738	1.18	761	1.33	784	1.47	806	1.62	827	1.76	868	2.04	907	2.33	982	2.91	1054	3.52
7500	1790	731	1.08	755	1.22	778	1.37	800	1.53	821	1.67	842	1.82	862	1.98	902	2.29	939	2.59	1012	3.20	1080	3.84
8000	1909	774	1.27	796	1.41	818	1.58	839	1.75	860	1.91	880	2.07	899	2.22	937	2.56	973	2.87	1042	3.52	1108	4.19
8500	2029	817	1.47	838	1.63	858	1.81	879	1.97	898	2.15	918	2.33	936	2.50	973	2.83	1007	3.18	1074	3.87	1138	4.58
9000	2148	860	1.70	880	1.88	900	2.06	919	2.24	938	2.41	956	2.61	974	2.79	1009	3.15	1043	3.52	1107	4.25	1169	4.99
9500	2267	903	1.97	922	2.15	941	2.33	960	2.52	978	2.72	995	2.91	1013	3.09	1047	3.49	1079	3.87	1141	4.65	1201	5.41
10000	2387	947	2.25	965	2.45	983	2.65	1001	2.83	1018	3.04	1035	3.24	1052	3.45	1084	3.84	1116	4.25	1176	5.07	1234	5.87
11000	2625	1034	2.92	1051	3.12	1067	3.34	1084	3.55	1100	3.77	1116	3.99	1131	4.20	1162	4.66	1191	5.09	1248	6.00	1303	6.89
12000	2864	1123	3.72	1138	3.94	1153	4.16	1168	4.39	1183	4.62	1198	4.85	1212	5.09	1241	5.58	1269	6.07	1323	7.04	1374	8.01
13000	3103	1211	4.64	1225	4.87	1239	5.12	1253	5.37	1267	5.62	1281	5.87	1295	6.12	1322	6.65	1348	7.16	1399	8.21	1447	9.28
14000	3341	1300	5.72	1313	5.97	1326	6.23	1339	6.49	1352	6.75	1365	7.03	1378	7.30	1403	7.85	1428	8.41	1476	9.55	1523	10.67
15000	3580	1389	6.95	1402	7.21	1414	7.50	1426	7.76	1438	8.05	1450	8.33	1462	8.63	1486	9.21	1510	9.82	1555	11.01	1600	12.24
16000	3819	1479	8.36	1490	8.64	1502	8.94	1513	9.23	1525	9.53	1536	9.83	1547	10.14	1570	10.75	1592	11.39	1636	12.66	1678	13.96

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	1432	1086	3.57	1159	4.20																		
6500	1551	1104	3.84	1174	4.50	1242	5.19	1307	5.91														
7000	1671	1124	4.16	1191	4.83	1257	5.55	1320	6.27	1382	7.05												
7500	1790	1147	4.51	1211	5.20	1274	5.92	1335	6.68	1395	7.45	1453	8.26	1510	9.10								
8000	1909	1172	4.89	1234	5.60	1294	6.34	1353	7.10	1411	7.91	1467	8.74	1522	9.58	1576	10.46						
8500	2029	1199	5.30	1259	6.04	1317	6.80	1373	7.58	1429	8.39	1483	9.24	1537	10.10	1589	11.00	1640	11.91	1690	12.86		
9000	2148	1228	5.74	1285	6.50	1341	7.29	1396	8.10	1449	8.92	1502	9.78	1554	10.66	1604	11.58	1654	12.50	1703	13.46	1751	14.46
9500	2267	1258	6.19	1313	7.00	1367	7.80	1420	8.64	1472	9.50	1523	10.38	1573	11.28	1622	12.19	1670	13.14	1718	14.11	1765	15.11
10000	2387	1289	6.69	1343	7.53	1395	8.36	1446	9.23	1496	10.10	1545	11.00	1594	11.92	1642	12.86	1688	13.83	1735	14.82	1780	15.83
11000	2625	1355	7.78	1405	8.67	1454	9.58	1502	10.50	1550	11.44	1596	12.39	1641	13.36	1686	14.33	1731	15.35	1774	16.36	1817	17.41
12000	2864	1423	8.99	1471	9.96	1518	10.94	1563	11.92	1608	12.92	1652	13.92	1695	14.94	1737	15.98	1779	17.03	1820	18.10	1861	19.19
13000	3103	1495	10.33	1540	11.39	1584	12.44	1628	13.50	1670	14.57	1712	15.63	1753	16.71	1793	17.81	1833	18.92	1872	20.03	1911	21.17
14000	3341	1568	11.82	1611	12.94	1654	14.08	1695	15.21	1735	16.35	1775	17.51	1814	18.66	1853	19.81	1890	20.98	1928	22.16	1965	23.35
15000	3580	1643	13.46	1684	14.66	1725	15.88	1765	17.10	1803	18.32	1841	19.53	1879	20.76	1916	21.98	1952	23.21	1988	24.46	2023	25.72
16000	3819	1719	15.26	1759	16.54	1798	17.85	1836	19.14	1873	20.43	1910	21.73	1946	23.03	1981	24.33	2016	25.64	2050	26.96	2084	28.27
17000	4057	1797	17.23	1835	18.60	1873	19.98	1909	21.36	1945	22.75	1980	24.11	2015	25.50	2049	26.87	2083	28.26	2116	29.64	2148	31.03
18000	4296	1876	19.39	1912	20.85	1948	22.32	1984	23.78	2018	25.23	2052	26.68	2086	28.14	2119	29.60	2151	31.07	2183	32.53	2215	34.00
19000	4535	1955	21.76	1991	23.29	2026	24.83	2060	26.37	2093	27.92	2126	29.46	2158	31.00	2190	32.53	2221	34.07	2252	35.62	2283	37.15
20000	4773	2036	24.33	2070	25.95	2104	27.57	2137	29.18	2169	30.81	2201	32.42	2232	34.06	2263	35.67	2293	37.29	2323	38.92	2353	40.53
21000	5012	2117	27.14	2150	28.82	2183	30.52	2215	32.21	2246	33.92	2277	35.62	2307	37.32	2337	39.03	2366	40.73	2395	42.43	2424	44.14

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	2148	1798	15.46																				
9500	2267	1811	16.14	1856	17.17																		
10000	2387	1825	16.86	1869	17.92	1956	20.10																
11000	2625	1860	18.48	1902	19.57	1985	21.79	2065	24.11	2144	26.51	2221	28.98										
12000	2864	1901	20.29	1941	21.42	2020	23.71	2097	26.10	2172	28.54	2246	31.07	2319	33.67	2390	36.34						
13000	3103	1949	22.32	1987	23.48	2062	25.87	2135	28.31	2207	30.82	2278	33.42	2348	36.07	2416	38.79	2483	41.59	2550	44.45	2615	47.37
14000	3341	2001	24.54	2038	25.76	2109	28.22	2179	30.76	2248	33.35	2316	36.01	2382	38.72	2448	41.52	2513	44.37	2577	47.28	2640	50.26
15000	3580	2058	26.97	2093	28.25	2161	30.82	2228	33.45	2294	36.12	2359	38.85	2423	41.65	2486	44.51	2548	47.42	2610	50.40	2670	53.44
16000	3819	2118	29.60	2151	30.93	2217	33.62	2281	36.35	2344	39.14	2406	41.96	2468	44.84	2529	47.78	2588	50.77	2648	53.82	2706	56.92
17000	4057	2181	32.42	2213	33.82	2276	36.65	2337	39.51	2398	42.40	2458	45.32	2517	48.29	2576	51.32	2633	54.40	2690	57.52	2747	60.70
18000	4296	2246	35.46	2277	36.92	2337	39.89	2397	42.87	2456	45.89	2513	48.92	2570	55.02	2627	55.14	2682	58.30	2737	61.52		
19000	4535	2313	38.70	2343	40.25	2402	43.34	2459	46.46	2516	49.62	2572	52.79	2627	55.99	2681	59.21	2735	62.50				
20000	4773	2382	42.15	2411	43.78	2468	47.03	2524	50.29	2578	53.57	2632	56.87	2686	60.20	2738	63.57						
21000	5012	2452	45.84	2480	47.53	2536	50.95	2590	54.35	2643	57.79	2695	61.22	2747	64.69								
22000	5251	2524	49.75	2551	51.53	2605	55.09	2658	58.67	2709	62.25												
23000	5489	2597	53.90	2624	55.77	2676	59.49	2727	63.21														
24000	5728	2671	58.29	2697	60.25	2748	64.14																
25000	5967	2746	62.96																				

Performance Data

VCR Fan

300 AF SWSI

Wheel Diameter = 30 in.	Discharge Area = 5.17 sq. ft.
Inlet Area = 5.355 sq. ft.	Tip Speed, FPM = 7.86 x RPM
Maximum BHP = 5.342 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	812	366	0.26	403	0.34	437	0.43	470	0.53	502	0.61	553	0.72	563	0.83								
4800	928	397	0.32	431	0.41	463	0.52	493	0.61	522	0.72	551	0.83	578	0.94	631	1.18	682	1.45				
5400	1044	430	0.40	461	0.52	491	0.63	519	0.73	546	0.85	572	0.96	598	1.08	647	1.33	695	1.60	785	2.17		
6000	1161	463	0.50	493	0.61	521	0.75	547	0.86	572	0.98	597	1.12	621	1.23	667	1.51	712	1.77	797	2.37	877	3.02
6600	1277	498	0.60	526	0.75	552	0.88	576	1.01	600	1.14	623	1.28	646	1.41	690	1.70	732	1.98	812	2.61	889	3.27
7200	1393	533	0.73	559	0.88	584	1.03	607	1.18	630	1.31	652	1.46	673	1.62	714	1.92	754	2.22	831	2.87	903	3.55
7800	1509	569	0.88	594	1.04	617	1.20	639	1.36	661	1.52	682	1.67	702	1.82	741	2.15	779	2.47	851	3.15	921	3.87
8400	1625	605	1.04	628	1.21	651	1.38	672	1.56	692	1.72	712	1.89	732	2.07	769	2.41	805	2.75	874	3.47	940	4.20
9000	1741	642	1.23	664	1.41	685	1.60	705	1.77	725	1.97	744	2.15	763	2.33	799	2.70	833	3.06	899	3.80	962	4.58
9600	1857	679	1.45	700	1.64	720	1.83	739	2.02	758	2.22	776	2.41	794	2.62	829	3.00	862	3.39	925	4.17	986	4.99
10200	1973	717	1.70	736	1.89	755	2.09	774	2.29	792	2.50	809	2.72	827	2.91	860	3.34	892	3.75	953	4.58	1011	5.42
11200	2166	779	2.16	797	2.37	815	2.58	832	2.82	849	3.04	866	3.27	882	3.50	913	3.95	943	4.41	1001	5.30	1056	6.23
12200	2360	843	2.70	859	2.93	876	3.16	892	3.41	908	3.65	923	3.90	938	4.15	968	4.65	997	5.14	1051	6.12	1103	7.11
13200	2553	907	3.34	922	3.59	937	3.84	952	4.09	967	4.35	982	4.62	996	4.89	1024	5.42	1051	5.95	1103	7.03	1153	8.10
14200	2747	971	4.08	985	4.33	999	4.60	1013	4.89	1027	5.16	1041	5.44	1055	5.73	1081	6.30	1107	6.88	1157	8.03	1204	9.17
15200	2940	1035	4.92	1049	5.19	1062	5.49	1075	5.77	1088	6.08	1101	6.37	1114	6.68	1139	7.29	1164	7.90	1211	9.13	1257	10.36
16200	3133	1100	5.89	1112	6.17	1125	6.48	1137	6.79	1150	7.09	1162	7.41	1174	7.73	1198	8.38	1222	9.03	1267	10.33	1311	11.66
17200	3327	1165	6.96	1177	7.26	1188	7.58	1200	7.91	1212	8.24	1224	8.57	1235	8.91	1258	9.58	1280	10.28	1324	11.66	1366	13.06
18200	3520	1230	8.17	1241	8.50	1252	8.83	1263	9.16	1274	9.50	1285	9.85	1296	10.21	1318	10.92	1340	11.66	1381	13.11	1422	14.58
19200	3714	1295	9.51	1305	9.85	1316	10.21	1327	10.55	1337	10.91	1348	11.28	1358	11.66	1379	12.41	1400	13.16	1440	14.69	1478	16.26

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7200	1393	973	4.30	1040	5.08																		
7800	1509	987	4.62	1051	5.42	1113	6.26																
8400	1625	1004	4.99	1066	5.80	1125	6.66																
9000	1741	1023	5.39	1082	6.23	1140	7.11	1196	8.03	1250	8.99	1303	9.99										
9600	1857	1044	5.83	1101	6.69	1156	7.59	1210	8.53	1263	9.50	1314	10.51	1364	11.57	1414	12.64						
10200	1973	1067	6.30	1122	7.19	1175	8.11	1227	9.08	1278	10.08	1328	11.10	1376	12.16	1424	13.26	1471	14.38				
11200	2166	1109	7.16	1160	8.10	1210	9.08	1259	10.08	1307	11.11	1354	12.19	1401	13.28	1446	14.39	1491	15.56	1535	16.73	1578	17.96
12200	2360	1154	8.11	1202	9.13	1250	10.16	1296	11.21	1341	12.30	1386	13.39	1430	14.53	1473	15.68	1516	16.88	1557	18.08	1599	19.32
13200	2553	1201	9.17	1247	10.25	1292	11.35	1336	12.46	1379	13.60	1422	14.75	1463	15.91	1505	17.11	1545	18.35	1585	19.60	1625	20.86
14200	2747	1250	10.33	1294	11.49	1337	12.66	1379	13.83	1420	15.01	1461	16.23	1501	17.45	1540	18.70	1579	19.96	1617	21.26	1655	22.57
15200	2940	1301	11.60	1343	12.83	1384	14.07	1425	15.31	1464	16.57	1503	17.83	1541	19.11	1579	20.42	1616	21.73	1652	23.07	1688	24.42
16200	3133	1353	12.96	1394	14.28	1433	15.60	1472	16.92	1510	18.23	1547	19.57	1584	20.92	1620	22.28	1656	23.66	1691	25.04	1725	26.45
17200	3327	1406	14.46	1446	15.85	1484	17.25	1521	18.64	1558	20.03	1594	21.45	1629	22.85	1664	24.28	1698	25.72	1732	27.17	1765	28.62
18200	3520	1461	16.07	1499	17.54	1536	19.01	1572	20.50	1607	21.96	1642	23.45	1676	24.93	1709	26.42	1742	27.92	1775	29.45	1807	30.97
19200	3714	1516	17.81	1553	19.36	1589	20.92	1623	22.48	1658	24.03	1691	25.60	1724	27.16	1756	28.72	1788	30.29	1820	31.87	1851	33.46
20200	3907	1572	19.68	1608	21.32	1642	22.96	1676	24.60	1709	26.23	1742	27.87	1774	29.52	1805	31.16	1836	32.81	1866	34.46	1897	36.12
21200	4101	1629	21.71	1663	23.43	1697	25.16	1730	26.87	1762	28.58	1793	30.31	1824	32.03	1855	33.75	1885	35.46	1914	37.20	1944	38.92
22200	4294	1687	23.89	1720	25.70	1752	27.50	1784	29.29	1815	31.10	1846	32.90	1876	34.70	1906	36.48	1935	38.28	1964	40.09	1992	41.90
23200	4487	1745	26.23	1777	28.12	1809	30.00	1839	31.87	1870	33.76	1900	35.64	1929	37.52	1958	39.40	1986	41.28	2014	43.15	2042	45.03
24200	4681	1803	28.75	1835	30.70	1865	32.65	1895	34.62	1925	36.59	1954	38.54	1982	40.51	2010	42.46	2038	44.42	2065	46.39	2092	48.35

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11200	2166	1620	19.21																				
12200	2360	1639	20.60	1680	21.91	1758	24.58																
13200	2553	1664	22.17	1702	23.50	1778	26.23	1851	29.07	1923	32.02												
14200	2747	1692	23.91	1729	25.26	1801	28.07	1872	30.96	1942	33.96	2010	37.03	2076	40.21								
15200	2940	1724	25.81	1759	27.21	1829	30.07	1897	33.03	1964	36.09	2030	39.22	2094	42.46	2158	45.78	2220	49.18				
16200	3133	1760	27.87	1794	29.32	1860	32.28	1926	35.31	1991	38.42	2054	41.62	2116	44.92	2178	48.28	2238	51.75	2297	55.29	2356	58.90
17200	3327	1798	30.10	1831	31.60	1895	34.65	1958	37.77	2020	40.96	2082	44.22	2142	47.57	2201	51.02	2260	54.53	2317	58.12	2374	61.79
18200	3520	1839	32.51	1870	34.06	1932	37.20	1993	40.40	2053	43.68	2112	47.03	2171	50.46	2228	53.96	2285	57.54	2341	61.20	2396	64.93
19200	3714	1882	35.06	1912	36.67	1972	39.92	2031	43.25	2089	46.62	2146	50.06	2202	53.57	2258	57.14	2313	60.79	2367	64.50	2421	68.30
20200	3907	1926	37.78	1956	39.46	2014	42.84	2071	46.26	2127	49.73	2182	53.28	2237	56.87	2291	60.54	2344	64.25	2396	68.06	2448	71.92
21200	4101	1973	40.65	2001	42.40	2057	45.92	2113	49.46	2167	53.05	2221	56.70	2274	60.40	2326	64.15	2377	67.96	2428	71.84	2479	75.78
22200	4294	2020	43.71	2048	45.53	2103	49.17	2156	52.84	2209	56.57	2261	60.32	2312	64.12	2363	67.99	2413	71.90	2463	75.85		
23200	4487	2069	46.92	2096	48.82	2149	52.60	2201	56.42	2253	60.27	2303	64.15	2353	68.06	2402	72.04	2451	76.05				
24200	4681	2119	50.32	2145	52.28	2197	56.22	2248	60.17	2298	64.17	2347	68.18	2396	72.21	2444	76.31						
25200	4874	2170	53.89	2195	55.92	2246	60.02	2296	64.12	2344	68.25	2392	72.40	2440	76.57								
26200	5068	2221	57.64	2246	59.75	2296	64.00	2344	68.27	2392	72.54	2439	76.82										
27200	5261	2274	61.57	2298	63.78	2347	68.18	2394	72.60	2440	77.03												
28200	5455	2327	65.71	2351	68.00	2398	72.56	2444	77.14														
29200	5648	2381	70.05	2404	72.42	2450	77.15																

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AF SWSI

Wheel Diameter = 33 in.

Discharge Area = 6.26 sq. ft.

Inlet Area = 6.49 sq. ft.

Tip Speed, FPM = 8.65 x RPM

Maximum BHP = 8.60 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800	767	322	0.29	357	0.38	389	0.48	420	0.60	450	0.70	479	0.83	507	0.96								
5800	927	361	0.39	392	0.51	420	0.63	448	0.75	475	0.88	500	1.01	525	1.14	574	1.43	620	1.75				
6800	1086	402	0.53	430	0.66	456	0.81	481	0.94	505	1.08	528	1.22	551	1.37	595	1.68	637	2.02	717	2.72		
7800	1246	445	0.69	470	0.86	494	1.02	517	1.18	539	1.33	560	1.50	581	1.66	621	1.98	660	2.33	735	3.08	805	3.89
8800	1406	489	0.91	512	1.08	532	1.27	556	1.45	576	1.62	596	1.81	615	1.98	652	2.34	688	2.72	757	3.50	823	4.34
9800	1565	534	1.16	555	1.37	576	1.56	596	1.76	615	1.95	634	2.16	652	2.36	686	2.75	720	3.16	784	4.00	846	4.87
10800	1725	580	1.46	600	1.68	619	1.91	637	2.12	655	2.33	673	2.56	690	2.77	723	3.22	754	3.65	815	4.55	872	5.49
11800	1885	626	1.82	644	2.06	662	2.29	680	2.54	697	2.77	713	3.02	729	3.25	761	3.72	790	4.20	848	5.17	902	6.16
12800	2045	673	2.25	690	2.50	707	2.75	723	3.00	739	3.27	755	3.52	770	3.79	800	4.30	828	4.83	883	5.87	934	6.91
13800	2204	720	2.74	736	3.00	752	3.27	768	3.54	783	3.83	798	4.10	812	4.38	840	4.94	867	5.50	919	6.61	969	7.75
14800	2364	768	3.29	783	3.58	798	3.85	812	4.16	827	4.44	841	4.75	855	5.05	882	5.65	907	6.25	957	7.44	1004	8.64
15800	2524	816	3.92	830	4.22	844	4.52	858	4.83	871	5.15	885	5.47	898	5.79	924	6.43	949	7.06	996	8.35	1042	9.63
16800	2684	864	4.64	877	4.94	891	5.26	904	5.59	917	5.92	929	6.26	942	6.59	966	7.28	990	7.95	1036	9.33	1080	10.69
17800	2843	912	5.44	925	5.76	937	6.10	950	6.44	962	6.80	974	7.15	986	7.50	1010	8.21	1033	8.94	1077	10.38	1119	11.83
18800	3003	961	6.33	973	6.68	985	7.03	996	7.39	1008	7.75	1020	8.11	1031	8.49	1054	9.25	1076	10.00	1118	11.53	1159	13.05
19800	3163	1009	7.31	1021	7.68	1032	8.05	1043	8.41	1055	8.80	1066	9.19	1077	9.58	1098	10.36	1119	11.16	1160	12.76	1200	14.36
20800	3323	1058	8.41	1069	8.78	1080	9.16	1090	9.55	1101	9.96	1112	10.35	1122	10.76	1143	11.58	1163	12.41	1203	14.10	1241	15.78
21800	3482	1107	9.60	1117	10.00	1128	10.39	1138	10.80	1148	11.21	1158	11.64	1168	12.05	1188	12.91	1208	13.78	1246	15.53	1283	17.31
22800	3642	1156	10.91	1166	11.33	1176	11.74	1185	12.16	1195	12.58	1205	13.01	1215	13.46	1234	14.35	1253	15.26	1290	17.08	1326	18.92
23800	3802	1205	12.35	1214	12.76	1224	13.19	1233	13.63	1243	14.08	1252	14.53	1261	14.98	1280	15.91	1298	16.85	1334	18.75	1369	20.67

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9800	1565	905	5.80	962	6.79	1017	7.83	1071	8.91														
10800	1725	928	6.45	982	7.48	1034	8.53	1085	9.64	1135	10.80	1183	12.00										
11800	1885	955	7.19	1006	8.25	1055	9.35	1104	10.49	1151	11.67	1198	12.91	1243	14.17	1287	15.48						
12800	2045	984	8.00	1033	9.10	1080	10.25	1126	11.44	1171	12.66	1216	13.91	1259	15.21	1302	16.54	1343	17.92	1384	19.33		
13800	2204	1016	8.89	1062	10.05	1107	11.25	1151	12.48	1194	13.73	1237	15.03	1278	16.35	1319	17.73	1359	19.14	1399	20.57	1438	22.06
14800	2364	1050	9.85	1094	11.08	1137	12.33	1179	13.61	1220	14.92	1261	16.26	1301	17.63	1340	19.03	1379	20.46	1417	21.93	1454	23.45
15800	2524	1085	10.91	1128	12.21	1169	13.53	1209	14.86	1249	16.21	1288	17.60	1326	19.01	1364	20.46	1401	21.92	1437	23.43	1473	24.98
16800	2684	1122	12.05	1163	13.41	1202	14.80	1241	16.20	1279	17.60	1317	19.04	1353	20.51	1389	22.00	1425	23.51	1460	25.07	1495	26.64
17800	2843	1160	13.26	1199	14.71	1237	16.17	1275	17.63	1311	19.10	1347	20.60	1383	22.13	1418	23.67	1452	25.23	1486	26.82	1519	28.43
18800	3003	1198	14.58	1236	16.10	1273	17.63	1310	19.17	1345	20.71	1380	22.26	1414	23.85	1448	25.45	1481	27.07	1514	28.70	1546	30.37
19800	3163	1238	15.98	1275	17.57	1311	19.18	1346	20.79	1380	22.42	1413	24.04	1446	25.68	1479	27.35	1511	29.02	1543	30.71	1574	32.42
20800	3323	1278	17.48	1314	19.16	1349	20.85	1383	22.53	1416	24.23	1448	25.92	1480	27.64	1512	29.35	1543	31.10	1574	32.84	1604	34.62
21800	3482	1319	19.07	1354	20.83	1387	22.60	1420	24.38	1453	26.14	1484	27.92	1515	29.70	1546	31.48	1576	33.29	1606	35.10	1636	36.93
22800	3642	1360	20.78	1394	22.63	1427	24.48	1459	26.32	1490	28.17	1521	30.02	1551	31.87	1581	33.75	1611	35.62	1640	37.50	1668	39.39
23800	3802	1402	22.60	1435	24.53	1467	26.46	1498	28.39	1529	30.32	1559	32.25	1588	34.17	1617	36.12	1646	38.06	1674	40.01	1702	41.96
24800	3962	1445	24.53	1477	26.54	1508	28.56	1538	30.57	1568	32.57	1597	34.59	1626	36.59	1654	38.60	1682	40.62	1710	42.65	1737	44.68
25800	4121	1487	26.58	1518	28.67	1549	30.77	1579	32.87	1608	34.96	1636	37.04	1664	39.14	1692	41.22	1719	43.32	1746	45.42	1772	47.53
26800	4281	1531	28.77	1561	30.95	1590	33.12	1619	35.29	1648	37.46	1676	39.64	1703	41.81	1730	43.97	1757	46.15	1783	48.32	1809	50.51
27800	4441	1574	31.10	1604	33.34	1633	35.59	1661	37.84	1689	40.10	1716	42.35	1743	44.60	1769	46.87	1795	49.12	1821	51.37	1846	53.62
28800	4601	1618	33.54	1647	35.87	1675	38.21	1703	40.54	1730	42.87	1756	45.21	1783	47.54	1808	49.89	1834	52.21	1859	54.54	1884	56.89

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14800	2364	1491	24.98	1527	26.56	1599	29.81																
15800	2524	1509	26.54	1544	28.14	1613	31.45	1681	34.87	1746	38.42												
16800	2684	1530	28.25	1564	29.87	1630	33.23	1696	36.71	1759	40.32	1822	44.03										
17800	2843	1553	30.07	1585	31.75	1650	35.17	1713	38.71	1775	42.37	1836	46.14	1896	50.02	1954	54.00						
18800	3003	1578	32.04	1610	33.77	1672	37.27	1733	40.87	1793	44.59	1852	48.42	1910	52.34	1967	56.39	2023	60.53	2078	64.78		
19800	3163	1605	34.15	1636	35.92	1696	39.51	1756	43.18	1814	46.97	1871	50.87	1928	54.85	1983	58.95	2038	63.15	2091	67.43	2144	71.82
20800	3323	1634	36.40	1664	38.21	1722	41.90	1780	45.67	1836	49.53	1892	53.49	1947	57.54	2001	61.70	2054	65.94	2107	70.30	2158	74.74
21800	3482	1665	38.78	1693	40.65	1750	44.42	1806	48.28	1861	52.24	1915	56.28	1968	60.40	2021	64.62	2073	68.93	2124	73.34	2174	77.84
22800	3642	1696	41.29	1724	43.21	1780	47.10	1834	51.07	1887	55.12	1940	59.24	1992	63.45	2043	67.74	2093	72.12	2143	76.59	2192	81.15
23800	3802	1729	43.95	1757	45.92	1810	49.93	1863	54.00	1915	58.15	1966	62.37	2017	66.65	2066	71.04	2116	75.49	2164	80.04	2212	84.65
24800	3962	1764	46.72	1790	48.78	1842	52.90	1894	57.09	1944	61.34	1994	65.67	2043	70.06	2092	74.52	2140	79.06	2187	83.67	2234	88.37
25800	4121	1798	49.64	1824	51.75	1875	56.03	1925	60.34	1975	64.70	2023	69.14	2071	73.62	2118	78.18	2165	82.81	2211	87.50		
26800	4281	1834	52.70	1860	54.89	1909	59.29	1958	63.74	2006	68.22	2054	72.77	2100	77.35	2147	82.02	2192	86.75	2237	91.54		
27800	4441	1871	55.89	1896	58.15	1944	62.70	1992	67.28	2039	71.90	2085	76.56	2131	81.28	2176	86.04	2220	90.87				
28800	4601	1908	59.22	1932	61.57	1980	66.25	2027	70.97	2073	75.74	2118	80.53	2162	85.35	2206	90.24	2250	95.18				
29800	4760	1946	62.70	1970	65.12	2016	69.96	2062	74.84	2107	79.72	2151	84.65	2195	89.60	2238	94.62						
30800	4920	1984	66.34	2008	68.84	2053	73.84	2098	78.84	2142	83.89	2185	88.94	2228	94.04								
31800	5080	2023	70.12	2046	72.69	2091	77.85	2135	83.02	2178	88.20	2220	93.40										
32800	5240	2063	74.06	2085	76.71	2129	82.03	2172	87.35	2214	92.68												
33800	5399	2103	78.15	2124	80.90	2168	86.37	2210	91.85	2251	97.34												

Performance Data

VCR Fan

365 AF SWSI

Wheel Diameter = 36.50 in.	Discharge Area = 7.66 sq. ft.
Inlet Area = 7.98 sq. ft.	Tip Speed, FPM = 9.56 x RPM
Maximum BHP = 14.44 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	783	290	0.34	320	0.46	348	0.60	376	0.73	404	0.88	430	1.04	456	1.20	513	1.73	556	2.13				
7000	914	319	0.45	346	0.60	371	0.73	396	0.88	420	1.04	444	1.20	467	1.37	525	1.95	565	2.37				
8000	1044	348	0.60	374	0.75	397	0.91	419	1.06	441	1.22	462	1.39	483	1.58								
9000	1175	379	0.75	403	0.93	425	1.11	445	1.28	465	1.45	485	1.63	504	1.82	541	2.22	578	2.63	650	3.57	718	4.59
10000	1305	410	0.93	433	1.13	454	1.33	473	1.53	492	1.72	510	1.92	528	2.12	562	2.52	596	2.97	662	3.91	726	4.95
11000	1436	442	1.14	463	1.37	483	1.60	502	1.81	520	2.02	537	2.24	553	2.45	585	2.88	617	3.34	678	4.32	737	5.39
12000	1567	474	1.39	495	1.64	514	1.88	531	2.12	548	2.36	565	2.59	580	2.83	611	3.29	640	3.77	697	4.79	753	5.87
13000	1697	507	1.68	526	1.95	544	2.22	562	2.49	578	2.74	593	3.00	609	3.25	637	3.75	665	4.25	719	5.32	771	6.44
14000	1828	540	2.02	558	2.31	576	2.59	592	2.87	608	3.16	623	3.44	637	3.70	665	4.25	692	4.79	743	5.90	792	7.06
15000	1958	574	2.38	591	2.70	607	3.00	623	3.32	638	3.62	653	3.91	667	4.22	694	4.80	719	5.37	768	6.55	814	7.75
16000	2089	608	2.81	624	3.13	639	3.47	655	3.80	669	4.12	683	4.45	697	4.76	723	5.40	748	6.01	794	7.25	839	8.51
17000	2219	642	3.27	657	3.62	672	3.99	686	4.33	700	4.69	714	5.04	727	5.37	753	6.05	776	6.70	822	8.01	864	9.35
18000	2350	676	3.80	690	4.17	704	4.55	718	4.92	732	5.30	745	5.66	758	6.02	783	6.75	806	7.45	850	8.85	891	10.25
19000	2480	711	4.39	724	4.77	737	5.16	751	5.57	764	5.95	777	6.35	789	6.74	813	7.50	836	8.25	878	9.74	918	11.21
20000	2611	745	5.04	758	5.44	771	5.84	783	6.26	796	6.69	808	7.09	820	7.50	844	8.33	866	9.11	907	10.69	946	12.24
21000	2742	780	5.75	792	6.16	804	6.59	816	7.03	829	7.46	840	7.91	852	8.33	875	9.19	896	10.05	937	11.71	975	13.33
22000	2872	815	6.53	827	6.95	838	7.41	850	7.85	861	8.32	873	8.78	884	9.24	906	10.14	927	11.03	967	12.78	1004	14.50
23000	3003	850	7.38	861	7.83	872	8.28	883	8.75	894	9.24	905	9.71	916	10.19	937	11.14	958	12.08	997	13.93	1033	15.73
25000	3264	921	9.30	931	9.78	941	10.28	951	10.78	961	11.30	971	11.82	981	12.33	1001	13.38	1021	14.41	1058	16.45	1093	18.43
27000	3525	992	11.53	1000	12.05	1010	12.58	1019	13.13	1028	13.67	1038	14.23	1047	14.80	1066	15.91	1084	17.04	1120	19.26	1154	21.45

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	1436	795	6.55	852	7.79																		
12000	1567	807	7.05	860	8.32	912	9.64																
13000	1697	822	7.64	872	8.91	922	10.26	970	11.69	1017	13.18												
14000	1828	840	8.30	887	9.60	934	10.96	980	12.41	1025	13.92	1069	15.51	1112	17.14								
15000	1958	860	9.03	905	10.35	949	11.75	993	13.21	1036	14.75	1078	16.35	1120	18.00	1161	19.71						
16000	2089	882	9.83	925	11.19	967	12.61	1008	14.11	1049	15.66	1090	17.26	1130	18.95	1169	20.67	1208	22.46	1246	24.32		
17000	2219	906	10.71	946	12.11	986	13.58	1026	15.08	1065	16.67	1104	18.29	1142	19.98	1180	21.75	1217	23.56	1254	25.42	1290	27.32
18000	2350	931	11.66	970	13.11	1008	14.61	1045	16.16	1083	17.76	1120	19.42	1156	21.14	1193	22.91	1229	24.73	1264	26.62	1299	28.56
19000	2480	957	12.69	994	14.19	1031	15.73	1067	17.32	1103	18.96	1138	20.64	1173	22.39	1208	24.18	1242	26.02	1277	27.92	1310	29.89
20000	2611	984	13.78	1020	15.35	1055	16.95	1090	18.57	1124	20.26	1158	21.98	1192	23.75	1225	25.57	1258	27.43	1291	29.35	1324	31.32
21000	2742	1011	14.96	1046	16.58	1080	18.25	1114	19.92	1147	21.64	1179	23.41	1212	25.21	1244	27.06	1276	28.96	1307	30.89	1339	32.90
22000	2872	1039	16.20	1073	17.91	1106	19.61	1139	21.35	1171	23.13	1202	24.93	1233	26.77	1264	28.66	1295	30.58	1325	32.56	1356	34.57
23000	3003	1068	17.51	1101	19.29	1133	21.07	1165	22.89	1196	24.71	1226	26.56	1256	28.45	1286	30.37	1315	32.34	1345	34.34	1374	36.39
25000	3264	1126	20.39	1158	22.32	1189	24.26	1219	26.20	1248	28.14	1276	30.10	1305	32.09	1333	34.12	1360	36.17	1388	38.25	1415	40.37
27000	3525	1186	23.57	1216	25.68	1246	27.78	1274	29.87	1302	31.96	1330	34.06	1357	36.17	1383	38.29	1409	40.45	1435	42.62	1461	44.82
29000	3786	1246	27.10	1276	29.39	1304	31.67	1332	33.92	1359	36.15	1385	38.40	1411	40.65	1436	42.90	1461	45.17	1486	47.46	1510	49.77
31000	4047	1307	30.98	1336	33.46	1364	35.92	1390	38.34	1416	40.75	1442	43.15	1467	45.53	1491	47.93	1515	50.34	1538	52.75	1562	55.17
33000	4308	1370	35.25	1397	37.90	1424	40.54	1450	43.15	1475	45.73	1500	48.29	1524	50.85	1547	53.40	1570	55.95	1593	58.50	1616	61.07
35000	4569	1432	39.90	1459	42.76	1485	45.59	1510	48.37	1535	51.15	1559	53.89	1582	56.60	1605	59.32	1627	62.04	1649	64.74	1671	67.43
37000	4830	1496	44.98	1522	48.03	1547	51.04	1572	54.03	1595	56.99	1619	59.90	1641	62.82	1664	65.69	1685	68.57	1707	71.43	1728	74.30

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	2219	1326	29.29																				
18000	2350	1334	30.53	1368	32.57	1436	36.78																
19000	2480	1344	31.89	1377	33.93	1443	38.18	1506	42.60														
20000	2611	1356	33.34	1388	35.42	1452	39.71	1514	44.17	1574	48.81												
21000	2742	1370	34.93	1401	37.03	1462	41.34	1523	45.85	1582	50.53	1640	55.37										
22000	2872	1386	36.65	1416	38.76	1475	43.12	1533	47.65	1591	52.37	1648	57.25	1703	62.29	1758	67.46						
23000	3003	1403	38.47	1432	40.60	1489	45.02	1546	49.59	1602	54.34	1657	59.27	1711	64.34	1765	69.56	1817	74.93				
25000	3264	1442	42.52	1469	44.71	1523	49.21	1576	53.89	1628	58.71	1680	63.70	1732	68.85	1783	74.17	1833	79.62	1883	85.21	1932	90.94
27000	3525	1486	47.06	1512	49.32	1562	53.96	1612	58.75	1661	63.67	1710	68.75	1759	73.97	1807	79.37	1855	84.90	1902	90.56	1949	96.37
29000	3786	1534	52.09	1558	54.45	1606	59.25	1653	64.18	1699	69.22	1745	74.40	1791	79.74	1837	85.20	1882	90.81	1927	96.56	1972	102.44
31000	4047	1585	57.62	1608	60.09	1653	65.07	1697	70.17	1742	75.37	1785	80.69	1829	86.14	1872	91.70	1915	97.40	1958	103.25	2000	109.21
33000	4308	1638	63.64	1660	66.22	1703	71.43	1745	76.72	1788	82.10	1829	87.59	1871	93.18	1912	98.89	1954	104.69	1993	110.64	2033	116.70
35000	4569	1692	70.15	1714	72.87	1755	78.32	1796	83.84	1836	89.43	1876	95.10	1916	100.87	1955	106.71	1994	112.68	2032	118.75		
37000	4830	1748	77.15	1769	80.02	1809	85.75	1849	91.53	1887	97.34	1926	103.23	1964	109.18	2001	115.21	2038	121.34				
39000	5091	1806	84.67	1826	87.68	1865	93.71	1903	99.75	1940	105.83	1977	111.94	2014	118.13								
41000	5352	1864	92.69	1883	95.87	1921	102.21	1958	108.56	1995	114.90	2030	121.29										
43000	5614	1923	101.25	1942	104.60	1979	111.28	2015	117.91														
45000	5875	1982	110.35	2001	113.89	2037	120.90																

402

AF SWSI

Wheel Diameter = 40.25 in.	Discharge Area = 9.31 sq. ft.
Inlet Area = 9.72 sq. ft.	Tip Speed, FPM = 10.55 x RPM
Maximum BHP = 23.54 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7700	827	272	0.46	298	0.61	322	0.78	347	0.94	370	1.12	394	1.31	416	1.53	464	2.09	508	2.72	582	4.00		
8400	902	287	0.55	311	0.70	335	0.88	357	1.06	379	1.23	401	1.43	422	1.64	469	2.24	513	2.90	586	4.19		
9100	977	302	0.64	326	0.81	348	0.98	369	1.18	390	1.37	410	1.56	430	1.77	485	2.58	527	3.29	591	4.41	652	5.67
9800	1053	318	0.73	340	0.93	362	1.12	382	1.31	401	1.51	420	1.72	439	1.92	476	2.40	513	2.90	582	4.00	656	5.94
10500	1128	334	0.83	356	1.04	376	1.25	395	1.45	414	1.67	432	1.87	450	2.09	485	2.58	519	3.08	586	4.19	662	6.20
11200	1203	350	0.96	371	1.18	391	1.39	409	1.62	427	1.83	444	2.06	461	2.29	495	2.77	527	3.29	591	4.41	668	6.51
11900	1278	366	1.08	387	1.33	406	1.56	424	1.79	441	2.02	457	2.25	474	2.50	505	2.99	537	3.52	597	4.66	675	6.84
12600	1353	382	1.22	403	1.48	421	1.73	438	1.97	455	2.22	471	2.47	487	2.72	517	3.22	547	3.77	605	4.92	682	7.20
13300	1429	399	1.38	419	1.66	437	1.92	454	2.17	470	2.43	485	2.70	500	2.95	529	3.49	558	4.04	614	5.22	698	7.13
14000	1504	416	1.54	435	1.83	452	2.12	469	2.40	485	2.66	500	2.93	514	3.20	542	3.75	570	4.33	623	5.54	705	8.28
14700	1579	433	1.73	451	2.04	468	2.33	484	2.62	500	2.91	514	3.20	529	3.47	556	4.05	582	4.64	634	5.87	718	8.38
16700	1794	482	2.33	498	2.68	514	3.04	530	3.37	544	3.70	558	4.02	571	4.35	596	5.00	621	5.65	667	6.98	747	9.78
18700	2009	532	3.08	547	3.47	562	3.87	576	4.25	589	4.64	602	5.00	615	5.37	639	6.10	662	6.83	705	8.28	784	11.39
20700	2223	583	4.00	596	4.42	610	4.85	623	5.29	636	5.72	648	6.14	660	6.55	683	7.36	705	8.17	746	9.78	824	13.23
22700	2438	634	5.09	646	5.55	659	6.02	671	6.50	683	6.96	695	7.44	706	7.91	728	8.82	749	9.71	788	11.48	866	15.28
24700	2653	686	6.39	697	6.88	708	7.39	720	7.90	731	8.41	742	8.92	753	9.44	774	10.44	794	11.44	831	13.38	909	17.57
26700	2868	738	7.89	748	8.41	759	8.96	769	9.50	780	10.07	790	10.63	800	11.17	820	12.28	839	13.36	875	15.48	953	20.08
28700	3083	790	9.63	800	10.19	809	10.76	819	11.35	829	11.94	839	12.55	848	13.14	867	14.33	886	15.51	921	17.82	998	22.85
30700	3298	843	11.61	852	12.21	861	12.82	870	13.43	879	14.08	888	14.71	897	15.35	915	16.63	933	17.89	966	20.39	1043	25.87
32700	3512	896	13.86	904	14.50	912	15.13	921	15.80	929	16.46	938	17.14	946	17.82	963	19.17	980	20.53	1013	23.23		

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12600	1353	716	7.60																				
13300	1429	721	7.93	772	9.42																		
14000	1504	726	8.26	776	9.78	824	11.39																
14700	1579	733	8.64	781	10.16	828	11.80	873	13.51														
16700	1794	757	9.86	801	11.44	844	13.11	886	14.86	927	16.68	968	18.60										
18700	2009	787	11.33	827	12.96	866	14.67	905	16.46	944	18.33	981	20.28	1019	22.31	1055	24.41	1091	26.57				
20700	2223	822	13.05	859	14.76	895	16.53	931	18.38	966	20.28	1001	22.28	1036	24.33	1070	26.47	1104	28.67	1137	30.93	1170	33.27
22700	2438	860	15.01	894	16.82	928	18.67	961	20.58	994	22.56	1026	24.60	1059	26.71	1091	28.87	1122	31.12	1154	33.42	1185	35.78
24700	2653	900	17.20	932	19.13	964	21.08	995	23.10	1026	25.14	1056	27.26	1086	29.42	1116	31.64	1146	33.92	1175	36.27	1204	38.67
26700	2868	941	19.64	972	21.70	1002	23.78	1032	25.89	1061	28.04	1089	30.23	1117	32.47	1146	34.77	1173	37.10	1201	39.51	1229	41.96
28700	3083	984	22.32	1014	24.53	1043	26.76	1071	29.00	1098	31.26	1125	33.54	1152	35.87	1178	38.25	1205	40.65	1231	43.12	1257	45.64
30700	3298	1028	25.26	1057	27.64	1084	30.01	1111	32.39	1138	34.77	1163	37.17	1189	39.62	1214	42.09	1239	44.59	1264	47.14	1288	49.71
32700	3512	1072	28.46	1100	31.01	1127	33.54	1153	36.07	1178	38.59	1203	41.14	1228	43.70	1252	46.28	1275	48.89	1299	51.53	1322	54.20
34700	3727	1117	31.92	1144	34.67	1170	37.37	1196	40.06	1220	42.73	1244	45.42	1268	48.12	1291	50.82	1314	53.54	1336	56.29	1359	59.07
36700	3942	1163	35.68	1189	38.62	1214	41.50	1239	44.35	1263	47.20	1286	50.03	1309	52.87	1331	55.71	1353	58.57	1375	61.44	1397	64.32
38700	4157	1209	39.76	1234	42.87	1259	45.93	1283	48.97	1306	51.99	1329	54.99	1351	57.97	1373	60.96	1394	63.96	1415	66.96	1436	69.99
40700	4372	1255	44.14	1280	47.43	1304	50.70	1328	53.92	1350	57.12	1373	60.29	1394	63.44	1415	66.59	1436	69.72	1457	72.87	1477	76.03
42700	4586	1302	48.85	1326	52.34	1350	55.79	1373	59.20	1395	62.59	1417	65.93	1438	69.25	1458	72.56	1479	75.87	1499	79.18	1518	82.47
44700	4801	1349	53.93	1373	57.61	1396	61.25	1418	64.85	1440	68.41	1461	71.94	1482	75.45	1502	78.93	1522	82.40	1541	85.86	1561	89.32
46700	5016	1397	59.38	1420	63.24	1443	67.07	1464	70.86	1486	74.61	1506	78.33	1527	82.01	1546	85.68	1566	89.32	1585	92.95	1603	96.57

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20700	2223	1203	35.65	1235	38.10	1306	45.85	1375	54.34	1430	60.00												
22700	2438	1216	38.21	1246	40.71																		
24700	2653	1233	41.14	1262	43.67																		
26700	2868	1256	44.46	1283	47.03	1337	52.34	1390	57.85	1442	63.59	1494	69.52	1544	75.65								
28700	3083	1283	48.20	1308	50.82	1359	56.20	1409	61.80	1459	67.60	1508	73.62	1557	79.82	1605	86.20	1652	92.78	1698	99.50		
30700	3298	1313	52.34	1337	55.03	1385	60.53	1433	66.21	1480	72.10	1527	78.18	1573	84.46	1619	90.93	1665	97.57	1709	104.39	1753	111.38
32700	3512	1346	56.90	1369	59.65	1414	65.29	1460	71.09	1505	77.07	1549	83.25	1594	89.60	1637	96.15	1681	102.86	1724	109.75	1767	116.81
34700	3727	1381	61.87	1403	64.71	1447	70.50	1490	76.43	1533	82.55	1575	88.81	1617	95.27	1659	101.89	1701	108.68	1742	115.65	1783	122.80
36700	3942	1418	67.25	1439	70.18	1481	76.15	1522	82.25	1563	88.50	1604	94.90	1644	101.45	1684	108.18	1724	115.06	1763	122.11	1803	129.33
38700	4157	1457	73.02	1477	76.07	1517	82.25	1557	88.54	1596	94.94	1635	101.50	1674	108.18	1712	115.01	1750	122.00	1788	129.15	1826	136.45
40700	4372	1497	79.19	1516	82.37	1555	88.78	1593	95.28	1631	101.87	1669	108.59	1706	115.43	1742	122.40	1779	129.53	1815	136.78		
42700	4586	1538	85.78	1557	89.09	1594	95.75	1631	102.48	1668	109.29	1704	116.19	1740	123.20	1775	130.35	1810	137.61	1845	144.99		
44700	4801	1579	92.77	1598	96.22	1635	103.15	1671	110.14	1706	117.18	1741	124.30	1775	131.50	1809	138.81	1843	146.25				
46700	5016	1622	100.18	1640	103.78	1676	111.00	1711	118.25	1745	125.55	1779	132.89	1812	140.33	1845	147.84						
48700	5231	1665	108.00	1683	111.76	1718	119.30	1752	126.83	1785	134.38	1818	142.00										
50700	5446	1709	116.25	1726	120.19	1760	128.04	1794	135.87	1826	143.71												
52700	5661	1753	124.95	1770	129.06	1803	137.24	1836	145.38														
54700	5875	1797	134.10	1814	138.39	1847	146.91																

Performance Data

VCR Fan

445 AF SWSI

Wheel Diameter = 44.50 in.	Discharge Area = 11.39 sq. ft.
Inlet Area = 11.86 sq. ft.	Tip Speed, FPM = 11.65 x RPM
Maximum BHP = 38.88 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	790	239	0.53	264	0.70	287	0.89	309	1.10	332	1.31	353	1.56	375	1.81								
10000	878	255	0.64	278	0.83	299	1.04	320	1.25	340	1.46	360	1.70	380	1.97	418	2.50						
11000	966	271	0.76	293	0.97	313	1.18	332	1.41	351	1.64	370	1.89	388	2.15	424	2.70	459	3.30				
12000	1054	288	0.89	308	1.13	327	1.37	346	1.61	363	1.85	380	2.09	398	2.37	431	2.93	464	3.54	527	4.90		
13000	1141	304	1.06	324	1.31	343	1.56	360	1.82	376	2.08	393	2.33	409	2.62	440	3.18	471	3.82	531	5.19		
14000	1229	322	1.22	341	1.51	358	1.77	375	2.04	391	2.33	406	2.59	421	2.88	451	3.49	480	4.12	537	5.50	591	7.05
15000	1317	339	1.41	357	1.72	374	2.02	390	2.31	405	2.59	420	2.88	435	3.18	463	3.80	490	4.45	544	5.87	596	7.43
16000	1405	356	1.63	374	1.95	391	2.27	406	2.58	421	2.90	435	3.20	449	3.52	475	4.16	502	4.83	553	6.26	602	7.84
18000	1580	392	2.12	409	2.50	424	2.87	439	3.22	452	3.57	466	3.91	479	4.26	503	4.97	527	5.69	574	7.19	619	8.83
20000	1756	428	2.72	444	3.13	458	3.55	472	3.95	485	4.34	498	4.74	510	5.12	533	5.91	555	6.68	598	8.28	640	9.99
22000	1932	465	3.44	479	3.90	493	4.34	506	4.80	519	5.25	531	5.67	542	6.10	564	6.96	585	7.81	626	9.53	664	11.32
24000	2107	503	4.27	515	4.76	528	5.26	541	5.76	553	6.25	564	6.74	575	7.21	596	8.16	617	9.08	655	10.94	691	12.83
26000	2283	540	5.25	552	5.79	564	6.33	576	6.86	587	7.41	598	7.94	609	8.46	629	9.49	649	10.50	685	12.51	720	14.53
28000	2458	578	6.37	589	6.94	600	7.53	611	8.10	622	8.69	633	9.26	643	9.85	663	10.96	681	12.08	717	14.26	750	16.42
30000	2634	617	7.68	627	8.28	637	8.89	648	9.51	658	10.14	668	10.76	678	11.39	697	12.60	715	13.81	749	16.16	780	18.48
32000	2809	655	9.14	665	9.78	674	10.42	684	11.08	694	11.75	703	12.42	713	13.08	731	14.41	748	15.69	781	18.23	812	20.71
34000	2985	694	10.80	703	11.46	712	12.14	721	12.85	730	13.56	739	14.26	748	14.96	766	16.38	783	17.76	815	20.48	844	23.16
36000	3161	733	12.64	741	13.35	750	14.07	758	14.80	767	15.55	775	16.29	784	17.04	801	18.53	817	20.03	848	22.93	877	25.78
38000	3336	772	14.71	779	15.43	787	16.20	796	16.96	804	17.75	812	18.53	820	19.32	836	20.91	852	22.48	882	25.58	910	28.62
40000	3512	811	17.00	818	17.76	826	18.54	833	19.35	841	20.16	849	20.98	857	21.82	872	23.48	887	25.14	916	28.43	944	31.67

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	1317	646	9.13																				
16000	1405	651	9.57	697	11.39																		
18000	1580	663	10.58	707	12.44	749	14.43	790	16.53														
20000	1756	681	11.78	721	13.69	760	15.73	799	17.85	837	20.08	874	22.42										
22000	1932	702	13.18	739	15.16	776	17.23	812	19.39	848	21.67	883	24.03	917	26.48	951	29.02						
24000	2107	726	14.80	761	16.83	795	18.96	829	21.17	862	23.48	895	25.89	928	28.39	960	30.97	992	33.62	1023	36.37	1053	39.18
26000	2283	753	16.60	785	18.73	817	20.92	849	23.20	880	25.56	911	28.01	942	30.53	973	33.15	1003	35.85	1032	38.64	1062	41.51
28000	2458	781	18.60	812	20.82	842	23.11	872	25.46	902	27.89	931	30.39	960	32.96	989	35.62	1017	38.37	1045	41.18	1073	44.09
30000	2634	811	20.79	840	23.14	869	25.53	897	27.97	925	30.47	953	33.04	980	35.68	1007	38.40	1034	41.17	1061	44.04	1088	46.97
32000	2809	842	23.20	870	25.67	897	28.18	924	30.72	951	33.32	977	35.97	1003	38.68	1029	41.46	1054	44.29	1080	47.21	1105	50.20
34000	2985	873	25.78	900	28.42	927	31.06	953	33.71	978	36.42	1003	39.17	1028	41.96	1052	44.82	1077	47.72	1101	50.70	1125	53.74
36000	3161	905	28.58	931	31.37	957	34.15	982	36.96	1006	39.78	1031	42.62	1054	45.53	1078	48.46	1101	51.45	1124	54.50	1147	57.60
38000	3336	937	31.60	963	34.56	988	37.48	1012	40.42	1036	43.37	1059	46.35	1082	49.35	1105	52.40	1127	55.49	1149	58.62	1171	61.79
40000	3512	970	34.82	995	37.96	1020	41.06	1043	44.15	1066	47.23	1089	50.34	1111	53.47	1133	56.62	1154	59.82	1175	63.04	1196	66.31
42000	3687	1004	38.28	1028	41.59	1052	44.85	1075	48.10	1097	51.35	1119	54.60	1140	57.87	1161	61.15	1182	64.44	1203	67.79	1223	71.15
44000	3863	1037	41.96	1061	45.46	1084	48.90	1107	52.32	1129	55.74	1150	59.14	1171	62.54	1191	65.94	1211	69.39	1231	72.84	1251	76.31
46000	4039	1071	45.90	1095	49.57	1117	53.20	1139	56.80	1161	60.37	1181	63.94	1202	67.49	1222	71.05	1241	74.62	1261	78.19	1280	81.80
48000	4214	1105	50.07	1128	53.95	1151	57.77	1172	61.54	1193	65.29	1213	69.02	1233	72.72	1253	76.43	1272	80.15	1291	83.87	1309	87.59
52000	4565	1174	59.25	1196	63.50	1218	67.69	1239	71.84	1259	75.94	1278	80.03	1297	84.07	1316	88.10	1334	92.12	1352	96.15	1370	100.17

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
26000	2283	1091	44.43	1119	47.45																		
28000	2454	1101	47.07	1128	50.10	1182	56.42	1235	62.97														
30000	2634	1114	50.00	1140	53.07	1192	59.45	1243	66.10	1292	73.00												
32000	2809	1130	53.25	1155	56.37	1205	62.82	1253	69.56	1301	76.54	1348	83.75	1394	91.21								
34000	2985	1149	56.84	1173	60.00	1220	66.55	1267	73.34	1313	80.40	1358	87.70	1403	95.25	1447	103.00	1490	110.98				
36000	3161	1170	60.77	1193	63.99	1238	70.62	1282	77.50	1327	84.64	1370	92.02	1413	99.64	1456	107.48	1498	115.54	1539	123.81	1580	132.28
38000	3336	1193	65.04	1215	68.31	1258	75.06	1300	82.05	1343	89.27	1385	96.72	1426	104.41	1467	112.34	1508	120.48	1548	128.83	1588	137.37
40000	3512	1217	69.64	1238	73.00	1280	79.87	1321	86.97	1361	94.30	1402	101.84	1442	109.60	1481	117.60	1521	125.81	1559	134.25	1598	142.87
42000	3687	1243	74.56	1264	78.02	1303	85.06	1343	92.29	1382	99.72	1420	107.36	1459	115.23	1497	123.31	1535	131.60	1573	140.10	1610	148.81
44000	3863	1271	79.84	1290	83.39	1328	90.59	1366	97.99	1404	105.56	1441	113.31	1478	121.29	1515	129.45	1552	137.83	1588	146.40	1624	155.19
46000	4039	1299	85.43	1318	89.09	1355	96.50	1391	104.06	1428	111.79	1464	119.68	1499	127.76	1535	136.05	1570	144.53	1605	153.19	1640	162.06
48000	4214	1328	91.35	1346	95.12	1382	102.75	1417	110.50	1453	118.40	1487	126.46	1522	134.69	1556	143.10	1590	151.68	1624	160.44	1658	169.40
52000	4565	1388	104.19	1405	108.23	1439	116.34	1473	124.55	1506	132.85	1539	141.26	1571	149.83	1603	158.54	1635	167.38	1667	176.40		
56000	4917	1450	118.38	1467	122.69	1499	131.37	1531	140.08	1563	148.86	1594	157.71	1624	166.66	1655	175.75						
60000	5268	1514	133.93	1530	138.56	1561	147.84	1592	157.12	1622	166.43	1651	175.79										
64000	5619	1578	150.88	1594	155.87	1624	165.80	1654	175.68														
68000	5970	1644	169.31	1659	174.64																		

490

AF SWSI

Wheel Diameter = 49 in.

Discharge Area = 13.80 sq. ft.

Inlet Area = 14.42 sq. ft.

Tip Speed, FPM = 12.85 x RPM

Maximum BHP = 62.94 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11000	797	218	0.65	240	0.86	261	1.10	282	1.35	302	1.62	321	1.89	340	2.20								
12000	870	230	0.76	251	1.00	270	1.23	289	1.48	308	1.77	327	2.06	345	2.36	380	3.02						
13000	942	242	0.88	262	1.12	281	1.38	298	1.66	316	1.93	333	2.22	350	2.54	383	3.20	415	3.94				
14000	1014	254	1.02	273	1.29	291	1.56	308	1.83	325	2.12	341	2.42	357	2.75	388	3.42	419	4.16				
15000	1087	267	1.16	285	1.45	302	1.75	319	2.04	334	2.33	350	2.65	365	2.97	394	3.66	424	4.41	480	6.07		
16000	1159	280	1.31	297	1.63	314	1.95	329	2.25	344	2.57	359	2.90	373	3.22	402	3.94	429	4.69	483	6.35		
17000	1232	292	1.50	310	1.83	326	2.16	341	2.50	355	2.83	369	3.16	383	3.50	410	4.23	436	5.00	487	6.69	537	8.55
18000	1304	305	1.68	322	2.04	338	2.40	352	2.75	366	3.09	380	3.45	393	3.80	418	4.55	444	5.33	493	7.05	541	8.94
19000	1377	318	1.89	335	2.27	350	2.66	364	3.02	378	3.39	391	3.75	403	4.14	428	4.90	452	5.70	499	7.44	545	9.35
20000	1449	332	2.12	347	2.52	362	2.92	376	3.32	389	3.70	402	4.08	414	4.48	438	5.27	461	6.09	506	7.86	550	9.78
21000	1522	345	2.37	360	2.79	375	3.22	388	3.62	401	4.04	413	4.44	425	4.84	448	5.67	471	6.53	514	8.33	556	10.28
24000	1739	386	3.22	400	3.72	413	4.22	426	4.69	438	5.17	449	5.64	460	6.10	481	7.04	502	7.96	541	9.91	579	11.94
27000	1957	427	4.30	440	4.85	452	5.41	464	5.97	475	6.51	486	7.05	496	7.58	516	8.63	535	9.67	572	11.78	606	13.96
30000	2174	469	5.60	480	6.22	492	6.84	503	7.46	513	8.08	524	8.69	534	9.28	553	10.48	571	11.64	605	13.96	637	16.31
33000	2391	512	7.18	522	7.84	532	8.53	543	9.23	553	9.91	562	10.58	572	11.25	590	12.58	607	13.88	639	16.43	670	18.98
36000	2609	555	9.05	564	9.76	574	10.50	583	11.25	592	12.00	602	12.75	611	13.50	628	14.96	644	16.39	675	19.21	704	22.01
39000	2826	598	11.24	607	12.01	615	12.81	624	13.61	633	14.42	641	15.23	650	16.04	666	17.66	682	19.23	712	22.32	740	25.35
42000	3043	641	13.78	649	14.61	657	15.44	665	16.31	674	17.17	682	18.06	690	18.92	706	20.67	721	22.39	749	25.77	776	29.07
45000	3261	685	16.70	692	17.57	700	18.46	700	19.38	715	20.29	723	21.23	730	22.17	745	24.04	760	25.91	787	29.57	813	33.15
48000	3478	729	20.01	736	20.92	743	21.88	750	22.83	757	23.82	764	24.81	771	25.81	785	27.81	799	29.81	826	33.75	821	37.60

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1304	586	10.99																				
19000	1377	589	11.41																				
20000	1449	593	11.88																				
21000	1522	598	12.39	635	14.11																		
24000	1739	616	14.13	653	16.45	689	18.89	725	21.48	759	24.17	793	26.98										
27000	1957	640	16.25	674	18.64	707	21.16	739	23.78	771	26.54	803	29.42	834	32.40	865	35.50						
30000	2174	668	18.73	699	21.23	729	23.83	759	26.54	789	29.37	818	32.31	847	35.34	876	38.48	904	41.73	932	45.09	959	48.53
33000	2391	699	21.57	728	24.23	756	26.96	784	29.77	811	32.67	838	35.67	865	38.78	892	41.98	918	45.28	944	48.68	970	52.19
36000	2609	732	24.79	759	27.62	785	30.48	811	33.42	837	36.45	862	39.54	887	42.73	912	46.01	937	49.37	961	52.84	986	56.40
39000	2826	767	28.37	792	31.39	817	34.45	842	37.54	866	40.71	889	43.92	913	47.21	936	50.59	959	54.04	982	57.57	1005	61.20
42000	3043	802	32.32	827	35.57	850	38.82	874	42.10	896	45.42	919	48.79	941	52.22	963	55.71	985	59.28	1006	62.90	1028	66.60
45000	3261	838	36.67	862	40.15	885	43.64	907	47.12	929	50.62	950	54.17	971	57.75	992	61.37	1013	65.06	1033	68.81	1054	72.62
48000	3478	875	41.40	898	45.15	920	48.87	942	52.57	963	56.29	983	60.03	1003	63.79	1023	67.57	1043	71.42	1062	75.31	1082	79.25
51000	3696	912	46.56	935	50.57	956	54.54	977	58.49	997	62.42	1017	66.37	1037	70.34	1056	74.31	1075	78.32	1093	82.37	1112	86.46
54000	3913	950	52.14	972	56.42	993	60.67	1013	64.87	1033	69.06	1052	73.22	1071	77.40	1089	81.59	1107	85.80	1125	90.02	1143	94.29
57000	4130	988	58.17	1010	62.75	1030	67.27	1050	71.74	1069	76.18	1087	80.59	1106	85.00	1124	89.40	1141	93.81	1159	98.24	1176	102.68
60000	4348	1027	64.69	1048	69.56	1067	74.35	1087	79.09	1105	83.81	1124	88.47	1141	93.12	1159	97.77	1176	102.40	1193	107.04	1209	111.68
63000	4565	1066	71.72	1086	76.87	1105	81.95	1124	86.97	1142	91.95	1160	96.89	1178	101.80	1195	106.68	1211	111.56	1228	116.41	1244	121.29
66000	4783	1105	79.28	1125	84.71	1144	90.08	1162	95.39	1180	100.65	1197	105.86	1214	111.03	1231	116.17	1247	121.29	1263	126.40	1279	131.50
69000	5000	1145	87.41	1164	93.11	1182	98.77	1200	104.36	1218	109.90	1235	115.39	1251	120.84	1268	126.25	1284	131.63	1299	136.98	1315	142.33

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	2174	986	52.04																				
33000	2391	996	55.78																				
36000	2609	1010	60.04	1034	63.78	1081	71.50																
39000	2826	1028	64.90	1050	68.69	1095	76.54	1139	84.69	1183	93.17	1225	101.93	1267	110.99								
42000	3043	1049	70.40	1071	74.25	1113	82.21	1155	90.50	1196	99.07	1237	107.96	1277	117.14	1316	126.59	1355	136.29				
45000	3261	1074	76.50	1094	80.45	1134	88.57	1173	96.99	1213	105.68	1251	114.68	1290	123.98	1328	133.54	1365	143.37	1402	153.44	1439	163.78
48000	3478	1101	83.25	1120	87.31	1158	95.62	1195	104.18	1233	113.04	1270	122.15	1306	131.56	1342	141.24	1378	151.18	1414	161.37	1449	171.83
51000	3696	1130	90.60	1148	94.80	1184	103.34	1220	112.10	1255	121.13	1291	130.39	1325	139.93	1360	149.73	1395	159.79	1429	170.10	1462	180.65
54000	3913	1161	98.57	1178	102.91	1213	111.73	1247	120.74	1281	129.95	1314	139.41	1347	149.12	1381	159.06	1413	169.24	1446	179.66	1479	190.35
57000	4130	1193	107.16	1210	111.66	1243	120.79	1275	130.06	1308	139.54	1340	149.20	1372	159.10	1403	169.20	1435	179.55	1466	190.12	1497	200.93
60000	4348	1226	116.35	1242	121.05	1274	130.50	1306	140.10	1337	149.85	1368	159.78	1398	169.88	1428	180.19	1459	190.71	1489	201.45		
63000	4565	1260	126.16	1276	131.06	1307	140.89	1337	150.83	1367	160.88	1397	171.10	1426	181.46	1455	192.01	1484	202.75	1513	213.68		
66000	4783	1294	136.60	1310	141.70	1340	151.94	1369	162.25	1399	172.65	1427	183.18	1456	193.85	1484	204.65	1512	215.63				
69000	5000	1330	147.65	1345	152.99	1374	163.66	1403	174.37	1431	185.15	1459	196.03	1486	207.01	1514	218.12						
72000	5217	1366	159.36	1380	164.93	1409	176.06	1437	187.19	1464	198.37	1492	209.62										
75000	5435	1402	171.70	1416	177.53	1444	189.13	1472	200.73	1499	212.33												
78000	5652	1438	184.73	1452	190.81	1480	202.90	1507	214.96														
81000	5870	1475	198.43	1489	204.77	1516	217.39																

Performance Data

VCR Fan

542 AF SWSI

Wheel Diameter = 54.25 in.	Discharge Area = 16.92 sq. ft.
Inlet Area = 17.61 sq. ft.	Tip Speed, FPM = 14.29 x RPM
Maximum BHP = 104.73 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	827	202	0.86	221	1.12	239	1.41	257	1.72	275	2.06	292	2.41	309	2.77								
15000	887	210	0.96	229	1.26	246	1.56	263	1.87	280	2.20	296	2.57	312	2.95	344	3.75						
16000	946	219	1.08	237	1.39	254	1.72	270	2.04	286	2.38	301	2.75	317	3.12	346	3.95	375	4.84				
17000	1005	228	1.21	246	1.54	262	1.87	277	2.22	292	2.58	307	2.95	321	3.34	350	4.16	378	5.07				
18000	1064	237	1.37	254	1.72	270	2.07	285	2.41	299	2.79	313	3.16	327	3.55	354	4.40	381	5.32	432	7.33		
19000	1123	247	1.52	263	1.88	278	2.25	293	2.62	306	3.00	320	3.40	333	3.79	359	4.66	385	5.58	435	7.60		
20000	1182	256	1.68	272	2.08	287	2.47	301	2.86	314	3.25	327	3.65	340	4.07	365	4.94	390	5.87	437	7.91	483	10.19
21000	1241	266	1.86	281	2.27	296	2.68	309	3.09	322	3.50	335	3.91	347	4.34	371	5.24	395	6.19	441	8.25	485	10.55
22000	1300	275	2.06	290	2.50	304	2.92	318	3.35	330	3.77	342	4.20	354	4.65	377	5.55	400	6.53	445	8.61	488	10.92
23000	1359	285	2.25	300	2.72	313	3.17	326	3.62	339	4.07	350	4.51	362	4.97	384	5.91	406	6.89	449	9.00	491	11.33
24000	1418	294	2.47	309	2.97	322	3.45	335	3.91	347	4.37	359	4.83	370	5.30	392	6.26	413	7.26	454	9.41	495	11.76
25000	1478	304	2.72	318	3.22	332	3.72	344	4.22	356	4.69	367	5.19	378	5.66	399	6.66	420	7.68	460	9.85	499	12.23
26000	1537	314	2.97	328	3.50	341	4.02	353	4.54	364	5.04	376	5.55	386	6.05	407	7.06	427	8.11	466	10.33	504	12.73
30000	1773	354	4.14	367	4.76	378	5.39	390	5.99	400	6.58	411	7.16	421	7.75	440	8.91	458	10.08	493	12.48	527	15.01
34000	2009	395	5.62	406	6.33	417	7.05	428	7.75	438	8.44	447	9.10	457	9.78	474	11.10	491	12.41	523	15.07	554	17.78
38000	2246	436	7.48	446	8.25	456	9.05	466	9.83	476	10.61	485	11.39	493	12.16	510	13.66	526	15.14	557	18.08	585	21.04
42000	2482	478	9.71	487	10.57	496	11.44	505	12.32	514	13.18	523	14.06	531	14.91	547	16.60	562	18.26	591	21.53	618	24.78
46000	2719	521	12.41	529	13.33	537	14.26	545	15.21	554	16.17	562	17.14	570	18.08	585	19.98	599	21.82	627	25.45	653	29.02
50000	2955	564	15.58	571	16.57	578	17.57	586	18.60	594	19.64	601	20.68	608	21.73	623	23.79	637	25.83	663	29.83	688	33.75
54000	3191	606	19.28	613	20.33	620	21.42	627	22.51	634	23.63	641	24.75	648	25.87	662	28.12	675	30.35	700	34.72	724	39.01

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	1300	529	13.43																				
23000	1359	532	13.86																				
24000	1418	534	14.32	572	17.04																		
25000	1478	537	14.80	575	17.56																		
26000	1537	541	15.32	577	18.08	613	21.03																
30000	1773	560	17.70	592	20.54	625	23.57	656	26.73	687	30.07	717	33.53										
34000	2009	584	20.61	614	23.57	643	26.68	672	29.95	700	33.34	728	36.89	756	40.56	783	44.37	810	48.28				
38000	2246	613	24.07	640	27.20	666	30.43	693	33.79	719	37.28	745	40.90	770	44.65	795	48.53	820	52.54	845	56.67	869	60.90
42000	2482	644	28.06	669	31.39	694	34.81	718	38.31	742	41.92	766	45.65	789	49.50	813	53.45	836	57.54	859	61.75	882	66.06
46000	2719	677	32.57	701	36.15	724	39.78	746	43.47	769	47.26	791	51.14	813	55.09	834	59.17	856	63.35	878	67.64	899	72.04
50000	2955	711	37.62	734	41.48	756	45.37	777	49.29	798	53.29	819	57.34	839	61.46	860	65.68	880	69.99	900	74.39	920	78.89
54000	3191	747	43.21	768	47.40	789	51.57	810	55.75	830	59.99	849	64.25	869	68.59	888	72.97	907	77.44	925	81.99	944	86.62
58000	3428	783	49.39	804	53.90	824	58.40	843	62.87	862	67.37	881	71.89	900	76.44	918	81.05	936	85.71	953	90.43	971	95.22
62000	3664	819	56.15	840	61.03	859	65.84	878	70.65	896	75.43	914	80.24	932	85.06	949	89.90	966	94.79	983	99.72	1000	104.70
66000	3901	856	63.54	876	68.79	895	73.96	913	79.09	931	84.20	948	89.31	965	94.42	982	99.53	999	104.66	1015	109.84	1031	115.06
70000	4137	894	71.59	913	77.20	931	82.75	949	88.25	967	93.69	983	99.12	1000	104.53	1016	109.93	1032	115.35	1048	120.80	1063	126.25
74000	4374	932	80.34	950	86.34	968	92.25	986	98.12	1003	103.93	1019	109.68	1035	115.43	1051	121.15	1066	126.86	1081	132.59	1096	138.31
78000	4610	970	89.82	988	96.20	1006	102.51	1023	108.74	1039	114.91	1055	121.03	1071	127.11	1086	133.17	1101	139.20	1116	145.23	1130	151.26
82000	4846	1009	100.09	1026	106.84	1043	113.53	1060	120.14	1076	126.69	1091	133.18	1107	139.62	1122	146.02	1136	152.39	1151	158.74	1165	165.08

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
38000	2246	893	65.25	917	69.70																		
42000	2482	904	70.49	927	75.03	971	84.40	1014	94.18														
46000	2719	920	76.54	941	81.15	982	90.68	1023	100.62	1063	110.93	1103	121.60										
50000	2955	940	83.49	959	88.18	998	97.87	1037	107.95	1075	118.43	1112	129.26	1149	140.44	1186	151.95						
54000	3191	963	91.34	981	96.14	1018	106.03	1054	116.28	1090	126.90	1126	137.88	1161	149.23	1196	160.89	1230	172.90	1264	185.21	1297	197.81
58000	3428	989	100.09	1006	105.04	1041	115.16	1075	125.63	1109	136.43	1143	147.58	1176	159.06	1209	170.88	1242	183.04	1275	195.51	1307	208.28
62000	3664	1017	109.75	1033	114.86	1066	125.29	1099	136.00	1131	147.03	1163	158.37	1195	170.04	1226	182.01	1257	194.33	1288	206.94	1319	219.87
66000	3901	1047	120.31	1063	125.61	1094	136.39	1125	147.41	1155	158.71	1186	170.30	1216	182.16	1246	194.35	1276	206.81	1305	219.60	1335	232.68
70000	4137	1078	131.75	1094	137.28	1123	148.46	1153	159.86	1182	171.48	1211	183.35	1240	195.48	1268	207.87	1297	220.56	1325	233.51	1353	246.78
74000	4374	1111	144.06	1126	149.85	1154	161.50	1183	173.31	1211	185.31	1238	197.50	1266	209.94	1293	222.62	1320	235.55	1347	248.73		
78000	4610	1144	157.29	1159	163.34	1186	175.50	1214	187.76	1241	200.18	1267	212.78	1294	225.56	1320	238.56	1346	251.78				
82000	4846	1179	171.40	1192	177.75	1219	190.45	1246	203.24	1272	216.12	1298	229.14	1323	242.33	1348	255.69						
86000	5083	1214	186.44	1227	193.10	1253	206.38	1279	219.71	1304	233.12	1329	246.62	1354	260.25								
90000	5319	1249	202.41	1262	209.39	1288	223.31	1313	237.21	1337	251.16	1361	265.18										
94000	5556	1285	219.35	1298	226.66	1323	241.21	1347	255.75														

600

AF SWSI

Wheel Diameter = 60 in.	Discharge Area = 20.70 sq. ft.
Inlet Area = 21.55 sq. ft.	Tip Speed, FPM = 15.71 x RPM
Maximum BHP = 173.29 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
17000	821	181	1.04	199	1.37	216	1.72	232	2.08	248	2.50	264	2.91	279	3.37								
18000	870	188	1.14	205	1.50	221	1.86	236	2.24	252	2.65	267	3.08	281	3.54	310	4.52						
19000	918	194	1.26	211	1.62	226	2.00	241	2.40	256	2.82	270	3.25	284	3.72			338	5.80				
20000	966	201	1.38	217	1.77	232	2.16	246	2.57	260	3.00	274	3.45	288	3.91	314	4.92	340	6.01				
21000	1014	208	1.52	223	1.92	238	2.33	252	2.75	265	3.18	278	3.65	291	4.12	317	5.15	342	6.25				
22000	1063	215	1.67	230	2.09	244	2.52	257	2.95	270	3.40	283	3.87	296	4.34	320	5.37	345	6.50	391	8.96		
23000	1111	221	1.82	236	2.27	250	2.72	263	3.16	276	3.62	288	4.09	300	4.58	324	5.64	347	6.75	393	9.24		
24000	1159	228	1.97	243	2.45	256	2.91	269	3.39	281	3.85	293	4.34	305	4.84	328	5.91	351	7.05	395	9.55		
25000	1208	235	2.16	250	2.65	263	3.13	275	3.62	287	4.10	299	4.60	310	5.12	332	6.19	354	7.34	397	9.86	438	12.66
26000	1256	242	2.33	256	2.86	269	3.37	281	3.87	293	4.37	304	4.89	315	5.41	337	6.50	358	7.66	400	10.21	439	13.01
27000	1304	249	2.52	263	3.08	276	3.60	288	4.12	299	4.65	310	5.17	321	5.72	342	6.83	362	8.00	403	10.57	441	13.41
28000	1353	257	2.74	270	3.30	282	3.85	294	4.40	305	4.94	316	5.49	326	6.04	347	7.18	367	8.38	406	10.96	444	13.81
33000	1594	293	3.95	305	4.62	316	5.30	327	5.95	337	6.59	347	7.24	357	7.86	375	9.16	392	10.46	427	13.23	460	16.20
38000	1836	330	5.50	341	6.30	351	7.08	361	7.85	371	8.61	380	9.36	389	10.10	406	11.58	422	13.05	453	16.06	482	19.21
43000	2077	368	7.49	378	8.38	387	9.28	397	10.16	405	11.03	414	11.91	422	12.75	438	14.43	453	16.10	482	19.43	509	22.85
48000	2319	406	9.94	415	10.91	424	11.91	432	12.91	441	13.91	449	14.89	457	15.86	472	17.78	486	19.66	513	23.38	538	27.10
53000	2560	445	12.91	453	13.98	461	15.08	469	16.18	477	17.28	484	18.39	492	19.48	506	21.63	520	23.73	545	27.87	569	31.97
58000	2802	485	16.48	492	17.64	499	18.82	506	20.01	513	21.23	520	22.43	527	23.64	541	26.02	554	28.37	578	32.96	601	37.46
63000	3043	524	20.68	530	21.92	537	23.18	544	24.48	550	25.78	557	27.10	564	28.41	576	31.02	589	33.60	612	38.67	634	43.62
68000	3285	564	25.58	570	26.89	576	28.25	582	29.62	588	31.02	594	32.43	600	33.85	612	36.68	624	39.51	647	45.04	668	50.46

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
27000	1304	479	16.48																				
28000	1353	480	16.89																				
33000	1594	493	19.39	525	22.79	556	26.42	586	30.22														
38000	1836	512	22.53	540	26.06	569	29.77	597	33.67	624	37.77	651	42.03	677	46.46								
43000	2077	535	26.37	561	30.04	587	33.89	612	37.90	637	42.09	662	46.45	687	50.96	711	55.65	734	60.49	758	65.45		
48000	2319	563	30.89	586	34.78	610	38.81	633	42.96	656	47.28	679	51.75	701	56.37	724	61.14	746	66.06	767	71.14	789	76.35
53000	2560	592	36.09	614	40.26	636	44.52	657	48.87	679	53.35	700	57.96	720	62.71	741	67.60	761	72.64	782	77.81	802	83.12
58000	2802	623	41.96	644	46.45	665	51.00	685	55.62	704	60.32	724	65.12	743	70.05	762	75.09	781	80.25	800	85.54	819	90.95
63000	3043	655	48.51	675	53.37	695	58.25	714	63.17	732	68.15	751	73.21	769	78.34	787	83.59	804	88.92	822	94.37	840	99.93
68000	3285	688	55.79	707	61.05	726	66.31	744	71.57	762	76.87	779	82.20	796	87.60	813	93.09	830	98.64	847	104.28	863	110.01
73000	3527	722	63.79	740	69.50	758	75.15	776	80.80	793	86.44	809	92.12	825	97.81	842	103.58	858	109.39	873	115.26	889	121.23
78000	3768	756	72.57	774	78.74	791	84.82	808	90.87	824	96.90	840	102.93	856	108.98	871	115.06	887	121.16	902	127.33	916	133.54
83000	4010	790	82.18	808	88.81	824	95.35	841	101.84	857	108.28	872	114.69	887	121.10	902	127.53	917	133.96	931	140.44	946	146.95
88000	4251	825	92.65	842	99.75	858	106.75	874	113.69	890	120.56	905	127.40	919	134.21	934	141.01	948	147.81	962	154.62	976	161.46
93000	4493	860	104.04	877	111.61	893	119.09	908	126.50	923	133.81	938	141.09	952	148.31	966	155.51	980	162.70	993	169.89	1007	177.09
98000	4734	896	116.39	912	124.44	927	132.40	942	140.27	957	148.06	971	155.79	985	163.45	999	171.08	1012	178.68	1025	186.26	1038	193.83
103000	4976	932	129.78	947	138.29	962	146.73	977	155.07	991	163.34	1005	171.52	1019	179.65	1032	187.71	1045	195.74	1058	203.74	1071	211.71
108000	5217	968	144.25	983	153.22	998	162.12	1012	170.95	1026	179.68	1039	188.34	1053	196.93	1066	205.46	1079	213.93	1091	222.36	1103	230.75
113000	5459	1004	159.87	1019	169.28	1033	178.65	1047	187.94	1061	197.16	1074	206.29	1087	215.35	1100	224.34	1112	233.27	1125	242.15	1137	250.98

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
48000	2319	810	81.70	831	87.18																		
53000	2560	822	88.56	842	94.14	881	105.68	919	117.70														
58000	2802	838	96.50	856	102.18	893	113.90	929	126.13	965	138.81	1000	151.94	1034	165.49								
63000	3043	857	105.59	874	111.39	909	123.33	943	135.74	977	148.62	1010	161.93	1043	175.68	1075	189.86	1107	204.40				
68000	3285	879	115.85	896	121.80	928	134.00	960	146.62	992	159.70	1024	173.21	1055	187.15	1086	201.51	1116	216.26	1146	231.41	1176	246.91
73000	3527	904	127.26	920	133.39	950	145.93	981	158.85	1011	172.16	1041	185.88	1070	200.03	1099	214.58	1129	229.51	1157	244.85	1186	260.56
78000	3768	931	139.83	946	146.18	975	159.11	1004	172.37	1032	186.00	1060	200.00	1088	214.37	1116	229.12	1144	244.26	1171	259.78	1199	275.68
83000	4010	960	153.51	974	160.12	1001	173.54	1029	187.23	1056	201.21	1083	215.53	1109	230.19	1136	245.21	1162	260.58	1188	276.31	1214	292.41
88000	4251	989	168.34	1003	175.25	1029	189.19	1055	203.37	1081	217.80	1107	232.51	1132	247.51	1157	262.85	1183	278.50	1208	294.49	1232	310.81
93000	4493	1020	184.30	1033	191.53	1058	206.08	1083	220.81	1108	235.73	1133	250.91	1157	266.33	1181	282.01	1205	298.00	1229	314.29		
98000	4734	1051	201.40	1064	208.98	1088	224.21	1113	239.53	1137	255.03	1160	270.71	1184	286.60	1207	302.73	1230	319.11				
103000	4976	1083	219.66	1095	227.62	1119	243.56	1143	259.56	1166	275.66	1189	291.91	1211	308.33	1234	324.93						
108000	5217	1116	239.12	1127	247.48	1151	264.16	1174	280.87	1196	297.64	1218	314.51	1240	331.51								
113000	5459	1148	259.77	1160	268.54	1183	286.03	1205	303.50	1227	320.99												
118000	5700	1182	281.68	1193	290.87	1216	309.20	1237	327.46														

Performance Data

VCR Fan

660 AF SWSI

Wheel Diameter = 66 in.	Discharge Area = 25.05 sq. ft.
Inlet Area = 26.15 sq. ft.	Tip Speed, FPM = 17.30 x RPM
Maximum BHP = 279.11 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	798	162	1.18	179	1.58	194	2.00	209	2.45	224	2.93	239	3.45	253	4.00	282	5.52						
22000	878	172	1.41	187	1.83	202	2.27	216	2.75	229	3.24	243	3.77	256	4.32	285	5.91	309	7.24				
24000	958	182	1.66	196	2.12	210	2.58	223	3.08	236	3.59	249	4.12	261	4.69	285	5.91	309	7.24				
26000	1038	192	1.92	206	2.42	219	2.93	231	3.45	243	3.99	255	4.54	267	5.12	290	6.35	312	7.70				
28000	1118	202	2.22	216	2.77	228	3.32	240	3.87	251	4.42	262	5.00	273	5.59	295	6.86	316	8.23	357	11.23		
30000	1198	213	2.57	226	3.16	238	3.74	249	4.32	260	4.91	270	5.50	281	6.12	301	7.43	321	8.80	360	11.85	398	15.23
32000	1277	223	2.92	236	3.58	247	4.19	258	4.82	269	5.44	279	6.07	289	6.70	308	8.05	327	9.46	364	12.55	400	15.96
34000	1357	234	3.34	246	4.02	257	4.69	268	5.35	278	6.00	288	6.68	297	7.34	316	8.73	334	10.17	369	13.31	404	16.76
36000	1437	245	3.77	257	4.51	267	5.24	278	5.94	288	6.63	297	7.33	306	8.03	324	9.46	341	10.96	375	14.14	408	17.64
38000	1517	256	4.26	267	5.05	278	5.80	288	6.55	297	7.30	306	8.03	315	8.76	332	10.25	349	11.80	381	15.06	413	18.60
40000	1597	267	4.80	278	5.62	288	6.44	298	7.23	307	8.00	316	8.78	325	9.55	341	11.10	357	12.71	388	16.04	418	19.64
42000	1677	278	5.37	288	6.25	298	7.10	308	7.94	317	8.76	326	9.58	334	10.39	350	12.01	366	13.67	396	17.10	425	20.76
44000	1756	289	6.00	299	6.91	302	7.81	318	8.71	327	9.58	336	10.44	344	11.28	359	12.98	374	14.71	403	18.23	431	21.96
46000	1836	300	6.68	310	7.64	320	8.58	329	9.51	337	10.44	346	11.35	354	12.24	369	14.01	384	15.80	412	19.45	439	23.26
52000	2076	334	9.05	343	10.13	352	11.21	360	12.28	368	13.35	376	14.38	384	15.41	398	17.46	412	19.46	438	23.50	463	27.62
58000	2315	369	11.99	377	13.16	385	14.38	393	15.58	400	16.78	408	17.98	415	19.14	428	21.46	441	23.73	466	28.22	489	32.71
64000	2555	404	15.55	411	16.83	418	18.16	426	19.48	433	20.82	440	22.14	446	23.46	459	26.06	472	28.60	495	33.59	517	38.54
70000	2794	439	19.81	446	21.20	452	22.63	459	24.07	466	25.53	472	26.98	478	28.45	491	31.32	503	34.15	525	39.68	546	45.12
76000	3034	475	24.82	481	26.32	487	27.83	493	29.39	499	30.97	505	32.56	511	34.15	523	37.29	534	40.40	555	46.52	575	52.49
82000	3273	511	30.67	516	32.25	522	33.87	527	35.54	533	37.22	539	38.93	544	40.64	555	44.06	566	47.46	586	54.12	606	60.65

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34000	1357	437	20.51																				
36000	1437	440	21.42	471	25.48																		
38000	1517	444	22.42	474	26.51	503	30.85																
40000	1597	448	23.50	477	27.62	506	32.01	533	36.62														
42000	1677	453	24.67	481	28.83	509	33.26	536	37.90	562	42.78												
44000	1756	459	25.92	486	30.14	513	34.59	539	39.28	564	44.20	589	49.32										
46000	1836	465	27.27	491	31.53	517	36.03	542	40.77	567	45.71	592	50.87	615	56.22								
52000	2076	487	31.89	510	36.34	534	40.97	557	45.84	579	50.90	602	56.17	624	61.65	646	67.31	668	73.15	689	79.18		
58000	2315	511	37.29	533	42.01	554	46.87	575	51.90	596	57.12	617	62.52	637	68.10	658	73.89	678	79.40	698	85.99	717	92.30
64000	2555	538	43.52	558	48.56	578	53.70	597	58.97	616	64.40	636	69.97	654	75.71	673	81.62	692	87.70	710	93.95	729	100.37
70000	2794	566	50.53	585	55.96	603	61.45	622	67.04	640	72.72	657	78.54	675	84.47	692	90.57	710	96.81	727	103.20	744	109.75
76000	3034	594	58.39	613	64.25	630	70.15	648	76.09	665	82.09	681	88.19	698	94.40	714	100.72	730	107.18	746	113.75	763	120.48
82000	3273	624	67.06	642	73.43	659	79.77	675	86.12	691	92.50	707	98.94	723	105.46	738	112.06	753	118.78	769	125.59	784	132.53
88000	3513	654	76.64	671	83.52	688	90.34	703	97.14	719	103.93	734	110.78	749	117.65	764	124.59	778	131.62	793	138.71	807	145.90
94000	3752	685	87.12	701	94.55	717	101.87	733	109.16	747	116.43	762	123.69	776	130.99	790	138.31	804	145.68	818	153.11	832	160.61
100000	3992	716	98.59	732	106.56	747	114.43	762	122.25	777	130.00	791	137.74	805	145.45	818	153.19	831	160.96	845	168.76	858	176.62
106000	4232	747	111.06	763	119.60	778	128.05	792	136.38	806	144.66	820	152.89	833	161.10	847	169.29	859	177.48	872	185.69	885	193.93
112000	4471	779	124.63	794	133.75	809	142.75	823	151.65	837	160.46	850	169.21	863	177.93	876	186.60	888	195.25	900	203.90	913	212.56
118000	4711	811	139.35	826	149.04	840	158.61	854	168.08	867	177.45	880	186.74	893	195.97	905	205.15	917	214.29	929	223.42	941	232.54
124000	4950	844	155.28	858	165.53	871	175.68	885	185.71	898	195.65	911	205.50	923	215.27	935	224.98	947	234.64	959	244.26	970	253.85

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
58000	2315	737	98.77	756	105.40																		
64000	2555	747	106.96	765	113.71	801	127.68	835	142.23														
70000	2794	761	116.46	778	123.33	811	137.51	844	152.30	877	167.63	909	183.51	940	199.89								
76000	3034	778	127.33	794	134.33	826	148.76	857	163.78	887	179.35	918	195.45	948	212.08	977	229.21	1006	246.81				
82000	3273	799	139.58	813	146.75	843	161.50	872	176.78	901	192.59	930	208.93	958	225.78	986	243.14	1014	260.99	1042	279.29	1069	298.04
88000	3513	821	153.20	835	160.61	863	175.75	890	191.36	918	207.44	945	224.05	972	241.13	999	258.73	1025	276.79	1051	295.33	1077	314.33
94000	3752	845	168.18	858	175.86	885	191.48	911	207.50	937	223.96	963	240.87	988	258.25	1014	276.08	1039	294.38	1064	313.14	1089	332.37
100000	3992	871	184.53	883	192.50	909	208.68	933	225.21	958	242.11	983	259.41	1007	277.12	1031	295.25	1055	313.83	1079	332.86	1103	352.31
106000	4232	897	202.21	909	210.55	934	227.37	957	244.48	981	261.88	1004	279.64	1028	297.77	1051	316.28	1073	335.18	1096	354.50	1119	374.24
112000	4471	925	221.26	936	229.96	960	247.51	983	265.27	1005	283.27	1028	301.58	1050	320.18	1072	339.13	1094	358.45	1116	378.12		
118000	4711	953	241.66	964	250.78	987	269.12	1009	287.61	1031	306.27	1052	325.18	1074	344.36	1095	363.81	1116	383.58				
124000	4950	982	263.43	993	273.01	1015	292.20	1036	311.47	1057	330.87	1078	350.46	1099	370.25	1119	390.29						
130000	5190	1011	286.62	1022	296.68	1043	316.76	1064	336.87	1084	357.08	1105	377.41	1124	397.88								
136000	5429	1040	311.24	1051	321.78	1072	342.83	1092	363.85	1112	384.89												
142000	5669	1070	337.33	1081	348.39	1101	370.43	1121	392.39														

730

AF SWSI

Wheel Diameter = 73 in.	Discharge Area = 30.64 sq. ft.
Inlet Area = 31.95 sq. ft.	Tip Speed, FPM = 19.15 x RPM
Maximum BHP = 462.08 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	783	145	1.41	160	1.88	174	2.38	188	2.93	202	3.52	215	4.16	228	4.83	254	6.59	278	8.57				
26000	849	152	1.62	166	2.12	180	2.66	193	3.22	206	3.82	218	4.45	230	5.14	256	6.95						
28000	914	159	1.86	173	2.40	186	2.95	198	3.52	210	4.15	222	4.80	233	5.49	256	6.95	278	8.57				
30000	979	167	2.11	180	2.68	192	3.27	204	3.87	215	4.50	226	5.17	237	5.87	259	7.36	280	9.00				
32000	1044	174	2.38	187	3.00	199	3.62	210	4.25	221	4.91	231	5.59	242	6.30	262	7.83	282	9.48				
34000	1110	182	2.68	194	3.35	205	4.00	216	4.67	226	5.35	237	6.05	247	6.79	266	8.33	285	10.00	323	13.66		
36000	1175	190	3.02	201	3.72	212	4.42	223	5.12	233	5.83	242	6.55	252	7.30	271	8.88	289	10.57	325	14.28	359	18.39
38000	1240	197	3.37	209	4.12	220	4.87	230	5.59	239	6.33	249	7.09	258	7.86	276	9.48	293	11.19	328	14.93	361	19.10
40000	1305	205	3.75	216	4.55	227	5.34	237	6.12	246	6.89	255	7.68	264	8.48	281	10.13	298	11.86	331	15.66	363	19.85
46000	1501	229	5.09	239	6.05	249	6.96	258	7.86	267	8.75	275	9.64	283	10.53	299	12.35	314	14.21	344	18.18	372	22.51
52000	1697	254	6.75	263	7.84	272	8.91	281	9.94	289	10.96	297	11.99	304	12.98	319	15.00	333	17.03	359	21.26	385	25.76
58000	1893	279	8.80	287	10.00	296	11.21	304	12.39	312	13.55	319	14.69	326	15.83	340	18.07	353	20.32	377	24.88	401	29.62
64000	2089	304	11.25	312	12.57	320	13.89	327	15.23	335	16.53	342	17.82	348	19.08	361	21.60	374	24.07	397	29.02	419	34.09
70000	2285	329	14.16	337	15.58	344	17.04	351	18.51	358	19.95	365	21.38	371	22.78	384	25.57	396	28.31	418	33.71	439	39.17
76000	2480	355	17.57	362	19.10	369	20.67	375	22.26	382	23.85	388	25.42	395	26.97	406	30.03	418	33.04	439	38.96	459	44.82
82000	2676	381	21.53	388	23.17	394	24.85	400	26.57	406	28.27	412	29.97	418	31.67	430	35.03	440	38.31	461	44.76	480	51.10
88000	2872	408	26.10	413	27.85	419	29.62	425	31.45	431	33.28	436	35.10	442	36.93	453	40.57	463	44.15	483	51.15	502	58.00
94000	3068	434	31.31	439	33.14	445	35.03	450	36.96	455	38.90	461	40.85	466	42.82	477	46.72	487	50.57	506	58.15	524	65.55
100000	3264	460	37.18	465	39.12	470	41.10	475	43.14	480	45.20	486	47.28	491	49.35	501	53.53	510	57.65	529	65.80	546	73.75
106000	3460	487	43.78	491	45.82	496	47.92	501	50.04	506	52.20	511	54.40	515	56.59	525	61.02	534	65.43	552	74.12	569	82.65

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40000	1305	394	24.41																				
46000	1501	400	27.17	428	32.17	454	37.46																
52000	1697	411	30.56	436	35.67	461	41.09	485	46.79	508	52.77												
58000	1893	425	34.60	448	39.87	471	45.40	493	51.22	515	57.30	537	63.65	558	70.24	579	77.05						
64000	2089	441	39.34	462	44.78	483	50.48	504	56.44	525	62.64	545	69.09	565	75.80	585	82.74	604	89.90	623	97.27		
70000	2285	459	44.71	479	50.42	498	56.34	518	62.46	537	68.81	556	75.40	574	82.21	593	89.27	611	96.54	629	104.03	647	111.73
76000	2480	478	50.76	497	56.79	515	62.96	533	69.31	551	75.85	569	82.60	587	89.56	604	96.74	621	104.13	638	111.74	655	119.55
82000	2676	499	57.45	516	63.84	534	70.34	551	76.97	568	83.77	584	90.71	601	97.87	617	105.19	633	112.73	649	120.45	665	128.38
88000	2872	520	64.81	537	71.62	553	78.49	569	85.44	585	92.53	601	99.74	617	107.10	632	114.65	647	122.35	663	130.25	678	138.31
94000	3068	541	72.84	558	80.10	573	87.39	589	94.71	604	102.14	619	109.65	634	117.30	649	125.08	663	133.00	678	141.09	692	149.34
100000	3264	563	81.57	579	89.32	594	97.05	609	104.80	624	112.59	638	120.44	652	128.40	666	136.48	680	144.66	694	153.00	708	161.45
106000	3460	585	91.02	601	99.29	616	107.49	630	115.68	644	123.89	658	132.13	672	140.44	685	148.85	698	157.34	712	165.94	725	174.66
112000	3655	608	101.20	623	110.00	637	118.73	651	127.40	665	136.05	679	144.71	692	153.41	705	162.18	717	171.01	730	179.93	743	188.94
118000	3851	631	112.18	645	121.53	660	130.76	673	139.94	687	149.08	700	158.18	712	167.31	725	176.48	737	185.68	749	194.95	761	204.31
124000	4047	654	123.94	668	133.87	682	143.65	695	153.36	708	162.99	721	172.58	733	182.15	745	191.75	757	201.37	769	211.01	781	220.73
130000	4243	677	136.58	691	147.06	704	157.40	718	167.64	730	177.81	743	187.89	755	197.95	767	208.00	778	218.05	790	228.12	801	238.23
136000	4439	700	150.09	714	161.14	727	172.06	740	182.86	753	193.55	765	204.16	776	214.73	788	225.25	799	235.76	811	246.26	822	256.79
142000	4634	724	164.53	737	176.16	750	187.65	763	199.01	775	210.26	787	221.41	798	232.49	810	243.51	821	254.51	832	265.48	843	276.45
148000	4830	748	179.96	761	192.15	774	204.21	786	216.14	798	227.95	809	239.65	821	251.26	832	262.81	843	274.31	853	285.77	864	297.21

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70000	2285	665	119.63	682	127.71																		
76000	2480	672	127.56	689	135.78	721	152.76	753	170.45														
82000	2676	681	136.51	697	144.85	728	162.06	759	180.00	789	198.63	818	217.88										
88000	2872	693	146.58	708	155.03	737	172.46	767	190.63	795	209.51	824	229.03	852	249.16	879	269.89						
94000	3068	706	157.75	720	166.36	749	184.06	776	202.46	804	221.55	831	241.30	858	261.68	884	282.68	910	304.25	936	326.37		
100000	3264	721	170.08	735	178.85	761	196.87	788	215.53	814	234.87	840	254.85	866	275.46	891	296.68	917	318.50	941	340.88	966	363.81
106000	3460	737	183.51	750	192.50	776	210.91	801	229.91	826	249.51	851	269.74	876	290.58	900	312.02	924	334.08	948	356.68	972	379.87
112000	3655	755	198.08	767	207.31	792	226.16	816	245.56	840	265.50	864	286.01	887	307.12	911	328.81	934	351.08	957	373.93	980	397.33
118000	3851	773	213.73	785	223.26	809	242.64	832	262.49	855	282.83	878	303.70	900	325.12	923	347.08	945	369.60	967	392.68	989	416.29
124000	4047	792	230.51	804	240.36	826	260.33	849	280.70	871	301.50	893	322.77	914	344.56	936	366.85	958	389.66	979	413.00	1000	436.87
130000	4243	812	248.37	823	258.58	845	279.21	867	300.16	888	321.50	909	343.25	930	365.45	951	388.12	971	411.27	992	434.92	1012	459.07
136000	4439	832	267.35	843	277.93	864	299.27	885	320.88	906	342.81	926	365.10	946	387.77	966	410.88	986	434.42	1006	458.43		
142000	4634	853	287.43	864	298.43	884	320.54	904	342.87	924	365.43	944	388.31	964	411.54	983	435.14	1002	459.13				
148000	4830	874	308.63	884	320.08	905	343.01	924	366.10	944	389.37	963	412.91	982	436.72	1001	460.87						
154000	5026	896	330.99	906	342.88	925	366.70	945	390.58	963	414.62	982	438.86	1000	463.33								
160000	5222	917	354.49	927	366.87	946	391.60	965	416.35	984	441.18	1002	466.17										
166000	5418	939	379.16	949	392.03	968	417.72	986	443.37	1004	469.07												

Performance Data

VCR Fan

807

AF SWSI

Wheel Diameter = 80.75 in.	Discharge Area = 37.49 sq. ft.
Inlet Area = 39.02 sq. ft.	Tip Speed, FPM = 21.14 x RPM
Maximum BHP = 765.21 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	800	133	1.79	146	2.37	159	3.00	171	3.67	183	4.41	195	5.17	207	6.00								
32000	854	138	2.00	151	2.62	163	3.27	175	3.97	186	4.69	197	5.49	208	6.32	230	8.10						
34000	907	143	2.24	156	2.90	167	3.57	178	4.27	189	5.02	200	5.83	211	6.66	231	8.46	251	10.42				
36000	960	149	2.49	161	3.17	172	3.89	183	4.62	193	5.39	203	6.19	213	7.05	233	8.86	253	10.85				
38000	1014	154	2.75	166	3.49	177	4.23	187	4.99	197	5.77	207	6.59	217	7.45	236	9.30	254	11.30				
40000	1067	160	3.04	171	3.82	182	4.59	192	5.39	201	6.19	211	7.04	220	7.91	238	9.78	256	11.80	291	16.26		
42000	1120	165	3.34	177	4.17	187	4.99	196	5.80	206	6.65	215	7.50	224	8.41	241	10.30	259	12.33	292	16.83		
44000	1174	171	3.67	182	4.55	192	5.40	201	6.25	210	7.11	219	8.00	228	8.92	245	10.85	261	12.91	294	17.46	324	22.48
46000	1227	177	4.02	187	4.94	197	5.84	206	6.73	215	7.63	224	8.55	232	9.49	248	11.44	264	13.53	296	18.10	326	23.18
48000	1280	183	4.41	193	5.37	203	6.30	211	7.24	220	8.16	228	9.11	236	10.08	252	12.08	268	14.19	298	18.82	327	23.92
50000	1334	189	4.80	199	5.82	208	6.80	217	7.76	225	8.74	233	9.71	241	10.71	256	12.75	271	14.91	301	19.57	329	24.71
52000	1387	194	5.24	204	6.29	213	7.31	222	8.33	230	9.33	238	10.35	246	11.36	260	13.46	275	15.66	303	20.36	331	25.56
61000	1627	221	7.50	230	8.75	239	10.00	247	11.21	254	12.41	261	13.58	268	14.76	282	17.14	294	19.54	319	24.60	344	30.01
70000	1867	249	10.41	257	11.86	265	13.32	272	14.73	279	16.14	286	17.51	292	18.89	305	21.60	316	24.29	339	29.82	361	35.59
79000	2107	277	14.07	284	15.69	291	17.35	298	18.98	304	20.60	311	22.18	317	23.76	329	26.85	340	29.92	361	36.03	381	42.27
88000	2347	305	18.58	312	20.39	318	22.21	324	24.04	331	25.87	337	27.67	342	29.46	353	32.96	364	36.42	384	43.23	402	50.06
97000	2587	334	24.07	340	26.02	346	28.01	351	30.02	357	32.06	363	34.07	368	36.07	379	40.00	389	43.87	408	51.45	425	58.95
106000	2827	363	30.60	368	32.70	374	34.85	379	37.04	384	39.26	389	41.46	395	43.67	405	48.03	414	52.32	432	60.72	449	68.97
115000	3067	392	38.28	397	40.53	402	42.84	407	45.20	412	47.59	417	49.97	421	52.37	431	57.15	440	61.87	457	71.12	474	80.18
124000	3308	422	47.22	426	49.62	430	52.09	435	54.59	439	57.15	444	59.71	449	62.29	457	67.46	466	72.60	483	82.71	499	92.59

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50000	1334	357	30.31																				
52000	1387	358	31.18	384	37.21																		
61000	1627	368	35.82	391	42.02	414	48.59	436	55.53														
70000	1867	382	41.65	403	48.06	424	54.80	445	61.90	465	69.34	484	77.09	504	85.12								
79000	2107	400	48.71	419	55.42	438	62.40	457	69.69	475	77.31	493	85.22	511	93.43	529	101.93	546	110.70	564	119.75	581	129.01
88000	2347	420	57.00	438	64.09	455	71.43	472	79.00	489	86.84	506	94.95	523	103.34	539	112.01	555	120.96	571	130.18	587	139.64
97000	2587	442	66.47	459	74.09	475	81.85	491	89.81	506	97.96	522	106.35	537	114.99	552	123.86	567	133.00	582	142.38	597	152.01
106000	2827	465	77.18	481	85.39	496	93.68	511	102.09	525	110.68	540	119.43	554	128.37	568	137.54	582	146.91	596	156.51	610	166.36
115000	3067	489	89.10	504	98.00	518	106.90	532	115.86	546	124.93	560	134.13	573	143.49	586	153.00	599	162.70	613	172.61	625	182.69
124000	3308	514	102.31	528	111.93	542	121.53	555	131.12	568	140.75	581	150.49	594	160.31	606	170.28	619	180.37	631	190.63	643	201.06
133000	3548	538	116.85	552	127.26	565	137.58	578	147.86	591	158.14	603	168.46	615	178.85	627	189.31	639	199.88	651	210.58	662	221.41
142000	3788	563	132.80	577	144.01	590	155.12	602	166.13	614	177.11	626	188.09	638	199.08	649	210.12	661	221.23	672	232.43	683	243.75
151000	4028	589	150.19	602	162.25	614	174.18	627	185.98	638	197.69	650	209.37	661	221.05	672	232.73	683	244.43	694	256.20	704	268.03
160000	4268	615	169.14	627	182.06	639	194.83	651	207.43	663	219.94	674	232.37	685	244.76	695	257.12	706	269.49	716	281.87	726	294.29
169000	4508	641	189.75	653	203.53	665	217.13	676	230.58	687	243.91	698	257.12	709	270.26	719	283.36	729	296.43	739	309.48	749	322.54
178000	4748	667	212.10	679	226.73	690	241.19	702	255.49	712	269.65	723	283.68	733	297.62	744	311.47	753	325.28	763	339.05	773	352.80
187000	4988	694	236.29	705	251.75	716	267.07	727	282.23	738	297.24	748	312.11	758	326.86	768	341.51	778	356.09	787	370.61	797	385.09
196000	5228	720	262.43	731	278.71	742	294.87	753	310.89	763	326.75	773	342.48	783	358.07	793	373.54	802	388.92	812	404.22	821	419.46

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
88000	2347	603	149.36	618	159.31	649	179.87																
97000	2587	612	161.90	627	172.03	655	192.98	684	214.80	711	237.43												
106000	2827	624	176.41	637	186.71	665	208.01	691	230.18	718	253.18	743	277.00	769	301.58								
115000	3067	638	193.00	651	203.51	677	225.18	702	247.69	727	271.04	751	295.22	776	320.16	799	345.85	823	372.25	846	399.29		
124000	3308	655	211.66	667	222.44	691	244.60	715	267.52	738	291.25	762	315.75	785	341.03	808	367.06	830	393.83	852	421.28	874	449.41
133000	3548	674	232.38	685	243.51	708	266.27	730	289.72	752	313.88	774	338.78	796	364.43	818	390.81	839	417.89	861	445.70	882	474.17
142000	3788	694	255.16	704	266.70	726	290.18	747	314.27	768	339.00	789	364.38	810	390.47	830	417.22	851	444.67	871	472.82	891	501.67
151000	4028	715	279.96	725	291.98	745	316.33	766	341.18	786	366.58	806	392.56	825	419.17	845	446.39	864	474.27	884	502.79	903	531.98
160000	4268	737	306.78	746	319.33	766	344.68	786	370.41	805	396.61	824	423.29	842	450.53	861	478.33	880	506.72	898	535.71	917	565.30
169000	4508	759	335.63	769	348.77	788	375.22	806	401.96	825	429.06	843	456.57	861	484.54	879	513.02	897	542.01	914	571.55		
178000	4748	782	366.56	792	380.33	810	407.96	828	435.79	846	463.91	863	492.36	881	521.19	898	550.45	915	580.16				
187000	4988	806	399.54	815	414.00	833	442.92	850	471.95	867	501.17	884	530.66	901	560.45	918	590.57						
196000	5228	830	434.66	839	449.82	856	480.11	873	510.42	890	540.86	906	571.46										
205000	5468	854	471.92	863	487.83	880	519.57	896	551.25	913	582.96												
214000	5708	879	511.41	887	528.09	904	561.33	920	594.45														

890

AF SWSI

Wheel Diameter = 89 in.

Discharge Area = 45.54 sq. ft.

Inlet Area = 47.30 sq. ft.

Tip Speed, FPM = 23.30 x RPM

Maximum BHP = 1244.51 (RPM / 1000)³

- White area is Class I
 Light blue area is Class II
 Medium blue area is Class III
 Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP		2" SP		2 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
36000	791	120	2.13	132	2.84	143	3.59	155	4.41	166	5.29	177	6.23	187	7.21								
39000	856	125	2.45	137	3.20	148	4.00	159	4.83	169	5.73	179	6.69	189	7.69	209	9.86						
42000	922	131	2.79	143	3.62	153	4.44	163	5.32	173	6.23	182	7.19	192	8.21	210	10.42	228	12.82				
45000	988	138	3.18	148	4.05	158	4.94	168	5.83	177	6.79	186	7.78	195	8.82	213	11.05	230	13.46				
48000	1054	144	3.60	154	4.55	164	5.48	173	6.41	182	7.40	190	8.41	199	9.48	216	11.74	232	14.18	263	19.60		
51000	1120	150	4.07	160	5.07	169	6.05	178	7.05	187	8.07	195	9.11	203	10.21	219	12.50	235	14.98	265	20.45		
54000	1186	156	4.57	166	5.64	175	6.68	184	7.73	192	8.78	200	9.88	207	11.00	223	13.35	238	15.86	267	21.38	295	27.50
57000	1252	163	5.10	172	6.25	181	7.35	189	8.46	197	9.57	205	10.69	212	11.85	227	14.26	241	16.81	269	22.39	296	28.57
60000	1318	169	5.69	179	6.90	187	8.08	195	9.24	203	10.39	210	11.58	217	12.76	231	15.23	245	17.83	272	23.48	298	29.72
63000	1383	176	6.32	185	7.60	193	8.85	201	10.07	208	11.28	216	12.50	223	13.75	236	16.29	249	18.95	275	24.67	300	30.97
66000	1449	183	7.00	191	8.35	199	9.66	207	10.96	214	12.24	221	13.51	228	14.80	241	17.42	254	20.14	279	25.96	303	32.32
76000	1669	205	9.66	213	11.24	221	12.78	228	14.31	234	15.80	241	17.28	247	18.75	259	21.68	270	24.67	293	30.89	314	37.53
86000	1888	228	13.00	235	14.78	242	16.57	249	18.32	255	20.04	261	21.75	267	23.42	278	26.76	289	30.07	309	36.84	329	43.89
96000	2108	251	17.10	258	19.08	264	21.08	270	23.07	276	25.03	282	26.97	288	28.87	298	32.65	308	36.35	327	43.79	346	51.37
106000	2328	275	22.08	281	24.25	287	26.46	292	28.67	298	30.85	303	33.03	309	35.17	319	39.40	328	43.54	346	51.75	364	59.97
116000	2547	299	28.03	304	30.37	309	32.76	315	35.17	320	37.59	325	40.00	330	42.37	340	47.07	349	51.69	366	60.74	382	69.70
126000	2767	323	35.03	328	37.53	333	40.10	337	42.71	342	45.34	347	47.97	352	50.59	361	55.75	370	60.84	387	70.80	402	80.57
136000	2986	347	43.18	351	45.85	356	48.59	360	51.40	365	54.21	370	57.05	374	59.89	383	65.52	391	71.09	407	81.97	422	92.62
146000	3206	371	52.57	375	55.40	379	58.32	384	61.29	388	64.31	392	67.34	396	70.39	405	76.46	413	82.49	428	94.32	443	105.90
156000	3426	396	63.29	399	66.30	403	69.37	407	72.52	411	75.70	415	78.93	419	82.18	427	88.68	435	95.15	450	107.94	464	120.46

CFM	OV	3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP		6 1/2" SP		7" SP		7 1/2" SP		8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60000	1318	323	36.51																				
63000	1383	325	37.81																				
66000	1449	327	39.21	350	46.59																		
76000	1669	336	44.64	357	52.20	377	60.24	397	68.68	416	77.53												
86000	1888	348	51.29	367	59.09	386	67.32	404	75.96	422	85.02	440	94.43	458	104.23	475	114.34						
96000	2108	363	59.20	380	67.34	398	75.84	414	84.70	431	93.94	448	103.56	464	113.54	480	123.86	496	134.53	511	145.50	527	156.76
106000	2328	380	68.34	396	76.93	412	85.80	427	94.96	443	104.46	458	114.30	473	124.48	488	135.00	503	145.84	518	157.01	532	168.50
116000	2547	398	78.71	413	87.85	428	97.19	442	106.76	457	116.60	471	126.74	485	137.16	499	147.90	513	158.95	526	170.31	540	181.99
126000	2767	417	90.31	431	100.10	445	110.00	459	120.09	472	130.36	485	140.87	499	151.63	512	162.66	525	173.98	537	185.56	550	197.44
136000	2986	436	103.16	450	113.68	463	124.24	476	134.89	489	145.69	502	156.68	514	167.86	526	179.26	538	190.90	550	202.80	563	214.94
146000	3206	456	117.30	470	128.61	482	139.88	495	151.20	507	162.62	519	174.14	531	185.84	542	197.69	554	209.75	565	222.01	576	234.50
156000	3426	477	132.75	490	144.90	502	156.98	514	169.04	525	181.12	537	193.28	548	205.53	559	217.93	570	230.48	581	243.18	592	256.08
166000	3645	498	149.60	510	162.63	522	175.55	533	188.39	545	201.23	556	214.06	566	226.98	577	239.96	588	253.08	598	266.31	608	279.68
176000	3865	519	167.88	531	181.85	542	195.63	553	209.33	564	222.94	575	236.55	585	250.16	596	263.81	606	277.53	616	291.36	626	305.28
186000	4084	540	187.68	552	202.59	563	217.30	574	231.87	584	246.33	595	260.73	605	275.10	615	289.48	624	303.88	634	318.35	644	332.88
196000	4304	561	209.10	573	224.94	584	240.60	594	256.06	605	271.41	615	286.64	625	301.83	634	316.98	644	332.12	653	347.28	662	362.49
206000	4523	583	232.18	594	248.98	605	265.58	615	281.99	625	298.24	635	314.36	645	330.37	654	346.35	663	362.26	672	378.18	681	394.12
216000	4743	605	257.06	615	274.81	626	292.35	636	309.71	646	326.88	656	343.91	665	360.81	674	377.63	683	394.38	692	411.09	701	427.78
226000	4963	627	283.80	637	302.48	647	320.98	657	339.28	667	357.40	676	375.36	686	393.17	695	410.87	703	428.48	712	446.02	721	463.51

CFM	OV	8 1/2" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
106000	2328	547	180.28	561	192.35																		
116000	2547	554	193.95	567	206.23	593	231.60	619	258.02														
126000	2767	563	209.62	576	222.06	601	247.81	625	274.64	649	302.50	673	331.31										
136000	2986	574	227.36	586	240.03	610	266.18	633	293.38	656	321.62	679	350.83	701	381.00	723	412.04	745	443.92				
146000	3206	588	247.21	599	260.16	621	286.81	643	314.43	665	343.04	687	372.63	708	403.18	729	434.62	750	466.96	771	500.12	791	534.07
156000	3426	602	269.18	613	282.48	634	309.72	655	337.87	676	366.93	696	396.93	717	427.85	737	459.67	757	492.37	777	525.94	796	560.32
166000	3645	618	293.23	629	306.93	649	334.93	668	363.70	688	393.31	708	423.79	727	455.13	746	487.36	766	520.45	785	554.37	803	589.13
176000	3865	635	319.35	645	333.53	664	362.39	683	391.93	702	422.22	721	453.27	739	485.13	758	517.82	776	551.32	794	585.65	812	620.78
186000	4084	653	347.51	662	362.26	681	392.12	699	422.56	717	453.62	735	485.37	752	517.86	770	551.08	787	585.08	805	619.86	822	655.42
196000	4304	671	377.75	680	393.11	698	424.08	715	455.52	733	487.50	750	520.07	767	553.27	784	587.16	800	621.75	817	657.05	834	693.08
206000	4523	690	410.07	699	426.07	716	458.28	733	490.85	749	523.83	766	557.33	782	591.38	798	626.03	815	661.30	831	697.25		
216000	4743	709	444.47	718	461.17	734	494.72	751	528.50	767	562.62	783	597.16	799	632.17	814	667.67	830	703.75				
226000	4963	729	480.97	737	498.43	753	533.40	769	568.50	785	603.87	800	639.53	816	675.58	831	712.07						
236000	5182	749	519.62	757	537.88	773	574.36	788	610.87	803	647.54	818	684.46	833	721.67								
246000	5402	769	560.48	777	579.54	792	617.61	807	655.62	822	693.70												
256000	5621	789	603.55	797	623.49	812	663.19	827	702.76														

Performance Data

VCR Fan

182

AF DWDI

Wheel Diameter = 18.25 in.	Discharge Area = 3.45 sq. ft.
Inlet Area = 4.050 sq. ft.	Tip Speed, FPM = 4.78 x RPM
Maximum BHP = .814 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2800	812	613	0.19	677	0.25	736	0.32	792	0.39	844	0.46	895	0.54	944	0.61				
3200	928	663	0.22	723	0.30	778	0.38	830	0.45	879	0.54	927	0.61	972	0.70	1060	0.88	1142	1.08
3600	1043	716	0.29	772	0.36	824	0.44	873	0.54	919	0.63	963	0.71	1006	0.81	1089	1.00	1167	1.20
4000	1159	769	0.35	823	0.44	872	0.54	918	0.63	962	0.71	1004	0.81	1045	0.91	1123	1.12	1197	1.33
4400	1275	825	0.43	875	0.53	922	0.63	966	0.72	1008	0.83	1048	0.93	1087	1.04	1161	1.26	1232	1.47
4800	1391	881	0.52	929	0.63	974	0.72	1016	0.83	1056	0.94	1094	1.06	1131	1.18	1202	1.41	1270	1.63
5200	1507	939	0.61	984	0.73	1026	0.85	1067	0.96	1105	1.08	1142	1.20	1178	1.33	1246	1.56	1311	1.82
5600	1623	997	0.73	1040	0.86	1080	0.98	1119	1.11	1156	1.23	1192	1.36	1226	1.48	1292	1.75	1354	2.02
6000	1739	1056	0.86	1097	1.00	1135	1.12	1173	1.27	1208	1.39	1243	1.54	1276	1.67	1339	1.95	1400	2.22
6400	1855	1116	1.02	1154	1.16	1191	1.29	1227	1.43	1261	1.58	1295	1.72	1327	1.87	1388	2.16	1446	2.45
6800	1971	1176	1.18	1212	1.33	1248	1.47	1282	1.62	1315	1.77	1347	1.92	1378	2.08	1438	2.38	1495	2.70
7200	2087	1237	1.37	1271	1.53	1305	1.67	1338	1.83	1370	2.00	1401	2.16	1431	2.32	1489	2.63	1544	2.97
7600	2203	1298	1.58	1331	1.73	1363	1.89	1395	2.07	1426	2.22	1456	2.40	1485	2.57	1541	2.91	1594	3.25
8000	2319	1359	1.81	1391	1.97	1422	2.13	1452	2.32	1482	2.49	1511	2.66	1539	2.83	1593	3.20	1646	3.55
8400	2435	1421	2.04	1451	2.22	1481	2.41	1510	2.58	1539	2.77	1567	2.95	1594	3.13	1647	3.50	1698	3.89
8800	2551	1483	2.33	1512	2.50	1540	2.68	1568	2.87	1596	3.07	1623	3.27	1650	3.45	1701	3.84	1750	4.24
9200	2667	1546	2.62	1573	2.81	1600	3.00	1627	3.20	1654	3.40	1680	3.59	1706	3.79	1756	4.20	1804	4.62
9600	2783	1608	2.95	1634	3.13	1661	3.34	1687	3.54	1712	3.75	1738	3.95	1762	4.16	1811	4.58	1858	5.01
10000	2899	1671	3.29	1696	3.50	1721	3.70	1745	3.91	1771	4.12	1796	4.34	1820	4.55	1867	5.00	1912	5.44
10400	3014	1734	3.66	1758	3.89	1782	4.09	1806	4.32	1830	4.54	1854	4.75	1877	4.99	1923	5.44	1968	5.90

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4400	1275	1365	1.95	1490	2.45														
4800	1391	1398	2.13	1518	2.66	1631	3.20												
5200	1507	1433	2.33	1549	2.88	1658	3.45			1864	4.66								
5600	1623	1472	2.57	1583	3.13	1689	3.72	1790	4.34	1887	4.99	1982	5.65						
6000	1739	1513	2.79	1620	3.40	1722	4.01	1820	4.66	1914	5.32	2006	6.00	2094	6.70				
6400	1855	1557	3.06	1660	3.69	1759	4.33	1853	5.00	1945	5.67	2033	6.39	2119	7.10				
6800	1971	1601	3.34	1702	3.99	1797	4.66	1889	5.34	1978	6.05	2064	6.79	2147	7.54	2228	8.30	2308	9.08
7200	2087	1648	3.64	1745	4.32	1838	5.01	1927	5.73	2013	6.46	2096	7.21	2178	7.99	2257	8.78	2334	9.58
7600	2203	1695	3.95	1790	4.66	1880	5.39	1967	6.14	2051	6.90	2132	7.66	2211	8.46	2288	9.28	2363	10.10
8000	2319	1744	4.29	1836	5.02	1924	5.79	2009	6.55	2090	7.34	2169	8.14	2246	8.96	2321	9.80	2395	10.66
8400	2435	1794	4.65	1884	5.41	1970	6.20	2052	7.00	2131	7.83	2208	8.66	2283	9.50	2357	10.36	2428	11.24
8800	2551	1844	5.04	1932	5.83	2016	6.66	2096	7.49	2174	8.33	2249	9.19	2322	10.05	2394	10.94	2464	11.85
9200	2667	1895	5.44	1981	6.27	2063	7.13	2142	7.99	2218	8.85	2291	9.75	2363	10.64	2433	11.55	2501	12.49
9600	2783	1947	5.87	2032	6.75	2112	7.63	2189	8.51	2263	9.41	2335	10.33	2405	11.25	2473	12.19	2540	13.16
10000	2899	2000	6.33	2082	7.24	2161	8.14	2236	9.07	2309	10.00	2379	10.94	2448	11.91	2515	12.88	2580	13.86
10400	3014	2053	6.81	2134	7.75	2211	8.69	2285	9.66	2356	10.61	2425	11.58	2492	12.58	2558	13.58	2622	14.58
10800	3130	2107	7.33	2186	8.30	2261	9.28	2334	10.26	2404	11.25	2472	12.26	2538	13.28	2602	14.31	2665	15.35
11200	3246	2161	7.88	2238	8.89	2313	9.89	2384	10.91	2452	11.94	2519	12.96	2584	14.01	2647	15.08	2709	16.14
12200	3536	2299	9.38	2372	10.46	2443	11.55	2511	12.66	2577	13.76	2641	14.88	2703	16.00	2763	17.13	2822	18.26
13200	3826	2439	11.08	2509	12.25	2576	13.42	2642	14.61	2705	15.80	2766	16.98	2826	18.20	2884	19.41	2941	20.63

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6800	1971	2385	9.89																
7200	2087	2410	10.41	2484	11.25	2556	12.10												
7600	2203	2437	10.96	2509	11.82	2580	12.69	2650	13.58										
8000	2319	2467	11.53	2537	12.41	2606	13.32	2674	14.23	2807	16.10								
8400	2435	2498	12.14	2567	13.05	2635	13.96	2701	14.91	2831	16.82	2957	18.81						
8800	2551	2532	12.76	2600	13.69	2666	14.64	2731	15.61	2858	17.57	2981	19.60	3101	21.67				
9200	2667	2568	13.42	2634	14.38	2698	15.36	2762	16.35	2886	18.35	3007	20.42	3124	22.54	3239	24.71		
9600	2783	2606	14.13	2670	15.11	2733	16.10	2795	17.11	2917	19.17	3035	21.28	3150	23.45	3263	25.67	3373	27.93
10000	2899	2645	14.85	2707	15.86	2769	16.88	2830	17.92	2949	20.03	3065	22.18	3178	24.39	3289	26.66	3397	28.97
10400	3014	2685	15.61	2747	16.64	2807	17.68	2867	18.75	2984	20.91	3097	23.11	3208	25.36	3316	27.67	3422	30.03
10800	3130	2726	16.39	2787	17.46	2846	18.53	2905	19.61	3019	21.82	3131	24.08	3240	26.39	3346	28.73	3450	31.14
11200	3246	2769	17.21	2829	18.31	2887	19.41	2944	20.51	3057	22.78	3166	25.08	3273	27.43	3377	29.83	3480	32.28
12200	3536	2880	19.42	2937	20.58	2993	21.76	3048	22.93	3155	25.32	3260	27.77	3362	30.25	3462	32.77	3560	35.34
13200	3826	2997	21.85	3051	23.08	3105	24.32	3158	25.57	3261	28.12	3361	30.68	3459	33.29	3555	35.95	3649	38.64
14200	4116	3117	24.51	3170	25.82	3221	27.14	3272	28.47	3372	31.14	3468	33.87	3563	36.62	3655	39.40	3746	42.22
15200	4406	3241	27.42	3292	28.82	3342	30.21	3391	31.62	3487	34.45	3580	37.31	3672	40.20	3761	43.12	3848	46.09
16200	4696	3367	30.60	3417	32.07	3465	33.54	3513	35.03	3606	38.02	3696	41.03	3785	44.07	3871	47.14	3956	50.23
17200	4986	3496	34.04	3544	35.59	3591	37.15	3637	38.71	3728	41.87	3816	45.03	3901	48.22	3985	51.45	4067	54.70
18200	5275	3628	37.78	3674	39.42	3720	41.07	3765	42.71	3853	46.02	3938	49.34	4021	52.70				
19200	5565	3761	41.84	3806	43.57	3851	45.28	3894	47.02	3980	50.47	4063	53.96						

200 AF DWDI

Wheel Diameter = 20 in.	Discharge Area = 4.14 sq. ft.
Inlet Area = 4.880 sq. ft.	Tip Speed, FPM = 5.23 x RPM
Maximum BHP = 1.285 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3500	845	572	0.24	630	0.32	682	0.40	732	0.48	779	0.58	824	0.68	868	0.78	951	0.97		
4000	966	621	0.30	674	0.39	723	0.48	770	0.58	814	0.68	856	0.78	897	0.88	975	1.11	1049	1.33
4500	1087	671	0.38	721	0.48	768	0.58	811	0.68	853	0.79	892	0.89	931	1.02	1005	1.25	1075	1.50
5000	1208	723	0.45	770	0.56	814	0.68	855	0.80	895	0.91	932	1.04	969	1.16	1039	1.41	1105	1.67
5500	1329	776	0.56	820	0.68	862	0.81	902	0.93	939	1.06	975	1.18	1010	1.31	1076	1.58	1139	1.87
6000	1449	830	0.68	872	0.81	912	0.94	950	1.08	985	1.21	1020	1.36	1053	1.50	1117	1.79	1177	2.08
6500	1570	885	0.81	925	0.96	963	1.11	999	1.25	1033	1.39	1066	1.54	1098	1.70	1159	2.00	1217	2.31
7000	1691	940	0.97	978	1.12	1014	1.28	1049	1.43	1082	1.60	1114	1.75	1145	1.91	1203	2.24	1259	2.57
7500	1812	997	1.14	1033	1.31	1067	1.47	1100	1.64	1132	1.81	1163	1.97	1192	2.15	1249	2.49	1303	2.83
8000	1932	1054	1.35	1088	1.52	1121	1.70	1152	1.87	1183	2.04	1213	2.22	1241	2.41	1296	2.77	1348	3.13
8500	2053	1112	1.58	1144	1.76	1175	1.93	1205	2.12	1235	2.32	1263	2.50	1291	2.70	1344	3.08	1395	3.47
9000	2174	1170	1.82	1200	2.02	1230	2.20	1259	2.41	1287	2.59	1315	2.79	1342	3.00	1393	3.40	1443	3.82
9500	2295	1228	2.09	1257	2.29	1285	2.50	1313	2.70	1341	2.91	1367	3.12	1393	3.34	1443	3.75	1491	4.19
10000	2415	1286	2.41	1314	2.62	1341	2.83	1368	3.04	1394	3.25	1420	3.47	1445	3.70	1494	4.15	1540	4.59
10500	2536	1345	2.75	1372	2.95	1398	3.17	1424	3.40	1449	3.64	1474	3.87	1498	4.09	1545	4.55	1590	5.02
11000	2657	1405	3.11	1430	3.34	1455	3.57	1479	3.80	1504	4.04	1528	4.27	1551	4.51	1597	5.00	1641	5.50
11500	2778	1464	3.50	1488	3.75	1512	3.99	1536	4.23	1559	4.48	1582	4.73	1605	4.98	1649	5.49	1692	6.00
12000	2899	1523	3.95	1547	4.19	1570	4.44	1592	4.69	1615	4.94	1637	5.20	1659	5.47	1702	6.00	1744	6.53
12500	3019	1583	4.41	1605	4.67	1627	4.92	1649	5.19	1671	5.45	1693	5.73	1714	6.00	1756	6.55	1797	7.09
13500	3261	1703	5.48	1724	5.75	1744	6.02	1764	6.30	1785	6.58	1805	6.88	1825	7.16	1864	7.75	1903	8.33

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1208	1230	2.22	1347	2.80														
5500	1329	1259	2.44	1371	3.05	1477	3.70												
6000	1449	1291	2.68	1398	3.33	1500	4.00	1598	4.69										
6500	1570	1326	2.95	1429	3.62	1527	4.32	1621	5.05	1712	5.80								
7000	1691	1365	3.24	1464	3.95	1558	4.67	1649	5.42	1736	6.22	1820	7.03	1902	7.85				
7500	1812	1405	3.55	1500	4.29	1592	5.05	1679	5.83	1763	6.65	1845	7.49	1925	8.35	2002	9.23		
8000	1932	1447	3.89	1539	4.66	1627	5.45	1712	6.27	1794	7.11	1873	7.99	1950	8.86	2025	9.78	2098	10.71
8500	2053	1491	4.25	1580	5.05	1666	5.89	1748	6.74	1827	7.61	1904	8.50	1978	9.42	2051	10.36	2122	11.33
9000	2174	1535	4.64	1623	5.49	1705	6.34	1785	7.24	1862	8.14	1936	9.07	2009	10.01	2080	10.99	2149	11.96
9500	2295	1581	5.05	1666	5.94	1747	6.83	1824	7.75	1899	8.69	1972	9.66	2042	10.64	2111	11.64	2178	12.66
10000	2415	1628	5.50	1711	6.43	1790	7.35	1865	8.32	1938	9.28	2008	10.28	2077	11.30	2144	12.33	2210	13.36
10500	2536	1676	5.98	1757	6.94	1833	7.91	1907	8.91	1978	9.91	2047	10.94	2114	11.99	2179	13.05	2243	14.13
11000	2657	1725	6.49	1803	7.49	1878	8.50	1950	9.53	2020	10.58	2087	11.64	2152	12.71	2216	13.81	2279	14.91
11500	2778	1774	7.03	1851	8.07	1924	9.11	1995	10.19	2062	11.26	2128	12.36	2192	13.48	2254	14.61	2316	15.75
12000	2899	1824	7.59	1899	8.67	1971	9.78	2040	10.88	2106	12.00	2170	13.13	2233	14.28	2294	15.44	2354	16.63
12500	3019	1874	8.21	1948	9.33	2018	10.46	2086	11.60	2151	12.76	2214	13.93	2275	15.13	2335	16.32	2393	17.53
13500	3261	1977	9.53	2047	10.74	2115	11.96	2180	13.18	2242	14.41	2303	15.66	2362	16.92	2420	18.20	2476	19.48
14500	3502	2081	11.03	2149	12.32	2214	13.61	2276	14.91	2337	16.23	2395	17.57	2452	18.89	2508	20.25	2562	21.60
15500	3744	2188	12.69	2253	14.06	2315	15.43	2375	16.82	2434	18.23	2490	19.64	2545	21.04	2599	22.48	2651	23.91
16500	3986	2295	14.53	2358	15.98	2418	17.45	2476	18.92	2532	20.39	2587	21.89	2640	23.39	2692	24.89	2743	26.41

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8500	2053	2192	12.30	2260	13.31														
9000	2174	2217	12.98	2283	14.01	2348	15.06	2412	16.13										
9500	2295	2245	13.68	2309	14.75	2373	15.83	2435	16.92	2557	19.16								
10000	2415	2274	14.43	2337	15.53	2399	16.63	2460	17.75	2579	20.04	2694	22.42						
10500	2536	2306	15.23	2368	16.33	2428	17.48	2488	18.63	2604	20.98	2717	23.39	2826	25.89				
11000	2657	2340	16.04	2400	17.20	2459	18.35	2517	19.53	2631	21.95	2741	24.42	2849	26.97	2953	29.57		
11500	2778	2375	16.92	2434	18.08	2492	19.28	2549	20.50	2660	22.96	2768	25.50	2873	28.10	2976	30.76	3076	33.47
12000	2899	2412	17.82	2470	19.03	2526	20.26	2582	21.50	2691	24.03	2797	26.62	2900	29.27	3000	31.98	3099	34.76
12500	3019	2451	18.76	2507	20.01	2562	21.26	2617	22.53	2723	25.13	2827	27.78	2928	30.50	3027	33.27	3123	36.09
13500	3261	2531	20.78	2585	22.10	2638	23.42	2690	24.76	2793	27.47	2892	30.26	2990	33.09	3085	35.97	3178	38.92
14500	3502	2615	22.98	2667	24.35	2719	25.76	2769	27.17	2868	30.02	2964	32.92	3057	35.87	3149	38.90	3239	41.96
15500	3744	2703	25.35	2753	26.82	2803	28.27	2851	29.76	2947	32.76	3039	35.79	3130	38.89	3218	42.02	3305	45.21
16500	3986	2793	27.92	2842	29.46	2890	31.01	2937	32.56	3029	35.70	3119	38.87	3207	42.09	3293	45.37	3377	48.68
17500	4227	2886	30.70	2933	32.31	2980	33.92	3026	35.56	3115	38.84	3202	42.17	3287	45.53	3371	48.95	3452	52.39
18500	4469	2980	33.68	3027	35.37	3072	37.07	3116	38.78	3204	42.21	3288	45.68	3371	49.20	3452	52.75	3531	56.34
19500	4710	3077	36.89	3122	38.65	3166	40.43	3209	42.22	3294	45.82	3377	49.45	3457	53.10	3536	56.79	3613	60.53
20500	4952	3175	40.32	3219	42.17	3262	44.03	3304	45.90	3387	49.65	3467	53.44	3546	57.25	3623	61.09	3698	64.96
21500	5193	3275	44.01	3317	45.95	3359	47.89	3401	49.82	3481	53.74	3560	57.67	3637	61.65	3712	65.65		
22500	5435	3375	47.95	3417	49.96	3458	51.99	3498	54.00	3577	58.09	3654	62.19						
23500	5676	3478	52.15	3518	54.25	3558	56.34	3598	58.45	3675	62.70								

Performance Data

VCR Fan

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AF DWDI

Wheel Diameter = 22.25 in.	Discharge Area = 5.12 sq. ft.
Inlet Area = 6.040 sq. ft.	Tip Speed, FPM = 5.83 x RPM
Maximum BHP = 2.190 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4200	820	505	0.28	558	0.38	606	0.48	651	0.59	694	0.69	736	0.81	775	0.93				
4800	938	547	0.34	596	0.45	641	0.58	683	0.68	723	0.81	762	0.93	799	1.06	871	1.33	938	1.61
5400	1055	591	0.44	637	0.56	679	0.68	719	0.81	757	0.93	793	1.08	828	1.20	895	1.50	959	1.79
6000	1172	635	0.54	679	0.66	719	0.81	757	0.94	793	1.08	827	1.22	860	1.37	924	1.68	985	2.00
6600	1289	681	0.65	722	0.80	760	0.94	796	1.10	831	1.25	863	1.41	895	1.56	956	1.88	1013	2.22
7200	1406	728	0.79	767	0.94	803	1.11	838	1.27	870	1.43	902	1.60	932	1.77	990	2.12	1045	2.47
7800	1523	776	0.94	812	1.12	847	1.29	880	1.46	912	1.63	942	1.82	971	2.00	1027	2.37	1079	2.74
8400	1641	824	1.12	859	1.31	892	1.48	924	1.67	954	1.87	983	2.06	1011	2.25	1065	2.63	1116	3.04
9000	1758	873	1.31	906	1.52	938	1.72	968	1.92	997	2.12	1025	2.32	1052	2.52	1104	2.93	1153	3.35
9600	1875	922	1.54	954	1.76	984	1.97	1013	2.17	1041	2.38	1068	2.61	1094	2.82	1144	3.25	1192	3.70
10200	1992	972	1.81	1002	2.02	1031	2.24	1059	2.47	1086	2.68	1112	2.91	1137	3.15	1186	3.60	1232	4.08
11200	2188	1056	2.29	1084	2.52	1110	2.77	1136	3.00	1162	3.25	1187	3.50	1211	3.75	1257	4.25	1301	4.76
12200	2383	1141	2.87	1166	3.12	1191	3.39	1216	3.65	1240	3.90	1263	4.17	1286	4.44	1330	5.00	1372	5.54
13200	2578	1227	3.54	1250	3.82	1273	4.09	1296	4.37	1319	4.66	1341	4.94	1362	5.24	1404	5.82	1444	6.41
14200	2773	1313	4.32	1335	4.60	1356	4.91	1378	5.20	1399	5.50	1420	5.82	1440	6.12	1480	6.75	1519	7.39
15200	2969	1400	5.20	1420	5.51	1440	5.83	1460	6.16	1480	6.48	1500	6.80	1519	7.13	1557	7.80	1594	8.46
16200	3164	1487	6.22	1506	6.55	1525	6.88	1543	7.21	1562	7.55	1581	7.91	1599	8.25	1636	8.96	1671	9.66
17200	3359	1574	7.35	1592	7.69	1610	8.05	1627	8.41	1645	8.76	1663	9.14	1680	9.50	1715	10.25	1749	11.00
18200	3555	1661	8.63	1678	9.00	1695	9.36	1712	9.74	1729	10.11	1746	10.50	1762	10.89	1795	11.66	1828	12.46
19200	3750	1749	10.05	1765	10.42	1781	10.82	1797	11.21	1813	11.60	1829	12.00	1845	12.41	1876	13.23	1907	14.06

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	1172	1099	2.67	1205	3.38														
6600	1289	1122	2.93	1225	3.67	1321	4.46												
7200	1406	1149	3.20	1247	3.99	1340	4.80	1429	5.66										
7800	1523	1179	3.52	1273	4.33	1363	5.19	1449	6.08	1531	7.00								
8400	1641	1212	3.85	1302	4.70	1388	5.59	1471	6.51	1551	7.46	1628	8.46						
9000	1758	1246	4.22	1333	5.10	1417	6.04	1496	7.00	1574	7.98	1648	9.00	1720	10.05				
9600	1875	1282	4.60	1366	5.54	1447	6.50	1524	7.50	1599	8.53	1671	9.58	1741	10.66	1810	11.76	1876	12.91
10200	1992	1319	5.02	1401	6.00	1479	7.00	1554	8.03	1626	9.10	1697	10.19	1765	11.30	1831	12.44	1896	13.61
11200	2188	1384	5.80	1462	6.84	1537	7.91	1608	9.01	1677	10.14	1744	11.30	1809	12.46	1872	13.66	1934	14.89
12200	2383	1452	6.65	1526	7.78	1598	8.92	1666	10.10	1732	11.28	1796	12.50	1858	13.73	1919	15.01	1978	16.28
13200	2578	1521	7.59	1593	8.80	1661	10.03	1727	11.28	1790	12.53	1852	13.82	1911	15.13	1970	16.46	2027	17.81
14200	2773	1592	8.66	1661	9.94	1727	11.25	1791	12.57	1852	13.89	1911	15.26	1968	16.63	2025	18.03	2080	19.43
15200	2969	1665	9.82	1732	11.19	1795	12.57	1857	13.96	1916	15.38	1973	16.81	2028	18.26	2083	19.71	2136	21.21
16200	3164	1739	11.10	1803	12.55	1865	14.01	1924	15.50	1981	16.98	2037	18.48	2091	20.01	2143	21.54	2195	23.10
17200	3359	1814	12.50	1877	14.05	1936	15.58	1994	17.14	2049	18.71	2103	20.29	2155	21.89	2206	23.51	2256	25.14
18200	3555	1890	14.05	1951	15.66	2009	17.29	2064	18.92	2118	20.58	2170	22.25	2221	23.92	2271	25.60	2319	27.31
19200	3750	1968	15.73	2026	17.42	2082	19.14	2136	20.85	2189	22.58	2239	24.33	2289	26.08	2337	27.85	2384	29.64
20200	3945	2046	17.57	2102	19.33	2157	21.14	2209	22.93	2260	24.75	2310	26.57	2358	28.41	2405	30.26	2451	32.10
21200	4141	2125	19.56	2179	21.41	2232	23.28	2283	25.17	2333	27.07	2381	28.97	2428	30.89	2474	32.82	2519	34.75
22200	4336	2205	21.71	2257	23.64	2308	25.60	2358	27.57	2406	29.54	2453	31.52	2499	33.53	2544	35.53	2588	37.56

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10200	1992	1960	14.82	2022	16.03														
11200	2188	1995	16.14	2055	17.42	2113	18.73	2170	20.06										
12200	2383	2036	17.60	2094	18.93	2150	20.29	2205	21.67	2312	24.50	2416	27.41						
13200	2578	2083	19.17	2138	20.57	2192	21.98	2245	23.42	2348	26.35	2449	29.37	2547	32.47				
14200	2773	2133	20.88	2186	22.32	2238	23.81	2290	25.31	2390	28.35	2487	31.48	2581	34.70	2674	37.98	2764	41.34
15200	2969	2188	22.71	2239	24.23	2289	25.77	2338	27.32	2435	30.50	2529	33.75	2621	37.07	2710	40.47	2798	43.95
16200	3164	2245	24.67	2294	26.26	2343	27.87	2391	29.48	2484	32.78	2575	36.15	2664	39.60	2751	43.12	2836	46.71
17200	3359	2305	26.77	2353	28.43	2400	30.10	2446	31.79	2537	35.22	2625	38.72	2711	42.29	2795	45.92	2878	49.62
18200	3555	2367	29.02	2413	30.76	2459	32.50	2504	34.26	2592	37.82	2678	41.46	2761	45.15	2843	48.90	2923	52.72
19200	3750	2430	31.42	2476	33.22	2520	35.04	2564	36.87	2650	40.59	2733	44.34	2816	48.17	2894	52.05	2972	56.00
20200	3945	2496	33.97	2540	35.85	2583	37.75	2626	39.65	2710	43.51	2791	47.40	2870	51.37	2947	55.39	3023	59.46
21200	4141	2563	36.70	2606	38.65	2648	40.62	2690	42.60	2771	46.59	2850	50.65	2928	54.75	3003	58.90	3077	63.10
22200	4336	2631	39.57	2673	41.62	2714	43.67	2755	45.71	2835	49.87	2912	54.07	2987	58.30	3061	62.59	3134	66.93
23200	4531	2700	42.64	2741	44.76	2782	46.87	2822	49.02	2899	53.32	2975	57.65	3049	62.04	3121	66.49	3192	70.96
24200	4727	2770	45.87	2811	48.07	2850	50.28	2889	52.50	2966	56.95	3040	61.45	3112	65.99	3183	70.56	3252	75.19
25200	4922	2842	49.31	2881	51.59	2920	53.87	2958	56.17	3033	60.78	3105	65.43	3176	70.12	3245	74.85	3313	79.62
26200	5117	2914	52.92	2952	55.29	2990	57.65	3028	60.03	3101	64.81	3172	69.62	3242	74.45	3310	79.34		
27200	5313	2987	56.75	3024	59.20	3062	61.65	3098	64.09	3170	69.04	3240	74.00	3308	79.00				
28200	5508	3060	60.79	3097	63.30	3134	65.84	3170	68.39	3240	73.49	3309	78.62						
29200	5703	3134	65.04	3171	67.65	3207	70.25	3242	72.89	3311	78.15								

245

AF DWDI

Wheel Diameter = 24.50 in.	Discharge Area = 6.21 sq. ft.
Inlet Area = 7.280 sq. ft.	Tip Speed, FPM = 6.41 x RPM
Maximum BHP = 3.550 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4900	789	449	0.32	498	0.44	542	0.56	584	0.68	624	0.81	662	0.94	699	1.08				
5900	950	501	0.44	545	0.56	586	0.70	624	0.86	660	1.00	695	1.14	729	1.31	793	1.63	854	1.97
6900	1111	556	0.59	597	0.73	634	0.89	669	1.06	703	1.22	735	1.39	766	1.56	825	1.92	882	2.29
7900	1272	613	0.77	650	0.94	685	1.12	718	1.31	749	1.48	779	1.67	808	1.87	864	2.25	916	2.66
8900	1433	671	1.00	706	1.20	739	1.38	770	1.60	799	1.79	827	2.00	855	2.20	907	2.63	956	3.07
9900	1594	731	1.27	763	1.48	794	1.70	823	1.92	851	2.15	878	2.37	904	2.61	953	3.07	1000	3.54
10900	1755	792	1.60	822	1.83	851	2.08	878	2.32	905	2.56	930	2.81	955	3.06	1002	3.55	1047	4.05
11900	1916	854	1.98	882	2.24	909	2.50	935	2.75	960	3.02	984	3.29	1008	3.55	1053	4.09	1096	4.65
12900	2077	916	2.43	942	2.70	968	2.99	992	3.27	1016	3.55	1039	3.84	1062	4.12	1105	4.70	1146	5.30
13900	2238	980	2.95	1004	3.25	1028	3.54	1051	3.84	1074	4.15	1096	4.45	1117	4.76	1159	5.39	1198	6.01
14900	2399	1043	3.54	1066	3.85	1088	4.17	1110	4.50	1132	4.82	1153	5.15	1174	5.48	1214	6.14	1252	6.80
15900	2560	1108	4.22	1129	4.55	1150	4.89	1171	5.23	1191	5.57	1211	5.91	1231	6.26	1269	6.96	1306	7.68
16900	2721	1172	4.98	1192	5.33	1212	5.67	1232	6.04	1251	6.40	1270	6.76	1289	7.14	1326	7.88	1361	8.63
17900	2882	1237	5.83	1256	6.19	1275	6.56	1293	6.94	1312	7.33	1330	7.70	1348	8.10	1384	8.89	1418	9.67
18900	3043	1302	6.78	1320	7.16	1338	7.55	1355	7.94	1373	8.35	1391	8.75	1408	9.16	1442	9.98	1475	10.82
19900	3205	1367	7.81	1384	8.21	1401	8.63	1418	9.05	1435	9.46	1451	9.89	1468	10.32	1501	11.17	1532	12.05
20900	3366	1432	8.98	1448	9.39	1465	9.82	1481	10.25	1497	10.69	1513	11.14	1529	11.58	1560	12.48	1591	13.39
21900	3527	1498	10.24	1513	10.67	1529	11.13	1544	11.58	1560	12.03	1575	12.49	1590	12.96	1620	13.89	1650	14.85
22900	3688	1563	11.63	1578	12.08	1593	12.55	1608	13.01	1622	13.48	1637	13.96	1652	14.44	1681	15.42	1709	16.42
23900	3849	1629	13.13	1643	13.61	1657	14.08	1672	14.58	1686	15.07	1700	15.57	1714	16.07	1742	17.08	1769	18.10

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6900	1111	988	3.08	1087	3.93	1180	4.82												
7900	1272	1016	3.50	1109	4.40	1198	5.35	1281	6.34										
8900	1433	1050	3.98	1138	4.93	1222	5.94	1302	6.98	1378	8.07								
9900	1594	1089	4.50	1172	5.52	1252	6.58	1328	7.69	1401	8.83	1472	10.00						
10900	1755	1131	5.10	1210	6.19	1286	7.30	1359	8.46	1429	9.66	1496	10.89	1562	12.17				
11900	1916	1176	5.76	1252	6.91	1324	8.10	1394	9.33	1461	10.58	1526	11.88	1589	13.19	1650	14.56	1710	15.96
12900	2077	1224	6.49	1297	7.71	1366	8.96	1432	10.25	1497	11.58	1559	12.92	1620	14.32	1679	15.73	1737	17.17
13900	2238	1273	7.29	1343	8.58	1410	9.91	1474	11.26	1536	12.64	1596	14.07	1654	15.51	1711	16.98	1767	18.50
14900	2399	1324	8.16	1391	9.53	1456	10.94	1518	12.35	1577	13.82	1635	15.30	1691	16.81	1747	18.35	1800	19.91
15900	2560	1376	9.11	1441	10.57	1504	12.03	1563	13.53	1621	15.07	1677	16.61	1732	18.18	1785	19.79	1837	21.42
16900	2721	1429	10.14	1492	11.69	1553	13.23	1611	14.81	1667	16.41	1721	18.03	1774	19.67	1825	21.35	1876	23.03
17900	2882	1483	11.28	1545	12.88	1603	14.53	1660	16.17	1714	17.85	1767	19.53	1818	21.26	1868	23.00	1917	24.76
18900	3043	1538	12.50	1598	14.18	1655	15.91	1710	17.64	1763	19.39	1814	21.16	1864	22.93	1912	24.75	1960	26.57
19900	3205	1594	13.81	1652	15.58	1707	17.39	1761	19.20	1812	21.03	1862	22.86	1911	24.73	1958	26.62	2005	28.52
20900	3366	1650	15.23	1707	17.10	1761	18.98	1813	20.86	1863	22.78	1912	24.70	1959	26.64	2006	28.60	2051	30.57
21900	3527	1707	16.76	1762	18.71	1815	20.67	1866	22.64	1915	24.64	1963	26.64	2009	28.66	2054	30.68	2098	32.73
22900	3688	1765	18.42	1818	20.45	1870	22.48	1919	24.53	1967	26.60	2014	28.70	2059	30.78	2104	32.90	2147	35.03
23900	3849	1823	20.18	1875	22.29	1925	24.42	1974	26.56	2021	28.71	2066	30.87	2111	33.04	2154	35.23	2196	37.45
24900	4010	1882	22.08	1933	24.28	1981	26.47	2029	28.70	2075	30.92	2119	33.17	2163	35.43	2205	37.71	2246	39.98
25900	4171	1941	24.11	1991	26.39	2038	28.67	2084	30.97	2129	33.28	2173	35.62	2215	37.96	2257	40.31	2298	42.67

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13900	2238	1821	20.04	1875	21.60	1927	23.20	1979	24.82	2079	28.15								
14900	2399	1853	21.51	1905	23.13	1956	24.78	2005	26.46	2103	29.89	2197	33.43						
15900	2560	1888	23.07	1938	24.76	1987	26.47	2035	28.21	2130	31.76	2221	35.40	2311	39.15				
16900	2721	1925	24.76	1974	26.50	2021	28.27	2068	30.07	2160	33.72	2249	37.50	2336	41.34	2420	45.29	2503	49.34
17900	2882	1965	26.53	2012	28.35	2058	30.17	2104	32.03	2193	35.82	2279	39.70	2364	43.67	2446	47.73	2527	51.89
18900	3043	2007	28.43	2052	30.31	2097	32.21	2142	34.12	2228	38.03	2313	42.03	2395	46.12	2475	50.29	2554	54.55
19900	3205	2050	30.43	2095	32.39	2138	34.34	2182	36.34	2266	40.37	2348	44.48	2428	48.70	2506	52.99	2583	57.37
20900	3366	2095	32.57	2139	34.57	2181	36.60	2223	38.67	2305	42.82	2385	47.07	2464	51.40	2540	55.82	2615	60.32
21900	3527	2141	34.81	2184	36.89	2226	39.00	2267	41.12	2347	45.42	2425	49.79	2501	54.25	2576	58.79	2649	63.40
22900	3688	2189	37.17	2230	39.32	2271	41.51	2311	43.70	2390	48.14	2466	52.65	2540	57.24	2613	61.90	2685	66.64
23900	3849	2238	39.67	2278	41.90	2318	44.15	2357	46.42	2434	51.00	2509	55.65	2581	60.37	2653	65.15	2723	70.03
24900	4010	2287	42.28	2327	44.59	2366	46.92	2404	49.27	2479	53.99	2552	58.79	2624	63.64	2694	68.56	2762	73.56
25900	4171	2337	45.04	2376	47.42	2415	49.84	2452	52.25	2526	57.12	2598	62.07	2668	67.06	2736	72.12	2803	77.25
26900	4332	2388	47.93	2427	50.40	2464	52.89	2501	55.37	2574	60.40	2644	65.49	2712	70.64	2779	75.84	2845	81.09
27900	4493	2440	50.97	2478	53.53	2515	56.09	2551	58.65	2622	63.84	2691	69.06	2758	74.35	2824	79.70	2889	85.10
28900	4654	2493	54.17	2530	56.79	2566	59.44	2601	62.09	2671	67.42	2739	72.81	2805	78.24	2870	83.72	2933	89.28
29900	4815	2546	57.50	2582	60.21	2618	62.94	2653	65.67	2721	71.15	2788	76.69	2853	82.29	2916	87.93	2979	93.62
30900	4976	2599	61.00	2635	63.79	2670	66.59	2704	69.40	2772	75.06	2837	80.75	2901	86.50	2964	92.29	3025	98.12
31900	5137	2653	64.67	2688	67.55	2723	70.43	2757	73.31	2823	79.12	2888	84.97	2951	90.87	3012	96.81		
32900	5298	2708	68.50	2742	71.45	2776	74.42	2810	77.39	2875	83.37	2939	89.37	3001	95.43				

Performance Data

VCR Fan

270 AF DWDI

Wheel Diameter = 27 in.	Discharge Area = 7.54 sq. ft.
Inlet Area = 8.700 sq. ft.	Tip Speed, FPM = 7.075 x RPM
Maximum BHP = 6.074 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	796	392	0.35	433	0.48	472	0.61	510	0.76	547	0.91	582	1.06	616	1.22				
6600	875	415	0.43	454	0.56	490	0.69	525	0.85	559	1.00	593	1.16	625	1.33	688	1.70		
7200	955	438	0.50	475	0.64	509	0.80	543	0.94	575	1.11	606	1.28	637	1.45	696	1.82	753	2.22
7800	1034	461	0.58	497	0.73	530	0.89	561	1.06	592	1.22	621	1.39	650	1.58	707	1.95	761	2.37
8400	1114	486	0.66	520	0.83	551	1.01	581	1.18	610	1.36	638	1.54	666	1.72	719	2.12	771	2.54
9000	1194	510	0.77	543	0.94	574	1.13	602	1.31	630	1.51	657	1.70	683	1.88	734	2.29	784	2.72
9600	1273	535	0.88	567	1.08	596	1.27	624	1.46	651	1.67	676	1.87	702	2.07	750	2.47	798	2.91
10200	1353	561	1.00	591	1.20	620	1.41	647	1.62	672	1.83	697	2.04	721	2.25	768	2.68	813	3.13
10800	1432	586	1.12	616	1.36	643	1.58	669	1.79	694	2.02	718	2.24	741	2.45	786	2.91	830	3.37
11400	1512	613	1.28	641	1.51	667	1.75	693	1.97	717	2.22	740	2.45	763	2.67	806	3.15	848	3.64
12000	1592	639	1.43	666	1.67	692	1.92	716	2.17	740	2.42	762	2.66	784	2.91	826	3.40	867	3.90
12600	1671	665	1.62	691	1.87	716	2.12	740	2.38	763	2.65	785	2.91	807	3.16	847	3.67	887	4.19
13200	1751	692	1.81	717	2.07	741	2.33	765	2.62	787	2.88	808	3.16	829	3.42	869	3.97	907	4.50
13800	1830	719	2.02	743	2.29	766	2.57	789	2.86	811	3.13	832	3.42	852	3.70	891	4.26	928	4.83
14400	1910	747	2.24	769	2.52	792	2.82	814	3.11	835	3.40	856	3.70	875	4.00	913	4.58	950	5.17
15000	1989	774	2.49	796	2.77	818	3.08	839	3.39	860	3.70	880	4.00	899	4.32	936	4.92	972	5.55
17000	2255	866	3.45	886	3.75	905	4.08	924	4.42	943	4.77	961	5.12	979	5.49	1014	6.19	1047	6.89
19000	2520	960	4.65	977	4.99	994	5.33	1011	5.70	1029	6.08	1046	6.48	1062	6.86	1095	7.66	1126	8.44
21000	2785	1055	6.12	1070	6.49	1085	6.85	1100	7.25	1116	7.66	1132	8.08	1147	8.51	1177	9.38	1207	10.25
23000	3050	1150	7.90	1163	8.28	1177	8.67	1191	9.10	1205	9.53	1220	9.99	1234	10.44	1262	11.38	1290	12.32

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	1194	879	3.65	969	4.66														
9600	1273	889	3.87	976	4.90														
10200	1353	901	4.10	985	5.16	1065	6.30												
10800	1432	914	4.37	995	5.44	1073	6.58	1148	7.81										
11400	1512	929	4.65	1007	5.74	1082	6.91	1155	8.14	1226	9.46								
12000	1592	945	4.94	1020	6.05	1093	7.25	1164	8.50	1233	9.83	1299	11.23						
12600	1671	962	5.27	1035	6.41	1105	7.60	1174	8.89	1241	10.23	1306	11.64						
13200	1751	980	5.62	1051	6.78	1119	8.00	1185	9.30	1250	10.66	1314	12.08	1376	13.57				
13800	1830	999	5.99	1067	7.18	1133	8.42	1198	9.74	1261	11.10	1323	12.55	1383	14.06	1442	15.61		
14400	1910	1019	6.37	1085	7.59	1149	8.86	1212	10.19	1273	11.60	1333	13.05	1392	14.57	1450	16.14	1506	17.78
15000	1989	1039	6.78	1104	8.03	1166	9.33	1227	10.69	1286	12.10	1345	13.58	1402	15.11	1459	16.71	1514	18.35
17000	2255	1110	8.28	1170	9.66	1227	11.08	1283	12.53	1337	14.03	1391	15.58	1443	17.17	1495	18.82	1547	20.53
19000	2520	1185	10.00	1241	11.55	1295	13.11	1346	14.68	1397	16.29	1446	17.93	1495	19.60	1543	21.33	1590	23.10
21000	2785	1263	11.98	1316	13.71	1366	15.41	1415	17.14	1462	18.88	1509	20.63	1554	22.41	1599	24.23	1643	26.07
23000	3050	1343	14.23	1393	16.13	1441	18.01	1488	19.89	1532	21.76	1576	23.66	1619	25.57	1661	27.50	1702	29.46
25000	3316	1424	16.76	1473	18.83	1519	20.89	1563	22.95	1606	24.98	1647	27.20	1688	29.07	1728	31.14	1767	33.22
27000	3581	1508	19.64	1554	21.86	1598	24.10	1640	26.32	1681	28.53	1721	30.75	1760	32.96	1798	35.17	1835	37.37
29000	3846	1592	22.86	1636	25.26	1678	27.66	1719	30.06	1759	32.45	1797	34.82	1834	37.20	1871	39.56	1907	41.93
31000	4111	1678	26.48	1720	29.02	1760	31.58	1800	34.15	1838	36.71	1875	39.27	1911	41.82	1946	44.34	1981	46.89
33000	4377	1766	30.53	1805	33.21	1844	35.92	1881	38.65	1918	41.39	1954	44.12	1989	46.82	2023	49.53	2056	52.25

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	1989	1568	20.06	1621	21.82														
17000	2255	1597	22.28	1647	24.08	1696	25.95	1744	27.85	1838	31.78								
19000	2520	1637	24.92	1683	26.77	1729	28.68	1774	30.64	1863	34.68	1949	38.90	2034	43.29				
21000	2785	1686	27.97	1729	29.89	1772	31.87	1814	33.87	1898	38.03	1979	42.37	2059	46.85	2138	51.52	2215	56.32
23000	3050	1743	31.43	1783	33.46	1823	35.51	1863	37.59	1941	41.87	2018	46.32	2094	50.92	2168	55.69	2241	60.59
25000	3316	1805	35.32	1843	37.45	1881	39.59	1918	41.78	1992	46.22	2065	50.81	2136	55.54	2206	60.40	2276	65.43
27000	3581	1872	39.60	1908	41.85	1944	44.12	1979	46.40	2049	51.06	2118	55.82	2185	60.70	2252	65.70	2318	70.84
29000	3846	1942	44.31	1977	46.70	2011	49.09	2045	51.50	2111	56.37	2176	61.34	2240	66.40	2304	71.57	2366	76.85
31000	4111	2015	49.42	2048	51.95	2081	54.50	2113	57.04	2177	62.17	2239	67.37	2300	72.65	2361	78.02	2421	83.47
33000	4377	2089	54.95	2121	57.64	2153	60.34	2184	63.04	2245	68.45	2305	73.92	2364	79.43	2422	85.02	2479	90.68
35000	4642	2165	60.90	2197	63.77	2227	66.62	2257	69.49	2317	75.20	2374	80.95	2431	86.74	2487	92.56	2542	98.46
37000	4907	2243	67.31	2273	70.34	2303	73.37	2332	76.40	2390	82.45	2446	88.50	2501	94.57	2554	100.68	2607	106.83
39000	5172	2322	74.19	2351	77.40	2380	80.62	2409	83.81	2465	90.18	2519	96.56	2572	102.93	2624	109.34	2676	115.75
41000	5438	2402	81.57	2431	84.96	2459	88.34	2487	91.71	2541	98.43	2594	105.15	2646	111.84	2696	118.55	2746	125.26
43000	5703	2483	89.49	2511	93.05	2538	96.59	2566	100.15	2618	107.21	2670	114.26	2720	121.31				
45000	5968	2565	97.92	2592	101.66	2619	105.39	2645	109.12	2697	116.55	2747	123.96						

- Notes:**
- 1) Performance certified is for Installation Type B: free inlet, ducted outlet.
 - 2) Power rating (BHP) does not include transmission losses.
 - 3) Performance ratings do not include the effects of appurtenances (accessories) in the airstream.
 - 4) Bold figures indicate maximum static efficiency.

300

AF DWDI

Wheel Diameter = 30 in.	Discharge Area = 9.31 sq. ft.
Inlet Area = 10.710 sq. ft.	Tip Speed, FPM = 7.86 x RPM
Maximum BHP = 10.284 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7700	827	361	0.48	397	0.64	431	0.80	464	0.97	496	1.16	527	1.36	558	1.56				
8400	902	380	0.56	415	0.72	447	0.91	478	1.08	508	1.28	537	1.47	566	1.68	621	2.13		
9100	977	400	0.64	433	0.83	464	1.02	493	1.20	521	1.41	549	1.62	576	1.82	629	2.29	680	2.79
9800	1053	420	0.73	452	0.93	481	1.13	509	1.35	536	1.54	563	1.77	588	1.98	638	2.47	687	2.97
10500	1128	441	0.85	472	1.06	500	1.28	527	1.48	552	1.70	577	1.93	602	2.16	650	2.65	696	3.16
11200	1203	462	0.96	491	1.20	519	1.43	545	1.64	569	1.88	593	2.12	617	2.36	662	2.86	707	3.39
11900	1278	483	1.08	512	1.33	538	1.58	563	1.85	587	2.07	610	2.32	632	2.57	676	3.08	719	3.62
12600	1353	505	1.23	532	1.50	558	1.76	582	2.00	605	2.27	627	2.52	649	2.79	691	3.33	732	3.87
13300	1429	527	1.38	553	1.66	578	1.93	602	2.20	624	2.47	646	2.75	667	3.02	707	3.59	746	4.16
14000	1504	549	1.56	574	1.85	598	2.13	621	2.42	643	2.70	664	3.00	684	3.27	724	3.85	762	4.45
14700	1579	571	1.75	596	2.04	619	2.34	641	2.65	663	2.95	683	3.25	703	3.55	741	4.16	778	4.77
16700	1794	636	2.37	658	2.70	679	3.04	700	3.39	720	3.72	739	4.08	757	4.41	793	5.09	827	5.79
18700	2009	703	3.15	722	3.50	742	3.87	761	4.26	779	4.65	797	5.04	814	5.42	848	6.19	879	6.95
20700	2223	770	4.10	787	4.49	805	4.89	823	5.30	840	5.73	857	6.16	873	6.58	904	7.44	935	8.28
22700	2438	838	5.25	854	5.66	870	6.08	886	6.54	902	7.00	918	7.45	933	7.93	963	8.86	992	9.80
24700	2653	907	6.61	921	7.04	936	7.50	950	7.96	965	8.46	980	8.96	994	9.46	1023	10.49	1050	11.50
26700	2868	976	8.21	989	8.66	1002	9.14	1016	9.64	1030	10.14	1043	10.67	1057	11.21	1083	12.30	1109	13.41
28700	3083	1045	10.05	1057	10.53	1070	11.03	1082	11.55	1095	12.08	1107	12.64	1120	13.21	1145	14.38	1170	15.56
30700	3298	1115	12.16	1126	12.66	1137	13.17	1149	13.73	1161	14.28	1173	14.88	1185	15.46	1208	16.70	1232	17.95
32700	3512	1185	14.57	1195	15.08	1206	15.63	1217	16.20	1228	16.78	1239	17.39	1250	18.01	1272	19.28	1294	20.60

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
11200	1203	792	4.54	873	5.80														
11900	1278	801	4.79	879	6.07														
12600	1353	811	5.07	886	6.37	959	7.78												
13300	1429	822	5.37	895	6.69	965	8.11	1033	9.63										
14000	1504	835	5.70	905	7.05	973	8.49	1039	10.01	1103	11.63								
14700	1579	848	6.05	916	7.41	982	8.88	1046	10.42	1108	12.07								
16700	1794	891	7.18	954	8.64	1014	10.16	1073	11.76	1131	13.46	1187	15.23	1242	17.07	1295	19.00		
18700	2009	940	8.49	997	10.05	1053	11.67	1107	13.36	1161	15.11	1213	16.93	1264	18.83	1315	20.81	1364	22.85
20700	2223	992	9.99	1046	11.69	1098	13.41	1148	15.19	1198	17.03	1246	18.92	1294	20.89	1341	22.92	1388	25.01
22700	2438	1046	11.66	1097	13.51	1146	15.38	1194	17.28	1240	19.21	1285	21.21	1330	23.25	1375	25.33	1418	27.50
24700	2653	1102	13.53	1151	15.56	1197	17.57	1242	19.61	1286	21.67	1329	23.76	1371	25.89	1413	28.07	1454	30.31
26700	2868	1159	15.63	1206	17.82	1251	20.00	1294	22.18	1336	24.38	1376	26.60	1416	28.85	1456	31.12	1495	33.45
28700	3083	1218	17.92	1263	20.29	1306	22.64	1347	25.00	1387	27.35	1426	29.71	1464	32.07	1502	34.47	1539	36.90
30700	3298	1277	20.48	1321	23.01	1362	25.54	1402	28.07	1441	30.57	1478	33.09	1515	35.59	1551	38.14	1586	40.68
32700	3512	1338	23.29	1379	26.00	1419	28.71	1458	31.39	1495	34.07	1532	36.75	1567	39.42	1602	42.09	1636	44.78
34700	3727	1399	26.39	1439	29.26	1478	32.14	1515	35.00	1551	37.84	1587	40.68	1621	43.53	1654	46.35	1687	49.20
36700	3942	1461	29.79	1500	32.82	1537	35.85	1573	38.89	1609	41.92	1643	44.92	1676	47.93	1708	50.93	1740	53.94
38700	4157	1524	33.53	1561	36.68	1597	39.89	1632	43.09	1666	46.29	1700	49.47	1732	52.65	1763	55.82	1794	59.00
40700	4372	1588	37.60	1623	40.90	1658	44.26	1692	47.62	1725	51.00	1757	54.35	1789	57.70	1820	61.05	1850	64.39
42700	4586	1652	42.07	1686	45.48	1720	48.97	1752	52.50	1785	56.04	1816	59.57	1847	63.09	1877	66.62	1906	70.12

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18700	2009	1413	24.96	1460	27.12														
20700	2223	1434	27.17	1479	29.39	1523	31.67	1567	34.02										
22700	2438	1461	29.71	1504	31.98	1546	34.32	1587	36.71	1669	41.67	1748	46.84						
24700	2653	1495	32.59	1535	34.92	1575	37.32	1614	39.77	1691	44.84	1767	50.12	1841	55.59	1913	61.28		
26700	2868	1533	35.82	1571	38.22	1609	40.68	1646	43.21	1719	48.39	1791	53.77	1862	59.35	1932	65.14	2000	71.10
28700	3083	1575	39.37	1611	41.87	1647	44.42	1682	47.02	1752	52.34	1821	57.84	1889	63.54	1955	69.43	2021	75.50
30700	3298	1621	43.28	1655	45.89	1689	48.53	1723	51.20	1790	56.69	1855	62.34	1920	68.17	1983	74.17	2046	80.34
32700	3512	1669	47.50	1702	50.22	1735	52.99	1767	55.78	1831	61.45	1893	67.27	1955	73.24	2016	79.37	2076	85.68
34700	3727	1719	52.04	1751	54.92	1782	57.79	1813	60.70	1874	66.59	1934	72.60	1994	78.75	2052	85.04	2110	91.47
36700	3942	1771	56.94	1802	59.95	1832	62.96	1862	66.00	1921	72.14	1979	78.37	2035	84.70	2092	91.18	2147	97.78
38700	4157	1825	62.15	1854	65.31	1884	68.49	1913	71.67	1970	78.06	2025	84.54	2080	91.09	2134	97.77	2187	104.55
40700	4372	1879	67.71	1908	71.04	1937	74.37	1965	77.69	2020	84.37	2074	91.12	2127	97.92	2179	104.81	2230	111.80
42700	4586	1935	73.62	1963	77.12	1991	80.60	2018	84.09	2072	91.09	2124	98.09	2175	105.16	2226	112.31	2276	119.51
44700	4801	1991	79.90	2018	83.56	2046	87.21	2072	90.87	2125	98.18	2176	105.50	2225	112.84	2275	120.25	2323	127.70
46700	5016	2048	86.55	2075	90.39	2101	94.21	2128	98.04	2179	105.66	2228	113.31	2277	120.94	2325	128.63	2372	136.36
48700	5231	2106	93.59	2132	97.59	2158	101.59	2184	105.59	2233	113.56	2282	121.53	2330	129.49	2376	137.46	2422	145.48
50700	5446	2164	101.04	2190	105.21	2215	109.40	2240	113.56	2289	121.89	2337	130.18	2383	138.46	2429	146.75	2474	155.06
52700	5661	2223	108.90	2249	113.26	2273	117.61	2298	121.96	2346	130.62	2392	139.26	2438	147.88				
54700	5875	2283	117.20	2307	121.74	2332	126.27	2356	130.80	2403	139.83	2449	148.82						
56700	6090	2343	125.98	2367	130.68	2391	135.38	2414	140.08	2460	149.46								

Performance Data

VCR Fan

330 AF DWDI

Wheel Diameter = 33 in.	Discharge Area = 11.27 sq. ft.
Inlet Area = 12.98 sq. ft.	Tip Speed, FPM = 8.65 x RPM
Maximum BHP = 16.583 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	799	322	0.55	355	0.72	387	0.93	418	1.13	448	1.36	477	1.58	505	1.83				
9900	878	340	0.64	372	0.85	402	1.06	430	1.27	458	1.50	485	1.73	512	2.00	563	2.54		
10800	958	359	0.75	389	0.96	418	1.20	445	1.43	471	1.66	496	1.91	521	2.16	570	2.72	616	3.33
11700	1038	379	0.86	408	1.11	435	1.35	460	1.60	485	1.85	509	2.11	533	2.37	579	2.93	623	3.55
12600	1118	399	1.01	426	1.27	452	1.53	477	1.77	500	2.04	523	2.32	546	2.59	589	3.17	632	3.80
13500	1198	419	1.16	446	1.43	471	1.70	494	1.98	517	2.27	538	2.54	560	2.83	601	3.44	642	4.08
14400	1278	439	1.31	465	1.62	489	1.92	512	2.20	534	2.50	555	2.79	575	3.11	615	3.74	653	4.39
15300	1358	460	1.51	485	1.82	508	2.13	530	2.45	551	2.75	571	3.08	591	3.39	629	4.04	666	4.72
16200	1437	481	1.70	505	2.04	528	2.37	549	2.70	569	3.04	589	3.37	608	3.70	645	4.37	680	5.08
17100	1517	503	1.92	526	2.27	548	2.62	568	2.99	588	3.34	607	3.69	625	4.04	661	4.74	695	5.45
18000	1597	525	2.16	547	2.54	568	2.91	588	3.27	607	3.65	625	4.01	643	4.39	678	5.12	711	5.87
18900	1677	546	2.43	567	2.82	588	3.20	607	3.59	626	3.99	644	4.37	661	4.75	695	5.54	727	6.32
19800	1757	568	2.72	589	3.12	608	3.52	627	3.94	646	4.34	663	4.75	680	5.16	713	5.97	744	6.78
20700	1837	591	3.04	610	3.45	629	3.87	648	4.30	665	4.73	682	5.16	699	5.58	731	6.43	761	7.28
21600	1917	613	3.39	632	3.80	650	4.24	668	4.69	685	5.14	702	5.58	718	6.02	749	6.91	779	7.79
22500	1996	636	3.75	653	4.19	671	4.64	689	5.09	705	5.57	722	6.02	738	6.50	768	7.41	797	8.33
23400	2076	658	4.16	675	4.59	692	5.05	709	5.54	726	6.02	742	6.50	757	6.99	787	7.95	815	8.91
26400	2343	735	5.72	750	6.19	765	6.69	780	7.21	795	7.75	810	8.30	824	8.85	852	9.94	878	11.03
29400	2609	812	7.65	825	8.16	839	8.71	852	9.26	866	9.85	879	10.46	893	11.05	919	12.26	944	13.48
32400	2875	890	10.01	901	10.55	914	11.14	926	11.74	938	12.36	951	13.01	963	13.66	987	14.98	1011	16.32

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
13500	1198	720	5.47	793	7.00														
14400	1278	728	5.80	799	7.34														
15300	1358	738	6.16	806	7.74	872	9.42												
16200	1437	749	6.55	815	8.16	878	9.88	940	11.71										
17100	1517	761	6.98	825	8.60	886	10.35	946	12.21	1003	14.16								
18000	1597	774	7.44	836	9.10	895	10.86	953	12.75	1009	14.73								
18900	1677	788	7.93	848	9.61	905	11.41	961	13.33	1016	15.33	1069	17.45	1121	19.64				
19800	1757	803	8.44	861	10.17	916	12.01	971	13.94	1024	15.98	1076	18.10	1126	20.33	1175	22.64		
20700	1837	819	9.00	875	10.78	929	12.64	981	14.61	1033	16.67	1083	18.82	1132	21.07	1181	23.39	1227	25.82
21600	1917	835	9.58	889	11.41	942	13.32	993	15.31	1043	17.39	1092	19.57	1140	21.85	1187	24.21	1233	26.64
22500	1996	852	10.19	904	12.08	955	14.03	1005	16.06	1054	18.17	1101	20.38	1148	22.67	1194	25.06	1239	27.52
23400	2076	869	10.83	920	12.78	970	14.78	1018	16.85	1065	19.00	1112	21.23	1157	23.54	1202	25.96	1246	28.43
26400	2343	929	13.18	976	15.35	1022	17.53	1066	19.76	1110	22.06	1152	24.41	1194	26.82	1236	29.32	1276	31.89
29400	2609	991	15.91	1036	18.31	1079	20.71	1120	23.14	1161	25.60	1200	28.10	1239	30.66	1277	33.28	1315	35.96
32400	2875	1056	19.01	1098	21.67	1139	24.32	1178	26.97	1216	29.62	1253	32.32	1289	35.04	1325	37.81	1360	40.62
35400	3141	1122	22.53	1162	25.45	1201	28.35	1238	31.25	1274	34.14	1310	37.04	1344	39.96	1378	42.92	1411	45.90
38400	3407	1189	26.51	1228	29.68	1265	32.84	1301	36.01	1335	39.15	1369	42.28	1402	45.42	1434	48.57	1465	51.75
41400	3673	1258	30.98	1295	34.42	1331	37.84	1365	41.26	1398	44.65	1430	48.04	1462	51.42	1492	54.80	1522	58.20
44400	3940	1328	36.03	1363	39.70	1397	43.37	1430	47.04	1462	50.71	1493	54.34	1523	57.99	1553	61.62	1582	65.25
47400	4206	1399	41.70	1433	45.57	1465	49.47	1497	53.40	1528	57.32	1557	61.24	1587	65.12	1615	69.02	1643	72.89

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
21600	1917	1278	29.17																
22500	1996	1283	30.07	1327	32.68														
23400	2076	1290	31.01	1332	33.65	1374	36.37												
26400	2343	1317	34.53	1356	37.27	1396	40.07	1434	42.93	1510	48.87								
29400	2609	1352	38.70	1389	41.51	1426	44.40	1462	47.34	1533	53.45	1602	59.80	1670	66.42	1737	73.25		
32400	2875	1395	43.50	1430	46.42	1464	49.40	1497	52.45	1564	58.71	1630	65.24	1694	72.00	1757	79.00	1819	86.24
35400	3141	1443	48.92	1476	51.99	1508	55.09	1539	58.25	1602	64.75	1664	71.44	1724	78.39	1784	85.55	1843	92.93
38400	3407	1496	54.95	1527	58.19	1557	61.45	1587	64.77	1646	71.52	1704	78.45	1761	85.59	1818	92.93	1874	100.49
41400	3673	1552	61.60	1581	65.04	1610	68.49	1638	71.96	1694	79.03	1749	86.24	1804	93.62	1857	101.18	1910	108.93
44400	3940	1610	68.87	1638	72.52	1666	76.18	1693	79.84	1746	87.27	1799	94.81	1850	102.48	1901	110.30	1952	118.29
47400	4206	1670	76.75	1697	80.64	1724	84.52	1750	88.40	1801	96.22	1851	104.13	1901	112.14	1949	120.26	1998	128.53
50400	4472	1732	85.29	1758	89.40	1784	93.53	1809	97.65	1858	105.90	1907	114.21	1954	122.59	2001	131.08	2047	139.65
53400	4738	1795	94.47	1821	98.84	1845	103.21	1870	107.58	1918	116.31	1964	125.06	2010	133.86	2055	142.71	2099	151.65
56400	5004	1860	104.35	1884	108.99	1908	113.61	1932	118.23	1978	127.44	2024	136.66	2068	145.90	2111	155.18	2154	164.51
59400	5271	1925	114.95	1949	119.85	1972	124.75	1995	129.62	2040	139.35	2084	149.06	2127	158.76	2169	168.49	2211	178.25
62400	5537	1991	126.33	2014	131.49	2037	136.63	2059	141.78	2103	152.01	2146	162.24	2188	172.43	2229	182.63	2269	192.92
65400	5803	2058	138.48	2080	143.90	2102	149.32	2124	154.73	2167	165.52	2209	176.27	2250	186.99	2290	197.69	2329	208.38
68400	6069	2125	151.50	2147	157.17	2169	162.85	2190	168.52	2232	179.83	2273	191.11	2313	202.34	2352	213.55		
71400	6335	2194	165.43	2215	171.34	2236	177.27												

365

AF DWDI

Wheel Diameter = 36.50 in.	Discharge Area = 13.79 sq. ft.
Inlet Area = 15.96 sq. ft.	Tip Speed, FPM = 9.56 x RPM
Maximum BHP = 27.68 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	870	301	0.76	330	0.98	357	1.23	384	1.50	410	1.77	436	2.08	461	2.38	508	3.06		
14000	1015	332	1.00	358	1.28	383	1.54	407	1.83	430	2.12	453	2.45	475	2.77	519	3.47	561	4.22
16000	1160	364	1.31	388	1.62	411	1.92	433	2.25	454	2.57	474	2.90	494	3.24	534	3.97	573	4.74
18000	1305	397	1.67	420	2.02	441	2.37	461	2.72	480	3.08	499	3.44	518	3.80	554	4.57	589	5.37
20000	1450	432	2.11	453	2.50	472	2.88	491	3.27	509	3.66	527	4.05	544	4.45	577	5.26	610	6.12
22000	1595	466	2.62	486	3.04	505	3.49	522	3.91	539	4.34	556	4.77	572	5.20	603	6.08	634	6.96
24000	1740	502	3.22	520	3.70	538	4.16	554	4.64	571	5.10	586	5.58	601	6.05	631	6.98	659	7.94
26000	1885	538	3.92	555	4.42	571	4.94	587	5.45	603	5.97	617	6.48	632	6.98	660	8.00	687	9.00
28000	2030	574	4.75	590	5.27	605	5.82	621	6.37	635	6.93	649	7.48	663	8.01	690	9.10	716	10.21
30000	2175	610	5.66	625	6.24	640	6.81	655	7.40	669	7.99	682	8.58	695	9.16	721	10.35	746	11.50
32000	2321	647	6.73	661	7.31	675	7.93	689	8.55	702	9.17	715	9.80	728	10.44	753	11.69	776	12.93
34000	2466	684	7.91	698	8.53	711	9.16	724	9.83	737	10.50	749	11.16	761	11.83	785	13.16	808	14.50
36000	2611	721	9.24	734	9.88	747	10.55	759	11.25	771	11.94	783	12.64	795	13.36	818	14.78	840	16.18
38000	2756	759	10.71	771	11.39	783	12.08	794	12.81	806	13.53	818	14.28	829	15.03	851	16.53	872	18.01
40000	2901	796	12.35	808	13.05	819	13.78	830	14.53	841	15.28	852	16.07	863	16.85	884	18.42	905	20.00
42000	3046	834	14.14	845	14.86	855	15.63	866	16.41	877	17.21	887	18.01	898	18.82	918	20.48	938	22.13
44000	3191	872	16.11	882	16.88	892	17.66	903	18.46	913	19.28	923	20.13	933	20.98	953	22.70	972	24.43
46000	3336	909	18.28	919	19.06	929	19.86	939	20.70	949	21.56	959	22.42	968	23.31	987	25.10	1006	26.91
48000	3481	947	20.63	957	21.43	966	22.26	976	23.13	985	24.01	994	24.92	1004	25.82	1022	27.68	1040	29.57
50000	3626	985	23.17	994	24.01	1003	24.86	1012	25.76	1021	26.67	1030	27.60	1039	28.54	1057	30.47	1075	32.42

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18000	1305	658	7.13	723	9.05	785	11.13												
20000	1450	673	7.93	735	9.90	794	12.04	850	14.31										
22000	1595	693	8.85	750	10.88	805	13.07	859	15.38	911	17.85								
24000	1740	715	9.91	768	12.00	821	14.25	872	16.61	921	19.13	970	21.76	1017	24.50				
26000	1885	739	11.10	790	13.28	839	15.58	887	18.01	934	20.56	980	23.25	1026	26.03	1070	28.95	1113	31.96
28000	2030	765	12.41	813	14.69	860	17.07	905	19.56	950	22.17	994	24.89	1037	27.75	1080	30.71	1121	33.77
30000	2175	793	13.86	838	16.26	883	18.73	926	21.28	968	23.96	1010	26.75	1051	29.64	1092	32.65	1132	35.77
32000	2321	822	15.43	865	17.96	907	20.53	948	23.18	989	25.93	1029	28.78	1068	31.73	1107	34.79	1145	37.96
34000	2466	851	17.14	893	19.81	933	22.51	973	25.26	1011	28.10	1050	31.02	1087	34.03	1124	37.15	1161	40.37
36000	2611	882	19.00	922	21.81	961	24.64	999	27.51	1036	30.43	1072	33.45	1108	36.53	1144	39.71	1179	43.00
38000	2756	913	20.98	952	23.95	989	26.92	1026	29.92	1061	32.96	1096	36.07	1131	39.25	1165	42.51	1199	45.84
40000	2901	944	23.14	982	26.26	1018	29.37	1053	32.51	1088	35.67	1122	38.89	1155	42.17	1188	45.51	1220	48.92
42000	3046	977	25.43	1013	28.72	1048	31.98	1082	35.27	1115	38.57	1148	41.90	1180	45.28	1212	48.72	1243	52.22
44000	3191	1009	27.89	1044	31.33	1079	34.78	1112	38.20	1144	41.64	1175	45.10	1206	48.60	1237	52.15	1267	55.75
46000	3336	1042	30.52	1076	34.14	1110	37.73	1142	41.32	1173	44.90	1204	48.51	1234	52.14	1263	55.79	1293	59.52
48000	3481	1075	33.34	1109	37.12	1141	40.87	1172	44.62	1203	48.35	1233	52.10	1262	55.87	1291	59.65	1319	63.49
50000	3626	1109	36.34	1141	40.28	1173	44.21	1203	48.12	1233	52.00	1262	55.90	1291	59.80	1319	63.74	1346	67.68
52000	3771	1143	39.56	1174	43.65	1205	47.73	1235	51.80	1264	55.85	1292	59.90	1320	63.96	1347	68.03	1374	72.12
54000	3916	1177	42.96	1208	47.21	1238	51.46	1267	55.70	1295	59.92	1323	64.12	1350	68.32	1376	72.54	1403	76.77
56000	4061	1211	46.59	1241	51.00	1271	55.40	1299	59.79	1327	64.18	1354	68.56	1380	72.92	1406	77.28	1432	81.65

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
32000	2321	1183	41.21	1220	44.57	1257	48.03	1293	51.57	1363	58.90	1438	69.39						
34000	2466	1197	43.67	1233	47.09	1268	50.59	1303	54.17	1372	61.62								
36000	2611	1214	46.35	1248	49.82	1282	53.37	1316	57.00	1382	64.56	1447	72.43	1510	80.60				
38000	2756	1232	49.28	1265	52.79	1298	56.39	1330	60.07	1394	67.72	1457	75.69	1518	83.99				
40000	2901	1252	52.42	1284	56.00	1316	59.65	1347	63.40	1409	71.15	1469	79.21	1529	87.60	1587	96.29	1645	105.25
42000	3046	1274	55.80	1305	59.45	1335	63.17	1365	66.99	1425	74.84	1484	83.00	1541	91.49	1598	100.28	1654	109.34
44000	3191	1297	59.42	1327	63.15	1356	66.95	1385	70.82	1443	78.80	1500	87.07	1556	95.65	1611	104.54	1665	113.70
46000	3336	1322	63.28	1350	67.09	1379	70.97	1407	74.93	1462	83.04	1517	91.43	1572	100.12	1625	109.09	1678	118.35
48000	3481	1347	67.35	1375	71.28	1402	75.25	1429	79.29	1483	87.55	1537	96.07	1589	104.88	1641	113.95	1692	123.33
50000	3626	1373	71.68	1400	75.70	1427	79.79	1453	83.90	1506	92.34	1557	101.00	1608	109.93	1659	119.14	1708	128.61
52000	3771	1400	76.22	1427	80.37	1453	84.56	1478	88.79	1529	97.40	1579	106.24	1629	115.31	1678	124.64	1726	134.21
54000	3916	1428	81.00	1454	85.29	1479	89.59	1504	93.93	1553	102.75	1602	111.75	1650	120.99	1698	130.44	1745	140.15
56000	4061	1457	86.03	1482	90.43	1506	94.87	1531	99.32	1579	108.35	1626	117.56	1673	126.96	1719	136.59	1765	145.43
58000	4206	1486	91.29	1510	95.82	1534	100.40	1558	104.98	1605	114.25	1651	123.65	1697	133.25	1742	143.04	1786	153.04
60000	4351	1516	96.79	1539	101.47	1563	106.18	1586	110.90	1632	120.40	1677	130.05	1721	139.84	1765	149.81	1808	159.98
62000	4496	1546	102.54	1569	107.36	1592	112.21	1614	117.06	1659	126.84	1703	136.71	1747	146.73	1789	156.89	1832	167.24
64000	4641	1576	108.54	1599	113.53	1621	118.51	1643	123.50	1687	133.56	1730	143.68	1773	153.93	1814	164.31	1856	174.84
66000	4786	1607	114.80	1629	119.93	1651	125.08	1673	130.21	1716	140.55	1758	150.93	1799	161.41	1840	172.03	1881	182.76
68000	4931	1638	121.31	1660	126.60	1681	131.90	1703	137.19	1745	147.81	1786	158.48	1827	169.21	1867	180.06	1906	191.03
72000	5221	1701	135.15	1722	140.78	1743	146.38	1764	152.00	1804	163.21	1844	174.44	1883	185.74	1922	197.09	1960	208.51

Performance Data

VCR Fan

402 AF DWDI

Wheel Diameter = 40.25 in.	Discharge Area = 16.77 sq. ft.
Inlet Area = 19.44 sq. ft.	Tip Speed, FPM = 10.55 x RPM
Maximum BHP = 45.12 (RPM / 1000) ³	

- White area is Class I
- Light blue area is Class II
- Medium blue area is Class III
- Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14000	835	266	0.85	293	1.12	319	1.43	344	1.73	369	2.08	392	2.42	415	2.81				
16000	954	289	1.08	314	1.39	337	1.72	360	2.04	382	2.40	403	2.77	425	3.16	466	4.00	505	4.90
18000	1073	312	1.36	335	1.70	357	2.06	378	2.41	398	2.79	418	3.17	437	3.59	475	4.44	512	5.37
20000	1193	337	1.67	358	2.07	379	2.45	398	2.84	417	3.25	435	3.65	453	4.08	488	4.98	522	5.92
22000	1312	362	2.04	382	2.49	401	2.91	419	3.34	437	3.77	454	4.20	471	4.66	503	5.58	535	6.56
24000	1431	387	2.49	406	2.95	424	3.42	442	3.90	458	4.35	474	4.83	490	5.30	521	6.29	551	7.30
26000	1550	413	2.97	431	3.49	448	4.00	465	4.50	480	5.01	496	5.52	511	6.04	540	7.06	568	8.14
28000	1670	439	3.54	456	4.09	473	4.65	488	5.19	503	5.75	518	6.29	532	6.83	560	7.94	586	9.05
30000	1789	466	4.19	482	4.77	498	5.37	513	5.95	527	6.55	541	7.14	555	7.71	581	8.89	606	10.08
32000	1908	493	4.92	508	5.54	523	6.16	537	6.80	551	7.43	564	8.05	578	8.67	603	9.92	627	11.17
34000	2027	520	5.75	534	6.40	548	7.05	562	7.73	575	8.39	588	9.05	601	9.73	625	11.05	649	12.38
36000	2147	547	6.66	561	7.33	574	8.03	587	8.74	600	9.44	613	10.16	625	10.86	648	12.26	671	13.67
38000	2266	574	7.68	587	8.39	600	9.11	613	9.85	625	10.60	637	11.35	649	12.10	672	13.58	694	15.07
40000	2385	602	8.80	614	9.53	627	10.30	639	11.07	651	11.85	662	12.64	674	13.42	696	15.00	717	16.57
42000	2504	630	10.03	641	10.80	653	11.58	665	12.39	676	13.21	688	14.05	698	14.86	720	16.53	740	18.17
44000	2624	657	11.39	669	12.17	680	13.00	691	13.83	702	14.69	713	15.56	724	16.42	744	18.16	764	19.88
46000	2743	685	12.86	696	13.67	707	14.53	718	15.39	728	16.28	739	17.18	749	18.08	769	19.91	788	21.71
48000	2862	713	14.46	724	15.31	734	16.18	744	17.08	755	18.01	765	18.95	775	19.89	794	21.78	813	23.67
50000	2982	741	16.21	751	17.07	761	17.98	771	18.92	781	19.86	791	20.83	800	21.81	819	23.78	838	25.75
52000	3101	769	18.08	779	18.98	788	19.92	798	20.88	808	21.85	817	22.85	826	23.86	845	25.91	862	27.96

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
22000	1312	597	8.71	656	11.05														
24000	1431	609	9.50	665	11.89	719	14.48												
26000	1550	622	10.39	675	12.85	727	15.48	776	18.28	824	21.26								
28000	1670	638	11.41	688	13.91	737	16.60	785	19.46	831	22.48	876	25.64						
30000	1789	655	12.51	703	15.10	749	17.85	795	20.75	839	23.82	882	27.03	924	30.39				
32000	1908	674	13.73	719	16.41	763	19.21	807	22.17	849	25.29	891	28.57	931	31.97	971	35.53	1010	39.20
34000	2027	694	15.06	737	17.82	779	20.71	820	23.75	861	26.92	901	30.23	940	33.70	979	37.29	1016	41.02
36000	2147	714	16.50	756	19.38	796	22.35	836	25.46	875	28.68	913	32.07	951	35.57	988	39.21	1024	43.00
38000	2266	735	18.03	775	21.03	814	24.13	852	27.31	890	30.62	926	34.04	963	37.60	998	41.31	1034	45.12
40000	2385	757	19.67	796	22.82	833	26.02	870	29.29	906	32.68	941	36.18	976	39.82	1011	43.56	1045	47.43
42000	2504	779	21.43	817	24.73	853	28.04	888	31.43	923	34.92	957	38.50	991	42.18	1024	46.00	1057	49.92
44000	2624	802	23.32	839	26.75	874	30.20	908	33.71	941	37.28	974	40.96	1007	44.72	1039	48.59	1071	52.59
46000	2743	825	25.31	861	28.89	895	32.48	928	36.12	960	39.82	992	43.59	1024	47.43	1055	51.39	1085	55.44
48000	2862	849	27.42	883	31.17	916	34.90	949	38.67	980	42.48	1011	46.37	1041	50.32	1071	54.35	1101	58.47
50000	2982	873	29.67	906	33.57	938	37.46	970	41.37	1000	45.32	1030	49.31	1060	53.37	1089	57.50	1118	61.70
52000	3101	897	32.04	929	36.10	961	40.17	991	44.21	1021	48.29	1050	52.40	1079	56.57	1107	60.80	1135	65.12
54000	3220	921	34.56	953	38.78	984	43.00	1014	47.21	1043	51.42	1071	55.67	1099	59.95	1127	64.31	1154	68.71
56000	3339	946	37.21	977	41.60	1007	45.97	1036	50.34	1064	54.70	1092	59.09	1119	63.52	1146	67.97	1173	72.49
58000	3459	970	40.02	1001	44.57	1030	49.12	1059	53.64	1087	58.15	1114	62.67	1140	67.24	1167	71.81	1192	76.45
60000	3578	995	42.97	1025	47.70	1054	52.40	1082	57.07	1109	61.75	1136	66.43	1162	71.12	1187	75.84	1212	80.59

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
34000	2027	1053	44.85																
36000	2147	1060	46.89	1095	50.90	1130	55.02												
38000	2266	1069	49.07	1103	53.14	1136	57.32	1169	61.59										
40000	2385	1078	51.42	1111	55.54	1144	59.77	1176	64.10	1239	73.09								
42000	2504	1089	53.96	1122	58.12	1153	62.40	1185	66.79	1246	75.87	1306	85.34						
44000	2624	1102	56.69	1133	60.90	1164	65.22	1194	69.65	1254	78.84	1313	88.43	1370	98.39				
46000	2743	1116	59.59	1146	63.87	1176	68.25	1205	72.72	1263	82.02	1320	91.69	1376	101.77	1431	112.18		
48000	2862	1131	62.70	1160	67.04	1189	71.46	1217	76.00	1274	85.39	1329	95.18	1384	105.34	1437	115.86	1489	126.73
50000	2982	1146	66.00	1175	70.40	1203	74.90	1231	79.50	1285	88.99	1339	98.87	1393	109.13	1445	119.75	1496	130.74
52000	3101	1163	69.50	1191	73.97	1218	78.55	1245	83.19	1298	92.80	1351	102.79	1403	113.15	1453	123.88	1504	134.94
54000	3220	1181	73.18	1207	77.75	1234	82.39	1260	87.12	1312	96.84	1363	106.93	1414	117.40	1463	128.21	1512	139.39
56000	3339	1199	77.06	1225	81.71	1251	86.44	1276	91.25	1327	101.10	1376	111.33	1426	121.89	1474	132.81	1522	144.09
58000	3459	1218	81.14	1243	85.89	1268	90.70	1293	95.59	1342	105.60	1391	115.94	1439	126.63	1486	137.65	1533	149.03
60000	3578	1237	85.40	1262	90.25	1286	95.17	1311	100.15	1359	110.33	1406	120.81	1453	131.62	1499	142.75	1544	154.23
62000	3697	1257	89.85	1281	94.81	1305	99.84	1329	104.93	1376	115.28	1422	125.91	1467	136.87	1512	148.12	1557	159.70
64000	3816	1278	94.50	1301	99.59	1325	104.71	1348	109.90	1393	120.45	1438	131.26	1483	142.36	1527	153.75	1570	165.44
66000	3936	1299	99.34	1322	104.55	1345	109.81	1367	115.10	1412	125.85	1456	136.85	1499	148.10	1542	159.63	1585	171.46
68000	4055	1320	104.36	1343	109.71	1365	115.09	1387	120.51	1431	131.49	1474	142.66	1516	154.10	1558	165.79	1600	177.75
78000	4651	1431	132.51	1452	138.60	1472	144.68	1492	150.76	1532	163.00	1571	175.34	1609	187.81	1647	200.45	1685	213.28
88000	5247	1548	165.95	1567	172.84	1586	179.69	1604	186.56	1641	200.26	1677	214.00	1712	227.78	1747	241.63	1781	255.60

VCR Fan

Wheel Diameter = 44.50 in.	Discharge Area = 20.49 sq. ft.
Inlet Area = 23.72 sq. ft.	Tip Speed, FPM = 11.65 x RPM
Maximum BHP = 74.52 (RPM / 1000) ³	

-  White area is Class I
-  Light blue area is Class II
-  Medium blue area is Class III
-  Dark blue area is Class IV

[illegible]**PENNBARRY 89**

Performance Data

VCR Fan

490 AF DWDI

Wheel Diameter = 49 in.	Discharge Area = 24.85 sq. ft.
Inlet Area = 28.84 sq. ft.	Tip Speed, FPM = 12.85 x RPM
Maximum BHP = 120.64 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
21000	845	220	1.29	242	1.70	263	2.15	284	2.61	304	3.11	323	3.64	342	4.20				
24000	966	239	1.63	259	2.11	278	2.58	297	3.08	315	3.60	332	4.16	350	4.74	383	5.98	415	7.31
27000	1087	259	2.06	278	2.58	295	3.12	312	3.65	329	4.20	345	4.79	361	5.39	391	6.66	421	8.05
30000	1207	279	2.54	297	3.13	313	3.72	329	4.30	344	4.91	359	5.51	374	6.15	402	7.48	430	8.89
33000	1328	300	3.12	316	3.77	332	4.41	347	5.05	361	5.70	375	6.35	389	7.03	415	8.41	441	9.88
36000	1449	321	3.79	337	4.49	351	5.19	365	5.90	379	6.59	392	7.30	405	8.01	430	9.48	454	11.00
39000	1569	343	4.55	357	5.30	371	6.08	385	6.83	398	7.59	410	8.35	422	9.13	446	10.67	469	12.26
42000	1690	365	5.41	379	6.24	392	7.06	405	7.89	417	8.71	429	9.53	440	10.35	463	12.00	484	13.66
45000	1811	387	6.41	400	7.28	413	8.16	425	9.05	436	9.94	448	10.80	459	11.69	480	13.44	501	15.21
48000	1932	409	7.53	421	8.44	434	9.39	445	10.33	457	11.28	467	12.21	478	13.16	499	15.03	518	16.89
51000	2052	432	8.78	443	9.75	455	10.75	466	11.75	477	12.75	487	13.76	498	14.76	517	16.73	537	18.73
54000	2173	454	10.19	465	11.19	476	12.25	487	13.31	498	14.36	508	15.42	518	16.48	537	18.60	555	20.71
57000	2294	477	11.75	488	12.81	498	13.89	508	15.01	518	16.13	528	17.25	538	18.38	556	20.60	574	22.82
60000	2414	500	13.46	510	14.57	520	15.71	530	16.86	540	18.04	549	19.23	558	20.41	576	22.76	593	25.10
63000	2535	523	15.36	533	16.51	542	17.68	552	18.89	561	20.13	570	21.36	579	22.60	596	25.08	613	27.56
66000	2656	546	17.45	555	18.61	564	19.85	574	21.10	582	22.39	591	23.68	600	24.98	617	27.57	633	30.17
69000	2777	569	19.71	578	20.92	587	22.20	596	23.51	604	24.83	613	26.17	621	27.53	637	30.26	653	32.96
72000	2897	593	22.17	601	23.43	609	24.75	618	26.10	626	27.47	634	28.87	642	30.27	658	33.12	674	35.95
75000	3018	616	24.85	624	26.14	632	27.50	640	28.89	648	30.32	656	31.77	664	33.22	679	36.17	694	39.12
78000	3139	639	27.73	647	29.07	655	30.47	663	31.91	670	33.37	678	34.87	686	36.39	700	39.43	715	42.51

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
30000	1207	484	11.99																
33000	1328	492	13.05	540	16.54	586	20.30												
36000	1449	501	14.26	547	17.82	591	21.67	633	25.77										
39000	1569	513	15.63	556	19.28	598	23.20	639	27.37	678	31.77								
42000	1690	526	17.17	567	20.91	607	24.89	646	29.14	683	33.64	720	38.34						
45000	1811	541	18.86	580	22.71	618	26.79	655	31.12	691	35.68	726	40.47	760	45.46	794	50.65		
48000	1932	557	20.73	594	24.71	630	28.89	665	33.31	699	37.95	733	42.81	766	47.87	799	53.15	831	58.59
51000	2052	573	22.75	608	26.89	643	31.20	676	35.70	710	40.42	742	45.35	774	50.50	805	55.84	836	61.37
54000	2173	590	24.92	624	29.23	657	33.68	689	38.31	721	43.12	752	48.15	783	53.35	813	58.78	843	64.39
57000	2294	608	27.27	641	31.77	672	36.39	703	41.14	734	46.06	764	51.17	793	56.46	822	61.96	851	67.65
60000	2414	626	29.78	658	34.48	688	39.28	718	44.17	747	49.22	776	54.44	805	59.84	833	65.40	860	71.17
63000	2535	645	32.46	675	37.39	705	42.35	734	47.42	762	52.62	790	57.95	817	63.45	844	69.12	871	74.96
66000	2656	664	35.32	694	40.46	722	45.65	750	50.90	777	56.24	804	61.71	831	67.34	857	73.10	883	79.04
69000	2777	683	38.37	712	43.75	740	49.14	767	54.57	793	60.09	819	65.71	845	71.46	870	77.35	895	83.40
72000	2897	703	41.59	731	47.21	758	52.82	784	58.46	810	64.17	835	69.95	860	75.85	884	81.87	908	88.04
75000	3018	723	45.02	750	50.87	776	56.71	802	62.57	827	68.47	851	74.44	875	80.50	899	86.67	923	92.95
78000	3139	743	48.65	770	54.75	795	60.82	820	66.90	844	73.02	868	79.18	892	85.40	915	91.72	937	98.15
81000	3260	763	52.47	789	58.82	814	65.15	839	71.45	862	77.79	885	84.15	908	90.56	931	97.06	953	103.64
84000	3380	784	56.54	809	63.14	834	69.69	857	76.24	881	82.79	903	89.35	925	95.96	947	102.65	969	109.40
87000	3501	804	60.82	829	67.67	853	74.47	876	81.25	899	88.04	921	94.81	943	101.64	964	108.50	985	115.43

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
51000	2052	866	67.09	896	72.96														
54000	2173	872	70.18	901	76.14	929	82.27	957	88.55										
57000	2294	879	73.50	907	79.55	935	85.75	962	92.12										
60000	2414	888	77.10	915	83.21	942	89.50	968	95.94	1019	109.30								
63000	2535	897	80.97	924	87.17	949	93.52	975	100.04	1025	113.55	1074	127.64						
66000	2656	908	85.14	933	91.40	959	97.82	983	104.41	1032	118.08	1080	132.33	1126	147.12				
69000	2777	920	89.59	944	95.93	969	102.44	993	109.10	1040	122.90	1087	137.31	1132	152.26	1177	167.75	1220	183.73
72000	2897	932	94.34	956	100.78	980	107.36	1003	114.11	1049	128.06	1094	142.61	1139	157.71	1182	173.37	1225	189.51
75000	3018	946	99.37	969	105.91	992	112.61	1014	119.44	1059	133.56	1103	148.25	1146	163.50	1189	179.30	1231	195.61
78000	3139	960	104.69	982	111.36	1004	118.16	1026	125.09	1070	139.38	1113	154.24	1155	169.63	1196	185.58	1237	202.04
81000	3260	975	110.33	996	117.11	1018	124.04	1039	131.08	1082	145.56	1123	160.58	1164	176.12	1205	192.21	1245	208.81
84000	3380	990	116.24	1011	123.18	1032	130.23	1053	137.38	1094	152.08	1135	167.28	1175	182.99	1214	199.23	1253	215.98
87000	3501	1006	122.43	1027	129.54	1047	136.71	1067	144.01	1107	158.93	1147	174.34	1186	190.23	1224	206.62	1262	223.53
90000	3622	1022	128.93	1042	136.18	1062	143.53	1082	150.96	1121	166.14	1159	181.76	1197	197.85	1235	214.43	1272	231.48
93000	3742	1039	135.71	1059	143.14	1078	150.65	1097	158.24	1135	173.69	1173	189.56	1210	205.86	1247	222.62	1283	239.83
96000	3863	1056	142.80	1076	150.40	1094	158.09	1113	165.84	1150	181.59	1187	197.70	1223	214.23	1259	231.19	1294	248.61
106000	4266	1116	168.51	1134	176.81	1151	185.12	1169	193.49	1204	210.37	1238	227.50	1271	244.93	1304	262.71	1337	280.83
116000	4668	1178	197.63	1195	206.66	1212	215.71	1228	224.76	1261	242.96	1293	261.29	1324	279.83	1355	298.61	1386	317.66
126000	5070	1242	230.31	1258	240.14	1274	249.96	1290	259.77	1321	279.41	1351	299.12	1381	318.93	1410	338.91	1439	459.06
136000	5473	1308	266.81	1324	277.46	1339	298.08	1354	298.70	1383	319.88	1412	341.08	1440	362.29	1468	383.61	1495	405.02

542

AF DWDI

Wheel Diameter = 54.25 in.	Discharge Area = 30.46 sq. ft.
Inlet Area = 35.22 sq. ft.	Tip Speed, FPM = 14.29 x RPM
Maximum BHP = 200.73 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24000	788	191	1.41	212	1.88	232	2.41	251	2.97	270	3.57	289	4.20	306	4.87				
28000	919	209	1.83	228	2.38	246	2.95	263	3.54	280	4.17	297	4.83	313	5.54	344	7.05		
32000	1051	228	2.37	246	2.99	262	3.62	278	4.25	293	4.92	308	5.62	322	6.35	351	7.91	379	9.58
36000	1182	248	2.99	264	3.70	279	4.40	294	5.10	308	5.83	321	6.56	335	7.33	361	8.94	387	10.66
40000	1313	269	3.74	284	4.51	298	5.30	311	6.08	324	6.86	337	7.66	349	8.48	374	10.16	397	11.94
44000	1445	289	4.60	304	5.48	317	6.33	330	7.19	342	8.05	354	8.91	365	9.78	388	11.58	410	13.43
48000	1576	311	5.62	324	6.56	336	7.50	348	8.44	360	9.39	371	10.32	382	11.25	403	13.16	424	15.13
52000	1707	332	6.80	345	7.81	357	8.83	368	9.86	379	10.88	390	11.89	400	12.91	420	14.94	440	17.01
56000	1838	354	8.16	366	9.24	377	10.33	388	11.44	398	12.53	409	13.63	418	14.73	438	16.91	456	19.10
60000	1970	376	9.69	387	10.85	398	12.01	408	13.19	418	14.38	428	15.56	437	16.73	456	19.07	473	21.41
64000	2101	398	11.44	408	12.64	419	13.89	429	15.14	438	16.41	448	17.67	457	18.92	474	21.42	491	23.92
68000	2232	420	13.41	430	14.66	440	15.98	449	17.31	459	18.64	468	19.98	476	21.32	493	23.98	510	26.64
72000	2364	443	15.60	452	16.92	461	18.29	470	19.70	479	21.10	488	22.53	496	23.95	513	26.77	529	29.57
76000	2495	465	18.03	474	19.42	483	20.85	492	22.32	500	23.81	509	25.29	517	26.79	533	29.78	548	32.76
80000	2626	488	20.73	497	22.17	505	23.66	513	25.20	521	26.75	529	28.32	537	29.89	553	33.03	567	36.17
84000	2758	511	23.71	519	25.20	527	26.75	535	28.33	543	29.96	550	31.60	558	33.25	573	36.56	587	39.85
88000	2889	534	26.97	541	28.51	549	30.10	557	31.76	564	33.45	572	35.15	579	36.87	593	40.34	607	43.81
92000	3020	557	30.52	564	32.12	571	33.78	579	35.48	586	37.22	593	39.01	600	40.79	614	44.40	627	48.03
96000	3152	580	34.39	587	36.03	594	37.75	601	39.52	608	41.32	614	43.17	621	45.03	635	48.78	648	52.55
100000	3283	603	38.59	609	40.28	616	42.06	623	43.87	629	45.75	636	47.65	643	49.57	656	53.46	668	57.40

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
40000	1313	443	15.83	487	20.10	529	24.69												
44000	1445	453	17.42	494	21.78	534	26.50	572	31.52										
48000	1576	464	19.26	503	23.73	541	28.53	577	33.65	613	39.07								
52000	1707	477	21.32	514	25.92	550	30.83	584	36.06	618	41.57	651	47.35						
56000	1838	492	23.64	526	28.39	560	33.42	593	38.73	625	44.35	657	50.25	688	56.39	718	62.77		
60000	1970	507	26.17	540	31.10	572	36.28	604	41.72	634	47.45	665	53.42	694	59.67	723	66.15	752	72.87
64000	2101	524	28.93	555	34.09	586	39.45	616	45.03	645	50.85	674	56.94	702	63.29	730	69.87	758	76.68
68000	2232	541	31.95	571	37.34	600	42.89	629	48.62	657	54.59	684	60.79	712	67.25	738	73.93	765	80.84
72000	2364	559	35.20	588	40.84	616	46.62	643	52.54	670	58.67	696	65.00	722	71.57	748	78.35	774	85.37
76000	2495	577	38.68	605	44.62	632	50.64	658	56.78	684	63.09	709	69.57	734	76.27	759	83.18	783	90.30
80000	2626	596	42.42	622	48.65	648	54.95	674	61.32	699	67.82	723	74.50	747	81.34	771	88.39	794	95.62
84000	2758	614	46.42	641	52.97	666	59.54	690	66.17	714	72.90	738	79.77	761	86.79	784	93.99	807	101.37
88000	2889	634	50.71	659	57.57	683	64.43	707	71.32	730	78.30	753	85.39	776	92.60	798	99.97	820	107.50
92000	3020	653	55.27	678	62.45	702	69.62	725	76.80	747	84.04	769	91.35	791	98.79	812	106.34	833	114.06
96000	3152	673	60.12	697	67.62	720	75.10	743	82.59	764	90.10	786	97.68	807	105.34	828	113.11	848	121.01
100000	3283	693	65.28	716	73.12	739	80.92	761	88.70	782	96.50	803	104.35	823	112.26	843	120.26	863	128.37
104000	3414	713	70.75	736	78.93	758	87.06	779	95.15	800	103.25	820	111.39	840	119.56	860	127.81	879	136.14
108000	3546	733	76.56	756	85.06	777	93.53	798	101.94	818	110.35	838	118.78	858	127.24	877	135.74	895	144.31
112000	3677	754	82.72	776	91.55	797	100.34	817	109.09	837	117.81	856	126.55	875	135.29	894	144.06	912	152.89
116000	3808	775	89.25	796	98.40	816	107.51	836	116.59	856	125.65	875	134.68	893	143.71	911	152.78	929	161.88

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
64000	2101	784	83.74	811	90.97	837	98.43												
68000	2232	791	87.99	816	95.34	842	102.90	866	110.65										
72000	2364	799	92.62	823	100.07	848	107.74	872	115.59	919	131.87								
76000	2495	808	97.64	832	105.19	855	112.95	878	120.91	924	137.40	969	154.61						
80000	2626	818	103.08	841	110.73	864	118.59	886	126.65	931	143.34	974	160.75	1016	178.85				
84000	2758	829	108.93	851	116.69	873	124.65	895	132.81	938	149.70	980	167.33	1022	185.63	1062	204.58		
88000	2889	841	115.21	863	123.10	884	131.18	905	139.44	947	156.53	988	174.35	1028	192.86	1067	212.01	1106	231.80
92000	3020	854	121.93	875	129.95	896	138.15	916	146.54	957	163.84	996	181.85	1036	200.56	1074	219.91	1112	239.91
96000	3152	868	129.06	889	137.25	908	145.59	928	154.11	967	171.63	1006	189.86	1044	208.76	1081	228.31	1118	248.51
100000	3283	883	136.61	903	144.98	922	153.49	941	162.14	979	179.93	1016	198.38	1053	217.48	1090	237.23	1126	257.62
104000	3414	898	144.59	917	153.14	936	161.83	955	170.64	991	188.74	1028	207.43	1064	226.76	1099	246.71	1134	267.29
108000	3546	914	152.99	932	161.75	951	170.62	969	179.62	1005	198.04	1040	217.01	1075	236.58	1109	256.75	1143	277.53
112000	3677	930	161.80	948	170.79	966	179.87	984	189.08	1018	207.83	1053	227.11	1087	246.94	1120	267.36	1153	288.37
116000	3808	947	171.04	965	180.26	982	189.59	999	199.00	1033	218.12	1066	237.73	1099	257.87	1132	278.54	1164	299.78
120000	3940	964	180.70	981	190.18	998	199.75	1015	209.37	1048	228.93	1080	248.89	1113	269.35	1145	290.31	1176	311.81
130000	4268	1008	206.76	1024	216.91	1040	227.12	1056	237.37	1087	258.08	1118	279.08	1148	300.46	1178	322.25	1208	344.48
140000	4596	1054	235.56	1069	246.48	1085	257.39	1100	268.33	1129	290.33	1158	312.52	1187	335.00	1215	357.77	1244	380.91
150000	4924	1101	267.26	1116	278.95	1130	290.63	1145	302.31	1173	325.73	1201	349.25	1228	372.96	1255	396.87	1282	421.07
160000	5253	1149	301.99	1163	314.49	1177	326.97	1191	339.43	1218	364.36	1245	389.31	1271	414.37	1297	439.57	1322	464.96
170000	5581	1198	339.91	1212	353.24	1225	366.53	1238	379.81	1265	406.31	1290	432.78	1315	459.29	1340	485.87		

Performance Data

VCR Fan

600 AF DWDI

Wheel Diameter = 60 in.	Discharge Area = 37.26 sq. ft.
Inlet Area = 43.10 sq. ft.	Tip Speed, FPM = 15.71 x RPM
Maximum BHP = 332.15 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28000	751	168	1.58	188	2.16	207	2.79	225	3.45	243	4.19	260	4.95	280	6.39	309	8.19	339	10.99
32000	859	181	1.98	199	2.62	216	3.29	233	3.99	249	4.75	264	5.55	286	7.11	313	8.98	339	10.99
36000	966	195	2.47	212	3.16	227	3.89	242	4.62	257	5.41	271	6.25	286	7.11	313	8.98	339	10.99
40000	1074	210	3.02	225	3.79	240	4.58	253	5.37	267	6.20	280	7.06	293	7.96	319	9.88	344	11.94
44000	1181	224	3.65	239	4.51	252	5.37	266	6.24	278	7.11	291	8.03	303	8.96	326	10.92	350	13.03
48000	1288	239	4.39	253	5.33	266	6.26	278	7.19	290	8.14	302	9.10	313	10.08	335	12.14	357	14.31
52000	1396	255	5.22	268	6.25	280	7.25	292	8.28	303	9.28	314	10.30	325	11.35	346	13.48	366	15.73
56000	1503	270	6.16	283	7.26	294	8.36	306	9.46	316	10.55	327	11.64	337	12.75	357	15.00	376	17.32
60000	1610	286	7.24	298	8.41	309	9.60	320	10.78	330	11.94	340	13.11	350	14.28	369	16.66	387	19.08
64000	1718	302	8.44	313	9.69	324	10.96	334	12.21	344	13.46	354	14.71	363	15.96	381	18.46	399	21.01
68000	1825	318	9.80	329	11.11	339	12.44	349	13.78	358	15.11	368	16.45	377	17.78	394	20.42	411	23.10
72000	1932	334	11.30	344	12.67	354	14.10	364	15.51	373	16.92	382	18.33	391	19.73	407	22.54	424	25.35
76000	2040	351	12.96	360	14.41	370	15.89	379	17.39	388	18.89	396	20.38	405	21.86	421	24.82	437	27.78
80000	2147	367	14.81	376	16.31	385	17.85	394	19.42	403	21.01	411	22.57	419	24.14	435	27.27	450	30.39
84000	2254	383	16.82	392	18.39	401	20.01	410	21.64	418	23.29	426	24.96	434	26.60	449	29.89	464	33.17
88000	2362	400	19.03	409	20.66	417	22.33	425	24.04	433	25.77	441	27.51	449	29.23	463	32.70	478	36.12
92000	2469	417	21.46	425	23.13	433	24.86	441	26.64	449	28.45	456	30.26	464	32.07	478	35.68	492	39.28
96000	2576	434	24.07	441	25.81	449	27.60	457	29.45	464	31.32	471	33.20	479	35.09	493	38.87	506	42.64
100000	2684	450	26.92	458	28.70	465	30.56	473	32.46	480	34.40	487	36.35	494	38.32	508	42.26	521	46.18
110000	2952	493	35.03	499	36.95	506	38.95	513	41.00	519	43.09	526	45.22	533	47.37	545	51.70	558	56.03

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
48000	1288	399	19.01	439	24.21														
52000	1396	406	20.56	444	25.85	481	31.57												
56000	1503	414	22.28	450	27.67	485	33.48	519	39.68										
60000	1610	423	24.20	457	29.71	491	35.62	523	41.92	555	48.57								
64000	1718	433	26.31	465	31.95	498	37.96	529	44.35	559	51.12	589	58.20	618	65.59				
68000	1825	443	28.60	475	34.40	505	40.53	535	47.03	565	53.89	593	61.07	621	68.59	649	76.37		
72000	1932	455	31.10	485	37.07	514	43.34	543	49.96	571	56.92	599	64.20	626	71.81	652	79.70	678	87.89
76000	2040	467	33.78	496	39.96	524	46.40	551	53.15	579	60.20	605	67.59	631	75.30	657	83.30	682	91.57
80000	2147	479	36.65	507	43.06	534	49.68	561	56.57	587	63.77	612	71.25	638	79.06	663	87.15	687	95.54
84000	2254	492	39.72	519	46.37	545	53.20	571	60.27	596	67.59	621	75.20	645	83.12	669	91.31	693	99.80
88000	2362	505	42.98	531	49.90	556	56.95	581	64.20	605	71.69	629	79.44	653	87.46	676	95.77	699	104.35
92000	2469	518	46.46	544	53.65	568	60.95	592	68.40	616	76.06	639	83.97	662	92.12	684	100.55	706	109.24
96000	2576	532	50.12	557	57.60	580	65.17	604	72.85	626	80.71	649	88.79	671	97.09	693	105.64	714	114.44
100000	2684	546	54.00	570	61.79	593	69.62	616	77.56	638	85.64	659	93.90	681	102.35	702	111.06	723	119.99
110000	2952	581	64.67	604	73.25	626	81.81	647	90.43	668	99.10	688	107.91	708	116.86	728	125.99	747	135.31
120000	3221	618	76.80	639	86.20	660	95.56	680	104.90	699	114.29	719	123.71	737	133.25	756	142.90	774	152.69
130000	3489	655	90.55	676	100.77	695	110.93	714	121.08	733	131.20	751	141.35	769	151.54	786	161.81	803	172.16
140000	3757	693	106.04	712	117.06	731	128.06	749	139.01	767	149.93	784	160.84	801	171.75	818	182.69	834	193.70
150000	4026	732	123.43	750	135.25	768	147.06	785	158.84	802	170.56	819	182.26	835	193.94	851	205.63	867	217.35
160000	4294	771	142.89	788	155.45	805	168.06	822	180.65	838	193.20	854	205.73	870	218.21	885	230.68	900	243.13

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
76000	2040	707	100.12	731	108.93														
80000	2147	711	104.19	735	113.11	758	122.26												
84000	2254	716	108.55	739	117.56	762	126.84	784	136.35										
88000	2362	722	113.20	744	122.33	766	131.69	788	141.31	831	161.21								
92000	2469	729	118.18	750	127.40	772	136.87	793	146.59	835	166.70	875	187.69						
96000	2576	736	123.50	757	132.81	778	142.37	798	152.19	839	172.51	879	193.73	917	215.75				
100000	2684	744	129.15	764	138.58	785	148.25	805	158.15	844	178.68	883	200.10	921	222.35	958	245.36		
110000	2952	766	144.81	785	154.56	804	164.50	823	174.68	860	195.70	897	217.61	933	240.37	968	263.93	1002	288.25
120000	3221	792	162.65	810	172.78	828	183.10	845	193.60	880	215.21	914	237.63	948	260.88	982	284.93	1014	309.76
130000	3489	820	182.64	837	193.25	854	204.00	870	214.93	903	237.26	935	260.33	967	284.13	999	308.70	1030	334.00
140000	3757	850	204.79	866	215.96	882	227.25	898	238.66	929	261.87	959	285.71	989	310.18	1019	335.35	1049	361.21
150000	4026	882	229.10	897	240.91	912	252.78	927	264.76	957	289.02	986	313.76	1014	339.06	1043	364.95	1071	391.46
160000	4294	915	255.61	929	268.12	944	280.66	958	293.26	986	318.71	1014	344.51	1041	370.75	1068	397.50	1095	424.78
170000	4563	949	284.38	963	297.63	976	310.89	990	324.20	1017	350.93	1044	377.93	1070	405.25	1095	433.00	1121	461.17
180000	4831	983	315.51	997	329.53	1010	343.56	1023	357.58	1049	385.72	1075	414.02	1100	442.56	1124	471.41	1149	500.62
190000	5099	1018	349.08	1032	363.89	1044	378.71	1057	393.50	1082	423.12	1107	452.82	1131	482.67	1155	512.75	1178	543.09
200000	5368	1054	385.20	1067	400.83	1079	416.45	1092	432.03	1116	463.20	1140	494.37	1163	525.62	1186	557.02	1209	588.62
210000	5636	1091	423.99	1103	440.45	1115	456.87	1127	473.27	1151	506.02	1174	538.74	1196	571.48	1219	604.28	1240	637.23
220000	5904	1127	465.59	1139	482.87	1151	500.12	1163	517.35	1186	551.72	1208	586.01	1230	620.28	1252	654.57	1273	688.94
230000	6173	1165	510.13	1176	528.23	1188	546.31	1199	564.35	1221	600.36								

660

AF DWDI

Wheel Diameter = 66 in.	Discharge Area = 45.08 sq. ft.
Inlet Area = 52.30 sq. ft.	Tip Speed, FPM = 17.30 x RPM
Maximum BHP = 535.02 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
35000	776	156	2.02	173	2.74	190	3.50	206	4.32	222	5.20	237	6.16	251	7.15				
40000	887	168	2.56	184	3.34	199	4.16	214	5.01	228	5.94	242	6.91	256	7.94	282	10.16		
45000	998	181	3.16	196	4.05	210	4.94	223	5.85	236	6.83	249	7.83	262	8.89	286	11.16	309	13.61
50000	1109	195	3.90	209	4.87	222	5.84	234	6.83	246	7.85	258	8.91	269	10.01	292	12.35	314	14.86
55000	1220	209	4.73	222	5.80	234	6.88	246	7.95	257	9.05	268	10.16	279	11.32	300	13.73	320	16.32
60000	1331	223	5.69	235	6.86	247	8.03	258	9.21	268	10.39	279	11.58	289	12.80	309	15.31	328	17.96
65000	1442	238	6.79	249	8.07	260	9.35	271	10.60	281	11.88	290	13.16	300	14.43	318	17.08	337	19.83
70000	1553	252	8.05	263	9.41	274	10.80	284	12.16	293	13.53	303	14.89	312	16.26	329	19.04	346	21.92
75000	1664	267	9.46	278	10.92	288	12.41	297	13.88	306	15.35	315	16.81	324	18.26	341	21.21	357	24.23
80000	1775	282	11.07	292	12.61	302	14.18	311	15.76	320	17.32	328	18.89	336	20.45	353	23.57	368	26.73
85000	1886	297	12.86	307	14.48	316	16.16	325	17.83	333	19.51	341	21.17	349	22.82	365	26.14	380	29.47
90000	1996	313	14.85	322	16.57	330	18.32	339	20.10	347	21.86	355	23.64	363	25.39	378	28.89	392	32.40
95000	2107	328	17.07	337	18.85	345	20.70	353	22.57	361	24.43	369	26.31	376	28.17	391	31.87	405	35.57
100000	2218	344	19.51	352	21.38	360	23.29	368	25.26	375	27.22	383	29.20	390	31.16	404	35.07	417	38.96
105000	2329	359	22.20	367	24.14	375	26.14	382	28.18	389	30.25	397	32.32	404	34.39	417	38.50	430	42.59
115000	2551	390	28.35	398	30.42	405	32.57	412	34.79	419	37.03	425	39.29	432	41.56	445	46.09	457	50.59
125000	2773	422	35.62	429	37.82	435	40.12	442	42.50	448	44.90	454	47.34	461	49.79	473	54.71	484	59.64
135000	2995	454	44.09	460	46.43	466	48.87	472	51.40	478	53.96	484	56.57	490	59.20	501	64.50	512	69.82
145000	3217	486	53.90	491	56.37	497	58.95	503	61.60	508	64.31	514	67.09	519	69.89	530	75.56	541	81.25
155000	3438	518	65.09	523	67.70	528	70.42	534	73.20	539	76.07	544	78.99	549	81.94	560	87.95	570	94.04

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
60000	1331	365	23.73	401	30.06	435	36.89												
65000	1442	372	25.75	406	32.20	439	39.17	470	46.59										
70000	1553	380	28.01	412	34.59	443	41.67	474	49.23	503	57.21								
75000	1664	389	30.52	419	37.26	449	44.46	478	52.15	506	60.27	534	68.77						
80000	1775	398	33.28	428	40.20	456	47.54	484	55.35	511	63.59	538	72.24	563	81.25				
85000	1886	409	36.28	437	43.40	464	50.92	490	58.87	517	67.22	542	76.00	567	85.15	592	94.65	615	104.48
90000	1996	420	39.53	446	46.90	473	54.62	498	62.70	523	71.19	548	80.09	572	89.35	596	99.00	619	108.96
95000	2107	431	43.03	457	50.67	482	58.60	506	66.87	531	75.52	554	84.54	578	93.93	600	103.68	623	113.79
100000	2218	443	46.78	468	54.72	492	62.90	516	71.37	539	80.18	562	89.34	584	98.87	606	108.74	628	118.96
105000	2329	455	50.78	479	59.04	503	67.50	525	76.20	548	85.19	570	94.53	591	104.18	613	114.19	634	124.54
115000	2551	481	59.55	503	68.54	525	77.60	546	86.84	567	96.30	588	106.00	608	116.00	628	126.31	648	136.93
125000	2773	507	69.42	528	79.15	549	88.93	569	98.78	589	108.79	608	118.98	627	129.40	646	140.09	664	151.03
135000	2995	534	80.43	554	90.96	574	101.49	593	112.04	611	122.66	632	133.43	648	144.37	665	155.50	683	166.86
145000	3217	561	92.68	581	104.03	599	115.34	618	126.64	635	137.96	653	149.37	670	160.88	687	172.56	703	184.39
155000	3438	589	106.24	608	118.41	626	130.55	643	142.62	660	154.69	677	166.81	693	178.98	709	191.25	725	203.64
165000	3660	617	121.24	635	134.23	653	147.16	670	160.06	686	172.91	702	185.76	717	198.65	733	211.58	748	224.62
175000	3882	646	137.75	663	151.54	680	165.31	696	179.01	712	192.68	727	206.31	743	219.94	757	233.60	772	247.31
185000	4104	675	155.90	692	170.46	708	185.04	724	199.56	739	214.06	754	228.50	768	242.91	782	257.31	797	271.75
195000	4326	705	175.80	721	191.10	736	206.46	751	221.81	766	237.12	780	252.37	794	267.60	808	282.78	822	297.98
205000	4547	734	197.54	750	213.56	765	229.68	779	245.83	793	261.97	807	278.04	821	294.08	834	310.08	848	326.06

CFM	OV	6 1/2" SP		7" SP		7-1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90000	1996	641	119.25																
95000	2107	645	124.21																
100000	2218	649	129.51	667	134.94	688	145.98												
105000	2329	655	135.21	675	146.21	695	157.51	715	169.11	754	193.11								
115000	2551	667	147.86	687	159.10	706	170.64	725	182.49	762	207.03	798	232.62	833	259.21				
125000	2773	683	162.25	701	173.76	719	185.58	737	197.66	772	222.68	807	248.80	840	275.93	873	304.01	906	332.99
135000	2995	700	178.44	717	190.30	734	202.39	751	214.76	785	240.31	818	266.91	850	294.52	882	323.13	913	352.66
145000	3217	720	196.43	736	208.68	752	221.14	768	233.86	800	259.99	831	287.12	862	315.24	892	344.33	922	374.36
155000	3438	741	216.19	756	228.91	771	241.83	787	254.93	817	281.77	847	309.52	876	338.18	905	367.78	934	398.31
165000	3660	763	237.75	778	251.01	792	264.41	807	278.00	836	305.68	864	334.16	892	363.46	920	393.62	947	424.67
175000	3882	786	261.08	800	274.95	814	288.93	828	303.03	856	331.70	883	361.01	910	391.06	936	421.91	962	453.54
185000	4104	810	286.21	824	300.74	837	315.35	851	330.04	877	359.79	903	390.08	929	421.02	954	452.62	979	484.95
195000	4326	835	313.18	848	328.41	861	343.68	874	359.03	900	389.99	925	421.37	949	453.27	974	485.77	998	518.90
205000	4547	861	342.02	873	358.00	886	374.00	898	390.02	923	422.28	947	454.87	971	487.86	994	521.33	1018	555.37
215000	4769	886	372.79	899	389.54	911	406.29	923	423.06	947	456.70	970	490.57	993	524.75	1016	559.32	1038	594.37
225000	4991	913	405.58	925	423.12	937	440.63	948	458.17	972	493.25	994	528.50	1017	563.97	1038	599.74	1060	635.88
235000	5213	940	440.42	951	458.77	963	477.10	974	495.39	997	532.00	1019	568.69	1040	605.51	1062	642.57	1083	679.92
245000	5435	967	477.42	978	496.58	989	515.72	1000	534.82	1022	573.00	1044	611.17	1065	649.42	1086	687.83	1106	726.47
255000	5657	994	516.65	1005	536.63	1016	556.59	1027	576.51	1048	616.28	1069	656.00	1090	695.75	1110	735.58		

Performance Data

VCR Fan

730 AF DWDI

Wheel Diameter = 73 in.	Discharge Area = 55.15 sq. ft.
Inlet Area = 63.90 sq. ft.	Tip Speed, FPM = 19.15 x RPM
Maximum BHP = 885.76 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
42000	762	139	2.41	155	3.25	171	4.19	185	5.19	200	6.26	214	7.41	231	9.74	255	12.44	280	16.89
49000	888	152	3.13	167	4.09	180	5.09	193	6.16	206	7.28	219	8.48	237	11.08	259	13.88	280	16.89
56000	1015	166	4.00	179	5.09	191	6.20	203	7.34	215	8.53	226	9.78	246	12.71	266	15.60	285	18.70
63000	1142	180	5.05	192	6.29	204	7.51	215	8.75	225	10.03	236	11.35	246	12.71	266	15.60	285	18.70
70000	1269	194	6.29	206	7.66	217	9.03	227	10.39	237	11.78	246	13.17	256	14.61	274	17.63	292	20.82
77000	1396	209	7.74	220	9.25	230	10.75	240	12.25	249	13.76	258	15.28	267	16.81	284	19.98	301	23.29
84000	1523	224	9.41	235	11.07	244	12.71	253	14.36	262	15.98	271	17.63	279	19.28	295	22.64	311	26.12
94000	1704	246	12.28	256	14.11	265	15.96	273	17.81	281	19.64	289	21.46	297	23.29	312	26.98	326	30.73
104000	1886	269	15.73	277	17.73	286	19.78	294	21.82	301	23.86	309	25.89	316	27.92	330	31.97	344	36.06
114000	2067	292	19.86	299	22.01	307	24.23	315	26.47	322	28.72	329	30.97	336	33.20	349	37.65	362	42.09
124000	2248	314	24.73	322	27.03	329	29.42	336	31.85	343	34.28	349	36.72	356	39.17	368	44.02	380	48.85
134000	2430	337	30.41	344	32.84	351	35.39	358	37.98	364	40.62	370	43.25	376	45.89	388	51.15	400	56.40
144000	2611	361	36.95	367	39.53	373	42.21	379	44.97	386	47.78	392	50.60	397	53.44	409	59.10	420	64.75
154000	2792	384	44.42	390	47.15	396	49.97	402	52.89	407	55.85	413	58.85	419	61.87	430	67.94	440	74.00
164000	2974	408	52.90	413	55.75	419	58.72	424	61.79	430	64.90	435	68.07	440	71.28	451	77.72	461	84.18
174000	3155	431	62.45	436	65.43	442	68.54	447	71.74	452	75.02	457	78.34	462	81.71	472	88.53	482	95.37
184000	3336	455	73.12	460	76.24	465	79.47	469	82.81	474	86.24	479	89.72	484	93.25	494	100.42	503	107.64
194000	3518	478	84.99	483	88.24	488	91.60	492	95.09	497	98.65	502	102.29	506	105.98	515	113.46	524	121.06
204000	3699	502	98.12	507	101.50	511	105.00	515	108.61	520	112.31	524	116.09	529	119.93	537	127.75	546	135.68
214000	3880	526	112.56	530	116.09	534	119.71	539	123.46	543	127.31	547	131.23	551	135.20	560	143.34	568	151.61

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70000	1269	327	27.78	361	35.44	395	46.73	427	59.34	459	75.18	484	85.65	513	104.18	535	115.80	556	127.83
77000	1396	334	30.45	365	38.28	395	46.73	427	59.34	459	75.18	484	85.65	513	104.18	535	115.80	556	127.83
84000	1523	341	33.48	371	41.51	400	50.14	434	65.19	459	75.18	484	85.65	513	104.18	535	115.80	556	127.83
94000	1704	354	38.53	382	46.85	408	55.75	434	65.19	459	75.18	484	85.65	513	104.18	535	115.80	556	127.83
104000	1886	370	44.40	395	53.12	419	62.32	443	72.03	467	82.25	490	92.97	513	104.18	535	115.80	556	127.83
114000	2067	386	51.06	410	60.29	433	69.89	455	79.92	477	90.42	499	101.39	520	112.83	541	124.70	562	137.00
124000	2248	404	58.54	426	68.35	447	78.44	468	88.89	489	99.71	510	110.98	530	122.66	550	134.80	569	147.35
134000	2430	422	66.84	443	77.34	463	88.00	483	98.93	503	110.16	522	121.78	541	133.78	560	146.18	578	158.98
144000	2611	441	76.00	461	87.22	480	98.54	499	110.04	518	121.76	536	133.81	554	146.16	572	158.88	589	171.98
154000	2792	460	86.06	480	98.06	498	110.08	516	122.20	534	134.50	551	147.05	568	159.85	585	172.95	602	186.38
164000	2974	480	97.06	499	109.86	517	122.64	534	135.45	551	148.39	567	161.50	584	174.81	600	188.37	616	202.20
174000	3155	500	109.06	518	122.68	535	136.25	552	149.81	568	163.43	584	177.15	600	191.04	615	205.12	631	219.43
184000	3336	521	122.14	538	136.58	555	150.94	571	165.28	587	179.62	602	194.04	617	208.55	632	223.21	646	238.06
194000	3518	542	136.33	558	151.59	574	166.78	590	181.90	605	197.01	620	212.14	634	227.35	649	242.64	663	258.08
204000	3699	563	151.71	579	167.79	594	183.80	610	199.74	624	215.63	639	231.53	653	247.44	666	263.43	680	279.50
214000	3880	584	168.37	600	185.23	615	202.06	629	218.83	644	235.53	658	252.21	671	268.87	685	285.58	698	302.33
224000	4062	605	186.36	621	203.99	635	221.62	649	239.21	663	256.75	677	274.22	690	291.66	703	309.12	716	326.60
234000	4243	627	205.75	642	224.12	656	242.56	670	260.98	683	279.33	696	297.62	709	315.87	722	334.10	734	352.31
244000	4424	649	226.62	663	245.73	677	264.95	690	284.16	704	303.33	716	322.45	729	341.50	741	360.53	753	379.53
254000	4606	671	249.03	685	268.85	698	288.83	711	308.83	724	328.83	736	348.76	749	368.64	761	388.49	773	408.28

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
124000	2248	588	160.30	607	173.64	626	187.36	644	201.41										
134000	2430	597	172.16	615	185.75	633	199.73	650	214.05	685	243.73	718	274.66						
144000	2611	607	185.43	624	199.28	641	213.48	658	228.06	691	258.24	723	289.74	755	322.43				
154000	2792	618	200.15	635	214.28	651	228.75	667	243.56	699	274.24	730	306.23	760	339.48	790	373.89	819	409.39
164000	2974	631	216.35	647	230.80	663	245.56	678	260.66	708	291.85	738	324.33	767	358.06	796	393.00	825	429.07
174000	3155	646	234.00	661	248.83	675	263.96	690	279.37	719	311.13	748	344.13	776	378.37	804	413.78	831	450.37
184000	3336	661	253.11	675	268.39	689	283.93	703	299.73	731	332.14	759	365.73	786	400.48	813	436.39	839	473.46
194000	3518	677	273.68	690	289.47	704	305.47	718	321.70	744	354.88	771	389.13	797	424.47	823	460.92	848	498.47
204000	3699	693	295.70	707	312.04	720	328.56	733	345.28	759	379.36	784	414.36	809	450.36	834	487.41	859	525.50
214000	3880	711	319.18	724	336.13	736	353.24	749	370.49	774	405.53	798	441.41	822	475.17	846	515.87	870	554.57
224000	4062	728	344.12	741	361.75	753	379.47	765	397.31	789	433.43	813	470.27	836	507.87	860	546.36	882	585.74
234000	4243	747	370.58	759	388.88	771	407.26	782	425.74	806	463.04	829	500.92	851	539.49	874	578.82	896	618.97
244000	4424	765	398.54	777	417.57	789	436.66	800	455.79	823	494.37	845	533.40	867	573.00	889	613.26	910	654.27
254000	4606	784	428.07	796	447.86	807	467.66	818	487.50	840	527.41	864	567.66	883	608.40	904	649.70	925	691.65
264000	4787	803	459.17	815	479.74	826	500.31	836	520.88	858	562.17	879	603.75	900	645.69	920	688.11	940	731.07
274000	4968	823	491.92	834	513.28	845	534.62	855	555.97	876	598.72	897	641.65	917	684.87	937	728.48	956	772.55
284000	5150	843	526.37	853	548.52	864	570.67	874	592.78	895	637.03	915	681.40	934	725.97	954	770.83	973	816.11
294000	5331	862	562.53	873	585.51	883	608.47	893	631.37	913	677.17	933	723.01	952	768.99	971	815.19	990	861.70
304000	5512	883	600.50	893	624.30	903	648.07	913	671.78	932	719.17	952	766.52	971	813.96	989	861.54	1007	909.37
314000	5694	903	640.33	913	664.96	923	689.53	933	714.07	952	763.05	971	811.98	989	860.90	1007	909.92		

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AF DWDI

Wheel Diameter = 80.75 in.	Discharge Area = 67.48 sq. ft.
Inlet Area = 78.04 sq. ft.	Tip Speed, FPM = 21.14 x RPM
Maximum BHP = 1466.82 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
50000	741	124	2.82	139	3.84	153	4.95	167	6.17	180	7.49	193	8.89	209	11.91	230	15.23	254	21.01
60000	889	138	3.84	151	5.01	163	6.24	175	7.54	186	8.91	198	10.38	216	13.88	235	17.32	254	21.01
70000	1037	152	5.10	164	6.48	175	7.84	185	9.26	196	10.74	206	12.28	216	13.88	235	17.32	254	21.01
80000	1186	167	6.66	178	8.24	188	9.80	198	11.36	207	12.96	216	14.61	225	16.31	243	19.89	260	23.71
90000	1334	183	8.55	193	10.33	202	12.08	211	13.83	220	15.60	228	17.39	236	19.21	252	22.98	268	26.97
100000	1482	198	10.82	208	12.78	217	14.75	225	16.70	233	18.64	241	20.60	249	22.57	263	26.60	278	30.78
110000	1630	215	13.50	223	15.66	232	17.82	239	19.98	247	22.11	254	24.26	262	26.41	276	30.75	289	35.18
120000	1778	531	16.64	239	18.98	247	21.33	254	23.70	262	26.04	269	28.39	275	30.72	289	35.40	301	40.15
130000	1926	248	20.31	255	22.81	263	25.35	270	27.91	276	30.47	283	33.02	290	35.54	302	40.62	314	45.70
140000	2075	264	24.53	271	27.18	278	29.91	285	32.65	292	35.42	298	38.17	304	40.90	316	46.37	328	51.82
150000	2223	281	29.37	288	32.15	294	35.04	301	37.98	307	40.93	313	43.90	319	46.84	331	52.70	342	58.55
160000	2371	298	34.84	305	37.78	311	40.82	317	43.93	323	47.07	329	50.22	334	53.37	345	59.65	356	65.90
170000	2519	315	41.02	321	44.09	327	47.28	333	50.57	339	53.89	344	57.22	350	60.57	360	67.27	370	73.93
180000	2667	333	47.92	338	51.14	344	54.49	349	57.92	355	61.40	360	64.93	365	68.47	375	75.56	385	82.64
190000	2816	350	55.62	355	58.96	360	62.45	366	66.04	371	69.69	376	73.40	381	77.12	391	84.59	400	92.07
200000	2964	367	64.12	372	67.60	377	71.24	382	74.96	387	78.79	392	82.65	397	86.56	406	94.42	416	102.30
210000	3112	385	73.52	389	77.12	394	80.89	399	84.77	404	88.72	408	92.75	413	96.84	422	105.06	431	113.34
220000	3260	402	83.81	407	87.55	411	91.44	416	95.46	420	99.57	425	103.76	429	108.00	438	116.59	447	125.24
230000	3408	420	95.06	424	98.93	428	102.95	433	107.11	437	111.38	441	115.70	446	120.10	454	129.04	462	138.06
240000	3557	437	107.31	441	111.31	445	115.48	450	119.76	454	124.15	458	128.64	462	133.19	470	142.45	478	151.83

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
90000	1334	299	35.59	328	45.07	356	55.31	385	71.12	413	88.79	435	101.45	460	121.81	485	144.03	504	158.81
100000	1482	306	39.71	333	49.45	360	59.94	385	71.12	413	88.79	435	101.45	460	121.81	485	144.03	504	158.81
110000	1630	315	44.50	341	54.52	366	65.25	390	76.69	413	88.79	435	101.45	460	121.81	485	144.03	504	158.81
120000	1778	326	49.96	350	60.32	373	71.34	396	83.03	418	95.37	439	108.31	460	121.81	485	144.03	504	158.81
130000	1926	337	56.07	360	66.87	382	78.22	403	90.18	424	102.76	445	115.95	465	129.73	485	144.03	504	158.81
140000	2075	350	62.84	371	74.15	392	85.93	412	98.21	432	111.09	451	124.51	471	138.53	490	153.08	508	168.14
150000	2223	363	70.27	383	82.18	402	94.43	422	107.14	441	120.33	459	134.05	478	148.31	496	163.11	513	178.41
160000	2371	376	78.37	395	90.94	414	103.75	432	116.93	450	130.50	468	144.56	486	159.12	503	174.18	520	189.74
170000	2519	390	87.18	408	100.45	426	113.89	444	127.59	461	141.63	478	156.09	495	170.98	511	186.33	528	202.15
180000	2667	404	96.69	422	110.71	439	124.83	456	139.12	473	153.69	489	168.60	505	183.88	521	199.59	536	215.73
190000	2816	418	106.95	436	121.76	452	136.59	469	151.54	485	166.68	500	182.11	515	197.85	531	213.94	546	230.44
200000	2964	433	118.00	450	133.61	466	149.18	482	164.83	497	180.61	512	196.60	527	212.85	541	229.41	556	246.31
210000	3112	448	129.85	464	146.28	480	162.63	495	179.00	510	195.46	524	212.08	539	228.89	553	245.98	567	263.33
220000	3260	463	142.56	479	159.81	494	176.98	509	194.11	523	211.28	537	228.56	551	245.98	565	263.62	578	281.50
230000	3408	478	156.16	494	174.24	509	192.21	523	210.13	537	228.06	551	246.03	564	264.12	577	282.37	590	300.81
240000	3557	494	170.71	509	189.61	523	208.41	537	227.12	551	245.83	564	264.53	577	283.31	590	302.21	602	321.25
250000	3705	509	186.25	524	205.94	538	225.58	552	245.12	565	264.60	578	284.08	590	303.58	603	323.16	615	342.85
260000	3853	525	202.83	539	223.31	553	243.76	566	264.12	579	284.41	592	304.66	604	324.93	616	345.23	628	365.60
270000	4001	541	220.48	555	241.75	568	263.00	581	284.18	594	305.29	606	326.36	618	347.38	630	368.43	642	389.51
280000	4149	557	239.26	570	261.29	583	283.35	596	305.36	608	327.28	620	349.16	632	370.98	644	392.78	655	414.62

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
150000	2223	531	194.23	548	210.51	565	227.23	582	244.38	617	292.81								
160000	2371	537	205.78	553	222.31	570	239.31	586	256.73										
170000	2519	544	218.46	560	235.23	575	252.46	591	270.14										
180000	2667	552	232.31	567	249.33	582	266.81	597	284.74	627	321.86	656	360.60	684	400.83	711	442.45	741	503.92
190000	2816	561	247.35	575	264.66	590	282.41	604	300.60	633	338.20	661	377.43	688	418.18	715	460.38		
200000	2964	570	263.58	584	281.25	598	299.29	612	317.75	640	355.87	667	395.58	693	436.82	720	479.54		
210000	3112	581	281.02	594	299.06	608	317.46	621	336.23	648	374.91	674	415.12	700	456.87	725	500.07	750	544.69
220000	3260	591	299.66	605	318.12	618	336.91	631	356.03	656	395.36	682	436.12	707	478.37	731	522.07	755	567.17
230000	3408	603	319.49	616	338.43	628	357.64	641	377.18	666	417.21	690	458.61	714	501.39	738	545.59	762	591.19
240000	3557	615	340.50	627	359.96	640	379.66	652	399.64	676	440.47	699	482.57	723	525.97	746	570.72	769	616.80
250000	3705	627	362.70	639	382.73	651	402.96	663	423.43	686	465.16	709	508.02	732	552.09	754	597.45	776	644.08
260000	3853	640	386.08	652	406.73	663	427.53	675	448.53	697	491.24	720	534.96	742	579.78	763	625.80	785	673.03
270000	4001	653	410.67	664	431.96	676	453.37	687	474.97	709	518.73	730	563.37	752	609.03	773	655.79	794	703.70
280000	4149	666	436.49	678	458.45	688	480.50	699	502.71	721	547.59	742	593.27	763	639.84	783	687.42	804	736.04
290000	4298	680	463.52	691	486.18	702	508.93	712	531.77	733	577.87	754	624.65	774	672.21	794	720.66	814	770.08
300000	4446	694	491.82	704	515.21	715	538.66	725	562.19	746	609.55	766	657.49	785	706.11	805	755.52	824	805.82
320000	4742	722	552.24	732	577.17	742	602.09	752	627.05	772	677.15	791	727.59	810	778.54	828	830.09	847	882.35
340000	5039	751	617.98	761	644.49	770	670.98	780	697.46	798	750.47	817	803.67	835	857.19	853	911.14	870	965.62
360000	5335	780	689.29	789	717.44	799	745.52	808	773.58	826	829.67	844	885.79	861	942.09	878	998.65	895	1055.59
380000	5631	810	766.49	819	796.26	828	826.00	837	855.67	854	914.94	872	974.12	888	1033.35	905	1092.74	921	1152.35

Performance Data

VCR Fan

890 AF DWDI

Wheel Diameter = 89 in.	Discharge Area = 81.98 sq. ft.
Inlet Area = 94.60 sq. ft.	Tip Speed, FPM = 23.30 x RPM
Maximum BHP = 2385.61 (RPM / 1000) ³	

	White area is Class I
	Light blue area is Class II
	Medium blue area is Class III
	Dark blue area is Class IV

CFM	OV	1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP		1" SP		1 1/4" SP		1 1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
70000	854	122	4.34	134	5.73	145	7.18	157	8.73	168	10.38	178	12.14	188	13.98				
80000	976	132	5.52	144	7.08	154	8.67	164	10.33	174	12.07	184	13.88	193	15.81	211	19.92	229	24.35
90000	1098	144	6.94	154	8.69	163	10.46	173	12.25	182	14.10	190	16.01	199	18.00	216	22.23	232	26.79
100000	1220	155	8.60	164	10.55	173	12.50	182	14.46	190	16.45	199	18.48	207	20.57	222	24.98	237	29.66
110000	1342	166	10.53	176	12.69	184	14.85	192	16.98	200	19.14	208	21.32	215	23.54	229	28.14	244	33.00
120000	1464	178	12.78	187	15.14	195	17.50	203	19.83	210	22.17	217	24.53	224	26.89	238	31.75	251	36.79
130000	1586	190	15.36	198	17.92	206	20.48	213	23.01	220	25.56	227	28.08	234	30.62	247	35.78	259	41.07
140000	1708	203	18.32	210	21.06	217	23.82	224	26.57	231	29.31	238	32.03	244	34.76	256	40.25	268	45.82
150000	1830	215	21.70	222	24.60	229	27.54	236	30.50	242	33.43	248	36.37	254	39.29	266	45.14	277	51.04
160000	1952	227	25.51	234	28.57	241	31.70	247	34.84	253	38.00	259	41.12	265	44.26	276	50.48	287	56.74
170000	2074	240	29.77	246	32.98	253	36.29	259	39.64	265	42.98	270	46.32	276	49.65	287	56.29	297	62.90
180000	2196	252	34.54	259	37.90	265	41.39	270	44.90	276	48.46	282	52.00	287	55.54	297	62.57	308	69.59
190000	2318	265	39.84	271	43.34	277	46.98	282	50.68	288	54.42	293	58.17	298	61.90	308	69.35	318	76.77
200000	2440	278	45.70	283	49.34	289	53.14	294	57.00	300	60.92	305	64.85	310	68.80	320	76.65	329	84.49
210000	2562	291	52.15	296	55.92	301	59.87	306	63.90	311	68.00	316	72.12	321	76.25	331	84.52	340	92.75
220000	2684	304	59.20	309	63.12	314	67.20	319	71.40	323	75.67	328	79.96	333	84.30	342	92.95	351	101.60
230000	2806	316	66.90	321	70.96	326	75.18	331	79.54	336	83.96	340	88.44	345	92.95	354	102.02	362	111.06
240000	2928	329	75.30	334	79.47	339	83.84	343	88.34	348	92.93	352	97.57	357	102.27	365	111.70	374	121.15
250000	3050	342	84.39	347	88.70	351	93.20	356	97.84	360	102.59	364	107.40	369	112.25	377	122.06	385	131.91
260000	3172	355	94.20	360	98.65	364	103.30	368	108.08	372	112.96	377	117.93	381	122.96	389	133.14	397	143.37

CFM	OV	2" SP		2 1/2" SP		3" SP		3 1/2" SP		4" SP		4 1/2" SP		5" SP		5 1/2" SP		6" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
110000	1342	271	43.49	298	55.03														
120000	1464	277	47.59	302	59.37	326	72.09	349	85.64										
130000	1586	283	52.24	307	64.30	330	77.25	352	91.06	374	105.65								
140000	1708	291	57.44	313	69.81	335	83.03	356	97.09	377	111.93	397	127.50						
150000	1830	299	63.17	320	75.93	341	89.45	361	103.76	381	118.85	400	134.68	419	151.20	437	168.35		
160000	1952	308	69.45	328	82.68	348	96.56	367	111.15	386	126.50	404	142.56	423	159.34	440	176.75	458	194.80
170000	2074	317	76.29	336	90.03	355	104.33	374	119.25	392	134.87	409	151.20	427	168.21	444	185.88	461	204.19
180000	2196	327	83.65	345	97.99	363	112.75	381	128.09	398	144.04	415	160.63	432	177.90	449	195.81	465	214.37
190000	2318	337	91.57	355	106.56	372	121.86	389	137.63	405	153.96	422	170.88	438	188.43	454	206.60	470	225.38
200000	2440	347	100.06	364	115.73	381	131.63	397	147.91	413	164.66	429	181.95	444	199.81	460	218.26	475	237.31
210000	2562	357	109.14	374	125.51	390	142.06	406	158.90	421	176.14	436	193.85	451	212.06	466	230.83	481	250.16
220000	2684	368	118.80	384	135.93	400	153.16	415	170.62	430	188.38	445	206.56	459	225.18	473	244.31	487	263.97
230000	2806	379	129.08	395	147.00	410	164.94	424	183.05	439	201.39	453	220.08	467	239.18	481	258.71	494	278.71
240000	2928	390	139.99	405	158.70	420	177.40	434	196.19	448	215.18	462	234.43	475	254.01	489	274.00	502	294.41
250000	3050	401	151.56	416	171.10	430	190.58	444	210.08	458	229.73	471	249.58	484	269.72	497	290.18	510	311.04
260000	3172	412	163.84	427	184.18	441	204.45	454	224.71	468	245.06	481	265.56	493	286.27	506	307.28	518	328.62
270000	3293	423	176.83	438	198.00	451	219.08	465	240.11	478	261.16	490	282.35	503	303.70	515	325.27	527	347.14
280000	3415	435	190.56	449	212.56	462	234.44	475	256.26	488	278.08	500	299.97	512	321.98	524	344.18	536	366.62
290000	3537	446	205.08	460	227.88	473	250.60	486	273.22	498	295.81	510	318.43	522	341.12	534	363.98	545	387.01
300000	3659	458	220.39	471	244.01	484	267.54	496	290.99	509	314.37	520	337.74	532	361.16	543	384.68	555	408.37

CFM	OV	6 1/2" SP		7" SP		7 1/2" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
170000	2074	477	223.08	494	242.53														
180000	2196	481	233.51	497	253.23	512	273.50	527	294.26										
190000	2318	485	244.78	500	264.75	515	285.28	530	306.35	559	349.93								
200000	2440	490	256.96	505	277.16	519	297.95	534	319.25	562	363.41	589	409.43						
210000	2562	495	270.06	510	290.52	524	311.54	538	333.11	565	377.76	592	424.37	618	472.75				
220000	2684	501	284.14	515	304.87	529	326.14	543	347.95	569	393.10	595	440.22	621	489.17	646	539.82		
230000	2806	508	299.22	521	320.24	535	341.76	548	363.83	574	409.47	599	457.07	624	506.56	648	557.77	672	610.61
240000	2928	515	315.26	528	336.62	541	358.45	554	380.77	579	426.92	604	475.02	628	524.99	652	576.74	675	630.15
250000	3050	523	332.31	535	354.01	548	376.18	560	398.81	585	445.50	609	494.11	632	544.55	656	596.79	678	650.74
260000	3172	531	350.33	543	372.45	555	394.98	567	417.95	591	465.24	614	514.37	637	565.30	660	618.02	682	672.47
270000	3293	539	369.35	551	391.89	563	414.83	574	438.17	597	486.12	620	535.82	643	587.28	665	640.50	687	695.42
280000	3415	548	389.33	559	412.37	571	435.75	582	459.50	604	508.17	627	558.50	648	610.52	670	664.25	691	719.65
290000	3537	557	410.29	568	433.86	579	457.72	590	481.92	612	531.40	633	582.41	655	635.03	676	689.29	697	745.21
300000	3659	566	432.24	577	456.36	588	480.74	598	505.42	620	555.76	641	607.53	661	660.82	682	715.67	702	772.12
310000	3781	575	455.17	586	479.87	596	504.81	607	530.01	628	581.29	648	633.90	668	687.91	689	743.40	708	800.42
340000	4147	605	529.87	615	556.53	625	583.33	634	610.29	654	664.80	673	720.27	692	776.83	710	834.60	729	893.67
370000	4513	635	613.72	645	642.54	654	671.44	663	700.41	682	758.69	700	817.57	717	877.26	735	937.85	752	999.49
400000	4879	667	707.07	676	738.25	685	769.40	694	800.55	711	863.04	728	925.84	745	989.14	762	1053.07	778	1117.78
430000	5245	700	810.50	708	844.09	717	877.62	725	911.12	742	978.12	758	1045.21	774	1112.55	790	1180.27	805	1248.52
460000	5611	733	924.65	741	960.70	749	996.67	758	1032.59	773	1104.32	789	1175.98	804	1247.69	819	1319.59	834	1391.79

EXAMPLE NO. 1

A VCR 330 SWSI backward inclined fan is operating at 12,500 CFM, 3.5" SP and 957 RPM.

	Octave Bands							
	1	2	3	4	5	6	7	8
From 330 table @ 957 RPM (by interpolation).....	97	94	89	83	80	76	73	70
Note 1	2	2	0	1	1	-1	0	0
Sound Power Level	99	96	89	84	81	75	73	70

Note 1: The correction point of operation is found by dividing design CFM by the Wide Open Volume CFM (WOV CFM). The WOVC FM is found in the far right-hand column of the tables on pages 98 through 101 for backward inclined fans and pages 103 through 105 for airfoil fans. Design RPM and percentage of WOVC are applied on page 102 through 106, respectively. In this case,

$$\frac{12,500 \text{ CFM}}{21,141 \text{ CFM}} = .591 = 59.1\% \text{ WOVC}$$

EXAMPLE NO. 2

A VCR 542 DWDI airfoil fan is operating at 72,000 CFM, 4" SP, 2364 OV and 670 RPM.

	Octave Bands							
	1	2	3	4	5	6	7	8
From 542 table @ 670 RPM (by interpolation).....	102	98	91	89	88	83	75	72
Note 2	2	1	1	0	0	0	0	-1
Note 3	3	3	3	3	3	3	3	3
Sound Power Level	107	102	95	92	91	86	78	74

Note 2: The correction point of operation is obtained by first finding the relative design CFM of a SWSI fan at the same outlet velocity. The basic equation is:

$$(\text{OV for DWDI fan}) \times (\text{Discharge Area for SWSI fan}) = \text{CFM}$$

For example the values are: $2364 \times 16.92 = 39,999 \text{ CFM}$. This CFM value is then divided by the WOVC FM of the SWSI fan at 670 RPM to obtain the point of operation.

$$\frac{39,999 \text{ CFM}}{60,956 \text{ CFM}} = .656 = 65.6\% \text{ WOVC}$$

Note 3: Because the sound ratings in this bulletin are based on symmetrical SWSI fans, a value of 3 DB is added to all DWDI fans when operation is at the same RPM and outlet velocity as a SWSI fan.

Sound Power Levels

VCR Backward Inclined Fans

105 BI SWSI DISCHARGE AREA: 0.63 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
1200	68	73	67	62	60	59	58	49	806
1300	69	74	68	65	62	61	59	52	874
1400	70	74	68	67	64	62	61	54	941
1500	72	75	69	69	66	64	62	57	1008
1600	73	75	70	71	67	65	63	59	1075
1800	75	76	71	72	69	66	64	60	1210
2000	76	77	72	73	71	67	65	61	1344
2200	77	78	74	75	72	68	66	62	1478
2400	82	79	75	78	73	68	67	63	1613
2600	87	80	76	80	75	71	69	65	1747
2800	91	81	78	83	78	73	71	67	1882
3000	95	82	79	85	80	75	73	69	2016
3200	96	86	81	86	82	76	75	71	2150
3400	97	89	83	87	83	78	76	72	2285
3600	98	92	85	88	85	80	77	74	2419
3800	99	96	87	89	87	81	79	75	2554
4000	100	98	88	90	88	83	80	77	2688
4200	101	101	90	91	90	84	81	78	2822
4400	102	104	91	91	91	86	82	79	2957
4600	103	107	93	92	93	87	83	81	3091

122 BI SWSI DISCHARGE AREA: 0.86 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
1200	85	83	76	73	71	65	60	57	1246
1300	87	85	79	75	73	67	63	59	1349
1400	88	87	82	76	75	70	65	61	1453
1500	90	89	84	77	77	72	67	63	1557
1600	91	90	86	79	79	74	68	65	1661
1800	93	93	89	81	82	77	72	68	1868
2000	94	93	89	83	83	79	73	69	2076
2200	94	93	89	84	84	80	74	69	2284
2400	94	92	89	85	84	80	74	70	2491
2600	94	91	89	86	85	80	75	70	2699
2800	94	91	89	87	86	81	76	71	2906
3000	95	92	89	88	87	82	77	72	3114
3200	96	94	91	90	88	84	79	74	3322
3400	97	96	92	91	90	86	81	75	3529
3600	98	97	93	92	91	87	83	77	3737
3800	99	98	95	93	93	89	84	79	3944
4000	100	100	96	95	94	90	86	80	4152
4200	101	101	97	96	95	91	87	82	4360
4400	102	102	98	97	96	93	88	83	4567
4600	103	104	99	98	97	94	90	84	4775

135 BI SWSI DISCHARGE AREA: 1.05 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
1200	88	86	79	76	74	68	63	60	1667
1300	90	88	82	78	76	70	66	62	1806
1400	91	90	85	79	78	73	68	64	1945
1500	93	92	87	80	80	75	69	66	2084
1600	94	93	89	82	82	76	71	68	2223
1800	96	96	92	84	85	80	75	71	2501
2000	97	97	94	86	86	82	76	72	2779
2200	97	96	93	87	87	83	77	73	3056
2400	98	96	93	88	88	83	78	73	3334
2600	98	96	94	89	88	83	78	73	3612
2800	98	95	93	90	89	84	79	74	3890
3000	98	95	92	91	90	85	80	75	4168
3200	99	97	94	93	91	87	82	76	4446
3400	100	99	95	94	93	88	84	78	4724
3600	101	100	96	95	94	90	86	80	5001
3800	102	101	98	96	96	92	87	82	5279
4000	103	103	99	98	97	97	89	83	5557
4200	104	104	100	99	98	94	90	85	5835
4400	105	105	101	100	99	96	91	86	6113

150 BI SWSI DISCHARGE AREA: 1.29 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
1100	90	87	80	77	75	69	64	61	2096
1200	91	89	83	79	77	71	67	63	2287
1300	93	92	85	81	80	74	69	65	2477
1400	94	93	88	82	81	76	71	67	2668
1500	96	95	90	84	83	78	73	69	2859
1600	97	96	92	85	85	80	74	71	3049
1800	99	99	95	87	88	83	78	74	3430
2000	100	99	97	89	89	85	79	75	3811
2200	100	99	96	90	90	86	80	76	4193
2400	101	99	96	91	91	86	81	76	4574
2600	101	98	96	92	91	86	81	76	4955
2800	101	98	96	93	92	87	82	77	5336
3000	101	98	96	94	93	88	83	78	5717
3200	102	100	97	96	95	90	85	80	6098
3400	104	102	98	97	96	92	87	81	6480
3600	105	103	100	98	97	93	89	83	6861
3800	105	105	101	100	99	95	90	85	7242
4000	106	106	102	101	100	96	92	86	7623
4200	107	107	103	102	101	98	93	88	8004

165 BI SWSI DISCHARGE AREA: 1.57 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
1100	92	90	83	80	78	72	67	63	2790
1200	94	92	86	82	80	74	70	66	3044
1300	96	94	88	84	82	76	72	68	3297
1400	97	96	91	85	84	79	74	70	3551
1500	99	98	93	87	86	81	76	72	3805
1600	100	99	95	88	88	83	77	74	4058
1800	102	102	98	90	91	86	81	77	4566
2000	103	103	100	92	92	88	82	78	5073
2200	103	102	100	93	93	89	83	79	5580
2400	104	101	99	94	94	89	84	79	6088
2600	104	101	99	95	94	89	84	79	6595
2800	104	100	99	96	95	90	85	80	7102
3000	104	101	99	97	96	91	86	81	7610
3200	105	103	100	99	98	93	88	83	8117
3400	106	105	101	100	99	95	90	84	8624
3600	107	106	102	101	100	96	92	86	9132
3800	108	108	104	102	102	98	93	88	9639
4000	109	109	105	104	103	99	95	89	10146

182 BI SWSI DISCHARGE AREA: 1.92 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
700	76	74	70	67	64	58	54	50	2563
800	79	77	73	70	68	62	58	54	2929
900	82	80	77	73	71	65	61	57	3295
1000	85	83	79	76	74	68	64	60	3661
1100	88	85	82	78	76	71	67	62	4027
1200	90	87	84	81	78	74	69	65	4394
1300	93	89	87	83	80	77	71	67	4760
1400	95	91	89	85	82	79	73	69	5126
1500	97	92	91	87	84	81	75	71	5492
1600	99	94	92	88	85	83	77	73	5858
1800	102	97	96	92	88	87	80	76	6591
2000	104	100	98	94	91	89	83	79	7323
2200	106	103	100	97	93	91	86	82	8055
2400	107	105	102	99	96	93	89	84	8788
2600	109	108	104	102	98	95	92	86	9520
2800	110	110	106	104	100	97	94	88	10252
3000	111	112	107	106	102	99	96	90	10985
3200	112	114	109	107	103	100	98	92	11717

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Sound Power Levels

VCR Backward Inclined Fans

200 BI SWSI DISCHARGE AREA: 2.30 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
700	78	76	73	70	67	61	57	53	3373
800	82	80	76	73	71	65	61	56	3855
900	84	83	79	76	74	68	64	60	4337
1000	88	86	82	79	77	71	67	63	4819
1100	90	88	85	81	79	74	69	65	5301
1200	93	90	87	84	81	77	72	68	5783
1300	96	92	89	86	83	79	74	70	6265
1400	98	94	91	88	85	82	76	72	6747
1500	100	95	93	89	86	84	78	74	7229
1600	102	97	95	91	88	86	80	76	7711
1800	105	99	98	94	91	89	83	79	8674
2000	107	103	101	97	94	92	86	82	9638
2200	109	106	103	100	96	94	89	84	10602
2400	110	108	105	102	99	96	92	87	11566
2600	112	111	107	104	101	98	94	89	12530
2800	113	113	109	107	103	100	97	91	13494
3000	114	115	110	108	105	101	99	93	14458
3200	115	117	112	110	106	103	101	95	15422

222 BI SWSI DISCHARGE AREA: 2.85 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
700	82	80	76	73	70	64	60	56	4645
800	85	83	79	76	74	68	64	60	5308
900	88	86	83	79	78	71	67	63	5972
1000	91	89	85	82	80	74	70	66	6635
1100	94	91	88	84	82	77	73	69	7299
1200	96	93	90	87	84	80	75	71	7962
1300	99	95	93	89	86	83	77	73	8626
1400	101	97	95	91	88	85	79	75	9290
1500	103	98	97	93	90	87	81	77	9953
1600	105	100	98	94	91	89	83	79	10617
1800	102	103	102	98	94	93	86	82	11944
2000	110	106	104	100	97	95	89	85	13271
2200	112	109	106	103	99	97	92	88	14598
2400	113	111	108	106	102	99	95	90	15925
2600	115	114	110	108	104	101	98	92	17252
2800	116	116	112	110	106	103	100	94	18580
3000	117	118	113	112	108	105	102	96	19907

245 BI SWSI DISCHARGE AREA: 3.45 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
700	85	83	79	76	73	67	63	59	6201
800	88	86	82	79	77	71	67	63	7087
900	91	89	85	82	80	74	70	66	7973
1000	94	92	88	85	83	77	73	69	8859
1100	97	94	91	87	85	80	76	71	9745
1200	99	96	93	90	87	83	78	74	10631
1300	102	98	96	92	89	85	80	76	11517
1400	104	100	98	94	91	88	82	78	12403
1500	106	101	100	96	93	90	84	80	13288
1600	108	103	101	97	94	92	86	82	14174
1800	111	106	104	101	97	95	89	85	15946
2000	113	109	107	103	100	98	92	88	17718
2200	115	112	109	106	102	100	95	91	19490
2400	116	114	111	108	105	102	98	93	21262
2600	118	117	113	111	107	104	101	95	23034
2800	119	119	115	113	109	106	103	97	24806
3000	120	121	116	115	111	108	105	99	26577

270 BI SWSI DISCHARGE AREA: 4.19 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
450	74	69	63	58	55	51	47	42	5444
500	77	72	66	61	58	54	50	45	6050
550	80	74	69	63	60	56	53	48	6654
600	82	76	71	65	63	59	55	50	7250
650	84	79	73	67	65	61	58	52	7864
700	86	81	75	69	67	63	60	54	8469
750	88	83	77	71	69	65	61	56	9075
800	90	85	79	73	70	66	63	58	9679
900	91	86	81	75	72	68	65	62	10889
1000	92	89	85	78	75	71	68	65	12100
1100	94	91	88	81	77	73	71	68	13309
1200	96	93	90	83	80	76	73	70	14519
1300	98	95	92	86	82	79	75	72	15729
1400	99	97	95	88	84	80	77	74	16939
1500	101	99	96	90	86	82	79	75	18150
1600	102	100	98	91	87	83	80	77	19359
1800	104	103	100	95	90	86	83	80	21779
2000	106	106	103	99	93	89	86	83	24200
2200	107	108	105	102	96	91	88	86	26619

300 BI SWSI DISCHARGE AREA: 5.17 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
450	68	66	63	63	58	51	44	37	7469
500	73	69	66	66	61	54	47	41	8299
550	72	73	69	68	64	57	50	44	9128
600	72	77	71	70	67	60	53	46	9958
650	74	79	74	72	70	63	56	49	10788
700	77	80	76	73	72	65	58	51	11618
750	79	83	78	75	74	67	60	53	12448
800	81	85	80	76	76	69	63	55	13278
900	84	87	83	79	79	73	66	59	14938
1000	87	91	86	82	81	76	69	62	16598
1100	88	91	90	85	84	79	72	66	18257
1200	90	91	95	88	85	82	75	68	19917
1300	91	93	97	90	87	85	78	71	21577
1400	90	96	98	92	89	87	80	73	23237
1500	89	98	100	94	90	89	82	76	24897
1600	89	100	102	96	91	91	84	78	26556
1800	91	103	104	99	94	94	88	81	29876
2000	93	105	108	102	97	97	91	84	33196
2200	95	107	107	106	100	99	94	87	36515

330 BI SWSI DISCHARGE AREA: 6.26 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
450	80	75	69	64	61	57	53	48	9941
500	83	78	72	67	64	60	56	51	11045
550	86	80	75	69	66	62	59	54	12150
600	88	83	77	72	69	65	61	56	13255
650	90	85	79	74	71	67	64	58	14359
700	92	87	81	75	73	69	66	60	15464
750	94	89	83	77	75	71	68	62	16568
800	96	91	85	80	76	72	69	64	17673
900	95	92	87	81	78	74	71	68	19882
1000	98	95	91	84	81	77	74	71	22091
1100	100	97	94	87	83	79	77	74	24301
1200	102	99	96	89	86	82	79	76	26510
1300	104	101	99	92	88	84	81	78	28719
1400	106	103	101	94	90	86	83	80	30928
1500	107	105	102	96	92	88	85	81	33137
1600	108	106	104	98	93	89	87	83	35347
1800	110	109	106	101	96	92	89	86	39765
2000	112	112	109	105	99	95	92	89	44183

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Sound Power Levels

VCR Backward Inclined Fans

365 BI SWSI DISCHARGE AREA: 7.66 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
400	79	72	66	61	58	55	52	49	11875
450	82	75	69	64	61	58	55	52	13359
500	85	78	72	67	64	60	58	55	14843
550	88	81	75	70	66	63	60	58	16328
600	91	83	77	72	69	65	62	60	17812
650	93	86	80	74	71	67	65	62	19296
700	96	88	82	76	73	69	67	64	20781
750	98	91	84	78	75	71	68	65	22265
800	99	93	86	80	76	73	70	67	23750
900	101	95	89	83	80	75	72	69	26718
1000	103	98	92	86	86	78	75	72	29687
1100	104	101	95	89	85	81	78	75	32656
1200	106	104	97	91	87	83	80	77	35625
1300	107	107	100	93	90	85	82	79	38593
1400	109	109	102	95	91	87	84	81	41562
1500	110	111	104	97	93	89	86	83	44531
1600	111	113	106	99	95	91	87	84	47500

402 BI SWSI DISCHARGE AREA: 9.31 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
400	82	75	69	64	61	58	55	52	15923
450	85	78	72	67	64	61	58	55	17914
500	88	81	75	70	67	63	61	58	19904
550	91	84	78	73	69	66	63	61	21895
600	94	86	80	75	72	68	65	63	23885
650	96	89	83	77	74	70	68	65	25876
700	99	91	85	79	76	72	69	67	27866
750	101	94	87	81	78	74	71	68	29857
800	102	96	89	83	79	76	73	70	31847
900	104	98	92	86	83	78	75	72	33828
1000	106	101	95	89	85	81	78	75	35809
1100	107	104	98	92	88	84	81	78	37790
1200	109	107	100	94	90	86	83	80	39771
1300	110	110	103	96	93	88	85	82	41752
1400	112	112	105	98	94	90	87	84	43733
1500	113	114	107	100	96	92	89	86	45714

445 BI SWSI DISCHARGE AREA: 11.39 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
400	85	78	72	67	65	61	58	55	21519
450	88	81	75	70	67	64	61	58	24209
500	91	84	78	73	70	66	64	61	26899
550	94	87	81	76	73	69	66	64	29589
600	97	90	84	76	75	71	68	66	32279
650	99	92	86	80	77	73	71	68	34969
700	102	94	88	82	79	75	73	70	37659
750	104	97	90	84	81	77	74	71	40349
800	105	99	92	86	82	79	76	73	43039
900	107	101	95	89	86	81	78	75	45729
1000	109	104	98	92	88	84	81	78	48419
1100	110	107	101	95	91	87	84	81	51109
1200	112	110	103	97	93	89	86	83	53799
1300	113	113	106	99	96	91	88	85	56489
1400	115	115	108	101	97	93	90	87	59179

490 BI SWSI DISCHARGE AREA: 13.80 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
350	81	77	72	68	64	60	56	52	25139
400	85	81	76	72	68	63	60	56	28730
450	88	84	79	75	71	66	63	59	32321
500	90	86	82	77	74	69	66	62	35913
550	91	89	84	80	77	72	69	65	39504
600	93	91	87	82	79	74	71	67	43095
650	94	93	89	84	81	76	73	70	46687
700	96	95	91	86	83	78	75	71	50278
750	97	97	93	88	85	80	76	73	53869
800	98	99	95	90	87	82	78	75	57460
900	110	104	98	92	89	84	81	78	61051
1000	112	107	101	95	91	87	84	81	64643
1100	113	110	104	98	94	90	86	83	68234
1200	115	113	106	100	96	92	89	86	71826

542 BI SWSI DISCHARGE AREA: 16.92 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
350	84	80	75	71	67	63	60	56	34116
400	88	84	79	75	71	66	63	59	38989
450	91	87	82	78	75	69	66	62	43863
500	93	90	85	80	77	72	69	65	48737
550	94	92	87	83	80	75	72	68	53611
600	96	94	90	85	82	77	74	70	58484
650	97	96	92	87	84	79	76	73	63358
700	99	98	94	89	86	81	78	75	68232
750	100	100	96	91	88	83	79	76	73106
800	101	102	98	93	90	85	81	78	77979
900	113	107	101	95	92	87	84	81	82852
1000	115	110	104	98	94	90	87	84	87727
1100	116	113	107	101	97	93	90	87	92602

600 BI SWSI DISCHARGE AREA: 20.70 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
350	87	83	78	74	70	66	63	59	46154
400	91	87	82	78	74	69	66	62	52748
450	94	90	85	81	78	72	69	65	59341
500	96	93	88	83	81	75	72	68	65935
550	98	95	91	86	83	78	75	71	72528
600	99	97	93	88	85	80	77	74	79122
650	100	99	95	90	87	82	79	76	85715
700	102	101	97	92	89	84	81	78	92309
750	103	103	99	94	91	86	83	79	98903
800	104	105	101	96	93	88	84	81	105496
900	116	110	104	98	95	90	87	84	112088
1000	118	113	107	101	97	93	90	87	118780

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Sound Power Levels

VCR Backward Inclined Fans

660 BI SWSI DISCHARGE AREA: 25.05 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
300	86	82	77	73	69	65	61	57	52655
350	90	86	81	77	73	69	65	62	61431
400	94	90	85	81	77	72	69	65	70207
450	97	93	88	84	81	75	72	68	78983
500	99	95	91	86	83	78	75	71	87759
550	100	98	93	89	86	81	78	74	96535
600	102	100	96	91	88	83	80	76	105311
650	103	102	98	93	90	85	82	79	114087
700	105	104	100	95	92	87	84	81	122863
750	106	106	102	97	94	89	85	82	131639
800	107	108	104	99	96	91	87	84	140415

730 BI SWSI DISCHARGE AREA: 30.64 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
300	89	85	80	76	72	68	64	60	71250
350	93	89	84	80	76	72	69	65	83125
400	97	93	88	84	80	75	72	68	95000
450	100	96	91	87	84	78	75	71	106875
500	102	99	94	89	86	81	78	74	118750
550	103	101	97	92	89	84	81	77	130625
600	105	103	99	94	91	86	83	79	142500
650	106	105	101	96	93	88	85	82	154375
700	108	107	103	98	95	90	87	84	166250
750	109	109	105	100	97	92	88	85	178125
800	110	111	107	102	99	94	90	87	190000

807 BI SWSI DISCHARGE AREA: 37.49 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
250	88	83	78	75	70	66	62	58	80364
300	92	88	83	79	75	71	68	63	96436
350	96	92	87	83	79	75	72	68	112509
400	100	96	91	87	83	78	75	71	128582
450	103	99	94	90	87	81	78	74	144655
500	105	102	97	92	90	84	81	77	160728
550	107	104	100	95	92	87	84	80	176801
600	108	106	102	97	94	89	86	83	192873
650	109	108	104	99	96	91	88	85	208946
700	111	110	106	101	98	93	90	87	225019
750	112	112	108	103	100	95	92	88	241092
800	113	114	110	105	102	97	93	90	257165

890 BI SWSI DISCHARGE AREA: 45.54 Sq. Ft.

RPM	OCTAVE BAND LIMITS CPS								CFM WOV
	45 90	90 180	180 355	355 710	710 1400	1400 2800	2800 5600	5600 11200	
250	91	86	81	77	73	69	65	61	107598
300	95	97	86	82	78	74	70	66	129117
350	99	95	90	86	82	78	75	71	150637
400	103	99	94	90	86	81	78	74	172156
450	106	102	97	93	90	84	81	77	193676
500	108	105	100	95	93	87	84	80	215196
550	109	107	103	98	95	90	87	83	236715
600	111	109	105	100	97	92	89	86	258235
650	112	111	107	102	99	94	91	88	279755
700	114	113	108	104	101	96	93	90	301274
750	115	115	111	106	103	98	94	91	322794

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Correction in DB for Point of Operation

VCR Backward Inclined Fans

122 SWSI to 165 SWSI For 1200 – 2499 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+4	+7	+2	+1	+1	+1	+2	+4
45	+1	+3	+1	0	0	+1	0	+1
55	0	0	0	0	0	0	0	0
65	0	-1	0	0	0	0	0	0
75	+2	-2	+1	+1	0	0	0	-1
85	+3	-2	+2	+3	+2	+1	0	-1
95	+5	+1	+4	+4	+3	+3	+1	0

122 SWSI to 165 SWSI For 2500 – 4600 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+2	+3	+5	+2	+2	0	0	+1
45	+1	+1	+2	+1	0	0	0	+1
55	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
75	0	+1	+1	0	+1	0	0	0
85	+1	+4	+3	+1	+3	+1	+1	0
95	+3	+6	+5	+2	+4	+3	+2	+2

182 SWSI to 245 SWSI For 700 – 1599 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+4	+5	+4	+3	+1	+1	+1	+1
45	+2	+3	+2	+2	0	0	0	0
55	0	0	0	0	0	0	0	0
65	+1	+1	+3	+2	+1	+2	+2	+1
75	+2	+1	+5	+4	+2	+3	+3	+3
85	+3	+2	+6	+5	+3	+4	+4	+4
95	+4	+3	+6	+6	+4	+5	+6	+5

182 SWSI to 245 SWSI For 1600 – 3200 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+4	+5	+4	+3	+1	+1	+1	+1
45	+2	+3	+2	+2	0	0	0	0
55	0	0	0	0	0	0	0	0
65	+1	+1	+3	+2	+1	+2	+2	+1
75	+2	+1	+5	+4	+2	+3	+3	+3
85	+3	+2	+6	+5	+3	+4	+4	+4
95	+4	+3	+6	+6	+4	+5	+6	+5

270 SWSI to 330 SWSI For 450 – 849 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+6	+7	+1	+2	+2	+1	+1	+3
45	+5	+6	0	+1	+1	0	0	+2
55	+4	+4	0	0	0	-1	0	+1
65	0	0	0	0	0	0	0	0
75	+1	0	+1	+2	+1	+1	0	0
85	+3	+2	+2	+4	+2	+1	0	0
95	+5	+3	+4	+6	+5	+3	+3	0

270 SWSI to 330 SWSI For 850 – 2200 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+5	+6	+2	+3	+3	+3	+1	+1
45	+5	+6	+1	+3	+2	+1	0	0
55	+4	+4	0	+2	+1	-1	0	0
65	0	0	0	0	0	0	0	0
75	+2	+1	+1	+3	+3	+3	+2	0
85	+4	+4	+3	+5	+5	+5	+4	+1
95	+5	+6	+5	+7	+7	+7	+5	+2

365 SWSI to 445 SWSI For 400 – 849 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+2	+2	+2	+1	+1	0	0	+1
45	+1	+1	+1	0	0	0	0	+1
55	0	0	0	0	0	0	0	0
65	0	+1	+1	+1	+1	+1	0	0
75	0	+3	+2	+2	+3	+2	+2	0
85	+1	+3	+4	+4	+5	+4	+3	0
95	+3	+5	+7	+6	+8	+7	+5	0

365 SWSI to 600 SWSI For 850 – 1600 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+4	+3	+1	+2	+1	+1	+2	-1
45	+2	+2	0	+1	0	0	+1	-1
55	0	0	0	0	0	0	0	0
65	0	+1	0	+1	+1	+1	0	+1
75	+2	+2	+2	+3	+3	+2	+1	+3
85	+2	+21	+3	+5	+5	+5	+4	+3
95	+4	+5	+5	+8	+8	+8	+7	+4

490 SWSI to 890 SWSI For 200 – 849 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+2	+3	+1	+1	+1	0	+1	+2
45	+1	+2	0	0	0	0	0	+1
55	0	0	0	0	0	0	0	0
65	0	+2	+1	+1	0	0	0	0
75	+3	+5	+2	+2	+2	+2	+1	0
85	+4	+6	+4	+5	+4	+3	+2	0
95	+7	+9	+7	+7	+7	+6	+4	+2

Sound Power Levels

VCR Airfoil Fans

182 AF SWSI DISCHARGE AREA: 1.92 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
900	79	79	74	70	66	62	55	50	2855
950	81	80	75	72	67	63	57	52	3014
1000	82	82	77	73	68	65	58	53	3173
1100	83	85	80	76	71	67	61	56	3490
1200	83	85	80	76	71	67	61	56	3807
1300	84	86	81	77	72	68	63	58	4125
1400	84	86	81	78	73	69	65	60	4442
1500	85	87	83	79	75	71	67	62	4759
1600	85	88	84	81	76	73	69	64	5076
1800	86	89	88	84	80	76	72	67	5711
2000	86	92	91	87	82	79	75	70	6345
2200	88	94	93	90	85	82	78	73	6980
2400	89	96	96	92	88	84	80	76	7615
2600	90	97	98	95	90	86	82	78	8249
2800	92	99	100	97	92	88	84	80	8884
3000	93	100	102	99	94	90	86	82	9518
3200	94	102	104	101	96	91	88	84	10153
3400	95	103	106	102	98	93	90	85	10787
3600	96	104	107	104	100	95	91	87	11422
3800	97	105	109	106	101	96	93	89	12056
4000	98	106	110	107	103	98	94	90	12691
4200	99	107	111	108	104	99	95	91	13325

200 AF SWSI DISCHARGE AREA: 2.30 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
900	83	83	77	73	69	65	58	53	3758
950	84	84	78	74	70	66	60	55	3967
1000	85	86	80	76	71	68	61	56	4176
1100	86	88	83	79	74	70	64	59	4593
1200	87	89	83	79	74	70	64	59	5011
1300	88	89	84	80	75	71	66	61	5428
1400	87	89	84	81	75	71	67	62	5846
1500	88	91	86	81	78	74	70	65	6264
1600	88	92	87	84	79	76	72	67	6681
1800	90	93	91	87	83	79	75	70	7516
2000	89	96	94	89	85	82	78	73	8351
2200	92	97	96	93	88	85	81	76	9187
2400	93	100	99	95	91	87	83	79	10022
2600	94	100	101	98	93	89	85	81	10857
2800	96	102	103	100	94	90	86	82	11692
3000	97	104	105	101	97	93	89	85	12527
3200	98	106	107	104	99	94	91	87	13362
3400	99	106	110	105	101	96	93	88	14198
3600	100	107	111	107	103	98	94	90	15033
3800	101	109	112	109	104	99	96	92	15868

222 AF SWSI DISCHARGE AREA: 2.85 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
850	85	84	79	75	70	66	60	54	4887
900	86	86	81	76	72	68	61	56	5175
950	88	87	82	78	73	69	63	58	5462
1000	89	89	84	80	74	71	64	59	5750
1100	90	92	86	82	77	73	67	62	6324
1200	90	92	87	82	77	73	67	62	6899
1300	92	93	87	83	78	74	69	64	7474
1400	91	93	88	84	79	75	71	66	8049
1500	92	94	90	85	81	77	73	68	8624
1600	92	95	91	87	82	79	75	70	9199
1800	94	97	95	90	86	82	78	73	10349
2000	94	99	98	93	88	85	81	76	11499
2200	96	101	99	96	91	88	84	79	12649
2400	97	104	103	98	94	90	86	82	13799
2600	98	104	104	101	96	92	88	84	14949
2800	100	106	107	104	98	94	90	86	16099
3000	101	107	109	105	100	96	92	88	17249
3200	102	110	111	107	102	97	94	90	18399
3400	104	110	113	108	104	99	96	91	19548

245 AF SWSI DISCHARGE AREA: 3.45 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
850	88	88	82	78	73	69	63	57	6525
900	90	90	84	79	75	71	64	59	6909
950	92	91	85	81	76	72	66	61	7292
1000	93	93	87	83	77	74	67	62	7676
1100	94	95	90	85	80	76	70	65	8444
1200	94	96	90	85	80	76	70	65	9211
1300	95	96	90	86	81	77	72	67	9979
1400	95	97	91	87	82	78	74	69	10747
1500	96	98	93	88	84	80	76	71	11514
1600	96	99	94	90	85	82	78	73	12282
1800	98	100	98	93	89	85	81	76	13817
2000	98	103	101	96	91	88	84	79	15352
2200	100	104	103	99	94	91	87	82	16887
2400	101	107	106	101	97	93	89	85	18423
2600	102	107	107	104	99	95	91	87	19958
2800	104	110	110	107	101	97	93	89	21493
3000	105	111	112	108	103	99	95	91	23028
3200	106	113	114	110	105	100	97	93	24564

270 AF SWSI DISCHARGE AREA: 4.19 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
700	85	78	74	70	67	63	56	52	7693
750	86	80	76	72	69	65	58	54	8243
800	87	83	78	74	71	66	60	56	8792
850	89	85	80	76	72	68	62	57	9342
900	89	87	82	77	74	70	64	59	9891
950	90	89	83	79	75	71	66	60	10441
1000	90	89	83	79	75	72	68	61	10990
1100	91	90	84	80	76	75	70	64	12089
1200	91	90	86	82	78	77	73	67	13188
1300	92	91	88	84	80	78	76	69	14287
1400	93	91	91	86	82	80	78	72	15386
1500	96	92	93	88	84	82	80	74	16485
1600	98	92	94	90	85	83	82	76	17584
1800	101	95	97	94	89	86	85	79	19782
2000	103	99	99	97	92	89	87	83	21980
2200	104	103	101	99	94	91	90	86	24178
2400	106	106	103	102	97	93	92	88	26376
2600	107	109	105	104	99	95	94	91	28574

300 AF SWSI DISCHARGE AREA: 5.17 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	90	180	355	710	1400	2800	5600	11200	
700	89	81	77	74	71	67	60	56	10553
750	90	84	79	75	72	68	61	57	11307
800	90	87	82	77	74	69	63	59	12061
850	92	89	84	79	75	71	65	60	12814
900	92	91	86	80	77	73	67	62	13568
950	93	93	86	82	78	74	69	63	14322
1000	94	93	86	82	78	75	71	64	15076
1100	95	93	87	83	79	78	73	67	16583
1200	94	94	90	85	81	80	76	70	18091
1300	96	94	91	87	83	81	79	72	19598
1400	97	95	94	90	86	84	82	76	21106
1500	99	96	96	91	87	85	83	77	22613
1600	101	96	98	93	88	86	85	79	24121
1800	105	99	101	97	92	89	88	82	27136
2000	106	103	102	100	95	92	90	86	30151
2200	108	106	104	103	98	95	94	90	33166
2400	110	110	107	105	100	96	95	91	36182
2600	111	112	108	107	102	98	97	94	39197

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Sound Power Levels

VCR Airfoil Fans

330 AF SWSI

DISCHARGE AREA: 6.26 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
700	93	85	80	77	74	70	63	59	14046
750	94	87	82	78	75	71	64	60	15049
800	94	90	85	80	77	72	66	62	16053
850	96	92	87	82	78	74	68	63	17056
900	96	94	89	83	80	76	70	65	18059
950	97	96	90	85	81	77	72	66	19062
1000	98	96	89	85	81	78	74	67	20066
1100	98	97	90	86	82	81	76	70	22072
1200	98	97	93	88	84	83	79	73	24079
1300	99	97	94	90	86	84	82	75	26085
1400	101	98	97	93	89	87	85	79	28092
1500	103	99	99	94	90	88	86	80	30099
1600	105	99	101	96	91	89	88	82	32105
1800	108	102	104	100	95	92	91	85	36118
2000	110	106	105	103	98	95	93	89	40131
2200	111	110	107	105	100	97	96	92	44145
2400	113	113	110	108	103	99	98	94	48158
2600	114	116	111	110	105	101	100	97	52171

365 AF SWSI

DISCHARGE AREA: 7.66 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
500	84	75	71	71	70	63	55	53	13854
550	85	79	74	73	73	66	58	55	15240
600	87	82	76	75	75	69	61	57	16625
650	88	85	79	77	76	71	63	59	18011
700	89	86	79	77	76	71	64	61	19396
750	90	88	80	78	77	72	65	63	20782
800	91	89	81	78	77	72	67	65	22167
850	92	90	82	79	78	73	68	67	23553
900	93	92	83	80	78	73	70	69	24938
950	94	95	85	80	79	74	71	70	26323
1000	95	97	86	81	79	75	72	71	27709
1100	97	100	89	84	81	77	74	73	30480
1200	99	102	93	86	84	80	76	75	33251
1300	100	104	96	89	86	82	79	77	36022
1400	101	106	99	91	87	84	80	79	38793
1500	102	107	102	93	89	86	82	81	41563
1600	104	108	104	95	91	88	84	82	44334
1700	105	110	107	97	92	89	86	83	47105
1800	106	111	109	99	94	91	87	85	49876

402 AF SWSI

DISCHARGE AREA: 9.31 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
450	83	76	72	72	70	62	55	53	16721
500	88	78	74	74	73	66	58	56	18578
550	88	82	77	76	76	69	61	58	20436
600	90	86	79	78	78	72	64	60	22294
650	91	88	82	80	79	74	66	62	24152
700	93	89	82	80	79	74	67	64	26010
750	94	92	83	81	80	75	68	66	27868
800	94	93	84	81	80	75	70	68	29725
850	95	94	85	82	81	76	71	70	31583
900	96	96	86	83	81	76	73	72	33441
950	97	99	88	83	82	77	74	73	35299
1000	99	101	89	84	82	78	75	74	37157
1100	101	103	92	87	84	80	77	76	40873
1200	102	106	96	89	87	83	79	78	44588
1300	103	107	99	92	89	85	82	80	48304
1400	105	109	102	94	90	87	83	82	52020
1500	106	111	105	96	92	89	85	84	55735
1600	107	112	107	98	94	91	87	85	58451
1700	108	113	110	100	95	92	89	86	63167
1800	109	115	112	102	97	94	90	88	66882

445 AF SWSI

DISCHARGE AREA: 11.39 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
450	87	79	75	75	73	65	58	56	22596
500	91	82	77	77	76	69	61	59	25107
550	92	85	80	79	79	72	64	61	27617
600	94	89	82	81	81	75	67	63	30128
650	95	91	85	83	82	77	69	65	32639
700	96	93	86	83	82	77	70	67	35150
750	97	95	86	84	83	78	71	69	37660
800	98	96	87	84	83	78	73	71	40171
850	99	97	88	85	84	79	74	73	42682
900	100	99	89	86	84	79	76	75	45192
950	101	102	91	86	85	80	77	76	47703
1000	102	104	92	87	85	81	78	77	50214
1100	104	106	95	90	87	83	80	79	55235
1200	106	109	99	92	90	86	82	81	60256
1300	107	110	102	95	92	88	85	83	65278
1400	108	113	106	97	93	90	86	85	70299
1500	109	114	108	99	95	92	88	87	75320
1600	111	115	110	101	97	94	90	88	80342

490 AF SWSI

DISCHARGE AREA: 13.80 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
350	81	74	72	72	68	60	55	53	23464
400	86	78	75	75	72	64	58	56	26816
450	90	82	78	78	76	68	61	59	30168
500	95	85	80	80	79	72	64	62	33520
550	95	89	83	82	82	75	67	64	36872
600	97	92	85	84	84	78	70	66	40224
650	98	94	88	86	85	80	72	68	43576
700	100	96	88	86	85	80	73	70	46928
750	101	98	89	87	86	81	74	72	50279
800	101	99	90	87	86	81	76	74	53631
850	102	100	91	88	87	82	77	76	56983
900	103	102	92	89	87	82	79	78	60335
950	104	105	94	89	88	83	80	79	63687
1000	106	107	95	90	88	84	81	80	67039
1100	107	110	98	93	90	86	83	82	73743
1200	109	112	102	95	93	89	85	84	80447
1300	110	114	105	98	95	91	88	86	87151
1400	112	116	109	100	96	93	89	88	93855
1500	113	117	111	102	98	95	91	90	100559

542 AF SWSI

DISCHARGE AREA: 16.92 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
350	84	77	76	75	71	63	58	56	31843
400	89	81	78	78	75	67	61	59	36392
450	93	85	81	81	79	71	64	62	40940
500	98	88	83	83	82	75	67	65	45489
550	99	92	86	85	85	78	70	67	50038
600	100	95	88	87	87	81	73	69	54587
650	102	98	91	89	88	83	75	71	59136
700	103	99	92	89	88	83	76	73	63685
750	104	101	92	90	89	84	77	75	68234
800	104	102	93	90	89	84	79	77	72783
850	105	103	94	91	90	85	80	79	77332
900	106	105	95	92	90	85	82	81	81881
950	107	108	97	92	91	86	83	82	86430
1000	109	110	98	93	91	87	84	83	90979
1100	111	113	101	96	93	89	86	85	100077
1200	112	115	105	98	96	92	88	87	109175
1300	114	117	108	101	98	94	91	89	118273

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts calculated per AMCA Standard 301. Values shown are for inlet Lwi sound power levels for Installation Type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

Sound Power Levels

VCR Airfoil Fans

600 AF SWSI DISCHARGE AREA: 20.70 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
350	88	80	79	78	74	66	61	59	43079
400	93	85	81	81	78	70	64	62	49233
450	97	89	84	84	82	74	67	65	55387
500	102	91	86	86	85	78	70	68	61541
550	102	95	90	89	89	82	74	71	67695
600	104	99	91	90	90	84	76	72	73849
650	105	101	94	92	91	86	78	74	80003
700	107	102	95	92	91	86	79	76	86158
750	108	104	95	93	92	87	80	78	92312
800	108	106	96	93	92	87	82	80	98466
850	109	107	97	94	93	88	83	82	104620
900	110	109	98	95	93	88	85	84	110774
950	111	112	100	95	94	89	86	85	116928
1000	113	113	101	96	94	90	87	86	123082

660 AF SWSI DISCHARGE AREA: 25.05 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
300	85	80	78	77	72	64	60	58	49147
350	91	83	82	81	77	69	64	62	57338
400	96	88	84	84	81	73	67	65	65529
450	100	92	87	87	85	77	70	68	73720
500	105	94	89	89	88	81	73	71	81911
550	106	98	92	91	91	84	76	73	90102
600	107	102	94	93	93	87	79	75	98293
650	109	104	97	95	94	89	81	77	106485
700	110	105	98	95	94	89	82	79	114676
750	111	107	98	96	95	90	83	81	122867
800	111	109	99	96	95	90	85	83	131058
850	112	110	100	97	96	91	86	85	139249
900	113	112	101	98	96	91	88	87	147440
950	114	115	103	98	97	92	89	88	155631
1000	116	116	104	99	97	93	90	89	163822

730 AF SWSI DISCHARGE AREA: 30.64 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
250	81	78	78	76	69	61	59	56	55418
300	88	83	81	80	75	67	63	61	66501
350	94	86	85	84	80	72	67	65	77585
400	99	91	87	87	84	76	70	68	88669
450	104	95	90	90	88	80	73	71	99752
500	108	98	92	92	91	84	76	74	110836
550	109	101	95	94	94	87	79	76	121919
600	111	105	97	96	96	90	82	78	133003
650	112	107	100	98	97	92	84	80	144086
700	113	108	101	98	97	92	85	82	155170
750	114	111	101	99	98	93	86	84	166254
800	115	112	102	99	98	93	88	86	177337
850	116	113	103	100	99	94	89	88	188421
900	117	115	104	101	99	94	91	90	199504
950	117	118	106	101	100	95	92	91	210588
1000	119	120	107	102	100	96	93	92	221672

807 AF SWSI DISCHARGE AREA: 37.49 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
200	78	76	75	72	64	58	56	54	60007
250	85	81	81	79	72	64	62	59	75008
300	92	86	84	83	78	70	66	64	90010
350	97	90	88	87	83	75	70	68	105012
400	103	94	90	90	87	79	73	71	120013
450	107	98	93	93	91	83	76	74	135015
500	112	101	95	95	94	87	79	77	150016
550	112	104	99	98	98	91	83	80	165018
600	114	108	100	99	99	93	85	81	180020
650	115	110	103	101	100	95	87	83	195021
700	117	112	104	101	100	95	88	85	210023
750	118	114	104	102	101	96	89	87	225025
800	118	115	105	102	101	96	91	89	240026
850	119	116	106	103	102	97	92	91	255028
900	120	118	107	104	102	97	94	93	270030

890 AF SWSI DISCHARGE AREA: 45.54 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
200	81	79	78	75	67	61	59	57	80342
250	88	84	84	82	75	67	65	62	100427
300	95	89	87	86	81	73	69	67	120513
350	101	93	91	90	86	78	73	71	140598
400	106	97	93	93	90	82	76	74	160684
450	110	101	96	96	94	86	79	77	180769
500	115	104	98	98	97	90	82	80	200854
550	116	107	101	100	100	93	85	82	220940
600	117	111	103	102	102	96	88	84	241025
650	118	113	106	104	103	98	90	86	261111
700	120	115	107	104	103	98	91	88	281196
750	121	117	107	105	104	99	92	90	301282
800	121	118	108	105	104	99	94	92	321367
850	122	119	109	106	105	100	95	94	341452
900	123	121	110	107	105	100	97	96	361538

982 AF SWSI DISCHARGE AREA: 55.50 Sq. Ft.

RPM	OCTAVE BAND (CPS)								CFM WOV
	63	125	250	500	1000	2000	4000	8000	
150	76	75	74	69	61	57	55	53	81064
200	84	82	81	78	70	64	62	60	108086
250	91	87	87	85	78	70	68	65	135107
300	98	92	90	89	84	76	72	70	162129
350	104	96	94	93	89	81	76	74	189150
400	109	100	96	96	93	85	79	77	216172
450	113	104	99	99	97	89	82	80	243193
500	118	107	101	101	100	93	85	83	270215
550	119	111	105	104	104	97	89	86	297236
600	120	114	106	105	105	99	91	87	324258
650	122	116	109	107	106	101	93	89	351279
700	123	118	110	107	106	101	94	91	378301
750	124	120	110	108	107	102	95	93	405322
800	124	121	111	108	107	102	97	95	432344
850	125	122	112	109	108	103	98	97	459365

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Correction in DB for Point of Operation

VCR Airfoil Fans

182 SWSI to 245 SWSI

For 900 – 1599 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	-2	0	0	0	0	0	0	0
45	-1	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0
65	0	0	0	0	0	0	0	0
75	-1	0	+1	+1	+1	+1	+1	0
85	-1	+1	+2	+3	+2	+1	+1	+1
95	0	+1	+4	+5	+3	+3	+1	+1

182 SWSI to 245 SWSI

For 1600 – 4200 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	-2	+1	+1	0	-1	-1	0	0
45	-1	+1	0	0	-1	0	0	0
55	0	0	0	0	0	0	0	0
65	+1	0	+1	+1	+1	+1	0	0
75	+4	0	+2	+2	+2	+1	+1	0
85	+6	+1	+2	+2	+3	+3	+2	0
95	+8	+2	+3	+3	+4	+5	+4	+1

270 SWSI to 330 SWSI

For 700 – 1199 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+2	+1	0	0	-1	0	0	0
45	0	0	0	0	0	0	0	0
55	-1	+1	+1	+1	+1	0	0	0
65	-1	+2	+3	+1	+2	+1	0	0
75	-2	+2	+4	+2	+3	+1	0	0
85	-2	+3	+4	+3	+5	+2	+1	0
95	-2	+4	+5	+3	+6	+3	+2	+2

270 SWSI to 330 SWSI

For 1200 – 2600 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0
55	+1	0	+1	0	+1	+1	0	0
65	+1	-1	+2	0	+2	+2	0	-1
75	+2	-1	+2	0	+3	+3	0	-1
85	+4	-1	+3	+1	+5	+5	+2	0
95	+7	0	+4	+2	+8	+9	+5	+3

365 SWSI to 982 SWSI

For 500 – 849 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+13	+7	+7	+1	-2	-1	-1	-4
45	+7	+4	+4	0	-1	-1	0	-2
55	+1	+1	0	0	0	0	0	0
65	+2	+1	+1	0	0	0	0	-1
75	+3	+2	+2	+1	+1	-1	0	-2
85	+4	+4	+4	+2	+2	-1	0	-3
95	+4	+5	+5	+3	+4	0	+1	-1

365 SWSI to 982 SWSI

For 850 – 1800 RPM

% WOV	OCTAVE BANDS							
	1	2	3	4	5	6	7	8
35	+14	+2	+7	+5	+1	0	0	0
45	+3	0	+2	+1	0	0	0	0
55	+1	+1	+1	+2	+2	+2	+1	0
65	+3	+2	+3	+4	+4	+4	+3	0
75	+4	+3	+4	+6	+5	+6	+4	0
85	+5	+4	+6	+8	+9	+9	+7	+2
95	+6	+5	+8	+10	+12	+13	+9	+4