



INDUSTRIAL PROCESS AND
COMMERCIAL VENTILATION SYSTEMS

MIXED FLOW INDUCED FLOW EXHAUST FANS

MODEL QIFE, BELT DRIVEN



**AMCA 260
TESTED**



Overview

QIFE



Twin City Fan & Blower offers a specially modified version of the QSL fan designated as “QIFE” for induced flow laboratory fume hood exhaust applications, available in sizes 90 through 542.

The QIFE fan consists of a vertically mounted QSL unit with one of three different nozzles and specially designed windband to maximize dilution ratio (overall outlet volume/lab outlet volume) and plume height.

Mounted on a modular designed mixing plenum box or curb cap, the QIFE is capable of generating an induced flow to meet stringent roof exhaust requirements.

QIFE fans in a standard configuration utilize a heavy-duty curb cap. An optional modular mixing plenum box includes an integrated curb cap.

Benefits of Mixed Flow Fans

Twin City Fan & Blower Model QIFE Mixed Flow Induced-Flow Fans combine the benefits of axial flow and centrifugal flow fans with the added benefit of entraining ambient air for a pre-diluted plume. The QIFE has the advantages of an axial fan in its compact design and straight-through airflow combined with a centrifugal fan’s preferred acoustical characteristics and high pressure capabilities. QIFE fans offer superior air and sound performance and the AMCA certified rating seal for air and sound.

Sizes

12.25" to 66" wheel diameters

Performance

Airflow to 71,000 CFM

Static pressure to 8" w.g.



Twin City Fan & Blower certifies that the Model QIFE Mixed Flow Induced Flow Exhaust 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 311 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to Induced Flow Fan Air and Sound Performance tested in accordance with AMCA Standard 260. See Catalog 1081 for sound ratings.



Model QIFE is available with UL/cUL 705 listing, for electrical, File No. E158680.



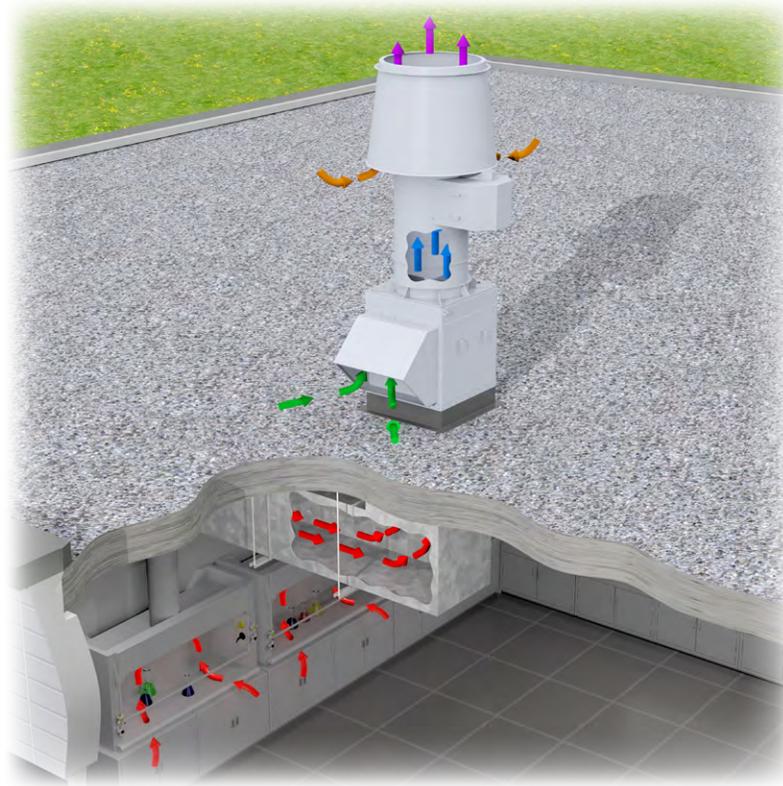
For complete product performance, drawings and available accessories, download our Fan Selector program at tcf.com.

Application

QIFE

The QIFE Induced Flow Mixed Flow Exhaust Fan is intended for use in exhausting laboratory fumes and hazardous chemicals in such a manner that diminishes the likelihood of concentrated, contaminant-laden air from being re-entrained into the building's intake or makeup air. This unit is commonly used in exhaust systems for universities, schools, hospitals, research facilities, laboratories and waste water treatment plants.

Induced flow exhaust fans dilute contaminated air at the outlet as well as increase the outlet volume of the fan. This accelerates the discharge air, increasing plume height without a tall stack.



Energy Recovery Systems

Twin City Fan & Blower energy recovery systems for fume exhaust applications combine our line of high efficiency fume exhaust fans with the latest in energy recovery technology. TCF can greatly reduce your energy consumption and carbon footprint while simultaneously increasing your bottom line. Our energy recovery plenums are available in endless configurations to match your specific needs.

TCF's energy recovery systems are designed to extract energy from the conditioned air exiting the laboratory and return the captured energy back into the make-up air unit before it re-enters the building. Energy recovery systems can also be used to pre-cool incoming supply air by removing the heat from the incoming airstream and sending it to the exhaust system.





Inner Cylinder tube is rigidly constructed to support the shaft and bearings. The removable discharge cone provides full access to the shaft, bearings, and fan sheave.

Drain coupling welded to the lowest point of the housing allows drainage of condensate from fan housing.

Nozzle Drain A drain tube routed to the outside of the housing allows for drainage of the nozzle tray, reducing the amount of precipitation entering the fan housing.

NOTE: While precipitation entry into the fan and duct system is greatly reduced while the fan is in operation, precipitation may enter in while the fan is not operating. Care must be taken by the system designer, building owner, and user to consider precipitation mitigation and moisture draining for the fume exhaust system.

Windbands are designed to maximize plume height and entrainment air. Constructed of heavy-gauge steel for strength and rigidity, the windband is mounted directly to the fan housing.

Straightening Vanes convert tangential velocity pressure into useful static pressure, reducing turbulence and increasing efficiency. Extensive testing of various shapes and locations has resulted in the most efficient aerodynamic design of the straightening vanes.

Bolted Access Door for inspection or cleaning of the wheel.

Weather Cover completely encloses the motor and V-belt drive from the elements. Provided with slots for ventilation, covers are easily removable for inspection and maintenance.

Heavy Duty Motor Mounting Platform pivots to offer easy and positive adjustment of belt tension.

Wheel/Impeller is designed with die-formed, continuously-welded single-thickness or airfoil blades for a stable air performance throughout the operating range.

Curb Cap attaches to the fan's flange for curb mounting. Standard accessory on QIFE without mixing plenum box.

Extended Lube Lines allow for ease of lubrication on all sizes.

Stainless Steel Hardware is standard for corrosion resistance.

Bearings are selected to exceed the L-10 life of 200,000 hours at the maximum operating speed.

Drives - Cast iron, adjustable or fixed pitch drives are selected for at least 200% of motor horsepower. Adjustable sheaves are provided on motors up to 10 HP, fixed sheaves for 15 HP and above.

V-belt drives with motors and drives mounted by Twin City Fan & Blower are set to the required RPM and test run as a complete assembly and rechecked for balance.

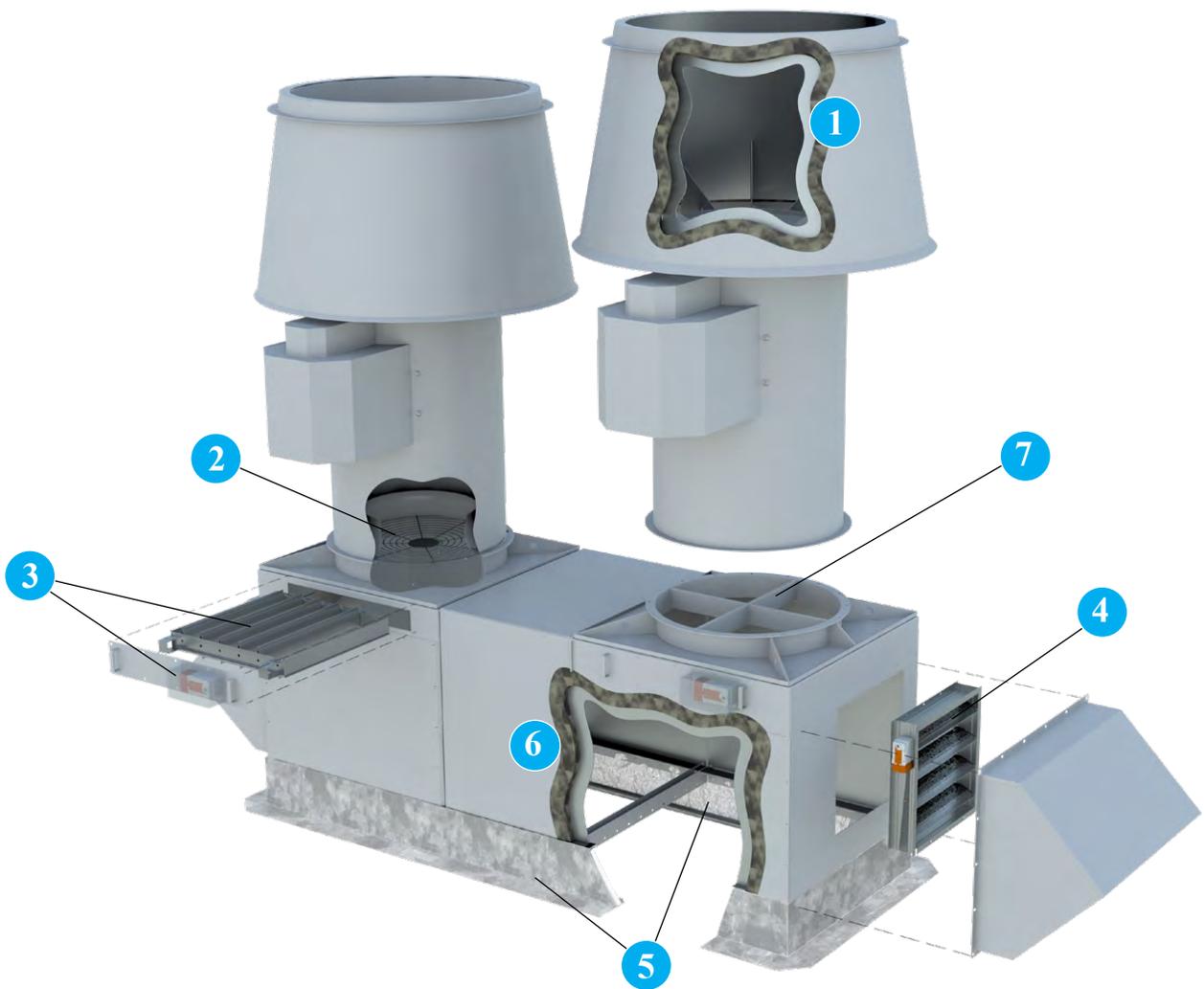
Sealed Belt Tube encloses the belts and drive components, protecting them from the airstream.

Shaft Seal limits the air entering the inner cylinder and avoid contact of airstream contaminants with the bearings and V-belt drive. Consists of a Teflon wear pad/plate and a rubber chekseal at the wheel end of the inner cylinder. Please note that a shaft seal does not make the inner cylinder gas tight.



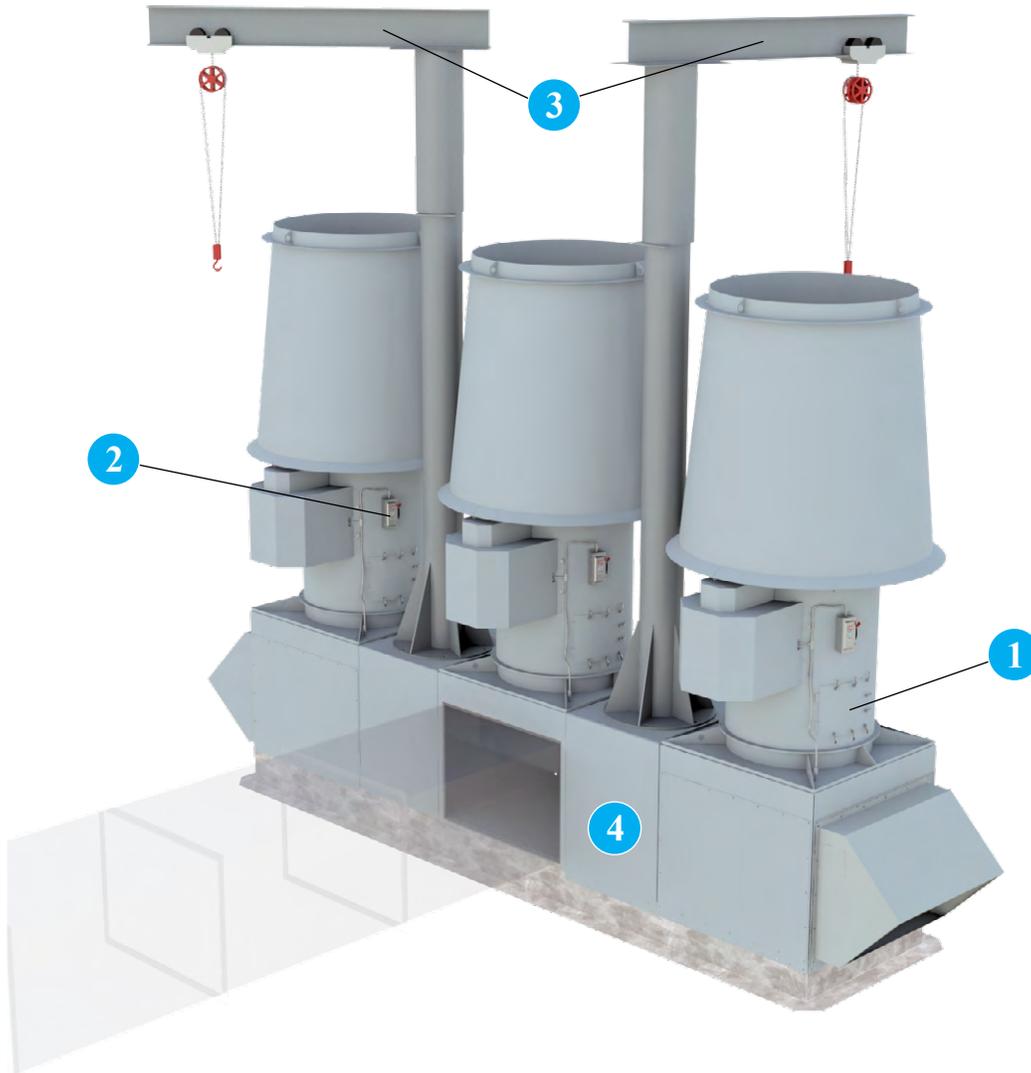
Unique applications require unique configurations. With the Twin City Fan & Blower Modular Mixing Box, multiple configurations are able to be easily created and retrofitted.





- 1 Acoustic Windband** Designed to reduce noise of the fan system by attenuating sound at the fan outlet.
- 2 Inlet Safety Screens** can be provided for installation in the fan inlet.
- 3 Isolation Dampers** are typically used on multi-fan systems to isolate individual fans. Isolation dampers are available with 2-position, spring-return controls and various materials of construction and coating options.
- 4 Bypass Damper** are used to maintain outlet velocities by allowing a constant volume at the fan when exhaust air is reduced. Bypass dampers are available with either a manual, locking quadrant (handle) or with electrical controls and various materials of construction and coating options.

- 5 Insulated Roof Curb** Standard roof curbs are 12" high and are constructed of heavy duty galvanized steel and include 1½" thick insulation. Contact factory for other roof curb options. Note: 125 mph windload ratings require a Twin City Fan & Blower supplied roof curb. Parallel backdraft dampers are available for mounting in roof curbs.
- 6 Mixing Plenum Box w/ Weatherhood; w/ Insulation & Stainless Steel Liner Bottom Intake** The mixing plenum box features modular construction allowing for multiple configurations and effortless retrofitting. Bottom intake is standard, side intake option available upon request.
- 7 Vortex Breaker** Installed in the mixing plenum box at the fan inlet, the vortex breaker minimizes air 'swirl'. Recommended for multi-fan configurations and where mixing box intakes are not directly across from the inlet of the fan.



1 Quick Open Access Doors are designed for quick wheel inspection and maintenance. Access doors are specified where examination and cleaning of the fan interior is frequently required.

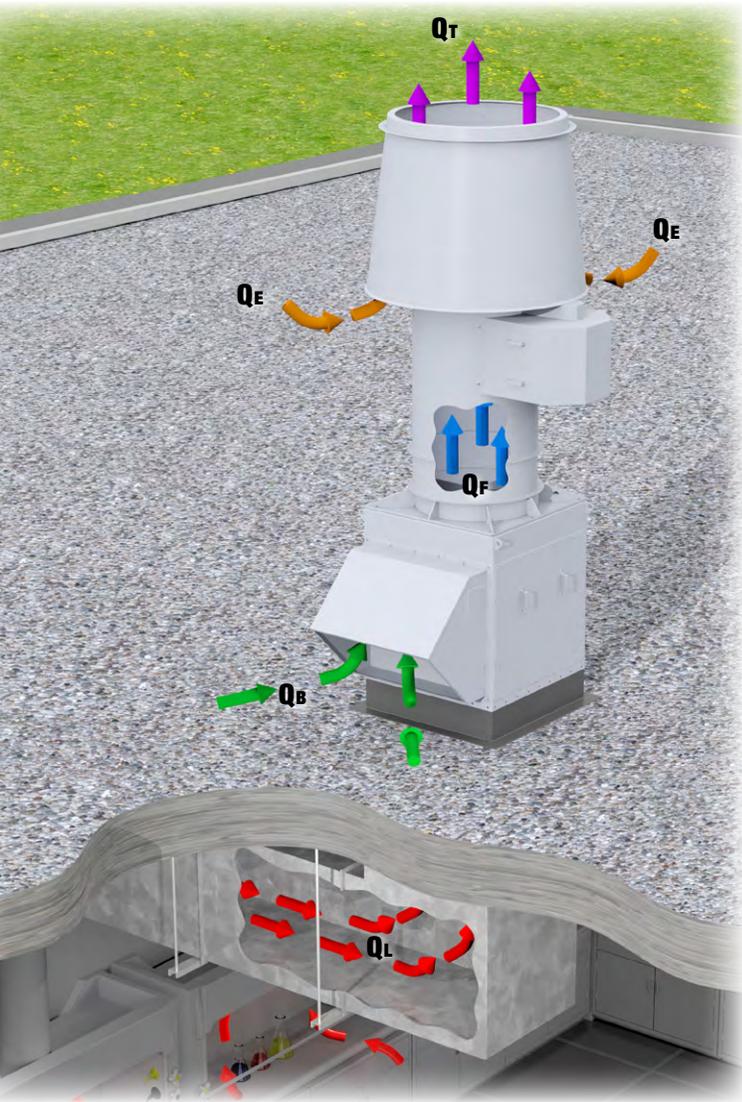
2 NEMA 3R Disconnect Switch, rain proof, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired. Also available with a NEMA 4 or 7/9 switch.

3 Jib Crane Heavy duty jib crane is designed to handle the weight of the heaviest individual component. The mount is connected to the specially reinforced mixing box spacer mixing box structure. Single and double mixing boxes receive one (1) jib crane. 3x1 and 4x1 configurations receive two (2) jib cranes.

4 Mixing Plenum Box w/ Weatherhood; Side Intake The mixing plenum box features modular construction allowing for multiple configurations and effortless retrofitting. Bottom intake is standard, side intake option available upon request.

OTHER ACCESSORIES:

- Mixing Box Blank-Off Panel
- Piezometer Ring and Pressure Transducer
- Spark Resistant Construction: Type C
- Stainless Steel Nameplate
- Backdraft damper



- QB = Bypass Flow**
- QE = Entrained Flow**
- QF = Fan Flow**
- QL = Laboratory Flow (Contaminated Air)**
- QT = Total Flow**

$$Q_T = Q_E + Q_F$$

$$Q_F = Q_B + Q_L$$

$$\therefore Q_T = Q_E + Q_B + Q_L$$

$$\text{Dilution Ratio} = \text{D.R.} = \frac{Q_T}{Q_L}$$

$$\text{Entrainment Ratio} = \text{E.R.} = \frac{Q_T}{Q_F}$$

Bypass Air

Ambient air that is drawing through the bypass air plenum and mixed with the lab exhaust to increase dilution and plume rise. Bypass air is primarily used in variable volume applications to maintain a constant discharge volume.

Dilution Ratio

The ratio of the total fan outlet volume to the lab exhaust volume. (Total Volume/Lab Exhaust Volume).

Entrainment Air

Air that is entrained (induced flow) through the windband and mixed with the lab exhaust to increase the dilution ratio and plume rise.

Fume Exhaust

Caustic or noxious air that is being exhausted from laboratory or fume hood.

Nozzle

Device located internal to the fan housing, providing fume exhaust air to accelerate upon entrance to the windband. Three nozzles per fan size are available on the QIFE; low-velocity, medium-velocity and high-velocity. Each nozzle provides different flow characteristics. Nozzle should be selected based on the application requirements.

Plume Rise

The height of the fume exhaust and entrainment air above the discharge of the windband.

Plume Height

Overall height of the discharge plume rise, plus the added height of the exhaust system above the roof-deck level. (See diagram on page 9).

Total Airflow

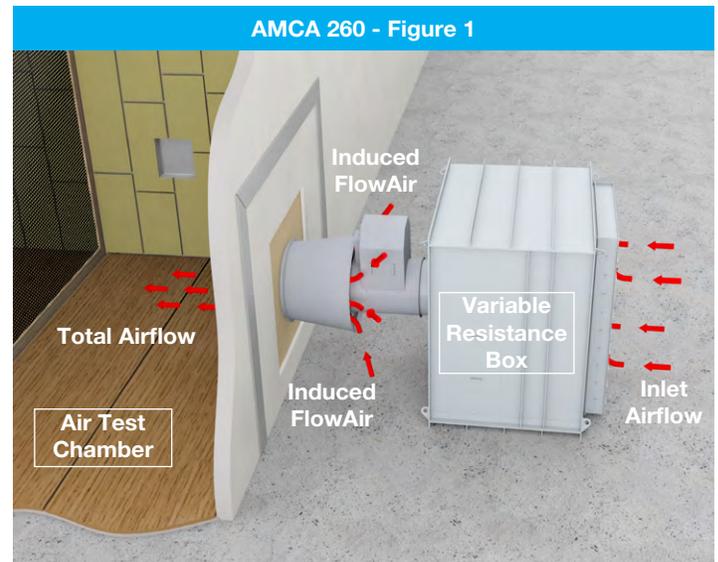
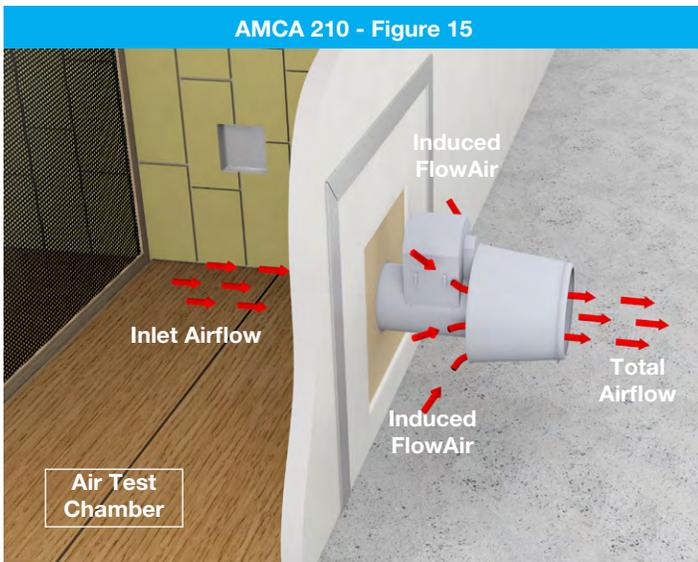
The total airflow exiting the windband, including fume exhaust, bypass air, and entrainment air.

Windband

Device used to direct the fume exhaust as it leaves the housing of the exhaust fan and entrain dilution air. Also available with an acoustically attenuated option.

The following illustrations describe the procedure for determining the total laboratory exhaust fan discharge flow. The total discharge flow is the sum of inlet airflow and entrained airflow. The key requirement to AMCA 260 is the variable resistance box. This box allows the measurement of total discharge flow ($P_s = 0$ in. w.g. to simulate discharging the fan to atmosphere) at all points along its fan curve.

Without the variable resistance box, the entrained airflow can only be measured at the free air point of its fan curve. The entrained airflow obtained can be used to calculate an effective plume height. Therefore, AMCA 260 certification is necessary to ensure the laboratory exhaust fan specified is providing the plume rise and entrainment submitted.



PLUME HEIGHT CALCULATION

$$h_e = h_r + h_s^*$$

$$h_e = [3.0 \times (V \times d/U)] + h_s$$

- h_e = Effective plume height (ft)
- h_r = Plume rise (ft)
- h_s = Stack height (height from roof to outlet of windband) (ft)
- V = Windband exit velocity (ft/min)
- d = Windband outlet diameter (ft)
- U = Crosswind speed (ft/min)

* Equation taken from ASHRAE Laboratory Design Guide, Equation 9-2.
Note: Plume height calculations are typically calculated with a 10 mph (880 ft/min) crosswind.

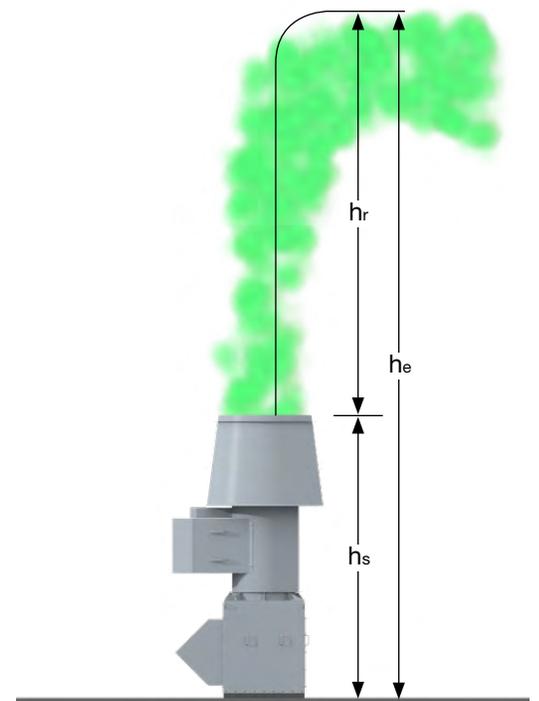


Table 1. Maximum RPM, Wheel Weights, and WR^2 (moment of inertia in $lb-ft^2$)

FAN SIZE	CLASS I			CLASS II		
	MAX. RPM	WEIGHT LB.	WR^2 LB-FT ²	MAX. RPM	WEIGHT LB.	WR^2 LB-FT ²
90	4225	9	1.05	-	-	-
122	3450	12	2.15	-	-	-
135	3137	15	3.50	-	-	-
150	2721	24	5.5	3558	28	7.1
165	2483	32	8.0	3247	36	10.3
182	2232	38	12	2918	44	15
200	2027	48	20	2650	52	23
222	1839	57	29	2405	62	34
245	1655	69	45	2165	75	52
270	1505	82	66	1968	90	76
300	1360	140	133	1779	150	145
330	1234	167	197	1613	179	215
365	1116	233	320	1459	247	347
402	1013	324	588	1325	324	588
445	915	393	883	1197	393	883
490	828	478	1321	1082	478	1321
542	752	591	1934	984	591	1934

Table 2. Bare Fan and Windband Weights (lb)

FAN SIZE	COMPLETE FAN WITH WINDBAND		WINDBAND ONLY
	CLASS I	CLASS II	
90	327	-	146
122	445	-	214
135	523	-	257
150	553	560	220
165	657	665	262
182	757	769	321
200	921	931	386
222	972	984	355
245	1134	1144	434
270	1313	1329	521
300	1703	1733	633
330	2075	2094	765
365	2208	2237	634
402	2721	2746	763
445	3208	3240	929
490	3926	3942	1128
542	4866	4899	1358

NOTE:
Weights do not include motor, mixing plenum box or roof curb. See Table 5 for mixing plenum box weights. Includes bare fan and windband.

Table 3. Temperature and Altitude Density Ratios

AIR TEMP °F	ALTITUDE IN FEET ABOVE SEA LEVEL											
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000
	BAROMETRIC PRESSURE IN INCHES OF MERCURY											
	29.92	28.86	27.82	26.82	25.84	24.90	23.98	23.09	22.22	21.39	20.58	16.89
-50	1.293	1.247	1.201	1.159	1.116	1.076	1.036	0.997	0.960	0.924	0.889	0.729
0	1.152	1.111	1.071	1.032	0.995	0.959	0.923	0.889	0.856	0.824	0.792	0.650
70	1.000	0.964	0.930	0.896	0.864	0.832	0.801	0.772	0.743	0.714	0.688	0.564
100	0.946	0.912	0.880	0.848	0.818	0.787	0.758	0.730	0.703	0.676	0.651	0.534
150	0.869	0.838	0.808	0.770	0.751	0.723	0.696	0.671	0.646	0.620	0.598	0.490
200	0.803	0.774	0.747	0.720	0.694	0.668	0.643	0.620	0.596	0.573	0.552	0.453

Table 4. Bearing Specifications

FAN SIZE	CLASS I		CLASS II	
	SHAFT DIA. (IN.)	BEARING	SHAFT DIA. (IN.)	BEARING
90	0.750	SDB	-	-
122	0.750	SDB	-	-
135	0.750	SDB	-	-
150	1.000	SDB	1.187	SDB
165	1.000	SDB	1.437	SDB
182	1.000	SDB	1.437	HDB
200	1.187	SDB	1.437	HDB
222	1.187	SDB	1.437	HDB
245	1.437	SDB	1.687	HDB
270	1.437	SDB	1.687	RB
300	1.437	HDB	1.937	RB
330	1.687	HDB	2.187	RB
365	1.937	HDB	2.187	RB
402	1.937	RB	2.187	RB
445	1.937	RB	2.437	RB
490	2.187	RB	2.437	RB
542	2.437	RB	2.687	RB

NOTES:
1. BEARINGS CODES:
SDB — Standard-Duty Ball such as Dodge SCAH or SKF SY Series
HDB — Heavy-Duty Ball such as Dodge SCMAH or SKF SYM Series
RB — Roller Bearing such as Dodge S2000 or SKF SYR Series
2. Standard bearings are selected to exceed L-10 life of 200,000 hours at the maximum operating speed.

Table 5. Mixing Plenum Box Weights (lb)

FAN SIZE	SINGLE	DOUBLE	TRIPLE	QUAD
90	269	554	852	1148
122	342	706	1086	1464
135	337	708	1095	1484
150	439	906	1392	1880
165	462	964	1488	2012
182	506	1062	1644	2228
200	519	1110	1725	2340
222	738	1590	2478	3368
245	926	1974	3066	4160
270	952	2070	3234	4400
300	1135	2450	3822	5192
330	1320	2824	4392	5960
365	1449	3114	4851	6588
402	1588	3422	5337	7248
445	1814	3892	6057	8224
490	1999	4310	6720	9128
542	2208	4776	7452	10132

NOTES:
1. Weights do not include roof curb or dampers.
2. Weights are for non-insulated, bottom-intake mixing boxes without jib crane mounting.

90 QIFE

Wheel Type: Mixed Flow Sngl. Thk.
Wheel Dia.: 12.25"

Max RPM = 4225
Tip Speed FPM = 2.40 x RPM

Max Motor Frame: 182T
Windband Outlet Area: 1.80 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 0.570 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
600	1053	1457	0.10	984	1889	<u>0.20</u>	993																
700	1228	1554	0.12	1165	1947	<u>0.23</u>	1147																
800	1404	1668	0.15	1363	2020	0.26	1310	2349	0.39	1316													
900	1579	1790	0.18	1551	2106	0.30	1479	2414	0.44	1474	2698	0.58	1481										
1000	1754	1917	0.22	1730	2208	0.35	1666	2490	0.49	1637	2760	0.65	1638	3013	0.81	1647							
1100	1930	2049	0.27	1906	2322	0.40	1866	2577	0.55	1807	2833	0.72	1802	3074	0.89	1803	3304	1.07	1813				
1200	2105	2185	0.32	2081	2442	0.46	2059	2678	0.62	1993	2913	0.79	1966	3145	0.98	1966	3364	1.16	1967	3778	1.57	1985	
1300	2281	2324	0.38	2257	2566	0.53	2244	2789	0.70	2191	3004	0.88	2139	3222	1.07	2128	3434	1.27	2129	3832	1.68	2139	
1400	2456	2466	0.45	2433	2693	0.61	2422	2906	0.79	2388	3107	0.97	2328	3309	1.17	2298	3510	1.38	2292	3894	1.81	2295	
1500	2632	2611	0.53	2611	2824	0.70	2598	3028	0.88	2579	3219	1.08	2527	3405	1.28	2477	3594	1.50	2459	3964	1.95	2456	
1600	2807	2757	0.62	2787	2957	0.80	2772	3152	0.99	2761	3336	1.19	2725	3512	1.41	2672	3687	1.63	2635	4040	2.09	2619	
1700	2982	2905	0.72	2964	3094	0.91	2949	3279	1.11	2940	3457	1.32	2918	3625	1.54	2871	3790	1.77	2823	4122	2.25	2784	
1800	3158	3054	0.83	3141	3233	1.03	3124	3409	1.23	3116	3580	1.45	3102	3743	1.68	3068	3900	1.92	3021	4212	2.42	2957	
1900	3333	3204	0.95	3317	3374	1.16	3301	3542	1.37	3292	3706	1.60	3283	3864	1.84	3260	4015	2.09	3202				
2000	3509	3355	1.09	3493	3517	1.30	3478	3677	1.53	3467	3834	1.76	3460	3988	2.01	3447	4134	2.26	3416				
2100	3684	3507	1.24	3670	3661	1.46	3654	3814	1.69	3643	3965	1.94	3636	4113	2.19	3627							

Medium Velocity Nozzle

Nozzle Outlet Area: 0.440 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
600	1364	1502	0.11	1076	1933	<u>0.21</u>	1086																
700	1591	1608	0.14	1245	1995	0.25	1253	2348	0.37	1273													
800	1818	1725	0.17	1406	2078	0.29	1433	2405	0.42	1437	2706	0.57	1455										
900	2045	1854	0.21	1580	2176	0.34	1611	2476	0.48	1609	2763	0.63	1621	3029	0.80	1637							
1000	2273	1991	0.26	1766	2285	0.39	1777	2564	0.54	1792	2828	0.70	1788	3086	0.88	1803	3326	1.07	1817				
1100	2500	2134	0.31	1956	2402	0.46	1937	2663	0.62	1970	2910	0.78	1967	3149	0.97	1968	3383	1.16	1982	3809	1.58	2002	
1200	2727	2280	0.38	2143	2526	0.53	2104	2771	0.70	2137	3004	0.88	2151	3228	1.07	2146	3446	1.27	2148	3866	1.70	2173	
1300	2955	2428	0.45	2326	2658	0.61	2283	2885	0.79	2296	3106	0.98	2326	3318	1.18	2329	3524	1.38	2324	3924	1.83	2338	
1400	3182	2579	0.54	2507	2796	0.71	2471	3006	0.89	2459	3215	1.09	2489	3417	1.30	2508	3612	1.51	2507	3989	1.97	2504	
1500	3409	2731	0.64	2686	2937	0.82	2660	3133	1.01	2630	3330	1.21	2649	3523	1.43	2678	3709	1.66	2689				
1600	3636	2885	0.75	2865	3082	0.94	2850	3266	1.13	2811	3451	1.35	2812	3634	1.58	2839	3813	1.81	2863				
1700	3864	3041	0.87	3045	3229	1.07	3037	3404	1.28	2999	3577	1.50	2981	3750	1.73	2998	3921	1.98	3025				
1800	4091	3197	1.01	3223	3377	1.22	3220	3545	1.44	3188	3708	1.66	3159	3872	1.90	3163							
1900	4318	3355	1.16	3401	3527	1.39	3402	3688	1.61	3377	3843	1.85	3343	3998	2.09	3332							
2000	4545	3513	1.33	3579	3678	1.57	3582	3834	1.80	3566	3982	2.05	3532										
2100	4773	3672	1.52	3757	3830	1.76	3761	3981	2.01	3752													

High Velocity Nozzle

Nozzle Outlet Area: 0.320 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
600	1875	1601	0.13	1169	2027	<u>0.24</u>	1160																
700	2188	1730	0.17	1373	2111	0.28	1356	2456	0.42	1352													
800	2500	1872	0.21	1581	2209	0.34	1554	2534	0.48	1546	2830	0.63	1545	3093	0.80	1528							
900	2813	2017	0.27	1789	2327	0.40	1757	2625	0.55	1745	2907	0.71	1740	3168	0.89	1738	3406	1.07	1726				
1000	3125	2168	0.33	1998	2461	0.48	1963	2727	0.64	1943	2994	0.81	1936	3245	0.99	1933	3481	1.19	1932				
1100	3438	2325	0.41	2205	2602	0.57	2170	2848	0.74	2149	3091	0.92	2135	3332	1.11	2131	3558	1.31	2126	3979	1.74	2122	
1200	3750	2489	0.50	2412	2746	0.67	2378	2980	0.85	2353	3201	1.04	2336	3426	1.24	2328	3645	1.45	2323				
1300	4063	2657	0.61	2619	2892	0.79	2585	3120	0.98	2560	3327	1.18	2542	3531	1.38	2528	3738	1.60	2520				
1400	4375	2828	0.73	2826	3044	0.92	2795	3262	1.12	2766	3461	1.33	2747	3651	1.55	2733	3842	1.78	2722				
1500	4688	3001	0.87	3032	3200	1.07	3003	3407	1.28	2975	3601	1.50	2954	3781	1.73	2937	3957	1.97	2923				
1600	5000	3176	1.03	3238	3360	1.24	3210	3554	1.46	3183	3743	1.69	3160	3917	1.93	3142							
1700	5313	3352	1.21	3443	3525	1.43	3418	3705	1.66	3392	3887	1.90	3368										
1800	5625	3530	1.41	3649	3692	1.64	3624	3860	1.88	3600													
1900	5938	3708	1.64	3854	3862	1.87	3831																
2000	6250	3888	1.88	4059																			

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

122 QIFE Wheel Type: Mixed Flow Sngl. Thk. Wheel Dia.: 15.00"

Max RPM = 3450
Tip Speed FPM = 2.93 x RPM

Max Motor Frame: 184T
Windband Outlet Area: 2.70 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 0.855 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
1000	1170	1240	0.17	1650	<u>1573</u>	0.32	<u>1642</u>															
1175	1374	1346	0.22	1994	<u>1639</u>	0.38	<u>1921</u>	<u>1910</u>	0.57	<u>1931</u>												
1350	1579	1462	0.27	2326	1720	0.45	2218	<u>1972</u>	0.66	<u>2210</u>	<u>2204</u>	0.88	<u>2222</u>									
1525	1784	1584	0.34	2640	1819	0.54	2551	<u>2045</u>	0.75	<u>2497</u>	<u>2264</u>	0.99	<u>2497</u>	<u>2469</u>	1.24	<u>2509</u>	2663	1.50	2522			
1700	1988	1710	0.42	2946	1929	0.63	2897	2131	0.87	2801	2335	1.11	2784	<u>2529</u>	1.38	<u>2782</u>	<u>2714</u>	1.65	<u>2794</u>			
1875	2193	1841	0.52	3254	2045	0.75	3228	2232	0.99	3138	2416	1.26	3080	<u>2599</u>	1.53	<u>3067</u>	<u>2775</u>	1.82	<u>3067</u>	3107	2.44	3092
2050	2398	1976	0.64	3564	2165	0.88	3544	2341	1.14	3483	2509	1.41	3397	<u>2678</u>	1.70	<u>3361</u>	<u>2846</u>	2.01	<u>3356</u>	<u>3163</u>	<u>2.65</u>	<u>3361</u>
2225	2602	2113	0.77	3873	2289	1.03	3854	2457	1.30	3822	2614	1.59	3743	<u>2768</u>	1.90	<u>3673</u>	<u>2924</u>	2.22	<u>3647</u>	<u>3228</u>	<u>2.89</u>	<u>3641</u>
2400	2807	2252	0.93	4181	2416	1.20	4161	2575	1.48	4142	2725	1.79	4088	<u>2869</u>	2.11	<u>4010</u>	<u>3012</u>	2.44	<u>3956</u>	3300	3.14	3928
2575	3012	2393	1.10	4490	2546	1.39	4468	2696	1.69	4453	2841	2.01	4424	<u>2977</u>	2.34	<u>4357</u>	<u>3110</u>	2.69	<u>4285</u>	3379	3.42	4221
2750	3216	2536	1.30	4801	2679	1.60	4776	2821	1.92	4763	2959	2.25	4745	<u>3090</u>	2.60	<u>4699</u>	<u>3216</u>	2.96	<u>4630</u>			
2925	3421	2679	1.53	5109	2814	1.84	5084	2948	2.17	5070	3080	2.52	5058	<u>3207</u>	2.89	<u>5032</u>	<u>3328</u>	3.26	<u>4978</u>			
3100	3626	2824	1.78	5419	2952	2.11	5396	3078	2.46	5377	3203	2.82	5366	<u>3325</u>	3.20	<u>5349</u>	<u>3443</u>	3.59	<u>5315</u>			
3275	3830	2969	2.06	5727	3090	2.41	5704	3210	2.77	5685	3329	3.14	5674	<u>3447</u>	3.54	<u>5664</u>						
3450	4035	3115	2.37	6035	3230	2.73	6013	3344	3.11	5994												
3625	4240	3261	2.71	6343	3371	3.09	6322															

Medium Velocity Nozzle

Nozzle Outlet Area: 0.660 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
1000	1515	1283	0.19	1787	<u>1611</u>	0.35	<u>1794</u>															
1175	1780	1393	0.24	2068	1685	0.42	2103	<u>1956</u>	0.62	<u>2113</u>	<u>2202</u>	0.84	<u>2137</u>									
1350	2045	1514	0.31	2366	1778	0.50	2421	<u>2022</u>	0.72	<u>2411</u>	<u>2257</u>	0.95	<u>2432</u>	<u>2474</u>	1.21	<u>2457</u>						
1525	2311	1646	0.40	2696	1882	0.60	2705	<u>2107</u>	0.83	<u>2735</u>	<u>2320</u>	1.07	<u>2723</u>	<u>2528</u>	1.34	<u>2743</u>	<u>2724</u>	1.63	<u>2767</u>			
1700	2576	1783	0.50	3029	1995	0.72	2985	2204	0.96	3043	2402	1.22	3047	<u>2592</u>	1.50	<u>3037</u>	<u>2779</u>	1.79	<u>3053</u>	3126	2.43	3089
1875	2841	1923	0.62	3353	2117	0.85	3286	2309	1.11	3324	2495	1.39	3364	<u>2672</u>	1.68	<u>3355</u>	<u>2845</u>	1.98	<u>3350</u>	<u>3181</u>	<u>2.65</u>	<u>3384</u>
2050	3106	2066	0.77	3672	2246	1.01	3609	2422	1.28	3604	2596	1.58	3656	<u>2764</u>	1.89	<u>3679</u>	<u>2926</u>	2.20	<u>3672</u>	<u>3239</u>	<u>2.88</u>	<u>3668</u>
2225	3371	2210	0.93	3985	2380	1.20	3942	2542	1.48	3898	2704	1.79	3933	<u>2863</u>	2.12	<u>3979</u>	<u>3016</u>	2.45	<u>3991</u>	<u>3311</u>	<u>3.15</u>	<u>3973</u>
2400	3636	2357	1.12	4299	2518	1.41	4275	2668	1.70	4213	2819	2.02	4216	<u>2968</u>	2.36	<u>4258</u>	<u>3114</u>	2.72	<u>4295</u>	3394	3.45	4298
2575	3902	2505	1.34	4611	2658	1.65	4602	2800	1.96	4543	2939	2.29	4511	<u>3080</u>	2.64	<u>4538</u>	<u>3218</u>	3.01	<u>4579</u>			
2750	4167	2655	1.59	4924	2799	1.91	4921	2935	2.24	4877	3065	2.58	4825	<u>3197</u>	2.95	<u>4825</u>	<u>3328</u>	3.33	<u>4857</u>			
2925	4432	2805	1.87	5235	2943	2.21	5239	3072	2.56	5207	3196	2.92	5153	<u>3319</u>	3.29	<u>5125</u>	<u>3442</u>	3.68	<u>5138</u>			
3100	4697	2957	2.18	5548	3087	2.54	5553	3212	2.91	5536	3330	3.28	5486	<u>3446</u>	3.67	<u>5443</u>						
3275	4962	3109	2.53	5859	3233	2.91	5866	3353	3.30	5858												
3450	5227	3262	2.92	6171	3381	3.31	6181															
3625	5492	3415	3.34	6481																		

High Velocity Nozzle

Nozzle Outlet Area: 0.480 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
1000	2083	1377	0.23	1959	<u>1700</u>	0.40	<u>1937</u>	<u>1986</u>	0.59	<u>1927</u>												
1175	2448	1509	0.31	2318	1790	0.49	2282	<u>2059</u>	0.70	<u>2274</u>	<u>2301</u>	0.93	<u>2264</u>									
1350	2813	1647	0.40	2682	1901	0.60	2637	2144	0.83	2618	<u>2374</u>	1.07	<u>2610</u>	<u>2588</u>	1.34	<u>2609</u>	<u>2782</u>	1.61	<u>2587</u>			
1525	3177	1792	0.52	3049	2029	0.74	2997	2243	0.98	2967	2458	1.24	2955	<u>2661</u>	1.51	<u>2948</u>	<u>2853</u>	1.81	<u>2946</u>	3198	2.43	2911
1700	3542	1944	0.66	3413	2164	0.90	3358	2361	1.16	3325	2553	1.43	3303	<u>2746</u>	1.72	<u>3296</u>	<u>2929</u>	2.03	<u>3290</u>	<u>3270</u>	<u>2.69</u>	<u>3282</u>
1875	3906	2102	0.83	3776	2302	1.09	3722	2491	1.37	3686	2665	1.66	3660	<u>2840</u>	1.96	<u>3643</u>	<u>3015</u>	2.28	<u>3637</u>	<u>3342</u>	<u>2.97</u>	<u>3623</u>
2050	4271	2263	1.04	4135	2445	1.31	4090	2626	1.61	4048	2790	1.92	4019	<u>2948</u>	2.24	<u>3996</u>	<u>3109</u>	2.57	<u>3984</u>	3424	3.29	3971
2225	4635	2428	1.27	4497	2592	1.56	4453	2763	1.88	4411	2922	2.21	4380	<u>3070</u>	2.55	<u>4355</u>	<u>3216</u>	2.90	<u>4336</u>			
2400	5000	2594	1.55	4856	2745	1.86	4817	2903	2.19	4776	3058	2.54	4743	<u>3200</u>	2.90	<u>4716</u>	<u>3336</u>	3.27	<u>4694</u>			
2575	5365	2763	1.87	5217	2902	2.19	5179	3048	2.54	5143	3195	2.91	5106	<u>3334</u>	3.29	<u>5077</u>						
2750	5729	2932	2.23	5576	3063	2.57	5543	3196	2.93	5506	3335	3.32	5471									
2925	6094	3103	2.64	5936	3225	3.00	5903	3349	3.37	5870												
3100	6458	3275	3.09	6295	3389	3.47	6263															
3275	6823	3447	3.60	6653																		

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

135 QIFE Wheel Type: Mixed Flow Sngl. Thk.
Wheel Dia.: 16.50"

Max RPM = 3137
Tip Speed FPM = 3.23 x RPM

Max Motor Frame: 184T
Windband Outlet Area: 3.27 ft²

Low Velocity Nozzle
Nozzle Outlet Area: 1.03 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	1209	1145	0.22	2075	1440	<u>0.40</u>	<u>2048</u>																
1425	1378	1225	0.26	2418	1491	<u>0.46</u>	<u>2330</u>	1737	<u>0.69</u>	<u>2342</u>													
1600	1547	1312	0.32	2753	1551	0.53	2625	1783	<u>0.78</u>	<u>2620</u>	1996	1.04	2638										
1775	1717	1403	0.38	3070	1622	0.61	2947	1836	<u>0.87</u>	<u>2905</u>	2039	1.15	2911	2229	1.44	2931							
1950	1886	1496	0.46	3377	1702	0.71	3294	1896	0.98	3198	<u>2089</u>	1.27	<u>3192</u>	2270	1.58	<u>3196</u>	2443	1.90	<u>3220</u>				
2125	2055	1593	0.55	3685	1787	0.81	3636	1965	1.09	3513	2145	1.40	3479	<u>2319</u>	1.72	<u>3478</u>	2484	2.06	<u>3485</u>	2795	2.79	3523	
2300	2224	1692	0.65	3992	1875	0.93	3964	2043	1.23	3857	2208	1.55	3780	<u>2373</u>	1.88	<u>3764</u>	2532	2.24	<u>3764</u>	<u>2831</u>	<u>2.98</u>	<u>3787</u>	
2475	2394	1793	0.77	4301	1965	1.06	4277	2126	1.37	4205	2279	1.71	4102	2433	2.06	4059	<u>2585</u>	<u>2.42</u>	<u>4049</u>	<u>2874</u>	<u>3.20</u>	<u>4059</u>	
2650	2563	1896	0.90	4610	2058	1.20	4587	2212	1.53	4543	2356	1.88	4441	2499	2.25	4366	2643	2.63	4339	<u>2922</u>	<u>3.43</u>	<u>4336</u>	
2825	2732	2000	1.05	4919	2153	1.37	4895	2300	1.71	4867	2439	2.07	4791	2573	2.45	4697	2707	2.85	4643	<u>2975</u>	<u>3.68</u>	<u>4624</u>	
3000	2901	2106	1.22	5230	2250	1.55	5202	2391	1.91	5185	2524	2.28	5130	2652	2.68	5042	2777	3.09	4960	3032	3.95	4913	
3175	3071	2212	1.40	5538	2348	1.75	5508	2483	2.12	5495	2612	2.51	5462	2735	2.92	5390	2854	3.35	5302	3093	4.24	5208	
3350	3240	2319	1.61	5847	2448	1.97	5815	2577	2.36	5803	2701	2.76	5780	2820	3.18	5728	2935	3.62	5651				
3525	3409	2427	1.83	6156	2550	2.21	6125	2672	2.61	6107	2792	3.03	6093	2908	3.47	6061	3019	3.92	5998				
3700	3578	2535	2.08	6464	2653	2.47	6435	2770	2.89	6417	2885	3.32	6404	2997	3.77	6382	3105	4.24	6336				
3875	3748	2644	2.35	6772	2757	2.76	6745	2868	3.19	6722	2979	3.64	6711	3087	4.10	6695							

Medium Velocity Nozzle
Nozzle Outlet Area: 0.798 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	1566	1184	0.24	2226	1475	<u>0.44</u>	<u>2236</u>	1738	0.67	2273													
1425	1786	1268	0.30	2507	1533	0.51	2551	1779	<u>0.75</u>	<u>2563</u>	2003	1.02	2596										
1600	2005	1358	0.36	2802	1602	0.59	2870	<u>1827</u>	<u>0.85</u>	<u>2856</u>	<u>2044</u>	<u>1.13</u>	<u>2890</u>										
1775	2224	1456	0.44	3129	1678	0.69	3160	1888	0.96	3177	<u>2088</u>	1.25	3174	2282	1.57	3208	2460	1.90	3230				
1950	2444	1557	0.54	3461	1761	0.80	3440	1958	1.08	3498	<u>2144</u>	1.38	<u>3483</u>	<u>2325</u>	1.71	<u>3492</u>	2501	2.07	<u>3523</u>				
2125	2663	1661	0.65	3791	1848	0.92	3724	2034	1.22	3795	2210	1.54	3813	<u>2378</u>	1.88	<u>3792</u>	2544	2.24	<u>3807</u>	2858	3.02	3856	
2300	2882	1767	0.78	4115	1941	1.06	4031	2114	1.38	4072	2281	1.72	4122	2441	2.07	4120	<u>2596</u>	<u>2.44</u>	<u>4106</u>	<u>2899</u>	<u>3.24</u>	<u>4144</u>	
2475	3102	1875	0.92	4435	2039	1.22	4358	2199	1.55	4352	2358	1.91	4416	2510	2.28	4440	2658	2.66	4433	<u>2943</u>	<u>3.48</u>	<u>4429</u>	
2650	3321	1983	1.09	4748	2139	1.40	4689	2289	1.74	4645	2438	2.11	4691	2584	2.50	4743	2725	2.90	4754	<u>2996</u>	<u>3.74</u>	<u>4732</u>	
2825	3540	2093	1.27	5062	2242	1.61	5023	2382	1.96	4952	2523	2.34	4972	2662	2.75	5027	2797	3.16	5063	3057	4.03	5056	
3000	3759	2204	1.48	5375	2346	1.83	5352	2479	2.20	5276	2611	2.59	5259	2744	3.01	5306	2874	3.45	5358	3123	4.35	5381	
3175	3979	2315	1.70	5686	2452	2.08	5677	2579	2.46	5609	2704	2.86	5564	2829	3.30	5586	2953	3.75	5634				
3350	4198	2428	1.96	6000	2559	2.35	5999	2681	2.75	5943	2799	3.17	5880	2918	3.61	5876	3036	4.08	5912				
3525	4417	2541	2.24	6311	2666	2.65	6313	2784	3.07	6274	2897	3.50	6207	3009	3.95	6174	3122	4.43	6194				
3700	4637	2655	2.55	6624	2775	2.98	6630	2889	3.42	6603	2998	3.86	6542	3104	4.32	6490							
3875	4856	2769	2.88	6935	2884	3.33	6943	2995	3.79	6929	3100	4.26	6876										

High Velocity Nozzle
Nozzle Outlet Area: 0.581 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			1.5" SP			2" SP			2.5" SP			3" SP			4" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	2151	1274	0.29	2454	1560	0.50	2422	<u>1817</u>	<u>0.74</u>	<u>2410</u>													
1425	2453	1374	0.37	2813	1629	0.60	2770	<u>1873</u>	<u>0.85</u>	<u>2758</u>	<u>2093</u>	1.13	<u>2749</u>										
1600	2754	1478	0.46	3179	1711	0.71	3124	1936	0.97	3101	<u>2147</u>	<u>1.27</u>	<u>3092</u>	<u>2342</u>	1.58	<u>3086</u>	2518	1.91	3053				
1775	3055	1585	0.58	3543	1805	0.84	3482	2007	1.12	3448	2209	1.43	3441	<u>2396</u>	1.76	<u>3431</u>	2572	2.11	<u>3424</u>				
1950	3356	1696	0.71	3905	1905	0.99	3843	2091	1.29	3808	2276	1.61	3785	2457	1.95	3778	2627	2.32	<u>3772</u>	2940	3.10	3752	
2125	3657	1813	0.86	4271	2008	1.16	4207	2184	1.48	4166	2352	1.82	4136	2523	2.17	4125	2687	2.55	4114	<u>2993</u>	<u>3.36</u>	<u>4104</u>	
2300	3959	1932	1.04	4631	2112	1.36	4571	2282	1.70	4524	2439	2.05	4494	2595	2.42	4470	2752	2.81	4458	<u>3049</u>	<u>3.65</u>	<u>4449</u>	
2475	4260	2054	1.25	4994	2219	1.58	4936	2384	1.94	4887	2533	2.31	4852	2678	2.70	4828	2824	3.11	4810	3111	3.97	4796	
2650	4561	2177	1.48	5353	2329	1.83	5299	2487	2.21	5250	2632	2.60	5213	2768	3.00	5184	2903	3.43	5162				
2825	4862	2302	1.75	5714	2443	2.11	5664	2591	2.51	5613	2733	2.92	5573	2864	3.34	5542	2991	3.78	5519				
3000	5164	2428	2.04	6074	2560	2.43	6028	2698	2.84	5979	2836	3.27	5936	2964	3.72	5904	3085	4.17	5878				
3175	5465	2555	2.38	6435	2679	2.78	6390	2808	3.20	6345	2940	3.66	6301	3066	4.12	6267							
3350	5766	2682	2.75	6792	2800	3.16	6752	2920	3.60	6708	3046	4.08	6668										
3525	6067	2810	3.15	7151	2922	3.59	7113	3035	4.04	7072													
3700	6368	2939	3.60	7510	3045	4.05	7473																
3875	6670	3069	4.10	7871																			

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

150 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 18.25"

Max RPM = CI I: 2721 CI II: 3558
Tip Speed FPM = 4.78 x RPM

Max Motor Frame: 215T
Windband Outlet Area: 3.99 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 1.18 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	1059	990	0.18	2129	<u>1259</u>	0.36	<u>2131</u>																
1500	1271	1074	0.23	2598	<u>1321</u>	0.43	<u>2535</u>																
1750	1483	1159	0.29	3025	1395	0.51	2981	1777	1.00	2987													
2000	1695	1251	0.36	3447	1478	0.60	3456	1836	1.13	3387	2146	1.73	3405										
2250	1907	1353	0.44	3885	1562	0.71	3897	<u>1904</u>	<u>1.28</u>	<u>3801</u>	2201	1.92	3838	2467	2.61	3830							
2500	2119	1459	0.55	4320	1647	0.82	4315	1980	1.45	4259	<u>2262</u>	<u>2.13</u>	<u>4232</u>	<u>2519</u>	<u>2.85</u>	<u>4269</u>							
2750	2331	1568	0.67	4754	1739	0.96	4741	2063	1.63	4737	<u>2330</u>	<u>2.35</u>	<u>4644</u>	<u>2577</u>	<u>3.11</u>	<u>4667</u>	3020	4.78	4677				
3000	2542	1680	0.81	5192	1838	1.12	5174	2148	1.84	5196	2406	2.60	5103	<u>2642</u>	<u>3.41</u>	<u>5070</u>	3071	5.14	5120				
3250	2754	1794	0.97	5630	1941	1.31	5608	2232	2.06	5627	2487	2.87	5577	2712	3.72	5493	<u>3128</u>	<u>5.53</u>	<u>5532</u>	3502	7.50	5538	
3500	2966	1909	1.15	6065	2048	1.51	6047	2317	2.30	6045	2572	3.16	6051	2789	4.05	5956	<u>3190</u>	<u>5.95</u>	<u>5929</u>	3554	7.98	5974	
3800	3220	2050	1.41	6593	2178	1.79	6568	2426	2.62	6554	2673	3.54	6583	2888	4.49	6533	<u>3270</u>	<u>6.49</u>	<u>6416</u>				
4100	3475	2191	1.70	7114	2312	2.12	7094	2542	2.99	7070	<u>2774</u>	<u>3.95</u>	<u>7093</u>	2990	4.96	7096	<u>3358</u>	<u>7.07</u>	<u>6948</u>				
4400	3729	2334	2.04	7639	2447	2.48	7617	2664	3.40	7593	2878	4.40	7595	3090	5.47	7620	3453	7.68	7515				
4700	3983	2478	2.42	8163	2585	2.89	8144	2789	3.86	8114	2988	4.89	8103	3191	6.01	8130	3553	8.35	8092				
5000	4237	2623	2.85	8688	<u>2723</u>	<u>3.34</u>	<u>8665</u>	2917	4.37	8635	3105	5.45	8623	3295	6.60	8636							
5300	4492	2769	3.34	9213	2864	3.85	9193	3048	4.93	9160	3226	6.05	9144	3403	7.24	9141							

Medium Velocity Nozzle

Nozzle Outlet Area: 0.910 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	1374	1018	0.20	2258	<u>1280</u>	0.37	<u>2297</u>																
1500	1648	1106	0.25	2717	1354	0.45	2711	1749	0.91	2808													
1750	1923	1202	0.32	3166	1433	0.55	3156	<u>1805</u>	<u>1.04</u>	<u>3216</u>	2126	1.60	3298										
2000	2198	1307	0.41	3627	1520	0.66	3623	<u>1877</u>	<u>1.20</u>	<u>3627</u>	<u>2175</u>	<u>1.79</u>	<u>3700</u>	2451	2.45	3773							
2250	2473	1418	0.52	4095	1612	0.79	4072	1954	1.38	4052	<u>2240</u>	<u>2.01</u>	<u>4114</u>	<u>2499</u>	<u>2.69</u>	<u>4179</u>							
2500	2747	1533	0.64	4562	1711	0.93	4527	2035	1.58	4511	2314	2.26	4525	<u>2559</u>	<u>2.97</u>	<u>4587</u>	3011	4.57	4704				
2750	3022	1651	0.80	5027	1815	1.10	4985	2121	1.79	4977	2392	2.53	4956	<u>2631</u>	<u>3.29</u>	<u>4956</u>	<u>3060</u>	<u>4.94</u>	<u>5113</u>				
3000	3297	1770	0.97	5483	1924	1.30	5451	2212	2.04	5434	2472	2.82	5410	2707	3.63	5416	<u>3118</u>	<u>5.35</u>	<u>5518</u>	3498	7.26	5617	
3250	3571	1891	1.17	5937	2036	1.52	5918	2306	2.30	5882	2556	3.14	5875	2786	4.00	5859	<u>3187</u>	<u>5.81</u>	<u>5927</u>	3549	7.76	6021	
3500	3846	2013	1.41	6389	2152	1.78	6388	2405	2.59	6336	2645	3.48	6338	2867	4.40	6318	3262	6.31	6342				
3800	4176	2161	1.73	6930	2292	2.13	6942	2528	2.98	6881	2756	3.93	6881	2968	4.91	6873	3355	6.95	6853				
4100	4505	2310	2.10	7469	2435	2.54	7494	2657	3.43	7437	2871	4.42	7420	3075	5.47	7422	3450	7.63	7391				
4400	4835	2460	2.53	8007	2579	2.99	8040	2791	3.94	8003	2991	4.97	7963	3187	6.08	7968	3549	8.37	7949				
4700	5165	2612	3.01	8549	<u>2724</u>	<u>3.50</u>	<u>8582</u>	2928	4.52	8568	3116	5.58	8514	3302	6.73	8508							
5000	5495	2764	3.56	9088	2871	4.08	9124	3066	5.15	9125	3245	6.26	9070	3421	7.44	9049							
5300	5824	2917	4.17	9627	3019	4.72	9666	3207	5.85	9683	3378	7.01	9633	3545	8.23	9599							

High Velocity Nozzle

Nozzle Outlet Area: 0.630 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1250	1984	1106	0.25	2570	1351	0.43	2488	<u>1752</u>	<u>0.86</u>	<u>2519</u>	2070	1.34	2544										
1500	2381	1215	0.33	3105	1447	0.55	3031	<u>1826</u>	<u>1.02</u>	<u>2987</u>	2136	1.54	<u>3021</u>	2405	2.12	3056							
1750	2778	1333	0.44	3628	1556	0.69	3594	1905	1.21	3485	<u>2210</u>	<u>1.79</u>	<u>3491</u>	2472	2.40	3525	2922	3.77	3553				
2000	3175	1457	0.58	4127	1665	0.85	4135	1996	1.43	4013	<u>2287</u>	<u>2.06</u>	<u>3980</u>	<u>2546</u>	<u>2.73</u>	<u>3994</u>	2988	4.15	4053	3369	5.76	4061	
2250	3571	1587	0.75	4631	1778	1.05	4666	2101	1.68	4575	2369	2.36	4484	<u>2622</u>	<u>3.08</u>	<u>4476</u>	<u>3058</u>	<u>4.61</u>	<u>4513</u>	3434	6.25	4566	
2500	3968	1721	0.95	5142	1897	1.28	5179	2211	1.97	5135	2465	2.70	5028	2702	3.47	4976	<u>3134</u>	<u>5.12</u>	<u>4991</u>	3503	6.84	5031	
2750	4365	1860	1.20	5668	2021	1.55	5681	2320	2.30	5678	2571	3.08	5592	2792	3.90	5504	<u>3210</u>	<u>5.66</u>	<u>5474</u>				
3000	4762	2000	1.49	6191	2149	1.86	6181	2431	2.67	6214	2681	3.51	6154	2894	4.38	6063	3289	6.23	5970				
3250	5159	2143	1.83	6719	2280	2.22	6685	2546	3.09	6739	2790	3.99	6699	3002	4.91	6629	3375	6.84	6486				
3500	5556	2288	2.22	7250	2415	2.64	7200	2666	3.56	7255	2900	4.52	7241	3111	5.49	7183	3472	7.53	7033				
3800	6032	2462	2.76	7881	2580	3.21	7825	2814	4.19	7858	3034	5.21	7874	3242	6.27	7837							
4100	6508	2639	3.39	8518	2748	3.86	8455	2965	4.90	8454	3175	6.00	8502	3374	7.12	8484							
4400	6984	2816	4.11	9152	2919	4.62	9090	3121	5.71	9058	3320	6.88	9113	3509	8.07	9118							
4700	7460	2995	4.94	9788	3091	5.48	9723	3281	6.62	9671	3469	7.85	9714										
5000	7937	3174	5.87	10422	3264	6.44	10356	3443	7.63	10287													
5300	8413	3354	6.92	11058	3439	7.52	10991																

Underlined figures indicate maximum static efficiency.

NOTES:

- Performance certified is for installation Type A: Free inlet, free outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings do not include the effects of crosswinds.

165 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 20.00"

Max RPM = CI I: 2483 CI II: 3247
Tip Speed FPM = 5.24 x RPM

Max Motor Frame: 256T
Windband Outlet Area: 4.79 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 1.42 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1500	1059	903	0.22	2554	1149	0.43	2561																
1700	1200	954	0.26	2937	1185	0.48	2879																
1900	1341	1005	0.30	3290	1226	0.54	3207	1590	1.10	3231													
2100	1482	1057	0.34	3629	1272	0.61	3572	1621	1.20	3582													
2400	1694	1141	0.43	4137	1348	0.72	4146	1675	1.36	4065	1958	2.07	4087										
2700	1905	1234	0.53	4662	1425	0.85	4678	1737	1.54	4561	2008	2.30	4605	2251	3.13	4599							
3000	2117	1330	0.65	5180	1503	0.99	5184	1807	1.74	5116	2063	2.55	5073	2298	3.42	5122							
3400	2399	1464	0.85	5881	1616	1.22	5865	1908	2.04	5875	2148	2.92	5751	2370	3.85	5759	2770	5.87	5791				
3800	2682	1601	1.09	6579	1739	1.49	6559	2010	2.38	6580	2244	3.33	6505	2452	4.33	6415	2836	6.47	6478	3180	8.81	6461	
4200	2964	1741	1.38	7279	1867	1.81	7252	2114	2.76	7258	2346	3.79	7261	2544	4.86	7145	2910	7.14	7113	3242	9.58	7164	
4600	3246	1883	1.73	7977	2000	2.19	7952	2224	3.19	7933	2448	4.30	7967	2645	5.45	7918	2991	7.86	7760				
5000	3529	2027	2.13	8678	2135	2.63	8649	2343	3.69	8625	2551	4.85	8646	2747	6.08	8653	3082	8.64	8485				
5400	3811	2172	2.59	9376	2273	3.13	9349	2467	4.25	9318	2658	5.47	9318	2849	6.77	9349	3180	9.48	9249				
5800	4093	2318	3.12	10074	2413	3.70	10050	2595	4.89	10013	2772	6.15	10000	2952	7.52	10024							
6200	4375	2466	3.73	10777	2554	4.34	10747	2727	5.61	10715	2893	6.93	10696	3059	8.34	10697							
6600	4658	2613	4.42	11472	2697	5.06	11448	2860	6.39	11410	3017	7.78	11387	3173	9.25	11384							

Medium Velocity Nozzle

Nozzle Outlet Area: 1.09 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1500	1372	928	0.24	2705	1167	0.45	2750																
1700	1555	981	0.28	3079	1211	0.51	3079	1582	1.04	3211													
1900	1738	1037	0.33	3439	1259	0.58	3428	1611	1.14	3534													
2100	1921	1097	0.39	3804	1307	0.66	3786	1647	1.25	3862	1940	1.93	3961										
2400	2196	1192	0.49	4352	1386	0.79	4345	1712	1.44	4350	1985	2.15	4446	2236	2.94	4525							
2700	2470	1293	0.62	4913	1471	0.94	4891	1783	1.65	4866	2043	2.41	4933	2280	3.23	5015							
3000	2745	1398	0.77	5474	1560	1.12	5430	1857	1.89	5418	2111	2.71	5430	2335	3.57	5508	2748	5.49	5654				
3400	3111	1541	1.02	6211	1688	1.39	6168	1962	2.25	6158	2206	3.14	6126	2423	4.08	6165	2808	6.09	6295	3164	8.33	6421	
3800	3477	1687	1.32	6939	1823	1.73	6917	2074	2.64	6878	2306	3.63	6867	2517	4.65	6848	2886	6.78	6952	3222	9.11	7068	
4200	3843	1835	1.69	7662	1962	2.14	7662	2193	3.10	7601	2412	4.17	7602	2615	5.28	7579	2976	7.57	7611				
4600	4209	1985	2.12	8384	2105	2.61	8405	2319	3.63	8335	2525	4.78	8329	2718	5.97	8322	3070	8.43	8292				
5000	4575	2137	2.63	9106	2250	3.16	9139	2450	4.25	9076	2643	5.44	9053	2827	6.72	9052	3167	9.35	9017				
5400	4941	2289	3.21	9823	2396	3.79	9864	2586	4.95	9826	2766	6.19	9780	2941	7.54	9776							
5800	5306	2443	3.89	10544	2544	4.50	10588	2726	5.74	10578	2894	7.04	10515	3059	8.44	10497							
6200	5672	2598	4.66	11265	2693	5.31	11309	2867	6.63	11319	3027	8.00	11263	3182	9.44	11224							
6600	6038	2753	5.53	11983	2843	6.22	12027	3011	7.62	12061	3163	9.05	12011										

High Velocity Nozzle

Nozzle Outlet Area: 0.757 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1500	1982	1008	0.30	3078	1232	0.52	2983	1598	1.03	3020	1888	1.61	3046										
1700	2246	1075	0.36	3516	1288	0.61	3409	1643	1.16	3395	1928	1.76	3443	2174	2.45	3451							
1900	2510	1143	0.44	3937	1352	0.71	3860	1690	1.30	3787	1971	1.95	3816	2214	2.64	3862	2629	4.27	3853				
2100	2774	1216	0.53	4354	1419	0.82	4310	1738	1.46	4183	2017	2.15	4198	2255	2.87	4228	2666	4.52	4264				
2400	3170	1329	0.70	4953	1519	1.02	4964	1821	1.71	4818	2086	2.47	4774	2323	3.28	4797	2726	4.97	4863	3074	6.92	4876	
2700	3567	1447	0.90	5555	1621	1.26	5594	1917	2.02	5493	2161	2.83	5381	2392	3.70	5373	2790	5.53	5418	3133	7.50	5479	
3000	3963	1570	1.14	6172	1730	1.54	6214	2017	2.37	6162	2249	3.24	6036	2465	4.16	5973	2859	6.15	5990	3196	8.21	6040	
3400	4491	1738	1.55	7007	1882	1.98	7018	2150	2.91	7031	2379	3.86	6939	2577	4.86	6826	2952	7.01	6767				
3800	5020	1911	2.05	7853	2039	2.51	7818	2287	3.54	7879	2512	4.59	7821	2705	5.67	7727	3052	7.96	7577				
4200	5548	2086	2.66	8697	2202	3.16	8637	2431	4.27	8703	2645	5.42	8687	2838	6.59	8619	3167	9.03	8439				
4600	6077	2263	3.38	9543	2370	3.93	9475	2581	5.11	9505	2782	6.36	9536	2971	7.63	9493							
5000	6605	2442	4.24	10390	2540	4.82	10313	2736	6.08	10307	2925	7.43	10367	3105	8.79	10353							
5400	7133	2622	5.24	11237	2713	5.86	11156	2894	7.19	11109	3073	8.62	11176	3243	10.08	11194							
5800	7662	2803	6.39	12083	2888	7.05	12002	3057	8.45	11929	3225	9.97	11975										
6200	8190	2985	7.71	12930	3065	8.42	12850	3223	9.89	12759													
6600	8719	3168	9.21	13778	3243	9.95	13698																

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

182 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 22.25"

Max RPM = CI I: 2232 CI II: 2918
Tip Speed FPM = 5.83 x RPM

Max Motor Frame: 256T
Windband Outlet Area: 5.93 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 1.75 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1700	969	<u>785</u>	0.24	<u>2870</u>	1015	0.49	2901																
2000	1140	838	0.30	3438	<u>1051</u>	0.57	<u>3399</u>																
2300	1311	894	0.36	3985	<u>1094</u>	0.65	<u>3882</u>	1424	1.34	3907													
2600	1482	950	0.43	4490	1144	0.75	4428	<u>1457</u>	<u>1.48</u>	<u>4432</u>													
3000	1710	1032	0.54	5171	1217	0.90	5183	<u>1510</u>	<u>1.70</u>	<u>5080</u>	1763	2.59	5106										
3400	1938	1122	0.68	5866	1291	1.07	5882	<u>1570</u>	<u>1.94</u>	<u>5740</u>	1812	2.89	<u>5787</u>	2029	3.92	5786							
3800	2166	1217	0.85	6568	1368	1.27	6561	1640	2.22	6499	<u>1867</u>	<u>3.23</u>	<u>6418</u>	<u>2076</u>	<u>4.32</u>	<u>6476</u>							
4200	2395	1314	1.05	7265	1451	1.50	7245	1713	2.52	7250	1929	3.60	7098	<u>2129</u>	<u>4.76</u>	<u>7112</u>	<u>2489</u>	<u>7.26</u>	<u>7152</u>				
4600	2623	1413	1.29	7961	1539	1.77	7933	1788	2.85	7969	1998	4.01	7847	<u>2188</u>	<u>5.23</u>	<u>7764</u>	<u>2536</u>	<u>7.85</u>	<u>7846</u>	2848	10.71	7814	
5100	2908	1540	1.64	8838	1655	2.16	8804	1881	3.31	8814	2090	4.57	8800	2270	5.88	8662	<u>2602</u>	<u>8.67</u>	<u>8648</u>	2903	11.66	8706	
5600	3193	1669	2.05	9714	1775	2.62	9678	1980	3.84	9660	2183	5.19	9696	2360	6.60	9618	<u>2674</u>	<u>9.55</u>	<u>9446</u>				
6100	3478	1799	2.54	10586	1898	3.15	10555	2087	4.45	10524	<u>2276</u>	<u>5.88</u>	<u>10548</u>	<u>2453</u>	<u>7.38</u>	<u>10551</u>	<u>2755</u>	<u>10.51</u>	<u>10334</u>				
6600	3763	1931	3.11	11463	2022	3.76	11424	2199	5.14	11391	2372	6.63	11386	2546	8.24	11432	<u>2843</u>	<u>11.55</u>	<u>11283</u>				
7100	4048	2063	3.76	12333	2149	4.46	12301	<u>2314</u>	<u>5.92</u>	<u>12255</u>	<u>2475</u>	<u>7.47</u>	<u>12242</u>	<u>2639</u>	<u>9.16</u>	<u>12277</u>							
7600	4333	2197	4.51	13210	<u>2277</u>	<u>5.25</u>	<u>13174</u>	<u>2433</u>	<u>6.80</u>	<u>13129</u>	<u>2584</u>	<u>8.43</u>	<u>13109</u>	<u>2735</u>	<u>10.16</u>	<u>13113</u>							
8100	4618	<u>2331</u>	<u>5.35</u>	<u>14083</u>	<u>2407</u>	<u>6.14</u>	<u>14053</u>	<u>2554</u>	<u>7.77</u>	<u>14002</u>	<u>2697</u>	<u>9.49</u>	<u>13980</u>	<u>2837</u>	<u>11.27</u>	<u>13965</u>							

Medium Velocity Nozzle

Nozzle Outlet Area: 1.35 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1700	1256	806	0.26	3059	<u>1028</u>	0.51	<u>3148</u>																
2000	1478	861	0.32	3615	<u>1072</u>	0.60	<u>3645</u>																
2300	1700	922	0.40	4169	1122	0.70	4143	1442	1.38	4286													
2600	1922	986	0.48	4707	<u>1175</u>	0.82	<u>4688</u>	<u>1480</u>	<u>1.54</u>	<u>4774</u>	1744	2.38	4906										
3000	2217	1078	0.62	5437	1252	0.99	5435	1544	1.80	5434	<u>1788</u>	<u>2.68</u>	<u>5551</u>	2013	3.66	5652							
3400	2513	1177	0.79	6190	1334	1.20	6154	1613	2.09	6128	1846	3.04	6204	<u>2056</u>	<u>4.06</u>	<u>6297</u>							
3800	2809	1279	1.00	6936	1422	1.44	6880	1685	2.41	6866	1912	3.44	6862	<u>2112</u>	<u>4.52</u>	<u>6960</u>	<u>2479</u>	<u>6.92</u>	<u>7140</u>				
4200	3104	1383	1.26	7672	1515	1.72	7615	1762	2.77	7608	1982	3.89	7572	<u>2176</u>	<u>5.04</u>	<u>7610</u>	<u>2523</u>	<u>7.52</u>	<u>7777</u>	2843	10.29	7930	
4600	3400	1489	1.55	8402	1613	2.05	8368	1843	3.17	8330	2054	4.37	8311	2245	5.61	8296	<u>2578</u>	<u>8.20</u>	<u>8431</u>	2884	11.06	8572	
5100	3769	1623	1.99	9307	1739	2.54	9304	1950	3.72	9233	2149	5.03	9235	2333	6.37	9201	<u>2658</u>	<u>9.17</u>	<u>9251</u>				
5600	4139	1759	2.52	10210	1868	3.11	10232	2063	4.37	10145	2250	5.76	10139	2425	7.22	10126	<u>2743</u>	<u>10.22</u>	<u>10094</u>				
6100	4508	1896	3.13	11108	1999	3.78	11149	2181	5.11	11068	2356	6.58	11041	2524	8.15	11052	2831	11.36	10998				
6600	4878	2035	3.85	12011	2131	4.54	12054	2304	5.97	12006	2467	7.50	11949	2626	9.15	11949							
7100	5248	2174	4.68	12917	<u>2265</u>	<u>5.42</u>	<u>12959</u>	<u>2430</u>	<u>6.94</u>	<u>12943</u>	<u>2583</u>	<u>8.54</u>	<u>12869</u>	<u>2733</u>	<u>10.26</u>	<u>12853</u>							
7600	5617	<u>2314</u>	<u>5.62</u>	<u>13805</u>	<u>2401</u>	<u>6.42</u>	<u>13866</u>	<u>2558</u>	<u>8.03</u>	<u>13873</u>	<u>2703</u>	<u>9.71</u>	<u>13801</u>	<u>2844</u>	<u>11.49</u>	<u>13760</u>							
8100	5987	<u>2455</u>	<u>6.69</u>	<u>14705</u>	<u>2537</u>	<u>7.53</u>	<u>14764</u>	<u>2688</u>	<u>9.25</u>	<u>14797</u>	<u>2826</u>	<u>11.01</u>	<u>14736</u>										

High Velocity Nozzle

Nozzle Outlet Area: 0.936 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
1700	1816	869	0.32	3469	<u>1080</u>	0.58	<u>3381</u>	1412	1.18	3440	1676	1.89	3449										
2000	2137	941	0.41	4125	1136	0.70	3997	<u>1460</u>	<u>1.37</u>	<u>4009</u>	1718	2.10	4066	1940	2.94	4055							
2300	2457	1015	0.53	4769	1203	0.85	4661	<u>1510</u>	<u>1.57</u>	<u>4582</u>	1763	2.36	4620	1982	3.22	4671							
2600	2778	1093	0.66	5388	1276	1.02	5338	1562	1.80	5174	<u>1813</u>	<u>2.66</u>	<u>5194</u>	<u>2027</u>	<u>3.56</u>	<u>5232</u>	<u>2397</u>	<u>5.60</u>	<u>5286</u>				
3000	3205	1203	0.88	6190	1372	1.29	6201	1643	2.15	6024	1880	3.09	5964	<u>2093</u>	<u>4.10</u>	<u>5992</u>	<u>2455</u>	<u>6.21</u>	<u>6075</u>	2767	8.61	6091	
3400	3632	1318	1.16	6995	1472	1.61	7045	1737	2.56	6928	1954	3.57	6781	<u>2160</u>	<u>4.67</u>	<u>6763</u>	<u>2518</u>	<u>6.96</u>	<u>6821</u>	2825	9.41	6892	
3800	4060	1437	1.49	7816	1579	1.99	7869	1834	3.04	7816	2041	4.13	7661	2232	5.29	7570	<u>2584</u>	<u>7.79</u>	<u>7575</u>	<u>2887</u>	<u>10.38</u>	<u>7639</u>	
4200	4487	1560	1.91	8657	1689	2.44	8666	1930	3.58	8679	2136	4.77	8565	2314	6.00	8423	<u>2652</u>	<u>8.66</u>	<u>8358</u>				
4600	4915	1685	2.39	9500	1803	2.96	9469	2029	4.20	9530	2233	5.48	9454	2407	6.80	9331	2723	9.59	9155				
5100	5449	1844	3.13	10559	1950	3.74	10488	2159	5.09	10571	2353	6.48	10534	2527	7.92	10449	2825	10.90	10225				
5600	5983	2004	4.01	11613	2102	4.67	11533	2294	6.11	11576	2477	7.64	11605	2648	9.19	11546							
6100	6517	2166	5.05	12670	<u>2256</u>	<u>5.76</u>	<u>12580</u>	<u>2434</u>	<u>7.30</u>	<u>12578</u>	<u>2606</u>	<u>8.94</u>	<u>12650</u>	<u>2769</u>	<u>10.61</u>	<u>12622</u>							
6600	7051	<u>2330</u>	<u>6.27</u>	<u>13733</u>	<u>2413</u>	<u>7.03</u>	<u>13636</u>	<u>2577</u>	<u>8.65</u>	<u>13580</u>	<u>2739</u>	<u>10.40</u>	<u>13660</u>	<u>2894</u>	<u>12.20</u>	<u>13682</u>							
7100	7585	2494	7.68	14790	2571	8.48	14689	2725	10.21	14606	<u>2877</u>	<u>12.06</u>	<u>14664</u>										
7600	8120	2659	9.29	15848	2731	10.15	15746	2875	11.96	15640													
8100	8654	<u>2825</u>	<u>11.13</u>	<u>16907</u>	<u>2893</u>	<u>12.04</u>	<u>16809</u>																

Underlined figures indicate maximum static efficiency.

NOTES:

- Performance certified is for installation Type A: Free inlet, free outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings do not include the effects of crosswinds.

200 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 24.50"

Max RPM = CI I: 2027 CI II: 2650
Tip Speed FPM = 6.41 x RPM

Max Motor Frame: 256T
Windband Outlet Area: 7.19 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 2.13 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
2400	1128	758	0.35	4127	<u>952</u>	<u>0.68</u>	<u>4082</u>																
2800	1316	813	0.43	4845	<u>995</u>	<u>0.80</u>	<u>4729</u>	1294	1.63	4754													
3200	1504	870	0.53	5528	1045	0.93	5457	<u>1328</u>	<u>1.82</u>	<u>5461</u>													
3600	1693	931	0.64	6203	1100	1.08	6216	<u>1367</u>	<u>2.04</u>	<u>6095</u>	1598	3.11	6123										
4100	1928	1015	0.82	7072	1170	1.29	7102	<u>1423</u>	<u>2.34</u>	<u>6920</u>	<u>1644</u>	<u>3.49</u>	<u>6990</u>	1841	4.73	6977							
4600	2163	1104	1.03	7952	1241	1.54	7939	1488	2.68	7862	<u>1695</u>	<u>3.91</u>	<u>7775</u>	<u>1885</u>	<u>5.23</u>	<u>7846</u>							
5100	2398	1195	1.28	8825	1319	1.83	8798	1557	3.06	8808	1753	4.38	8624	<u>1935</u>	<u>5.78</u>	<u>8646</u>	<u>2261</u>	<u>8.81</u>	<u>8683</u>				
5600	2633	1288	1.58	9698	1402	2.16	9663	1627	3.48	9703	1818	4.89	9566	<u>1990</u>	<u>6.38</u>	<u>9458</u>	<u>2305</u>	<u>9.55</u>	<u>9546</u>	2588	13.03	9509	
6100	2868	1382	1.92	10565	1489	2.55	10537	1696	3.93	10541	1887	5.45	10522	<u>2051</u>	<u>7.02</u>	<u>10350</u>	<u>2354</u>	<u>10.36</u>	<u>10347</u>	2629	13.98	10408	
6700	3150	1498	2.41	11619	1596	3.09	11582	1784	4.55	11554	1970	6.18	11599	2131	7.87	11493	<u>2419</u>	<u>11.42</u>	<u>11317</u>				
7300	3432	1615	2.98	12669	1706	3.72	12631	1879	5.27	12587	2054	6.99	12634	2214	8.79	12616	2490	12.56	12356				
7900	3714	1733	3.64	13717	1817	4.43	13673	1979	6.08	13627	2139	7.87	13631	2298	9.80	13685	2568	13.78	13485				
8500	3996	1852	4.41	14765	1931	5.25	14726	2083	7.00	14676	2231	8.88	14660	2381	10.89	14699	2650	15.11	14628				
9200	4325	1992	5.44	15989	<u>2065</u>	<u>6.34</u>	<u>15948</u>	2207	8.21	15894	2344	10.18	15866	2482	12.29	15878							
9900	4654	<u>2133</u>	<u>6.63</u>	<u>17215</u>	<u>2201</u>	<u>7.59</u>	<u>17174</u>	2334	9.59	17117	2462	11.66	17079	2589	13.86	17068							
10600	4984	<u>2274</u>	<u>7.98</u>	<u>18434</u>	<u>2338</u>	<u>9.01</u>	<u>18398</u>	2463	11.13	18338	2584	13.33	18300										

Medium Velocity Nozzle

Nozzle Outlet Area: 1.64 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
2400	1463	779	0.39	4345	<u>970</u>	<u>0.71</u>	<u>4372</u>																
2800	1707	839	0.48	5074	1021	0.85	5052	1311	1.68	5224													
3200	1951	903	0.60	5789	1074	1.01	5778	<u>1350</u>	<u>1.90</u>	<u>5876</u>	1587	2.92	6017										
3600	2195	973	0.74	6531	1131	1.19	6516	<u>1397</u>	<u>2.16</u>	<u>6520</u>	<u>1620</u>	<u>3.22</u>	<u>6664</u>	1826	4.41	6806							
4100	2500	1065	0.95	7467	1208	1.44	7422	1462	2.52	7392	<u>1674</u>	<u>3.66</u>	<u>7489</u>	<u>1865</u>	<u>4.90</u>	<u>7594</u>							
4600	2805	1160	1.21	8396	1290	1.74	8328	1529	2.92	8308	1736	4.17	8316	<u>1917</u>	<u>5.47</u>	<u>8423</u>	<u>2250</u>	<u>8.37</u>	<u>8629</u>				
5100	3110	1258	1.53	9321	1377	2.09	9246	1601	3.37	9234	1801	4.72	9196	<u>1977</u>	<u>6.12</u>	<u>9239</u>	<u>2292</u>	<u>9.13</u>	<u>9441</u>	2582	12.48	9618	
5600	3415	1357	1.90	10231	1469	2.51	10188	1677	3.86	10137	1868	5.32	10113	<u>2041</u>	<u>6.82</u>	<u>10090</u>	<u>2344</u>	<u>9.99</u>	<u>10261</u>	2621	13.46	10429	
6100	3720	1457	2.33	11133	1563	2.99	11122	1757	4.41	11042	1939	5.98	11038	2107	7.59	10996	<u>2404</u>	<u>10.95</u>	<u>11086</u>				
6700	4085	1579	2.95	12216	1679	3.66	12241	1858	5.17	12137	2030	6.86	12137	2190	8.60	12117	2480	12.20	12092				
7300	4451	1702	3.67	13295	1796	4.44	13339	1963	6.04	13238	2124	7.81	13213	2277	9.69	13216	2558	13.54	13157				
7900	4817	1827	4.52	14381	1915	5.34	14432	2073	7.05	14363	2223	8.89	14301	2369	10.89	14306	2639	15.00	14265				
8500	5183	1952	5.48	15459	2035	6.37	15516	2186	8.19	15489	2326	10.11	15398	2464	12.19	15385							
9200	5610	2099	6.79	16718	<u>2177</u>	<u>7.75</u>	<u>16781</u>	2321	9.71	16801	2452	11.74	16706	2580	13.89	16655							
9900	6037	2247	8.30	17978	2320	9.32	18041	2457	11.43	18091	2581	13.57	18014										
10600	6463	<u>2395</u>	<u>10.02</u>	<u>19234</u>	<u>2465</u>	<u>11.13</u>	<u>19308</u>	2595	13.37	19373													

High Velocity Nozzle

Nozzle Outlet Area: 1.13 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
2400	2115	850	0.49	4947	1028	0.84	4796	<u>1323</u>	<u>1.64</u>	<u>4817</u>	1558	2.53	4891	1759	3.54	4857							
2800	2467	924	0.64	5807	1095	1.04	5683	<u>1373</u>	<u>1.92</u>	<u>5581</u>	<u>1603</u>	<u>2.87</u>	<u>5633</u>	1802	3.92	5701	2141	6.34	5678				
3200	2819	1002	0.82	6627	1167	1.27	6572	1425	2.22	6369	<u>1652</u>	<u>3.28</u>	<u>6381</u>	<u>1847</u>	<u>4.38</u>	<u>6442</u>	2182	6.86	6512				
3600	3172	1085	1.05	7433	1239	1.53	7437	1486	2.57	7223	<u>1703</u>	<u>3.71</u>	<u>7165</u>	<u>1896</u>	<u>4.92</u>	<u>7192</u>	2225	7.46	7291	2509	10.37	7307	
4100	3612	1192	1.38	8435	1333	1.93	8500	1573	3.08	8345	1771	4.30	8173	<u>1959</u>	<u>5.63</u>	<u>8159</u>	<u>2284</u>	<u>8.40</u>	<u>8228</u>	2563	11.36	8315	
4600	4053	1304	1.81	9468	1432	2.41	9521	1664	3.67	9459	1852	5.00	9269	2026	6.41	9164	<u>2346</u>	<u>9.43</u>	<u>9173</u>	<u>2621</u>	<u>12.57</u>	<u>9249</u>	
5100	4493	1419	2.32	10517	1536	2.97	10527	1754	4.35	10538	1941	5.79	10401	<u>2103</u>	<u>7.29</u>	<u>10234</u>	<u>2409</u>	<u>10.51</u>	<u>10142</u>				
5600	4934	1536	2.94	11570	1642	3.62	11523	1847	5.13	11603	<u>2032</u>	<u>6.69</u>	<u>11513</u>	2190	8.29	11366	2476	11.68	11146				
6100	5374	1654	3.66	12620	1753	4.40	12551	1944	6.01	12644	2122	7.69	12596	2280	9.40	12488	<u>2552</u>	<u>12.98</u>	<u>12215</u>				
6700	5903	1798	4.68	13888	1888	5.48	13792	2065	7.22	13857	2232	9.03	13874	2388	10.89	13797							
7300	6432	1944	5.91	15162	2027	6.76	15057	2190	8.61	15057	2347	10.57	15130	2497	12.57	15097							
7900	6960	2091	7.34	16436	2167	8.25	16316	2319	10.21	16267	2467	12.30	16359	2609	14.46	16376							
8500	7489	2238	8.98	17701	2309	9.95	17581	2450	12.01	17481	2590	14.24	17561										
9200	8106	2411	11.21	19183	2477	12.26	19064	2607	14.44	18927													
9900	8722	2585	13.80	20666	2646	14.91	20544																

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

222 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 27.00"

Max RPM = CI I: 1839 CI II: 2405
Tip Speed FPM = 7.07 x RPM

Max Motor Frame: 256T
Windband Outlet Area: 8.73 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 2.50 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
2500	1000	<u>635</u>	<u>0.33</u>	<u>3777</u>	828	0.67	3619															
3000	1200	678	0.41	4429	<u>860</u>	<u>0.79</u>	<u>4482</u>	1142	1.68	4351												
3500	1400	728	0.50	5231	<u>895</u>	<u>0.92</u>	<u>5285</u>	1169	1.89	5067	1390	2.97	5093									
4000	1600	778	0.60	6081	937	1.07	5949	<u>1200</u>	<u>2.12</u>	<u>5890</u>	1416	3.28	5794	1603	4.55	5825						
4500	1800	835	0.72	6966	983	1.23	6641	<u>1233</u>	<u>2.36</u>	<u>6770</u>	1445	3.61	6548	1628	4.95	6502	1944	7.88	6599			
5000	2000	900	0.88	7851	1034	1.42	7472	<u>1270</u>	<u>2.63</u>	<u>7555</u>	1476	3.96	7390	1657	5.38	7265	1968	8.47	7264			
5500	2200	966	1.05	8662	1084	1.62	8320	1311	2.92	8210	<u>1510</u>	<u>4.33</u>	<u>8289</u>	1687	5.83	8051	1994	9.09	7967	2259	12.60	8018
6000	2400	1034	1.26	9449	1137	1.85	9199	1356	3.24	8859	<u>1546</u>	<u>4.73</u>	<u>9073</u>	1719	6.31	8938	2022	9.73	8705	2284	13.41	8702
6500	2600	1102	1.50	10219	1198	2.12	10096	1404	3.59	9613	<u>1586</u>	<u>5.16</u>	<u>9764</u>	1754	6.83	9816	2052	10.40	9480	2310	14.23	9400
7000	2800	1171	1.77	10994	1263	2.43	10976	1455	3.96	10446	1629	5.62	10390	<u>1791</u>	<u>7.36</u>	<u>10589</u>	<u>2083</u>	<u>11.09</u>	<u>10329</u>	2339	15.10	10161
7500	3000	1240	2.08	11765	1330	2.78	11818	1506	4.37	11298	1674	6.10	11051	1830	7.93	11254	2116	11.83	11231	2369	16.00	10935
8000	3200	1310	2.42	12540	1396	3.16	12600	1556	4.79	12161	1723	6.63	11829	1873	8.53	11883	2151	12.60	12086	2400	16.92	11780
9000	3600	1452	3.23	14101	1532	4.06	14154	1670	5.78	13932	1826	7.80	13522	1966	9.86	13281	2227	14.25	13560			
10000	4000	1595	4.22	15664	1670	5.13	15704	1800	7.01	15702	1927	9.07	15253	2068	11.37	14943	2312	16.06	14811			
11000	4400	1739	5.41	17229	1809	6.40	17252	1933	8.45	17336	2042	10.58	17015	2168	12.98	16640						
12000	4800	1884	6.82	18795	1950	7.89	18806	2067	10.10	18887	2172	12.40	18808	2274	14.81	18399						

Medium Velocity Nozzle

Nozzle Outlet Area: 1.89 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
2500	1323	655	0.36	4197	<u>840</u>	<u>0.70</u>	<u>4226</u>															
3000	1587	703	0.45	5014	<u>879</u>	<u>0.84</u>	<u>4977</u>	1153	1.72	5236												
3500	1852	759	0.57	5966	923	1.00	5876	<u>1185</u>	<u>1.96</u>	<u>5927</u>	1403	3.05	6130									
4000	2116	817	0.70	6988	970	1.18	6679	<u>1224</u>	<u>2.23</u>	<u>6635</u>	1432	3.39	6907	1618	4.66	7006						
4500	2381	879	0.86	7998	1022	1.39	7566	1265	2.53	7513	<u>1468</u>	<u>3.77</u>	<u>7540</u>	1645	5.10	7783	1963	8.07	7670			
5000	2646	944	1.05	8907	1079	1.63	8532	1310	2.87	8395	<u>1507</u>	<u>4.19</u>	<u>8290</u>	1680	5.60	8452	1986	8.68	8731			
5500	2910	1012	1.28	9796	1137	1.89	9551	1356	3.22	9180	1549	4.65	9195	<u>1718</u>	<u>6.13</u>	<u>9123</u>	2015	9.36	9540	2280	12.92	9591
6000	3175	1082	1.55	10672	1197	2.19	10597	1406	3.61	10029	1593	5.14	10074	<u>1759</u>	<u>6.72</u>	<u>9976</u>	2048	10.08	10189	2306	13.77	10473
6500	3439	1155	1.86	11558	1260	2.54	11557	1461	4.05	10966	1638	5.66	10861	1801	7.34	10879	2086	10.88	10835	2336	14.69	11228
7000	3704	1229	2.21	12433	1326	2.93	12474	1517	4.52	11915	1686	6.22	11668	1846	8.01	11753	2125	11.71	11595	2370	15.67	11854
7500	3968	1305	2.62	13309	1393	3.36	13362	1575	5.04	12912	1738	6.83	12556	1891	8.70	12535	2167	12.62	12494			
8000	4233	1381	3.07	14174	1462	3.85	14244	1634	5.61	13977	1793	7.49	13493	1939	9.45	13341	2210	13.57	13411			
9000	4762	1537	4.17	15933	1605	5.00	16003	1758	6.91	15996	1908	8.97	15445	2044	11.10	15131	2299	15.59	15063			
10000	5291	1693	5.50	17682	1753	6.41	17756	1889	8.45	17827	2026	10.67	17555	2157	12.99	17048	2395	17.84	16681			
11000	5820	1850	7.11	19434	1905	8.10	19500	2024	10.26	19592	2150	12.64	19545	2274	15.14	19102						
12000	6349	2008	9.03	21189	2060	10.11	21254	2165	12.39	21356	2280	14.91	21379	2394	17.55	21193						

High Velocity Nozzle

Nozzle Outlet Area: 1.28 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
2500	1953	706	0.44	4930	<u>882</u>	<u>0.79</u>	<u>4788</u>	1161	1.63	4632												
3000	2344	773	0.59	5999	933	0.99	5877	<u>1201</u>	<u>1.89</u>	<u>5711</u>	1417	2.94	5526									
3500	2734	842	0.77	7110	994	1.23	6900	<u>1244</u>	<u>2.21</u>	<u>6698</u>	1456	3.33	6614	1639	4.56	6465						
4000	3125	915	1.00	8245	1060	1.52	7960	1293	2.59	7780	<u>1498</u>	<u>3.78</u>	<u>7633</u>	1678	5.08	7552						
4500	3516	994	1.28	9351	1129	1.85	9052	1349	3.03	8833	<u>1543</u>	<u>4.29</u>	<u>8631</u>	1720	5.67	8591	2024	8.71	8401			
5000	3906	1076	1.61	10438	1198	2.23	10173	1412	3.54	9860	1594	4.88	9746	<u>1764</u>	<u>6.33</u>	<u>9576</u>	2064	9.51	9481	2322	13.01	9264
5500	4297	1160	2.01	11531	1270	2.67	11303	1478	4.10	10923	1651	5.54	10798	1812	7.06	10643	2105	10.38	10486	2361	14.03	10360
6000	4688	1245	2.47	12645	1346	3.18	12405	1546	4.73	11998	1714	6.31	11829	1865	7.89	11734	2149	11.37	11476	2402	15.16	11421
6500	5078	1331	3.01	13753	1427	3.77	13511	1615	5.42	13097	1779	7.13	12880	1925	8.83	12780	2196	12.44	12516			
7000	5469	1417	3.63	14821	1510	4.45	14609	1684	6.19	14220	1846	8.02	13946	1988	9.86	13801	2246	13.60	13612			
7500	5859	1504	4.33	15868	1594	5.21	15704	1755	7.03	15354	1915	9.00	15035	2053	10.96	14853	2302	14.91	14700			
8000	6250	1592	5.13	16906	1678	6.07	16797	1829	7.98	16476	1984	10.06	16139	2120	12.14	15920	2362	16.33	15724			
9000	7031	1770	7.03	18970	1849	8.09	19026	1987	10.19	18689	2123	12.44	18389	2258	14.80	18104						
10000	7813	1949	9.37	21019	2021	10.53	21167	2153	12.89	20890	2271	15.27	20630	2396	17.83	20345						
11000	8594	2130	12.21	23074	2196	13.48	23258	2321	16.07	23074												
12000	9375	2312	15.60	25129	2373	16.97	25325															

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

245 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 30.00"

Max RPM = CI I: 1655 CI II: 2165
Tip Speed FPM = 7.85 x RPM

Max Motor Frame: 286T
Windband Outlet Area: 10.77 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 3.09 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
3500	1133	597	0.47	5207	<u>764</u>	<u>0.93</u>	<u>5154</u>	1020	1.99	5080													
4000	1294	631	0.55	5916	<u>789</u>	<u>1.05</u>	<u>6050</u>	1039	2.19	5784	1239	3.48	5832										
4500	1456	668	0.65	6748	<u>816</u>	<u>1.19</u>	<u>6784</u>	1060	2.41	6536	1257	3.78	6512	1427	5.26	6593							
5000	1618	705	0.75	7618	<u>847</u>	<u>1.34</u>	<u>7416</u>	<u>1083</u>	<u>2.64</u>	<u>7387</u>	1277	4.09	7247	1445	5.66	7278							
5500	1780	746	0.88	8491	881	1.50	8117	<u>1107</u>	<u>2.89</u>	<u>8268</u>	1298	4.42	7996	1463	6.06	7947	1747	9.65	8047				
6000	1942	793	1.02	9388	918	1.69	8940	<u>1133</u>	<u>3.15</u>	<u>9062</u>	<u>1320</u>	<u>4.76</u>	<u>8802</u>	1484	6.50	8708	1765	10.25	8734				
6500	2104	842	1.20	10243	955	1.89	9783	<u>1162</u>	<u>3.43</u>	<u>9770</u>	<u>1344</u>	<u>5.12</u>	<u>9710</u>	1505	6.93	9452	1783	10.85	9408	2023	15.10	9513	
7000	2265	890	1.39	11025	991	2.09	10634	1193	3.74	10393	<u>1370</u>	<u>5.52</u>	<u>10586</u>	<u>1528</u>	<u>7.40</u>	<u>10308</u>	1803	11.48	10142	2040	15.88	10159	
7500	2427	939	1.60	11797	1031	2.33	11520	1226	4.06	11052	<u>1397</u>	<u>5.92</u>	<u>11349</u>	<u>1552</u>	<u>7.89</u>	<u>11215</u>	1824	12.14	10896	2059	16.70	10870	
8000	2589	989	1.84	12573	1076	2.61	12421	1262	4.41	11832	<u>1425</u>	<u>6.34</u>	<u>12005</u>	<u>1577</u>	<u>8.40</u>	<u>12069</u>	1845	12.79	11639	2078	17.52	11568	
9000	2913	1090	2.40	14127	1172	3.25	14167	1366	5.17	13497	1489	7.27	13280	1632	9.49	13569	1892	14.22	13410	2120	19.26	13071	
10000	3236	1192	3.08	15678	1269	4.01	15756	1410	6.02	15236	1560	8.32	14811	1694	10.70	14833	1942	15.74	15109				
11000	3560	1295	3.88	17230	1368	4.90	17306	1492	7.00	16981	1635	9.49	16501	1762	12.03	16235	1997	17.38	16578				
12000	3883	1399	4.84	18792	1468	5.94	18849	1587	8.21	18794	1708	10.73	18221	1835	13.49	17858	2058	19.17	17839				
13000	4207	1504	5.95	20360	1569	7.13	20399	1683	9.56	20469	1787	12.14	19979	1910	15.09	19566	2125	21.13	19174				
14000	4531	1609	7.23	21921	<u>1671</u>	<u>8.49</u>	<u>21949</u>	1780	11.09	22050	1877	13.79	21771	1983	16.77	21292							

Medium Velocity Nozzle

Nozzle Outlet Area: 2.33 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
3500	1502	618	0.52	5846	<u>779</u>	<u>0.98</u>	<u>5794</u>	1030	2.04	6131													
4000	1717	656	0.62	6735	810	1.13	6702	1050	2.26	6895	1251	3.56	6864										
4500	1931	698	0.74	7712	842	1.30	7528	<u>1076</u>	<u>2.51</u>	<u>7537</u>	1269	3.88	7841										
5000	2146	741	0.88	8766	877	1.48	8338	<u>1105</u>	<u>2.79</u>	<u>8288</u>	1291	4.22	8587	1458	5.80	8736							
5500	2361	786	1.05	9770	915	1.69	9228	<u>1135</u>	<u>3.09</u>	<u>9173</u>	<u>1318</u>	<u>4.61</u>	<u>9235</u>	1478	6.24	9524							
6000	2575	833	1.23	10686	956	1.92	10183	1167	3.42	10063	<u>1346</u>	<u>5.02</u>	<u>9944</u>	1503	6.73	10224	1781	10.50	10468				
6500	2790	882	1.45	11584	998	2.17	11166	1200	3.76	10863	<u>1376</u>	<u>5.46</u>	<u>10815</u>	<u>1530</u>	<u>7.25</u>	<u>10854</u>	1801	11.16	11336	2043	15.49	11220	
7000	3004	932	1.69	12461	1041	2.46	12229	1235	4.14	11669	1407	5.93	11723	1558	7.80	11588	1823	11.85	12069	2059	16.29	12213	
7500	3219	984	1.97	13346	1086	2.77	13275	1273	4.54	12559	1440	6.44	12595	1588	8.40	12463	1848	12.59	12692	2079	17.16	13067	
8000	3433	1036	2.27	14210	1132	3.12	14228	1313	4.98	13494	1473	6.96	13381	1620	9.04	13405	1876	13.39	13344	2101	18.08	13821	
9000	3863	1145	3.01	15966	1228	3.92	16034	1396	5.96	15424	1544	8.10	15027	1685	10.39	15079	1934	15.10	14940	2153	20.11	15097	
10000	4292	1257	3.92	17718	1328	4.88	17794	1482	7.08	17533	1624	9.42	16897	1754	11.86	16675	1997	17.00	16780				
11000	4721	1370	5.00	19466	1433	6.04	19565	1572	8.37	19540	1708	10.91	18849	1831	13.52	18479	2062	19.03	18428				
12000	5150	1484	6.29	21221	1540	7.39	21317	1666	9.86	21372	1793	12.56	20934	1913	15.37	20389	2130	21.20	20003				
13000	5579	1598	7.80	22969	1650	8.97	23064	1764	11.57	23167	1881	14.40	22992	1997	17.41	22357							
14000	6009	1713	9.54	24726	<u>1762</u>	<u>10.80</u>	<u>24814</u>	1864	13.51	24923	1974	16.50	24904	2083	19.67	24482							

High Velocity Nozzle

Nozzle Outlet Area: 1.58 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
3500	2215	675	0.66	6958	823	1.13	6796	1069	2.23	6633													
4000	2532	726	0.83	8068	865	1.36	7860	<u>1099</u>	<u>2.52</u>	<u>7638</u>	1292	3.85	7485										
4500	2848	776	1.03	9180	911	1.62	8883	<u>1132</u>	<u>2.86</u>	<u>8643</u>	<u>1321</u>	<u>4.26</u>	<u>8537</u>	1485	5.81	8377							
5000	3165	830	1.26	10310	960	1.91	9958	1168	3.24	9729	<u>1352</u>	<u>4.72</u>	<u>9542</u>	1514	6.34	9460							
5500	3481	888	1.54	11422	1010	2.24	11042	1209	3.68	10786	<u>1385</u>	<u>5.23</u>	<u>10543</u>	<u>1544</u>	<u>6.92</u>	<u>10478</u>	1818	10.66	10230				
6000	3797	948	1.87	12519	1061	2.62	12175	1255	4.19	11824	1421	5.80	11639	1576	7.57	11472	1847	11.44	11324	2080	15.73	11035	
6500	4114	1009	2.24	13612	1112	3.03	13299	1302	4.73	12866	1461	6.44	12733	1610	8.28	12502	1877	12.30	12374	2108	16.71	12153	
7000	4430	1070	2.66	14701	1166	3.50	14424	1351	5.32	13938	1505	7.16	13767	1647	9.06	13621	1908	13.23	13370	2137	17.78	13230	
7500	4747	1132	3.15	15817	1223	4.03	15537	1401	5.97	15021	1551	7.93	14789	1686	9.90	14677	1940	14.22	14346				
8000	5063	1194	3.69	16912	1282	4.63	16637	1451	6.66	16114	1598	8.75	15833	1730	10.85	15720	1975	15.31	15409				
9000	5696	1321	4.98	19056	1403	6.03	18823	1552	8.22	18360	1697	10.59	17988	1823	12.95	17789	2050	17.71	17592				
10000	6329	1449	6.55	21132	1526	7.73	21021	1660	10.10	20620	1798	12.69	20200	1920	15.29	19915	2137	20.53	19664				
11000	6962	1579	8.46	23199	1650	9.74	23241	1775	12.31	22825	1899	15.06	22447	2021	17.95	22105							
12000	7595	1709	10.70	25244	1775	12.09	25396	1896	14.93	25039	2005	17.79	24688	2121	20.90	24328							
13000	8228	1841	13.36	27305	1902	14.84	27505	2018	17.92	27224	2119	20.98	26923										
14000	8861	1973	16.43	29356	2031	18.04	29593	2140	21.31	29402													

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

270 QIFE Wheel Type: Mixed Flow Airfoil Max RPM = CI I: 1505 CI II: 1968 Max Motor Frame: 286T
 Wheel Dia.: 33.00" Tip Speed FPM = 8.64 x RPM Windband Outlet Area: 13.04 ft²

Low Velocity Nozzle
 Nozzle Outlet Area: 3.73 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
4500	1206	555	0.61	6624	704	1.18	6714	935	2.51	6531												
5000	1340	582	0.70	7407	723	1.31	7553	950	2.72	7262	1131	4.30	7292									
5500	1475	610	0.79	8249	744	1.45	8274	966	2.94	8018	1145	4.61	7992	1299	6.41	8066						
6000	1609	638	0.90	9129	767	1.60	8896	983	3.18	8859	1159	4.91	8676	1312	6.81	8724						
6500	1743	668	1.02	10001	793	1.77	9595	1001	3.42	9755	1175	5.24	9440	1326	7.21	9419						
7000	1877	702	1.16	10892	820	1.95	10383	1020	3.67	10583	1191	5.57	10199	1341	7.64	10149	1597	12.08	10187			
7500	2011	739	1.32	11790	848	2.14	11221	1040	3.94	11317	1209	5.94	11109	1356	8.06	10864	1611	12.69	10892			
8000	2145	775	1.50	12606	875	2.33	12052	1062	4.23	11979	1227	6.30	11996	1373	8.52	11667	1625	13.30	11585	1842	18.47	11659
9000	2413	848	1.90	14157	933	2.79	13820	1111	4.86	13276	1266	7.09	13592	1408	9.47	13428	1655	14.56	13034	1870	20.10	13062
10000	2681	923	2.39	15704	1001	3.35	15610	1165	5.57	14843	1311	7.97	14949	1446	10.49	15105	1688	15.91	14605	1899	21.75	14475
11000	2949	999	2.97	17259	1073	4.00	17314	1221	6.36	16529	1359	8.90	16214	1488	11.60	16548	1724	17.37	16424	1931	23.51	15990
12000	3217	1076	3.65	18817	1146	4.76	18904	1276	7.20	18258	1413	9.97	17768	1535	12.82	17818	1762	18.91	18141	1965	25.36	17666
13000	3485	1153	4.43	20363	1220	5.63	20452	1336	8.15	20002	1469	11.11	19443	1585	14.12	19162	1802	20.50	19624			
14000	3753	1231	5.33	21924	1295	6.62	21997	1405	9.28	21809	1524	12.32	21142	1639	15.54	20736	1847	22.26	20953			
16000	4290	1389	7.54	25067	1447	8.98	25102	1550	11.97	25212	1642	15.11	24653	1751	18.70	24135	1945	26.09	23576			
18000	4826	1547	10.30	28185	1601	11.90	28204	1697	15.24	28335	1782	18.65	28214	1865	22.26	27612						

Medium Velocity Nozzle
 Nozzle Outlet Area: 2.82 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
4500	1596	576	0.68	7516	720	1.26	7468	944	2.58	7855												
5000	1773	606	0.79	8448	744	1.42	8393	961	2.81	8579	1142	4.42	8746									
5500	1950	638	0.92	9441	769	1.59	9220	981	3.07	9207	1156	4.74	9612	1312	6.58	9443						
6000	2128	670	1.05	10490	795	1.78	10019	1002	3.34	9932	1172	5.07	10331	1324	6.98	10478						
6500	2305	704	1.21	11528	823	1.98	10892	1025	3.65	10829	1191	5.44	10954	1339	7.42	11307						
7000	2482	739	1.39	12467	853	2.20	11824	1049	3.97	11754	1212	5.85	11616	1356	7.88	12027	1613	12.40	12201			
7500	2660	775	1.59	13369	885	2.45	12813	1073	4.30	12578	1234	6.28	12423	1376	8.39	12671	1626	13.02	13108			
8000	2837	812	1.81	14258	916	2.70	13796	1098	4.65	13363	1257	6.73	13328	1396	8.91	13296	1641	13.67	13900	1860	18.94	13860
9000	3191	888	2.33	16002	982	3.30	15907	1153	5.44	15064	1305	7.71	15104	1441	10.08	14975	1677	15.11	15263	1888	20.65	15710
10000	3546	968	2.97	17766	1052	4.01	17808	1213	6.32	16928	1355	8.77	16680	1488	11.35	16785	1719	16.72	16601	1922	22.51	17158
11000	3901	1050	3.73	19510	1125	4.84	19609	1276	7.32	18881	1410	9.94	18383	1537	12.71	18409	1763	18.46	18267	1962	24.57	18414
12000	4255	1134	4.64	21258	1200	5.80	21365	1340	8.43	20979	1470	11.26	20249	1589	14.19	20008	1810	20.35	20102			
13000	4610	1219	5.69	23010	1278	6.92	23126	1407	9.69	23027	1533	12.72	22197	1646	15.82	21784	1859	22.37	21803			
14000	4965	1305	6.92	24774	1358	8.21	24886	1477	11.12	24908	1596	14.29	24206	1706	17.59	23647	1909	24.49	23367			
16000	5674	1476	9.88	28266	1522	11.31	28366	1624	14.51	28516	1729	17.98	28366	1833	21.67	27624						
18000	6383	1649	13.64	31776	1692	15.27	31884	1777	18.67	32027	1871	22.45	32073	1964	26.42	31815						

High Velocity Nozzle
 Nozzle Outlet Area: 1.91 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
4500	2356	634	0.89	9006	764	1.48	8800	983	2.84	8547	1160	4.41	8290									
5000	2618	672	1.07	10118	797	1.72	9829	1007	3.15	9568	1182	4.79	9431									
5500	2880	710	1.27	11240	833	1.99	10891	1032	3.50	10576	1204	5.21	10471	1353	7.10	10292						
6000	3141	750	1.50	12354	869	2.28	11941	1059	3.88	11664	1227	5.67	11459	1374	7.61	11334						
6500	3403	793	1.77	13465	907	2.61	13036	1089	4.31	12729	1251	6.17	12431	1397	8.20	12392	1647	12.68	12076			
7000	3665	838	2.08	14574	945	2.97	14150	1123	4.80	13777	1278	6.73	13528	1420	8.82	13363	1668	13.44	13159			
7500	3927	884	2.43	15680	983	3.36	15279	1158	5.33	14809	1306	7.32	14627	1445	9.50	14373	1690	14.25	14222	1901	19.50	13902
8000	4188	930	2.82	16773	1022	3.79	16407	1193	5.87	15842	1337	7.98	15695	1471	10.22	15429	1712	15.11	15222	1922	20.50	14992
9000	4712	1022	3.73	18970	1105	4.79	18627	1268	7.12	18012	1405	9.48	17747	1528	11.84	17600	1760	17.06	17212	1967	22.73	17139
10000	5236	1116	4.84	21164	1194	6.01	20826	1343	8.53	20207	1476	11.14	19837	1595	13.78	19687	1812	19.23	19320			
11000	5759	1211	6.17	23279	1286	7.47	23028	1420	10.15	22479	1551	13.03	22004	1665	15.91	21753	1871	21.73	21542			
12000	6283	1308	7.76	25372	1378	9.16	25214	1501	12.02	24734	1627	15.14	24218	1738	18.25	23881	1936	24.54	23592			
13000	6806	1405	9.60	27430	1471	11.12	27439	1586	14.16	26930	1703	17.47	26476	1814	20.87	26073						
14000	7330	1503	11.73	29488	1565	13.36	29628	1676	16.64	29147	1781	20.06	28723	1889	23.71	28271						
16000	8377	1700	16.94	33585	1755	18.77	33844	1859	22.55	33522	1950	26.31	33172									
18000	9424	1899	23.57	37690	1949	25.64																

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

300 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 36.50"

Max RPM = CI I: 1360 CI II: 1779
Tip Speed FPM = 9.56 x RPM

Max Motor Frame: 326T
Windband Outlet Area: 15.95 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 4.57 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
5000	1094	484	0.66	7470	623	1.32	7292	835	2.87	7291													
5750	1258	512	0.79	8496	<u>643</u>	<u>1.51</u>	<u>8631</u>	850	3.17	8300	1015	5.04	8401										
6500	1422	543	0.93	9742	<u>666</u>	<u>1.71</u>	<u>9841</u>	867	3.49	9406	1030	5.49	9428										
7250	1586	573	1.08	11007	<u>691</u>	<u>1.93</u>	<u>10796</u>	<u>886</u>	<u>3.84</u>	<u>10649</u>	1046	5.96	10493	1184	8.25	10524							
8000	1751	606	1.26	12310	718	2.17	11779	<u>906</u>	<u>4.20</u>	<u>11997</u>	1063	6.44	11593	1200	8.87	11600							
8750	1915	645	1.48	13673	749	2.45	13010	<u>928</u>	<u>4.60</u>	<u>13252</u>	1082	6.96	12828	1216	9.49	12650	1448	15.01	12747				
9500	2079	685	1.72	14948	780	2.74	14274	<u>951</u>	<u>5.01</u>	<u>14303</u>	<u>1102</u>	<u>7.51</u>	<u>14197</u>	1234	10.15	13802	1463	15.91	13761	1660	22.15	13893	
10250	2243	726	2.01	16161	810	3.05	15552	977	5.47	15260	<u>1122</u>	<u>8.06</u>	<u>15442</u>	<u>1253</u>	<u>10.85</u>	<u>15060</u>	1479	16.84	14822	1675	23.35	14923	
11000	2407	766	2.32	17300	843	3.40	16886	1004	5.94	16224	<u>1145</u>	<u>8.68</u>	<u>16647</u>	<u>1273</u>	<u>11.58</u>	<u>16428</u>	1496	17.80	15926	1690	24.55	15935	
12500	2735	850	3.08	19642	919	4.26	19562	1064	7.01	18591	1194	9.98	18599	<u>1316</u>	<u>13.14</u>	<u>18923</u>	<u>1533</u>	<u>19.85</u>	<u>18335</u>	1723	27.07	18104	
14000	3063	934	3.99	21960	999	5.29	22048	1126	8.22	21159	1250	11.46	20649	1364	14.84	20949	1573	22.05	21016	1759	29.74	20416	
15500	3392	1020	5.10	24303	1081	6.53	24401	1189	9.56	23759	1311	13.10	23089	1418	16.74	22876	<u>1617</u>	<u>24.43</u>	<u>23433</u>				
17000	3720	1106	6.41	26632	1164	7.97	26721	1264	11.21	26465	1373	14.92	25655	1477	18.84	25174	<u>1665</u>	<u>26.98</u>	<u>25454</u>				
18500	4048	1193	7.96	28980	1248	9.65	29050	1344	13.13	29089	1435	16.88	28262	1539	21.12	27683	1719	29.82	27379				
20000	4376	1280	9.74	31314	1332	11.55	31360	1424	15.28	31360	1505	19.15	30899	1600	23.58	30250	1776	32.84	29524				
21500	4705	1368	11.81	33664	1418	13.75	33704	1506	17.73	33866	1583	21.81	33593	1663	26.24	32875							

Medium Velocity Nozzle

Nozzle Outlet Area: 3.45 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
5000	1449	500	0.73	8325	<u>635</u>	<u>1.40</u>	<u>8316</u>	843	2.94	8733													
5750	1667	532	0.88	9669	660	1.62	9620	859	3.26	9970													
6500	1884	566	1.06	11093	686	1.86	10882	<u>880</u>	<u>3.64</u>	<u>10974</u>	1040	5.64	11378										
7250	2101	602	1.27	12667	715	2.14	12100	<u>903</u>	<u>4.04</u>	<u>12004</u>	1057	6.14	12503	1195	8.46	12632							
8000	2319	639	1.50	14199	746	2.44	13406	<u>928</u>	<u>4.49</u>	<u>13318</u>	<u>1079</u>	<u>6.71</u>	<u>13492</u>	1212	9.12	13923							
8750	2536	678	1.77	15592	780	2.78	14833	955	4.98	14700	<u>1102</u>	<u>7.31</u>	<u>14507</u>	<u>1231</u>	<u>9.82</u>	<u>14944</u>	1461	15.37	15218				
9500	2754	718	2.08	16924	815	3.16	16302	982	5.49	15899	<u>1127</u>	<u>7.98</u>	<u>15797</u>	<u>1254</u>	<u>10.61</u>	<u>15916</u>	1477	16.34	16555	1677	22.73	16240	
10250	2971	760	2.44	18260	851	3.58	17898	1011	6.04	17106	1153	8.69	17179	<u>1277</u>	<u>11.42</u>	<u>16975</u>	1495	17.36	17691	1690	23.92	17866	
11000	3188	803	2.85	19582	887	4.03	19427	1042	6.64	18410	1180	9.43	18485	<u>1302</u>	<u>12.31</u>	<u>18276</u>	1516	18.48	18664	1706	25.21	19152	
12500	3623	891	3.82	22197	965	5.11	22261	1109	7.99	21225	1236	11.04	20858	1355	14.25	20998	<u>1563</u>	<u>20.92</u>	<u>20740</u>	1745	28.06	21315	
14000	4058	983	5.04	24820	1047	6.42	24948	1179	9.54	24216	1299	12.87	23510	1410	16.34	23373	<u>1613</u>	<u>23.61</u>	<u>23370</u>				
15500	4493	1077	6.52	27451	1132	7.99	27584	1252	11.34	27378	1367	14.95	26362	1471	18.69	25925	1666	26.54	26016				
17000	4928	1172	8.31	30089	1220	9.86	30217	1329	13.42	30250	1437	17.28	29348	1537	21.30	28703	1721	29.67	28381				
18500	5362	1267	10.40	32718	1310	12.05	32829	1409	15.81	32964	1509	19.89	32523	1606	24.20	31590							
20000	5797	1362	12.82	35337	1403	14.62	35462	1492	18.56	35640	1585	22.88	35521	1677	27.43	34679							
21500	6232	1458	15.63	37972	1497	17.56	38094	1576	21.64	38250	1664	26.23	38304	1750	31.01	37872							

High Velocity Nozzle

Nozzle Outlet Area: 2.34 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
5000	2137	545	0.93	9916	669	1.60	9660	872	3.19	9383													
5750	2457	587	1.17	11558	703	1.93	11305	<u>897</u>	<u>3.62</u>	<u>10948</u>	1057	5.58	10737										
6500	2778	629	1.46	13240	741	2.31	12838	<u>924</u>	<u>4.11</u>	<u>12446</u>	<u>1081</u>	<u>6.18</u>	<u>12340</u>	1216	8.45	12076							
7250	3098	673	1.79	14928	781	2.74	14425	954	4.68	14089	<u>1106</u>	<u>6.84</u>	<u>13831</u>	1240	9.23	13720							
8000	3419	720	2.19	16576	823	3.23	16065	987	5.32	15679	<u>1133</u>	<u>7.60</u>	<u>15315</u>	<u>1264</u>	<u>10.07</u>	<u>15216</u>	1490	15.57	14841				
8750	3739	770	2.67	18234	864	3.76	17698	1025	6.07	17243	1163	8.45	16964	<u>1290</u>	<u>11.02</u>	<u>16688</u>	1514	16.73	16496	1706	23.05	16065	
9500	4060	821	3.22	19884	907	4.38	19414	1064	6.87	18800	1195	9.37	18583	1319	12.09	18270	<u>1539</u>	<u>18.00</u>	<u>18090</u>	1729	24.50	17740	
10250	4380	872	3.85	21521	951	5.06	21084	1104	7.74	20381	1231	10.42	20136	1349	13.24	19916	<u>1564</u>	<u>19.35</u>	<u>19554</u>	1753	26.08	19362	
11000	4701	923	4.55	23175	998	5.85	22752	1146	8.70	22020	1269	11.56	21661	1381	14.47	21510	<u>1591</u>	<u>20.85</u>	<u>21045</u>	<u>1778</u>	<u>27.78</u>	<u>20945</u>	
12500	5342	1028	6.26	26473	1098	7.73	26082	1229	10.84	25316	1349	14.11	24839	1455	17.38	24602	1649	24.14	24222				
14000	5983	1134	8.38	29628	1199	10.01	29336	1316	13.40	28739	1433	17.05	28120	1535	20.73	27789	1717	28.06	27479				
15500	6624	1241	10.96	32719	1302	12.77	32667	1408	16.42	32059	1516	20.36	31440	1617	24.43	30997							
17000	7265	1349	14.05	35795	1406	16.04	35968	1507	20.04	35386	1603	24.21	34864	1701	28.64	34310							
18500	7906	1458	17.71	38870	1511	19.86	39163	1608	24.22	38673	1694	28.61	38202										
20000	8547	1568	21.99	41955	1617	24.29	42287	1710	29.03	41947													
21500	9188	1679	26.98	45054	1725	29.44	45410																

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

330 QIFE Wheel Type: Mixed Flow Airfoil Max RPM = CI I: 1234 CI II: 1613 Max Motor Frame: 326T
 Wheel Dia.: 40.25" Tip Speed FPM = 10.54 x RPM Windband Outlet Area: 19.39 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 5.56 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
7250	1304	472	1.00	10740	589	1.90	10961	775	3.96	10464	924	6.28	10546										
8000	1439	495	1.15	11988	606	2.11	12088	788	4.29	11590	936	6.75	11642	1062	9.39	11718							
8750	1574	518	1.30	13293	625	2.33	13052	802	4.63	12816	947	7.19	12624	1073	9.99	12734							
9500	1709	542	1.47	14594	645	2.57	14011	817	5.00	14190	960	7.68	13757	1084	10.58	13731							
10250	1844	570	1.68	15947	667	2.83	15161	833	5.39	15503	974	8.20	14955	1096	11.20	14797	1307	17.78	14939				
11000	1978	599	1.91	17244	690	3.11	16407	849	5.78	16606	988	8.72	16227	1109	11.85	15927	1318	18.67	15948				
11750	2113	629	2.17	18495	713	3.41	17678	867	6.20	17633	1003	9.27	17589	1123	12.54	17123	1330	19.60	17030	1508	27.23	17139	
12500	2248	659	2.45	19677	736	3.73	18995	887	6.67	18606	1019	9.85	18896	1137	13.23	18382	1342	20.53	18094	1519	28.43	18151	
14000	2518	721	3.12	22028	787	4.47	21647	928	7.64	20631	1053	11.08	21128	1167	14.70	21058	1368	22.49	20342	1543	30.92	20310	
15500	2788	783	3.91	24338	845	5.36	24296	974	8.76	23105	1091	12.42	23007	1200	16.30	23442	1396	24.56	22834	1568	33.46	22493	
17000	3058	846	4.83	26667	905	6.42	26774	1020	9.97	25668	1133	13.91	25082	1236	18.01	25429	1426	26.77	25519	1595	36.14	24817	
18500	3327	910	5.92	29008	966	7.63	29131	1067	11.30	28302	1178	15.53	27487	1276	19.89	27337	1459	29.17	28008				
20000	3597	974	7.17	31335	1028	9.02	31465	1120	12.85	30950	1225	17.33	30057	1319	21.93	29525	1494	31.68	30141				
21500	3867	1039	8.62	33692	1090	10.58	33775	1178	14.62	33616	1270	19.19	32627	1365	24.15	31998	1532	34.37	32020				
23000	4137	1104	10.26	36039	1153	12.35	36114	1239	16.67	36215	1318	21.24	35253	1411	26.49	34511	1572	37.19	33928				
24500	4406	1169	12.09	38376	1216	14.30	38432	1299	18.87	38617	1372	23.61	37920	1456	28.95	37076							

Medium Velocity Nozzle

Nozzle Outlet Area: 4.20 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
7250	1726	491	1.13	12240	605	2.05	12152	784	4.09	12511	933	6.44	12472										
8000	1905	517	1.32	13699	625	2.30	13403	800	4.47	13456	944	6.91	13930										
8750	2083	543	1.52	15229	646	2.57	14582	818	4.89	14539	958	7.43	15165	1083	10.24	15277							
9500	2262	571	1.75	16824	669	2.87	15878	836	5.32	15795	973	7.98	16100	1095	10.88	16568							
10250	2440	599	2.01	18223	694	3.20	17288	855	5.78	17145	990	8.57	17059	1109	11.58	17710	1320	18.24	17739				
11000	2619	629	2.30	19603	720	3.56	18748	875	6.28	18431	1008	9.20	18223	1124	12.30	18617	1331	19.18	19267				
11750	2798	659	2.62	20922	746	3.95	20227	896	6.81	19644	1027	9.88	19569	1141	13.09	19572	1343	20.15	20465	1523	27.94	20253	
12500	2976	691	2.99	22280	773	4.37	21841	918	7.38	20868	1046	10.58	20918	1159	13.93	20707	1357	21.19	21605	1533	29.14	21784	
14000	3333	755	3.84	24895	828	5.32	24847	965	8.60	23522	1087	12.12	23471	1197	15.76	23395	1389	23.46	23494	1558	31.77	24253	
15500	3690	822	4.87	27536	887	6.46	27609	1016	10.00	26389	1130	13.78	25875	1237	17.73	26040	1424	25.92	25667	1589	34.73	26296	
17000	4048	890	6.10	30129	948	7.78	30275	1068	11.56	29378	1177	15.61	28533	1278	19.83	28387	1462	28.66	28366				
18500	4405	960	7.55	32759	1011	9.31	32907	1122	13.33	32556	1227	17.64	31347	1323	22.16	30905	1501	31.54	31025				
20000	4762	1031	9.26	35407	1076	11.09	35538	1179	15.34	35534	1280	19.95	34328	1371	24.67	33620	1542	34.64	33464				
21500	5119	1101	11.18	38008	1143	13.15	38186	1238	17.60	38302	1333	22.44	37479	1422	27.45	36487	1585	37.96	35865				
23000	5476	1172	13.39	40640	1211	15.46	40802	1298	20.09	40976	1387	25.14	40582	1474	30.47	39408							
24500	5833	1244	15.92	43299	1281	18.12	43452	1360	22.90	43635	1444	28.18	43522	1527	33.75	42544							

High Velocity Nozzle

Nozzle Outlet Area: 2.84 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
7250	2553	543	1.52	14624	647	2.47	14274	820	4.56	13815	964	6.97	13569										
8000	2817	574	1.81	16292	675	2.85	15774	841	5.08	15358	982	7.58	15151	1105	10.37	14905							
8750	3081	607	2.15	17990	705	3.28	17372	863	5.64	16980	1001	8.25	16671	1122	11.13	16467							
9500	3345	642	2.54	19658	736	3.76	18995	887	6.26	18586	1021	9.00	18154	1141	11.99	18083	1346	18.60	17541				
10250	3609	679	2.99	21325	768	4.30	20686	914	6.96	20132	1043	9.82	19769	1160	12.91	19563	1364	19.75	19253				
11000	3873	716	3.49	22946	799	4.86	22358	943	7.75	21688	1066	10.71	21436	1180	13.90	21039	1382	20.95	20851	1555	28.70	20331	
11750	4137	754	4.06	24588	831	5.50	24052	972	8.56	23243	1091	11.67	23045	1201	14.96	22578	1400	22.21	22355	1572	30.17	21954	
12500	4401	793	4.72	26267	864	6.19	25717	1003	9.46	24881	1118	12.73	24579	1224	16.14	24266	1419	23.59	23832	1590	31.76	23574	
14000	4930	869	6.18	29557	936	7.85	29077	1065	11.42	28129	1176	15.11	27692	1275	18.76	27493	1460	26.65	26846				
15500	5458	948	8.00	32833	1010	9.80	32339	1127	13.65	31460	1236	17.72	30870	1331	21.77	30533	1505	30.10	30137				
17000	5986	1027	10.15	35975	1086	12.13	35618	1192	16.24	34877	1298	20.66	34116	1391	25.15	33741	1556	34.04	33356				
18500	6514	1107	12.69	39080	1163	14.85	38955	1260	19.19	38200	1361	23.99	37489	1452	28.81	36943	1612	38.50	36428				
20000	7042	1187	15.62	42145	1240	17.96	42269	1333	22.66	41537	1424	27.63	40859	1515	32.90	40250							
21500	7570	1268	19.01	45221	1318	21.52	45511	1408	26.59	44847	1490	31.74	44224	1577	37.34	43584							
23000	8099	1350	22.91	48316	1397	25.58	48692	1483	30.95	48099	1560	36.42	47571										
24500	8627	1432	27.32	51396	1476	30.12	51799	1560	35.93	51410													

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

365 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 44.50"

Max RPM = CI I: 1116 CI II: 1459
Tip Speed FPM = 11.65 x RPM

Max Motor Frame: 365T
Windband Outlet Area: 23.71 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 6.85 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
8000	1168	409	1.08	11314	<u>520</u>	<u>2.12</u>	<u>11825</u>	692	4.51	12698													
9000	1314	429	1.25	12587	<u>536</u>	<u>2.39</u>	<u>13119</u>	703	4.91	13791	838	7.76	14561										
10000	1460	452	1.44	14250	<u>553</u>	<u>2.66</u>	<u>14364</u>	716	5.36	15026	849	8.38	15701	963	11.60	16317							
11000	1606	477	1.67	15989	572	2.96	15599	<u>730</u>	<u>5.83</u>	<u>16266</u>	861	9.02	16891	974	12.44	17482							
12000	1752	502	1.92	17457	592	3.28	16850	<u>746</u>	<u>6.35</u>	<u>17601</u>	874	9.70	18133	986	13.30	18696							
13000	1898	530	2.21	18918	613	3.63	18231	<u>762</u>	<u>6.88</u>	<u>18858</u>	888	10.40	19398	998	14.15	19874	1188	22.28	20898				
14000	2044	558	2.53	20301	636	4.02	19912	<u>780</u>	<u>7.45</u>	<u>20171</u>	<u>903</u>	<u>11.14</u>	<u>20678</u>	1011	15.05	21105	1199	23.53	22036				
15000	2190	587	2.90	21696	660	4.45	21650	798	8.03	21367	<u>918</u>	<u>11.89</u>	<u>21907</u>	<u>1025</u>	<u>15.99</u>	<u>22366</u>	1211	24.81	23235	1372	34.30	24154	
17000	2482	646	3.75	24477	711	5.44	24746	837	9.28	23816	<u>952</u>	<u>13.54</u>	<u>24472</u>	<u>1055</u>	<u>17.98</u>	<u>24892</u>	1236	27.44	25642	1395	37.69	26498	
19000	2774	706	4.77	27275	766	6.63	27576	881	10.74	26789	989	15.30	26910	<u>1089</u>	<u>20.18</u>	<u>27517</u>	1264	30.25	28139	1419	41.11	28836	
21000	3066	768	6.03	30133	824	8.04	30389	928	12.40	30244	1029	17.23	29415	1125	22.48	29990	1295	33.31	30720	1446	44.79	31317	
23000	3358	830	7.49	32956	882	9.63	33135	979	14.34	33500	1073	19.42	32374	1163	24.90	32386	<u>1329</u>	<u>36.62</u>	<u>33351</u>				
25000	3650	893	9.20	35797	942	11.51	35944	1032	16.50	36405	1119	21.83	35781	1204	27.56	34980	1364	39.97	35823				
27000	3942	956	11.17	38616	1003	13.67	38785	1087	18.91	39183	1169	24.60	39203	1249	30.59	38111	1401	43.51	38203				
29000	4234	1020	13.44	41461	1064	16.09	41600	1144	21.64	41956	1220	27.58	42227	1296	33.89	41601	1441	47.35	40703				
31000	4526	1085	16.06	44334	<u>1126</u>	<u>18.84</u>	<u>44436</u>	1203	24.74	44769	1274	30.94	45107	1345	37.51	44959							

Medium Velocity Nozzle

Nozzle Outlet Area: 5.41 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
8000	1479	425	1.21	13399	<u>529</u>	<u>2.22</u>	<u>13608</u>	697	4.58	13307													
9000	1664	449	1.43	15097	549	2.54	15297	<u>710</u>	<u>5.04</u>	<u>15141</u>	845	7.92	15157										
10000	1848	474	1.68	16855	570	2.88	16835	<u>726</u>	<u>5.56</u>	<u>17081</u>	856	8.55	16625										
11000	2033	500	1.96	18475	593	3.27	18403	<u>743</u>	<u>6.12</u>	<u>18773</u>	870	9.27	18603	982	12.69	18315							
12000	2218	528	2.28	20083	617	3.70	20053	<u>762</u>	<u>6.73</u>	<u>20458</u>	<u>885</u>	<u>10.02</u>	<u>20467</u>	994	13.57	19990							
13000	2403	557	2.65	21670	641	4.15	21788	782	7.37	22067	<u>902</u>	<u>10.84</u>	<u>22227</u>	<u>1009</u>	<u>14.57</u>	<u>22069</u>	1197	22.69	21689				
14000	2588	587	3.07	23248	666	4.65	23546	803	8.05	23592	<u>920</u>	<u>11.72</u>	<u>23907</u>	<u>1025</u>	<u>15.62</u>	<u>23972</u>	1208	23.95	23153				
15000	2773	618	3.55	24829	692	5.20	25221	826	8.82	25172	939	12.63	25534	<u>1041</u>	<u>16.67</u>	<u>25613</u>	1222	25.38	25139	1382	34.91	25022	
17000	3142	682	4.68	27984	748	6.49	28475	873	10.47	28389	981	14.67	28721	<u>1078</u>	<u>19.05</u>	<u>28962</u>	1253	28.46	29102	1406	38.42	28308	
19000	3512	749	6.10	31195	806	8.01	31618	922	12.35	31924	1026	16.94	31801	1118	21.63	32108	1286	31.69	32429	1436	42.43	32351	
21000	3882	816	7.77	34349	867	9.82	34761	973	14.46	35318	1074	19.50	35111	1163	24.59	35249	1323	35.27	35700				
23000	4251	885	9.80	37557	931	11.99	37943	1028	16.92	38580	1122	22.26	38585	1210	27.84	38437	1364	39.22	38937				
25000	4621	954	12.16	40737	996	14.49	41097	1085	19.72	41771	1173	25.38	42070	1258	31.37	41831	1408	43.54	42053				
27000	4991	1024	14.92	43941	1063	17.41	44295	1144	22.88	44932	1227	28.89	45388	1307	35.19	45366	1455	48.31	45245				
29000	5360	1094	18.07	47128	<u>1130</u>	<u>20.71</u>	<u>47453</u>	1205	26.46	48088	1282	32.73	48557	1358	39.38	48806							
31000	5730	<u>1165</u>	<u>21.69</u>	<u>50348</u>	1199	24.52	50675	1268	30.52	51258	1340	37.08	51767	1411	43.96	52066							

High Velocity Nozzle

Nozzle Outlet Area: 3.55 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
8000	2254	464	1.56	15349	562	2.61	14911	<u>726</u>	<u>5.06</u>	<u>15363</u>	857	7.87	15359										
9000	2535	495	1.91	17477	589	3.08	16938	<u>745</u>	<u>5.67</u>	<u>17094</u>	875	8.65	17417	986	11.91	17270							
10000	2817	527	2.31	19544	618	3.62	19024	<u>765</u>	<u>6.35</u>	<u>18760</u>	<u>892</u>	<u>9.45</u>	<u>19083</u>	1003	12.89	19326	1189	20.40	18459				
11000	3099	561	2.79	21637	648	4.22	21133	788	7.15	20564	<u>912</u>	<u>10.40</u>	<u>20898</u>	<u>1021</u>	<u>13.97</u>	<u>21177</u>	1207	21.84	21072				
12000	3380	597	3.35	23791	677	4.86	23153	813	8.01	22474	<u>932</u>	<u>11.41</u>	<u>22578</u>	<u>1039</u>	<u>15.11</u>	<u>22868</u>	1224	23.29	23175	1381	32.25	22547	
13000	3662	633	3.98	25857	708	5.59	25246	841	9.00	24539	954	12.56	24325	<u>1059</u>	<u>16.40</u>	<u>24642</u>	1242	24.88	25098	1399	34.21	25020	
14000	3944	670	4.71	27898	740	6.40	27308	870	10.08	26622	978	13.80	26180	<u>1079</u>	<u>17.77</u>	<u>26299</u>	1259	26.50	26755	1416	36.16	27059	
15000	4225	707	5.52	29876	774	7.33	29413	899	11.23	28666	1004	15.15	28143	1101	19.30	28042	1278	28.30	28506	1433	38.21	28865	
17000	4789	784	7.49	33851	845	9.50	33688	959	13.81	32851	1061	18.27	32283	1151	22.75	31876	1319	32.37	32007				
19000	5352	861	9.89	37713	918	12.13	37838	1021	16.79	36993	1120	21.80	36437	1207	26.76	35979	1363	36.97	35475				
21000	5915	939	12.80	41557	992	15.25	41836	1087	20.30	41128	1180	25.75	40610	1266	31.32	40163	1414	42.25	39363				
23000	6479	1019	16.32	45453	1068	18.97	45793	1157	24.43	45390	1242	30.21	44758	1325	36.28	44295							
25000	7042	1098	20.38	49266	1145	23.31	49704	1229	29.19	49613	1307	35.29	48872	1385	41.74	48421							
27000	7606	1179	25.19	53150	1223	28.35	53601	1303	34.68	53774	1376	41.15	53113	1448	47.91	52580							
29000	8169	1260	30.71	57016	1301	34.06	57450	1377	40.81	57788	1447	47.75	57374										
31000	8732	1341	36.99	60866	1380	40.58	61312	1453	47.83	61795													

Underlined figures indicate maximum static efficiency.

NOTES:

- Performance certified is for installation Type A: Free inlet, free outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings do not include the effects of crosswinds.

402 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 49.00"

Max RPM = CI I: 1013 CI II: 1325
Tip Speed FPM = 12.83 x RPM

Max Motor Frame: 365T
Windband Outlet Area: 28.75 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 8.31 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
10000	1204	375	1.35	14014	476	2.65	14756	631	5.59	15739												
11000	1325	391	1.53	15387	488	2.92	16032	640	6.02	16924	762	9.47	17790									
12000	1445	408	1.72	17029	501	3.20	17304	649	6.45	18066	770	10.09	18898									
13000	1565	426	1.94	18758	514	3.47	18452	660	6.93	19383	779	10.73	20096	882	14.81	20840						
14000	1686	445	2.18	20344	529	3.79	19708	671	7.42	20628	788	11.37	21264	891	15.69	22075						
15000	1806	465	2.45	21818	544	4.12	20971	683	7.94	21931	798	12.05	22512	899	16.48	23137	1073	26.07	24501			
17000	2047	507	3.08	24631	578	4.89	24183	708	9.02	24423	820	13.51	25063	918	18.25	25571	1089	28.56	26733			
19000	2288	551	3.84	27440	615	5.79	27616	736	10.21	26862	844	15.09	27641	940	20.19	28168	1107	31.11	29117	1253	42.99	30259
21000	2529	595	4.72	30198	654	6.83	30600	766	11.50	29373	870	16.76	30178	963	22.22	30706	1127	33.86	31648	1270	46.32	32539
23000	2769	640	5.76	32998	695	8.01	33393	799	12.97	32374	898	18.54	32612	988	24.39	33266	1148	36.68	34128	1289	49.85	35003
25000	3010	686	6.97	35834	738	9.39	36186	835	14.66	35932	927	20.40	35033	1015	26.69	35780	1171	39.71	36698	1309	53.51	37471
28000	3371	756	9.15	40093	804	11.80	40364	891	17.48	40766	976	23.65	39400	1058	30.35	39417	1208	44.54	40541			
31000	3733	827	11.79	44362	871	14.66	44547	951	20.78	45087	1029	27.39	44612	1105	34.44	43437	1248	49.65	44248			
34000	4094	899	14.96	48650	939	18.02	48762	1014	24.61	49261	1086	31.71	49518	1156	39.10	48366	1291	55.14	47878			
37000	4455	971	18.66	52980	1009	22.01	53050	1079	29.01	53425	1145	36.50	53862	1211	44.43	53600						
40000	4816	1043	22.94	57141	1079	26.56	57296	1146	34.09	57646	1207	41.94	58051	1268	50.29	58263						

Medium Velocity Nozzle

Nozzle Outlet Area: 6.56 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
10000	1524	391	1.52	16705	485	2.79	17043	635	5.67	16508												
11000	1677	409	1.75	18425	500	3.11	18696	646	6.16	18576	768	9.65	18480									
12000	1829	428	2.00	20215	516	3.46	20258	658	6.69	20521	776	10.27	19898									
13000	1982	447	2.27	21836	533	3.84	21813	671	7.25	22284	786	10.97	21794	889	15.10	21713						
14000	2134	468	2.58	23481	551	4.26	23445	684	7.81	23881	798	11.76	23921	897	15.93	23154						
15000	2287	489	2.93	25054	568	4.67	25046	698	8.42	25467	810	12.55	25715	908	16.91	25241						
17000	2591	534	3.75	28251	605	5.64	28563	730	9.80	28675	836	14.23	29044	931	18.95	29085	1098	29.12	28246			
19000	2896	581	4.74	31421	645	6.79	31902	764	11.33	31772	865	16.11	32274	956	21.13	32406	1119	32.01	32192	1262	43.71	31544
21000	3201	629	5.93	34553	687	8.12	35096	800	13.05	35106	897	18.19	35392	984	23.53	35673	1142	35.06	35873	1281	47.33	35109
23000	3506	679	7.35	37747	731	9.67	38267	836	14.91	38581	931	20.48	38487	1015	26.20	38898	1168	38.42	39333	1304	51.40	39205
25000	3811	729	8.99	40894	777	11.47	41445	875	17.05	42095	967	23.03	41779	1048	29.09	41993	1195	41.92	42553			
28000	4268	806	11.98	45678	848	14.66	46169	936	20.67	46961	1021	27.16	46978	1101	33.96	46798	1241	47.85	47433			
31000	4726	884	15.62	50471	922	18.54	50949	1000	24.92	51710	1079	31.94	52176	1155	39.31	51936	1291	54.43	52111			
34000	5183	963	20.01	55288	997	23.13	55702	1068	29.97	56502	1140	37.38	57028	1211	45.27	57217						
37000	5640	1042	25.16	60078	1074	28.58	60518	1137	35.71	61181	1204	43.63	61824	1270	51.96	62221						
40000	6098	1122	31.22	64908	1151	34.84	65286	1210	42.51	65994	1270	50.69	66553									

High Velocity Nozzle

Nozzle Outlet Area: 4.30 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP		
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW
10000	2323	428	1.98	19226	516	3.30	18653	663	6.30	19088	783	9.80	19399	883	13.56	18555						
11000	2556	451	2.34	21321	537	3.79	20740	678	6.94	20891	795	10.52	21166	896	14.50	21036						
12000	2788	475	2.74	23395	559	4.33	22854	693	7.62	22558	809	11.38	23002	909	15.49	23153						
13000	3020	501	3.22	25542	581	4.91	24922	710	8.40	24350	823	12.27	24717	922	16.53	24986	1092	26.01	24794			
14000	3253	527	3.74	27647	603	5.54	26978	728	9.24	26203	838	13.26	26450	936	17.68	26793	1105	27.47	27058	1247	38.09	25875
15000	3485	554	4.33	29765	625	6.20	29002	748	10.16	28209	854	14.36	28190	950	18.87	28502	1118	28.97	29047	1260	39.95	28456
17000	3950	609	5.72	33865	673	7.80	33191	791	12.27	32363	888	16.73	31722	981	21.63	32004	1144	32.19	32518	1286	43.87	32814
19000	4414	666	7.45	37894	724	9.70	37385	835	14.64	36494	929	19.59	35815	1014	24.70	35461	1173	35.90	36030	1313	48.20	36532
21000	4879	723	9.51	41787	778	12.00	41671	880	17.31	40661	972	22.80	39942	1053	28.30	39415	1204	40.10	39467			
23000	5344	781	11.95	45665	833	14.67	45827	926	20.28	44747	1016	26.33	44072	1095	32.34	43513	1237	44.71	42926			
25000	5809	839	14.78	49487	888	17.71	49811	976	23.79	48947	1061	30.26	48262	1139	36.83	47690	1275	49.95	46809			
28000	6506	928	19.95	55278	973	23.21	55734	1054	29.90	55295	1131	36.94	54534	1206	44.30	53956						
31000	7203	1018	26.28	61071	1060	29.92	61617	1135	37.19	61592	1205	44.77	60742	1274	52.68	60161						
34000	7900	1109	33.92	66885	1147	37.81	67389	1218	45.78	67730	1283	53.94	67092									
37000	8597	1200	42.91	72668	1236	47.21	73217	1303	55.87	73770												
40000	9294	1292	53.50	78489	1325	58.06	78989															

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

445 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 54.25"

Max RPM = CI I: 915 CI II: 1197
Tip Speed FPM = 14.20 x RPM

Max Motor Frame: 405T
Windband Outlet Area: 35.24 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 10.18 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
13000	1277	348	1.79	18242	<u>436</u>	<u>3.44</u>	<u>18978</u>	574	7.14	20024	685	11.28	21177										
14500	1424	366	2.07	20533	<u>450</u>	<u>3.85</u>	<u>20889</u>	585	7.82	21943	694	12.22	22890										
16000	1572	386	2.39	23142	465	4.28	22703	<u>596</u>	<u>8.50</u>	<u>23738</u>	704	13.19	24702	797	18.21	25613							
18000	1768	415	2.91	26262	487	4.92	25203	<u>613</u>	<u>9.51</u>	<u>26317</u>	718	14.52	27131	810	19.92	28002							
20000	1965	445	3.50	29043	511	5.64	28152	<u>632</u>	<u>10.63</u>	<u>28965</u>	<u>734</u>	<u>15.96</u>	<u>29703</u>	823	21.61	30295	979	34.01	31912				
22000	2161	477	4.20	31855	537	6.47	31623	652	11.78	31455	<u>751</u>	<u>17.48</u>	<u>32265</u>	<u>838</u>	<u>23.45</u>	<u>32796</u>	991	36.45	34108	1123	50.40	35433	
24000	2358	509	4.99	34602	565	7.43	34902	673	12.99	33858	<u>769</u>	<u>19.08</u>	<u>34800</u>	<u>855</u>	<u>25.47</u>	<u>35440</u>	1005	39.10	36590	1136	53.87	37878	
26000	2554	542	5.92	37404	594	8.49	37824	695	14.28	36368	<u>788</u>	<u>20.74</u>	<u>37263</u>	<u>872</u>	<u>27.50</u>	<u>37955</u>	1020	41.87	39135	1149	57.24	40226	
28000	2750	575	6.95	40190	625	9.71	40685	720	15.80	39462	809	22.55	39736	<u>891</u>	<u>29.73</u>	<u>40592</u>	<u>1035</u>	<u>44.63</u>	<u>41536</u>	1162	60.63	42515	
30000	2947	609	8.15	43040	656	11.03	43433	745	17.37	42825	830	24.37	42116	<u>910</u>	<u>31.93</u>	<u>43039</u>	<u>1052</u>	<u>47.66</u>	<u>44137</u>	1177	64.32	45058	
32500	3193	652	9.86	46607	696	12.91	46897	779	19.63	47116	859	26.94	45463	<u>936</u>	<u>34.93</u>	<u>46094</u>	<u>1074</u>	<u>51.59</u>	<u>47344</u>	<u>1197</u>	<u>69.13</u>	<u>48255</u>	
35000	3438	695	11.79	50142	737	15.05	50396	815	22.17	51029	890	29.78	49417	<u>963</u>	<u>38.06</u>	<u>49152</u>	<u>1098</u>	<u>55.79</u>	<u>50610</u>				
37500	3684	738	13.97	53649	779	17.49	53953	852	24.94	54619	923	32.95	53852	<u>992</u>	<u>41.49</u>	<u>52509</u>	1122	59.96	53618				
40000	3929	782	16.47	57215	820	20.13	57412	890	27.97	58087	957	36.36	58045	<u>1023</u>	<u>45.27</u>	<u>56437</u>	1148	64.45	56641				
43000	4224	835	19.86	61484	871	23.78	61679	937	32.04	62234	1000	40.93	62684	<u>1062</u>	<u>50.24</u>	<u>61685</u>	1181	70.20	60377				
46000	4519	888	23.71	65730	<u>922</u>	<u>27.86</u>	<u>65907</u>	985	36.58	66383	1044	45.87	66943	<u>1102</u>	<u>55.56</u>	<u>66670</u>							

Medium Velocity Nozzle

Nozzle Outlet Area: 8.04 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
13000	1617	363	2.03	21739	446	3.65	22103	580	7.33	21898													
14500	1803	383	2.38	24337	463	4.15	24441	592	<u>8.07</u>	<u>24686</u>	699	12.43	23916										
16000	1990	405	2.80	26904	482	4.72	26809	<u>606</u>	<u>8.89</u>	<u>27303</u>	711	13.53	26985	803	18.54	26623							
18000	2239	436	3.46	30141	508	5.56	30046	627	10.11	30700	<u>728</u>	<u>15.06</u>	<u>30827</u>	817	20.35	30134							
20000	2487	468	4.22	33276	535	6.50	33577	649	11.40	33812	<u>746</u>	<u>16.66</u>	<u>34095</u>	<u>833</u>	<u>22.31</u>	<u>34017</u>	986	34.58	33206				
22000	2736	502	5.14	36450	563	7.55	36962	674	12.89	36974	<u>767</u>	<u>18.49</u>	<u>37461</u>	<u>851</u>	<u>24.43</u>	<u>37544</u>	1000	37.29	36747	1132	51.41	36813	
24000	2985	537	6.20	39608	594	8.80	40308	700	14.51	40168	789	20.42	40629	<u>871</u>	<u>26.76</u>	<u>40961</u>	1016	<u>40.23</u>	<u>40714</u>	1144	54.75	39686	
26000	3233	573	7.44	42780	625	10.16	43468	726	16.23	43478	813	22.55	43735	892	29.22	44206	<u>1034</u>	<u>43.41</u>	<u>44452</u>	1159	58.51	43541	
28000	3482	610	8.88	45986	657	11.69	46595	753	18.12	47021	839	24.92	46943	915	31.90	47444	<u>1053</u>	<u>46.75</u>	<u>47875</u>	<u>1176</u>	<u>62.59</u>	<u>47655</u>	
30000	3731	647	10.49	49153	691	13.47	49802	781	20.19	50504	865	27.41	50149	<u>939</u>	<u>34.74</u>	<u>50529</u>	<u>1073</u>	<u>50.26</u>	<u>51166</u>	<u>1194</u>	<u>66.83</u>	<u>51336</u>	
32500	4042	694	12.81	53134	734	15.95	53736	818	23.07	54673	898	30.73	54412	971	38.65	54476	1100	54.98	55242				
35000	4353	741	15.45	57079	778	18.77	57660	856	26.25	58655	932	34.35	58839	1003	42.74	58432	1129	60.07	59206				
37500	4664	789	18.50	61081	824	22.06	61689	895	29.76	62576	967	38.28	63086	1036	47.18	62708	1159	65.45	63002				
40000	4975	837	21.94	65061	870	25.72	65664	936	33.76	66551	1004	42.64	67191	1070	51.99	67154	1191	71.34	66936				
43000	5348	895	26.64	69847	<u>925</u>	<u>30.60</u>	<u>70364</u>	987	39.17	71337	1050	48.43	72003	1112	58.23	72310							
46000	5721	<u>954</u>	<u>32.08</u>	<u>74696</u>	<u>982</u>	<u>36.28</u>	<u>75187</u>	1039	45.22	76081	1098	54.95	76822	1157	65.28	77337							

High Velocity Nozzle

Nozzle Outlet Area: 5.28 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
13000	2464	399	2.69	25115	477	4.38	24352	<u>607</u>	<u>8.19</u>	<u>24746</u>	714	12.55	25169	805	17.33	24732							
14500	2748	426	3.29	28331	501	5.17	27509	<u>624</u>	<u>9.21</u>	<u>27367</u>	<u>728</u>	<u>13.73</u>	<u>27730</u>	819	18.77	27961							
16000	3033	454	3.98	31474	525	6.03	30577	642	10.35	29948	<u>744</u>	<u>15.10</u>	<u>30402</u>	834	20.37	30850	987	31.98	30562				
18000	3412	493	5.08	35708	558	7.33	34742	669	12.05	33687	<u>766</u>	<u>17.12</u>	<u>33776</u>	<u>854</u>	<u>22.66</u>	<u>34273</u>	1006	34.91	34849	1135	48.33	34092	
20000	3791	533	6.39	39819	593	8.86	38970	700	14.06	37799	791	19.46	37340	<u>876</u>	<u>25.28</u>	<u>37740</u>	<u>1025</u>	<u>38.05</u>	<u>38419</u>	1154	52.16	38637	
22000	4170	574	7.95	43833	629	10.59	43056	733	16.36	42041	819	22.09	41210	900	28.27	41233	<u>1045</u>	<u>40.49</u>	<u>41822</u>	1173	56.22	42445	
24000	4549	616	9.80	47802	668	12.67	47366	766	18.86	46229	850	25.09	45337	<u>926</u>	<u>31.54</u>	<u>44880</u>	<u>1067</u>	<u>45.38</u>	<u>45331</u>	<u>1193</u>	<u>60.69</u>	<u>46002</u>	
26000	4928	658	11.92	51676	708	15.04	51634	799	21.56	50354	882	28.37	49480	955	35.19	48839	1090	49.66	48743				
28000	5307	701	14.38	55577	748	17.68	55733	833	24.55	54451	915	31.97	53681	986	39.23	52940	1115	54.36	52297				
30000	5686	744	17.16	59430	789	20.69	59789	869	27.93	58592	948	35.83	57862	1018	43.62	57078	1142	59.43	56059				
32500	6160	799	21.21	64308	841	24.98	64773	917	32.80	63946	990	41.08	63069	1059	49.60	62296	1180	66.63	61201				
35000	6634	853	25.76	69055	893	29.83	69629	965	38.14	69180	1033	46.85	68184	1100	56.03	67485							
37500	7108	909	31.13	73946	<u>947</u>	<u>35.51</u>	<u>74580</u>	1015	44.27	74450	1079	53.47	73406	1142	63.06	72686							
40000	7582	<u>964</u>	<u>37.09</u>	<u>78724</u>	1000	41.73	79375	1066	51.14	79638	1126	60.72	78639	<u>1186</u>	<u>70.88</u>	<u>77939</u>							
43000	8150	1031	45.31	84517	1065	50.31	85189	1128	60.42	85738	1185	70.62	85063										
46000	8719	<u>1098</u>	<u>54.68</u>	<u>90288</u>	1130	59.99	90949	1190	70.76	91664													

Underlined figures indicate maximum static efficiency.

NOTES:

1. Performance certified is for installation Type A: Free inlet, free outlet.
2. Power rating (BHP) does not include transmission losses.
3. Performance ratings do not include the effects of appurtenances (accessories).
4. Performance ratings do not include the effects of crosswinds.

490 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 60.00"

Max RPM = CI I: 828 CI II: 1082
Tip Speed FPM = 15.71 x RPM

Max Motor Frame: 405T
Windband Outlet Area: 43.10 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 12.45 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
18000	1445	334	2.60	25680	409	4.79	25919	530	9.66	27083	629	15.14	28376										
20000	1606	353	3.02	28947	424	5.37	28323	542	10.64	29692	639	16.43	30808	723	22.68	31937							
22000	1767	375	3.55	32094	440	6.00	30777	554	11.62	32141	649	17.74	33144	732	24.32	34162							
24000	1927	397	4.13	34874	458	6.73	33723	568	12.73	34809	661	19.20	35775	742	26.05	36558	883	41.00	38480				
26000	2088	420	4.79	37637	477	7.54	37167	582	13.83	37259	673	20.66	38259	753	27.89	39083	892	43.49	40737	1012	60.24	42459	
28000	2248	444	5.55	40449	497	8.44	40587	597	15.00	39649	686	22.23	40824	764	29.72	41466	902	46.08	43166	1021	63.62	44790	
30000	2409	468	6.39	43222	518	9.44	43712	613	16.25	42102	700	23.90	43418	777	31.79	44155	912	48.68	45532	1030	66.94	47041	
33000	2650	505	7.86	47461	551	11.12	48031	639	18.33	46202	722	26.47	47123	797	35.00	48065	929	52.89	49355	1045	72.12	50672	
36000	2891	542	9.54	51671	585	13.01	52162	667	20.68	51177	745	29.17	50683	818	38.31	51839	947	57.28	53134	1060	77.32	54167	
39000	3132	580	11.52	55946	621	15.25	56399	697	23.34	56450	770	32.14	54543	840	41.74	55405	966	61.89	56934	1078	83.16	58123	
42000	3373	618	13.76	60181	657	17.72	60567	728	26.25	61174	797	35.45	59065	864	45.50	59096	987	66.89	60872				
45000	3614	656	16.28	64383	693	20.47	64699	760	29.43	65491	826	39.18	64340	889	49.47	62962	1008	71.83	64526				
48000	3854	695	19.18	68666	730	23.59	68927	794	33.03	69749	856	43.20	69521	916	53.87	67445	1031	77.20	68202				
51000	4095	734	22.41	72925	767	27.03	73130	829	37.01	73969	887	47.56	74261	944	58.61	72507	1055	82.84	71892				
55000	4417	787	27.38	78681	818	32.33	78869	876	42.83	79501	930	53.94	80106	984	65.70	79551							
59000	4738	839	32.92	84298	869	38.30	84556	924	49.39	85063	975	61.10	85737	1025	73.36	85862							

Medium Velocity Nozzle

Nozzle Outlet Area: 9.84 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
18000	1830	349	2.98	30222	421	5.17	30306	537	10.01	30670	634	15.43	29926										
20000	2033	371	3.56	33611	440	5.95	33488	551	11.12	34114	645	16.84	33735	728	23.04	33193							
22000	2237	394	4.22	36839	459	6.78	36697	566	12.30	37366	658	18.40	37646	738	24.82	36615							
24000	2440	418	4.99	40035	479	7.72	40245	583	13.64	40674	672	20.06	41123	751	26.90	40955	889	41.65	39815				
26000	2643	442	5.83	43103	500	8.76	43792	601	15.08	43816	686	21.74	44253	764	28.99	44563	899	44.31	43144				
28000	2847	468	6.84	46322	521	9.87	47001	620	16.65	46985	702	23.63	47531	777	31.09	47728	911	47.28	47315	1028	64.64	46442	
30000	3050	494	7.96	49465	544	11.16	50277	639	18.28	50157	719	25.65	50712	792	33.46	51073	923	50.25	51126	1038	68.19	49793	
33000	3355	534	9.91	54201	579	13.31	55026	668	20.94	55245	747	29.04	55496	816	37.24	55935	943	55.04	56399	1056	74.13	55990	
36000	3660	575	12.22	58971	616	15.83	59810	699	23.97	60610	775	32.59	60149	843	41.52	60784	965	60.25	61470	1075	80.28	61606	
39000	3965	617	14.93	63796	654	18.72	64547	731	27.29	65615	804	36.48	65144	871	46.11	65484	988	65.71	66271				
42000	4270	659	18.02	68575	693	22.02	69280	765	31.07	70497	834	40.75	70469	899	50.90	70143	1013	71.64	71033				
45000	4575	701	21.52	73320	733	25.78	74040	799	35.13	75171	865	45.38	75685	929	56.28	75332	1040	78.12	75729				
48000	4880	744	25.55	78151	774	30.05	78851	835	39.76	79941	898	50.57	80763	958	61.76	80490	1068	85.03	80408				
51000	5185	787	30.06	82959	815	34.78	83608	872	44.90	84691	931	56.04	85506	989	67.88	85793							
55000	5592	844	36.83	89306	870	41.87	89927	923	52.65	91051	978	64.43	91989	1032	76.80	92528							
59000	5998	902	44.71	95738	926	50.04	96303	975	61.38	97370	1026	73.73	98341	1077	86.74	99012							

High Velocity Nozzle

Nozzle Outlet Area: 6.45 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
18000	2848	388	4.11	35091	456	6.47	34176	566	11.43	33833	661	17.09	34563	743	23.28	34893							
20000	3165	416	5.07	39325	480	7.65	38315	584	12.97	37302	676	18.87	37906	757	25.37	38442	895	39.68	38244				
22000	3481	445	6.18	43571	505	8.99	42578	605	14.74	41227	693	20.97	41396	772	27.70	41888	909	42.61	42464	1026	59.06	41620	
24000	3797	475	7.49	47766	530	10.46	46686	628	16.75	45367	711	23.27	44879	788	30.26	45334	923	45.72	46082	1040	62.87	46233	
26000	4114	505	8.98	51788	557	12.17	50893	652	18.97	49569	731	25.81	48650	805	33.11	48742	938	49.14	49614	1054	66.85	50216	
28000	4430	536	10.70	55809	584	14.02	54968	676	21.34	53700	753	28.63	52679	824	36.32	52393	954	52.87	53173	1068	71.04	53749	
30000	4747	567	12.64	59733	613	16.19	59260	700	23.87	57814	776	31.71	56775	844	39.71	56161	970	56.82	56528				
33000	5222	614	16.01	65558	658	19.94	65658	737	28.08	63996	812	36.81	63033	877	45.40	62178	997	63.62	61843				
36000	5696	662	20.01	71403	703	24.23	71760	777	33.02	70337	848	42.35	69215	912	51.76	68352	1026	71.01	67344				
39000	6171	710	24.64	77177	749	29.22	77769	818	38.54	76550	885	48.50	75472	949	58.93	74740	1058	79.19	73251				
42000	6646	758	29.93	82897	795	34.86	83614	861	44.86	82942	924	55.45	81822	985	66.45	80917							
45000	7120	807	36.06	88697	842	41.32	89470	905	51.97	89276	964	63.09	88035	1022	74.69	87162							
48000	7595	857	43.14	94581	889	48.54	95244	950	59.95	95531	1005	71.47	94229	1060	83.67	93371							
51000	8070	906	50.91	100323	937	56.75	101075	995	68.71	101592	1048	80.93	100628										
55000	8703	972	62.79	108024	1001	69.05	108774	1057	82.13	109694													
59000	9335	1039	76.61	115813	1066	83.26	116525																

Underlined figures indicate maximum static efficiency.

NOTES:

- Performance certified is for installation Type A: Free inlet, free outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings do not include the effects of crosswinds.

542 QIFE

Wheel Type: Mixed Flow Airfoil
Wheel Dia.: 66.00"

Max RPM = CI I: 752 CI II: 984
Tip Speed FPM = 17.28 x RPM

Max Motor Frame: 445T
Windband Outlet Area: 52.15 ft²

Low Velocity Nozzle

Nozzle Outlet Area: 15.07 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
22000	1460	305	3.18	31405	<u>373</u>	<u>5.86</u>	31629	483	11.82	33127	573	18.50	34724	650	25.60	36140							
25000	1659	328	3.88	36452	390	6.74	35198	<u>496</u>	<u>13.23</u>	<u>36833</u>	584	20.42	38254	660	28.11	39554							
28000	1858	352	4.68	40729	409	7.74	39142	<u>511</u>	<u>14.83</u>	<u>40790</u>	596	22.44	41885	671	30.67	43115	799	48.25	45278				
31000	2057	378	5.64	44938	430	8.92	44089	<u>527</u>	<u>16.51</u>	<u>44618</u>	<u>609</u>	<u>24.57</u>	<u>45529</u>	683	33.37	46829	809	51.99	48665	918	72.02	50674	
34000	2256	405	6.78	49154	453	10.29	49359	544	18.27	48237	<u>624</u>	<u>26.97</u>	<u>49490</u>	696	36.22	<u>50581</u>	820	55.81	52230	928	77.04	54134	
37000	2456	432	8.06	53300	476	11.75	53826	562	20.16	51909	<u>640</u>	<u>29.48</u>	<u>53394</u>	710	39.23	<u>54403</u>	832	59.87	55990	939	82.21	57777	
40000	2655	459	9.50	57414	501	13.45	58132	582	22.30	56148	657	32.13	57152	<u>725</u>	<u>42.44</u>	<u>58271</u>	845	64.14	59850	950	87.31	61312	
43000	2854	487	11.18	61659	527	15.37	62350	603	24.64	61103	674	34.78	60660	740	45.61	61886	858	68.39	63495	962	92.72	65045	
46500	3086	520	13.41	66611	558	17.88	67226	628	27.56	67052	696	38.26	65161	760	49.75	66280	<u>875</u>	<u>73.85</u>	<u>68062</u>	977	99.31	69476	
50000	3318	554	16.01	71664	589	20.65	72017	655	30.89	72710	719	41.98	70174	780	53.91	70397	893	79.58	72617				
53500	3551	587	18.84	76529	621	23.81	76914	683	34.54	77874	744	46.20	76173	802	58.54	74895	911	85.25	76875				
57000	3783	621	22.09	81508	654	27.43	81937	713	38.70	82951	<u>770</u>	<u>50.79</u>	<u>82315</u>	826	63.71	80064	931	91.46	81217				
60500	4015	656	25.83	86604	686	31.27	86788	743	43.14	87810	797	55.77	88024	850	69.06	85737	951	97.70	85342				
64000	4247	690	29.85	91530	719	35.62	91750	<u>773</u>	<u>47.87</u>	<u>92553</u>	824	60.95	93147	875	74.83	91790	973	104.62	89824				
67500	4480	724	34.28	96435	752	40.36	96677	805	53.33	97535	853	66.81	98215	902	81.32	97871							
71000	4712	759	39.28	101467	786	45.68	101722	836	58.99	102312	883	73.20	103193	929	88.05	103350							

Medium Velocity Nozzle

Nozzle Outlet Area: 11.90 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
22000	1848	319	3.67	36948	384	6.33	36961	<u>490</u>	<u>12.28</u>	<u>37746</u>	577	18.80	36501			41573							
25000	2100	344	4.56	41951	406	7.54	41849	<u>506</u>	<u>13.97</u>	<u>42799</u>	590	20.97	<u>42395</u>	665	28.61	41573	805	49.14	46851				
28000	2353	370	5.60	46693	428	8.87	46934	<u>523</u>	<u>15.77</u>	<u>47460</u>	<u>605</u>	<u>23.36</u>	<u>47868</u>	677	31.37	<u>47101</u>	816	53.09	51619				
31000	2605	398	6.87	51514	458	10.36	52223	<u>543</u>	<u>17.88</u>	<u>52257</u>	<u>621</u>	<u>25.90</u>	<u>52790</u>	692	34.55	<u>53047</u>							
34000	2857	426	8.31	56138	475	12.04	57134	564	20.19	56933	639	28.72	57726	<u>707</u>	<u>37.76</u>	<u>57949</u>	828	57.24	57169	935	78.43	56389	
37000	3109	456	10.06	60951	501	14.01	62027	586	22.72	61847	658	31.73	62385	<u>724</u>	<u>41.33</u>	<u>62925</u>	843	62.00	63351	947	83.95	61811	
40000	3361	486	12.03	65668	527	16.16	66693	608	25.42	67019	679	35.13	67130	743	45.29	67982	858	66.79	68479	960	89.74	67748	
43000	3613	517	14.33	70473	555	18.69	71525	631	28.40	72350	701	38.82	71993	<u>762</u>	<u>49.32</u>	<u>72547</u>	874	71.88	73420	974	95.81	73368	
46500	3907	553	17.35	75989	588	21.96	77029	659	32.23	78289	726	43.25	77671	786	54.51	77950	894	78.20	79067				
50000	4201	590	20.87	81604	622	25.71	82548	688	36.45	83901	752	48.11	83820	812	60.36	83697	916	85.12	84759				
53500	4495	627	24.85	87177	657	29.98	88114	718	41.14	89448	779	53.42	89981	837	66.26	89380	939	92.44	90170				
57000	4789	665	29.44	92867	692	34.69	93600	749	46.34	94970	807	59.19	95863	863	72.71	95528	964	100.58	95767				
60500	5083	702	34.43	98381	728	40.04	99179	782	52.31	100661	836	65.48	101503	890	79.71	101786							
64000	5377	740	40.12	104023	764	45.91	104707	814	58.51	106036	866	72.37	107111	917	87.00	107648							
67500	5671	778	46.41	109646	801	52.53	110346	848	65.62	111626	897	79.93	112721	946	95.16	113494							
71000	5965	816	53.33	115254	838	59.77	115951	882	73.25	117118	929	88.22	118347	975	103.71	119035							

High Velocity Nozzle

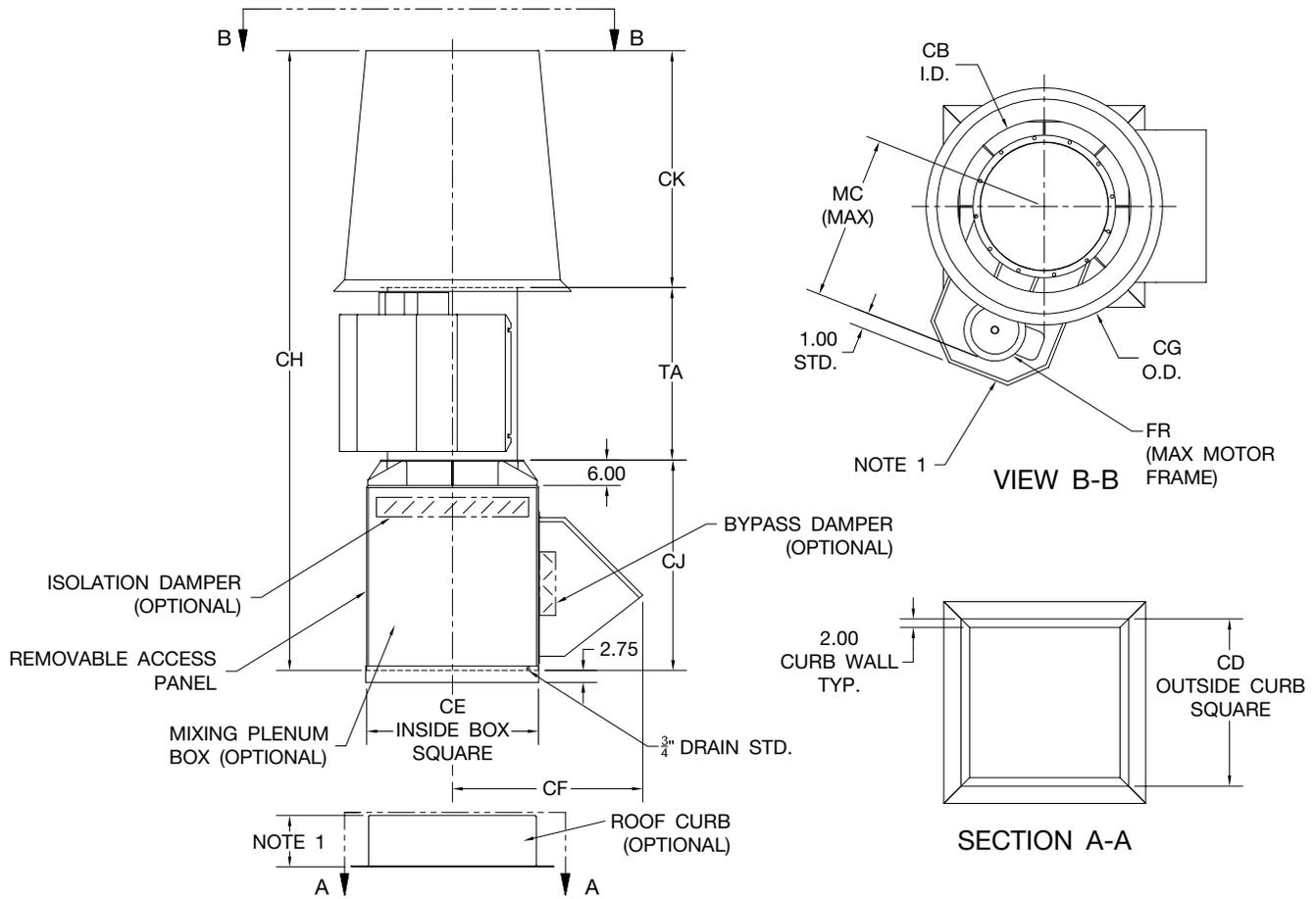
Nozzle Outlet Area: 7.81 ft²

FAN INLET CFM	NOZZLE OV	0.5" SP			1" SP			2" SP			3" SP			4" SP			6" SP			8" SP			
		RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	RPM	BHP	OUT. FLOW	
22000	2817	355	5.07	42925	417	7.98	41921	516	14.00	41319	602	20.85	<u>42154</u>	676	28.32	42418	802	44.93	40773				
25000	3201	387	6.56	49326	444	9.78	48106	537	16.37	46667	<u>620</u>	<u>23.69</u>	<u>47398</u>	693	31.66	<u>48023</u>	818	49.20	48124				
28000	3586	420	8.36	55626	472	11.87	54372	562	19.21	52780	639	26.91	52427	<u>710</u>	<u>35.23</u>	<u>53071</u>	834	53.75	54069	940	74.08	53649	
31000	3970	454	10.51	61768	501	14.26	60492	588	22.36	58886	661	30.62	57985	729	39.42	58242	850	58.63	59200	956	80.01	59984	
34000	4354	489	13.09	67824	533	17.17	66928	615	25.89	65082	685	34.74	63851	750	44.15	63625	868	64.21	64549	972	86.34	65387	
37000	4738	524	16.06	73699	565	20.40	73197	643	29.85	71455	712	39.56	70228	773	49.34	69368	887	70.41	69789				
40000	5122	559	19.45	79459	599	24.23	79597	671	34.13	77652	739	44.70	76458	798	55.10	75408	906	76.93	74736				
43000	5506	595	23.41	85300	633	28.51	85750	700	38.87	83798	766	50.20	82631	824	61.37	81523	928	84.35	80300				
46500	5955	637	28.67	92036	673	34.16	92744	736	45.22	91094	798	57.20	89866	856	69.53	88898	956	93.83	87224				
50000	6403	680	34.81	98868	713	40.52	99543	774	52.52	98652	832	65.14	97301	888	78.28	96213							
53500	6851	722	41.61	105494	754	47.81	106371	812	60.49	105996	866	73.64	104416	920	87.62	103444							
57000	7299	765	49.43	112240	796	56.15	113262	851	69.46	113283	902	83.24	111685	953	97.83	110696							
60500	7747	809	58.40	119111	838	65.41	120074	891	79.52	120522	940	94.10	119258										
64000	8196	852	68.15	125800	880	75.63	126825	931	90.51	127566	978	105.79	126665										
67500	8644	896	79.19	132625	922	86.87	133527	971	102.49	134455													
71000	9092	939	91.09	139277	964	99.18	140190																

Underlined figures indicate maximum static efficiency.

NOTES:

- Performance certified is for installation Type A: Free inlet, free outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include the effects of appurtenances (accessories).
- Performance ratings do not include the effects of crosswinds.



NOTES:

1. Motor position may vary with size.
2. Bottom intake standard; side intake, closed bottom optional.
3. Standard roof curb height is 12". Other heights available upon request.
4. 125 mph windload ratings require a Twin City Fan & Blower supplied roof curb.

SIZE	CB	CD	CE	CF	CG	CH	CJ	CK	FR	MC	SHAFT DIAMETER		TA
											CL I	CL II	
90	18.13	23.00	24.00	28.13	25.00	102.00	33.09	49.44	184T	22.88	0.75	-	19.44
122	22.25	27.00	28.00	32.13	30.63	120.03	37.09	60.69	184T	24.25	0.75	-	22.25
135	24.44	27.00	28.00	32.13	33.69	128.09	37.09	66.87	184T	26.88	0.75	-	24.13
150	27.06	32.00	33.00	37.13	37.25	119.78	42.09	49.81	215T	25.75	1.00	1.19	27.88
165	29.63	33.00	34.00	38.13	40.50	128.54	43.09	54.69	256T	27.75	1.00	1.44	30.76
182	32.69	35.00	36.00	40.13	45.38	140.04	45.09	60.94	256T	34.44	1.00	1.44	34.01
200	36.31	36.00	37.00	41.13	50.00	150.60	46.09	67.19	256T	36.19	1.19	1.44	37.32
222	40.00	39.00	40.00	44.13	55.06	141.16	49.09	51.75	256T	37.63	1.19	1.44	40.32
245	44.44	45.00	46.00	50.13	67.19	157.35	55.09	57.81	286T	37.88	1.44	1.69	44.45
270	48.88	46.00	47.00	51.13	67.31	168.48	56.09	63.44	286T	42.13	1.44	1.69	48.95
300	54.06	52.00	53.00	56.13	74.44	185.10	60.09	70.31	326T	45.13	1.44	1.94	54.70
330	59.63	59.00	60.00	59.63	82.13	197.41	60.09	77.31	326T	46.56	1.69	2.19	60.01
365	65.94	64.00	65.00	62.13	90.75	184.14	60.09	57.81	365T	51.50	1.94	2.19	66.51
402	72.56	70.00	71.00	65.13	99.94	196.97	60.09	63.75	365T	59.75	1.94	2.19	73.13
445	80.38	79.00	80.00	69.63	110.69	211.85	60.09	70.69	405T	62.25	1.94	2.44	81.07
490	88.88	86.00	87.00	73.13	122.38	227.59	60.09	78.31	405T	67.69	2.19	2.44	89.19
542	97.75	94.00	95.00	77.13	134.63	245.15	60.09	86.19	445T	71.50	2.44	2.69	98.87

BC1003133C

DIMENSIONS ARE SUBJECT TO CHANGE. CERTIFIED DRAWINGS AVAILABLE ON REQUEST.



Model QIFE

Model QIFE Induced Flow Exhaust Fans, where indicated on drawings and schedules, shall be of the non-overloading design, and shall be of the size and capacity as indicated in the fan schedule. Induced flow exhaust fans shall be as manufactured by Twin City Fan and Blower, Minneapolis, Minnesota.

Fans shall be designed for maximum efficiency. 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 self-limiting and shall reach a peak in the normal selection area.

PERFORMANCE — Fans shall be tested in accordance with AMCA test codes for air moving devices and shall be guaranteed by the manufacturer to deliver rated published performance levels. Model QIFE shall be licensed to bear the AMCA certified ratings seal for air, sound and induced flow. Sound certification shall apply to both inlet and outlet sound power levels. Model QIFE shall be UL/cUL 705 listed for electrical.

HOUSING — Housings shall be cylindrical and welded steel throughout. Inlets shall be fully streamlined. Housings shall be suitably braced to prevent vibration or pulsation. Totally enclosed weather cover shall enclose motor and V-belt drives. Punched inlet flange shall be equipped for curb cap or mixing plenum box mounting. Extended lube lines shall be provided for ease of lubrication. Model QIFE shall include outlet nozzle, windband, heavy duty coated steel curb cap, access door, shaft seal and weather cover, and a sealed belt tube for the protection of belts and drive components from the airstream.

WHEEL — Fan wheels shall have die-formed blades designed for maximum efficiency, and quiet and stable operation. Blades shall be continuously welded to the back plate and wheel cone. Wheels shall be statically and dynamically balanced and the complete fan assembly including motor and drive shall be test balanced at or near the operating speed at the factory prior to shipment.

SHAFT — Shafts shall be AISI 1045 hot rolled steel, accurately turned, ground, polished, and ring gauged for accuracy. Shafts shall be sized for the first critical speed of at least 1.43 times the maximum speed.

BEARINGS — Bearings shall be heavy duty, grease lubricated, anti-friction ball or roller, self-aligning, pillow block type and selected for a minimum L-10 life of 200,000 hours at the maximum fan RPM. Bearings shall be equipped with extended lubrication lines with grease fittings outside of the fan housing.

DRIVE — Motor sheaves shall be cast iron, variable pitch on applications 10 HP and smaller, and fixed pitch on 15 HP and larger. Drives shall be sized for at least 200% of motor horsepower.

CURB CAP — A heavy-duty, coated steel or galvanized curb cap shall be included to provide for a weather-tight transition between the roof curb and the fan. The curb cap shall allow discharge height up to 10 feet from roof without the need for guy wire support.



Model QIFE (cont'd.)

NOZZLE AND WINDBAND — A nozzle and windband combination shall be provided to efficiently induce ambient airflow from outside the fan housing and increase discharge velocities to be a recommended minimum of 3,000 FPM without significantly affecting BHP requirements. The windband shall provide a minimum discharge height of between 84" and 120" from roof surface.

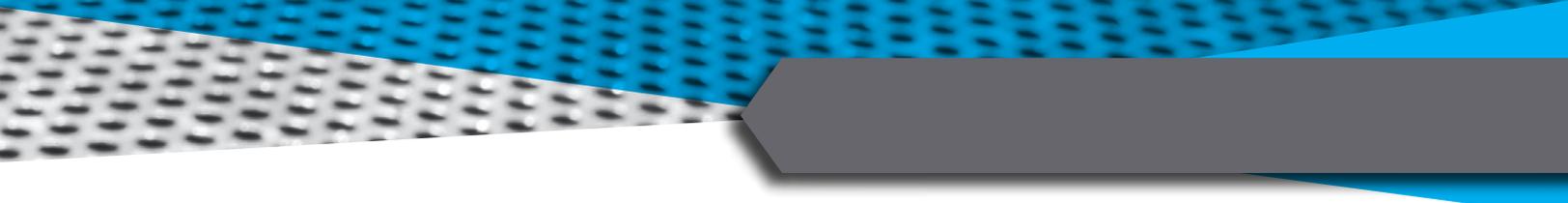
WEATHER COVER — A raintight, easily removable weather cover shall be provided to completely enclose the motor and exposed parts of the V-belt drive.

OPTIONAL ACCESSORIES — Where required the fans shall be provided with:

- AMCA "B" or "C" spark resistant construction
- Modular mixing plenum box
- Bypass damper with actuator
- Isolation damper with actuator
- Disconnect switches
- Roof curb
- Vortex breaker
- Special coatings (Epoxy, Air-Dry Phenolic, Synthetic Resin) on airstream parts or entire unit
- Special materials of construction

SUBMITTALS — Submittals for approval of equipment shall include copies of outline drawings, AMCA Certified Ratings, and percentage pressure-volume performance curves showing point of operation.

GUARANTEE — The manufacturer shall guarantee the workmanship and materials for its QIFE Mixed Flow Induced Flow Exhaust Fans for three (3) years from shipment.



INDUSTRIAL PROCESS AND COMMERCIAL VENTILATION SYSTEMS

CENTRIFUGAL FANS | UTILITY SETS | PLENUM & PLUG FANS | INLINE CENTRIFUGAL FANS
MIXED FLOW FANS | TUBEAXIAL & VANEAXIAL FANS | PROPELLER WALL FANS | PROPELLER ROOF VENTILATORS
CENTRIFUGAL ROOF & WALL EXHAUSTERS | CEILING VENTILATORS | GRAVITY VENTILATORS | DUCT BLOWERS
RADIAL BLADED FANS | RADIAL TIP FANS | HIGH EFFICIENCY INDUSTRIAL FANS | PRESSURE BLOWERS
LABORATORY EXHAUST FANS | FILTERED SUPPLY FANS | MANCOOLERS | FIBERGLASS FANS | CUSTOM FANS



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