

Jazz FANS

Design & Engineering *Guidelines*

ENVIRA-NORTH
SYSTEMS LIMITED



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Components

THE JAZZ FAN - OUR NEWEST ADDITION

From showrooms to restaurants and atriums to office spaces, the Jazz Fan's creative touch of ambiance enhances the comforts and aesthetics of each space. The sleek, ultra-modern design allows for a magnitude of customizable finishes from vibrant red to brilliant chrome and every imaginable color in between, enhancing any sophisticated environment.



Radiance



Cobalt



Alabaster



Sterling



Slate




Onyx

STANDARD COLOUR FINISHES

BLADE DESIGN - MOVING AIR WITH STYLE

Envira-North Systems has been working with HVLS fans since 2003. Over that time, we've worked with flat blades, extruded blades, bigger extruded blades, pitched blades, and irregular edge blades. Each one of those blade designs has strengths and weaknesses that designers will and will not admit to.





What we've accomplished with the Jazz Fan Blade is based on 14 years of knowledge and experience. Using the strengths of each previous iteration while digging even deeper into conceptual low revolution rotors allowed us to create this high-performance blade.

MINIMAL NOISE

Traditional airfoils (or blades) are linear in design and produce greater noise at a frequency. Using varying points on the leading edge of the blade spreads the noise or acoustic signature over a greater range of frequencies, virtually eliminating any noise.

EVENLY DISPERSED AIR

As a fan rotates, the tip of a blade spins faster than the fixed point (or center hub), creating pockets of minimal air movement directly underneath the fan. The Jazz Fan blade design tackles this challenge with a varying degree angle of attack, never seen in our industry.

MAXIMUM EFFICIENCY

Ranging from 6° (tip) to 14° at its greatest point, the Jazz Fan diminishes the resistance against each blade maximizing air movement, yet minimizing power consumption.

INDUSTRIAL STRENGTH

The zinc coated steel mounting plate is formed and surrounded by injection mold fibre filled polypropylene. The rugged industrial strength composition provides a light weight yet heavy-duty blade that measures 58.5" from tip-to-tip.

VISUALLY APPEALING

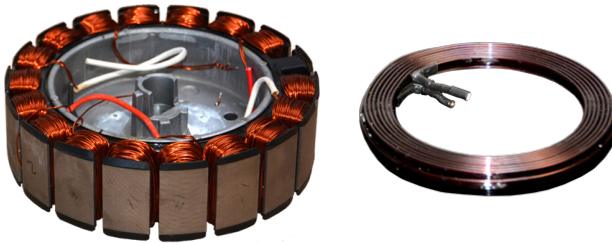
The sleek, ultra-modern design is available in any custom color or in six standard colors; Alabaster, Cobalt, Onyx, Radiance, Slate, and Sterling. Also available with a magnitude of customizable textured finishes from rich Carbon Fibre to soft Leather, deep Mahogany and rustic Barn Board.

The Jazz Fan's unique blade design makes it possible to move more air; quietly, efficiently and in style. The essential point of any fan is its airfoil and it allows the Jazz fan to move up to 45,000 cfm.




GEARLESS MOVER

By eliminating the mechanical components, the Jazz Fan drastically reduces the sound signature created by typical HVLS Fans. The whisper quiet motor performance leaves only the sound of the breeze itself aural.



Unlike a typical DC motor in which copper is wrapped around the poles, the Jazz Fan's gearless mover utilizes a simple ring of coil, with ultra low resistance. This motor technology features a transverse flux brushless DC motor specifically designed for low speed high torque applications. The compact motor housing is made of rigid and lightweight AISI 383 (ADC12) aluminum alloy, keeping the motor assembly under 15 lbs. All 60 poles provide the Jazz Fan with a continuous 52 lbf of torque across a broad operating speed and load window. And it provides zero backlash.



This Ultra-high continuous torque density motor is patented and proven. The motor adopted smart voltage technology is capable of accepting any single phase voltage in the range of 120-240 V, either 50 or 60 Hz.

The hollow shaft throughout the motor assembly and mounting allows access for power and fan/light control wires to be installed out of sight. This speeds up the installation process and provides a much more visually appealing finished product without sacrificing durability.

The Jazz Fan's direct drive (gearless) mover can be over 92% efficient and rotates at speeds between 20 and 120 RPM. Efficient and quiet, yet somehow light weight, this gearless mover is magnificently reliable for every application.

THE LIGHT

Designed to provide replacement level lighting, the Jazz Fan LED eliminates the strobing effect created by installing HVLS fans below the lighting level in any building.

Included with every fan shipped is the Jazz Fan LED Light. Seamlessly integrated, the built-in dimmable LED lighting system





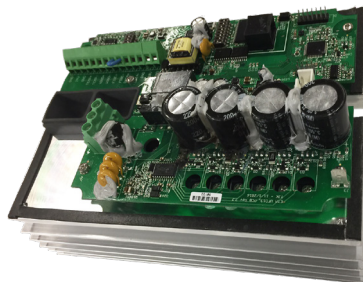
is purposely designed to adjust to any application. From 0 up to 1980 lumens, your space will be as bright or as dark as you need.

Separately controlled from the speed of the fan, the dimmable LED has twenty (20) different brightness levels purposely designed for every application; from commercial restaurants and showrooms to residential great rooms and gazebos.

Don't want a light included? No problem, the seamless integrated design disguises the light as a part of the fan. Don't turn it on – and you won't even know its there.

ON-BOARD CONTROLS

The Jazz Fan's advanced smart voltage on-board controls automatically detects input power when it's applied. Now the purchaser doesn't need to have an electrician onsite to determine what is needed prior to ordering.



Not only that, but the Jazz Fan's on-board controls constantly measures fan loads and makes real-time energy efficient adjustments, minimizing the environmental footprint while saving

money on already minimal operating costs. Because the controls are located on-board the fan assembly, all the connections are pre-wired before shipping to ensure a smooth and hassle-free installation. This minimizes electrical installation error, streamlines operation, and greatly diminishes the maintenance requirements.

The Jazz Fan can connect to standard building automation and fire suppression systems using the built-in Modbus 485 signal (other signals optional). The simple and compact design is hidden above the motor and completely invisible to the untrained eye.

WALL CONTROL

Placing all those finicky electronics inside the fan assembly means the bulk of the work is already done. No more reading wiring diagrams, ensuring the proper wiring is purchased/installed, incorrect wire connections being made... or lengthy troubleshooting with technician.



Once power is applied, a simple Cat5 cable connection to the provided control enables any user access to fan on/off, speed up/down, fan forward/reverse, light on/off and brightness up/down commands.



The compact design is light weight, compact and intuitive to all users. Simply knowing what you want the fan to do, is enough to operate the buttons and built-in LCD screen. operation, and greatly diminishes the maintenance requirements.

SAFETY SYSTEM

Hanging eighty-plus pounds of air movement technology in the ceiling is simple and straightforward. Ensuring its there forever is more important. Each Jazz Fan is supplied with superior harnessing system to maintain an integral safety status and give the customer peace of mind.

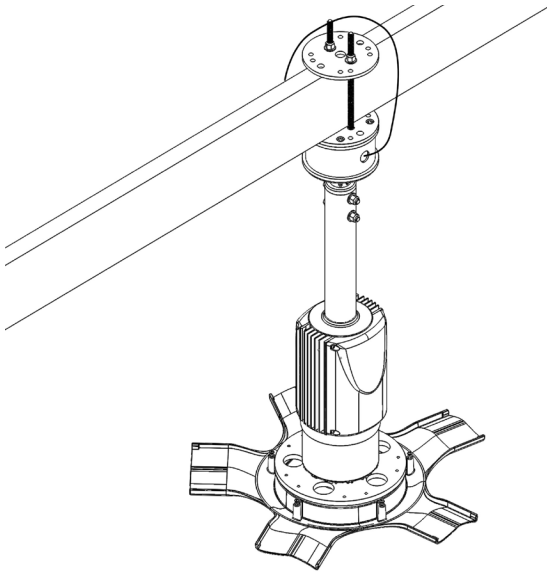
The Jazz Fan motor, LED Light and onboard controls have all been integrated to include current limits, motor overload sensors, thermal protection, acceleration/deceleration limits and minimum/maximum speeds.

The industrial strength construction includes;

- Four ¼" studs with nylon-inserted lock nuts attach the fan assembly to the mounting hardware.
- The oversized heavy duty motor cap is bolted directly to the hub, via four M5 fasteners.
- An additional four 1¼" x ¼" hex head bolts with serrated washers lock each blade tightly to the fan.

- All other components are pre-fastened during the manufacturing process to minimize installation error.

The entire assembly, from the mounting system to the blades was designed with safety as the main priority. The fail-safe 3/32 braided stainless steel cable is secured to the structure during the installation process and runs the length of the assembly, tying all components back to the building.





DISTINCTIVE UNIVERSAL MOUNTING SYSTEM

A complete redesign from top to bottom – no other HVLS Fan on the market can provide the robust yet sleek design of the Jazz Fan’s Universal Mounting System. Included in every Jazz Fan, the distinctive Universal Mounting System permits the Jazz Fan to be installed on a wide range of ceiling structures that includes; Open Web Steel Joists, Wood Beams (Glu Lam), Purlins and Wooden Trusses.

The design doesn’t stop there – the entire mounting kit is intended to act as a housing for your electric wiring – meaning power to the fan and from the control is invisible to the people below. Better yet, the Universal Mounting System also allows for the Jazz Fan to be located on any sloped ceilings from 0-18.5° with a complete 360° swivel.



Different mounting lengths are available upon request.

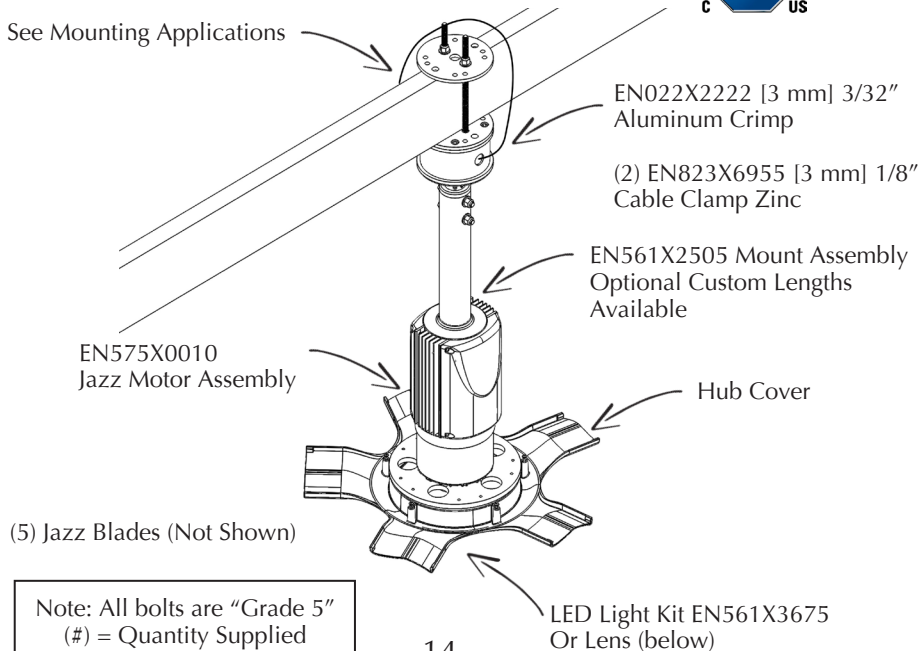
Drawings & Specifications

FAN COMPONENTS DIAGRAM

Illustrations may be changed without notice. All dimensions and specifications are approximate, and drawings are not to scale. Sales are subject to prevailing terms and conditions of sale. Specifications are subject to change without notice.



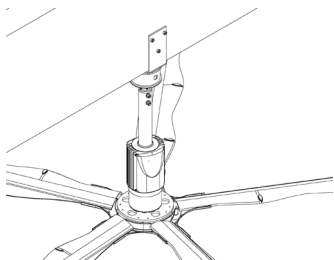
See Mounting Applications



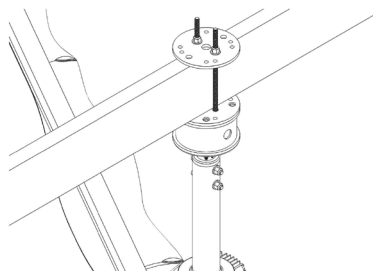
MOUNTING APPLICATIONS

For a complete review of the mounting system and how it applies to your application, please reference the Jazz Fan Installation Guide.

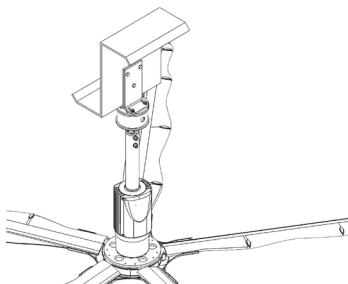
To obtain a copy, please contact us by phone at 1-519-527-2198 or by email at bigair@enviranorth.com.



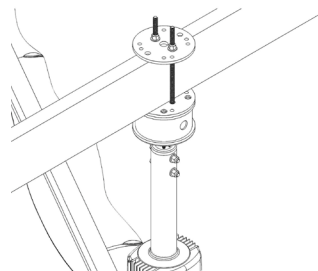
GLU LAM MOUNT



OWSJ MOUNT



PURLIN MOUNT



WOOD TRUSS MOUNT

10FT (3M) JAZZ FAN SPECIFICATIONS

General

Model Number	EN570X SERIES
Diameter	10 ft (3 m)
Number of Blades	5
Noise Level	39 dBA
Overall Weight (no mount)	85 lbs (38.5 kgs)
Packaged Fan Weight	98 lbs (44.5 kgs)
Certification	UL, CSA & CE



Performance

Airflow	45,000 CFM
Variable Speed	0 - 120 RPM
Power Usage	264 W (2.2 amps at 120 V)
Maximum Effective Diameter	2,800 sq ft (260 m ²)

Construction & Safety Components

Blade Mount Plates	Zinc Coated Steel
Blades	Injection Molding Fibre Filled Polypropylene
Motor Housing	AISI 383 Aluminum Alloy
Safety Cables	3/32" Stainless Steel Cable

Universal Mounting System

Maximum Ceiling Slope	18.5°
Open Web Steel Joist (OWSJ) Hardware	Included
Purlin Hardware	Included
Wood Beam Hardware	Included
Glu Lam Hardware	Included

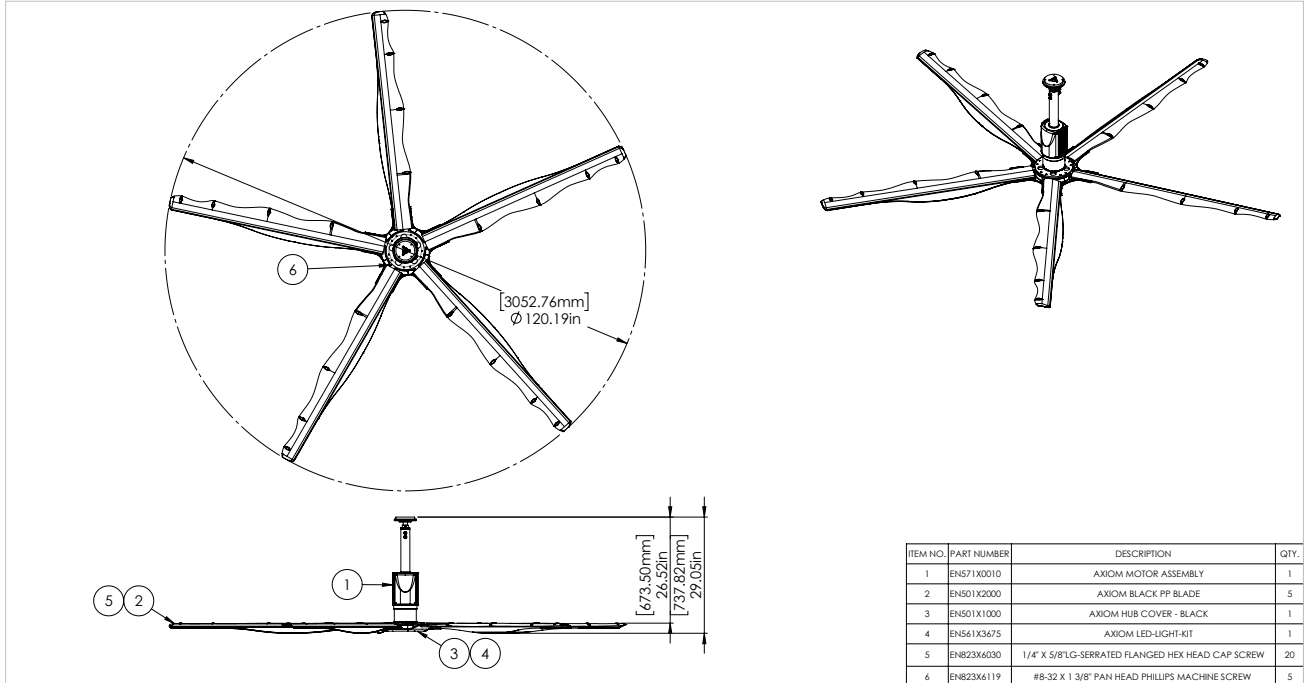
Gearless Motor

Type	Transverse Flux Brushless DC Motor
Voltage	120 - 240V (50 / 60 Hz)
Amps Consumed	2.2 amps (at 120 V)
Continuous Torque	52 lbf
Backlash	0
Poles	60
Insulation Class	B
IP Rating	54
Efficiency	92%

Jazz Wall Control

Operation	Keypad & LCD Screen
Fan Controls	Speed Up/Slow Down, Forward/Reverse, On/Off
Light Controls	Increase/Decrease Brightness, On/Off
Wiring	100' Cat5 Cable Included
Diagnostic Capability	Full

10FT (3M) JAZZ FAN SPEC DRAWING



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EN571X0010	AXIOM MOTOR ASSEMBLY	1
2	EN501X2000	AXIOM BLACK PP BLADE	5
3	EN501X1000	AXIOM HUB COVER - BLACK	1
4	EN561X3675	AXIOM LED-LIGHT-KIT	1
5	EN823X4030	1/4" X 5/8" LG-SERRATED FLANGED HEX HEAD CAP SCREW	20
6	EN823X6119	#8-32 X 1 3/8" PAN HEAD PHILLIPS MACHINE SCREW	5

MATERIAL AS SPECIFIED FINISH AS SPECIFIED Tolerance: DO NOT SCALE DRAWING	COMMENTS: ALL COMPONENTS APPLY FOR FAN ASSEMBLES EN570X5010 TO EN57009910	DRAWN: 8/4/MS Last Revision Date: ENG APPR. DATE: ENG APPR. UNLESS OTHERWISE SPECIFIED: UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES WEIGHT IS IN POUNDS TOLERANCES: FRACTIONS: ±.005 DECIMALS: ±.0005 ANGULAR: MACHINING ±.1° HOLE PLACES: ±.0005 SHEET PLACES: ±.0005	Drawing Date: 10/06/2016 Checked By: MFG APPR. Last Saved Date: Tuesday, July 11, 2017 2:13:08 PM	Envira-North Systems Ltd. TITLE: AXIOM GEARLESS FAN ASSEMBLY W/LIGHT
			REVISONS: 1-removed mount assembly to be assembled with motor assembly	G.A.

9FT (2.7M) JAZZ FAN SPECIFICATIONS

General

Model Number	EN570X SERIES
Diameter	9 ft (2.7 m)
Number of Blades	5
Noise Level	39 dBA
Overall Weight (no mount)	80 lbs (36.3 kgs)
Packaged Fan Weight	98 lbs (42.2 kgs)
Certification	UL, CSA & CE



Performance

Airflow	39,000 CFM
Variable Speed	0 - 120 RPM
Power Usage	264 W (2.2 amps at 120 V)
Maximum Effective Diameter	2,500 sq ft (232 m ²)

Construction & Safety Components

Blade Mount Plates	Zinc Coated Steel
Blades	Injection Molding Fibre Filled Polypropylene
Motor Housing	AISI 383 Aluminum Alloy
Safety Cables	3/32" Stainless Steel Cable

Universal Mounting System

Maximum Ceiling Slope	18.5°
Open Web Steel Joist (OWSJ) Hardware	Included
Purlin Hardware	Included
Wood Beam Hardware	Included
Glu Lam Hardware	Included

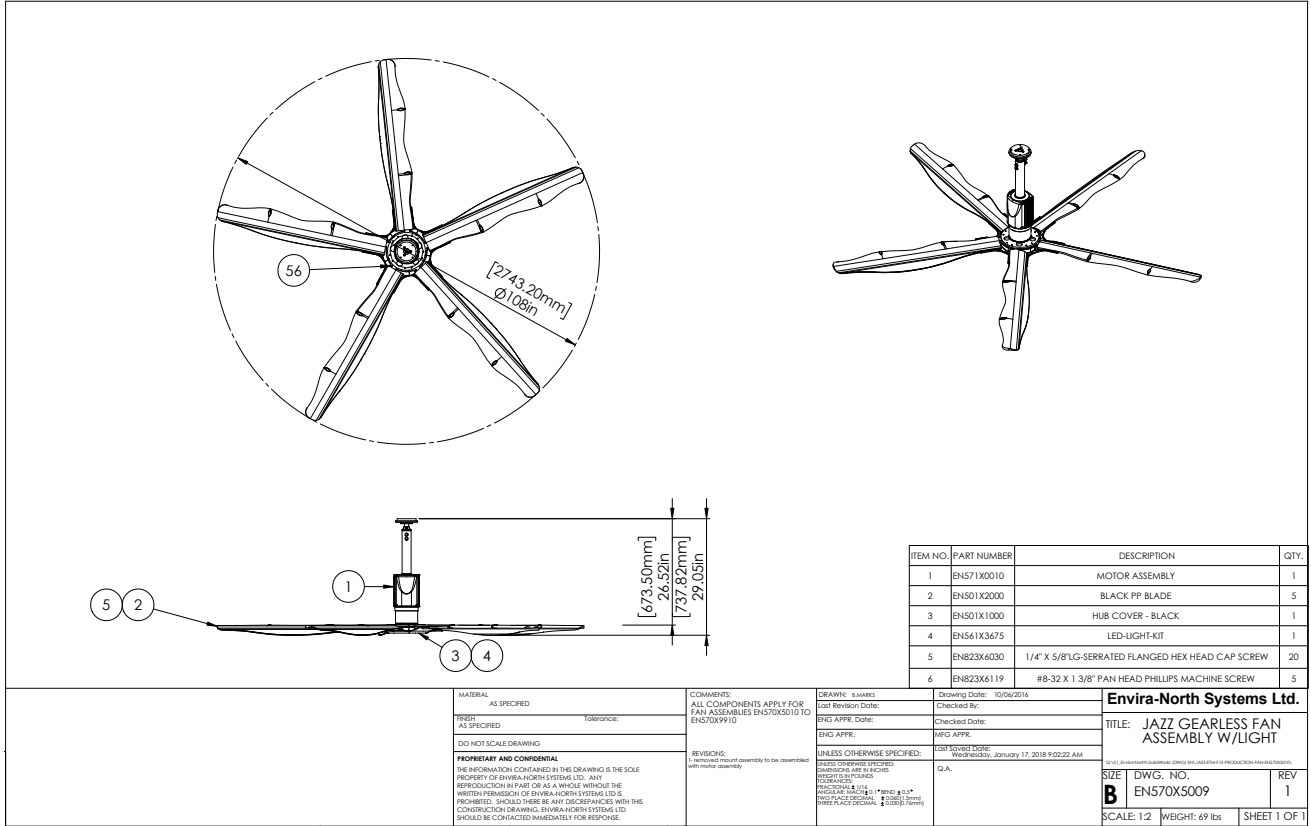
Gearless Motor

Type	Transverse Flux Brushless DC Motor
Voltage	120 - 240V (50 / 60 Hz)
Amps Consumed	2.2 amps (at 120 V)
Continuous Torque	52 lbf
Backlash	0
Poles	60
Insulation Class	B
IP Rating	54
Efficiency	92%

Jazz Wall Control

Operation	Keypad & LCD Screen
Fan Controls	Speed Up/Slow Down, Forward/Reverse, On/Off
Light Controls	Increase/Decrease Brightness, On/Off
Wiring	100' Cat5 Cable Included
Diagnostic Capability	Full

9FT (2.7M) JAZZ FAN SPEC DRAWING



8FT (2.4M) JAZZ FAN SPECIFICATIONS

General

Model Number	EN570X SERIES
Diameter	8 ft (2.4 m)
Number of Blades	5
Noise Level	39 dBA
Overall Weight (no mount)	75 lbs (34.0 kgs)
Packaged Fan Weight	88 lbs (39.9 kgs)
Certification	UL, CSA & CE



Performance

Airflow	35,000 CFM
Variable Speed	0 - 120 RPM
Power Usage	264 W (2.2 amps at 120 V)
Maximum Effective Diameter	2,100 sq ft (195 m ²)

Construction & Safety Components

Blade Mount Plates	Zinc Coated Steel
Blades	Injection Molding Fibre Filled Polypropylene
Motor Housing	AISI 383 Aluminum Alloy
Safety Cables	3/32" Stainless Steel Cable

Universal Mounting System

Maximum Ceiling Slope	18.5°
Open Web Steel Joist (OWSJ) Hardware	Included
Purlin Hardware	Included
Wood Beam Hardware	Included
Glu Lam Hardware	Included

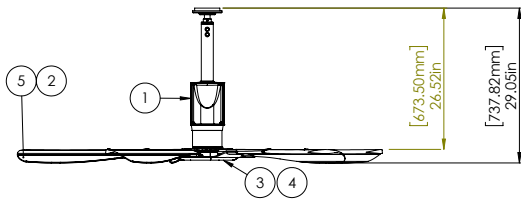
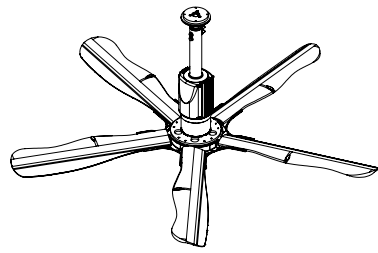
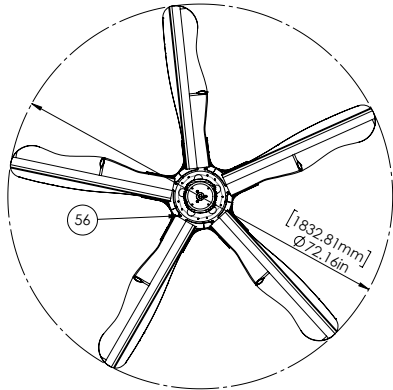
Gearless Motor

Type	Transverse Flux Brushless DC Motor
Voltage	120 - 240V (50 / 60 Hz)
Amps Consumed	2.2 amps (at 120 V)
Continuous Torque	52 lbf
Backlash	0
Poles	60
Insulation Class	B
IP Rating	54
Efficiency	92%

Jazz Wall Control

Operation	Keypad & LCD Screen
Fan Controls	Speed Up/Slow Down, Forward/Reverse, On/Off
Light Controls	Increase/Decrease Brightness, On/Off
Wiring	100' Cat5 Cable Included
Diagnostic Capability	Full

8FT (2.4M) JAZZ FAN SPEC DRAWING



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EN571X0010	AXIOM MOTOR ASSEMBLY	1
2	EN501X2000	AXIOM BLACK PP BLADE	5
3	EN501X1000	AXIOM HUB COVER - BLACK	1
4	EN561X3675	AXIOM LED-LIGHT-KIT	1
5	EN823X6030	1/4" X 5/8" LG-SERRATED FLANGED HEX HEAD CAP SCREW	20
6	EN823X6119	#8-32 X 1 3/8" PAN HEAD PHILLIPS MACHINE SCREW	5

<p>MATERIAL</p> <p>AS SPECIFIED</p> <p>FINISH</p> <p>AS SPECIFIED</p> <p>TOLERANCE:</p> <p>AS SPECIFIED</p> <p>DO NOT SCALE DRAWING</p> <p>PROPRIETARY AND CONFIDENTIAL</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ENVIRA-NORTH SYSTEMS LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ENVIRA-NORTH SYSTEMS LTD IS PROHIBITED. SHOULD THERE BE ANY DISCREPANCIES WITH THIS CONSTRUCTION DRAWING, ENVIRA-NORTH SYSTEMS LTD SHOULD BE CONTACTED IMMEDIATELY FOR RESPONSE.</p>	<p>COMMENTS:</p> <p>ALL COMPONENTS APPLY FOR FAN ASSEMBLIES EN570X5010 TO EN570X9910</p>	<p>DRAWING: 8-44485</p> <p>Last Revision Date:</p> <p>ENG APPR.: _____</p> <p>Date:</p> <p>ENG APPR.: _____</p> <p>Date:</p> <p>UNLESS OTHERWISE SPECIFIED:</p> <p>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES</p> <p>WEIGHT IS APPROX.</p> <p>RESISTANCE TO TORQUE</p> <p>ANGLE: 1/4" X 5/8" LG-SERRATED FLANGED HEX HEAD CAP SCREW # 1000023040</p> <p>3/8" X 1 3/8" LG-SERRATED FLANGED HEX HEAD CAP SCREW # 1000023040</p>	<p>Drawing Date: 10/06/2016</p> <p>Checked By: _____</p> <p>Date:</p> <p>MFG APPR. _____</p> <p>Date:</p> <p>Last Saved Date: 2016/02/09 17:20:43 AM</p> <p>G.A. _____</p>	<p>Envira-North Systems Ltd.</p> <p>TITLE: AXIOM GEARLESS FAN ASSEMBLY W/LIGHT</p> <p>© 2016 ENVIRA-NORTH SYSTEMS LTD. ALL RIGHTS RESERVED. PRODUCTION AND REPRODUCTION.</p>
	<p>REVISIONS:</p> <p>1-removed mount assembly to be assembled with motor assembly</p>	<p>4</p>	<p>3</p>	<p>2</p>

7FT (2.1M) JAZZ FAN SPECIFICATIONS

General

Model Number	EN570X SERIES
Diameter	7 ft (2.1 m)
Number of Blades	5
Noise Level	39 dBA
Overall Weight (no mount)	70 lbs (31.8 kgs)
Packaged Fan Weight	83 lbs (37.6 kgs)
Certification	UL, CSA & CE



Performance

Airflow	27,000 CFM
Variable Speed	0 - 120 RPM
Power Usage	264 W (2.2 amps at 120 V)
Maximum Effective Diameter	1,850 sq ft (172 m ²)

Construction & Safety Components

Blade Mount Plates	Zinc Coated Steel
Blades	Injection Molding Fibre Filled Polypropylene
Motor Housing	AISI 383 Aluminum Alloy
Safety Cables	3/32" Stainless Steel Cable

Universal Mounting System

Maximum Ceiling Slope	18.5°
Open Web Steel Joist (OWSJ) Hardware	Included
Purlin Hardware	Included
Wood Beam Hardware	Included
Glu Lam Hardware	Included

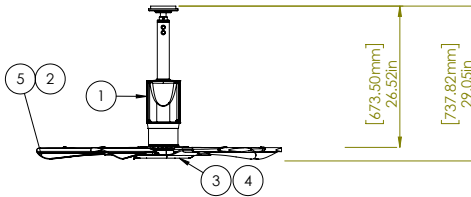
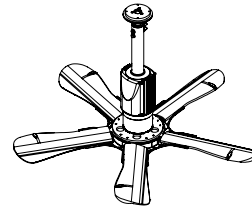
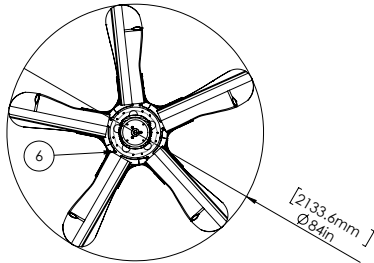
Gearless Motor

Type	Transverse Flux Brushless DC Motor
Voltage	120 - 240V (50 / 60 Hz)
Amps Consumed	2.2 amps (at 120 V)
Continuous Torque	52 lbf
Backlash	0
Poles	60
Insulation Class	B
IP Rating	54
Efficiency	92%

Jazz Wall Control

Operation	Keypad & LCD Screen
Fan Controls	Speed Up/Slow Down, Forward/Reverse, On/Off
Light Controls	Increase/Decrease Brightness, On/Off
Wiring	100' Cat5 Cable Included
Diagnostic Capability	Full

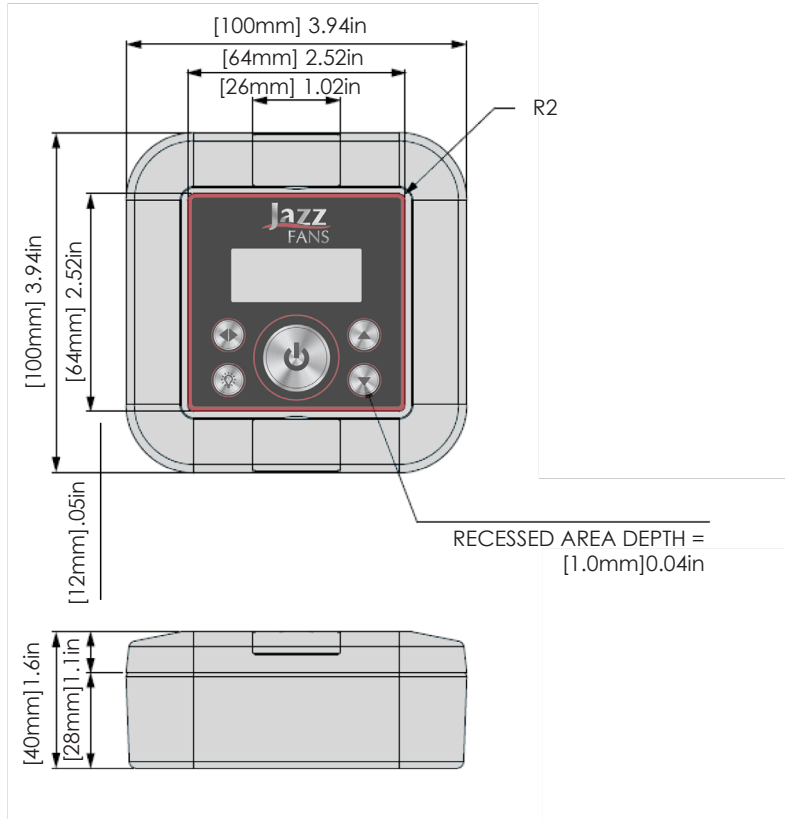
7FT (2.1M) JAZZ FAN SPEC DRAWING



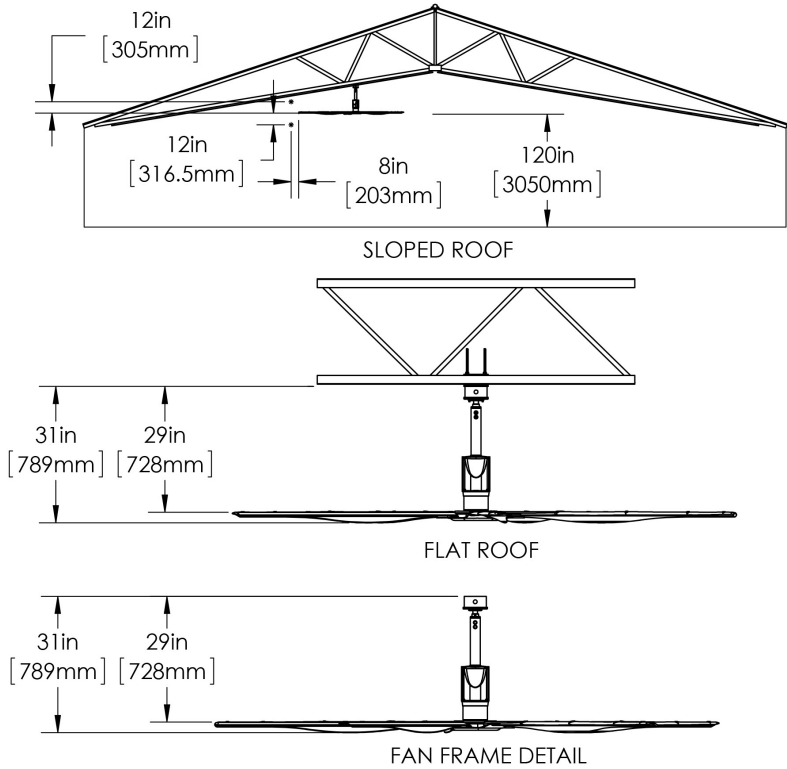
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	EN571X0010	JAZZ MOTOR ASSEMBLY	1
2	EN501X2000	JAZZ BLACK PP BLADE	5
3	EN501X1000	JAZZ HUB COVER - BLACK	1
4	EN561X3675	JAZZ-LED-LIGHT-KIT	1
5	EN823X6030	1/4" X 5/8" LG-SERRATED FLANGED HEX HEAD CAP SCREW	20
6	EN823X6119	#8-32 X 1 3/8" PAN HEAD PHILLIPS MACHINE SCREW	5

<p>MATERIAL</p> <p>AS SPECIFIED</p> <p>FINISH</p> <p>AS SPECIFIED</p> <p>Tolerance:</p> <p>DO NOT SCALE DRAWING</p> <p>PROPRIETARY AND CONFIDENTIAL</p> <p>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF ENVIRA-NORTH SYSTEMS LTD. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF ENVIRA-NORTH SYSTEMS LTD IS PROHIBITED. SHOULD THERE BE ANY DISCREPANCIES WITH THIS CONSTRUCTION DRAWING, ENVIRA-NORTH SYSTEMS LTD SHOULD BE CONTACTED IMMEDIATELY FOR RESPONSE.</p>	<p>COMMENTS:</p> <p>ALL COMPONENTS APPLY FOR FAN ASSEMBLIES EN570X5010 TO EN570X9910</p>	<p>DRAWN: 84480</p> <p>Last Revision Date:</p> <p>ENG APPR. Date:</p> <p>ENG APPR.</p>	<p>Drawing Date: 10/06/2016</p> <p>Checked By:</p> <p>Checked Date:</p> <p>MFG APPR.</p> <p>Last Saved Date: 2016/01/17 17:20:00 AM</p> <p>G.A.</p>	<p>Envira-North Systems Ltd.</p> <p>TITLE: JAZZ GEARLESS FAN ASSEMBLY W/ LIGHT</p> <p>DWG. NO. EN570X5007</p> <p>REV 1</p> <p>SCALE: 1:2 WEIGHT: 69 lbs SHEET 1 OF 1</p>
	<p>REVISONS:</p> <p>1-removed mount assembly to be assembled with motor assembly</p>	<p>UNLESS OTHERWISE SPECIFIED:</p> <p>UNLESS OTHERWISE SPECIFIED:</p> <p>CONSTRUCTION ARE IN INCHES</p> <p>WEIGHT IS IN POUNDS</p> <p>RESISTANCE 1/4"</p> <p>ANGLE: 45° MAX 1/4"</p> <p>MINI PLATE DECIMAL 0.0000 (3000)</p>		

JAZZ FAN CONTROL ASSEMBLY



JAZZ FAN BLADE CLEARANCES



Limitation of Warranty & Liability

THREE YEAR LIMITED WARRANTY

Jazz Fans should provide many years of virtually maintenance-free use. Warranty duration is as follows:

a)	Blades	3 year Limited Warranty
b)	Mount	3 year Limited Warranty
c)	Motor	3 year Limited Warranty
d)	Driver	3 year Limited Warranty
e)	HMI Control Panel	3 year Limited Warranty
f)	Labour	1 year Limited Warranty
g)	Fan Wraps/Paint	1 year Limited Warranty

Envira-North warrants that this Product will under normal use and service as specified by Envira-North, operate properly and be free of defects in materials and workmanship for a period of three years from the date of purchase by customer. The term “operate properly” in this context applies to mechanical, electrical and structural functions only. No guarantee, unless and except by separate written agreement, is made regarding dimensions of air movement generated or the effectiveness of this Product for its intended purpose.




Labour Warranty will cover all reasonable costs paid by the customer to an independent contractor (including dealers) to remove, dismantle, reassemble or reinstall any of the warranted Products during the first year that the Product is in service. All pre-approved receipts are to be submitted to Envira-North which will be paid upon completion of the installation of the Product and after the return of the failed unit. Envira-North will only issue a credit/cheque to the customer/dealer and will not be held responsible for paying the independent contractor.

WARRANTY EXCLUSIONS

Please note that the following may or could void any or all of the above listed Warranties.

- Not following required installation procedures as in installation guide and all other documentation supplied with the fans and related equipment, supplied by manufacturers of individual fan and control components.
- Not following all relevant codes and ordinances, not limited to National Electrical Code, provincial or state and local building codes.
- Not following electrical engineering industry standards regarding approved method of installing solid-state electrical equipment having characteristics of fans and all components included in this product.
- Any modification to installation, product and or controls without



written authorization from Envira-North, even if attempting to diagnose and or repair a problem.

- Misuse, abuse, accidents, unreasonable use or Acts of God.
- Incorrect electrical current, voltage or supply.
- Failure to use all installation and mounting hardware supplied by Envira-North.
- Failure to perform periodic maintenance as detailed in the Envira-North installation guide.

Envira-North reserves the right to make the final determination, based on its own evaluation of the components as to whether:

- The problem in question is the result of a defect in design, workmanship or materials and not the result of error, misuse or abuse on the part of the customer as stated above.
- Whether the problem or defect is material and requires action under this Warranty.
- Whether the remedy of repair or replacement is appropriate.

Envira-North will not be responsible for remedial work necessary to correct installation procedures that do not conform to those established by the instructions, codes and standards, regardless of when the installation occurred.



With regard to electrical and electronic components provided by Envira-North that comprise part of the Products, including motors, motor drives and variable frequency drives, Envira-North relies on the determination by the original manufacturer as to whether the failure of such component was the result of a defect. If the manufacturer of such component determines that there was no defect and therefore refuses to cover it under warranty, Envira-North likewise will not warranty such item unless Envira-North determines that the failure of such electrical or electronic component was the result of a defect of design, workmanship or material within some other part of the products.

WARRANTY DURATION

With respect to replacement or repair rendered, Envira-North warrants that the parts replaced or repaired will operate properly and be free from defects in materials and workmanship for a period of 90 days from the shipment date of the replacement products to the customer, or for the remainder of the original Warranty period, whichever is longer.

WARRANTY CLAIM INSTRUCTIONS

1. Contact your original dealer/salesman of the purchase when you first notice problem with the Product.
2. It will be the responsibility of the dealer or salesman to assist the customer in determining what Product is causing the problem.
3. If they cannot diagnose the problem, they are to contact Envira-North with all the necessary information.
4. The appropriate department will then be in contact with the customer to determine the cause of the problem.
5. Once diagnosed, submit a Purchase Order for a replacement component complete with price.
6. Replacement component will be shipped out upon receipt of the PO. This PO allows for an order to be established in the Envira-North System.
7. Once the units have been changed over, submit all pre-approved costs to Envira-North for payment.
8. No credits or cheques will be issued until all original products are received back at Envira-North or unless Envira-North directs otherwise.



FIFTEEN YEAR SERVICE LIFE PRORATED WARRANTY

WARRANTOR: The warrantor for the limited warranties set forth herein is Envira-North Systems Ltd (“Company”).

LIMITED WARRANTY: This prorated limited warranty (this “Warranty”) applies only to the original End-User (the “End-User”) of any Envira-North Systems’ Jazz Fan(s) (Individually and collectively, the “Product”) and cannot be transferred. This Warranty applies even in the event that the Product is initially sold by Company for resale to End-User. This Warranty applies to U.S and Canada purchases only. Outside U.S and Canada; standard Three-Year Warranty applies.

WHAT THIS WARRANTY COVERS: In addition to the standard Three-Year Limited Warranty covering all other components, the Warrantor warrants that the Product will have a service life (defined below) of Fifteen Years from the date of purchase (the “Fifteen Year Service Life”) when used in accordance with the operation and maintenance procedures prescribed in the Envira-North Systems’ Installation Manuals.

If Company finds, in its sole discretion, that any Product has not provided the Fifteen-Year Service Life, Company will, as its sole obligation and the End-User’s sole remedy for Company’s breach of this Warranty, repair or

replace the Product, at its option, F.O.B Company's factory, for a charge, payable to Company prorated on the following basis:

The End-User will be allowed a credit against Company's list price of equivalent equipment at the time of return of the Product to Company, in proportion to the percentage of Fifteen-Year Service Life remaining at the time of return of the Product to the Company. The End-User will assume responsibility to pay the balance of the list price; and Company reserves the right to require payment prior to delivery of the repaired or replacement equipment.

For the avoidance of doubt, Company's responsibilities under this Warranty are as follows:

YEAR 1-3 - Product repaired or replaced pursuant to terms if Limited Warranty applies

YEAR 4-15 - Unit Credit (\$) =

$$\text{Current List Price X } \frac{\text{Years of Unexpired Life}}{15 \text{ Years of Warranted Life}}$$



WHAT THIS WARRANTY DOES NOT COVER:

Any defects or damages caused by:


- Failure to properly store the Product before installation.
- Shipping and delivery of the Product if shipping is FOB Factory.
- Neglect, accident, abuse, misuse, misapplication, or incorrect installation.
- Repair or alteration not authorized in writing by Company personnel.
- Improper testing, operation, maintenance, adjustment, or modification of kind not authorized in writing by Company personnel.
- Use the Product under other than normal operating conditions or in a manner inconsistent with the Product's label or Instructions.
- Controls and or any other external electronic controlling devices.
- Exclusions listed in the standard Three-Year Limited Warranty.
- Any products or components purchased prior to effective date of this Warranty.

THIS WARRANTY IS NOT VALID:

- Unless the End-User returns to Company the Warranty Registration Form within thirty (30) days of purchase;
OR
- If the Product's serial numbers have been removed or are illegible;
OR

- If any warranted items repaired or replaced pursuant to this Warranty will be warranted for the remaining portion of the original Warranty subject to all the terms thereof. Company shall not be responsible for any charges for testing, checking, removal or installation of warranted items unless authorized in writing by Company personnel;
- OR
- If failed to submit records at time of performing Recommended Maintenance Schedule, minimum every 18 months.


LIMITATION OF LIABILITY: The remedies of the End-User set forth herein are exclusive and are the sole remedies for any failure of Company to comply with its obligations hereunder. In no event shall Company be liable in contract, in tort (including negligence or strict liability) or otherwise for damage to property or equipment other than the Products, including loss of profits or revenue, loss of use of Products, cost of capital, claims of customers of the End-User or any special, indirect, incidental or consequential damages whatsoever. The total cumulative liability of Company hereunder whether the claims are based in contract (including indemnity), in tort (including negligence or strict liability) or otherwise, shall not exceed the price of the Product on which such liability is based. Company shall not be responsible for failure to provide service or parts due to causes beyond Company's reasonable control.



END-USER'S OBLIGATIONS: In order to receive the benefits of this Warranty, the End-User must use the Product in a normal way; follow the Product's Installation Manuals; and protect against further damage to the Product if there is a covered defect. Submit records at time of performing Recommended Maintenance Schedule, minimum every 18 months.

OTHER LIMITATIONS: Company's obligations under this Warranty are expressly conditioned upon receipt by Company of all payments due to it, including all applicable interest charges. During such time as Company has not received payment of any amount due to it for the Product, in accordance with the contract terms under which the Product is sold, Company shall have no obligation under this Warranty. Also during such time, the period of this Warranty shall continue to run and the expiration of this Warranty shall not be extended upon payment of any overdue or unpaid amounts.

COSTS NOT RELATED TO WARRANTY: The End-User shall be invoiced for, and shall pay for, all services not expressly provided for by the terms of Warranty, including without limitation, site calls involving an inspection that determines no corrective maintenance is required. Any costs for replacement equipment, installation, materials, freight charges, travel expenses or labor of Company representatives outside the terms of this Warranty will be borne by the End-User.



OBTAIN WARRANTY SERVICE: Call Envira-North Systems Ltd., Service 1-866-771-7766 or 1-519-527-2198. Company will not accept any product for return, credit or exchange unless expressly authorized by Company in writing and delivered FOB Company factory with proper Return Authorization Number attached to the product.



FIFTEEN YEAR SERVICE LIFE PRORATED WARRANTY FORM

The Jazz Fan is covered by our standard Three Year Limited Warranty. To register for our extended Fifteen Year Prorated Limited Warranty, you must complete and return this form within 30 days of purchase by fax to 1(519)527-2560 OR email bigair@enviranorth.com. See Envira-North Systems Ltd. Fifteen Year Prorated Limited Warranty for details and restrictions.

For further information on all Envira-North Systems Ltd. products check out our website at www.enviranorth.com or contact:

Envira-North Systems Ltd.

Phone: 1(519)527-2198 or 1(866)771-7766

Fax: 1(519)527-2560

Email: bigair@enviranorth.com

Name of Customer: _____

Address: _____

Phone No: () _____ Fax No: () _____

Name of Facility Where Fans Installed: _____

Contact Name: _____ Phone No: () _____

Address: _____

Date of Purchase: _____

Quantity of Jazz Fans: _____

Fan Serial Number(s): _____

Special Declarations or Comments:

You must complete and return this form within 30 days of purchase by fax to 1(519)527-2560 OR email bigair@enviranorth.com.



1-866-771-7766
bigair@enviranorth.com.com
enviranorth.com.com

