

Town of Windsor

Memorandum

January 10, 2023

LATE ITEM

TO: The Honorable Mayor and Town Council

FROM: William G. Saunders, IV, Town Manager

SUBJECT: Quote in excess of \$5,000 – HVLS Ceiling Fan for Public Works Building

Background

Nearing the end of the construction of the public works building, Councilman Bernacki recommended that we look into the installation of a high volume, low speed (HVLS) ceiling fan to decrease heating and cooling expenses and improve the comfort level in the shop.

Specifics

While researching costs, several electrical contractors have either not been interested in providing a quote for installation or have recommended that we use a manufacturer-recommended installer. The two quotes enclosed are quoted with installation provided by contractors within the manufacturer's networks.

I would be glad to explore other local installation options before using the manufacturer's installers, if they would be more favorable to the Town.

Recommendation

Approve fan/installation and/or authorize Town Manager to seek more favorable local installation

Enclosures

AirMax quote

MacroAir quote



1826 Trade St. Florence, SC 29501

POB 5536 Florence, SC 29502

Phone: 843-667-9055

800-394-9739

Fax: 843-665-5006

Date: Monday, January 09, 2023

Time: 4:31 PM

To: William Saunders

Company: Town of Windsor

Address: Windsor, VA.

Phone: 757-242-3620

Email: wsaunders@windsor-va.gov

Please accept the following quote for the Hunter ECO "Industrial" HVLS ceiling fans.

- 1) **ECO10: 10' diameter blade, Industrial, direct drive, HVLS ceiling fan. Includes standard 2' drop.**-----\$4,890.00 each
- 2) **350 SERIES CONTROLLER: Digital touchscreen. Operates 1 to 10 fans.** ----- \$165.00 each
- 3) **Fire Relay Interlock: Fire relay.** -----\$50.00 each
- 4) **PLATINUM LEVEL INSTALLATION PACKAGE: Includes the mounting of the fan, the install of the VFD enclosure, and wall mount control module. It also includes the installation of supply power (maximum distance of 250', all longer lengths are priced upon request). package includes commissioning, start up, and training of the facility personnel of fan operation. (Integration to a fire suppression system will be done by others)**-----\$3,300.00 each

Materials: \$5,105.00

Install: \$3,300.00

Tax: \$0.00

Freight: \$INCLUDED

Total: \$8,405.00

Thank you for the opportunity!

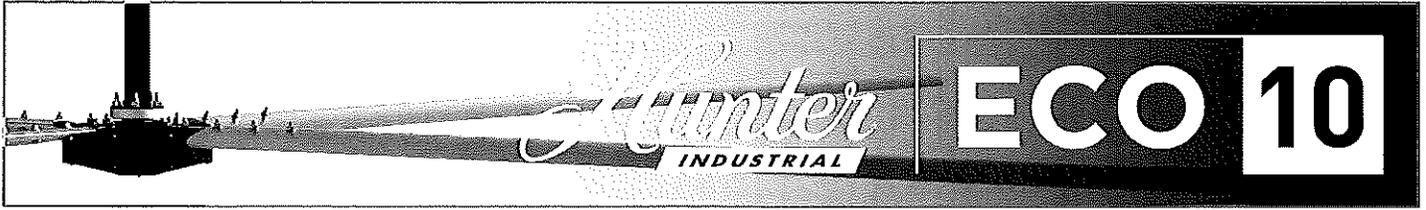
Chris Sorensen

Sales Manager

Air Max Fans

chris@airmaxfans.com

www.airmaxfans.com

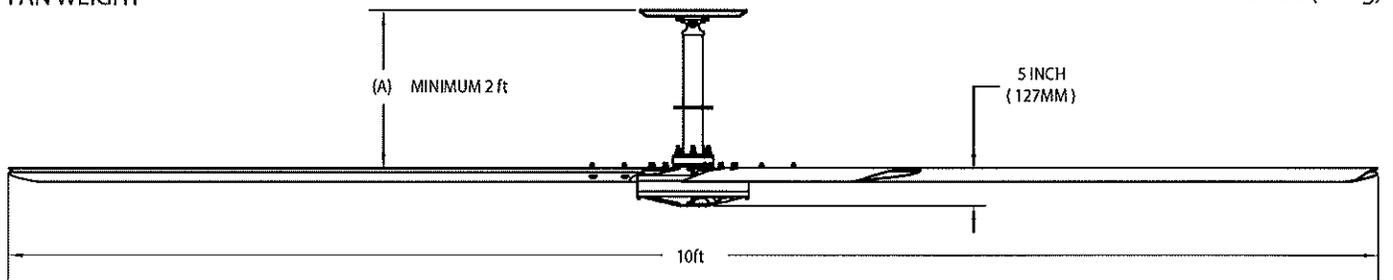


POWER & EFFICIENCY

INPUT POWER OPTIONS	AC 1PH 200-240V 60Hz AC 3PH 200-240V 60Hz AC 3PH 380-480V 60Hz		
MAXIMUM RATED CURRENT (amp)	7.0 A		3.5 A 2.0 A
POWER (hp)	5/8 HP		
MAXIMUM SPEED (RPM)	140 RPM		
CFM	80,000		

DIMENSIONS & WEIGHT

FAN DIAMETER	10 ft
FAN WEIGHT	94lbs (43 kg)



Pictured with 2 ft downrod

MOUNTING & SAFETY

MOUNTING OPTIONS	I-beam Glulam
DOWNROD (A)	Downrods available in 1 ft increments: 2 ft min., 10 ft max. Downrod length must be specified at time of order.
SAFETY FEATURES	Fan Retention System Airfoil Retention System Fire relay

IN THE BOX

INCLUDED	Fan I-beam mount with pre-wired downrod Control panel Install manual Wall Control Mounting hardware kit Communication Kit Guy wire kit
OPTIONAL	Additional cable lengths Network Controller Glulam brackets

WARRANTY & CERTIFICATIONS

CERTIFICATIONS	ETL/Intertek-certified to ANSI/UL 507 and CSA C22.2 No. 113 in North America
WARRANTY ¹	10-year, Non-Prorated Warranty

¹See complete warranty for details.



Quote #: Q-06423
 Version: 2
 Date: 11/14/2022 1:06 PM

PREPARED FOR

Town of Windsor
 William Saunders
 8 E Windsor Boulevard; P. O. Box 307
 Windsor, VA 23487
 United States of America

PREPARED BY

Mark Karvon
 MacroAir Technologies
 794 S Allen St
 San Bernardino, CA 92408
 Phone: Fax: (909) 890-2313
 mkarvon@macroairfans.com

QTY	PART #	DESCRIPTION	UNIT PRICE	EXTENDED
1	MZXX-0XX0-MA	MACROAIR AIRLEGACY POWER UNIT	\$4,800.00	\$4,800.00
1	60-10010-00	10' / 3.05 M XL 6 BLADE SET	included	Included
1	60-90006-00	AIRVOLUTION UNIVERSAL MOUNT (I-BEAM KIT) W/GUY WIRE 'A'	included	Included
1	30-21010-00	AIRVOLUTION CONTROL PANEL 1 HP / 0.75 KW - 240V/1PH	included	Included
1	30-90301-00	ANALOG REMOTE ASSEMBLY (1K POT)	included	Included
1	TURNKEY INSTALL	Install fan with electric power to existing panel including	\$4,275.00	\$4,275.00

Subtotal: \$9,075.00
Tax (%): \$0.00
Freight: \$595.00

Total: \$9,670.00

Notes

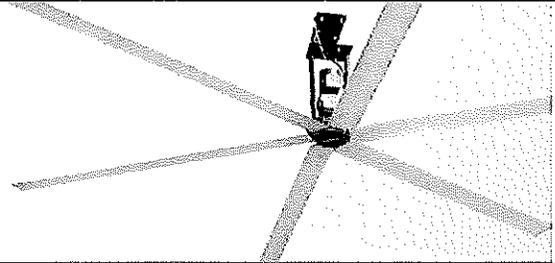
1) Estimated Lead Time is 4 Weeks ARO

 SIGNATURE

 DATE

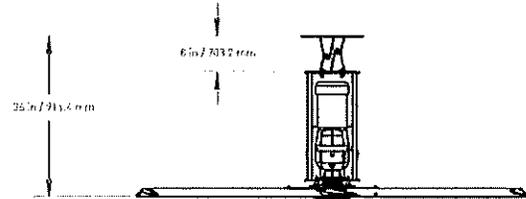
AirLegacy

The ultimate utility fan, the MacroAir AirLegacy industrial fan uses tried and true technology which is proven to last over time. The AirLegacy uses a reliable gearbox-driven power unit to provide huge airflow at a great value. With basic features and accessories, the AirLegacy industrial fan will meet any budget while performing better than any fan in its class.



STANDARD FEATURES

- Integrated Gearmotor
- Clearcoat anodized airfoil blades
- Forward, reverse, variable speed
- Variable frequency drive- basic fire alarm integration
- Analog remote for one-to-one fan control
- Safety Components: safety cable, Universal Mount with guy wires, blade retainer links



STEP 1: DIAMETERS

Item #	Diameter	Qty
MZ08-0100-MA	8 ft Power Unit, 1.0 HP	
MZ10-0100-MA	10 ft Power Unit, 1.0 HP	
MZ12-0100-MA	12 ft Power Unit, 1.0 HP	
MZ14-0100-MA	14 ft Power Unit, 1.0 HP	
MZ16-0100-MA	16 ft Power Unit, 1.0 HP	
MZ18-0100-MA	18 ft Power Unit, 1.0 HP	
MZ20-0150-MA	20 ft Power Unit, 1.5 HP	
MZ24-0200-MA	24 ft Power Unit, 2.0 HP	

STEP 2: VOLTAGE

Item #	Voltage Options	Qty
1xx1-MA*	100-120V Single Phase, 50/60 Hz	
2xx1-MA	208-240V Single Phase, 50/60 Hz	
2xx3-MA	208-240V Three Phase, 50/60 Hz	
4xx3-MA	480V Three Phase, 50/60 Hz	
6xx3-MA	600V Three Phase, 50/60 Hz	

xx=horsepower

STEP 3: MOUNTING

Item #	Mount Options	Qty
60-90006-00	AirLegacy Universal Mount: I-beam Hardware Kit (Standard)	
60-40041-00	Glulam Hardware Kit (for Universal Mount)	

STEP 4: CONTROLS

Item #	Description	Qty
30-90301-00	Analog Remote Assembly (Standard)	

*Only available for 8ft-18ft

BASIC SPECIFICATIONS

AIRFOIL DIAMETER	8ft	10ft	12ft	14ft	16ft	18ft	20ft	24ft
Airfoil Style	7.375" Extruded Anodized Aluminum Airfoil							
Number of Airfoils	6							
PERFORMANCE								
Max Speed	202 RPM	162 RPM	129 RPM	103 RPM	84 RPM	70 RPM	70 RPM	62 RPM
Recommended Spacing*	50 ft [15.2 m]	60 ft [18.3 m]	65 ft [19.8 m]	70 ft [21.3 m]	85 ft [25.9 m]	90 ft [27.4 m]	100 ft [30.5 m]	110 ft [33.5 m]
Max Affected Area	3,600 ft ² [336 m ²]	6,000 ft ² [557 m ²]	8,000 ft ² [743 m ²]	10,000 ft ² [929 m ²]	12,000 ft ² [1,115 m ²]	14,000 ft ² [1,301 m ²]	18,000 ft ² [1,673 m ²]	20,000 ft ² [1,858 m ²]
Sound Level dBA at Max Speed**	58	58	58	58	58	58	61	61
HANGING REQUIREMENTS								
Hanging Weight	171 lbs [77.56 kg]	178 lbs [80.74 kg]	189 lbs [85.73 kg]	195 lbs [88.45 kg]	202 lbs [91.63 kg]	208 lbs [94.35 kg]	217 lbs [98.43 kg]	270 lbs [122.5 kg]
Max Torque	18 ft-lb [24 Nm]	24 ft-lb [33 Nm]	31 ft-lb [42 Nm]	43 ft-lb [58 Nm]	40 ft-lb [54 Nm]	58 ft-lb [79 Nm]	88 ft-lb [119 Nm]	126 ft-lb [171 Nm]
Max Thrust in Reverse	4 lbs [1.8 kg]	6 lbs [2.7 kg]	9 lbs [4.1 kg]	14 lbs [6.4 kg]	15 lbs [6.8 kg]	21 lbs [9.5 kg]	31 lbs [14.1 kg]	44 lbs [20 kg]
MOTOR AND DRIVE TRAIN								
Motor Type	AC induction Motor with a sealed 2-stage helical gear box							
Equivalent Horsepower Rating	1.0 HP [8-18ft] / 1.5 HP [20ft] / 2.0 HP [24ft]							
Operating Temp Range	16°F [-10C°] - 104 F° [40C°]							
MAX AMP DRAW								
100-120V Single Phase	16.6A	16.6A	16.6A	16.6A	16.6A	16.6A	N/A	N/A
208-240V Single Phase	20.2A	20.2A	20.2A	20.2A	20.2A	20.2A	20.2A	20.2A
208-240V Three Phase	10.8A	10.8A	10.8A	10.8A	10.8A	10.8A	10.8A	10.8A
480V Three Phase	4.3A	4.3A	4.3A	4.3A	4.3A	4.3A	4.3A	4.3A
600V Three Phase	2A	2A	2A	2A	2A	2A	N/A	N/A
POWER AND CONTROLS								
Power Source	Single Phase 100-120 VAC 50/60 Hz / Single Phase 208-240 VAC 50/60 Hz / Three Phase 208-240 VAC 50/60 Hz / Three Phase 480 VAC 50/60 Hz / Three Phase 600 VAC 50/60 Hz							
Control Options	Analog Remote							
INSTALLATION								
Mounting Hardware	Universal Mount Hardware							
Extension	Optional extensions are available in 1 ft increments; all drop lengths require guy wires							
RATINGS AND COMPLIANCE								
Fire and Sprinkler	NFPA Compliant							
Wash Down Duty Rating***	IP55							
Certifications	UL 507							

*For spacing between fan units based on the dimensions of a specific space please refer to <https://macroairfans.com/airviz>.

**Sound testing taken with the sensor 5 ft above the ground and 20 ft from the center of the fan at 20 ft high.

***Applicable to the fan unit only, does not include controller and control panel.