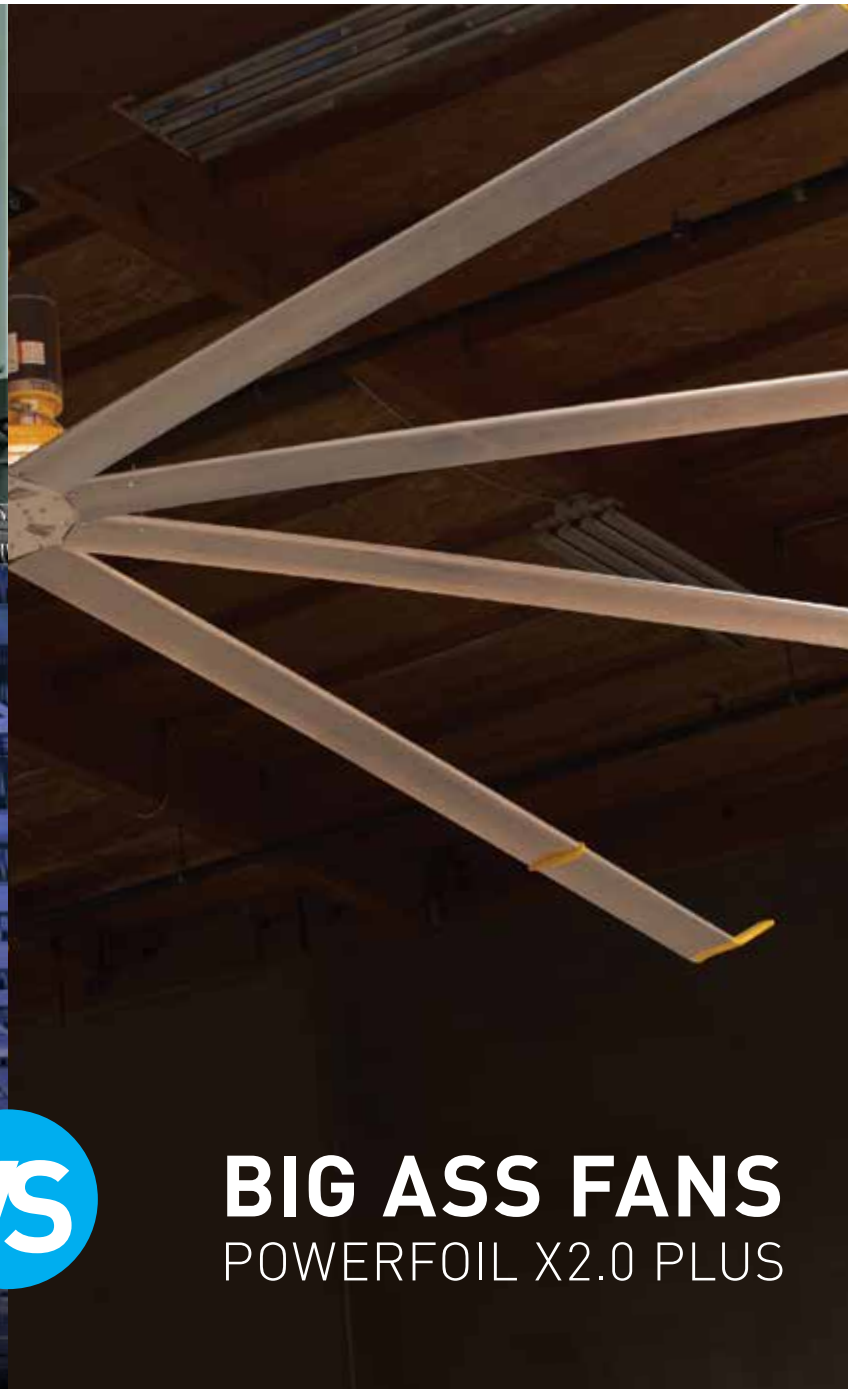


THE HVLS CHALLENGE

A SIDE-BY-SIDE COMPARISON



Airvolution^D
780



BIG ASS FANS
POWERFOIL X2.0 PLUS

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MOTORS

The motor is the heart of any HVLS fan. It's the power that drives the blades and is critical to determining a fan's efficiency, performance and durability.

AirVolution^D
By MacroAir

AIR SUPERIORITY

The company that invented the HVLS fan has created the next generation. Introducing AirVolution-D. Take a look at the side-by-side comparison between the new AirVolution-D and conventional HVLS design. You'll see the advantages in power, efficiency, intelligence, and reliability at every turn.



MacroAir AirVolution-D 780

- Sensorless permanent magnet brushless DC motor, 2.1 Horsepower
- Gearless direct drive eliminates the gearbox, increasing efficiency and durability while decreasing noise and weight
- Only two moving parts, requiring zero maintenance
- Zero liquids, no oils that could leak from a gearbox
- IP 65 rated for outdoor environments
- Hanging weight: 213 pounds
- Maximum RPMs: 64



Big Ass Fan Powerfoil X2.0 Plus

- AC induction motor, 2.0 Horsepower
- Large, heavy custom gearbox
- Dozens of moving parts in motor and gearbox
- Gearbox is oil filled
- IP 55 rated, not for outdoors without costly upgrade
- Hanging weight: 419 pounds
- Maximum RPMs: 48

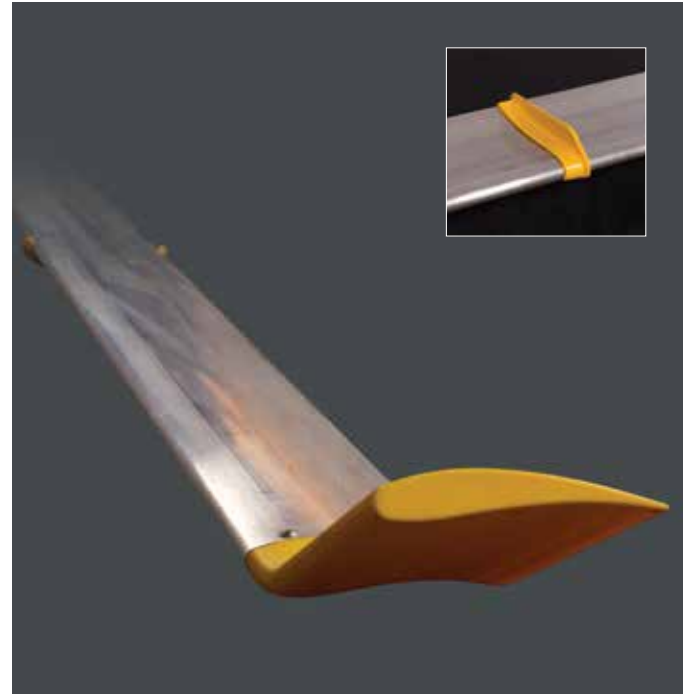
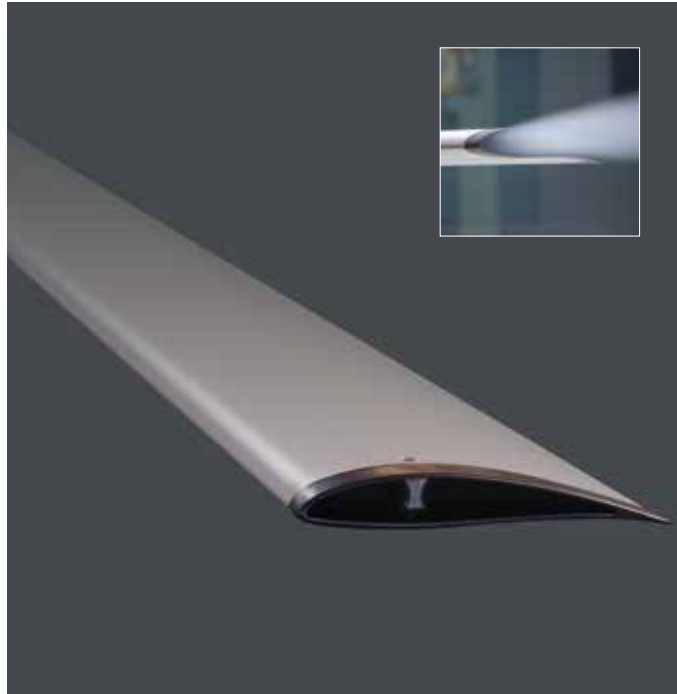


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BLADES

The volume, velocity and coverage of an HVLS fan is significantly determined by the quantity, spacing, efficiency and design of the blades.



MacroAir AirVolution-D 780

- NASA inspired airfoil generates 45.5% blade efficiency at max, over the entire speed range
- Requires less energy for optimum airflow
- Extruded aluminum
- Anodized clearcoat finish resists dust accumulation and oxidation
- 6 blades create optimal spacing for maximum volume, velocity and air delivery to the space below

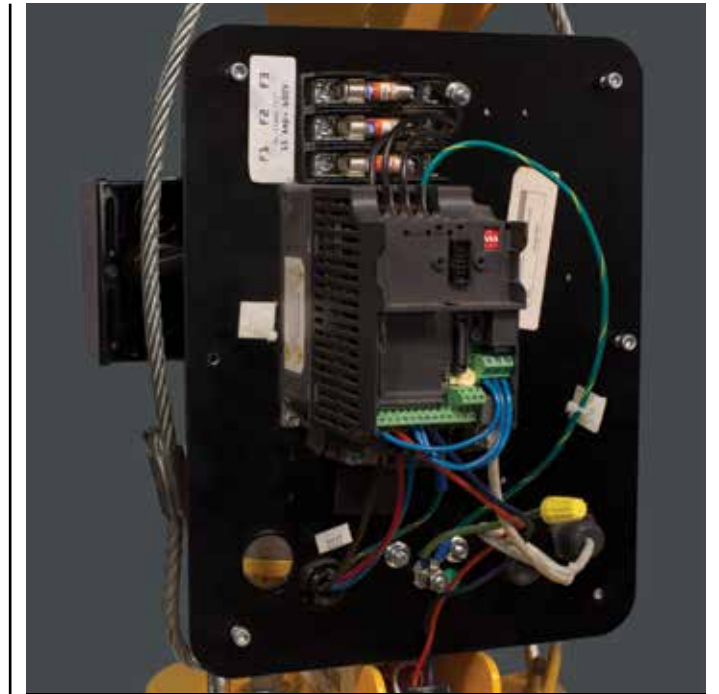
Big Ass Fan Powerfoil X2.0 Plus

- Airfoil design including winglets generates only 39.7% blade efficiency at max
- Requires more energy for optimum airflow
- Extruded aluminum
- Raw mill finish, anodization a significant upcharge
- 10 blades increases weight, lowers efficiency, does not produce more cfm

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ELECTRONICS

The brains of an HVLS fan are in the electronics which affect reliability, features and end user convenience.



MacroAir AirVolution-D 780

- Onboard microprocessor customized for HVLS fan environments
- Broad range power input adapts to voltages automatically, including single or three phase power
- Broad range input allows fan to be run on 277 volt circuits
- Broad range input instantly adapts to power dips and spikes without interruption
- Electronics and motor rated to 60°C or 140°F, valuable in hot warehouses
- Accelerometer senses fan sway from wind, earthquakes, equipment collisions to shut down fan immediately

Big Ass Fan Powerfoil X2.0 Plus

- Off the shelf variable frequency drive
- Voltage specific vfd's required to match input power
- 277 volt VFDs not available
- VFDs have limited ranges for voltage variation before they shut down
- Rated to 50°C or 122°F before VFD could derate or reduce performance
- No accelerometer



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INSTALLATION

Safety, simplicity, adaptability are all critical considerations when installing HVLS fans.



MacroAir AirVolution-D 780

- All mounting hardware included, customer selects their own mounting solution
- Rapidly adjusts for compound angles with patented ball mount, reduces install time significantly
- No guy wires required on typical installations with up to 10 foot drop height
- 38 inches minimum clearance recommended from fan blades to ceiling or deck above
- Fan hanging weight: 213 pounds, more manageable, faster to install

Big Ass Fan Powerfoil X2.0 Plus

- Each mounting solution is an additional option and added cost
- Customer or installer must accurately assess the mounting solution before ordering
- No guy wires required on typical applications up to 4 foot extensions
- 96 inches recommended from fan blades to ceiling or deck above
- Fan hanging weight: 419 pounds, may require additional structural support in some applications, structural engineering support often recommended

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RELIABILITY

An HVLS fan warranty can save money and protect the investment. Fine print can significantly differentiate warranties



MacroAir AirVolution-D 780

- 50,000 running hours, full coverage, non pro-rated equates to 24 years based on average run hours per year
- Factory install not required, customer can self install or use installer of choice
- Three years warranty labor coverage for removal, re-install and freight for replacement unit

Big Ass Fan Powerfoil X2.0 Plus

- 7 years with no factory install, 15 years with factory install
- Factory installation requirement is typically a higher priced installation
- One year warranty labor coverage



A SIDE-BY-SIDE COMPARISON

Featuring the two leading industrial sized HVLS fans as of July 1, 2015.

	MacroAir AirVolution-D 780	Big Ass Fans Powerfoil X 2.0 Plus
Diameter	24'	24'
Weight	213 lbs.	419 lbs.
Motor Type	DC Brushless	AC Induction
Horse Power	2.1	2
Torque	125 ft lb (170Nm)	116 ft lb (157Nm)
RPM	64	48
Industrial Spacing	115 ft.	not listed
Maximum Affected Area	22,000 sf	not listed
Gearbox	none	custom gearbox
Drive	custom microprocessor	off the shelf VFD
Clearance from ceiling deck	38 inches	96 inches
# of Blades	6	10
Blade Material	aluminum	aluminum
Blade Finish	anodized	mill
Blade Design	NASA airfoil	airfoil
Centrifugal Cooling	yes, patented	no
Voltage Ranges	200 - 600 volts	200 - 600 volts
Broad Range Input Recognition	yes	no
Fan Diameter Recognition	yes	no
Accelerometer	yes	no
Temperature Rating	140 F / 60 C	122 F / 50 C
IP 65 outdoor rating	yes	no
Sound in decibels	54.5	< 55
Fire Control Relay	standard	standard
Warranty	50,000 hrs.*	7 or 15 years **
Warranty Labor	3 years	1 year

* MacroAir warranty is non prorated, factory install not required

** BAF warranty is non prorated, factory install required for 15 year warranty, without factory install warranty is 7 years

And the winner is: MacroAir's AirVolution-D 780 outperforms the competition in value, efficiency and any other measure of industrial fan performance.



MacroAir
engineers of air™

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