

# AirVolution<sup>D</sup> 780



## Extra-Large Spaces

Designed for heavy-duty applications, a breakthrough in motor design allows the powerful AirVolution-D 780 fan to generate 75% more wind power. This makes it perfect for extra-large spaces like warehouses, airplane hangars, airports and stadiums. The fan's durable design also eliminates the gearbox for easy installation, zero maintenance and operation that's practically inaudible. To ensure safe and reliable performance, the full line is Wash Down rated for indoor or outdoor use.

### Key Specs:

- Airfoil sizes 20 to 24 ft. fit into any extra-large space
- Airfoils also available in black
- 50% more horsepower for 75% more wind power\*
- 45% lighter for easy installation, less wear and tear\*
- On-board AirBrain adapts to input voltages, optimizes motor control
- No gearbox means quiet operation and no maintenance
- Integrates into HVAC and other automated building systems via gateway
- Wash Down Duty rated for indoor/outdoor use (IP65)
- Backed by a 50,000-hour-warranty

*\*Compared to the leading competitor's similar model*

### Touchscreen Remote:



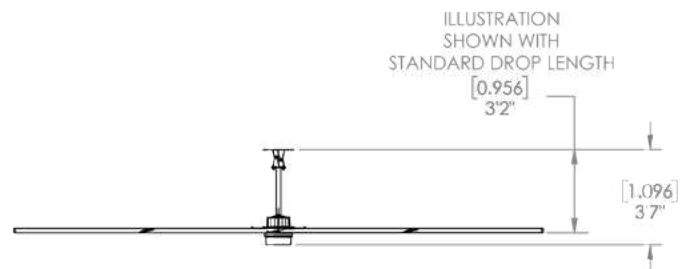
- 20 speed settings
- Forward and reverse
- Integrated warranty hour counter

### Warranty:

Standard 50,000-hour non-prorated warranty on parts and components plus a 3-year warranty on labor

### Mounting Dimensions:

*Illustration shown with standard extension*



### Basic Specifications:

| Airfoil Diameter   | 20ft   | 24ft |
|--------------------|--|------|
| Airfoil   Blade    | Extruded Anodized Aluminum Airfoils   7.375" Blade Width |      |
| Number of Airfoils | 6  | 6    |



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| PERFORMANCE                            | 20 ft                  | 24 ft                  |
|--|------------------------|------------------------|
| Max Displacement Forward**             | 250,000 CFM            | 346,000 CFM            |
| Max Thrust Forward                     | 65 lbf                 | 84 lbf                 |
| Max Displacement Reverse**             | 187,000 CFM            | 256,000 CFM            |
| Max Thrust Reverse                     | 36 lbf                 | 46 lbf                 |
| Variable Speed                         | 1 - 75 RPM             | 1 - 64 RPM             |
| Max Power Usage                        | 1,180 W                | 1,550 W                |
| Drive & Motor Efficiency at Max RPM*** | 79%                    | 73%                    |
| Recommended Industry Spacing****       | 105 ft                 | 115 ft                 |
| Max Affected Area*****                 | 20,000 ft <sup>2</sup> | 22,000 ft <sup>2</sup> |
| Sound Level dBA at 50% Speed*****      | 41                     | 39                     |
| Sound Level dBA at 100% Speed *****    | 57                     | 56                     |

| WEIGHTS AND DIMENSIONS           |                  |                  |
|----------------------------------|------------------|------------------|
| Hanging Weight                   | 214 lbs          | 239 lbs          |
| Total Shipping Weight            | 314 lbs          | 351 lbs          |
| Motor System Shipping Weight     | 157 lbs          | 157 lbs          |
| Motor System Shipping Dimensions | 29 x 30 x 26 in  | 29 x 30 x 26 in  |
| Blade Shipping Weight            | 160 lbs          | 197 lbs          |
| Blade Shipping Dimensions        | 120 x 25 x 15 in | 144 x 25 x 15 in |

| MOTOR AND DRIVE TRAIN        |   |
|------------------------------|---|
| Motor Type                   | Sensorless, Brushless, Permanent Magnet, Transverse Flux DC Motor |
| Drive Train                  | Gearless Direct Drive   |
| Motor Torque Rating          | 125.4 ft lb [170 Nm] Continuous                                   |
| Equivalent Horsepower Rating | 2.1 HP  |
| Max Operating Temp           | 140° F [60° C]  |

| MAX AMP DRAW / RECOMMENDED FUSE |             |             |
|---------------------------------|-------------|-------------|
| 208-240 VAC 1-Phase             | 12.5 A / 15 | 15.1 A / 20 |
| 277 VAC 1-Phase                 | 9.4 A / 10  | 11.3 A / 15 |
| 208-240 VAC 3-Phase             | 6.8 A / 10  | 8.2 A / 10  |
| 380 VAC 3-Phase                 | 3.7 A / 5   | 4.5 A / 5   |
| 480 VAC 3-Phase                 | 2.9 A / 5   | 3.5 A / 5   |
| 600 VAC 3-Phase                 | 2.3 A / 5   | 2.8 A / 5   |

| POWER AND CONTROLS  |   |
|---------------------|---|
| Power Source High   | 1-Phase or 3-Phase [380-600] VAC +/- 5%, 50/60 Hz       |
| Power Source Low    | 1-Phase or 3-Phase [120-277] VAC +/- 5%, 50/60 Hz       |
| Offered Controllers | Digital Touchpad Standard, MacroAir Controller 6 and 30 |
| Control Types       | Digital MODBUS 485                                      |

| INSTALLATION      |  |
|-------------------|--|
| Mounting Hardware | AVD Universal Mount  |
| Drop Extensions   | In addition to the standard drop length supplied, optional drop lengths are available in 1 inch increments. Total drop lengths 10 feet and greater require guy wires |

| RATINGS AND COMPLIANCE |                |
|------------------------|----------------|
| Fire and Sprinkler     | NFPA Compliant |
| Wash Down Duty Rating  | IP65           |

\* Data will be added when additional testing and/or information is ready.

\*\* Calculation based on AMCA 230-99 equation.

\*\*\* Determined by dividing the mechanical power output of the motor by the electrical input to the system.

\*\*\*\* Delivers 2.8 - 4.2 ft/s of average air speed in the occupied space. This relates to perceived cooling or set point change or 4.9-6.1° F. Consult EnergyLogic LLC for more details.

\*\*\*\*\* Delivers 2.7 - 3.8 ft/s of average air speed in the occupied space. This relates to perceived cooling or set point change or 4.8-5.8° F. Consult EnergyLogic LLC for more details.

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



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