Technical specification
Aeromine® 5000 Assembly and Frame

Aeromine® 5000 assembly and frame

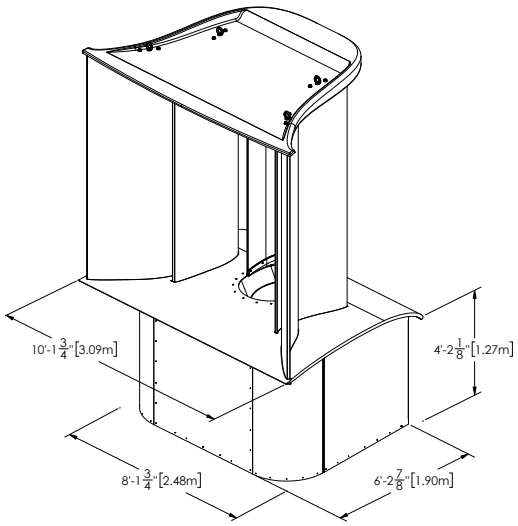
The assembled unit is built on an aluminum frame with aero-surfaces in reenforced plastics that is appropriately UV protected in Aeromine light grey. The airfoils, center body, top and bottom plate all handles individually by hand.

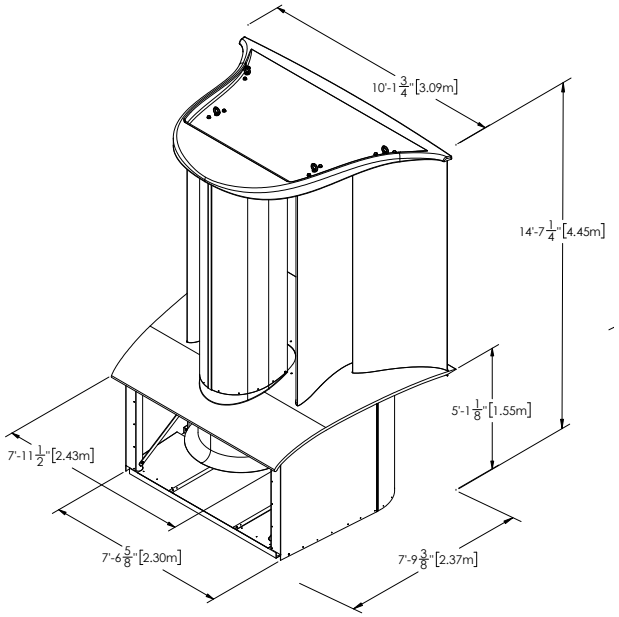
Total weight:
1,034 lbs (469kg)
Survival 3 sec. gust wind speed:
120 mph (53 m/s)
Elevation:
< 5,000 ft (1,500 m)
Normal operating temperature*:
-20* to 50C
Structure has no wearable parts

Aeromine® 5000 add-ons
All extension are custom made to order

Extension legs for tall parapets
Aeromine units can be delivered with extended legs, which elevate the unit above tall parapets.

Hurricane upgrade of the Aeromine structure can be upgraded to 158 mph (70 m/s)





* limited by electrical system, explore the cold climate add-on

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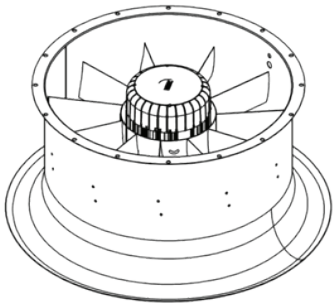
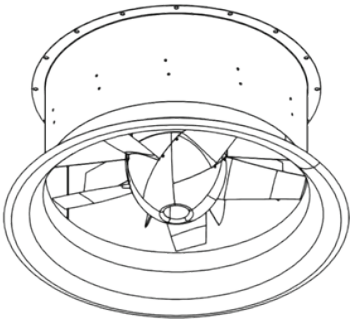
Technical specification
Aeromine® 5000 Electrical

Aeromine® 5000 generator module

The Aeromine generator system is a state-of-the-art rotor / stator system with a 5kW permanent magnet generator with a very high efficiency.

Rotor: 5 blades
Rotor diameter: 35.4 inch (898 mm)
Assembled weight: 120 lbs (54 kg)
Casing: 3 mm galvanized steel, corrosion category C3. (marine grade)
Bolt circle: Eurovent standard 900 mm
Generator casing: Aluminum, IP65 shaft end/ IP66 motor housing
Cooling: passive air cooling
Bearing: SKF/NSK, lubricated for life
Speed: 0 to 1500 PM
Output: 220VAC, 3 phases





Windgrabber® 5000 controller
The controller cabinet is made coated steel in an outdoor rating, prepared with a bracket for wall mount.

Installs: inside or outdoor
Enclosure rating: NEMA4 / IP65
Cooling: passive air cooling
Dimensions: 20x20x8 (550x550x208 mm)
Input: 220VAC, 3 phases from generator and 2 sensor cables
Output: 120VAC, single phase, 50/60Hz
Certification: UL1741 and other country specific

Windgrabber® 5000 safe brake
The Windgrabber controller cabinet is connected to a braking resistor system, which by default brings the rotor to a full stop.

Installs: inside or outdoor
Enclosure rating: NEMA4 / IP65
Cooling: passive
Dimensions: 24x20x8 (550x550x208 mm)
Input: 3 phase cable to controller cabinet

Aeromine® 5000 add-ons
All extension are custom made to order

Wire guard of generator casing inlet
Wire guards can be installed on the casing inlet. This will cause a small performance penalty.

Inlet area screen, alternative to wire guard has less efficiency loss and can prevent wildlife entrance to the inlet box below the unit

Aeromine technologies

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Technical specification
Aeromine® 5000 energy output

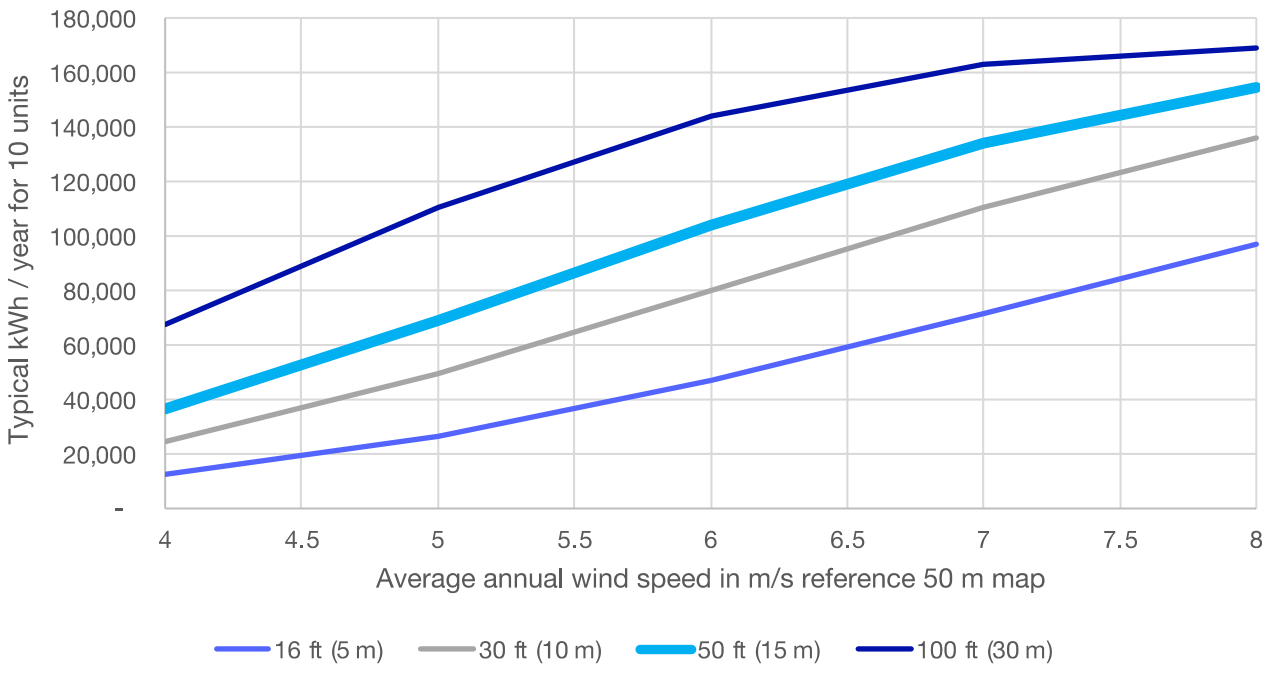
Aeromine energy output depends on many parameters and a detailed assessment is always made by Aeromine Technologies to estimate the expected system performance.

As a rule of thumb, the energy output depends on the building height and the wind resources in the region. The chart to the right shows the typical output in a typical region based on the average annual wind speed, with reference to 50-meter height (note the wind speed is translated to building height for the calculation).

The average annual wind speed can be found in wind maps, such as the global wind atlas or similar regional produced maps.

Graph below is calculated for a 50kW system of 10 units occupying 170 ft (50 m) of building face length. The different colors illustrate energy performance at different building heights

Sea level air density of 1.225 kg/m3 and without building or vegetation induced wind shading.



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