SWIFT WIND TURBINE

The SWIFT Wind Turbine - a quiet, structure or pole-mountable wind turbine capable of providing a cost-effective renewable energy source for residential, community, and industrial use. The original designers of SWIFT, UK-based company Renewable Devices, partnered with Grand Rapids, Michigan's Cascade Engineering, Inc. to make Cascade the proud manufacturer and marketer of the SWIFT Wind Turbine for North America.

The SWIFT is a grid-connected form of embedded power generation. The emphasis of the design process has focused on safety, reliability, and ease of operation, alongside the high-performance of this innovative system. Unique technologies have been developed, leading to the filing of five international patents, which allow the SWIFT Wind Turbine to offer:

- Universal application
- Quiet, minimal vibration structure-mounted operation
- Simple installation
- Safe, efficient, and autonomous operation
- Visually appealing design, which is zoning compliant
- Sustainable, harm neutral design - allowing the SWIFT to become carbon and energy positive within four years

A structure-mounted SWIFT Wind Turbine is installed on an aluminum mast with a minimum blade-roof clearance of approximately two feet. It is optimally mounted at the highest point of a roof, in a position which benefits from maximum prevailing wind, but it will work effectively in almost any location.

To ensure minimal transmission of oscillations from turbine to building, the SWIFT mounting brackets incorporate damping systems specifically designed to absorb a wide range of frequencies. The patented ring diffuser, connecting the blades, minimizes turbine noise by preventing the creation of turbulent vortices at the blade tip. In addition, the five bladed design allows for a slower speed of rotation to further reduce noise, making the SWIFT Wind Turbine one of the quietest wind systems.

For more information visit www.swiftwindturbine.com.

CASCADE engineering
The Cascade Family of Companies

Installations




APPLICATION

Design enables use of turbine in urban and suburban settings

Quiet mast mounting technology reduces unwanted vibration to building/home

SWIFT Wind Turbine is a grid-connected system, utilizing the electricity generated by the turbine first and supplementing the rest of your needs with your conventional utility

INSTALLATION

Simple installation and autonomous operation

Required installation by a trained SWIFT installer with the purchase of a unit, please visit the SWIFT web site for current dealer listings

ENVIRONMENT

The SWIFT Wind Turbine has been designed to be environmentally sustainable. The product produces more energy in its lifetime than is incorporated in the material and processes used to manufacture it, therefore making the turbine 'harm neutral.'

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TECHNICAL SPECIFICATIONS

Type	Upwind, horizontal axis, structure or pole-mountable wind turbine
Power Output	Over 1.5 kW @ peak production 1.0 kW @ 11 m/s (24.6 mph)
Annual Energy Production	Approximately - 1,200 kWh @ 5 m/s (11.2 mph) annual average wind speed 1,900 kWh @ 6 m/s (13.4 mph) annual average wind speed
Electrical Power	240VAC, 60Hz output voltage
Electrical Connection	Grid-tied system
Inverter	7 amp AC, custom designed brushless PMG
Rotor (Blade/Ring) Diameter	7 ft
Braking System	Dynamic & mechanical over-speed protection
Mast for Structure Mount	16 ft, aluminum (to BS1387, ISO65 specifications)
Mounting Brackets	Specifically designed mounting system with damping to reduce vibration
Lateral Loading	600 lbs @ 40.2 m/s (90 mph) 400 RPM maximum in a 20.1 m/s (45 mph) wind
Minimum Clearance Above Roof Line	2 ft above highest peak
Standard Pole Heights	30, 45, & 60 ft
Distance Between Multiple Units	Recommended 25 ft
Unit Weight	Approximately 250 lbs
Cut-In Speed	3.58 m/s (8 mph)
Maximum Designed Wind Speed	64.8 m/s (145 mph)
Product Design Life	20 yrs*
Acoustic Emissions	Less than 35 dB (A) for all wind speeds
EMI (Electromagnetic Emissions)	CE certified, BS EN 6100
Safety, Electrical & Reliability Standards	Certified to - UL 1741 IEEE 1547 & 1547.1 CSA C22.2 NO 107.1-01
Maintenance	Sealed component system, recommended annual visual inspection
Warranty	Parts - 5 yrs**

* 'Design Life' is not a guarantee of a specific unit's performance
** See full warranty for details and limitations