



Flower Turbines is the first small wind turbine to solve the problems of operating in dense environments such as rooftops.

Problem Traditional Turbines

Many building owners would like to benefit from wind power but existing solutions are:



Too big and ugly



Noise and vibration



Minimum starting speed 3 mps (6.7 mph)



Density causes turbulence

Solution Flower Turbines



Small ~3 meter (118") diameter footprint



Quiet (<x decibels)



1.2 mps (2.7 mph) starting wind speed



Density improves turbine performance (+20%-50%)



Ideal Locations



Flat rooftops
Use any flat rooftop for electricity or heating



Hot water production



Communication Towers



Parking Lots

Comparison of wind to solar - Double the revenue in the same space

	Solar	Flower Turbines
Number of kilowatts	20	20
Space in square meters	148.7	122
Cost of system including installation with 30% Federal tax subsidy	\$48,980	\$70,000
Value of electricity per year	\$4,381	\$6400
Payback time	11.24 years	10.93 years
Money earned per square meter	\$29.46	\$52.45

*Assumes zip code 02532 in Cape Cod, MA, \$0.16 per kilowatt hour, 6 meters per second wind

The Secret Sauce: Cluster Effect

Unique design. Instead of turbulence from one harming the other, Flower Turbines are placed close together and improve each other's power by 20-50%.





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Details

Price (not including delivery and taxes)	10 turbines for \$75000 for 20 kilowatts
Rated Power for a single turbine	2 kilowatts at 20 RPM or 13 mps (29 mph)
Maximum Wind Speed	50 m/s (180 km/h) (112 mph)
Blade Material	Aluminum 5052 (in some areas, fiberglass)
Number of Blades	2
Segments per Blade	4
Bearings	2 Taper roller bearings
Electrical Output	230VAC/3PH/60Hz or 110VAC/3PH/50Hz or DC. Supplied with inverter for grid connection or battery charger for batteries.
Total Height	5481 mm (215.8 inches)
Diameter	2628 mm (103.5 inches)
Space between turbines (shaft to shaft)	3679 mm (144.8 inches)
Blade Weight	50 kg each (110 pounds)
Overall Turbine Weight	275 Kg (606 pounds)
Design Life	20+ years
Operating Temperature Range	-15°C-40°C @ Max. 95% RH
Warranty	5 years
Birds	Hazard free
Generator	Permanent magnet
Standards	Designed to IEC61400 and AS4777
Noise	At low speeds at 10 meters, no increase over background noise.