



The 115 ft. tall windmill is hinged in the middle so its 40 ft. dia. wheel can be lowered to the ground for servicing.

### REVOLUTIONARY WHEEL WORKS IN WINDS AS LIGHT AS 7 MPH

## New-Style Windmill Powers Ohio Farmstead

A revolutionary new windmill with unique half-barrel aluminum airfoils that reportedly capture 97% of wind energy is spinning away on a central Ohio farmstead, providing power to inventor Kyle Gerhardt and his family.

The gigantic windmill has a 40-ft. dia. wind wheel — which could eventually be more than doubled in size — and stands over 115 ft. tall. Mounted on a concrete building, the big wheel is built on hinges so it can be lowered to the ground for service. Key to the design are Gerhardt's hand-built air foils that pivot to capture the wind. The farmer-contractor has his unique windmill design could be used on any size windmill from 10 ft. in dia. up to 120 ft.

"Any windmill works good where winds are strong but this windmill starts working even in winds as low as 7 mph, and collects 8 times more energy than any other design available," claims Gerhardt, who's still working on and adapting his windmill for more efficient use while he looks for a manufacturer to take over production. He has already secured more than 22 different patent claims on the new energy generator.

Each air foil on the windmill is 2 ft. wide with a 6-ft. circumference. There's 7 rows of airfoils and all change their angle of "attack" automatically as wind conditions change.

"The airfoils maintain their optimum angle until 20 mph when the cam and spring tension lets the angle decrease. At 35 mph, the angle will have decreased by 20°, when the cam goes over center and the air foils go to full feather position to take the pressure off the windmill and prevent damage, even in winds up to 100 mph," explains Gerhardt.

The windmill powers a 110-volt



Individual air foils in Gerhardt's windmill are 2 ft. wide and 6 ft. in circumference.

AC generator and a 12-volt 100 amp converted Chrysler alternator. The alternator is piped directly to a battery storage system in the shop below the windmill. Energy from the generator is consumed directly in the house to power an electric hot water heater and other appliances. Gerhardt notes that extra electricity from such a system can be sold to utilities, which are required by law to buy it.

"A 10-ft. dia. windmill of this design would be enough to power all the electrical needs of an average household. Extra rows of foils can be added as needed to fill other power requirements on the farm," says Gerhardt.

The big wheel begins spinning at 5 mph and starts to generate useable electricity at 7 mph. "I don't know of any other wind generator that can



Huge hauler measures 24 ft. long, 10 ft. wide and 13 ft. deep.

### HOLDS 10,000 GAL. OF MANURE, 900 BU. OF CORN

## Huge Manure Tank Also Hauls Grain

Nothing else quite measures up to this monstrous 10,000 gal. capacity liquid manure tank that doubles as a 900 bu. grain hauler.

Built by Iowa farmers Roger Montag, of Rodman, and Jim Fehr, of West Bend, it's 10 ft. wide, 24 ft. long, 13 ft. deep, and equipped with four 66 by 42 Terragator tires to reduce ground compaction. The back set of tires are on an axle salvaged from a Greyhound bus. The front tires are center pivoting.

When hauling manure, a steel plate is bolted over the gravity bottom discharge. Manure is then pumped out by a hydraulically-powered impellor through 3-in. hose and to a manifold and five soil injection knives. Fehr injects manure 8-in. deep except in

winter months when it's discharged out the side of the spreader. The spreader has two dividers inside to minimize sloshing. It unloads in about ½ mile of field travel.

For hauling grain, the steel plate cover is removed and grain is bottom-unloaded through two hydraulically-powered gates. Loaded with corn, the rig weighs about 100,000 lbs. Fehr uses his Deere 4840 to pull the rig.

It's fully enclosed except for a 5 by 5-ft. sliding access door on top for loading with grain or manure. The bottom is made of 10 ga. steel, the sides of 12 ga., and the top of 14 ga. steel.

Montag says the rig cost about \$8,000 to build, not counting labor.



Manure is pumped through 3 in. hose to a manifold which distributes it to 5 soil injection knives.

develop such power at low speeds. It's the key to widespread use of wind power in the future," says Gerhardt.

Gerhardt has spent several hundred thousand dollars in materials and labor developing his windmill. Each airfoil is hand-built

and many of the components were fashioned in his farm shop.

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