



The fan and tail piece are missing on thousands of windmill towers across North America. Breezy Mills offers a kit to restore such towers to working condition.

Fan Kit Fits Any Windmill Tower

There are thousands of windmill towers across North America no longer in use because the fan and tail piece are missing. An Iowa company has developed a kit to restore those towers to working condition.

"We offer everything you need at the top of the tower to get your windmill running again," says Roger Harklau, Breezy Mills Co., Humboldt, Iowa.

The fan head is made from aluminum and comes with a spindle and 5-bolt hub that fit into a tube at the top of the tower. A cross piece supports a tail fin at one end.

"It's very easy to install," says Harklau. "Most farmers use a crane to install the fan head. Or, you can buy a set of hinges from me that bolt onto the bottom of the tower on one side. You loosen the other side of the tower and then use a front-end loader and cable to pull the tower over onto the ground. It's a lot

safer to install the fan head on the ground than up in the air."

The fan head is available in 4, 5, 6 and 8-ft. diameters. The 4-ft. head kit is designed for 15 to 20-ft. towers and sells for \$940. A steel fan head is also available and sells for \$850. The 8-ft. head kit is designed for 35 to 40-ft. towers and sells for \$1,725.

"If you have a tower that's over 35 ft. tall you need an 8-ft. dia. fan or it won't look right," notes Harklau, adding that the fan kits are just for looks, not to drive a pump. However, Breezy Mills does also make windmill aeration systems.

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Powered Opener For Sliding Barn Doors

"As product manager for Morton Buildings, I had a lot of people come to me with ideas," says John Minor. "Most of them didn't work, but a few years ago two fellows brought us a home-made door-opening invention."

Today the product is known as a Propel Automated Door Opener and Minor is the company's distributor for all U.S. states.

The 3-part system, including the drive, side cinchers and a floor track, is all placed inside the building out of the weather. "The opener works without any electrical wires on an exposed track. This system combines the convenience and functionality of an overhead door with the economy of a sliding door. It requires one dedicated 20-amp. circuit, but the only wires are the pigtail for the control head and the low voltage wires for the photo eyes."

The motor is attached to the door and a stainless steel chain rides inside a protective poly sleeve. The motor door arm and the header drive rail provide up to 200 lbs. of torque to open a door. The control board memorizes the travel path of the door to ensure smooth and safe operation.

Minor says that side cinchers on the back of the door hold it close to the building as it's being closed. A floor track also guides the door smoothly during opening and closing cycles, keeping the bottom of the door in line, especially in windy conditions. Designed for single and double doors, the Propel opener has an obstacle detection system and photo cell safety sensors.

"This system has universal application on just about any type of horizontal door on any type of building," Minor says. "We've put them on everything from small garages to very large machine sheds."

"Even though the opener is a great option for new buildings," says Minor, "it's really ideal as a retrofit for older buildings. There are thousands of pole barns, cattle buildings



Propel Automated Door Opener combines the convenience of an overhead door with the economy of a sliding door.

and machine sheds that are 20, 30 or 40 years old. The sliding doors on those buildings can be tough to open. We can install a Propel opener for a few thousand dollars and make life a lot easier," John says.

Minor says a basic Propel system for a center-opening 30-ft. door would start at about \$4,250 and could be \$5,500, depending on the options chosen. Variables include whether the building is a pole shed, a steel building, has a single sliding door or is center opening, and whether the building has a flat floor and a nice level apron. "We never want to take something apart on a company installed building," says Minor. "Our installation won't do anything to void a warranty." Propel systems will work on doors as small as 4 ft. wide by 7 ft. tall up to openings 48 ft. wide by 22 ft. tall. The company has a strict policy of no money down, pay when the job is done. Says Minor, "If we can't put it in, we take it down and you don't owe us a penny." Once an opener is installed and working it has a lifetime warranty.

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Revolutionary Shovel Design Makes Digging Easier

You can do a lot more work with less back strain using these new ergonomic shovels from inventor Stephen Walden.

The 23-year-old man has won awards for his ergonomic designs and recently formed a company, Bosse Tools, to market them. So far, he has designed an ergonomic snow shovel, scoop shovel, and spade. All the tools are made from a lightweight composite material and all will be manufactured in the U.S.

"I grew up around farming and years of using shovels, rakes, brooms, and pitchforks led me to believe these tools could use some innovation," says Walden. "Our tools are designed to reduce stress on your back and also provide more leverage for digging," says Walden. "They let you work in a more upright position."

The tools are equipped with a rotating, spring-loaded center handle that turns 360 degrees, allowing you to adjust the handle to the most desirable position for ease of use. The perimeter of the ring has a series of notches in it. By depressing a button you can rotate the handle until it clicks into place at the desired notch.

The ability to hold the handle at a different angle may seem like a small adjustment, but it makes a big difference in reducing the strain on backs, says Walden. "Rotating the handle lets you pick up the material and dump it in the same motion. For example, you can set the handle to scoop dirt and dump it into a wheelbarrow in one fell swoop, instead of having to step toward the wheelbarrow."

The new spade is also equipped with an enlarged, U-shaped foot pad designed to provide maximum digging power. "It allows you to drive your weight through the middle of the blade, which is much more efficient," says Walden.

Walden says he expects the tools to be on the market soon and that they will be priced in the upper range of the current shovels and spades on market.

"We plan to offer everything from specialized construction tools to gardening equipment, all benefitting from our ergonomic designs. All the tools will eventually be



Rotating, spring-loaded center handle turns 360 degrees, allowing you to adjust the handle to the most desirable position for ease of use.

available with both rotational and stationary handles," he notes.

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State-Of-The-Art Cordless Tiller

"There's no other battery-operated tiller that can match it," says Brad Attig, Carts & Tools Technology, Corvallis, Ore.

The Tillie tiller is powered by a high torque, hub-driven electric motor located directly inside the blade hub mechanism. The battery pack mounts just above the blades and between a pair of 52-in. long wooden handles. A thumb throttle mounts on top of the handles.

"There's no choke, no fuel cans, and no extension cords," says Attig. "It's priced higher than other battery-powered tillers on the market, but it's built to last."

"Most conventional electric and battery-powered rototillers have simply taken the gas motor off and replaced it with an electric motor. They still have a transmission, which results in some loss of power. Our rototiller has no transmission, and because the motor is down low, the tool is more stable and easier to use. It also has a lot more torque, so you can operate the blade more slowly and still have full control whereas most other battery-powered rototillers have to run at full throttle in order to do any digging."

"It probably isn't the best tool to break fallow ground, but once you've got the ground broken down this tiller has an extraordinary range of uses. By tilting the tiller to one side you can walk the machine



Cordless tiller is powered by a high torque, hub-driven electric motor located directly inside the blade hub mechanism.

back and forth and use it to do everything from digging furrows to hilling and making raised beds."

The tiller is available with two battery options: a 24-volt, 10.5 Ah sealed lead acid power supply that sells for \$895 plus S&H; and a 24-volt, 20 Ah lithium battery upgrade that sells for \$1,095 plus S&H.

The company also offers a new electric-operated wheel hoe with the same battery options. The Solus is equipped with a 12-in. wide sharp steel stirrup and is designed to accept other brands of attachments. It sells for the same price as the tiller.

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