

“Vertical Axis” Wind Turbine

A technological breakthrough from VBINE Energy solves the vibration and other problems experienced in the past with vertical axis wind turbines (VAWT). The VBINE turbine's design allows it to be mounted to an existing tower, mounted to buildings, or even stacked one above the other. VBINE turbines have now been mounted on silos.

“This will be a great farm product,” says Dwight Siman, VBINE Energy. “Our first system is designed for a single turbine, but can be easily scaled up. We are working on a triple turbine tower. We have only built a 5 kW turbine so far, but we have interest for everything from 1 to 20 kW turbines.”

Like other vertical axis turbines, the VBINE has a wide range of effective wind speeds. It's bird friendly with its slow 120 rpm's at full speed and small diameter. The base unit is 34 in. dia. with a diameter of about 9 ft. at the outside of the blades. The entire height of the 5 kW turbine is only about 12 ft. It's also quiet, measuring only 66 decibels at full speed.

The ring-shape design allows the VBINE to be fitted to any existing cylindrical structure so that it rotates around the structure on which it is mounted, without interfering with other equipment mounted above or below.

“It's ideal for communication towers in remote areas,” says Siman. “Not only does it replace expensive diesel-powered generators needed to power the tower, but the low rpm's produce no electromagnetic interference with communication towers’

RF waves.”

The VBINE starts to spin at as little as 2.6 mph and begins producing electricity at 6.7 mph. It produces 5 kW at 24.6 mph. The blades catch winds from any direction and are propelled by winds hitting both its front and back sides as it spins through the circle. With both mechanical and electric brakes, it will never exceed its cutout speed of 150 rpm's, regardless of wind speeds. Conventional propeller design turbines have to shut down at considerably lower wind speeds.

The generator consists of two sets of permanent magnets mounted on facing flywheels with a stationary stator in between. As the magnets pass over and under the fixed wound coil ring, the magnetic field is constantly changing, producing a current. The direct drive of blades to generator requires no brushes, gearboxes or driveshafts. The minimal moving parts and maintenance give an expected life span of up to 30 years.

“It will offer a good solution for new construction, where connecting to the grid can cost \$25,000 to \$50,000,” says Siman. “Even in a grid situation, it has a payback between 7 and 12 years with no government assistance and wind speeds above 9 mph.”

Siman says the retail price for the existing 5 kW system is around \$32,500. With a tower, grid inverter or battery charge controller and installation, the full turbine package would be around \$50,000.

“We have dealers throughout much of



VBINE turbine can be mounted on its own pole or attached to an existing communications tower or even a silo.

Canada and are working on setting up dealers in the U.S.,” says Siman. “We have worldwide certification for all components. Interested readers can contact their nearest existing Canadian dealer or order direct from VBINE.”

Contact: FARM SHOW Followup, Dwight Siman, Director of Sales, VBINE Energy, Suite 323, 1102 8th Ave., Regina, Sask. S4R 1C9 Canada (ph 306 757-3777; dwight@vbine.com; www.vbine.com).

Reader Inquiry No. 173

Safe Way To Cut Tree Limbs

The LIMBHOG is a new tree trimming attachment that mounts directly to the front-end loader of a tractor, skidloader or backhoe. The commercial grade chainsaw slides easily into a receiver on the front-end loader and works off the tractor's auxiliary hydraulics.

The LIMBHOG's 8-ft. mast allows it to reach limbs 8 ft. higher than the bucket's reach. It reduces the risk of injury by eliminating ladders, ropes and standing in the tractor bucket. Limbs fall in front of the loader while the operator sits safely and comfortably in the tractor seat.

The LIMBHOG runs at 5,500 rpm's and cuts 5-in. dia. limbs in just over one second. Since it runs off the tractor's hydraulics, there's no gas engine noise or exhaust, and kickback is completely eliminated. The LIMBHOG comes equipped with a

self-oiling system and weighs only 85 lbs. making it easy to attach and be operated by one person. It also has the unique feature of reversing the chain to back out of a pinch.

The LIMBHOG usually retails for \$2,495, but the company has periodic specials, so call for current pricing. The price through the end of the year is \$1,895 delivered. The unit has a one-year unconditional warranty and comes completely assembled and pre-tested with an extra chisel chain. Price includes shipping.

The website includes a video of the LIMBHOG in action.

Contact: FARM SHOW Followup, James Capers, The LIMBHOG Co., 120 W. Joy Ave., Pauls Valley, Okla. 73075 (ph 866-954-6246; www.LIMBHOG.com).

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Tree trimmer has an 8-ft. mast and mounts directly to receiver on front-end loader.