

They're Still Making Water-Pumping Windmills

American West Windmill & Solar says there will always be a market for water-pumping windmills because they're simple and cost very little to run.

American West has been manufacturing and marketing quality windmills with precision components since the early 1990's. The company is an offshoot of Aermotor, one of the pioneering companies in wind power.

Today's American West windmills aren't much different than windmills made 100 years ago, but components are precision manufactured and backed by extended warranties. Even with new manufacturing technology, parts are interchangeable with the famous model 702 Aermotor made since the early 1930's. Wheels range from 6 to 16 ft. in dia. to provide pumping power that can raise water from depths in excess of 1,000 ft.

American West windmill motors are known for their strong, powerful wheel, replaceable babbit bearings, nodular pinion gears, positive lubrication, balanced self-regulating operation, and a galvanized steel



American West Windmill and Solar is a large supplier of new windmills and replacement parts, including fan blades, gearboxes and other components.



helmet that protects internal parts from the elements. The company makes its own castings, machines its own bull gears, and precisely cuts threads into the wheel hubs. Components are checked for tolerances, fit, tension and alignment before assembly and shipping.

Windmills from American West can be sized to practically any pumping or power

generating need. Components are chosen based on well size and depth, amount of water needed over time and typical wind speed for the area.

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They Use Horse Poop To Heat Their Home

Sherry Sutton-Zanardo and her husband Matt burn horse manure bricks in their home furnace. Last winter, they got about a third of their heat from the "poo-bricks", which they say burn longer and are lighter than firewood and give off no odor.

"They get really hard, but they are nearly weightless," she says. "They are a lot easier to carry than firewood, and you don't need as much."

Sutton-Zanardo got the idea for the horse fuel when she read that a horse's daily output of manure with bedding equaled about 3 qts. of fuel oil. Dried dung is a common fuel throughout much of the world.

After checking out a number of manure brick designs on the internet, she came up with one she liked. "My farrier made it for me," she says. "It has a box that is about 7 in. tall, 6 in. wide and 4 in. deep."

The box is attached to a wall. A hinged arm above it has a plunger sized to fit inside the box and compress the brick. Once packed sufficiently, a drop-out bottom lets the brick be pushed out by the plunger.

Sutton-Zanardo quickly found that horse apples alone made the best bricks. They had more than enough fiber, but if she added wood chips or other bedding they tended to break up when dry.



Sherry Sutton-Zanardo holds a "poo-brick" in front of their wall-mounted brick maker. She and her husband burn the horse manure in their home furnace.

However, the horse apples did need some processing. Sutton-Zanardo breaks them up and adds water to get a thick paste consistency. When pressed, excess water passes out through holes in the sides of the press box as well as through the gap around the drop-out bottom.

"The more you press, the more water comes out, but you don't want to over press either," she says. "I compress them down to about a 4-in. thickness."

Even the wastewater gets put to use. Sutton-Zanardo collects it, dilutes it, and uses it as a manure tea on garden plants.

The bricks are stacked up under a roof to

dry. She warns not to stack them on concrete or they'll remain damp.

"Once you get it figured out, it's the easiest thing in the world," says Sutton Zanardo.

"I had a couple left over last winter, and we kicked them around all summer, and they never broke up. I'm planning a bigger press with the idea of making bricks for a building. I'll cover it with stucco."

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