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Both augers fold up alongside drum for transport.

He Built His Own High-Capacity Rotary Seed Cleaner

"A comparable commercial machine would cost \$5,000. My only cost was my labor because I found nearly everything I needed in my junk pile," says Brian Haubrich, Glenbain, Sask., about his home-built rotary screen cleaner.

The rotary cleaner measures 4 ft. in diameter and almost 9 ft. long and mounts on an axle and wheels. It's powered by a 16 hp, electric start gas engine and is equipped with a pair of old Brandt augers - one for loading, the other for unloading. Both augers fold up alongside the drum for transport. The engine belt-drives the drum as well as both augers.

The drum rotates on a bearing-supported shaft and mounts above a V-shaped, plywood hopper covered with tin. An auger with slots

cut into the top of it runs the full length of the hopper. The auger carries fines out the back, where they're dumped into a separate auger (not part of the machine) that loads them into a truck or wagon.

To load the cleaner, Haubrich swings the loading auger out at a 90 degree angle. It drops grain into a small hopper just ahead of the drum. The unloading auger that carries away clean grain swings upward and outward from the back part of the cleaner, via a pair of hand-operated winches.

"I and some of my neighbors have used it to clean flax, canary seed, mustard, canola, and weed seeds out of wheat, durum, lentils and chickpeas. It really works well," says Haubrich, who operates a seed cleaning plant. "I have three different-sized screens for

different jobs. I was using a smaller commercial rotary cleaner but it didn't always have enough capacity. I designed it so that nothing runs any faster than it has to. Even when my seed cleaner is working the engine runs just slightly above idle.

"I pull it behind my pickup or tractor, and also rent it to neighbors who come and pick it up. It has more capacity than most rotary cleaners, which are usually only 3 ft. in diameter and 6 ft. long. I use my 1/2-ton pickup to pull it down the highway.

The shaft that the drum rotates on came out of an old combine pickup. He bought new screens to make the drum (the only new components). The screens came in 3-ft. widths so he overlapped three of them over a round a frame made of metal tubing. A

homemade clamp fits around the outside of the drum. "To change screens, I simply remove the clamp and put new ones on," says Haubrich.

Haubrich says the cleaner's capacity depends on what kind of seed he puts through it. "My son-in-law recently used it to remove lentils from canola. The Canola went through the drum as fast as he could load it, at about 600 bushels per hour. However, if you have to remove wheat from canola, the wheat will compete for the slots in the auger tube at the bottom of the drum, and is also lighter than wheat, so capacity will be limited to about 150 bushels per hour," he notes.

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Two Cylinders Give Home-Built Log Splitter Double the Power

Matt Throener, Matt's Ag Service, Carnegie, Oklahoma, heats his shop with a wood stove he built from half of a 500 gal. propane tank.

While the stove keeps the 35 by 75 ft. shop comfortable, it takes a lot of wood and that, says Throener, means a lot of wood splitting.

"I built the stove to handle big chunks of wood but then discovered that most log splitters wouldn't handle anything bigger than 10 in. in diameter," he says.

So he built a heavy duty trailer-mounted splitter that will handle just about any size and any kind of wood he can put into it.

He started with a 12 in. I-beam that serves as a base for the splitter. The I-beam mounts on an axle made from a length of 2 by 1/4-in. square tubing. On this, he mounted a pair of wheels salvaged off an old trailer built from the front spindles and hub of a car. On the front, he added another length of square tubing and a ball hitch.

A key feature of the splitter is a ram powered by twin hydraulic cylinders, which forces wood chunks through a stationary wedge. The splitter has self-contained hydraulics, powered by an 11 hp gas engine.

"I had an old engine I was going use to make a generator, but never got around to it. I figured this would be a good use for it," he says. He bought a new hydraulic pump, hoses and fittings, but everything else he used for the splitter came from salvage yards.

To assure that the twin hydraulic cylinders worked together and not against each other,

he plumbed them with a T fitting off the main hydraulic line. He mounted the two 4-in. cylinders parallel in a horizontal position in the splitter. He unscrewed the clevis fasteners from the ends of the shafts and threaded them into holes precisely located in a 12 by 4-in. piece of 1-in. plate steel to make the ram for the splitter.

"The two 4 in. cylinders together give me the same power as an 8 in. cylinder, which would have been considerably more expensive," he says.

To make the wedge for his splitter, he started with another 1-ft. square of 1-in. plate steel. He sharpened one side of the square, beveling it back about 60-degrees. On both sides of this plate, halfway back from the sharp edge, he welded two more 1-in. thick pieces of plate steel, measuring 6 by 12 in. He beveled the leading edge of each to about 45 degrees. This makes the back edge of the wedge 3 in. thick. "It does a good job with most wood," he says. "I could add a third layer of plate at the back of the wedge to make it split even faster."

Throener says it will split wood larger than he can easily lift into it. "I'd like to add a hydraulic lift to be able to pick up larger pieces for splitting," he says.

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Throener says his trailer-mounted wood splitter will handle just about any size and any kind of wood he can put into it.



A ram, powered by twin hydraulic cylinders, forces wood chunks through stationary wedge.