

Big Wheel Ditcher Outperforms Scrapers And Dozers

Pull-type scrapers, backhoes and dozers can't hold a candle to the T-Rex Rotary Ditcher when it comes to moving dirt. A traditional scraper can move 200 cubic yards per hour. The T-Rex, with its 8-ft. spinning wheel, moves as much as 10 times that with no need to deal with piles of dirt that has been removed.

"The T-Rex moves 1,500 to 2,000 cubic yards of dirt in an hour," says Grant Dyck, T-Rex Ditchers. "It can throw 20 to 85-lb. stones 100 to 150 ft. The dirt is thrown evenly over a 300-ft. distance, which eliminates the leveling work required with a backhoe."

Dyck designed and built his first T-Rex to resolve drainage problems on his own 14,000-acre, Red River Valley farming operation. Other rotary ditchers on the market couldn't handle the work and broke down.

"The first T-Rex was built out of necessity," recalls Dyck. "We were running behind on ditching and clean up. Other rotaries worked fine under ideal conditions, but they couldn't do the whole job."

Dyck's prototype had its own CAT engine and drive. He put 10 years and 3,000 hrs. on it. When he located heavier duty components, he upgraded the ditcher and began to commercialize it.

"When Walterscheid came out with the driveline we needed, we switched over," says Dyck. "To protect the driveline, we put a cut-off clutch between 400 and 450 hp. It also has an override clutch, so it free wheels when it lifts out of the ground."

The T-Rex averages a 6-in. cut at 3 to 5 mph and can cut as deep as 2 ft. Dyck has made twenty 6-in. passes for a 4-ft. deep ditch. He's also cut a foot deep in clay at 3 to 5 mph. It can also be used as a finishing tool to "step" or "flare" ditches.

"We ran it for 10 years in the Valley without problems, but when we tried it in Saskatchewan with all the sand and rocks, we had to rock-proof it," says Dyck.

In addition to the protection offered by the slip clutch, the heavy-duty cutting teeth are



With its 8-ft. spinning wheel, the T-Rex Rotary Ditcher moves up to 10 times more dirt than pull-type scrapers, backhoes and dozers. And, it throws dirt evenly over a 300-ft. distance without leaving big piles.

fastened to the disk with bolts. If they hit a very large rock, the bolts fail before damage to the driveline can occur. If that happens it takes just 3 min. to fix with a \$2 bolt.

Dyck has operated the T-Rex with everything from a 200 hp tractor to a 650 hp tractor. While the components are designed to handle up to 500 hp without a problem, he suggests a 300 to 400 hp tractor as ideal.

"With its 8-ft. wheel, it is twice as large as most rotary ditchers, which means it leaves

a ditch twice as wide," says Dyck. "The geometry of an 8-ft. wheel is ideal. The centrifugal force, our footprint, and our cut-load all match."

The T-Rex is priced at \$57,500 Canadian. Dyck says he has been delivering the ditchers all over western Canada.

You can see a video of the T-Rex in action at www.farmshow.com.

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Stump Grinder Built For \$250

Mark Yax used mostly off-the-shelf automotive parts to build his own stump grinder for only about \$250.

The stump grinder rides on 10-in. pneumatic tires and has handles made from 7/8-in. cold-rolled steel. It's powered by a Tecumseh HM80 engine that Yax already had. The engine mounts on a welded 2-piece square tubing frame and is used to double belt-drive the centrifugal clutch to the grinder's teeth.

The operator grabs a T-bar handle to guide the unit. Yax mounted hand brakes on the handles so he can lock one of the wheels in place, allowing him to pivot the machine back and forth as he grinds the stump.

"I designed it as simple as possible and used mostly parts I already had," he says.

He bought the brake rotor and rear axle bearing from a front wheel drive car, and a dual belt crankshaft pulley from an auto parts supplier on eBay. He also bought two #40 chain sprockets from a tractor supply company and welded them to the wheel rims. Pins that retract with the hand levers engage in the sprocket teeth and lock the wheels independently.

He used 1/8-in. plate to form a guard for the grinding wheel to keep wood chips from flying back at him.

"I'm pleased with how it turned out," says Yax. "The stump shown in the photo was about 18 in. dia. and 6 in. above ground when I started on it, but I had the stump and roots ground out to about 4 in. below ground level in only about 20 min."

"I wanted to keep the design as simple as possible, so that very little machining was required. Most of the parts I used were fabricated with a drill press, 4-in. angle grinder with cut-off saw, and welder. Some machining was required for the cutting tool holders and the bearing mount. I bought the belt pulley, brake rotor, bearing and cutter teeth and tools for about \$250. Everything else that I used, I already had."

To build the cutter assembly, Yax used cheap carbide lathe tools that he bought on eBay for only about \$3 apiece. He used 20 carbide-tipped teeth on the cutterhead. "I bought 10 left hand teeth and 10 right hand teeth and bolted them to some 1 1/2-in. dia. steel round stock with slots milled in that bolt onto the cutter wheel," says Yax. "I also pinned the cutters through the brake rotor to make sure the cutters won't fly out."

Since he only uses the stump grinder occasionally he made a belt-adjusting system that works off one bolt. "By removing the bolt I can quickly remove the engine and use it on other equipment that I intend to build," says Yax.

Yax documented the complete building process. "If there's enough interest I'll offer CAD drawings for sale with a complete list of components and part numbers that I used to build it," he says.

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"I designed it as simple as possible and used mostly parts that I already had," says Mark Yax, who built his own stump grinder for only about \$250.



Stump grinder is powered by a Tecumseh HM80 engine, which double belt-drives the centrifugal clutch to the grinder's teeth.