## Money-Saving Repairs & Maintenance Shortcuts





Rapidrill tool sells for \$995. A slimmed down version for light work (right) sells for \$349.

## Turn Your Cordless Drill Into A Mobile Drill Press

Rapidrill attaches to almost any standard collared cordless drill and turns it into a mobile drill press. It also adds a lot of leverage, allowing you to put large holes through thick steel fast.

The Rapidrill can be used on everything from steel plate to C-channel to pipe. It aligns your drill at a right angle to the drilling surface. One end of the frame attaches to the collar of the drill to hold it steady, while a receiver tube at the other end is placed against the material to be drilled. The operator holds the drill with one hand and uses his other hand to pull down on a built-in lever that acts on a gear and sprocket system.

According to the company, the design provides your drill with more than 1,000 lbs. of additional force for powerful leverage at a

perfect right angle, allowing precise control and making it much easier to drill. As you push down on the lever, it applies about 10 times as much force to the drill bit as you could without it.

The company claims you can drill a 1-in. dia. bit through 1/2-in. thick steel in less than 30 seconds, and a 1/2-in. dia. bit through 1/4-in. thick steel in just 10 to 15 seconds. And because you're drilling at a true right angle, with constant increased pressure, you save on the life of your drill bits.

The Rapidrill is available online or at any Fastenal retailer in the U.S.

Contact: FARM SHOW Followup, Rapidrill, LLC, Kanarraville, Utah 84742 (ph 855 993-7455; www.rapidrill.com; support@rapidrill.com).

RDM roller chain comes in 10 different lengths. It's almost 3,000 lbs. higher in tensile strength than competitive heavy-duty chain.

## Roller Chain "Better Than Heavy-Duty"

The first standard roller chain off the assembly line at RDM Enterprises is nearly 3,000 lbs. higher in tensile strength than competitive heavy-duty chain. To make the chain, RDM leveraged 25 years of experience in the metal stamping industry.

Dustin Russell, RDM Enterprises, says "We expanded into roller chain about 5 years ago when my grandfather and company founder Al Rinke decided to take what we had learned and apply it to making chains."

What RDM came up with was 81x roller chain with a tensile strength of 27,000 lbs. Russell compares that to competitive roller chain marketed as "heavy-duty" chain with a tensile strength of 24,300 lbs.

"Our chain is considered standard duty, but it is actually stronger," says Russell. "Initially, we're marketing it to sawmills and to farmers."

The chain comes in 10-ft. lengths. Each contains about 46 links with a pitch of around

2.6 in. Side links are made out of 1050 heat-treated steel.

Each side link has 2 types of bushings and pins. The bushings are made out of 1020 steel that is carbonized and hardened. They're then heat-treated to 50 Rockwell. The outside bushing is 1 in. long, and the inside bushing is 1 1/4 in. long. The pin inside the bushings is 2 in. long and made with 4140 steel.

"If desired, we can add flights made of 1050 heat-treated steel without welding," says Russell.

Russell suggests the 81x is just the beginning of a new line for RDM. "I expect we will be expanding our product line and the lengths offered."

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Terminator 20-in. abrasive chop saw cuts steel up to 4 in. thick.

## Nothing Can Stop The "Terminator" Chop Saw

Thirteen years after John Rutherford designed and built the "Terminator" 20-in. abrasive cut-off saw, it continues to cut steel up to 4 in. thick for an Ontario manufacturer. Now retired, FARM SHOW reader Rutherford says building it took plenty of planning and many hours to build using quality, heavyduty materials.

The fabricating plant he worked for cut a lot of steel and had burned out smaller chop saws when attempting to cut large diameter manganese shafting. As the maintenance department manager, known for building things to solve problems, they asked Rutherford to build the metal chop saw. He made sure to build it to endure daily use cutting the hardest manganese steel and to include important safety features.

A 10,000-lb. rated wagon spindle supports the saw head, and a machined round steel plate on the spindle serves as a rotor with a brake caliper to lock the head in position. A master brake controls it with an air cylinder operated with a valve handle. Another valve handle locks the vise on the tabletop that holds the steel.

"The vise is mounted on linear ball bearing pillow blocks so it can be lined up and moved sideways to allow for miter cuts," Rutherford says Everything, including the 10 hp motor and 3-phase, 600-volt electrical box, is mounted on a sturdy 1/4-in. wall 2 by 4 structural tubing frame. The arm made of 3 by 6 in. square tubing holds the saw and shield, and swivels 60 degrees in both directions to make miter cuts. The chop saw uses 3/16-in. thick, 20-in. dia. abrasive blades. The handle on the head has the start switch on the side.

"The saw is equipped with safety switches so the saw motor can't start until the brake and vise are locked," Rutherford says. The saw shield also comes down to protect the operator from hot sparks.

The Terminator has been fairly maintenance-free despite constant use, he adds. He changed the bearings on the spindle shaft about 6 years ago, and the four V-belt drives were changed to timing belt drives to prevent slippage.

Rutherford, 71, says he has been designing and building things since he was 14. He's pleased how one of his biggest creations turned out and to know that it will work for many years to come.

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Chop saw's 10 hp. motor and 3-phase, 600-volt electrical box mount on a sturdy 1/4-in. thick steel frame.