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Firewood Processor Built Entirely From Scratch

"Over the years we've built a complete low cost firewood cutting and splitting system that has saved us a lot of time, money and labor," says James Goetsch, Merrill, Wis.

Some components of the system Goetsch uses were built by his father as long as 50 years ago. Other components are much newer.

One of the newest is a conveyor that's used to deliver firewood into a trailer. The V-shaped conveyor measures 10 ft. long and 5 in. wide at the bottom and has 14-ga. metal slats spaced 2 ft. apart. It makes use of ordinary link chain. Power is supplied by a 1/16 hp washing machine motor mounted on top

of the conveyor. The motor belt-drives a shaft that chain-drives the conveyor. A bicycle sprocket and chain are used to gear the motor down and reduce chain speed. A 1 1/2-in. pulley serves as a slip clutch.

The conveyor is supported by an A-frame made from wooden 2 by 4's, with a pair of conduit rods providing reinforcement.

A small circular saw, belt-driven by a 5 hp Briggs & Stratton engine, is used to cut logs to firewood length. Both the saw and engine mount on a 2-wheeled wooden stand that Goetsch sets up at the base of the conveyor.

"My dad made the stand 50 years ago, but

he used a 1 1/2 hp electric motor instead of a gas engine to drive the saw. If I want I can pull the unit behind my 4-wheeler."

His dad also built an I-beam mounted wood splitter that's designed to split large chunks of wood up to 2 ft. in diameter. The wedge is built from mild steel that's hard surfaced to a point and is powered by a 7 1/2 hp Briggs and Stratton engine. A homemade 12-volt electric winch is used to lift large chunks of wood up onto the I-beam.

"My dad built this splitter more than 50 years ago before any commercial splitters were on the market," says Goetsch. "Split

wood drops directly into the conveyor."

The winch mounts on a vertical shaft that has a horizontal arm at the top. The shaft is free to pivot at the bottom. The cable rides up over a spool and pulley mounted on the arm and is equipped with homemade tongs. A handheld remote control is used to operate the motor.

"The winch has a capacity of 1,000 lbs. so it'll lift even the biggest chunks of wood," says Goetsch.

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Home-Built Wood Splitter-Buzz Saw Made From Swather

"I had an old swather and the leg off an old road grader, and by using them, some other salvage material, and spending \$100 to buy one cylinder, I made a versatile, mobile wood splitter-buzz saw combination unit," says Jim Rife of Roy, Montana. "It was a long winter's project a year ago, and I'm quite happy with it. It's unique and it will do just about anything you want in working with wood."

Rife has a wood furnace in his home and also heats his shop with wood, so he needs to process a lot of firewood. He uses old fence posts, old boards, and also goes into the mountains to cut trees.

The project began when Rife stripped a Massey Ferguson swather right down to the motor and drivelines, and then installed the road grader's leg with one cylinder, under the swather. He used the 4-in. hydraulic cylinder, which had an almost 2-in. shaft, and welded a blade he had built onto the leg. Rife also connected a 1-ft. sq. block to the end of the cylinder with a pin, forming a plunger end to push the blocks through.

"I built a hydraulic lift on the side where the operator stands, using a separate 3-in. cylinder that I bought new. It has a 1-in. shaft

and it will lift about any size block of wood that you want, and roll it onto the splitting platform," he explains.

Rife says he's used the unit to split some blocks so big that he couldn't lift them - they were 31 in. long and 2 ft. dia., and were originally cut with a chain saw.

On the other end of the swather, Rife mounted a 30-in. dia. buzz saw with a moveable table. It will cut through a 14-in. dia. piece of wood.

"It takes two men to run it, but it really cuts wood fast, and everything runs off the same power plant," he says. "The swather's hydraulic pumping system runs the wood splitter. I converted the V-belts and drives over to the buzz saw and two different grinders. There are separate clutches for the buzz saw and both grinders so you can start up whichever one you want separately."

Rife put a trailer hitch on the swather's trail wheel and pulls it from there.

"This rig has been really handy. It's a complete operation," Rife adds.

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Using an old swather and the leg off an old road grader, Jim Rife made this mobile wood splitter-buzz saw combination unit.



Side-mounted hydraulic lift lifts wood and rolls it onto splitting platform.

"Made-It-Myself" Two-Way Splitter

Royce Smith built a wood splitter, modeled after one his neighbor owned, and he appreciates its efficiency.

"It splits two ways," says the Heflin, Alabama, machinist. He had the 10 3/4 by 3/4-in. thick steel knife beveled on each side, and a rack made of store shelving moves wood up to 20 in. long in both directions. A rack on the back catches the split wood.

A 6-in. I-beam supports the splitter powered by a 14 hp Briggs and Stratton motor.

An 11 gal./min. hydraulic pump supplied by a 10-gal. tank runs a 4-in. hydraulic cylinder with 2-in. rods for plenty of power to split big red oak blocks.

Smith rigged switches and wires from an old lawn mower so he can turn the splitter on with a key. The splitter is mounted on an old car axle and pulls easily with his pickup.

Loading wood on the rack is the hardest part of the job, Smith says. In the two years he's had the splitter, he's learned the opera-

tion works best with three people loading and unloading the wood. They can split a heaping pickup load of wood in a couple of hours. He splits six to eight cords of wood for his family, plus he splits wood for neighbors.

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Big cutting blade cuts coming and going so there's no waiting between strokes.

