

Brute Force 18-24 HD FIREWOOD PROCESSOR

O2 Farms Harvests Money from the Forest Floor

Third-generation tree farmers in the Pacific Northwest, Jim and Sandy Hutson found a way to derive value from an otherwise worthless product lying on the forest floor. Thanks to some customization of an already well-engineered firewood processor, Jim can now turn some of the nastiest logs imaginable into bulk or bundled firewood. Instead of stepping over logs, he's turning them into dollars. **by *Scottie Barnes***



Jim Hutson's family has been managing timber in Washington State for three generations. Today, the family has multiple tree farms of varying sizes that were split among siblings. Jim and Sandy Hutson are the owners/operators of the 900-acre O2 Farms in Olympia.

In addition to managing their own timberland, they provide services to others, such as logging and thinning, road building, habitat enhancement, marketing, and more. Jim's marketing goal is to gain the best value from existing resources, which led him to incorporate firewood processing into his business model.

"I'm a tree farmer with logging equipment," said Jim. "I wanted to find a way to get value out of an otherwise worthless product—trees 7 inches and smaller that were lying on the ground." Pulp is worthless, he explained. But he still had to clean up the forest floor after logging operations. So he began to process and sell firewood using a Chomper firewood processor. Soon, he had two. But he still treated firewood more like a hobby than a business.

"You always have to look for new ways to market products," he said. "And this worked for us."

Soon, this "hobby" was contributing to Jim's bottom line, and he outgrew his equipment. "The Chompers were great in the 1980s," said Jim. "But technology has come a long way." So he went looking for a new processor. After thoroughly researching the market, he decided on a Brute Force 18-24 HD Firewood Processor.

Engineering Features

Jim said he liked the Brute Force for both price and functionality. "It's probably the best price on the market, with the best conveyer, and the best reliability." He also said that, because it has a hydraulic lift on both the log deck and the outfeed conveyer, "it's super easy to move."

Thanks to the rounded trough, he continued, "it also gives me the maximum production from the worst logs. Every other processor has a flat or a V-shaped trough." The rounded trough allows him to process larger-diameter logs without increasing overall weight or width. Plus, it can process the nastiest crooked wood with ease. "I can take a log that I'd pass over if I were using a chain saw, throw it in the trough, and cut it into firewood."

Jim also likes the 3-foot side-to-side swivel of the outfeed conveyer, which allows him to produce larger piles of wood in less time. Rather than dump the processed wood into what becomes a huge pyramid, the swivel conveyer spreads the wood across a 6-foot width, so Jim can keep working as the profits pile up.

All of these standard features appealed to Jim, but



At the far end of the rounded log trough, the clamp (right) descends to grip the log. A pressure-sensitive connection then engages the chain saw blade (left), which makes the cut. When the blade is raised, the action is reversed.



The standard hydraulic log deck features three strands. Jim modified his deck, placing strands in 15.5-inch increments, and also extended the deck to 16 feet so that he can handle logs from 3 to 26 feet.



The controls are simple, with all levers on a dead-man switch for safety.



The hydraulic conveyer on the outfeed swivels 3 feet to spread the firewood across a broader area.

the deciding factor was the willingness of Brute Force owner/engineer Clayton Szydel to build the processor to Jim's specifications.

A Custom Fit

Jim said that Szydel made adaptations to meet his needs, where other vendors would not. Whereas competitors offered options, Jim said Szydel listened to his requests and modified the processor accordingly. "He helped me develop my ideas into something that would work even better, and also save me money."

For instance, Jim wanted to lengthen the frame by 6 feet. Szydel had a ready-made frame that was 4 feet longer than the standard. So Jim took the 4-foot extension. The compromise gave Jim a longer frame for less money. "He worked with me and was able to make a good deal for both of us," said Jim. With the resulting 16-foot bed, Jim said he can put a 26-foot log on the deck and it won't fall off.

He also added extra log strands. The standard strands on the Brute Force 18-24 are 33 inches apart. Jim split the difference and had one strand inserted between each, so that no span was farther than 15.5 inches apart. "That allows me to load shorter logs on the deck," he said. "We could put a 3-footer on there if we had one," said Jim. "Using my truck-mounted shovel, we can load them on there like stacking domi-

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nos. And we could put a variety of sizes both in length and diameter and just run them through.”

Jim also wanted a fast splitter cycle time and was pleased to find that Szydel had already ported the cylinder holes to increase the throughput, enabling a 6-second cycle.

“Anybody can sell you a bigger pump, but if they don’t increase the hose or orifice size on the end of the cycler, you can’t put the oil in it,” he said. Brute Force had already done it. “They offered a 5/8-inch hole and 1-inch hole, for fast split, so Szydel had solved those issues.”

The processor comes standard with a gas motor, a 37-hp Kohler gas engine, and a 32-gallon pump. Jim upgraded to the optional 44-hp Kubota diesel and the high-volume pump. “When you upgrade to the diesel, it comes with a 62-gallon pump,” Jim explained. “When Szydel mentioned he had a 70-gallon pump, I said, put it on there!”

According to Jim, the Brute Force price point was low enough that it was easy to afford the upgrades he wanted.

Next, he needed a variety of splitters so he could cut to fit his four firewood bundlers. “By bundling, you can turn a \$200 cord product into a \$600 cord product,” Jim said. “I hire a couple of guys to run the twister and wrapper, but there’s a lot more margin.”

To meet Jim’s needs, Brute Force provided a 4-, 6-, 8- and a multi-head splitter. “We worked together on the specs for the multi-head splitter,” said Jim. “Szydel just made us part of his product development process.”

Bundled wood, of course, is not Jim’s primary business. But it is a profitable one. “Our budget for 2016 is 1,500 cords,” said Jim.

The KISS Principle

Jim also likes the simplicity and built-in safety features of the Brute Force processor.

“The three levers are laid out like a dead-man switch, with the operator’s safety built right in,” he said. To engage the splitter, the operator pulls the right lever toward him. “If you were to fall toward the processor and push the lever forward, or take your hand off it for some reason, the operations come to a complete stop.”

He said the controls are also intuitive and the processing functions are very simple. With your right hand, you advance the log and run the saw up and down. The left hand operates the splitter. “When you’re processing a log, you never take your hand off those two controls. When you’re cutting a log, your hand stays on those two levers. Then when you want to move a log off the strand deck and into the trough, you put your left hand on that third lever to advance the log.”



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ALWAYS IMPROVING

The chain saw operation comprises a log clamp and a 30-inch chain saw. The log goes into the chute; the operator adjusts the length setting using a simple visual guide. The clamp and blade are controlled with just one action. The operator pulls the lever, which lowers the log clamp. When the clamp engages and has a grip on the log, the pressure bypasses to the saw motor and the blade comes down to make the cut. Then when

the saw is retracted, it signals to the clamp to release and rise up. “Because the components are pressure sensitive, they communicate with each other and you don’t have to think about operating two different pieces of equipment. It’s just one movement to engage the saw and log clamp,” Jim explained.

To set for length, the operator “eyeballs” a “rod and spring” that is suspended above the saw/clamp configuration. “It’s a very simple and inexpensive solution,” said Jim. “It’s literally hanging down and you see it. You run the log out and visually stop it at your mark and then make your cuts. To change the length of the cut, you basically move the nut that suspends the marker.” The nut can be moved in 1-inch increments.

“It’s so simple and inexpensive that it reminds me of the story about NASA spending \$5 million to design a pen that would write upside down in space, and the Russians just sent up lead pencils.” Szydel opted for the lead pencil. “It’s basically a \$10 solution,” said Jim.

“Keep it simple stupid (KISS),” Jim continued. “That’s how Szydel does business. And it saves his customers money and makes things easy.”

Testing It Out, Running the Numbers

After running the processor for three weeks, Jim wanted to test his productivity. So he loaded his trailer with small logs. “The largest log we tried had a 9-inch butt and was fir pulp,” he explained. For the first cord of this “field test,” Jim had one guy feeding the log deck while he processed. “I was still getting my rhythm down and still had to look down at the controllers,” he said. “I ran one cord of wood in my dump trailer in just 21 minutes.”

The following week, Jim filled his dump truck, which he knew held 2 cords. Only this time, he was on his own. “I was running the loader and feeding the deck myself. I started the machine to let it warm up, jumped on my tractor, and started loading the deck. By the time I shut it down 47 minutes later I had cut 2 cords in 47 minutes. All by myself.”

Jim said that the processor is faster than he is. “It was waiting on me. I never waited on it.”

Jim is pleased. And he has every reason to be. “At that point, I had a \$200 per cord product. I’d created value where I would have lost money,” he said. “It may be small volume, but for a small landowner, it keeps you working and it pencils out well.”

And this summer, Jim has 300 cords of logs and he’s ready to “start chewin’ ’em up.” ■

Scottie Barnes is an author, editor, and owner of a small piece of land in western Oregon. She grew up in a timber town and remembers the days of the one-log load.

BRUTE FORCE SPECS

Brute Force 18-24 HD Firewood Processor

Maximum log size.....20 in. diameter, 14 ft. long

Rated output.....1.5 to 3 cords per hour

Powerplant.....37-hp Kohler gas

Powerplant fast split options.....44-hp Kubota diesel
with 36 or 62 GPM double pump

Slasher.....30 in. chain saw bar

Splitting cylinder.....24 in. long, 4 in. diameter

Splitting cycle.....6 seconds

Dimensions.....8 ft. wide by 20 ft. long
(transport configuration)

Weight.....5,250 lbs.

Towing.....Highway legal in U.S. and Canada

Standard features.....14-ft. hydraulic conveyer
with 3-ft. swivel, choice of 4-, 6-, or 8-way
cutting head, 3-strand hydraulic log deck

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The rounded log trough allows the operator to feed in misshapen logs that might otherwise be considered worthless.