



The loaded metal firewood baskets are pushed into the kiln box with the front-end forks on the yard machine.

Mountain Firewood Kilns

With the demand for firewood now reaching record levels, the availability of firewood that's dry is a matter of concern to both consumers and producers.

Premium prices for dry wood have risen. Nobody enjoys burning green wood and struggling to keep the fire burning while much of the heat is used to evaporate all the water in the wood and creosote fouls up the chimney. Wouldn't kilns to dry firewood make sense? Of course they would, and that is not a new concept. There are a few firewood producers who have successfully used firewood kilns for a number of years. And now the need is

greater than ever.

Mountain Firewood Kilns, a company in Littleton, New Hampshire, has developed a firewood kiln installation that can be found in a number of different locations in the country. It's a 5-year-old company with primarily family members as employees. I took the opportunity to observe one of their installations at Whitehill Firewood, a firewood producer near St. Johnsbury, Vermont.



Dennis Whitehill processes his firewood with a Multitek 20-40, kept under cover in the wood yard.



The two firewood kilns flank a larger trailer box used as a storage barn. The Central Boiler outdoor furnace is seen on the left.

The dairy farm where Dennis Whitehill spent his boyhood years no longer exists as such, but the woodland acres once attached to the farm have for many years provided a portion of Dennis's livelihood. In addition to harvesting saw logs, Dennis has been active in the firewood business for 35 years. Combine that with a 26-year career with the Vermont Agency of Transportation, currently as district supervisor, and it is obvious Dennis allows no grass to grow under his feet.

The business known as Whitehill Firewood is currently producing between 750 and 1,000 cords of firewood yearly, most or all of it dry. Dennis does no logging now; his firewood is purchased roadside from logging operators and hauled with his own truck. Dennis has two Multitek 20-40 firewood processors in his wood yard, but it appears that one is a well-used machine, possibly used only for parts.

Mountain Firewood Kilns

Kiln structure	40 ft. refrigerated sea containers/ stainless steel and aluminum
Heat exchanger	Modine heat transfer
Fan	2, large
Humidity controls	
Also available	Metal baskets with rollers (6 ft. x 6 ft. x 4 ft.; 6 ft. x 6 ft. x 4 ft. 6 in.; 6 ft. x 6 ft. x 5 ft.)
Trailers for baskets	Rails inside kiln for baskets—installed Basket for skid steer—70 in. x 48 in. x 40 in
Price	\$25,800 FOB

MANUFACTURER

Mountain Firewood Kilns

1536 Broomstick Hill Rd., Littleton, NH 03561

Phone: 603/444-6954

E-mail: mountainfirewoodkiln@mail2newhampshire.com

www.mountainfirewoodkilns.com

The item of interest in his yard, however, is the Mountain Firewood kiln, a business addition which Dennis praises highly. The kiln package that is provided by

Mountain Firewood Kilns consists of the kiln box or container plus the controls, heat exchanger, and other equipment needed in the kiln itself. The heat source, usual-

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Metal kiln baskets waiting in front of the two kiln boxes, one on each side of the storage box.

ly an outdoor furnace, can be provided separately by the customer or by Mountain Firewood Kilns.

To fashion the kiln box the company uses 40-foot-long refrigerated sea containers that have been placed out of service after possibly 10 years of use. Bill Latulip, owner of Mountain Firewood Kilns, says "the sea containers are perfect for a kiln box because of their durability and non-rusting factor as they are

made of stainless steel and aluminum." The doors on the rugged container form a complete airtight seal. Bill told me that refrigerated truck bodies had been tried but were not satisfactory when compared with the sea containers.

An obvious advantage of this type of kiln is the portability of the unit. It can easily be moved to another location on a flatbed and placed on gravel, pavement, or con-

crete pads.

The heating system is based on hot water infeed from the heat source and a heat exchanger within the container. An external heating unit is obviously needed to provide the hot water which is piped to the heat exchanger through 1 1/4-inch supply lines. A 220V power source is required for the water pump. Fans are mounted on both ends of the kiln for air movement

The external heat source needs to be a hot water boiler of at least 150,000 BTU. Dennis Whitehill has two kiln boxes in operation and uses a wood-fired Central Boiler for heat, rated at 500,000 BTU. That's obviously more than is needed, but he also heats his large garage with the furnace. Bill Latulip said that his customers generally use wood scraps or sawdust for furnace fuel and one customer even uses coal. Although not a part of the basic package, Bill Latulip's company can provide different types of outdoor furnaces.

The green firewood is placed in

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the kiln in metal baskets, often large enough to hold one loosely thrown cord. All the basket sides are open grate style to allow air movement though the wood. The baskets need to be capable of transport by a front-end loader and have rollers underneath, or some way of moving the basket along the container floor. Mountain Firewood Kilns can have various sizes of baskets built at the company location, if the customer desires it, or can provide plans for building your own.

Some kiln customers have mounted the baskets on trailer wheels in order to load them with a tractor, lacking a front-end loader on the premises. Mountain Firewood Kilns can provide these trailers for loading the kiln.

The metal basket has to be a size that allows an 8-inch space along the wall on each side for air movement. This is in addition to the spaces along the top, under the baskets and between the baskets. The 40-foot-long container box holds from five to six cords (full

cords) of wood.

In operation the kiln remains a closed unit for the first 24 to 36 hours, allowing the temperature to build and the humidity level to rise. The humidity controls then activate to open the louvers and start the fans, moving out the moist air. A large fan is installed on each



Kiln controls are located on the rear wall of the container.

end. The time needed to take the firewood down to a moisture content of 13% to 15% is about 31/2 days during the summer, double that during the winter.

A portion of the Whitehill firewood production is bundled for retail camp wood sales, using a Twister bundler and a Super Split wood splitter if smaller pieces are needed. One cord of split wood will make about 170 of the small bundles, each containing possibly six or seven pieces. Dennis provides about 3,000 bundles yearly to retailers.

The addition of the two Mountain Firewood Kilns to his long-standing firewood operation has created a more stable business for Dennis Whitehill and resulted in very satisfied customers. ■

Bill Gove is retired from a forestry career with private industry and with state government as a wood utilization specialist and lives in Williamstown, Vermont. He is a regular contributor and is the author of several books on the history of railroading and logging.

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