



Daryl Lamppa (left) and Herb Lamppa are shown with one of the wood-burning furnaces made by Lamppa Manufacturing in Tower. Photo courtesy of Lamppa Manufacturing

Tower company claims to have best wood furnace around

Fourth generation of Lamppas now in the wood stove business.

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Restricted in some big cities as smoke-belching smog machines and targeted by the federal Environmental Protection Agency for tough new emissions regulations, wood stoves

and furnaces have been burned in recent years as a polluting relic of the past.

Many wood furnaces and stoves burn inefficiently, sending a lot of smoke, creosote and particulate matter (soot, ash, dust and more) up the chimney. That particulate matter builds up to causes smog, sometimes in levels unhealthy to people in places like Denver, Albuquerque, N.M., and

Fresno, Calif.

But Lamppa Manufacturing in Tower wants to change that, and they say their Kuuma Vapor Fire indoor wood furnace will make believers out of even the toughest skeptics.

The Kuuma is a high-efficiency, wood-gasification furnace that allows people to burn a renewable, carbon-neutral, locally produced fuel. And if that sounds environ-

mentally "green," that's what Daryl Lamppa is hoping.

"We know we have a product here that will solve a lot of the problems in cold-weather cities where they have the smog problems," he said. "Our units are about as close as you can get to eliminating the pollution problem from burning wood."

The EPA is expected to impose new emissions

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Lamppa

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regulations on wood stoves and furnaces by 2013, with requirements for efficiency and limits on the amount of particulates that go up the chimney. The limits probably will mandate less than 7 grams of particulate matter per hour during wood burning on some units — or the furnaces can't be sold in the U.S. Some stoves will have to meet 4-gram limits.

But the Kuuma (roughly translated to "very hot" in Finnish) already is way beyond that. In tests conducted by an EPA-certified independent lab in Wisconsin, the Kuuma produced less than 1 gram of particulates — and in some tests as low as 0.45 grams.

"We knew we had something good 25 years ago because of how little wood we were burning; we knew we were more efficient. We didn't have the smoke," Lamppa said. "When I took out an old wood unit and put our furnace in, I went from burning eight to 10 cords each winter down to four or five cords."

Al Witz of Calumet agrees that the Lamppas have something unique in the Kuuma.

Witz has owned one of the Kuuma indoor furnaces for about five winters and said he is amazed at how efficient they are. Where he once burned 12 cords of wood each winter to run an outdoor wood boiler heating system, he now is down to four cords with the indoor Kuuma.

For a while, Witz, who works in the heating and air conditioning supply business, used a propane furnace and once went through 400 gallons in one month. At \$2 per gallon, that's \$800 for a month of heating.

Now, even if he had to buy all the wood, that's a full season's heating bill. "My house is 72 degrees all the time. It's such a nice, consistent heat. And I'm using half the wood," Witz said. "The way the system runs itself, to keep that heat at the perfect temperature, it's phenomenal. The air movement is so well-regulated, I didn't think you could get a wood stove this efficient."

FOUR GENERATIONS OF LAMPPAS

The company had its roots in Embarrass where Richard Lamppa — a blacksmith for the federal Works Progress Administration — used his Finnish heritage to make wood stoves for saunas during the Great Depression.

Herb Lamppa, 80, (a longtime county commissioner) followed, and Daryl, now 62, joined in as well. Now a fourth generation is involved, with Daryl's son Garrett as the chief bookkeeper and website developer.

Lamppa Manufacturing started selling wood stoves in 1977 and now has six employees who turn out about 300 indoor wood furnaces and sauna stoves (wood and electric) every year.

"We're a month behind now, but we still want to grow," Daryl Lamppa said.

The standard Kuuma furnace costs about \$3,900, while a larger unit for bigger homes costs about \$4,850. With the reduced amount of wood needed to keep the home warm, and especially if the owner is converting from \$4 per gallon oil or \$2 per gallon propane, the new wood furnaces could pay for themselves within a few years, Lamppa noted.

The Kuuma furnaces are designed to replace oil or gas furnaces (or old wood burners) as the heating part of a forced-air system. They are indoor only and usually require a basement or first-floor space that's out of the way. The furnaces are meant to heat, not offer ambiance.

Since the first Kuuma furnace was produced in 1982, the Lamppas have been tinkering with innovations. In 2010 they paid to have their furnaces tested for efficiency so buyers would qualify for a \$1,500 federal energy tax credit (now \$900). The Kuuma aced the tests, spurring the Lamppas to promote their product as among the greenest wood-burning units on the market.

The federal government required a thermal efficiency rating of 75 or higher to qualify for the tax credit. The Kuuma hit 84 percent. And the Lamppas' furnace has a fuel

combustion efficiency rating between 98.1 percent and 99.4 percent, unheard of numbers for wood-burning appliances.

BETTER BURN, NO SMOKE

Without giving away too many trade secrets, Lamppa said the key lies in the fire burning from front to back in the ceramic-lined fire box. The air coming into the box is preheated. A system of baffles keeps the fire burning at an even heat, and a computer module controls the overall airflow. Set by the homeowner, the module will keep the fire going at the precise level to deal with outside temperatures.

All of it runs without trying to force air through the system. Warm air simply rises as it moves through.

"The electronic control panel runs the fire like cruise control. Just set it and it keeps it at the right level," Lamppa said. "The system opens and closes the air flow like a carburetor on a car."

Wood stoked in the Kuuma commonly burns for eight, 10 or even 12 hours, according to testimonials on the company's website. And customers say they simply rake the coals forward, add more wood and walk away. Many say they never have to light a fire twice in one winter.

The first thing you'll notice when you see a house with a Kuuma furnace is smoke, or the lack thereof. "After the first few minutes, our units just don't put off any smoke at all. That's because they are so efficient," Lamppa noted.

If there's no smoke, there will be no creosote buildup, Lamppa said, and that means no bothersome chimney cleaning or deadly chimney fires.

"I haven't cleaned my chimney in 28 years, since I threw out my old wood stove and put in one of ours, and I burn birch wood the bark on," Lamppa said. "We started burning wood seriously during that gulf oil crisis (of the 1970s) but we figured there had to be a better way. We were just tired of all the creosote and worrying about fires. Now, nothing. There isn't any creosote so there aren't any fires."

Iron or coal sh

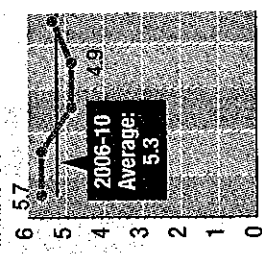
News Tribune staff

Iron ore shipment increased in November coal and limestone went up 10.5 percent compared to the five-year average, Carriers' Association

Great Lakes iron ore trade

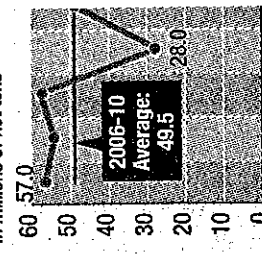
November

In millions of net tons



Year-to-date

In millions of net tons



SOURCE: Lake Carriers' Association

NEWS TRIBUNE

This bankruptcy information is derived from cases filed in U.S. Bankruptcy Court in Duluth N.D. Dec. 6.

DEBTOR: Ronald T. Beckman
Beckman Timber Harvest
ADDRESS: 56663 County Northome
CHAPTER 7

DATE FILED: Nov. 30
ASSETS: \$128,850
LIABILITIES: \$1,329,080.18

DEBTOR: Joyce Ferguson
ADDRESS: 8105 Shaver Road
CHAPTER 7

DATE FILED: Nov. 30
ASSETS: \$94,413.01
LIABILITIES: \$136,583

DEBTOR: Victor Nickolai Stepien
JOINT DEBTOR: Neva Stepien
ADDRESS: 2510 Highway 10man

CHAPTER 7
DATE FILED: Nov. 30
ASSETS: \$23,950

LIABILITIES: \$58,198.13

DEBTOR: Alan R. Gau
Tri-County Plats LLC
JOINT DEBTOR: Priscilla J. La

ADDRESS: 1101 Spring Lake
Carlton

CHAPTER 7
DATE FILED: Nov. 30
ASSETS: \$244,516

LIABILITIES: \$268,227

DEBTOR: Ronald R. Beckman
Beckman Timber Harvest
ADDRESS: 27606 Splithal

Grand Rapids
CHAPTER 7
DATE FILED: Nov. 30
ASSETS: \$89,801

LIABILITIES: \$1,227,979.15

DEBTOR: James Joel Onstada
JOINT DEBTOR: Tammy Le
ADDRESS: 15415 Goshawk

US online holiday sales up 15 percent to \$24.6B

Associated Press

NEW YORK — U.S. online sales in the holiday season to date are up 15 percent to \$24.6 billion, according to comScore.

The research firm said Sunday sales on six individual days during the first 39 days of the November-to-December shopping season have exceeded \$1 billion. Led

"As we enter what will be the heaviest week of the season for online retailers ... all signs are now pointing to a strong finish to the season."

Gian Fulgoni, comScore chairman

\$1.25 billion.

Sales in the most-recent week ended Dec. 9 rose

15 percent to \$5.9 billion, the

emergeance of "Free

spending day

Fulgoni said a possible

reason for that change is

the emergence of "Free