# Masonry Heaters... The Intelligent Choice



Custom Double Bell Masonry Stove designed and built by Matthew Helicke and Barrett Funka of Lefthand Masonry, LLC

Masonry heaters have been used for centuries in nearly every region of the world.

Designs differ, but the operating principle remains the same - a fuel load is burned rapidly and the resulting heat is stored in a masonry mass. The heat then evenly radiates into the room for the next twelve to twenty-four hours.

Masonry heaters are the premium wood-burning system. They are very safe and extremely efficient. Properly designed, they do not produce creosote in normal operation, and generate almost no woodsmoke emissions. Renewable sources of energy such as wood heat do not contribute to the greenhouse effect.

Masonry heaters today are available in a wide variety of styles and designs, both custom-built and prefabricated. Some are also masonry bakeovens and provide excellent value for your dollar.

If efficiency, comfort, and safety are part of your lifestyle, the time has come for you to consider masonry heating.

### **About Masonry Heaters**

Think of a masonry heater as a large warm rock in the middle of your home. It is a high-mass heat storage system. Short, hot fires generate tremendous amounts of heat which is then stored in the masonry, to be slowly and evenly released into your home.



A well-built and well-maintained masonry heater more than meets all current air pollution standards.

Masonry heaters are designed to burn fuel at its maximum efficiency. To properly burn wood, you need a flame temperature above 1100 degrees F, a liberal air supply, and a good mixing of the gasses. This burns up creosote in the firebox, preventing any buildup on flue walls.



Custom Kachelofen/Kuchenherd, designed and made by Jessica Steinhauserand installed by Mario Zauner (Cerom) and Jessica Steinhauser, Stonehouse Pottery.



Hand built North American Contraflow, faced in recycled clay brick by Marcus Flynn, Pyromasse, Inc.

#### **Fuel Savings**

Masonry heaters can be designed to burn almost any solid fuel, but dry, reasonably split cordwood is ideal. Some designs can handle 60 lbs in a single load. A properly designed masonry heater can warm your home on one or two fires a day, eliminating the need for constant stoking.



Custom design using Heat-kit contraflow heater core, Stephen Bushway, Deer Hill Masonry

#### **Design Considerations**

Masonry heaters work best in well-insulated homes with open floor plans that allow the heat to radiate freely. They are true radiant heating systems, and there is very little temperature stratification in the house. Since radiant heat warms objects directly, you will feel warmer over a wider range of air temperatures. Imagine a sunny spring day, and the feeling of well-being that your body intuitively recognizes.

A wide range of design options and masonry facing lets you express your unique personal style. Choose from a variety of brick, stone, plaster (stucco), soapstone and tile. You can opt for a small room heater, or a massive hearth that includes a cooktop and bakeoven that will literally become the "heart" of your home.

Your design will need to include a chimney and a foundation. The design and size of the heater must be matched to your climate and your home's heating requirements. Since the heat retention and output of



Top exit brick masonry heater with a wrap around heated bench, built by Albie Barden of Maine Wood Heat Company assisted by Jimmy Cornish and Mark Seymour

Masonry heating is not a new concept. The Romans heated their famous baths this way. The Chinese and Koreans have used masonry heat for centuries, often to heat beds or entire floors. Europeans began developing masonry heaters about 400 years ago. Russian and Scandinavian immigrants were building them 100 years ago in the North American prairies, where winters are long and cold fuel is scarce.

Mark Twain, traveling through Europe years ago, discovered the virtues of masonry heat. Here is a little of what he wrote about it:

"All day long and until past midnight all parts of the room will be delightfully warm and comfortable...Its surface is not hot; you can put your hand on it anywhere and not get burnt."

"Consider these things. One firing is enough for the day; the cost is next to nothing; the heat produced is the same all

Illustration © 1984 The Book of Masonry Stoves, David Lyle



Custom Grundofen, designed and built in Scotland by Martin Ruzicka of Stovemason

masonry are mathematically predictable, your heater builder can design a system that fits your needs.

Once you have determined that a masonry heater is the best choice for your home, contact the heater builder whose name appears on this brochure or contact the Masonry Heater Association of North America (MHA) for the name of a heater builder in your area Check the references of the heater builder you contact to make sure he is the right person for the job. Look at heaters he has built and talk with their owners.



Tulikivi soapstone heater, Integration and build by Mark Seymour, Radiant Hearth, Inc.

day, instead of too hot and too cold by turns ... "

"America could adopt this stove, but does America do it? No, she sticks placidly to her own fearful and wonderful inventions in the stove line. The American wood stove, of whatever breed, is a terror. It requires more attention than a baby. It has to be fed every little while, it has to be watched all the time; and for all reward you are roasted half your time and frozen the other half...and when your wood bill comes in you think you have been supporting a volcano."

"It is certainly strange that useful customs and devices do not spread from country to country with more facility and promptness than they do."



Two early examples of the massive clay stoves built in Northern Europe.

## Wood–Fired Bake Ovens

Many of the MHA members build and install residential and commercial wood-fired ovens. The ovens are made with pre-cast oven cores or site-built with brick. Gourmet chefs often prefer wood-fired cooking, especially for pizza and breads, for the unmatched flavor imparted to the food.

Wood-fired oven building workshops are held annually at the MHA meeting and by MHA members elsewhere. Visit the website for more information.



Outdoor oven with cobblestone, Goshen stone and soapstone facing by Marty Pearson, Stone Comfort Fireplace Gallery



Outdoor vaulted oven with brick exterior by John Rousseau, Red Clay Construction, Inc.

## About the Masonry Heater Association of North America

The MHA of North America is a non-profit organization dedicated to serving the interests of the masonry heating and bake oven industry and it's clients. Founded in 1987, MHA is an association of builders, manufacturers and retailer of masonry heaters

MHA members learn their trade from each other, from the "old country" heater masons and through MHA-sponsored workshops and seminars, like our Heater Mason Education and Development (HMED) program held in locations across the U.S. and Canada throughout the year.

In 1998, the MHA established a certification program for masonry heater builder. To earn their certification, each candidate is required to demonstrate a working knowledge of masonry work, masonry heater design and construction and relevant housing and fuel-burning regulations. MHA-approved documentation is required from each candidate of at least three masonry heater construction projects they have completed within the past five years. In addition, each candidate must achieve a passing score on the MHA certification exam. Continuing Education Units are also required to maintain the Certified Heater Builder certification.

MHA is a volunteer organization with active committees to develop and maintain technical, educational and public relations programs. We are committed to spreading the word about this clean burning "Old World" technology to both government regulators and the general public.

MHA currently has members from 11 countries. It also maintains a comprehensive website: mha-net.org, where the public can access our member directory, a photo Gallery of completed projects and the "e-zine" which is constantly updated with all things related to masonry heating. Our website is also the critical source for anyone seeking to find out about the organization's activities.



Dome oven interior by Alex Chernov, Stovemaster, Ltd.



Masonry Heater Association Of North America

www.mha-net.org