

# Highly Efficient, Economical, Environment & User Friendly Portage & Main Indoor Wood Gasification Unit



## How it Works

The Portage & Main Indoor Wood Gasification Furnace produces highly efficient combustion in the furnace's dual burn chambers. Wood in the primary fire chamber burns from the bottom up, drying the top layer of wood in the fire chamber pushing gases and exhaust into the lower combustion chamber where temperatures are above 1800 degrees F. Hot enough to burn smoke gases. The pre-cast, stainless steel reinforced, heat-treated refractory brick lining in primary fire chamber absorbs the heat and maintains temperatures for consistent combustion. This high temperature gasification significantly lowers emissions. After passing through the secondary burn chamber, exhaust air is forced through multiple horizontal flues running through the water jacket, heating the water quickly and efficiently.

## Simple Operation & Maintenance

Portage & Main Indoor Wood Gasification is revolutionary efficient indoor wood heating system. It operates best with seasoned wood a few inches shorter than the length of the fire chamber. The super efficient combustions means there is little to no ash to dust from the re-action chamber. The Portage & Main multiple tube design is easily and quickly cleaned with the cleaning brush supplied. The Portage & Main Indoor Wood Gasification Unit is easy to integrate into practically any home's existing heating system. It requires a 6 in. chimney liner and connects to floor heat or existing duct work with a water to air heat exchanger.

Easily installed in wood sheds, garage, barn, shops



Primary Fire Chamber



Secondary Fire Chamber  
Exhaust Gases Being Burnt to Produce  
Useable Heat



Multi-pass Vertical and Horizontal Tubes  
Extract Maximum Heat



Back View of Economizer IDM 100

### EconomizerIDM-100

| Gasification Units              | Indoor 150         |
|---------------------------------|--------------------|
| Max Furnace Output Btu/Hr.      | 90,000             |
| Heating Area                    | 3,000              |
| Total Size W X D X H            | 29.5" x 40" x 66"  |
| Shipping Weight                 | 1600 lbs           |
| Chimney size                    | 6"                 |
| Door size W x H                 | 12.5 x 14"         |
| Firepot W x H x L/ Cubic Feet   | 20" x 30" x 20"/ 7 |
| Water Capacity ( US gallons)    | 60                 |
| Horizontal Fire Tubes (2" dia.) | 8                  |
| Vertical Fire Tubes (2" dia.)   | 4                  |
| Maximum Log Length              | 18"                |
| Split or Suggested Log Dia.     | 4 to 5 "           |
| Limited Warranty                | 10 year            |
| Electrical Requirement          | 220 Volt           |
| Suction Motor                   | Negative Pressure  |
| Heat Exchanger                  | Triple Pass        |

Portage & Main Furnaces continue to lead the way in new highly efficient clean burn technology. This means high efficiency, economical savings and environmental friendliness both for the user and the earth. For the user it means savings all around-resources, time,-work etc. Gasification Units burn cord wood. The firepot is smaller because it requires less wood to maintain burn times comparable to conventional outdoor furnaces while it produces more btu's of heat.

Portage & Main Furnaces  
Heat Smart Plus

[www.portageandmainboilers.com](http://www.portageandmainboilers.com)

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