

# NAPOLEON

WOOD & HYBRID FURNACES

WOOD | OIL | ELECTRIC | MULTI FUEL COMBINATION FURNACES



Award Winners

[napoleonheatingandcooling.com](http://napoleonheatingandcooling.com)



# Modular Design Flexible Installations

Napoleon's Canadian made 9600 Series gas furnace has been configured to operate with the multi-fuel Hybrid 150™ and Hybrid 200™. Combining the environmentally conscious features of the Hybrid furnaces with the efficiency of the 9600 Series gas furnace offers superior performance. The Hybrid 150 and Hybrid 200 can also operate with oil or electric secondary heat sources. High efficiency has never been greener thanks to renewable energy and superior engineering.

Napoleon's Hybrid furnaces are designed with features such as insulated cabinets and knockouts on both sides to offer multiple configuration options and incredibly low clearances for easy installation.

The various Hybrid 150 and Hybrid 200 configurations can be seen below - left hand return air configurations are shown, right hand return air configurations can be achieved by easy reversal of side panels.



The Editor's at Green Builder® magazine have selected the HMF150 for their HOT 50 Product list; a collection of advanced products that their editor's believe will have a significant impact on sustainable construction.



Wood only furnace



A combination wood / electric furnace



Combined with a Napoleon Gas Furnace and the HMF-KT Transition kit



A combination wood / oil furnace



A triple-fuel wood / oil / electric furnace



Add-on wood furnace to your existing heating system

*Napoleon's Hybrid Multi-Fuel Combination Furnaces are extremely clean burning wood furnaces that are certified to the latest emission standards (CSA B415.1-10) and boast efficiency ratings as high as 88.6%. The Napoleon Hybrid Series are some of the cleanest and most efficient combination solid fuel-burning furnaces on the market today.*

## Superior Combinations

At the 2012 HPBExpo Vesta Awards in Atlanta Georgia, Napoleon's Wood/ Gas Furnace Combination was honored with winning the Central Heating Systems Category Award and went on to win the prestigious Daniel J. Melcon Award for Best-in-Show – Hearth Products. The Combo Furnace won for its industry first design, green technology and fuel saving capabilities.



# HybridSeries

WOOD & COMBINATION FUEL FURNACES

## Multi Fuel Combinations for Added Convenience and Peace of Mind

Go away for an extended period without worrying about keeping your wood furnace operational. Napoleon's Hybrid Series furnaces switch from wood to their secondary heating source automatically. If the furnace runs out of wood, a second thermostat controlling the optional electric, oil or gas components will keep your home warm and toasty even if you are not at home. During power failures, the furnaces (wood portion only) are designed to use gravity air flow for emergency heating. High fire can be maintained by using a manual override on the primary air control.

The stainless steel combustion chamber/heat exchanger of the oil furnace module (HMF150 and HMF200 models only) can be connected to your choice of Beckett or Riello high-efficiency burners to give you many years of reliable and safe performance.

Depending on the Hybrid model, optional electric heating modules are available in 15, 18, 20 and 25 kW ratings.

## Solid Construction and Automatic Combustion Control

Hybrid Series furnaces come standard with a fully welded and refractory brick lined combustion chamber, similar to a kiln, for many years of safe and trouble free performance. The thermostat sets the desired heat level for a roaring fire and then shuts down for a long, clean and consistent burn. A Bypass Exhaust Damper built into the Hybrid 150 and Hybrid 200 ensures quick and clean start ups.

## Advanced Combustion System

A stainless steel tube combustion system achieves a secondary burn cycle. Not only are you getting energy from the wood, but also from the wood gases which are mixed at the precise ratio of temperature and oxygen. To achieve an extraordinary clean burn without a catalytic combustor, horizontal jets of super heated secondary air are mixed with the fire's smoke to burn off released smoke particles. You can watch the torch-like secondary flames just below the ceiling during the burn. This results in more heat, cleaner exhaust, fast start up, less chimney maintenance and less trips to the woodpile.

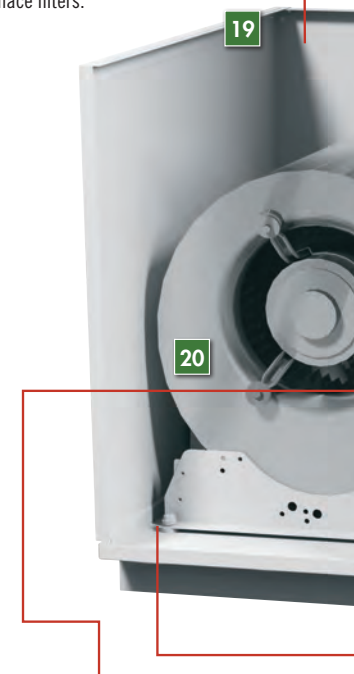
# Hybrid 150 & 200

With a firebox volume of 3.4 cu. ft. the Hybrid 150 will handle heating requirements for up to 2000 sq. ft. while the Hybrid 200's 4.5 cu. ft. capacity will provide heat for areas up to 3000 sq. ft. for well insulated homes. Both models are also now Central A/C adaptable for further convenience and versatility.

1. Clean out door
2. Wood heat exchangers
3. Cabinet
4. Bypass damper
5. Ceramic glass or solid insulated cast door
6. 4" Ash lip
7. Ash dump & pan
8. Optional stainless steel oil combustion & heat exchanger module
9. Opening for ductwork
10. Air control
11. Direct outside air
12. 6" Flue
13. Outside air collar
14. Bypass damper control rod
15. Baffle
16. Stainless steel secondary air tubes
17. High temperature refractory liner
18. Oil exhaust
19. Opening for return air duct (left or right side option)
20. Blower (left or right side option)
21. Optional electric element
22. Optional oil burner module
23. Wood fire chamber
24. Stainless steel replaceable airwash system
25. Levelling legs
26. Cleaning brush and rod come standard
27. Heat resistant leather gloves come standard



Return air designed to use standard 16" x 25" furnace filters.



The modular component design allows the blower module to be moved to either side of the main furnace to facilitate installation.





- 3** Heavy duty, 24 gauge powder coated cabinet features sound dampening, high density fibre insulation.

Optional electric element.  
Available in 15, 18 & 20 kW  
for Hybrid 150.

Available in 18, 20 &  
25 kW for Hybrid 200.



Blower, air ducts and electric  
furnace module can be installed on  
the left or right side of the furnace  
for versatile installations.



**26**



**27**

- 1** Outside air enters  
the firebox through a  
stainless steel tube.

- 4** The manual bypass  
damper allows the unit  
to perform a quicker,  
cleaner startup.



**5**

Cast iron door with ceramic  
fibre insulation and cover.

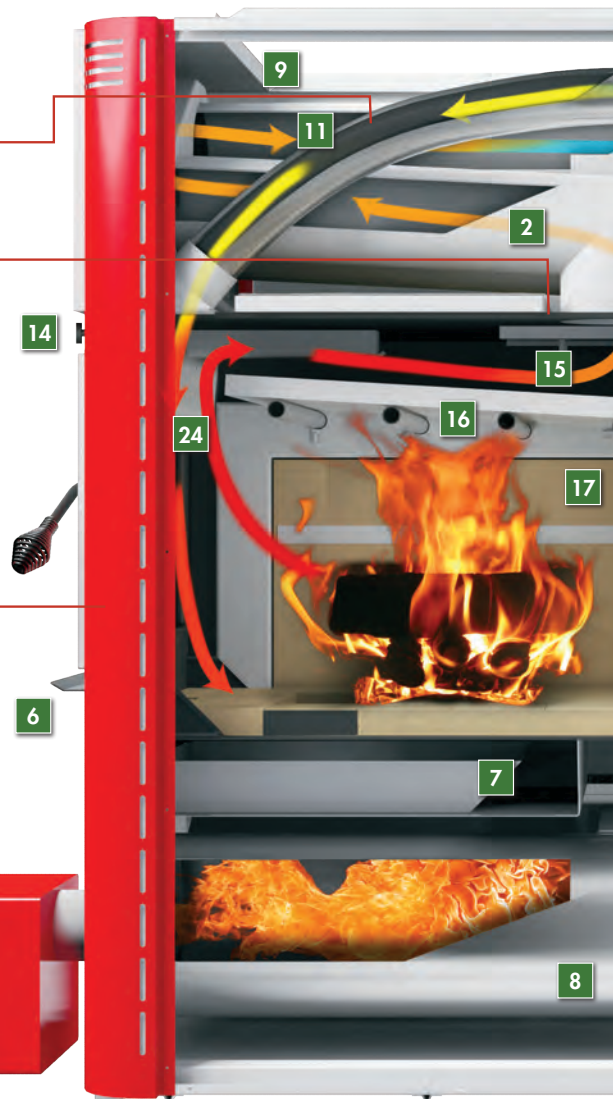


**5**

Cast iron door with  
ceramic viewing glass.

Choose between a glass or solid door.  
Glass allows you to see the fire and feel  
the heat radiating into the room where  
the furnace is located. A solid, insulated  
door offers maximum heat distribution  
through the ductwork to the entire house.

- 13** A four inch port draws air directly from the outside into  
the combustion chamber for maximum efficiency.
- 12** 6" flue increases to 7" if oil option is added.
- 10** Thermostatic air control regulates  
primary air and burn rate.



# Hybrid100

For heating requirements up to 1400 sq. ft. the Hybrid 100 is up to the task. It can be connected to a new or existing ducting system to distribute air throughout the home or completed with the diffuser kit option to circulate heated air directly into a room.

1. Variable speed motor
2. Blower
3. Optional electric element (10 kW)
4. High temperature refractory liner
5. Opening for return air duct (left, right or rear panel location)
6. Firebox
7. Baffle
8. 6" top mount flue
9. Opening for supply plenum
10. Heat exchanger surfaces
11. Cabinet
12. Manual air choke
13. Four secondary air tubes
14. Airwash to keep the glass clean
15. Ceramic glass cast door
16. 4" Ash lip
17. Air damper motor
18. Door switch
19. Levelling legs
20. Air filter

Small size:  
29" wide x 29" deep x 44" high.

Panel construction  
allows for extreme  
reduced clearances  
to combustibles.

Self contained unit –  
blower, electrical controls  
and optional 10 kW  
electrical backup heater  
mount internally.

Adjustable return air  
configuration (rear or  
side mount).

Flue through top of furnace  
reduces clearance to  
combustibles at back of unit – smallest clearance  
to combustibles in the wood furnace market.

Automatic air control with  
manual choke, creating a fully  
variable burn rate for ultimate  
heating comfort.

A finned heat exchanger  
surface allows for  
optimized efficiency.

Extremely low emissions at 3.6  
grams per hour, with a firebox  
volume of 2 cu. ft.

Four speed 1/6 - 1/12 HP  
variable motor controls.

Optional diffusion  
plenum kit available  
(HMFK - DP).



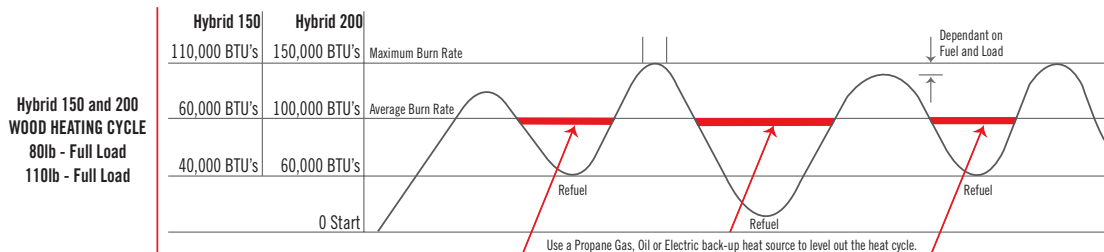




Fireplace Inserts • Patioflame • Gas Fireplaces • Charcoal Grills • Wood Stoves  
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## SPECIFICATIONS

|  | Hybrid 100   | Hybrid 150   | Hybrid 200   |
|--|--|--|--|
| Maximum peak input capacity (wood)*                      | 76,000 BTU's   | 150,000 BTU's  | 200,000 BTU's  |
| Maximum peak output capacity (wood)*                     | 65,000 BTU's   | 110,000 BTU's  | 150,000 BTU's*   |
| Average output capacity (wood)* - see graph below        | 35,000 BTU's*  | 60,000 BTU's*  | 100,000 BTU's*   |
| Optional oil furnace module (input)                      | -  | 70,000 - 93,000 BTU's / Up to 85% AFUE                             | 70,000 - 93,000 BTU's / Up to 85% AFUE                             |
| Electric furnace module (optional)                       | 10 kW  | 51,000 - 70,000 BTU's (15 - 20 kW)                                 | 70,000 - 85,000 BTU's (18 - 25 kW)                                 |
| Efficiency (wood) (maximum)**                            | 86%  | 88.6%  | 85%  |
| Emissions (wood)   | 3.6 grams per hour   | 3.4 grams per hour   | 4.5 grams per hour   |
| Blower   | 4 speeds - 500 - 700 CFM   | 4 speed - 1200 CFM   | 4 speed - 1400 CFM   |
| Recommended exhaust pipe size (wood only), (in)          | 6  | 6  | 6  |
| Recommended exhaust pipe size (wood/oil/combo), (in)     | -  | 7  | 7  |
| Type of chimney  | High temperature 6"  | High temperature 6"  | High temperature 6"  |
| Max. Log length (in)                                     | 18   | 24   | 30   |
| Loading capacity   | 2.0 cu. ft.  | 3.4 cu. ft. / APR 80Pds  | 5 cu. ft. / APR 80Pds  |
| Furnace dimensions (complete with blower), (in)          | 29 w x 29 d x 45 h   | 48 w x 32 d x 52 h   | 48 w x 39 d x 52 h   |
| Furnace dimensions (wood/oil with blower), (in)          | -  | 48 w x 42 d x 52 h   | 48 w x 49 d x 52 h   |
| Furnace dimensions (wood/electric with blower), (in)     | -  | 60 w x 32 d x 52 h   | 60 w x 39 d x 52 h   |
| Furnace dimensions (wood/electric/oil with blower), (in) | -  | 60 w x 42 d x 52 h   | 60 w x 49 d x 52 h   |
| Minimum clearance to combustibles (in)                   | 6 back / sides x 48 front  | 14 sides x 24 back x 48 front                                      | 14 sides x 24 back x 48 front                                      |
| Firebox dimensions (in)                                  | 20 <sup>7</sup> / <sub>8</sub> w x 14 <sup>5</sup> / <sub>8</sub> d x 11 <sup>5</sup> / <sub>8</sub> h | 18 w x 24 d x 13 <sup>1</sup> / <sub>2</sub> h                     | 20 w x 32 d x 13 <sup>1</sup> / <sub>2</sub> h                     |
| Firebox front opening (in)                               | 17 <sup>1</sup> / <sub>8</sub> w x 9 <sup>1</sup> / <sub>2</sub> h                                     | 16 <sup>1</sup> / <sub>2</sub> w x 9 <sup>1</sup> / <sub>2</sub> h | 16 <sup>1</sup> / <sub>2</sub> w x 9 <sup>1</sup> / <sub>2</sub> h |
| Hot air plenum dimensions (in)                           | 22 w x 7 <sup>1</sup> / <sub>2</sub> d   | 22 w x 24 d  | 22 w x 31 d  |
| Cold air plenum dimensions (in)                          | 14 w x 10 d  | 14 w x 23 d  | 14 w x 23 d  |



Use the following chart as a general guideline for selecting either the Hybrid 150 or Hybrid 200 based upon heat loss calculation results for the application being considered.

| Model  | Calculated BTU's Required |
|--------|---------------------------|
| HMF150 | 40,000 - 60,000 BTU's     |
| HMF200 | 60,000 - 100,000 BTU's    |

\*BTU output is not a continuous, steady output; it cycles by the amount and frequency with which the fuel is loaded in the furnace.

\*\*Depending on burn conditions

Certification Standards: CSA B366.1-M91, B140.4-04, B212-00, UL 1995/CSA C22.2 No.236, UL 391, UL 727, CSA B415.1-10

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Authorized Dealer



24 Napoleon Road, Barrie, Ontario, Canada L4M 0G8  
103 Miller Drive, Crittenden, Kentucky, USA 41030  
7200 Trans Canada Highway, Montreal, Quebec, Canada H4T 1A3

Tel: 1-800-461-5581 Fax: 705-725-1150

hvac@napoleonproducts.com  
napoleonheatingandcooling.com

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