

# NAPOLEON

WOOD & HYBRID FURNACES

WOOD | OIL | ELECTRIC | MULTI FUEL COMBINATION FURNACES



Award Winners

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



# Hybrid Series

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 the 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, without any interruptions. 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 Hybrid150 and Hybrid200 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 Hybrid150 will handle heating requirements for up to 2000 sq. ft. while the Hybrid200'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 Hybrid150.

Available in 18, 20 & 25 kW for Hybrid200.



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



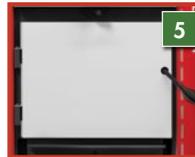
**26**



**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.

Your choice of doors - either glass so that you can see the fire and feel the heat radiating into the room where the furnace is located; or a solid, insulated door for 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 Hybrid100 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).



# Modular Design Flexible Installations

Napoleon's new Canadian made gas furnace, the 9600 Series, has been configured to operate with the multi fuel Hybrid150™ and Hybrid200™ furnaces that heat with wood, electric or oil. This combination goes beyond superior performance by integrating the environmentally friendly features of the Hybrid furnaces with the extremely high efficiency features of the 96% AFUE gas furnace. Extreme high efficiency has never been greener thanks to renewable energy and superior engineering.

Space is a commodity that Napoleon® makes the most of with features such as insulated cabinets and knockouts on both sides for multiple configuration options, we have allowed for incredibly low clearances that make installations easy.

The HMF150 & HMF200 can be combined in the following configurations below. Left hand return air configurations shown (right hand return air configurations can be made by easy reversal of the side panels).



Wood only furnace



A combination wood / electric furnace



Combined with a Napoleon® Gas Furnace and the HMFK-GT Transition kit



A combination wood / oil furnace



A triple-fuel wood / oil / electric furnace



Add-on wood furnace to your existing heating system



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.

*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.

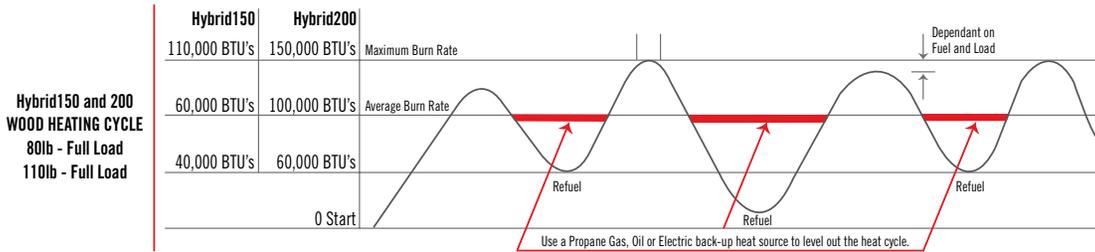




Fireplace Inserts • Patioflame • Gas Fireplaces • Charcoal Grills • Wood Stoves  
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## SPECIFICATIONS

	Hybrid100	Hybrid150	Hybrid200
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 Hybrid150 or Hybrid200 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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