

NPF Series

 **navien**

# NEW NPF Hydro-furnaces

The leader in condensing technology brings the next level of comfort to forced-air heating



# Introducing the NPF upflow and horizontal high-efficiency hydro-furnace



**NPF700-060U3BH**  
Upflow

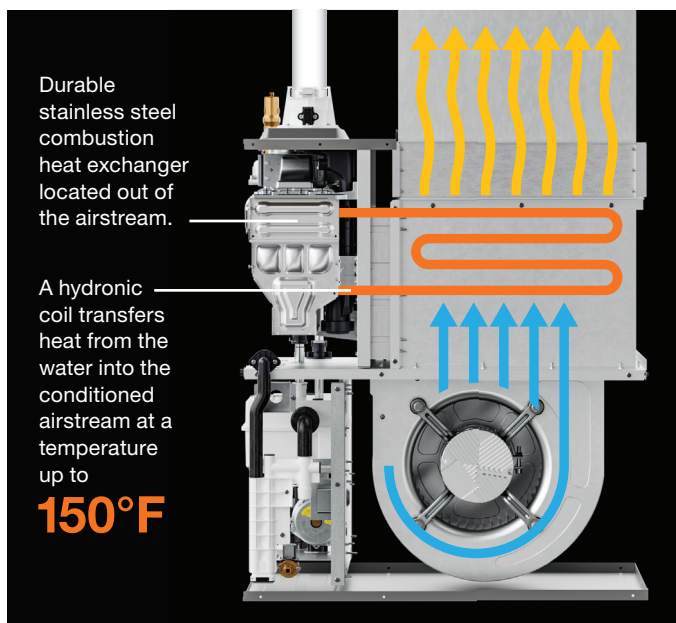


**NPF700-060H3BH**  
Horizontal

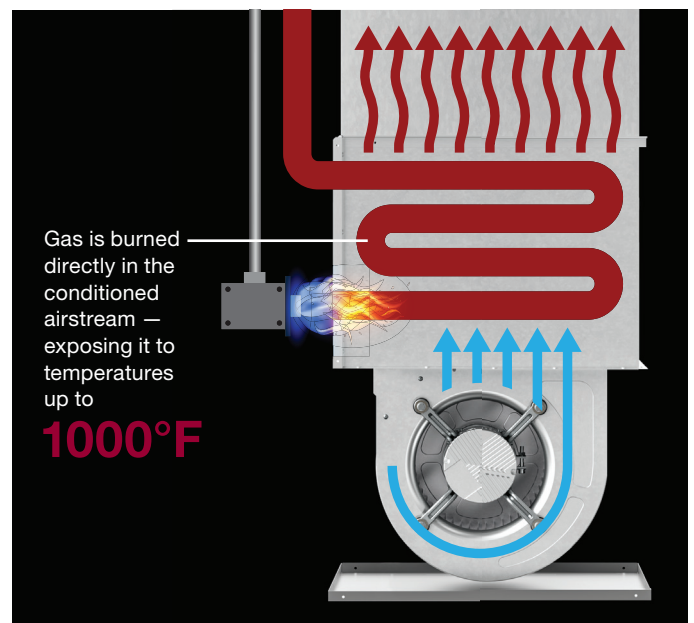
## Technology that delivers next-level comfort

In conventional gas furnaces the combustion heat exchanger is located in the conditioned airstream. This exposes the air to very high temperatures that can dry out the air. The NPF Difference: The NPF heats water by burning the gas in a sealed combustion heat exchanger, completely isolated from the airstream. The heated water is then pumped through a hydronic heat exchanger that gently transfers the heat into the air. This unique method improves operational control, provides safe and even heating, and keeps operating sounds to a minimum. By exposing the air to much lower temperatures, there is less impact on the conditioned air humidity level.

### NPF Hydro-furnace



### Conventional furnace



Our unique hydronic forced-air heating design keeps combustion in a separate, fully enclosed compartment for safe and quiet comfort.

# An inside look at the NPF upflow

Our stainless steel heat exchanger and burner are the heart and soul of the hydro-furnace

The heart of the NPF. An innovative stainless steel combustion heat exchanger located out of the airstream, heating water efficiently at 97% AFUE\* and with emissions so clean that each model is also Ultra-low NOx compliant.

Flame rod and ignitor. Easy access and reliable ignition.

Industry-leading variable capacity operation. 100 percent down to 15 percent for optimal energy efficiency.

Factory-supplied NG/LP conversions and high-altitude kits up to 10,100 ft. for fuel flexibility.

Manual fill. Easy access.

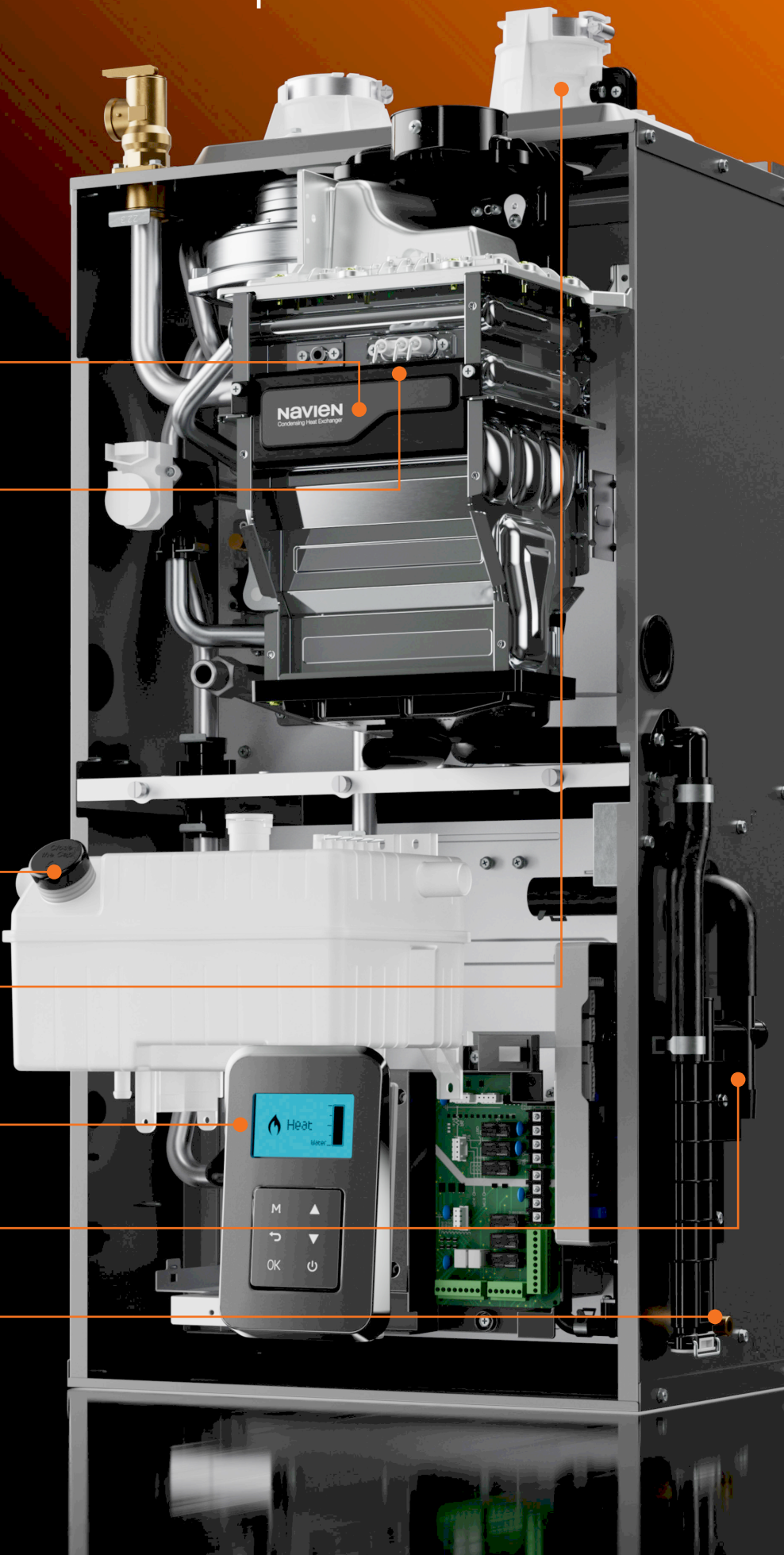
2" venting. Compatible with schedule 40 PVC, CPVC and polypropylene venting — saving time and costs. Vent Installation Detector (VID). Added safety during installation and maintenance.

EZ-Nav user friendly backlit interface. Provides easy access, built-in set-up and diagnostic software.

Cleanable external condensate trap. Left- or right-side convertible.

Optional auto-fill water connection. 1/4-inch connection point.

\*Annual Fuel Utilization Efficiency.

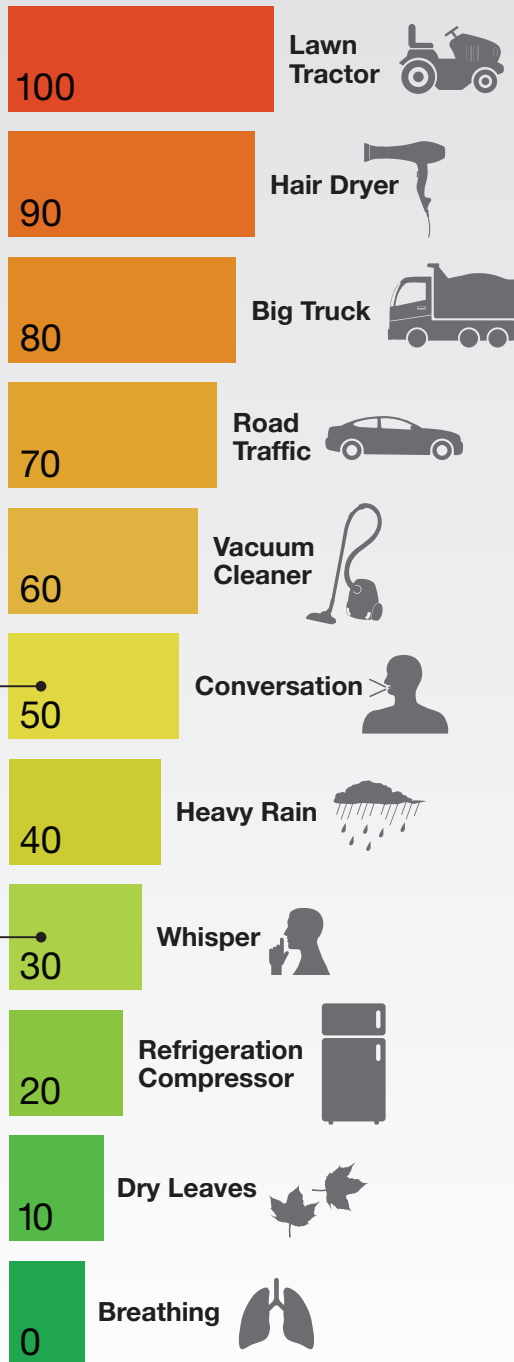


# The elements of next-level comfort

## Quieter

One of the quietest furnaces in the industry is made possible by the combination of isolated combustion that occurs outside of the airstream, variable capacity operation and intelligent blower ramping.

Sound Pressure Levels (dBA)



Maximum Capacity



Minimum Capacity



See notes on back page for sound testing methods and standard conditions.

## Easier

Control is at your fingertips with the Intuitive EZNav™ control panel. Startup, configurations and diagnostics are streamlined in the interface for easy operation. The NPF is compatible with single- or two-stage thermostats. It also seamlessly integrates with the latest thermostat and Indoor Air Quality (IAQ) technology.



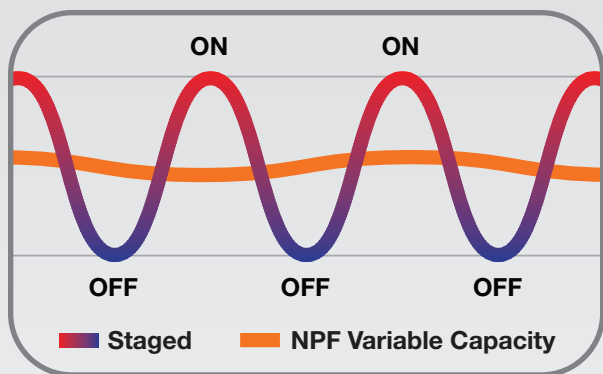


## Softer

A softer solution for body and mind. Our patented heat exchanger and hydronic coil gently heats the airstream, providing safe, even heating.

**MILDER**  
AIR STREAM  
TEMPS  
& AIR FLOW

## Smarter



**The NPF's intelligent Variable Capacity System operates at 15%–100% capacity, optimizing air temperatures and airflow to maximize comfort and energy efficiency.**

The NPF showcases smarter design through adaptable technology integration and advanced control options, and operates with standard or smart 1- or 2-stage thermostats. Self-diagnostic readouts allow for easy system monitoring and maintenance.

## Greener

The NPF is built with the environment in mind with all units featuring high-efficiency ECM motor technology, 97% AFUE, and ultra-low NOx compliance. The NPF qualifies for most regional incentives, provides lower energy bills, and potentially helps boost air conditioning and heat pump system efficiencies.

**ULTRA**  
**LowNOx**

Complies with  
SCAQMD  
Rule 1111

**97%**  
A F U E



# NPF Variable Capacity Control System... advanced comfort for all seasons

**Fall:** As heating season begins and outside temperatures are cooling down, variable capacity allows the NPF to operate at a minimum range to comfortably heat the home.



**Winter:** As the temperature keeps dropping into the coldest time of the year, the NPF modulates to a higher output to compensate for the greater heat loss that is experienced.



**Spring:** Ever-changing weather won't outsmart the NPF. From a cold and rainy day to a sunny springtime chill, the NPF's industry-leading variable capacity will automatically adjust to keep the space warm and comfortable.



**Summer:** When paired with an AC or HP system, the variable capacity blower can be customized for a comfortable, quiet cooling experience.

## Heating capacity and efficiency

Items		NPF700-060U3BH NPF700-060H3BH	NPF700-080U3BH NPF700-080H3BH	NPF700-100U5CH NPF700-100H5CH
Heating (gas input) natural/ propane gas (BTU/h)	Max heat	60,000	80,000	100,000
	Min heat	9,000	11,000	14,000
AFUE (%)		97	97	97
Certified temperature rise range °F (°C)	Max heat	45–75 (25–42)		
	Min heat	5–35 (3–19)	10–40 (6–22)	10–40 (6–22)
Burner control		Modulating		

## Airflow capacity and blower data

Items		NPF700-060U3BH NPF700-060H3BH	NPF700-080U3BH NPF700-080H3BH	NPF700-100U5CH NPF700-100H5CH
External static pressure	Heating	0.1" to 0.8" WC		
	Cooling			
Airflow delivery range [CFM] (Rated ESP)	Max heat	720–1,200	950–1,200	1,200–2,000
	Min heat	450–1,200	450–1,200	500–2,000
	Cooling	1,200	1,200	2,000
Nominal cooling capacity (TON)	@400CFM	1.5–3.0	1.5–3.0	2.0–5.0
	@350CFM	1.5–3.5	1.5–3.5	2.0–5.5
Circulator blower	DxW	12" x 10"	12" x 10"	12" x 12"
	Horsepower	1/2	1/2	1
	Motor full load amps	7.6	7.6	11.0
	Motor speed & type	Variable, Electronically Commutated Motor (ECM)		

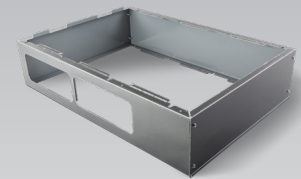
## Accessories



**Residential Neutralizer (V2)**  
GXXX002212  
**Residential Replacement Media**  
GXXX001323



**Outdoor Sensor & Wire**  
30012950A



**Return Air Box Kit**  
**NPF700-060U3BH & NPF700-080U3BH**  
GXXX002427  
**NPF700-100U5CH**  
GXXX002398

## Dimensions







**NPF Upflow and Horizontal**  
Dimensional drawings and measurements.



## Customer support and advanced training make Navien a smart choice for home comfort solutions

Besides supplying the most innovative and energy efficient systems for residential and commercial applications, Navien provides extensive field support, webinars and training events for builders, architects and contractors. Our full-time customer support network provides quick answers to installation and operational questions.

# Specifications

Items		NPF700-060U3BH	NPF700-080U3BH	NPF700-100U5CH	NPF700-060H3BH	NPF700-080H3BH	NPF700-100H5CH
Installation type		Upflow			Horizontal left		
Venting type		Forced draft direct vent or non-direct vent					
Maximum vent length	2"	70 ft.					
	3"	140 ft.					
Ignition		Electronic spark ignition					
Natural gas supply pressure (from source)		3.5" to 10.5" WC					
Propane gas supply pressure (from source)		8.0" to 13.0" WC					
Natural gas manifold pressure		-0.01" to -0.02" WC					
Propane gas manifold pressure		-0.01" to -0.02" WC					
Gas connection size		1/2" NPT					
Water connection size		1/4" NPT					
Condensate size		3/4" NPT					
Materials	Casing	Corrosion resistant baked on pre-painted steel					
	Combustion heat exchanger	Stainless steel					
	Hydronic heat exchanger	Copper & aluminum					
Venting	Exhaust	2" or 3" PVC, CPVC, approved PP, 2" or 3" special gas vent type BH (Class III, A/B/C) 2" or 3" SS					
	Intake	2" or 3" PVC, CPVC, PP, 2" or 3" special gas vent type BH (Class III, A/B/C) 2" or 3" SS					
	Vent clearance	0" to combustibles					
Safety devices		Flame rod, ignition operation detector, water temperature high limit switch, high limit sensor for exhaust temperature, Vent Installation Detector (VID), water level sensor, burner high limit sensor, Pressure Relief Valve (PRV), leak sensor					
Dimensions in (mm), WxDxH		17.5 x 31 x 34.5 (445 x 787 x 876)	17.5 x 31 x 34.5 (445 x 787 x 876)	21 x 31 x 34.5 (533 x 787 x 876)	34.5 x 31 x 17.5 (876 x 787 x 445)	34.5 x 31 x 17.5 (876 x 787 x 445)	34.5 x 31 x 21 (876 x 787 x 533)
Shipping weight lb (Kg)		145.0 (65.8)	145.0 (65.8)	167.6 (76.0)	145.0 (65.8)	145.0 (65.8)	167.6 (76.0)
Power supply		120V AC, 60 Hz					
Max current (A)		10.9	10.9	14.3	10.9	10.9	14.3
Circuit breaker amps (A)		15	15	20	15	15	20
Wire size (AWG)		14	14	12	14	14	12
Certifications		   					

Navien reserves the right to change specifications at any time without prior notice. Please refer to [www.navieninc.com](http://www.navieninc.com) to verify you have the most current information.

## Warranty

	Registered Furnaces	Non-Registered Furnaces
Heat exchanger	Lifetime*	20 Years**
Parts	10 Years*	5 Years**
Labor	1 Year*	1 Year**

\*Limited warranties to original owner in residential applications with prompt registration.

\*\*20-years heat exchanger, 5-year parts, and 1-year labor for non-registered furnaces.

Visit [navieninc.com](http://navieninc.com) for complete warranty details and restrictions.

We test our products in a sound laboratory specifically built to resemble a typical residence. Sound level recordings produced at steady state minimum and maximum operation measured three feet from the furnace. Additional sound level information available at: [www.ensafe.com/occupational-noise-exposure-key-osh-a-provisions](http://www.ensafe.com/occupational-noise-exposure-key-osh-a-provisions)

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