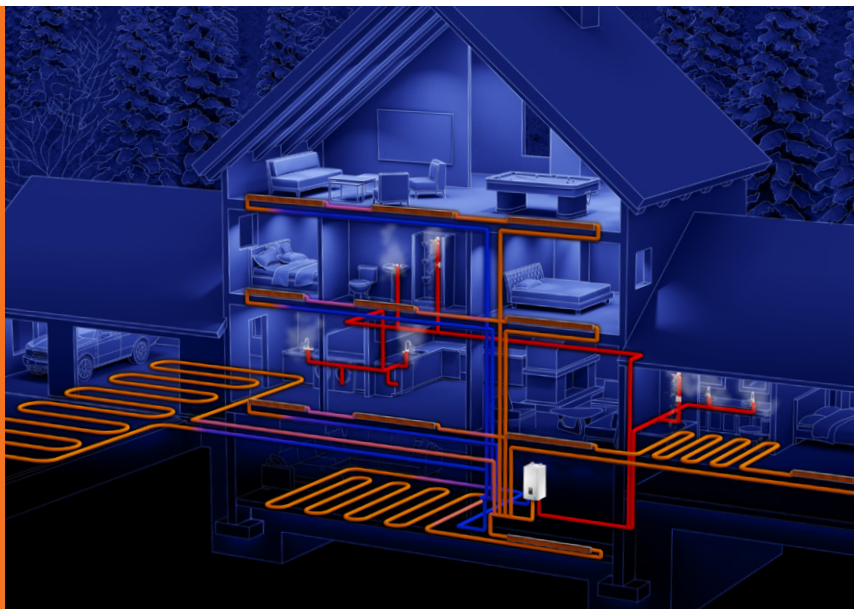


NFC Series



# NFC Condensing Fire Tube Combi-boilers



The ultimate space heating  
and DHW comfort package



Navilink™ Wi-Fi remote control system...  
available as an add-on accessory.



THE LEADER IN CONDENSING TECHNOLOGY



# Navien NFC condensing fire tube combi-boilers

## More features, more benefits, more extras and more value... all in one package

Now the innovator in high efficiency condensing tankless water heaters and fire tube boilers puts it all together in one amazing combi-boiler.

- 5 modes of external domestic recirculation control built-in (Always on, Intelligent, Scheduling, HotButton, Aquastat)
- TDR 11:1 for heating and domestic hot water
- Approved venting: 2" up to 60' or 3" up to 150' PVC/CPVC/PP/SS
- Heating and domestic hot water up to 199k BTU/H
- AFUE 95.0% Energy Star Certified

### Plus

The NFC comes with 16 extras including a primary manifold kit, heating isolation valve kit and NaviClean™ magnetic filtration system...all part of the NFC combi-boiler package.



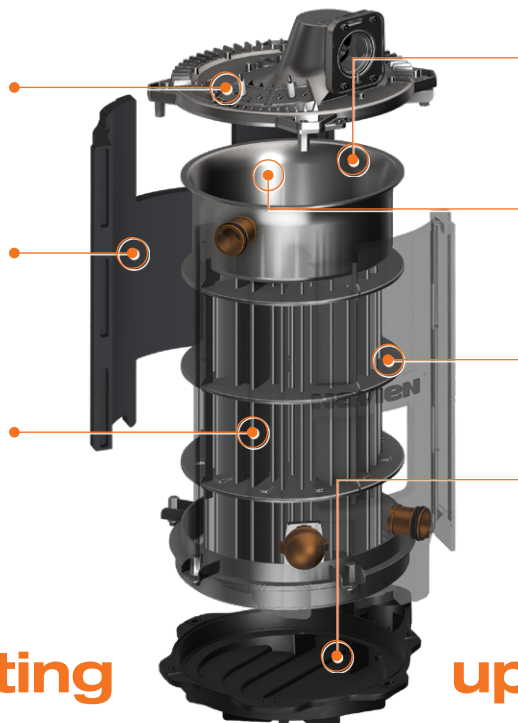
## Patented stainless steel fire tube heat exchanger

Navien's advanced patented stainless steel heat exchanger design is ASME-Certified, "H" Stamped, and reduces high stress point weld failures common on other combi-boilers. This compact, in-house designed and manufactured heat exchanger uses the latest automated laser welding technology to deliver superior product quality.

**Low profile burner design** is easy to remove, improving serviceability. It also reduces overall heat exchanger height.

**EPP insulation** used on the heat exchanger exterior reduces heat loss and increases efficiency.

**Turbulators inside the tubes** increase structural strength and create a cyclone effect of flue gases maximizing heat transfer rate and efficiency.



**One-piece combustion chamber** minimizes welding point areas prone to corrosion.

**Innovative heat exchanger design** allows water to fill the entire heat exchanger eliminating extra insulation at the top of the combustion chamber and improves durability.

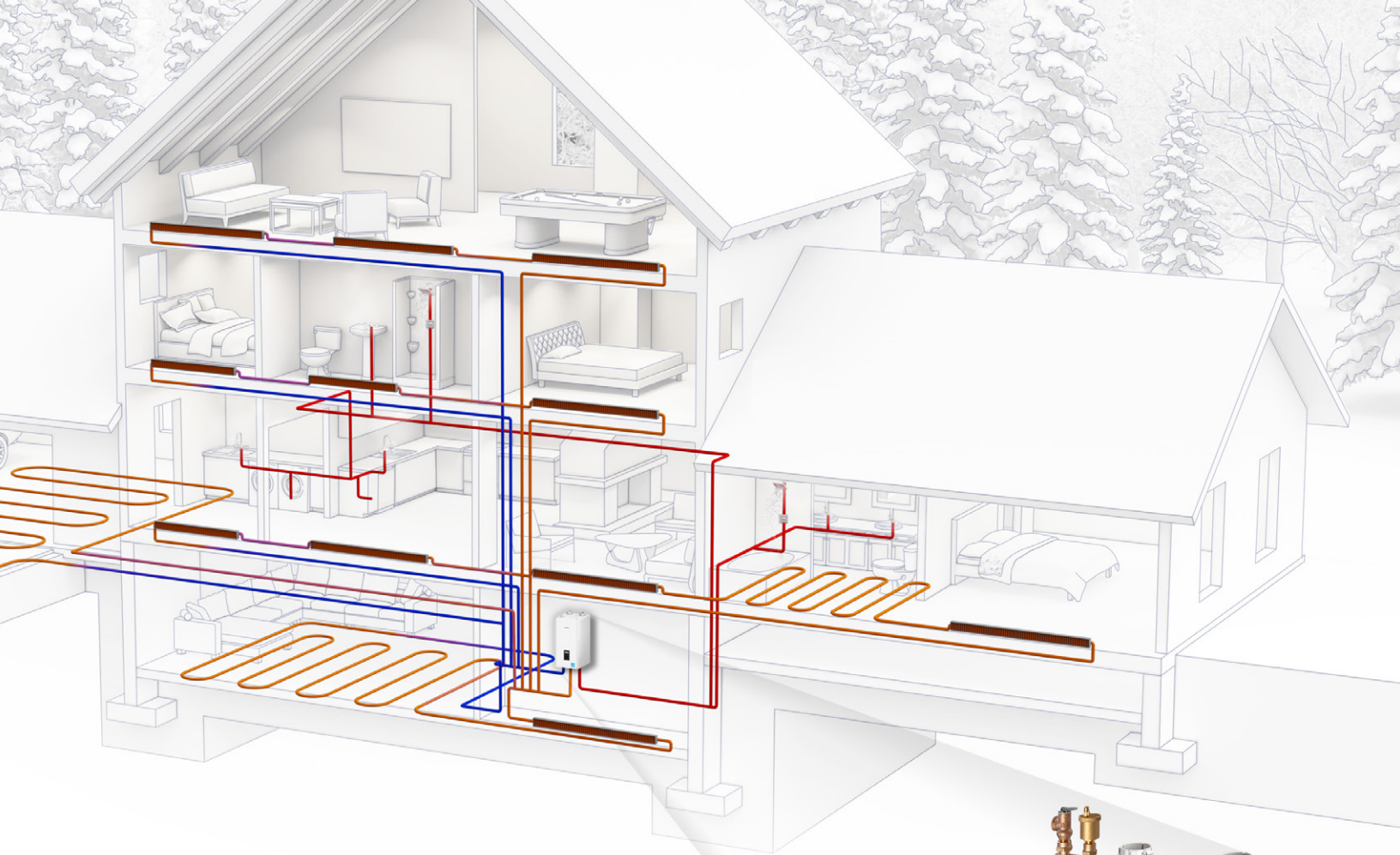
**New heat exchanger diaphragm design** optimizes water flow and performance.

**Non-metallic drain pan** prevents corrosion caused by acidic condensate.

**Space heating**

**up to 199k BTU/H**





## Built-in DHW module now with advanced performance

Navien's new innovative domestic hot water heat exchanger now generates even more hot water, giving customers the ability to run up to 3 showers and a dishwasher, all at the same time (@67°F temperature rise).

**Integrated boiler pump** for hydronic space heating and domestic hot water. No need for an external pump saving installation time, space and costs.

**New mixing valve**

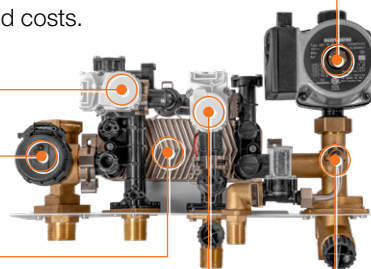
**New easy access 3-way valve**

**DHW stainless steel flat plate heat exchanger**

5.4 GPM @ 67°F temperature rise.  
One of the highest flow rates in the industry.

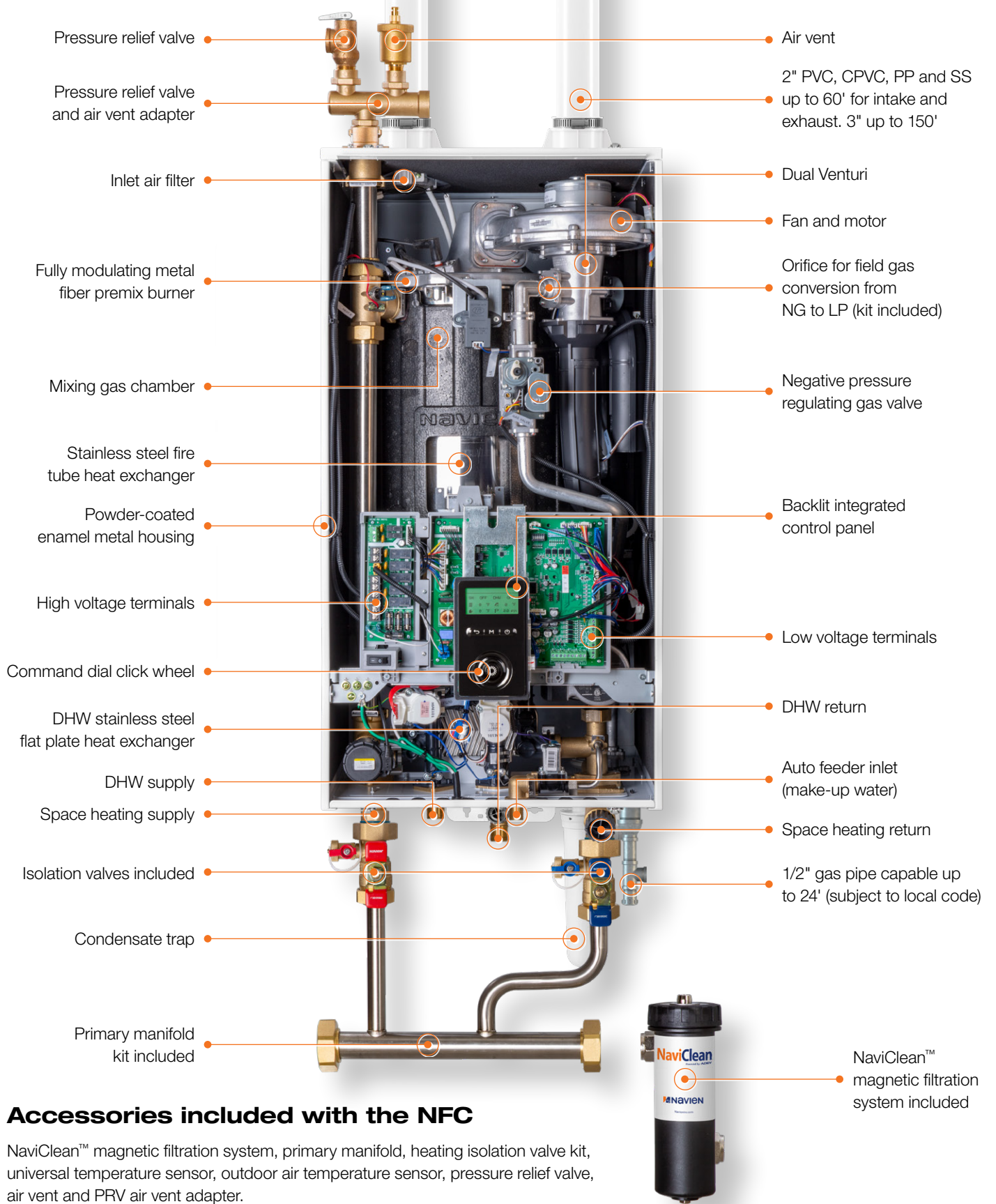
**New flow adjustment valve**

**Water feed valve**



# DHW up to 199k BTU/H

# Navien NFC combi-boiler — no one has



## Accessories included with the NFC

NaviClean™ magnetic filtration system, primary manifold, heating isolation valve kit, universal temperature sensor, outdoor air temperature sensor, pressure relief valve, air vent and PRV air vent adapter.



# more advantages, inside or out



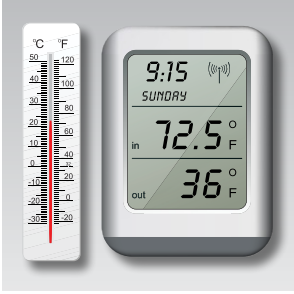
### Dual inputs of up to 199k BTU/H for heating and 199k BTU/H for DHW

Satisfies all the space heating and domestic hot water requirements of most typical large homes.



### Low noise levels

Installations in or near media rooms, recreation rooms or any living areas of the house are possible with the quiet running NFC combi-boilers.



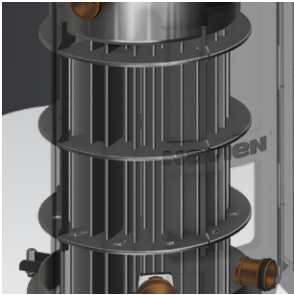
### Turndown ratio of 11:1 for heating and 11:1 for DHW

The sophisticated gas flow control system provides a high turndown ratio, reducing energy waste, preventing excessive boiler cycling and enhancing temperature control for DHW.



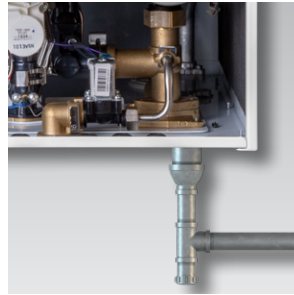
### Multiple venting options

Low exhaust gas temperatures allow use of PVC, CPVC, polypropylene (rigid and flexible) and stainless steel venting reducing installation time and costs. System can use 2" venting for up to 60', or up to 150' with 3" venting.



### Patented stainless steel fire tube heat exchanger

Navien's advanced patented stainless steel heat exchanger design reduces high stress point weld failures and provides improved corrosion resistance resulting in longer life.



### Uses existing 1/2" gas piping

Save time and effort in retrofit applications with 1/2" gas lines for up to 24' in length (subject to local code).



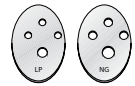
### 5.4 GPM @ 67° temperature rise for DHW

Separate stainless steel flat plate heat exchanger for DHW creates one of the highest flow rates for any combi-boiler in the industry.



### Dual Venturi and field gas convertibility

Dual Venturi system creates better combustion control and turndown ratio. Orifice conversion kit for easy field gas convertibility from NG to LP is included with every NFC Series combi-boiler.



### Advanced user interface, control and circuitry

Navien's new backlit control panel uses simple, intuitive color-coded text and an innovative click wheel for easy information input. Built-in three zone pump control allows for quick and easy system integration.



### Expanded DHW capability

For increased domestic hot water flow demand, the NFC can be cascaded with our NPE units.

# NFC Series combi-boiler accessories



## SmartZone+ pump controller

Zone pump controller designed to work with NFC series units allowing control from 2 to 6 zone pumps. Adding the SmartZone control will also allow expansion of the built in NFC zoning.

2 Zones: PFMZ-02P-001  
3 Zones: PFMZ-03P-001  
4 Zones: PFMZ-04P-001  
6 Zones: PFMZ-06P-001



## PeakFlowE™ anti-scale system

GXXX001725

## PeakFlowE™ Replacement Media

GXXX001726

## PeakFlowE™ Replacement Media

GXXX001327



## NaviLink™ Wi-Fi control

This add-on accessory will enable customers with smartphones and tablets to control temperatures remotely, access usage data and receive diagnostic notifications on all Navien products (NPE-A, NPE-S, NCB-E, NFB, NHB, NFC). PBCM-AS-001



## Commercial neutralizer

Commercial condensate neutralizer for NFC series units designed to neutralize the condensate of up to 16 units. GXXX001325

## Replacement media for commercial neutralizer

GXXX001329

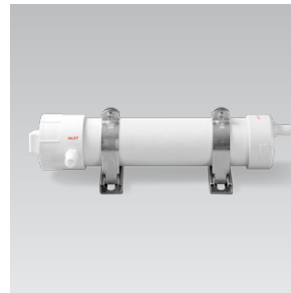


## Common vent collar kit

Required for common venting with one or more NPE tankless water heaters.

30014367A

Includes cascade cable (GXXX000546) and common vent collar damper.



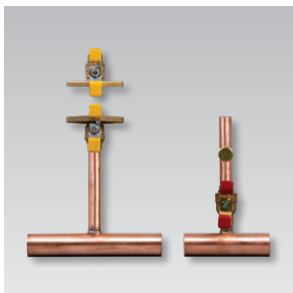
## Light commercial neutralizer

Light commercial condensate neutralizer for NFC series units designed to neutralize the condensate of up to 6 units.

GXXX001324

## Replacement media for light commercial neutralizer

GXXX001328



## NFC secondary manifold kit

Navien NFC secondary manifolds, like the primary manifolds, are ideal for any hydronic space heating application.

GFFM-SKTZUS-001



## Residential neutralizer kit, single unit

Residential condensate neutralizer for NFC series units designed to neutralize the condensate of one unit.

GXXX001322

## Replacement media for residential neutralizer

GXXX001323



## Cascade cable

Required to cascade & common vent NPE, NCB, NFC, NFB series and NHB-110 & NHB-150 models.

GXXX000546



## Universal temperature sensor

Designed to sense supply, return or tank water temperature. Works with all NFC and NFB series boilers.

GXXX001769

# Best combi package on the market



## Cascade up to 16 units

1 NFC combi-boiler and  
15 NPE tankless water heaters.

## Common vent up to 8 units

1 NFC combi-boiler and  
7 NPE tankless water heaters.

## Best technology

Navien advanced high efficiency condensing tankless water heater technology has taken the industry by storm. Combined with the patented fire tube boiler design, the NFC combi-boiler is the perfect option.

## Best warranty

Application	Heat Exchanger	Parts	Labor
Residential*	10 years	5 years	1 year
Commercial	5 years	3 years	1 year

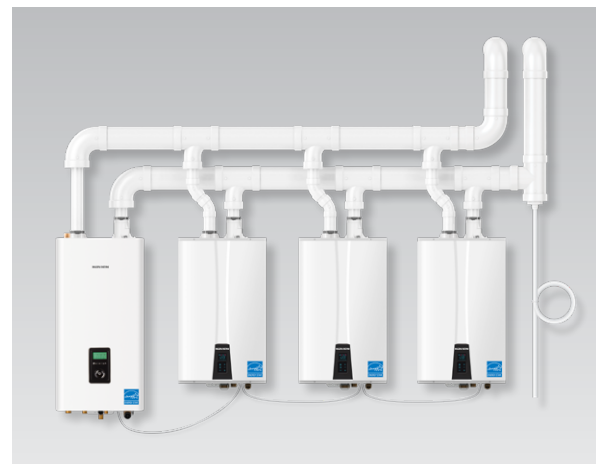
\*Applies to single family residential locations.  
For complete details please refer to the full warranty at [NavienInc.com](http://NavienInc.com).

## Best value

Every Navien NFC combi-boiler comes with 16 accessories including the primary manifold kit, isolation valve kit, outdoor temperature sensor and the NaviClean magnetic filtration system.

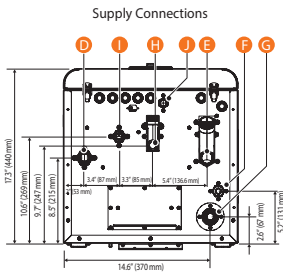
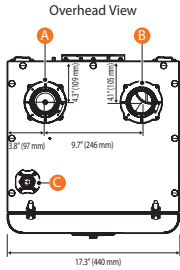
## Best choice for small or large homes and businesses

The NFC works great for residential and commercial applications small or large. You can easily expand your system by cascading the NFC combi-boiler with additional NPE series tankless water heaters.



# Dimensions

# Ratings & specifications



- Connection Size**
- A Air Intake  $\varnothing$  2"
  - B Exhaust Gas Vent  $\varnothing$  2"
  - C Air Vent Connection  $\varnothing$  3/4"
  - D Heating Supply  $\varnothing$  1"
  - E Heating Return  $\varnothing$  1"
  - F Gas Connection  $\varnothing$  3/4"
  - G Condensate Outlet  $\varnothing$  1/2"
  - H DHW Return  $\varnothing$  3/4"
  - I DHW Supply  $\varnothing$  3/4"
  - J Auto Feeder Inlet (Make-up Water)  $\varnothing$  1/2"

Navien Combination Condensing Boiler Space Heating Ratings						Other Space Heating Specifications		
Model Number <sup>1</sup>	Heating Input (BTU/H)		Heating Capacity (MBH) <sup>2</sup>	Net AHR Rating Water <sup>3</sup> (MBH)	AFUE <sup>2</sup> (%)	Water Pressure	Water Connection Size (Supply, Return)	Water Volume
	Min	Max						
NFC-175	18,000	175,000	161	140	95	12–80 psi	1" NPT	4.5 gallon
NFC-200	18,000	199,900	183	159	95			

<sup>1</sup> Ratings are the same for Natural Gas models converted to Propane use.

<sup>2</sup> Based on U.S. Department of Energy (DOE) test procedures.

<sup>3</sup> The NET AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. Consult Navien before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

Navien Combination Condensing Boiler Domestic Hot Water Ratings				Other Domestic Hot Water Specifications			
Model Number	Input Ratings (BTU/H)		Water Pressure	Minimum Flow Rate	Flow Rate 45°F (25°C) Temp Rise	DHW Supply Connection Size	DHW Return Connection Size
	Min	Max					
NFC-175	18,000	199,900	15–150 psi	0.5 GPM (1.9 L/m)	7.9 GPM	3/4" NPT	3/4" NPT
NFC-200	18,000	199,900					

Item	Model	
	NFC-175	NFC-200
Dimensions	17.3" W x 17.3" D x 33.5" H	
Boiler weight	145 lb (66 kg)	
Boiler weight with water	183 lb (83 kg)	
Installation type	Indoor wall-hung	
Venting type	Forced draft direct vent	
Ignition	Electronic ignition	
Natural Gas supply pressure (from source)	3.5" to 10.5" WC	
Propane Gas supply pressure (from source)	8.0" to 13.5" WC	
Natural Gas manifold pressure	-0.05" to -0.47" WC	-0.05" to -0.20" WC
Propane Gas manifold pressure	-0.10" to -0.45" WC	-0.10" to -0.45" WC
Gas connection size	3/4" NPT	
Power supply	Main supply	120V AC, 60Hz
	Maximum power consumption	Less than 15 amperes
Materials	Casing	Cold-rolled carbon steel
	Heat exchangers	Stainless steel
Venting	Exhaust	2" or 3" PVC, CPVC, PP and SS 2" or 3" special gas vent type BH, (Class III, A/B/C)
	Intake	2" or 3" PVC, CPVC, PP and SS 2" or 3" special gas vent type BH, (Class III, A/B/C)
	Vent clearance	0" to combustibles
Safety devices	Flame rod, APS, Ignition operation detector, Water temperature high limit switch, Exhaust temperature high limit sensor, Water pressure sensor	

NFC-175 and NFC-200 Series	
Temp. Rise °F (°C)	Flow Rate GPM (L/m) <sup>1</sup>
35 (19)	10.4 (39.5)
40 (22)	9.0 (34.1)
45 (25)	7.9 (30.0)
50 (28)	7.2 (27.3)
55 (31)	6.6 (25.0)
60 (33)	6.0 (22.7)
67 (37)	5.4 (20.4)
70 (39)	5.1 (19.3)
77 (43)	4.7 (17.8)
80 (44)	4.5 (17.0)
85 (47)	4.2 (15.9)
90 (50)	4.0 (15.1)
100 (56)	3.6 (13.6)

<sup>1</sup> Max GPM based on installation conditions.

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.

## Gas input ranges

Model	Heating (BTU/H)	DHW (BTU/H)
NFC-175	18,000–175,000	18,000–199,900
NFC-200	18,000–199,900	18,000–199,900

## Temperature setting ranges

Item	Temperature Setting Range	Remarks
Space Heating	Supply	77–194°F (25–90°C)
	Return	68–158°F (20–70°C)
DHW	89–140°F (30–60°C)	



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