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 Most Efficient for 2019

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 more advantages, inside or out

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.
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.

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.

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.

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.

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.

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.

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).

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

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

NFC secondary manifold kit
Navien NFC secondary manifolds, like the primary manifolds are ideal for any hydronic space heating application.
GFFM-SKTZUS-001

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

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.

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

PeakFlowE™ anti-scale system
GXXX001725
PeakFlowE™ Replacement Media
GXXX001726
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GXXX001327

Universal temperature sensor
Designed to sense supply, return or tank water temperature. Works with all NFC and NFB series boilers.
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GXXX001769
Best combi package on the market

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Heat Exchanger</th>
<th>Parts</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential*</td>
<td>10 years</td>
<td>5 years</td>
<td>1 year</td>
</tr>
<tr>
<td>Commercial</td>
<td>5 years</td>
<td>3 years</td>
<td>1 year</td>
</tr>
</tbody>
</table>

*Applies to single family residential locations.
For complete details please refer to the full warranty at 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.

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.
Navien Combination Condensing Boiler

Space Heating Ratings

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Heating Input (BTU/H)</th>
<th>Heating Capacity (MBH)</th>
<th>Net AHR Rating Water (MBH)</th>
<th>AFUE (%)</th>
<th>Water Pressure</th>
<th>Water Connection Size (Supply, Return)</th>
<th>Water Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFC-175</td>
<td>18,000 – 175,000</td>
<td>161</td>
<td>140</td>
<td>95</td>
<td>12 – 80 psi</td>
<td>1” NPT</td>
<td>4.5 gallon</td>
</tr>
<tr>
<td>NFC-200</td>
<td>18,000 – 199,900</td>
<td>183</td>
<td>159</td>
<td>95</td>
<td></td>
<td>3/4” NPT</td>
<td></td>
</tr>
</tbody>
</table>

Other Space Heating Specifications

- 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” – 13.5” WC
- Natural Gas manifold pressure: -0.05” to -0.47” WC
- Propane Gas manifold pressure: -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, Intake: 2” or 3” PVC, CPVC, PP and SS, 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

Domestic Hot Water Ratings

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Input Ratings (BTU/H)</th>
<th>Water Pressure</th>
<th>Flow Rate 45°F (20°C) Temp Rise</th>
<th>DHW Supply Connection Size</th>
<th>DHW Return Connection Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFC-175</td>
<td>18,000 – 199,900</td>
<td>15 – 150 psi</td>
<td>7.9 GPM</td>
<td>3/4” NPT</td>
<td>3/4” NPT</td>
</tr>
<tr>
<td>NFC-200</td>
<td>18,000 – 199,900</td>
<td>15 – 150 psi</td>
<td>11.3 GPM</td>
<td>3/4” NPT</td>
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</tr>
</tbody>
</table>

Other Domestic Hot Water Specifications

- 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)

Gas input ranges

<table>
<thead>
<tr>
<th>Model</th>
<th>Heating (BTU/H)</th>
<th>DHW (BTU/H)</th>
</tr>
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<td>NFC-175</td>
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Temperature setting ranges

- Actual supply and return temperatures vary depending on the selected outdoor reset curve.

Navien Inc.
20 Goodyear, Irvine, CA 92618
800-519-8794, NavienInc.com

Dimensions

- Overhead View
- Front View
- Supply Connections

Navien reserves the right to change specifications at any time without prior notice. Please refer to www.NavienInc.com to verify you have the most current information.