

US Product Catalog



May 2020





Innovation, advanced technology and solutions for a greener world

Navigating, Energy and Environment

Three words from which the company name was created.

Mission

To provide customers with the ultimate comfortable living environment through energy efficient products by using innovative technology to create a healthier environment for our future generations.

Global vision

Navien retains the largest market share for condensing gas water heaters in North America; is ranked top in technology patents; and is the largest exporter of boilers from Korea. Navien proudly exports that leadership in dependability, design, green technology, social responsibility and customer service to over 30 countries.

A world leader in energy efficient technology

Navien was an early leader in developing condensing technology for boilers and water heaters. Condensing technology maximizes energy by using heat emitted from flue gasses. As a result, energy consumption and green house gases are reduced.

Advanced technology for a cleaner world

Navien's high efficiency and eco-friendly technology has reduced energy consumption by 20% and cut down the emissions of green house gases. Our condensing tankless gas water heaters achieved the industry's highest energy factor, 0.97 UEF/0.99 EF, setting the standard for the rest of the world.



North









NPN Series

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NCB-E **Series**

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NFC Series

Pages 22-27



NHB Series

Pages 28-33



NFB Series



Pages 34-39



Navien

NFB-C **Series**





NAVIEN PREMIUM EFFICIENCY CONDENSING TANKLESS WATER HEATERS

Navien NPE Series is the best selling*, most advanced condensing tankless water heater in the industry

Navien makes it easy to go tankless

Navien NPE-A and NPE-S units replace inefficient tank heaters, saving water, natural gas and electricity with added benefits of endless supply of hot water, lower maintenance costs and longer product life.





- Exclusive ComfortFlow® internal recirculation pump and buffer tank
- Earn up to 3 LEED points with recirculation
- Lower the HERS home index score
- Wi-Fi enabled with NaviLink® add-on
- Optional HotButton[™] on demand control kit
- Optional Ready-Link manifold system simplifies side-by-side wall mounted applications, side-by-side rack mounted applications or floor mounted back-to-back applications

*Navien NPE Series is the best selling condensing tankless water heater according to BRG.

ComfortFlow® exclusive built-in recirculation system included on all NPE-A models. Navien ComfortFlow® is the first to incorporate a built-in insulated buffer tank and recirculation pump. The buffer tank eliminates the "cold water sandwich" effect and issues of minimum flow rates commonly found in other tankless water heaters. The recirculation pump saves on water bills by reducing the time to get hot water.

















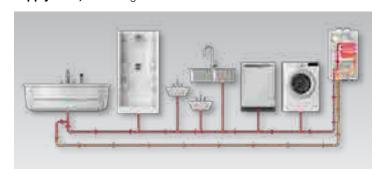


NPE-Advanced



NPE-Standard

ComfortFlow® recirculates hot water through supply lines, eliminating wait time for hot water.



NPE-A HotButton™ optional hot water activation system.

At the push of a button, the HotButton hot water system activates the internal recirculation pump and gas fired burner to heat water in the supply lines to provide hot

water only when it's needed.









The H2Air Kit utilizes the NPE-A pump to circulate the hot water for the hydronic air handler. This removes the need to purchase an additional circulator for the heating system. Designed for retrofit and new construction, the Navien H2Air Kit™ includes an add-on controller to integrate space heating and DHW between any NPE-A Series tankless water heater and a hydronic air handler.



2" PVC venting up to 60 feet. Low exhaust gas temps allows use of PVC, CPVC, System 636 and polyproplyene vent systems, saving time and money.



Dual stainless steel heat exchangers resist corrosion better than copper to provide longer life.



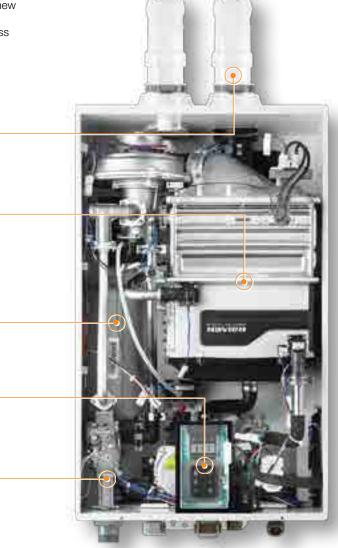
NPE ComfortFlow patented internal recirculation system includes built-in recir pump and insulated buffer tank. No need for costly external parts, no more "cold water sandwich" effect and no minimal flow rate issues.



User-friendly, advanced controls. Easy set up diagnostic control system displays temperature, water flow rate, cascading operations and much more.



1/2" gas pipe capability up to 24' (subject to local codes). Cuts installation time, no need to install new gas lines for retrofit applications.









NPE-Advanced NPE-Standard

NAVIEN PREMIUM EFFICIENCY CONDENSING TANKLESS WATER HEATERS

NPE-Advanced

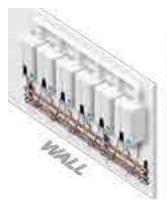
NPE-Standard

Ready-Link®

Manifold system for mounting on wall or rack

- Simply no waiting for factory racks
- Simply easy to install... same day
- Simply more profitable
- Simply visit your local Navien wholesaler and pick up everything you need







NaviCirc™

Recirculation valve for NPE-A tankless

Designed for recirculation of domestic hot water in applications where a dedicated return line is not available.



NPE Series water heater accessories

| Water Heater Accessory | Description | Part Number |
|------------------------|--|--|
| | NaviLink™ Wi-Fi Control | PBCM-AS-001 |
| | H2Air™ Kit AHU Optimizer | PNBD-000001 |
| | Remote Controller | 300009757A |
| | Plumb Easy Valve 3/4" with Relief Valve | 30009323A |
| 122 | Plumb Easy 3 Valve Set for NPE-A | 30022163A |
| | Plumb Easy Valve 3/4" with Relief Valve Designed to work with pipe cover | 30012581A |
| 1 | NaviCirc™ Recirculation Valve for NPE-A | NaviCirc™ PFFW-SXX-001 NaviCirc Kit 30022965A |

NPE Series water heater accessories

| INFE Series water fleater accessories | | | | | | | |
|---------------------------------------|--|---|--|--|--|--|--|
| Water Heater Accessory | Description | Part Number | | | | | |
| | HotButton™ Control Kit Includes Push Button and Wall Plate | HotButton™ Control Kit PZZZ-00046 Wall Plate GXXX001427 Push Button GXXX001426 | | | | | |
| | Residential Neutralizer | Residential Neutralizer 1 unit GXXX001322 Residential Replacement Media GXXX001323 | | | | | |
| | Light Commercial Neutralizer Up to 6 units | Light Commercial Neutralizer GXXX001324 Light Commercial Replacement Media GXXX001328 | | | | | |
| | Commercial Neutralizer Up to 16 units | Commercial Neutralizer GXXX001325 Commercial Replacement Media GXXX001329 | | | | | |
| | 2" and 3" Wall Flange and Vent Terminator Kit | 2" Kit 30010747A 3" Kit 30003873B | | | | | |
| | PeakFlowE™ Anti-scale System | PeakFlowE [™] System GXXX001725 PeakFlowE [™] Replacement Media GXXX001726 PeakFlow [™] Replacement Media GXXX001327 | | | | | |

| Water Heater Accessory | Description | Part Number |
|------------------------|---|---|
| | Common Vent Collar Kit | Common Vent Collar Kit 30014367A Includes Cascade Cable GXXX000546 |
| Q. | Cascade Cable and External Pump Wire | Cascade Cable GXXX000546 External Pump Wire GXXX001319 |
| | Vent Cap NPE Series | 30010604A |
| | Pipe Cover NPE Series | Pipe Cover 30012634A Use with Isolation Valves 30012581A |
| Base Add-on | Ready-Link® Rack Base (V3) and Add-on Rack(s) | Base (V3) GFFMKDIZUS-005 Add-on (V3) GFFMKDIZUS-006 |







NPE-Advanced NPE-Standard

NAVIEN PREMIUM EFFICIENCY CONDENSING TANKLESS WATER HEATERS

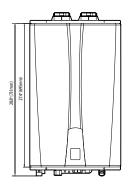
NPE-Advanced

NPE-Standard

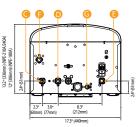
NPE Series

Overhead View 15 (Bonn) 143' (Bónn) 143'

Front View



Supply Connections



| Cor | nection S |
|---|-----------|
| Air Intake | Ф 2" |
| B Exhaust Gas Vent | Ф 2" |
| Hot Water Outlet | Φ 3/4" |
| Recirculation Inlet (A model) | Ф 3/4" |
| Cold Water Inlet | Ф 3/4" |
| Gas Inlet | Φ 3/4" |
| Condonesto Drain | Φ 1/2" |

Specifications

| | Item | | | | Model | | | |
|-------------------------------|---------------------------|---------------------------------|------------------------|---------------------|---------------------------|---------------------|---------------------------|---------------------|
| | Item | NPE-150S | NPE-180A | NPE-180S | NPE-210A | NPE-210S | NPE-240A | NPE-240S |
| Heat capacity (input) | Natural gas | 18,000— 120,000 | 15,000–15 (BTU/H) | 0,000 | 19,900–180,000 (BTU/H) | | 19,900–199,900 (BTU/H) | |
| (Iriput) | Propane gas | (BTU/H) | ΓU/H) (ΒΤΟ/Η) (| | , | ı | | |
| Efficiency | UEF (NG & LP) | 0.96 | 0.96 | 0.97 | 0.96 | 0.97 | 0.96 | 0.97 |
| ratings | EF (Canada NG & LP) | 0.97 | 0.97 | 0.99 | 0.97 | 0.99 | 0.97 | 0.99 |
| | 35°F (19°C) temp rise | 6.8 GPM (26 L/m) | 8.4 GPM (3 | 32 L/m) | 10.1 GPM | (38 L/m) | 11.2 GPM | (42 L/m) |
| Flow rate (DHW) | 45°F (25°C) temp rise | 5.3 GPM (20 L/m) | 6.5 GPM (2 | 25 L/m) | 7.8 GPM (3 | 80 L/m) | 8.7 GPM (3 | 33 L/m) |
| | 67°F (36°C) temp rise | 3.2 GPM (12 L/m) | 4.3 GPM (16 L/m) | 4.2 GPM (16 L/m) | 5.0 GPM (19 L/m) | 5.2 GPM (20 L/m) | 5.6 GPM (21 L/m) | 5.7 GPM (22 L/m) |
| Dimensions | | 17.3"W x 27.4" | 'H x 13.2"D | | | | | |
| Weight | | 55lbs (25kg) | 75lbs (34kg) | 67lbs (30kg) | 82lbs (37kg) | 75lbs (34kg) | 82lbs (37kg) | 75lbs (34kg) |
| Installation type | Э | Indoor or outdo | or wall-hung | | | | | |
| Venting type | | Forced draft direct vent | | | | | | |
| Ignition | | Electronic ignition | | | | | | |
| Water pressure |) | 15–150 PSI | | | | | | |
| Natural gas sur (from source) | oply pressure | 3.5"-10.5" WC | | | | | | |
| Propane gas su (from source) | upply pressure | 8"-13" WC | | | | | | |
| Natural gas ma (min-max) | nifold pressure | -0.04" WC to -0.38" WC | -0.04" WC -0.84" WC | | -0.05" WC -0.36" WC | | -0.05" WC -0.58" WC | |
| Propane gas m (min-max) | anifold pressure | -0.04" WC to -0.42" WC | -0.05" WC -0.50" WC | | -0.10" WC -0.66" WC | | -0.10" WC -0.78" WC | |
| Minimum flow | rate | 0.5 GPM (1.9 L | /m), < 0.01 | GPM (0.04 L | _/m) option fo | or "A" models | 3* | |
| 0 " | Cold water inlet | 3/4" NPT | | | | | | |
| Connection sizes | Hot water outlet | 3/4" NPT | | | | | | |
| 31263 | Gas inlet | 3/4" NPT | | | | | | |
| Power | Main supply | 120V AC, 60 H | Z | | | | | |
| supply | Maximum power consumption | 200W (max 2A |), 350W (ma | ıx 4A) with ex | xternal pump | connected | | |
| Materials | Casing | Cold rolled cart | oon steel | | | | | |
| ivialtiidis | Heat exchangers | Primary heat ex | | | | | | |
| | Exhaust | 2" or 3" PVC, 0 | CPVC, PP, SS | 2" or 3" | special gas v | ent type BH | (Class II, A/E | 3/C) |
| Venting | Intake | 2" or 3" PVC, 0 | CPVC, PP, SS | 2" or 3" | special gas v | ent type BH | (Class II, A/E | 3/C) |
| | Vent clearances | 0" to combustil | | | | | | |
| Safety devices | | Flame rod, APS temperature high | | | | nperature hig | h limit switch | n, exhaust |

^{*}Available for "A" models configured in an optional ComfortFlow recirculation mode. Additional energy use will occur when using recirculation. Navien reserves the right to change specifications at any time without prior notice.

Please refer to NavienInc.com to verify you have the most current information.

Navien certification summary (Note: all NPE models are field convertible from NG to LP gas)

| | | | Product A | pprovals | | | Effici | ency Ratin | gs* | | nergy Cons (Residentia | |
|--------------|-----|------------------------|-------------------------|--------------------------------------|----------------|----------------|--------------------------|--------------------------------------|------------------------------|-------------------------------------|-------------------------------|----------------------------------|
| Model | CSA | NSF (Standard 5) | Low Lead (<0.25%) | SCAQMD 1146.2 (NOx, <20ppm) | AHRI Number | Energy Star | Energy Factor (EF) | Uniform Energy Factor (UEF) | Max GPM (67°F Rise) | Natural Gas (Therms/ Year) | Propane (Gallons/ Year) | Estimated Operating Cost** |
| NPE-180A-NG | Yes | Yes | Yes | Yes | 6678380 | Yes | 0.97 | 0.96 | 4.3 | 176 | | \$192 |
| NPE-180A-LPG | Yes | Yes | Yes | Yes | 6678380 | Yes | 0.97 | 0.96 | 4.3 | | 193 | \$465 |
| NPE-210A-NG | Yes | Yes | Yes | Yes | 6678381 | Yes | 0.97 | 0.96 | 5.0 | 176 | | \$192 |
| NPE-210A-LPG | Yes | Yes | Yes | Yes | 6678381 | Yes | 0.97 | 0.96 | 5.0 | | 193 | \$465 |
| NPE-240A-NG | Yes | Yes | Yes | Yes | 6678382 | Yes | 0.97 | 0.96 | 5.6 | 176 | | \$192 |
| NPE-240A-LPG | Yes | Yes | Yes | Yes | 6678382 | Yes | 0.97 | 0.96 | 5.6 | | 193 | \$465 |
| NPE-150S-NG | Yes | Yes | Yes | Yes | 8235610 | Yes | 0.97 | 0.96 | 3.2 | 115 | | \$125 |
| NPE-150S-LPG | Yes | Yes | Yes | Yes | 8235610 | Yes | 0.97 | 0.96 | 3.2 | | 126 | \$304 |
| NPE-180S-NG | Yes | Yes | Yes | Yes | 6478771 | Yes | 0.99 | 0.97 | 4.2 | 175 | | \$191 |
| NPE-180S-LPG | Yes | Yes | Yes | Yes | 6478771 | Yes | 0.99 | 0.97 | 4.2 | | 192 | \$463 |
| NPE-210S-NG | Yes | Yes | Yes | Yes | 6478772 | Yes | 0.99 | 0.97 | 5.2 | 175 | | \$191 |
| NPE-210S-LPG | Yes | Yes | Yes | Yes | 6478772 | Yes | 0.99 | 0.97 | 5.2 | | 192 | \$463 |
| NPE-240S-NG | Yes | Yes | Yes | Yes | 6478773 | Yes | 0.99 | 0.97 | 5.7 | 175 | | \$191 |
| NPE-240S-LPG | Yes | Yes | Yes | Yes | 6478773 | Yes | 0.99 | 0.97 | 5.7 | | 192 | \$463 |

^{*}Based on U.S. Department of Energy (DOE) test procedures.

(NSF) AHER CERTIFIED

Temperature rise (maximum output)

| Temp rise (°F) | 150S GPM | 180 Series GPM | 210 Series GPM | 240 Series GPM |
|-------------------|-------------|-------------------|-------------------|-------------------|
| 35 | 6.8 | 8.4 | 10.1 | 11.2 |
| 40 | 5.9 | 7.4 | 8.8 | 9.8 |
| 45 | 5.3 | 6.5 | 7.8 | 8.7 |
| 50 | 4.8 | 5.9 | 7.1 | 7.8 |
| 55 | 4.3 | 5.3 | 6.4 | 7.1 |
| 60 | 4.0 | 4.9 | 5.9 | 6.5 |
| 65 | 3.7 | 4.5 | 5.4 | 6.0 |
| 70 | 3.4 | 4.2 | 5.0 | 5.6 |
| 75 | 3.2 | 3.9 | 4.7 | 5.2 |
| 80 | 3.0 | 3.7 | 4.4 | 4.9 |
| 85 | 2.8 | 3.5 | 4.2 | 4.6 |
| 90 | 2.6 | 3.3 | 3.9 | 4.4 |
| 100 | 2.4 | 2.9 | 3.5 | 3.9 |
| 110 | 2.2 | 2.7 | 3.2 | 3.6 |
| 120 | 2.0 | 2.5 | 2.9 | 3.3 |
| 130 | 1.8 | 2.3 | 2.7 | 3.0 |
| 140 | 1.7 | 2.1 | 2.5 | 2.8 |

^{*}Max temperature setting is 182°F (83°C).

DHW capacity

| Models | Natural gas (BTU/H) | Propane Gas (BTU/H) |
|--------------------|------------------------|------------------------|
| NPE-150S | 18,000-120,000 | 18,000-120,000 |
| NPE-180 A/S Series | 15,000-150,000 | 15,000-150,000 |
| NPE-210 A/S Series | 19,900-180,000 | 19,900-180,000 |
| NPE-240 A/S Series | 19,900-199,900 | 19,900-199,900 |

Lower HERS home index score

Operating cost

| Navien Tankless | 175 therms | \$191* | |
|-----------------|------------|--------|---|
| Other tankless | 209 therms | \$228* | |
| 50 gallon tank | 269 therms | \$293 | * |

^{*}Based on Energy Guide cost estimates using \$1.09 per therm of natural gas. Cost is in US dollars.

U.S. Green Building Council LEED points

| Water heater | Location | Recirculation |
|--------------|----------|---------------|
| 1 Point | 2 Points | 3 Points |

Warranty

| Application | | Labor | Parts | Heat Exchanger |
|----------------------------------|---|--------|---------|-------------------|
| Residential | Standard or controlled recirculation ² | 1 year | 5 years | 15 years |
| nesideriliai | Uncontrolled recirculation ³ | 1 year | 3 years | 5 years |
| | Standard or controlled recirculation ² for units produced on or after Jan. 1, 2016 | 1 year | 5 years | 8 years |
| Commercial or Combi ¹ | Standard or controlled recirculation ² for units produced before Jan. 1, 2016 | 1 year | 3 years | 10 years |
| | Uncontrolled recirculation ³ | 1 year | 3 years | 3 years |

¹Combi refers to a combination potable water and space heating application. Water heaters cannot be used in space heating only applications.

For complete details please refer to the full warranty at NavienInc.com.

³Uncontrolled-Recirculation: External pumps configured to circulate continuously through the water heater are subject to the uncontrolled recirculation warranty terms. An aquastat is the minimum pump control requirement for DHW or storage tank recirculation in order to maintain the full controlled recirculation warranty.



^{**}Based on a national average natural gas cost of \$1.09/therm, propane cost of \$2.41/gallon.

²Controlled-Recirculation: Recirculation through the water heater is controlled by either the water heater, a timer or an external aquastat.

NAVIEN PREMIUM NON-CONDENSING TANKLESS WATER HEATERS

No one has put more ingenuity into non-condensing tankless than Navien

The NPN Series brings you endless hot water, innovations and energy savings

Navien's NPN Series is the first and only non-condensing tankless water heater series that offers a durable stainless-steel heat exchanger and a patented stainless steel burner design, all with Navien's dedication to advanced engineering, elegant design and exceptional product quality, support and strong warranties.

- Choice of universal indoor/outdoor or outdoor only operation
- For residential/commercial use and cascade capable
- NaviVent[™] concentric 3" x 5" venting
- Units available in either Natural Gas (NG) or Liquid Propane (LP) gas



INTEGRATED CONTROLS











NPN-Universal indoor version



NPN-Universal with vent cap for outdoor use



outdoor only









Exclusive NaviTech™
stainless steel heat
exchanger. NPN is the first
non-condensing unit with a
stainless steel heat exchanger.



Patented NaviTech™ stainless steel burner with precision control flame technology for eco-friendly low NOx emissions comparable to condensing burners.



Circuitry with built-in recirculation control and software. No need to add separate controller saving installation time and money.



Built-in Water Adjustment Valve (WAV) and Mixing Valve controls flow to maintain setpoint and stabilizes temperature during flow changes.



NPN Series integrated control panel allows you to adjust water temperature, operation status and troubleshooting.









NPN-Universal with vent cap for outdoor use



NPN-Exterior outdoor only

NPN-Universal NPN-Exterior

NAVIEN PREMIUM NON-CONDENSING TANKLESS WATER HEATERS

NaviVent 3"x5" concentric venting accessories

| NaviVent Accessory | Description | Part Number |
|--------------------|--|-------------|
| W 20.0 | Sidewall Standard Termination Kit 11.5" (292mm) | GXXX001891 |
| 10 33.6* | Sidewall Long Termination Kit 21" (533mm) | GXXX001892 |
| 10 6 | Vent Pipe Extension 10" (254mm) | GXXX001896 |
| - P | Vent Pipe Extension 39" (991mm) | GXXX001897 |
| 11.2 | Concentric Roof Termination 18" (457mm) | GXXX001893 |

| NaviVent Accessory | Description | Part Number |
|--------------------|-------------------------------|-------------|
| | Elbow 80-125 mm 45° | GXXX001894 |
| · 0 · | Elbow 80-125 mm 90° | GXXX001895 |
| 3 | Flat Roof Flashing | GXXX001900 |
| 19.7" | Adjustable Roof Flashing | GXXX001901 |
| J. | Metal Wall Strap | GXXX001902 |
| | Condensate Trap Kit | GXXX001952 |



NPN water heater accessories

| Water Heater Accessory | Description | Part Number |
|------------------------|--|--|
| | NaviLink™ Wi-Fi Control | NaviLink [™] PBCM-AS-001 Expansion Cable GXXXX001659 |
| | H2Air™ Kit AHU Optimizer | PNBD-000001 |
| | Plumb Easy Valve 3/4" with Relief Valve | 30009323A |
| | Remote Controller Optional for NPN-U models | 30022717A |
| Q. | Cascade Cable and External Pump Wire | Cascade Cable GXXX000546 External Pump Wire GXXX001319 |
| 0 | HotButton™ Control Kit Includes Push Button and Wall Plate | HotButton™ Control Kit PZZZ-00046 Wall Plate GXXX001427 Push Button GXXX001426 |

| Water Heater Accessory | Description | Part Number |
|------------------------|---|---|
| | PeakFlowE™ Anti-scale System | PeakFlowE™ System GXXX001725 PeakFlowE™ Replacement Media GXXX001726 PeakFlow™ Replacement Media GXXX001327 |
| | Outdoor Vent Cap Kit NPN-U only | 30023991A |
| | Pipe Cover NPN Series | 30024017A |
| | Recess Box NPN-E only Lock not included | 30023550A |
| | | |









NPN-Universal NPN-Exterior

NAVIEN PREMIUM NON-CONDENSING TANKLESS WATER HEATERS

NPN-Universal indoor version

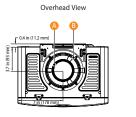
NPN-Universal with vent cap for outdoor use

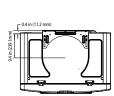
NPN-Exterior outdoor only

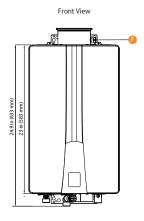
NPN-U Series

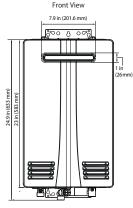
NPN-E Series

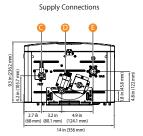
Overhead View

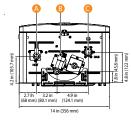












Supply Connections

| | Connection Size |
|--------------------|-----------------|
| A Exhaust Gas Vent | 3" |
| Air Intake | 5" |

| (A) | Extraust das Verit | 3 |
|----------|--------------------|--------|
| B | Air Intake | 5" |
| 0 | Hot Water Outlet | Ф 3/4" |
| 0 | Cold Water Inlet | Φ 3/4" |
| (| Gas Inlet | Φ 3/4" |
| A | Condensate Drain | Φ 5/8" |

| | Connection Size |
|--------------------|-----------------|
| A Hot Water Outlet | Φ 3/4" |
| Cold Water Inlet | Φ 3/4" |
| Gas Inlet | Φ 3/4" |

Specifications

| Item | | NPN- | -Universal N | /lodel | NPN-Exterior Model | | |
|--|-------------------------------|-------------------------------|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | iteiii | NPN-160U | NPN-180U | NPN-199U | NPN-160E | NPN-180E | NPN-199E |
| Heat capa natural gas | city (input) s/propane gas | 10,700- 160,000 (BTU/H) | 10,700- 180,000 (BTU/H) | 10,700- 199,900 (BTU/H) | 10,700- 160,000 (BTU/H) | 10,700- 180,000 (BTU/H) | 10,700- 199,900 (BTU/H) |
| Uniform Er for NG & L | nergy Factor P | 0.81 UEF | | | | , | |
| | 35°F (18°C) temp rise | 7.5 GPM (28 L/m) | 8.5 GPM (32 L/m) | 9.5 GPM (36 L/m) | 7.5 GPM (28 L/m) | 8.5 GPM (32 L/m) | 9.5 GPM (36 L/m) |
| Flow rate (DHW) | 45°F (23°C) temp rise | 5.8 GPM (22 L/m) | 6.6 GPM (25 L/m) | 7.4 GPM (28 L/m) | 5.8 GPM (22 L/m) | 6.6 GPM (25 L/m) | 7.4 GPM (28 L/m) |
| | 67°F (36°C) temp rise | 4.0 GPM (15 L/m) | 4.6 GPM (17 L/m) | 5.1 GPM (19 L/m) | 4.0 GPM (15 L/m) | 4.6 GPM (17 L/m) | 5.1 GPM (19 L/m) |
| Dimension | S | 14.0" W x 2 | 23.0" H x 9.3 | 8" D | | | |
| Weight | | 55 lbs (25 kg) | 60 lbs (27 kg) | 60 lbs (27 kg) | 55 lbs (25 kg) | 60 lbs (27 kg) | 60 lbs (27 kg) |
| Installation | ı type | | tion for outdo | | Only outdoo | or wall-hung | |
| Venting type | | Forced draf | t direct vent | (indoor only) | | | |
| Ignition typ | | Electronic i | | | | | |
| Water pres | | 15–150 PSI | | | | | |
| | from source) | 3.5" WC-1 | 0.5" WC | | | | |
| Propane g pressure (i | as supply from source) | 8" WC-13' | | | | | |
| Natural ga pressure (i | s manifold min-max) | 2.83" WC, 0.70" WC | 2.25" WC, 0.53" WC | 2.81" WC, 0.53" WC | 3.23" WC, 0.69" WC | 2.38" WC, 0.53" WC | 2.99" WC, 0.52" WC |
| Propane g pressure (i | as manifold min-max) | 5.93" WC, 1.38" WC | 5.28" WC, 1.31" WC | 6.55" WC, 1.31" WC | 6.34" WC, 1.35" WC | 5.39" WC, 1.28" WC | 6.61" WC, 1.28" WC |
| Minimum 1 | flow rate | 0.5 GPM (1 | .9L/m) | | | | |
| Connection | n sizes | | old water inle ot water outl as inlet | | | | |
| | Main supply | 120V AC, 6 | 0 Hz | | | | |
| | Normal | 90 W | 88 W | 120 W | 90 W | 88 W | 120 W |
| Power | Standby | 4 W | | | | | |
| supply | Anti-frost | 114 W | | | | | |
| | External pump | < 150 W, 1 | .5 A | | | | |
| | Fuse | 5.0 A | | | | | |
| | Casing | Cold rolled | carbon steel | | | | |
| Materials | Heat exchanger | | Stainless steel | | | | |
| Safety devices Flame rod, APS ignition operation detector, water temperature high lim switch, power surge fuse | | | | high limit | | | |

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





Navien certification summary

| | Product Approvals | | | Efficiency Rati | ngs* | |
|-------------|-------------------|---------------------|--------------------------|-----------------|--------------------------------|------------------------|
| Model | CSA | NSF (Standard 5) | Low Lead (<0.25%) | Ultra Low NOx | Uniform Energy Factor (UEF) | Max GPM (35°F Rise) |
| NPN-160U-NG | Yes | Yes | Yes | Yes | 0.81 | 7.5 |
| NPN-160U-LP | Yes | Yes | Yes | Yes | 0.81 | 7.5 |
| NPN-180U-NG | Yes | Yes | Yes | Yes | 0.81 | 8.5 |
| NPN-180U-LP | Yes | Yes | Yes | Yes | 0.81 | 8.5 |
| NPN-199U-NG | Yes | Yes | Yes | Yes | 0.81 | 9.5 |
| NPN-199U-LP | Yes | Yes | Yes | Yes | 0.81 | 9.5 |
| NPN-160E-NG | Yes | Yes | Yes | Yes | 0.81 | 7.5 |
| NPN-160E-LP | Yes | Yes | Yes | Yes | 0.81 | 7.5 |
| NPN-180E-NG | Yes | Yes | Yes | Yes | 0.81 | 8.5 |
| NPN-180E-LP | Yes | Yes | Yes | Yes | 0.81 | 8.5 |
| NPN-199E-NG | Yes | Yes | Yes | Yes | 0.81 | 9.5 |
| NPN-199E-LP | Yes | Yes | Yes | Yes | 0.81 | 9.5 |

^{*}Based on U.S. Department of Energy (DOE) test procedures.

DHW capacity

| Models | Natural Gas/Propane Gas |
|--------------------|-------------------------|
| NPN-160 U/E Series | 10,700-160,000 (BTU/H) |
| NPN-180 U/E Series | 10,700-180,000 (BTU/H) |
| NPN-199 U/E Series | 10,700-199,900 (BTU/H) |

NSF CERTIFIED SEA MATERIAL CONTROL OF SEA MATERIAL CON

Warranty

| Application | | Labor | Parts | Heat Exchanger |
|-----------------------|--|--------|---------|----------------|
| | Standard | 1 year | 5 years | 15 years |
| Residential | Uncontrolled Recirculation ² | 1 year | 3 years | 5 years |
| Commercial | Standard | 1 year | 5 years | 5 years |
| or Combi ¹ | Uncontrolled Recirculation ² | 1 year | 3 years | 3 years |

¹Combi refers to a combination potable water and space heating application. Water heaters cannot be used in space heating only applications.

Temperature rise (maximum output)

| Temp Rise | Flow Rate (GPM) | | | |
|-----------|-----------------|---------|---------|--|
| (°F) | NPN-160 | NPN-180 | NPN-199 | |
| 30 | 8.7 | 10.0 | 11.1 | |
| 35 | 7.5 | 8.5 | 9.5 | |
| 40 | 6.6 | 7.5 | 8.3 | |
| 45 | 5.8 | 6.6 | 7.4 | |
| 50 | 5.2 | 6.0 | 6.6 | |
| 55 | 4.8 | 5.4 | 6.0 | |
| 60 | 4.4 | 5.0 | 5.5 | |
| 65 | 4.0 | 4.6 | 5.1 | |
| 70 | 3.7 | 4.3 | 4.7 | |
| 75 | 3.5 | 4.0 | 4.4 | |
| 80 | 3.3 | 3.7 | 4.1 | |
| 85 | 3.1 | 3.5 | 3.9 | |
| 90 | 2.9 | 3.3 | 3.7 | |
| 100* | 2.6 | 3.0 | 3.3 | |

^{*}Max temperature setting is 140°F (60°C).



²Uncontrolled-Recirculation: External pumps configured to circulate continuously through the water heater are subject to the uncontrolled recirculation warranty terms. An aquastat is the minimum pump control requirement for DHW or storage tank recirculation in order to maintain the full controlled recirculation warranty.

For complete details please refer to the full warranty at NavienInc.com.

NCB-E NAVIEN HIGH EFFICIENCY TANKLESS CONDENSING COMBI-BOILERS

The undisputed industry sales leader* in residential combi-boilers

NCB-E Series compact combi-boiler supports heating and DHW for the whole house

Navien NCB-E is the first high efficiency condensing combination boiler with the capacity to supply both heat and domestic hot water for larger homes — enough hydronic heat for a whole house, plus hot water to run two showers and a dishwasher all at the 2020 same time, in most applications.

- Durable dual stainless steel heat exchanger for space heating
- Separate stainless steel heat exchanger for domestic hot water
- TDR up to 6.66:1 for heating and 10:1 for DHW
- AFUE 95.0%

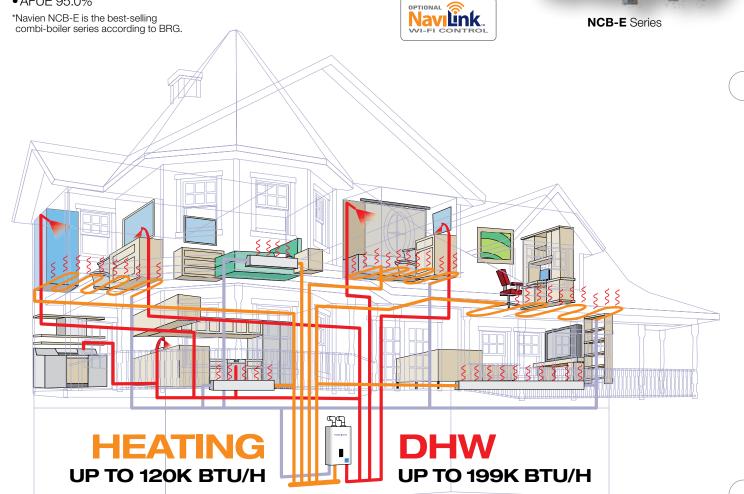
*Navien NCB-E is the best-selling



LP FIELD GAS CONVERTIBLE







Manifold kits for faster installations



NCB Series Primary Manifold Kit GFFM-MCOZUS-001

Navien's done a major part of the piping work for you. Both primary and secondary manifold kits are system matched for all NCB-E models for easy, efficient installations.

Manifold Kit

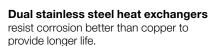
GFFM-SKTZUS-001













Advanced integrated control.

PVC venting. Low exhaust gas temperatures allows use of PVC, CPVC, ULC S636 and polypropylene vent systems, reducing installation time and costs. System can use 2" venting for up to 60', or up to 150' with 3" venting.



This user-friendly control makes set up, temperature adjustments, system status and troubleshooting an easy task.

4.5 GPM@77° temperature rise for domestic hot water. Separate stainless steel flat plate heat exchanger for DHW creates a high flow rate.







NCB-E Series

NAVIEN HIGH EFFICIENCY CONDENSING **C**OMBI-BOILERS



NCB-E

Innovation that saves space and energy





After Before

The NCB-E takes up to 80% less space than a traditional floor standing boiler and tank water heater. Customer's now have more room, save energy and enjoy all the hot water they need whenever they want it.



Turndown ratio of 6:1 for heating and 11:1 for DHW.

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



Dual inputs of up to 120k BTU/H for heating and 199k BTU/H for DHW

supplies all the heat and domestic hot water that most houses require.



Low noise levels. Installations in or near media rooms, recreation rooms or any living areas of the house are possible with the quiet running NCB-E combi-boilers.



Linkability for extraordinarily large domestic hot water flow demand, the NCB-E can be cascaded with our NPE units.



NCB-E Series combi-boiler accessories

| Boiler Accessory | Description | Part Number |
|------------------|---|---|
| | Zone Pump Controller | 2 Zones: PFMZ-02P-001 3 Zones: PFMZ-03P-001 4 Zones: PFMZ-04P-001 6 Zones: PFMZ-06P-001 |
| | NaviLink™ Wi-Fi Control | NaviLink™ PBCM-AS-001 Expansion Cable GXXX001659 |
| 1 | NCB Series Primary Manifold Kit | GFFM- MCOZUS-001 |
| | NCB-E Series Secondary Manifold Kit | GFFM- SKTZUS-001 |
| | PeakFlowE™ Anti-scale System | PeakFlowE [™] System GXXX001725 PeakFlowE [™] Replacement Media GXXX001726 PeakFlow [™] Replacement Media GXXX001327 |

| Boiler Accessory | Description | Part Number |
|------------------|---|---|
| | Plumb Easy Valve Set | 1" Standard 30010950A 3/4" Standard with Relief Valve 30009323A |
| | Light Commercial Neutralizer Up to 6 units | Light Commercial Neutralizer GXXX001324 Light Commercial Replacement Media GXXX001328 |
| -24°S | Residential Neutralizer | Residential Neutralizer 1 unit GXXX001322 Residential Replacement Media GXXX001323 |
| Q | Cascade Cable | GXXX000546 |
| | Outdoor Sensor and Wire | 30012950A |





NCB-E Series

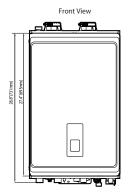
NAVIEN HIGH EFFICIENCY CONDENSING COMBI-BOILERS

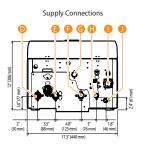
NCB-E



NCB-E Series

Overhead View | State | State





| | Cor | inection 5 |
|-----------|-------------------------------|------------|
| A | Pressure Relief Valve Adapter | Φ 3/4" |
| B | Air Intake | Φ2" |
| (| Exhaust Gas Vent | Φ2" |
| 0 | Heating Supply Outlet | Ф 1" |
| (| Heating Return Inlet | Φ1" |
| () | DHW Hot Water Outlet | Φ 3/4" |
| G | Gas Supply Inlet | Φ 3/4" |
| 0 | DHW Cold Water Inlet | Φ 3/4" |
| 0 | Condensate Outlet | Φ 1/2" |
| 0 | Auto Feeder Inlet | Φ 1/2" |

Specifications

| | | Specificat | tions | | | | |
|--------------------|------------------------------------|---|---|-----------------------------|-----------------------------|--|--|
| | Item | NCB-150E | NCB-180 / NCB-180E | NCB-210 / NCB-210E | NCB-240 / NCB-240E | | |
| Coolingut | Space heating | 12,000-60,000 (BTU/H) | 14,000-80,000 (BTU/H) | 18,000-100,000 (BTU/H) | 18,000-120,000 (BTU/H) | | |
| Gas input | Domestic hot water | 12,000-120,000 (BTU/H) | 14,000–150,000 (BTU/H) | 18,000-180,000 (BTU/H) | 18,000-199,900 (BTU/H) | | |
| Flow rate (DHW) | 77°F (43°C) Temp Rise | 2.6 GPM (9.8 L/m) | 3.4 GPM (12.9 L/m) | 4.0 GPM (15.1 L/m) | 4.5 GPM (17.0 L/m) | | |
| Dimensions | | 17"(W) x 28"(H) x 12"(D) | 17"(W) x 28"(H) x 12"(D) | 17"(W) x 28"(H) x 12"(D) | 17"(W) x 28"(H) x 12"(D) | | |
| Weight | | 66 lbs (30kg) | 74 lbs (34kg) | 84 lbs (38kg) | 84 lbs (38kg) | | |
| Installation ty | /ре | Indoor wall-hung | | | | | |
| Venting type | | Forced draft direct | vent | | | | |
| Ignition | | Electronic ignition | | | | | |
| Water pressu | re (Hydronic/DHW) | 12-30 PSI / 15-15 | 0 PSI | | | | |
| Natural gas s | upply pressure (from source) | 3.5"-10.5" WC | | | | | |
| Propane gas | supply pressure (from source) | 8.0"-13.5" WC | | | | | |
| Natural gas m | ll gas manifold pressure (min/max) | | | | | | |
| Propane gas | manifold pressure (min/max) | -0.08" WC / -0.30" WC | -0.07" WC / -0.62" WC | -0.10" WC / -0.66" WC | -0.03" WC / -0.98" WC | | |
| Minimum flov | v rate (DHW) | 0.5 GPM (1.9 L/m) | | | | | |
| | Heating supply/return | 1" NPT | | | | | |
| 0 " | DHW inlet/outlet | 3/4" NPT | | | | | |
| Connection sizes | Gas inlet | 3/4" NPT | | | | | |
| 31203 | Auto feeder | 1/2" NPT | | | | | |
| | Condensate outlet | 1/2" NPT | | | | | |
| Power | Main supply | 120V AC, 60Hz | | | | | |
| supply | Maximum power consumption | 200W (up to 2 amp | peres) | | | | |
| | Casing | Cold rolled carbon steel | | | | | |
| Materials | Heat exchangers | Primary/secondary heat exchanger: stainless steel DHW heat exchanger: stainless steel | | | | | |
| | Exhaust | 2" or 3" PVC, CPVC 2" or 3" special gas | C, PP, SS s vent type BH (Class | II, A/B/C) | | | |
| Venting | Intake | 2" or 3" PVC, CPVC 2" or 3" special gas | C, PP, SS s vent type BH (Class | II, A/B/C) | | | |
| | Vent clearances | 0" to combustibles | | | | | |
| Safety device | es | Flame rod, APS ign exhaust temperatur | ition operation detect e high limit sensor | or, water temperature | e high limit switch, | | |

Navien reserves the right to change specifications at any time without prior notice.

Please refer to NavienInc.com to verify you have the most current information.



Ratings

| NA. J.1 | | Navien Co | mbination Boiler Space Heating Ratings | | | Other Specifications | | |
|-------------------|-----|-----------------------------------|--|------------------|------------------------------------|----------------------|-----------------------|--|
| Model Heating Inp | | Heating Input, MBH Heating Capaci | | Net AHRI Rating, | t AHRI Rating, AFUE ² , | Water | Water Connection | |
| Number | Min | Max | MBH | | | Pressure | Size (Supply, Return) | |
| NCB-150E | 12 | 60 | 56 | 49 | 95.0 | | | |
| NCB-180E | 14 | 80 | 75 | 65 | 95.0 | 12-30 psi 1" NPT | 1" NDT | |
| NCB-210E | 18 | 100 | 94 | 82 | 95.0 | 12-30 μδι | I NPI | |
| NCB-240E | 18 | 120 | 112 | 97 | 95.0 | | | |

¹Ratings are the same for Natural Gas models converted to Propane use.

Consult Navien before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.

Navien certification summary

| | | Mo | del | |
|-------------------------------------|------------------|------------------|------------------|------------------|
| | NCB-150E | NCB-180E | NCB-210E | NCB-240E |
| | | Product A | Approvals | |
| CSA | Yes | Yes | Yes | Yes |
| SCAQMD 1146.2 (NOx, <20 ppm) | Yes | Yes | Yes | Yes |
| Low lead (<0.25%, DHW only) | Yes | Yes | Yes | Yes |
| ASME | Yes "H" stamp | Yes "H" stamp | Yes "H" stamp | Yes "H" stamp |
| AHRI Number | 8580769 | 8580770 | 8580771 | 8580772 |
| Energy Star | Yes | Yes | Yes | Yes |

Gas input ranges

| Model | Heating (BTU/H) | DHW (BTU/H) |
|----------|-----------------|----------------|
| NCB-150E | 12,000-60,000 | 12,000-120,000 |
| NCB-180E | 14,000-80,000 | 14,000–150,000 |
| NCB-210E | 18,000–100,000 | 18,000–180,000 |
| NCB-240E | 18,000–120,000 | 18,000–199,900 |

(NSF) (SF) (SF) (CERTIFIED)

Applications

| Air Handler Closed Loop Hydronic Heating System | |
|---|--|
| | -E technical drawings of specific installations juirements, please visit NavienInc.com. |

Warranty

| Туре | Labor | Parts | Heat Exchanger |
|------------------------------------|--------|---------|----------------|
| Residential single family use only | 1 year | 5 year* | 10 year |

^{*}Includes DHW flat plate HX.

For complete details please refer to the full warranty at Navienlnc.com.





² Based on U.S. Department of Energy (DOE) test procedures.

 $^{^{3}\}mbox{The NET}$ AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.

NAVIEN FIRE TUBE CONDENSING COMBI-BOILERS

The ultimate heating and DHW comfort package

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%



AFUE **95.0**%













Patented stainless steel fire tube heat exchanger

Navien's advanced in-house design/built patented stainless steel heat exchanger design is ASME-Certified, "H" Stamped, and reduces high stress point weld failures common on other combi-boilers.

Low profile burner removes easily and improves serviceability, unlike other's bulky cyndrical burners.

Innovative heat exchanger design allows water to fill to the top eliminating extra combustion chamber insulation and improving durability.

One-piece combustion chamber minimizes number of weld points — prone to corrosion.

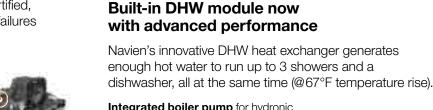
EPP exterior insulation reduces heat loss and increases efficiency.

Turbulators inside the tubes

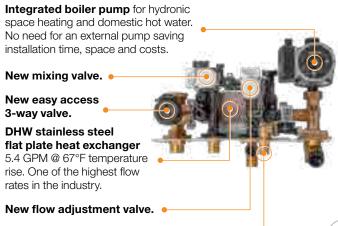
increase structural strength and create a cyclone effect of flue gases maximizing heat transfer and efficiency.

Non-metallic drain pan prevents corrosion caused by acidic condensate, unlike competitor's metal pans.

New diaphragm design optimizes water flow and improves performance.



Water feed valve.





It features a powerful permanent magnet mounted inside a nylon housing.



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 "command dial" click wheel for easy information input. Built-in three zone pump control allows for quick and easy system integration.



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.





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.

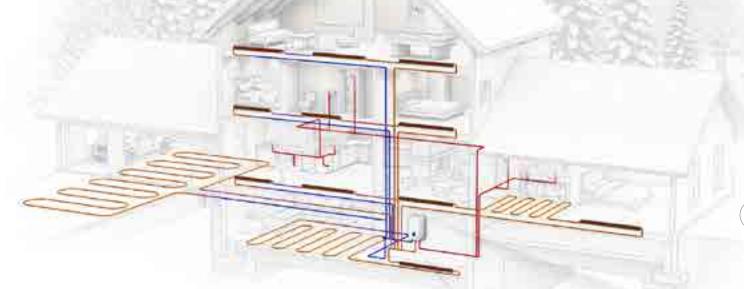




NFC Series NAVIEN CONDENSING FIRE TUBE COMBI-BOILERS

NFC

Best combi package on the market



Space heating up to 199k BTU/H

Best choice for small or large homes and businesses

The NFC is designed for residential and commercial applications small or large. You can easily expand a system by cascading the NFC combi-boiler with additional NPE series tankless water heaters for higher DHW flow capability.



DHW up to 199k BTU/H

Best value

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

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.

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.













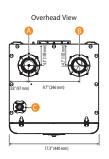


NFC Series

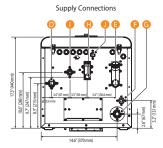
NAVIEN CONDENSING FIRE TUBE **C**OMBI-BOILERS



NFC Series







| | | onnection Size |
|---|-------------------------------|----------------|
| A | Air Intake | Ф 2" |
| B | Exhaust Gas Vent | Ф2" |
| 0 | Air Vent Connection | Φ 3/4" |
| 0 | Heating Supply | Ф1" |
| • | Heating Return | Ф1" |
| • | Gas Connection | Φ 3/4" |
| G | Condensate Outlet | Φ 1/2" |
| | DHW Return | Φ 3/4" |
| 0 | DHW Supply | Φ 3/4" |
| | Auto Feeder Inlet (Make-up Wa | tor) 1/2" |

Specifications

| | | Model | | | |
|---|---|---|---------|--|--|
| | Item | NFC-175 | NFC-200 | | |
| Dimensions | | 17.3" W x 17.3" D x 33.5" H | | | |
| Boiler weight | | 145 lb (66 kg) | | | |
| Boiler weight w | ith water | 183 lb (83 kg) | | | |
| Installation type | 9 | Indoor wall-hung | | | |
| Venting type | | Forced draft direct vent | | | |
| Ignition | | Electronic ignition | | | |
| Natural Gas su (from source) | pply pressure | 3.5" to 10.5" WC | | | |
| Propane Gas supply pressure (from source) | | 8.0" to 13.5" WC | | | |
| Natural Gas ma | anifold pressure | -0.05" to -0.47" WC -0.05" to -0.20" W | | | |
| Propane Gas m | nanifold pressure | -0.10" to -0.45" WC | | | |
| Gas connection size | | 3/4" NPT | | | |
| | Main supply | 120V AC, 60Hz | | | |
| Power supply | Maximum power consumption | Less than 15 amperes | | | |
| Materials | Casing | Cold-rolled carbon steel | | | |
| ivialeriais | Heat exchangers | Stainless steel | | | |
| | Exhaust | 2" or 3" PVC, CPVC, PP 2" or 3" special gas ven (Class III, A/B/C) | | | |
| Venting Intake | | 2" or 3" PVC, CPVC, PP and SS 2" or 3" special gas vent type BH, (Class III, A/B/C) | | | |
| | Vent clearance | nce 0" to combustibles | | | |
| Safety devices | Flame rod, APS ignition operation detector, water temperature high limit switch, exhaust temperature high limit sensor, water pressure sensor | | | | |

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.

| NFC-175 and | NFC-200 Series |
|-----------------------|-------------------------------------|
| Temp. Rise °F (°C) | Flow Rate GPM (L/m) ¹ |
| 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) |
| 1May CDM based on | installation conditions |

¹Max GPM based on installation conditions.





Ratings

| N | | nation Condens Heating Rating | Indensing Boiler Ratings Other Space Heating Specifications | | | | | |
|---------------------|------------|----------------------------------|---|------------------------------------|-------------------|----------------------|-----------------|-------------|
| Model | Heating Ir | nput (BTU/H) | Heating | Net AHR | AFUE ² | E ² Water | Connection Size | Water |
| Number ¹ | Min | Max | Capacity ² (MBH) | Rating Water ³ (MBH) | (%) | Pressure | | Volume |
| 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 | 12-00 psi | | 4.5 yallol1 |

¹Ratings are the same for Natural Gas models converted to Propane use.









| | ALRI CERTIFIED® | |
|---|-------------------------|--|
| E | num, shridinectory, and | |

³The 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 | Input Ratin | gs (BTU/H) | Water Minimum Flow Rate 45°F (25°C) DHW Supply DHV | | | Water Minimum Flow Rate 45°F (25°C) DHV | Water Minimum | Water | ater Minimum Flow Rate 45°F (25°C) DHW St | DHW Return |
| Number | Min | Max | Pressure | Flow Rate | Temp Rise | Connection Size | Connection Size | | | |
| NFC-175 | 18,000 | 199,900 | 15–150 psi | 0.5 GPM | 7.9 GPM | 3/4" NPT | 3/4" NPT | | | |
| NFC-200 | 18,000 | 199,900 | 13–130 psi | (1.9 L/m) | 7.9 GFW | 3/4 NF1 | 3/4 NF1 | | | |

Navien certification summary

| | Mo | del |
|-------------------------------------|---------------|---------------|
| | NFC-175 | NFC-200 |
| | Product A | Approvals |
| CSA | Yes | Yes |
| SCAQMD 1146.2 (NOx, <20 ppm) | Yes | Yes |
| Low lead (<0.25%, DHW only) | Yes | Yes |
| ASME | Yes "H" stamp | Yes "H" stamp |
| AHRI Number | 202245848 | 202245849 |
| Energy Star | Yes | Yes |

Applications

| Air Handler Closed Loop Hydronic Heating Systems | | | | | | |
|--|--|--|--|--|--|--|
| For NFC technical drawings of specific installations and | | | | | | |
| re | requirements, please visit NavienInc.com | | | | | |

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 |
|---------------|--------|---------------------------|
| Space Heating | Supply | 77–194°F (25–90°C) |
| | Return | 68-158°F (20-70°C) |
| DHW | | 89-140°F (30-60°C) |

Warranty

| Туре | Residential* | Commercial |
|----------------|--------------|------------|
| Heat Exchanger | 10 years | 5 years |
| Parts | 5 years | 3 years |
| Labor | 1 year | 1 year |

^{*}Applies to single family residential locations.

For complete details please refer to the full warranty at NavienInc.com.



 $^{^{\}rm 2}\,\textsc{Based}$ on U.S. Department of Energy (DOE) test procedures.

NAVIEN WATER TUBE CONDENSING HEATING BOILERS

Navien innovation in a compact high efficiency wall-hung boiler

The NHB Series: Industry's highest TDR at 15:1

As the leader in condensing technology, Navien reinvented the water heating industry with the award-winning NPE tankless water heaters and the NCB-E combi-boilers. Our tradition of innovation continues with the NHB Series high efficiency condensing boilers. All NHB boilers have Navien's advanced burner system, an AFUE of 95.0% and industry-leading turndown ratios up to 15:1. The NHB boiler is available in four sizes: 55 MBH, 80 MBH, 110 MBH and 150 MBH.

- Dual stainless steel heat exchangers last longer than copper
- •SCH 40, 2" PVC venting up to 60 feet
- 1/2" gas pipe up to 40 feet (subject to local codes)



NHB Series

Before



After



Sleek wall-hung design uses up to 80% less space than other boilers.



NHB 110 and 150: Common vent up to 8 units and cascade up to 16 units





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.



The condensing technology in the stainless steel heat exchangers of the NHB boilers saves energy, reduces green house gasses.



Turndown ratio up to 15:1 on NHB.

The sophisticated gas flow control system provides a high turndown ratio which reduces energy waste and excessive boiler cycling.



NHB integrated control provides industry leading options and features in the boiler operation parameters, including:

- Adjustable heat capacity
- Temperature boost for outdoor reset control
- Adjustable anti-cycle timer
- Freeze protection
- Pressure LWCO with manual reset
- Adjustable minimum burner time setting
- Outdoor reset and domestic hot water priority
- Adjustable outdoor temperature reset curves
- Field gas convertible







With Navien's cascading technology, when a unit gets up to capacity determined by the supply and return temperatures, the next unit will start to help meet the hydronic space heating requirements.





NHB Series NAVIEN WATER TUBE CONDENSING

CONDENSING
HEATING BOILERS

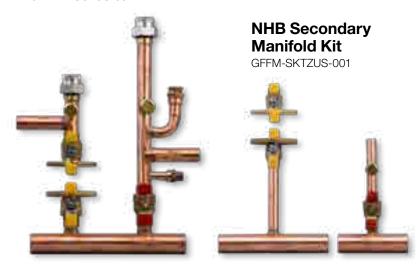


NHB

Navien NHB system matched manifold kits

NHB Primary Manifold Kit

GFFM-MSOZUS-001



Navien has done the piping work for you. Both primary and secondary loop manifold kits are designed to work on all NHB models for fast and clean installations. All you need to add is your own appropriately sized pump.



Advanced filtration for hydronic heating systems

NaviClean™ magnetic boiler filter

NaviClean™ is designed to work with Navien NCB-E, NHB and NFB Series boilers. Works with flow rates up to 21 GPM. It features a permanent magnet mounted inside the nylon housing.

- Powerful permanent magnet for removing higher levels of iron oxide, sludge and debris
- 360° rotation allows flexibility of installation
- Inlet and outlet ports for rapid in-line installation
- Tool-free valve connection prevents cross threading
- Large canister and full flow valves result in minimal pressure drop and unrestricted flow
- Low profile drain valve makes installation and service easier
- High performance seals provide higher protection against leaks

In minutes, the NaviClean™ filter traps the debris, and water is clear















| Boiler Accessory | Description | Part Number |
|------------------|--|--|
| | Zone Pump Controller | 2 Zones: PFMZ-02P-001 3 Zones: PFMZ-03P-001 4 Zones: PFMZ-04P-001 6 Zones: PFMZ-06P-001 |
| | NaviLink™ Wi-Fi Control | NaviLink™ PBCM-AS-001 Expansion Cable GXXX001659 |
| | Common Vent Collar Kit | Common Vent Collar Kit 30014367A Includes Cascade Cable GXXX000546 |
| | Plumb Easy Valve Set 1" Standard | BCSA056 |
| 90 | System Supply & Return Sensors Sold in pairs | GXXX001417 |
| 9 | Universal Temperature Sensor | GXXX001769 |

| Boiler Accessory | Description | Part Number |
|------------------|--|---|
| | Commercial Neutralizer Up to 16 units | Commercial Neutralizer GXXX001325 Commercial Replacement Media GXXX001329 |
| | Light Commercial Neutralizer Up to 6 units | Light Commerc Neutralizer GXXX001324 Light Commerc Replacement Media GXXX001328 |
| 6.00 Sep | Residential Neutralizer | Residential Neutralizer 1 unit GXXX001322 Residential Replacement Media GXXX001323 |
| Base Add-on | Ready-Link® Rack Base (V3) and Add-on Rack(s) | Base (V3) GFFMKDIZUS-00 Add-on (V3) GFFMKDIZUS-00 |



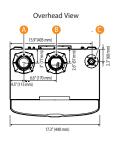


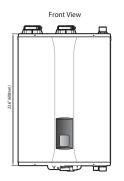
NHB Series

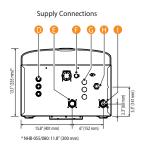
NAVIEN WATER TUBE CONDENSING HEATING BOILERS



NHB Series







| | Connection Size |
|--|-----------------|
| Air Intake | Ф 2" |
| B Exhaust Gas Vent | Ф 2" |
| Air Vent Connection | Φ 3/4" |
| Rubber Grommet | Ф 1" |
| Space Heating Return | Ф 1" |
| Condensate Outlet | Φ 1/2" |
| G Knock Out Hole | Ф 3/4" |
| Gas Connection | Ф 3/4" |
| Space Heating Supply | Ф 1" |

Specifications

| | | Spe | ecifications | | | | |
|--|---------------------------|---|--|----------------|-----------|--|--|
| | Item | NHB-55 | NHB-80 | NHB-110 | NHB-150 | | |
| Dimensions | | 24" (H) x 17" (W) x 12 | 24" (H) x 17" (W) x 12" (D) | | 3" (D) | | |
| Weight | | 73 lbs (33 kg) | | 80 lbs (36 kg) | | | |
| Installation ty | /pe | Indoor wall-hung | | | | | |
| Venting type | | Forced draft direct ver | nt | | | | |
| Ignition | | Electronic ignition | | | | | |
| Natural gas s (from source) | supply pressure) | 3.5" –10.5" WC | | | | | |
| Propane gas (from source) | supply pressure | 8.0" –13.5" WC | | | | | |
| Natural gas n | nanifold pressure | -0.03" WC | -0.08" WC | -0.10" WC | -0.40" WC | | |
| Propane gas | manifold pressure | -0.03" WC | -0.07" WC | -0.09" WC | -0.30" WC | | |
| Gas connecti | ion size | 3/4" NPT (female) | 3/4" NPT (female) | | | | |
| Power | Main supply | 120V AC, 60Hz | | | | | |
| supply | Maximum power consumption | Less than 10A | | | | | |
| Materials | Casing | Cold rolled carbon steel | | | | | |
| ivialeriais | Heat exchangers | Primary and secondary heat exchangers: stainless steel | | | | | |
| | Exhaust | 2" or 3" PVC, CPVC, PP, SS (see installation manual for more details) | | | | | |
| Vanting | | | 2" or 3" special gas vent type BH (Class III, A/B/C) | | | | |
| Venting | Intake | 2" or 3" PVC, CPVC, I | • | | | | |
| | intano | 2" or 3" special gas vent type BH (Class III, A/B/C) | | | | | |
| Vent clearances 0" to combustibles | | | | | | | |
| Safety devices Flame rod, APS ignition operation detector, water temperature high limit switch, exhaust temperature high limit sensor | | | imit switch, | | | | |

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





| | Navien Condensing Boiler Space Heating Ratings | | | | | | | |
|---------------------------|--|-----------|-------------------------------------|---|-----------------------|--|--|--|
| Model Number ¹ | Heating Ir | iput, MBH | Heating Capacity ² , MBH | Not AUDI Pating Water ³ MDU | AFUE ² . % | | | |
| MODEL MAILINGLY | Min | Max | Ticating GapaGity-, Midii | ing Capacity ² , MBH Net AHRI Rating, Water ³ , MBH AFI | AFUL-, 70 | | | |
| NHB-55 | 8 | 55 | 51 | 44 | 95.0 | | | |
| NHB-80 | 8 | 80 | 74 | 64 | 95.0 | | | |
| NHB-110 | 10 | 110 | 102 | 89 | 95.0 | | | |
| NHB-150 | 10 | 150 | 138 | 120 | 95.0 | | | |

 $^{^{\}rm 1}{\rm Ratings}$ are the same for Natural Gas models converted to Propane use.

Consult Navien before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc.



| | Model | | | |
|-------------------------------------|-------------------|------------------|------------------|------------------|
| | NHB-55 | NHB-80 | NHB-110 | NHB-150 |
| | Product Approvals | | | |
| CSA | Yes | Yes | Yes | Yes |
| SCAQMD 1146.2 (NOx, <20 ppm) | Yes | Yes | Yes | Yes |
| ASME | Yes "H" stamp | Yes "H" stamp | Yes "H" stamp | Yes "H" stamp |
| AHRI Number | 7501495 | 7501496 | 7501497 | 7501498 |
| Energy Star | Yes | Yes | Yes | Yes |

Gas input ranges

| Model | Range (BTU/H) | TDR |
|---------|----------------|------|
| NHB-55 | 8,000-55,000 | 7:1 |
| NHB-80 | 8,000-80,000 | 10:1 |
| NHB-110 | 10,000-110,000 | 11:1 |
| NHB-150 | 10,000-150,000 | 15:1 |

AHRI CERTIFIED PRODUCTION OF THE PRODUCTION OF T

Warranty

| Туре | Residential* | Commercial | |
|-----------------|--------------------------|--------------------------|--|
| Heat Exchangers | 15 year limited warranty | 10 year limited warranty | |
| Parts | 5 years | 3 years | |
| Labor | 1 year | 1 year | |

^{*}Applies to single family residential locations.

For complete details please refer to the full warranty at NavienInc.com.





²Based on U.S. Department of Energy (DOE) test procedures.

 $^{^3\}mbox{The NET}$ AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.

NAVIEN CONDENSING WALL HUNG FIRE TUBE BOILERS

The high-efficiency fire tube boiler built smarter from start to finish

Navien NFB Series totally reinvents fire tube technology

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

- 10:1 turndown ratio
- Cascading and common venting capable
- Optional NaviLink Wi-Fi remote control
- AFUE 95.0%





AFUE 95.0%











Patented compact stainless steel fire tube heat exchanger

Navien's advanced in-house design/built patented stainless steel heat exchanger design is ASME-Certified, "H" Stamped, and reduces high stress point weld failures common on other boilers.

Low profile burner removes easily and improves serviceability, unlike other's bulky cyndrical burners.

Innovative heat exchanger design allows water to fill to the top eliminating extra combustion chamber insulation and improving durability.

One-piece combustion chamber minimizes number of weld points **•**-prone to corrosion.

EPP exterior insulation reduces heat loss and increases efficiency.

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

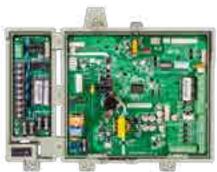
Non-metallic drain pan prevents corrosion caused by acidic condensate, unlike competitor's metal pans.

New diaphragm design optimizes water flow and improves performance.

Advanced user interface, control and built-in hardware



User friendly smart control system. Navien's new backlit control panel is simple and intuitive to use with its plain text display and an innovative click wheel that improves usability for all information input.



Built-in circuitry to connect a boiler pump, 3 zone pumps or 3 zone valves. With Navien's new PCB design you now have the ability to connect a boiler pump, 3 zone pumps or 3 zone valves, all integrated in the unit. No need to add extra zone panels.





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.



Dual Venturi and field gas convertibility. Dual Venturi system creates better combustion

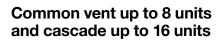
control and turndown ratio. Orifice for easy field gas convertibility from NG to LP. Conversion kit included with every NFB Series boiler.



Low gas pressure operation. Negative pressure regulating gas valve ensures maximum performance all the way down to 3.5" of water column on natural gas and 8" of water column on propane gas.



Space saving and lighter weight design. The sleek wall-hung design uses much less space and is substantially lighter than traditional floor standing boilers, making installations a lot easier.



With Navien's cascading technology, when a unit gets up to capacity determined by the supply and return temperatures, the next unit will start to help meet the hydronic space heating requirements. This boiler sequence will continue until all units are generating the needed hydronic space heat up to the maximum cascaded capacity. The Navien cascading system also balances out the workload of each unit for longer life. The NFB is dual certified for direct and non-direct venting applications.











NFB Series **N**AVIEN WALL HUNG CONDENSING FIRE TUBE BOILERS

Navien NFB Series condensing boilers deliver cost effective solutions to a wide variety of applications





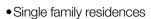






After





- Multi family and condominiums
- Office complexes
- Commercial buildings
 - Warehouses
- Restaurants and lodging







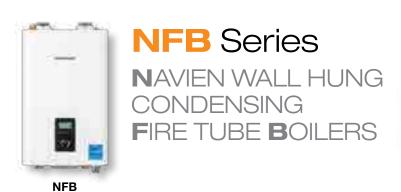


NFB Series fire tube boiler accessories

| Boiler Accessory | Description | Part Number |
|------------------|------------------------------------|--|
| | Zone Pump Controller | 2 Zones: PFMZ-02P-001 3 Zones: PFMZ-03P-001 4 Zones: PFMZ-04P-001 6 Zones: PFMZ-06P-001 |
| | NaviLink™ Wi-Fi Control | NaviLink™ PBCM-AS-001 Expansion Cable GXXX001659 |
| | Common Vent Collar Kit | Common Vent Collar Kit 30014367A Includes Cascade Cable GXXX000546 |
| 1 | NFB Primary Manifold Kit | GFFM- MSOZUS-002 |
| 9 | Universal Temperature Sensor | GXXX001769 |
| | Cascade Cable | GXXX000546 |
| | Outdoor Sensor and Wire | 30012950A |

| Boiler Accessory | Description | Part Number |
|------------------|--|---|
| | Commercial Neutralizer Up to 16 units | Commercial Neutralizer GXXX001325 Commercial Replacement Media GXXX001329 |
| | Light Commercial Neutralizer Up to 6 units | Light Commercial Neutralizer GXXX001324 Light Commercial Replacement Media GXXX001328 |
| | Residential Neutralizer | Residential Neutralizer 1 unit GXXX001322 Residential Replacement Media GXXX001323 |
| Geen | NaviClean™ Magnetic Filter for Boilers | GXXX001727 |
| Base Add-on | Ready-Link® Rack Base (V3) and Add-on Rack(s) | Base (V3) GFFMKDIZUS-005 Add-on (V3) GFFMKDIZUS-006 |







NFB Series

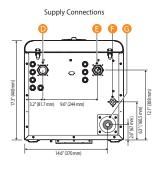
Overhead View Sat (97 mm) 9.77 (246 mm)

Front View

Specifications

| Item | | Model | | |
|-------------------------------|------------------------------|---|--|--|
| | | NFB-175 | NFB-200 | |
| Dimensions | | 17.3" W x 17.3" D x 27.6" H | | |
| Weight | | 123 lb (56 kg) | | |
| Installation type | | Indoor wall-hung | | |
| Venting type | | Forced draft direct vent | | |
| Ignition | | Electronic ignition | | |
| Natural Gas sup | pply pressure (from source) | 3.5" to 10.5" WC | | |
| Propane Gas su | ipply pressure (from source) | 8.0" to 13.5" WC | | |
| Natural Gas manifold pressure | | -0.05" to -0.70" WC | -0.05" to -0.20" WC | |
| Propane Gas manifold pressure | | -0.10" to -0.68" WC | -0.10" to -0.45" WC | |
| Gas connection size | | 3/4" NPT | | |
| Main supply | | 120V AC, 60Hz | | |
| Power supply | Maximum power consumption | Up to 15 amperes | | |
| Materials | Casing | Cold-rolled carbon steel | | |
| iviateriais | Heat exchangers | Stainless steel | | |
| | Exhaust | 2" or 3" PVC, CPVC, PP and SS | | |
| | Extiduot | 2" or 3" special gas vent type BH (Class III, A/B/C) | | |
| Venting | 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 | | | ion detector, water temperature high limit gh limit sensor, water pressure sensor | |

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.



| | Connection Siz |
|---|----------------|
| Air Intake | Φ2" |
| B Exhaust Gas Vent | Φ2" |
| Air Vent Connection | Φ 3/4" |
| Heating Supply | Φ 1-1/4" |
| Heating Return | Ф 1-1/4" |
| Gas Connection | Φ 3/4" |
| Condensate Outlet | Φ 1/2" |



A WORLD LEADER IN TANKLESS WATER HEATERS, COMBI-BOILERS AND BOILERS

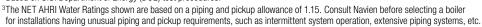


Ratings

| Navien Condensing Boiler Space Heating Ratings | | | | | | Other | Specifications |
|--|------|---|--------------------------------|-------------------------------------|-----|-----------------------|-------------------------------------|
| Model Heating input (MBH) | | ating input (MBH) Heating Net AHR AFUE ² | | Heating input (MBH) Heating Net AHR | | Water | Water |
| Number ¹ | Min | Max | capacity ² (MBH) | rating water ³ (MBH) | (%) | pressure ⁴ | connection size (supply, return) |
| NFB-175 | 17.5 | 175 | 161 | 140 | 95 | 12–80 psi | 1-1/4" NPT |
| NFB-200 | 19.9 | 199 | 183 | 159 | 95 | 12-00 psi | 1-1/4 INF1 |

¹Ratings are the same for Natural Gas models converted to Propane use.

 $^{^2\}mbox{Based}$ on U.S. Department of Energy (D0E) test procedures.



⁴³⁰ psi water pressure relief valve is included as standard.

Navien certification summary

| | Model | | |
|---------------------------------|-------------------|---------------|--|
| | NFB-175 | NFB-200 | |
| | Product Approvals | | |
| CSA | Yes | Yes | |
| SCAQMD 1146.2 (NOx, <20 ppm) | Yes | Yes | |
| ASME | Yes "H" stamp | Yes "H" stamp | |
| AHRI Number | 10579977 | 201786061 | |
| Energy Star | Yes | Yes | |

Gas input ranges

| Model | Range (BTU/H) | TDR |
|---------|----------------|------|
| NFB-175 | 17,500-175,000 | 10:1 |
| NFB-200 | 19,900-199,900 | 10:1 |

CERTIFIED CERTIFIED

Warranty

| Туре | Residential* | Commercial |
|-----------------|--------------------------|------------|
| Heat Exchangers | 15 year limited warranty | 10 years |
| Parts | 5 years | 3 years |
| Labor | 1 year | 1 year |

^{*}Applies to single family residential locations.

For complete details please refer to the full warranty at NavienInc.com.





NFB-C NAVIEN CONDENSING COMMERCIAL FIRE TUBE BOILERS

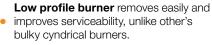
Navien's high efficiency fire tube condensing technology makes NFB-C hard to beat and the easy choice for today's commercial boiler installs

Human innovation meets robotic precision

- Robotic and automated manufacturing technology for unmatched quality control
- In-house designed and built components, for system matched compatibility...unlike most competitors who use the same out-sourced parts to build their boilers
- Lower installation costs with our innovative engineered compact wall hung design, intuitive controls, top or bottom piping connections and flexible venting options
- Lower operating costs with the industry's leading thermal efficiency at TE 97.5%...Energy Star approved
- Best-in-class training and technical support
- One of the industry's best warranties

Patented stainless steel fire tube HX

Navien's ASME-certified, "H" stamped stainless steel fire tube heat exchangers are in-house designed and built by the latest in robotic and automated technology, reducing high stress point weld failures common on other boilers.



Innovative heat exchanger design allows water to fill to the top eliminating extra combustion chamber insulation and improving durability.

One-piece combustion chamber minimizes number of weld points prone to corrosion.

EPP exterior insulation reduces heat loss and increases efficiency.

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

New diaphragm design optimizes water flow and improves performance.

Non-metallic drain pan prevents corrosion caused by acidic condensate, unlike competitor's metal pans.







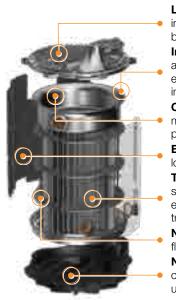














A WORLD LEADER IN TANKLESS WATER HEATERS, COMBI-BOILERS AND BOILERS



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 3" venting for up to 60', or up to 150' with 4" venting.



Dual Venturi and field gas convertibility.

Dual Venturi system creates better combustion control and turndown ratio. Orifice for easy field gas convertibility from NG to LP. Conversion kits included with every NFB-C series boiler.



Low gas pressure operation. Negative pressure regulating gas valve ensures maximum performance all the way down to 3.5" of water column on natural gas and 8" of water column on propane gas.



Advanced controls. All system setup, operations and troubleshooting available at your fingertips with the 7" color display panel. Intuitive text information makes everything easier.



Built-in hardware connects boiler pump & 3 zone pumps.

All integated into the NFB-C circuit board. Also includes a DHW priority zone.



and common vent up to 4 units

With our cascading technology, when a unit gets up to capacity the next unit will start to help meet the hydronic heating requirements. This boiler sequence will continue until all units are generating the needed hydronic heat. The Navien cascading system also balances out the workload of each unit for longer life.







NFB-C Series

NAVIEN CONDENSING FIRE TUBE BOILERS COMMERCIAL











right in the box























VEB-C

NFB-C Series fire tube commercial boiler accessories

| Boiler Accessory | Description | Part Number |
|------------------|---|--|
| | Zone Pump Controller | 2 Zones: PFMZ-02P-001 3 Zones: PFMZ-03P-001 4 Zones: PFMZ-04P-001 6 Zones: PFMZ-06P-001 |
| | NaviLink™ Wi-Fi Control | NaviLink [™] PBCM-AS-001 Expansion Cable GXXX001659 |
| | NFB-C Common Vent Collar Kit Required for cascade/common vent installations | 30022799A Includes cascade cable GXXX000546 and common vent collar damper |
| | Pressure Relief Valves | 75 PSI GXXX001931 150 PSI GXXX001946 |
| 9 | Universal Temperature Sensor | GXXX001769 |
| Q | Cascade Cable | GXXX000546 |

| Boiler Accessory | Description | Part Number |
|------------------|---|---|
| | Commercial Neutralizer Up to 16 units | Commercial Neutralizer GXXX001325 Commercial Replacement Media GXXX001329 |
| | Light Commercial Neutralizer Up to 6 units | Light Commercial Neutralizer GXXX001324 Light Commercial Replacement Media GXXX001328 |
| | Modbus/BACnet Gateway & Power Adaptor | GXXX001932 |
| | LonWorks Gateway & Power Adaptor | GXXX001933 |
| Base | Ready-Link® Commercial Rack System Base and add-on will include pipe support brackets | Base GFFM-KDIZUS-007 Add-on GFFM-KDIZUS-008 |





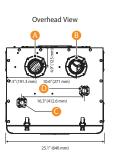
NFB-C Series

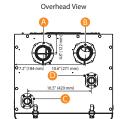
NAVIEN CONDENSING FIRE TUBE BOILERS COMMERCIAL



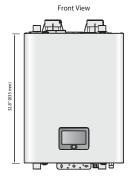
NFB-C

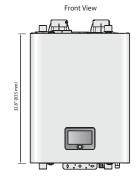
NFB-301C

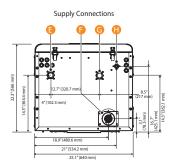




NFB-399C







| 22.3.*(566 mm) | 16.5" (420 mm) |
|----------------|--|
| | 18.4" (468 mm) 22" (560 mm) 25.1" (640 mm) |

Supply Connections

| | NFB-301C |
|--|----------|
| Air Intake | Ф3" |
| B Exhaust Gas Vent | Φ3" |
| PVR-Air Vent Connection (Optional Heating Supply) | Ф 1-1/4" |
| Optional Heating Return | Φ 1-1/4" |
| Heating Supply | Ф 1-1/4" |
| Condensate Outlet | Ф 3/4" |
| G Heating Return | Φ 1-1/4" |
| Car Connection | ⊕ 3/4 " |

Connection Size

| | | Connection Size NFB-399C |
|----------|--|-----------------------------|
| A | Air Intake | Φ3" |
| B | Exhaust Gas Vent | Ф 3" |
| (| PVR-Air Vent Connection (Optional Heating Supply) | Ф 1-1/2" |
| 0 | Optional Heating Return | Φ 1-1/2" |
| (| Heating Supply | Ф 1-1/2" |
| (3 | Condensate Outlet | Φ 3/4" |
| G | Heating Return | Φ 1-1/2" |
| • | Gas Connection | Φ 3/4" |
| | | |

Specifications

| Item | | | Model | | | |
|---|-------------|---------------------|---|---------------------|--|--|
| | | | NFB-301C | NFB-399C | | |
| Dimensions | | | 25.1" W x 22.3" D x 32.8" H | | | |
| Roilor woic | ıht | Empty | 243 lb (110 kg) | 278 lb (126 kg) | | |
| Boiler weight Wit | | With water | 307 lb (139 kg) | 371 lb (168 kg) | | |
| Installation | type | | Indoor wall-hung | | | |
| Venting typ | е | | Forced draft direct vent and non-direct vent (single pipe) | | | |
| Ignition | | | Electronic ignition | | | |
| Natural Ga (from sour | | y pressure | 3.5" to 10.5" WC | | | |
| Propane Gas supply pressure (from source) | | ly pressure | 8.0" to 13.5" WC | | | |
| Natural Ga | s manif | old pressure | -0.06" to -0.87" WC | -0.03" to -1.85" WC | | |
| Propane G | as man | ifold pressure | -0.01" to -0.92" WC | -0.01" to -0.90" WC | | |
| Gas conne | ction siz | ze | 3/4" NPT | | | |
| Power | Main supply | | 120V AC, 60Hz | | | |
| supply | | num power mption | Less than 12 amperes | | | |
| Materials | Casin | g | Cold-rolled carbon steel | | | |
| เงเลเษาเลเจ | Heat e | exchangers | Stainless steel | | | |
| | Exhau | st | 3" or 4" PVC, CPVC, PP and SS 3" or 4" special gas vent type BH (Class III, A/B/C) | | | |
| Venting | Intake | | 3" or 4" PVC, CPVC, PP and SS 3" or 4" special gas vent type BH (Class III, A/B/C | | | |
| | Vent o | learance | 0" to combustibles | | | |
| Safety devices | | | Flame Rod, APS, LWCO, water temperature high limit switch, exhaust temperature high limit sensor, water pressure sensor | | | |

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



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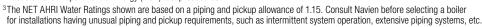


Ratings

| Navien Commercial Condensing Boiler Space Heating Ratings | | | | | Other Specifications | | | |
|---|---------------------|--|------------------------------------|-------------------------|----------------------|-----------------------|-------------------|------------------|
| Model | Heating input (MBH) | Heating Net AHRI capacity ² rating water ³ | Thermal Efficiency ² | Boiler water content | Water | Water connection size | | |
| Number ¹ | Min | Max | (MBH) | (MBH) | (%) | (gallons) | pressure (PSI) | (supply, return) |
| NFB-301C | 20 | 301 | 293 | 255 | 97.5 | 7.6 | 12-160 | 1-1/4 in NPT |
| NFB-399C | 26 | 399 | 389 | 338 | 97.5 | 9.6 | 12-100 | 1-1/2 in NPT |

¹ Ratings are the same for Natural Gas models converted to Propane use.

 $^{^2\}mbox{Based}$ on U.S. Department of Energy (D0E) test procedures.



Navien certification summary

| | Model | | |
|------------------------------------|-------------------|---------------|--|
| | NFB-301C NFB-399C | | |
| | Product Approvals | | |
| CSA | Yes | Yes | |
| SCAQMD 1146.2 (NOx <20 ppm) | Yes | Yes | |
| ASME | Yes "H" stamp | Yes "H" stamp | |
| AHRI Number | 201925233 | 201928625 | |
| Energy Star | Yes | Yes | |

Gas input ranges

| Model | Heating (MBH) | TDR |
|----------|---------------|-------|
| NFB-301C | 20-301 | 15:1* |
| NFB-399C | 26-399 | 15:1* |

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Temperature setting range

| Item | | Temperature Setting Range |
|---------------|--------|---------------------------|
| Chana Haating | Supply | 77–194°F (25–90°C) |
| Space Heating | Return | 68–158°F (20–70°C) |

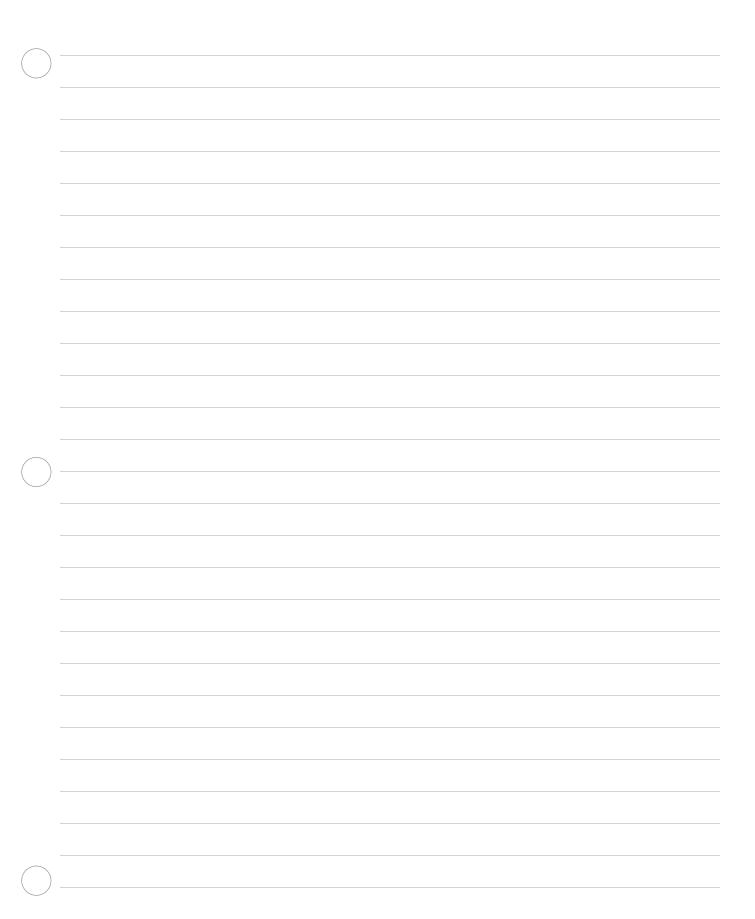
Warranty

| Туре | Residential Applications | Commercial Applications |
|----------------|-----------------------------|----------------------------|
| Heat Exchanger | 15 years limited* | 10 years |
| Parts | 5 years | 3 years |
| Labor | 1 year | 1 year |



^{*15:1} single boiler; 10:1 individual boilers when cascaded.

| NAVINOTES | |
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