Quick Installation Guide

Model
NPE-180A / 210A / 240A
NPE-150S / 180S / 210S / 240S

STEP 1  Before Installing

⚠️ Read the Installation Manual and Operation manual before installing.

This product must be installed and serviced by a licensed plumber, a licensed gas fitter, or a professional service technician. Navien is not liable for any damages or defects resulting from improper installation.

When applicable, the installation must conform with Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 and/or CAN/CSA Z240 MH Series, Mobile Homes.

⚠️ WARNING
Follow all local codes and/or the most recent edition of the National Fuel Gas Code (ANSI Z223.1/NFPA 54) in the USA, or the Natural Gas and Propane Installation Code in Canada (CAN/CGA B149.1).

Safety  DO NOT install in areas with excessively high humidity.

STEP 2  Installing

1 Unpacking

Navien water heater
Wall mounting bracket
Tapping screws and anchors
Vent terminators
Wall flanges
Conversion Kit
Spare Parts

2 Checking the Rating Plate

This water heater is configured for Natural Gas from the factory. If conversion to Propane Gas is required, the conversion kit supplied with the water heater must be used.

⚠️ WARNING
• Before connecting the gas supply, determine the gas type and pressure for the water heater by referring to the rating plate. Use only the same gas type indicated on the rating plate. Using a different gas type will result in abnormal combustion and malfunction of the water heater. Gas supplies should be connected by a licensed professional only.
• The appliance and its gas connection must be leak tested before placing the appliance in operation.
• This water heater cannot be converted from natural gas to propane or vice versa without a Navien gas conversion kit. Do not attempt a field conversion of this water heater without a Navien gas conversion kit. Doing so will result in dangerous operating conditions and will void the warranty.

Navien America Inc. is not liable for any property damage and/or personal injury resulting from improper conversions.

3 Mounting on the Wall

⚠️ CAUTION
Do not install water heater on dry wall only

Drill in the supplied anchor bolts after considering where the vent termination will be located.

Secure the mounting bracket to the wall with the tapping screws and anchors.

Lift up the water heater, rest the unit on the hooks provided on the wall bracket on the wall.

4 Removing the Front Cover

For indoor installation

<table>
<thead>
<tr>
<th>Clearance from</th>
<th>Indoor Installation</th>
<th>Outdoor Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>9 inches (229mm)</td>
<td>8 inches (203mm)</td>
</tr>
<tr>
<td>Back</td>
<td>0.5 inches (20mm)</td>
<td>0.5 inches (20mm)</td>
</tr>
<tr>
<td>Front</td>
<td>4 inches (100mm)</td>
<td>4 inches (100mm)</td>
</tr>
<tr>
<td>Sides</td>
<td>3 inches (76mm)</td>
<td>3 inches (76mm)</td>
</tr>
<tr>
<td>Bottom</td>
<td>12 inches (300mm)</td>
<td>12 inches (300mm)</td>
</tr>
</tbody>
</table>

* (): for outdoor installation
** Back of the water heater: Min. 0.5”
5 **Gas Piping Connections**

The water heater is recommended to be the first appliance to be connected to the gas supply line.

**Example:**
Gas meter 425 CFH ≥ Water heater 195 CFH + Furnace 58.8 CFH + Domestic gas stove 63.7 CFH

* 1 CFH = 1,020 Btu/h

- 1/2" rigid pipe can be used; refer to the sizing tables in the Installation Manual for limitations. Avoid using 1/2" corrugated connectors or tubing as noise may occur.

6 **Water Piping Connections (NPE-180A/210A/240A)**

**Internal Recirculation**

**External Recirculation**

**Internal Recirculation Settings**

**External Recirculation Settings**

7 **Condensate Drain Connection**

A condensate drain pipe must be connected to the 1/2" condensate outlet fitting at the bottom of the unit, and water must be poured into the exhaust connection to fill the condensate trap.

The end of the 1/2" (NPT) plastic piping should drain into a laundry tub or into a floor drain.

**Note**

Do not submerge the end of the pipe in water.
Vent Termination Options

### Indoor Horizontal Vent Termination

**Interior view**
- Intake Air
- Exhaust Gas

**Exterior view**
- 2" (50mm) min.

### Vertical Vent Termination

Maximum Length 150'

- 2 to 3 inch reducer
- Maximum number of elbows: 8
- 90° elbow = 5 linear feet of venting
- 45° elbow = 3 linear feet of venting

### Sidewall Vent Termination

Maximum Length 60'

- Maximum number of elbows: 6
- 90° elbow = 8 linear feet of venting
- 45° elbow = 4 linear feet of venting

### Roof Installation

- Maintain 12" min. (18" min. for Canada)
- Clearance above highest anticipated snow level
- Maximum of 24" above roof

Exhaust Vent Piping Materials

Venting requirements differ in the US and Canada. Consult the following chart or the most recent edition of ANSI Z223.1/NFPA 54 or CAN/CGA B149.1, as well as all applicable local codes and regulations when selecting vent pipe materials. Do not use cellular core PVC (ASTM F891), cellular core CPVC, Radv® (polyphenolsulfone) for the exhaust vent.

**Navien recommended venting materials**

<table>
<thead>
<tr>
<th>Locale</th>
<th>Recommended Vent Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USA</strong></td>
<td>• PVC Schedule 40 (Solid core)</td>
</tr>
<tr>
<td></td>
<td>• CPVC Schedule 40 or 80 (Solid core)</td>
</tr>
<tr>
<td></td>
<td>• Approved Polypropylene*</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td>• Type BH Special Gas Vent Class IIA (PVC)</td>
</tr>
<tr>
<td></td>
<td>• Type BH Special Gas Vent Class III (CPVC)</td>
</tr>
<tr>
<td></td>
<td>• Type BH Special Gas Class IIC (Polypropylene)</td>
</tr>
</tbody>
</table>

* Approved polypropylene systems include Duravent Polypro (Single Wall); 2PPS-xxx (2 in), 3PPS-xxx (3 in) / Centrotrend Innoflue SW: 11x020xx (2 in), 11x030xx (3 in) / Centrotrend Innoflue Flex: FPV12XX (2 in). Refer to the manufacturer’s literature for detailed information.

**For installation in Canada, field-supplied plastic vent piping must comply with CAN/CGA B149.1 (latest edition) and be certified to the Standard. For Type BH Gas Venting Systems, ULG-S636. Components of this listed system must not be interchanged with other vent systems or unlisted pipes or fittings. All plastic components and specified primers and glues of the certified vent system must be from a single system manufacturer and must not be intermixed with another system manufacturer’s parts. The supplied vent connector and vent termination are certified as part of the water heater.**

**Recommended Vent Materials**

- *Approved polypropylene systems include Duravent Polypro (Single Wall): 2PPS-xxx (2 in), 3PPS-xxx (3 in) / Centrotrend Innoflue SW: 11x020xx (2 in), 11x030xx (3 in) / Centrotrend Innoflue Flex: FPV12XX (2 in). Refer to the manufacturer’s literature for detailed information.

**CAUTION**

Using abnormally high or low AC voltage may cause abnormal operation, thereby causing fire which reduces the life expectancy of this product.

9 Electrical Connections

Remote Controller Connection

- Disconnect the power to the water heater before installing the remote controller.

**CAUTION**

Using abnormally high or low AC voltage may cause abnormal operation, thereby causing fire which reduces the life expectancy of this product.

Power Connection

**CAUTION**

Using abnormally high or low AC voltage may cause abnormal operation, thereby causing fire which reduces the life expectancy of this product.

Confirmation of Panel DIP Switch Settings

<table>
<thead>
<tr>
<th>Switch</th>
<th>Function</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>Pump and Recirculation</td>
<td>ON, OFF, 10 OFF</td>
</tr>
<tr>
<td></td>
<td>Internal Pump Only External Recirculation</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td></td>
<td>Internal Pump Only Internal Recirculation</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td></td>
<td>Internal Pump Only Intelligent Preheating</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td></td>
<td>Warm and External Pump Only External Recirculation</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td></td>
<td>Warm and Internal Pump Only Internal Recirculation</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td></td>
<td>Warm and Internal Pump Only Intelligent Preheating</td>
<td>2 OFF, 2 ON</td>
</tr>
<tr>
<td>3</td>
<td>Display Temperature Unit</td>
<td>Celsius</td>
</tr>
<tr>
<td>4</td>
<td>Wall Pump</td>
<td>ON OFF</td>
</tr>
<tr>
<td>5</td>
<td>DP Test Use Wall Pump</td>
<td>OFF</td>
</tr>
<tr>
<td>6</td>
<td>Storage Tank/Collector System</td>
<td>ON OFF</td>
</tr>
<tr>
<td></td>
<td>ON/off Switch</td>
<td>ON OFF</td>
</tr>
<tr>
<td>7-8</td>
<td>Display Warning</td>
<td>1, 2 OFF, 3 OFF</td>
</tr>
<tr>
<td>9-10</td>
<td>High Altitude**</td>
<td>1, 2 OFF, 3 OFF</td>
</tr>
</tbody>
</table>

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**DO NOT touch the power cord with wet hands.**

**DO NOT expose to excessive amounts of water.**
**STEP 3  After Installing**

1 **Opening All the Valves**

- **Gas shutoff valve**
- Pressure relief valve
- Shutoff valve

**Open all the valves.**

2 **Operating the Water Heater**

- **Power ON**
  - Temperature will appear on the Front Panel when the power is on.
- **Adjust water Temperature**
  - Press (+) or (-) to set the desired temperature
  - **Note** Setting over 125°F can cause scalding
- **View Basic Information**
  - Press (+) or (-) to switch the information type.
- **Resetting the Water Heater**
  - Press Reset to solve the problem.
  - **Note** If resetting does not solve the problem, refer to the troubleshooting section of the Operation or contact the service center.

3 **Measuring the Inlet Gas Pressure**

1. Shut off the manual gas valve.
2. Open a hot water faucet to turn on the unit.
3. Shut off the hot water faucet.
4. Remove 4 screws of the front cover assembly.
5. Loosen a screw two or three turns and connect a manometer to the pressure port.
6. Re-open the manual gas valve.
7. Open several fixtures that have high flow rates.
8. Check the inlet gas pressure reading on the manometer.

**Recommend Gas Pressure Settings:**
- **NG** : 3.5” ~ 10.5” WC
- **LP** : 8.0” ~ 13.5” WC

**CAUTION**
The Navien water heater cannot operate properly without sufficient inlet gas pressure and volume.
The instructions on how to check the inlet gas pressure are stated above.
**THIS IS ONLY TO BE DONE BY A LICENSED PROFESSIONAL.**

4 **Installing the Front Cover**

- After using the first 10 minutes, please stop using it and clean the cold water filter and recirculation water filter of any trapped debris.

5 **Ensure maximum water flow**

6 **Final Check**

A trial run should be performed in accordance with the Installation checklist found in the Installation Manual.