

STEP 1 Before Installing

⚠ Read the Installation & 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).

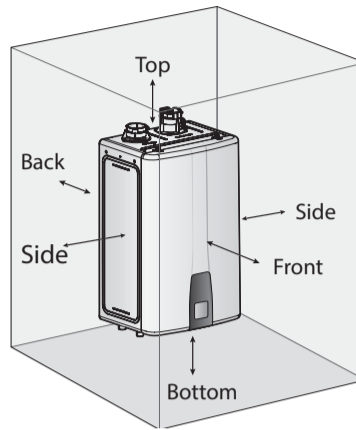
Safety

DO NOT install in areas with excessively high humidity.

Location Requirements

Select the best location on "Choosing an Installation Location" in the Installation & Operation Manual.

Allowable minimum clearances



| Clearance from: | Indoor Installation | Outdoor Installation |
|-----------------|------------------------|------------------------|
| Top | 9 in (229 mm) minimum | 36 in (900 mm) minimum |
| Back | 0.5 in (20 mm) minimum | 0.5 in (20 mm) minimum |
| Front | 4 in (100 mm) minimum | 24 in (600 mm) minimum |
| Sides | 3 in (76 mm) minimum | 3 in (76 mm) minimum |
| Bottom | 12 in (300 mm) minimum | 12 in (300 mm) minimum |

STEP 2 Installing

1 Unpacking

- Navien Water Heater
- User's Information Manual, Installation & Operation Manual
- Wall Mounting Bracket
- Tapping Screws and anchors
- Vent Terminators
- Wall Flanges
- Spare Parts
- High Altitude Conversion Kit (NG Model Only)

2 Checking the Rating Plate

Rating Plate, *Plaque Signalétique

Direct Vent Automatic Instantaneous Water Heater *Chauffe-eau instantané automatique à évent direct
 For Indoor, Outdoor or Manufactured Home (Mobile Home) Installation *Pour installation dans une maison préfabriquée (mobile)

Navien, Inc.
 20 Goodyear, Irvine, CA 92618
 Tel: 1-800-519-8794

Model No. *Numéro de modèle
 NPE-210A2

180,000 Btu/h
 Max. Input Rating, *Entrée GPL max.
 19,900 Btu/h

Recovery Rating, *Calibre de recouvrement
 285 Gallons/Hour, *gallons/heures

Max. Inlet Gas Pressure, *Pression max. de gaz d'entrée
 10.5 inches W.C., *pouces W.C.

Min. Inlet Gas Pressure, *Pression min. de gaz d'entrée
 3.5 inches W.C., *pouces W.C.

Manifold Pressure, *Pression d'admission
 4.36 inches W.C., *pouces W.C.

Electrical Rating, *Régime nominal électrique
 AC *c.a. 120 Volts 60Hz, less than 2 amperes, *Utilise moins de 2A

Max. Water Pressure, *Pression d'eau max.
 150 psi 10.3 - 2017 - CSA 4.3 - 2017

ANSI Z21.10.3 - 2017

Offices necessary for LP conversion are provided. *Les injecteurs nécessaires à la conversion au GPL sont fournis.
 Failure to use the correct gas can cause problems which can result in death, serious injury or property damage. *Le fait de ne pas utiliser le bon gaz peut causer des problèmes qui peuvent mener à la mort, causer des blessures graves ou endommager la propriété.
 Consult your installation manual for more information. *Consultez votre manuel d'installation pour plus d'information.

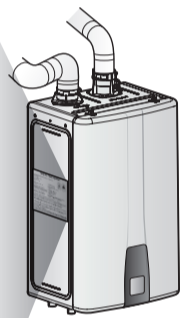
Suitable for combination water (potable) heating and space heating and not suitable for space heating applications only.
 *Convient au chauffage combiné de l'eau (potable) et des locaux, mais non au chauffage des locaux seulement.

This appliance is certified for use at altitudes up to 4,500 ft (1,370 m) in accordance to the latest CAN/CGA 2.17-High Altitude Installation procedures at normal manifold pressure. For installation instructions at altitudes higher than 4,500 ft, please contact Navien. *Cet appareil est certifié pour une utilisation à des altitudes de 0 à 4,500 pieds (1,370 m) conformément aux toutes les procédures d'installation à haute altitude CAN/CGA 2.17 à une pression normale. Pour les installations à élévations en haut de 4,500 pieds, appeler le bureau de Navien.

This appliance must be installed in accordance with local codes, or in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54 or the CSA B149.1, Natural Gas and Propane Installation Code. *Cet appareil doit être installé selon les règlements locaux, ou en l'absence de tels règlements, selon le National Fuel Gas Code, ANSI Z223.1/NFPA 54, ou les Code d'installation du gaz naturel et du propane, CSA-B149.1.

FOR YOUR SAFETY *POUR VOTRE SÉCURITÉ

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other gas appliances. *Ne rangez pas et n'utilisez pas d'essence ou d'autres liquides ou vapeurs inflammables près de cet appareil ou de tout autre appareil électroménager.



This water heater is configured for Natural Gas from the factory. If conversion to Propane Gas (LP) or Natural Gas (NG) is required, the optional Gas Conversion Kit must be used. This kit is not supplied with the water heater.

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

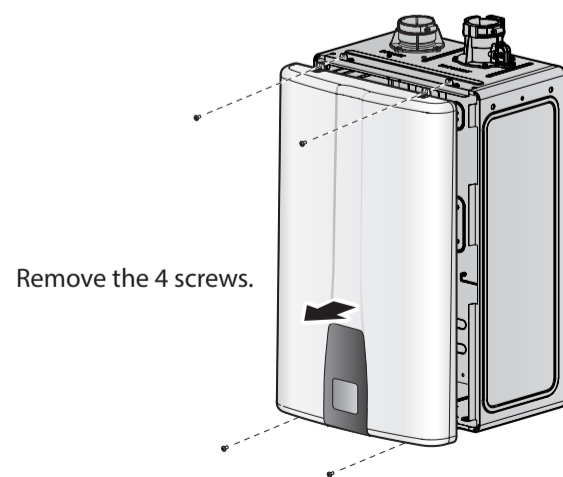
3 Mounting on the Wall

⚠ CAUTION

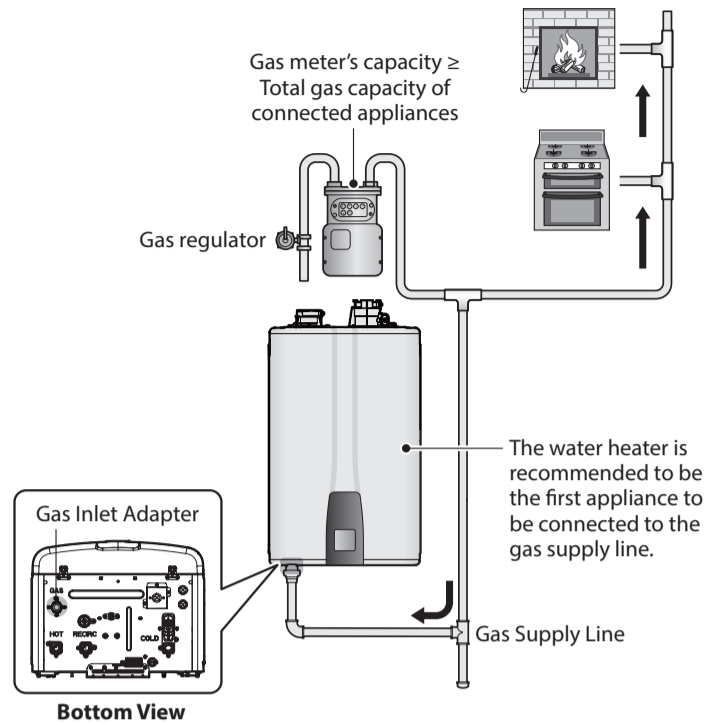
Do not install the water heater on drywall without proper reinforcement.

- 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



5 Gas Piping Connections



Example:

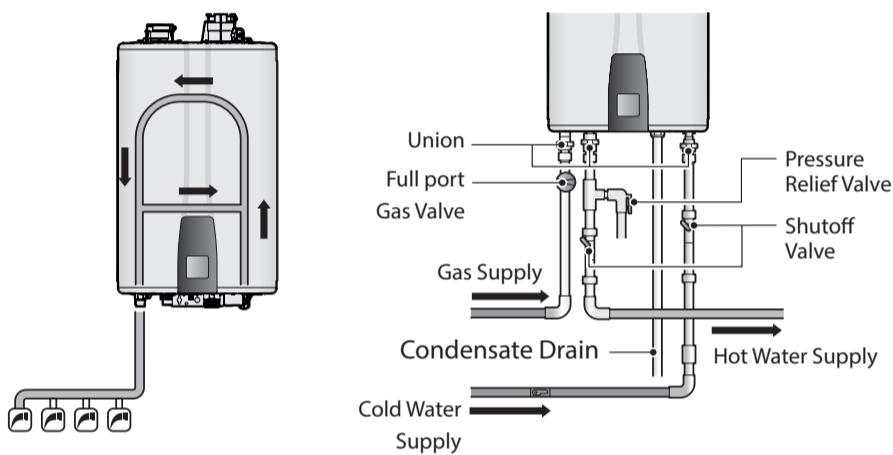
$$\text{Gas meter } 425 \text{ CFH} \geq \text{Water heater } 195 \text{ CFH} + \text{Furnace } 58.8 \text{ CFH} + \text{Domestic gas stove } 63.7 \text{ CFH}$$

* 1 CFH=1,020 Btuh

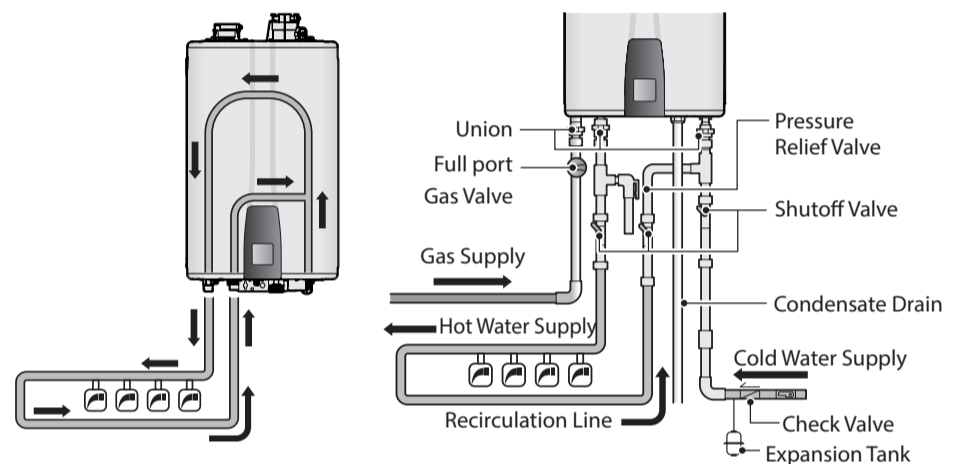
1/2" rigid pipe can be used; refer to the sizing tables in the Installation & Operation Manual for limitations. Avoid using 1/2" corrugated connectors or tubing as noise may occur.

6 Water Piping Connections (NPE-180A2/210A2/240A2)

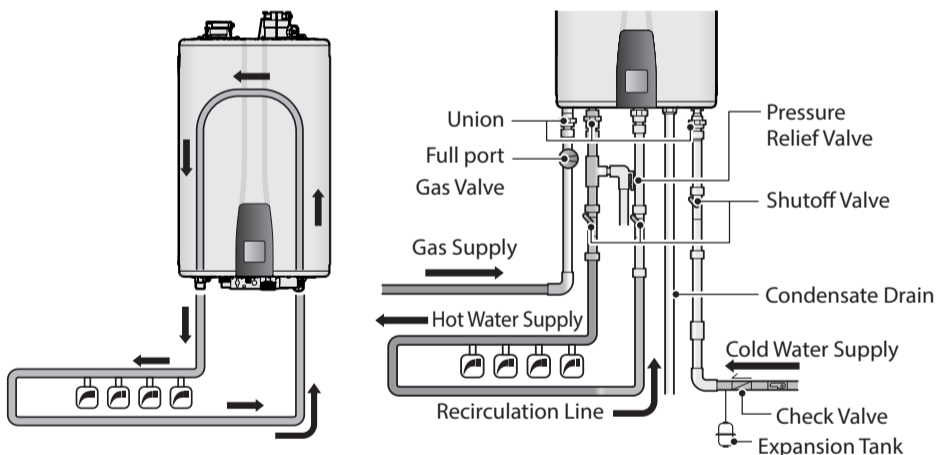
Internal Recirculation



External Recirculation using the Recirculation Inlet



External Recirculation using the Cold Water Inlet



Internal Recirculation Settings

Press the Menu button (M) to access the Main menu, and select **1. Recirculation Setting > 3. Internal Recirculation** by pressing the OK button (OK).

| Model | Step 1 | Step 2 | Step 3 |
|--------|-------------|-------------|--------------|
| A-type | Int. Recirc | Always On | N/A |
| | | Intelligent | N/A |
| | | Weekly | Schedule Set |

External Recirculation Settings

Press the Menu button (M) to access the Main menu, and select **1. Recirculation Setting > 2. External Recirculation** by pressing the OK button (OK).

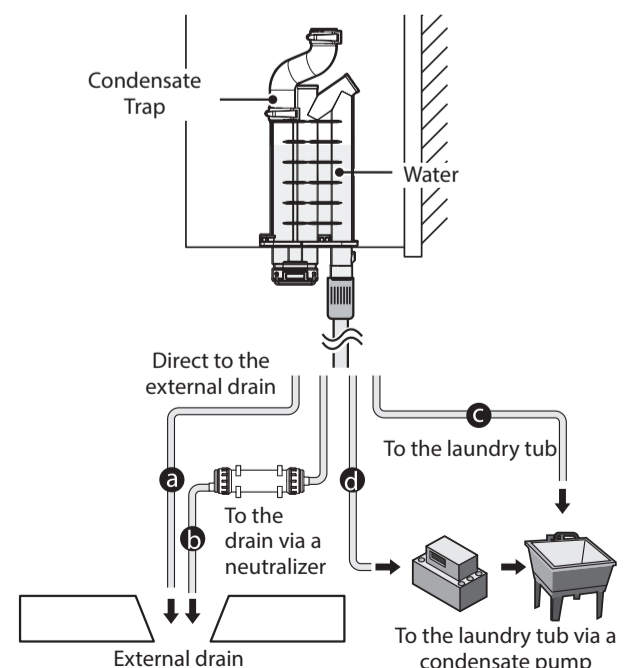
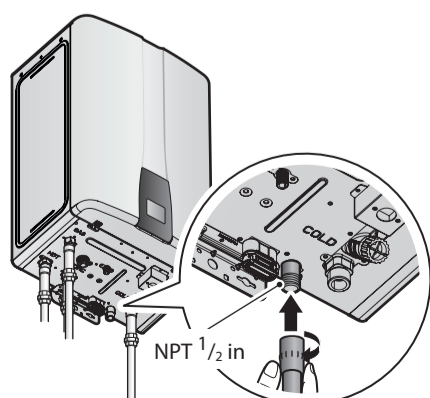
| Model | Step 1 | Step 2 | Step 3 |
|--------|-------------|----------------------|-------------|
| A-type | Ext. Recirc | Use Ext. Pump Yes/No | Always On |
| | | | Intelligent |
| | | | Weekly |
| | | | On-demand |

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.

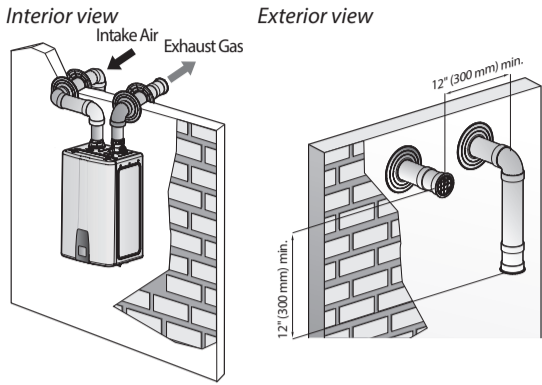
Note Do not submerge the end of the pipe in water.



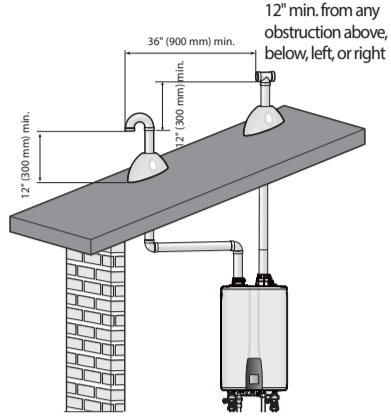
8 Venting

Vent Termination Options

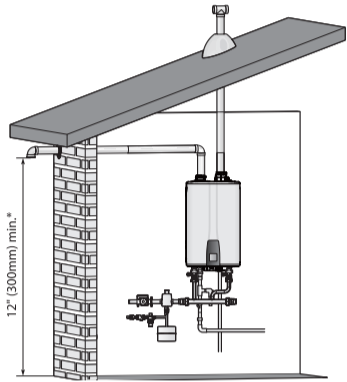
Indoor Horizontal Vent Termination



Vertical vent termination

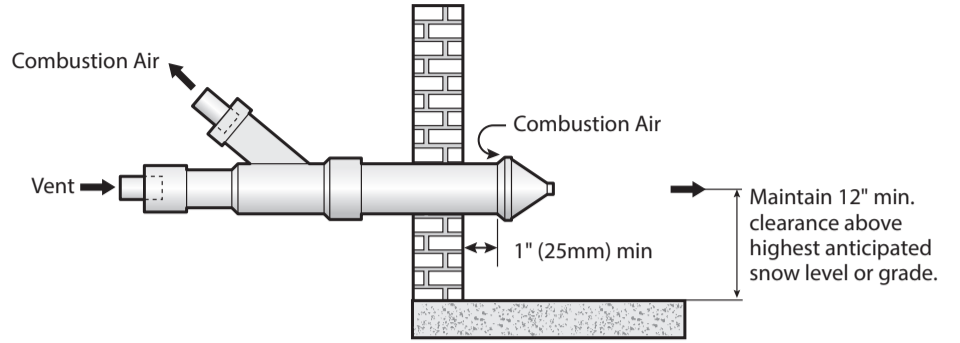


Sidewall vent termination



Concentric Vent Termination

Sidewall installation



Roof installation

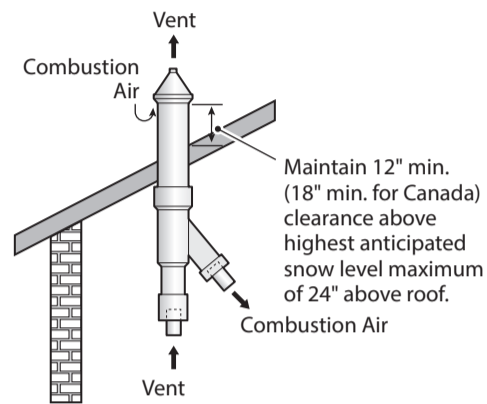
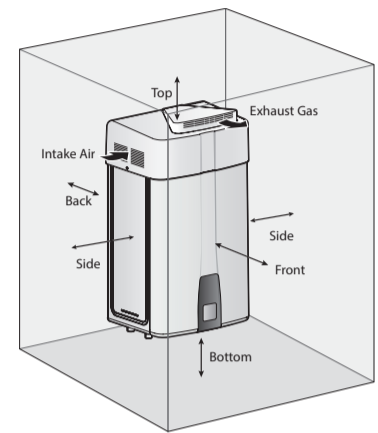
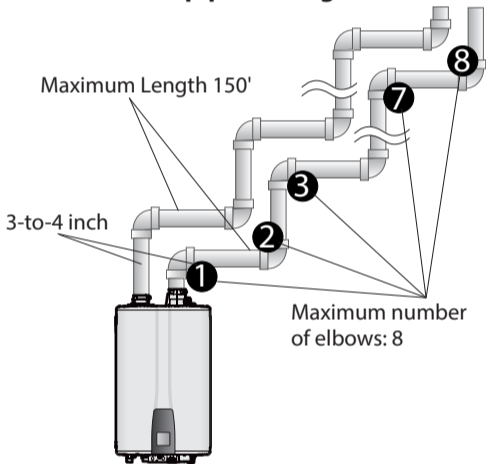


Image of outdoor vent cap



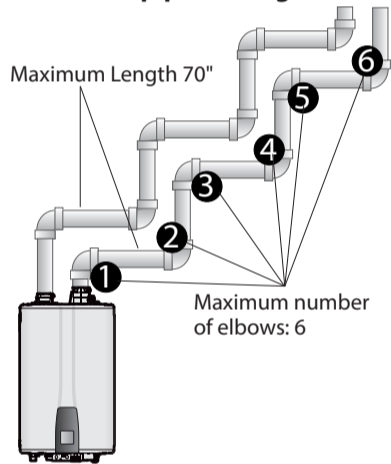
Venting Length

4" pipe venting



- 90° elbow = 5 linear feet of venting
- 45° elbow = 3 linear feet of venting

3" pipe venting



- 90° elbow = 5 linear feet of venting
- 45° elbow = 3 linear feet of venting

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, Radel® (polyphenolsulfone) for the exhaust vent.

Navien recommended venting materials

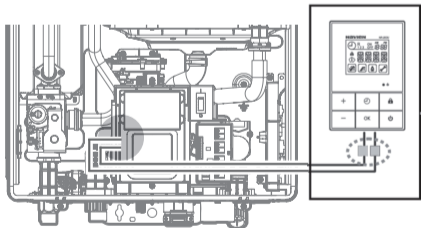
| Locale | Recommended Vent Materials |
|---------|---|
| USA | <ul style="list-style-type: none"> • PVC/CPVC Schedule 40 or 80 (Solid Core) - UL1738-certified materials are approved for use • Approved Polypropylene* • Approved Stainless Steel |
| Canada* | <ul style="list-style-type: none"> • Type BH Special Gas Vent Class IIA (PVC) • Type BH Special Gas Vent Class IIB (CPVC) • Type BH Special Gas Vent Class IIC (Polypropylene/Stainless Steel) |

* Refer to the manufacturer's literature for detailed information on approved vent materials.

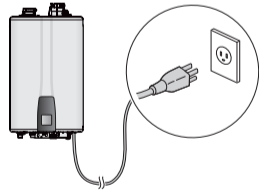
** For installation in Canada, field-supplied plastic vent piping must comply with CAN/CGA B149.1 (latest edition) and be certified to the Standard. For Type BH Gas Venting Systems, ULC-S636. Components of this listed system must not be interchanged with other vent systems or unlisted pipes or fittings. 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.

9 Electrical Connections

Remote Controller Connection



Power Connection

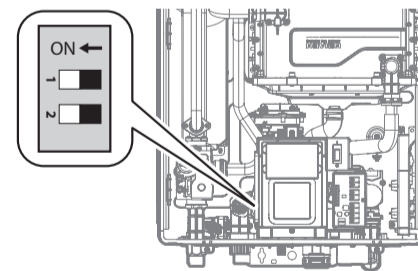


120 V AC 60 Hz
Min. 2 Amp current with proper grounding

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 DIP Switch Settings



- 2-switch Panel:

| Switch | Function | Setting | |
|--------|------------------|----------------------------|-----|
| 2 | Temperature Lock | Temperature can be set. | OFF |
| | | Temperature cannot be set. | ON |

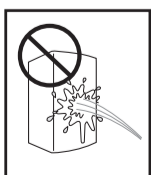
CAUTION

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

Safety



DO NOT touch the power cord with wet hands.

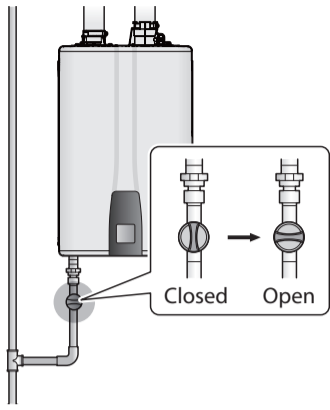


DO NOT allow the water heater to be exposed to excessive amounts of water.

STEP 3 After Installing

1 Opening All the Valves

Gas Valve

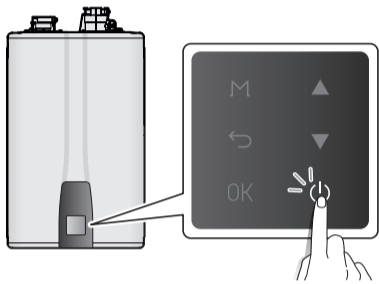


KD NAVIEN

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20 Goodyear, Irvine, CA 92618
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www.NavienInc.com

2 Operating the Water Heater

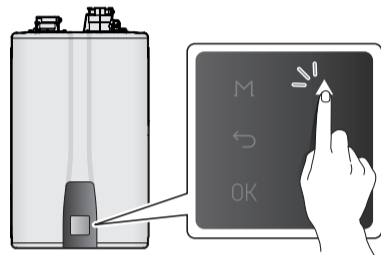
Power ON



To turn the water heater on, press the Power button (⏻).

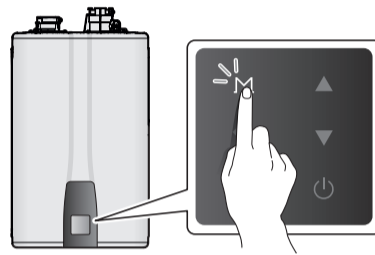
When the power is on for the first time, you must complete the start-up wizard. The temperature will appear on the front panel display after then when the power is on.

Adjust the Water Temperature



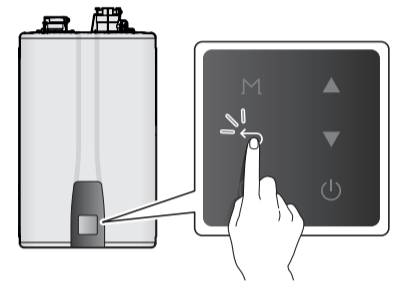
Press the Up button (▲) or the Down button (▼) until the desired temperature appears on the display. You can adjust the temperature while the display is flashing. Once the display stops flashing, the temperature setting is stored.

View Basic Information



To access to view the water heater's operating conditions, configure the DHW temperature, or review the error history, press the Menu button (M).

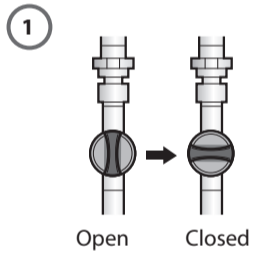
Resetting the Water Heater



If an error message appears, you can try resetting the water heater to resolve the problem. To reset the water heater, press the Back button (←).

Note If resetting does not solve the problem, refer to the troubleshooting section of the User's Information Manual or contact the service center.

3 Measuring the Inlet Gas Pressure



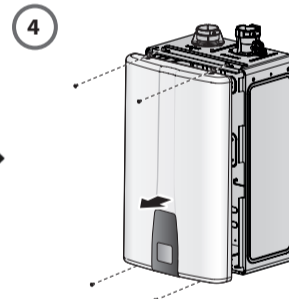
Shut off the manual gas valve.



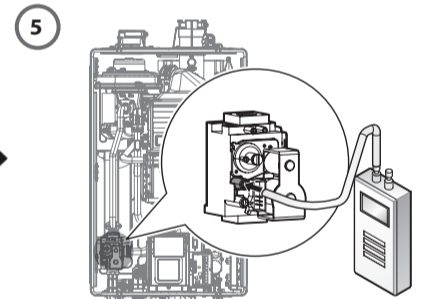
Open a hot water faucet to turn on the unit.



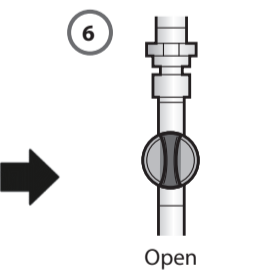
Shut off the hot water faucet.



Remove the 4 screws of the front cover assembly.



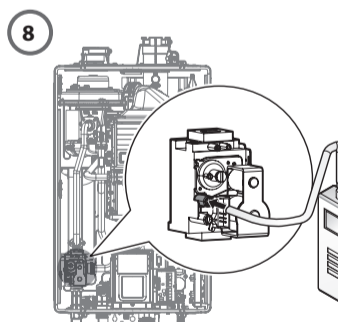
Loosen a screw two or three turns and connect a manometer to the pressure port.



Re-open the manual gas valve.



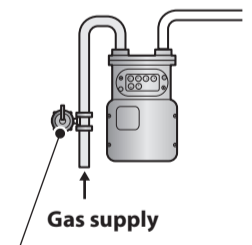
Open several fixtures that have high flow rates.



Check the inlet gas pressure reading on the manometer.

Recommended Gas Pressure Settings:
NG: 3.5"–10.5" WC
LP: 8.0"–13.0" WC

If not,

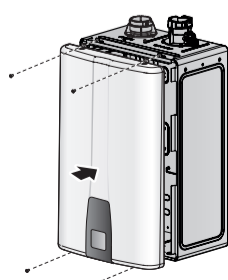


Adjust the inlet gas pressure with gas regulator.

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



5 Ensure Maximum Water Flow

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

6 Final Check

A trial run should be performed in accordance with the Installation checklist listed in the Installation & Operation Manual.