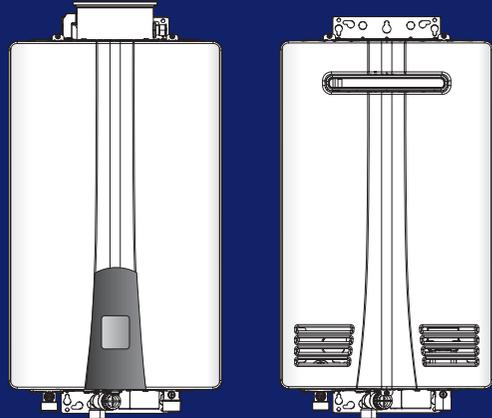


# User's Information Manual

## NPN Non-Condensing Water Heaters

**Model** | NPN-160U  
NPN-180U  
NPN-199U  
NPN-120E  
NPN-160E  
NPN-180E  
NPN-199E



\* Lead Free

Keep this manual near this water heater for future reference whenever maintenance or service is required.

\* The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight.



### WARNING

If the information in these instructions is not followed exactly, a fire or explosion may result, causing property damage, personal injury or death.

**Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

#### What to do if you smell gas

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

**Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

**The installation must conform with local codes or, in the absence of local codes, the National Fuel Gas Code, ANSI Z223.1/NFPA 54.**

**When applicable, the installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280.**

**Do not install this water heater in a recreational vehicle, trailer, boat or other vehicular type unit as it will result in a Carbon Monoxide Poisoning Hazard.**

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# 1. Safety Information

The following safety symbols are used in this manual. Read and follow all safety instructions in this manual precisely to avoid unsafe operating conditions, fire, explosion, property damage, personal injury, or death. Keep this manual for future reference.

## DANGER

Indicates an imminently hazardous situation which, if not avoided, could result in severe injury or death.

## WARNING

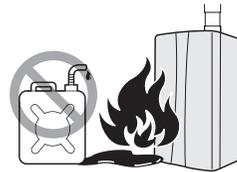
Indicates a potentially hazardous situation which, if not avoided, could result in injury or death.

## CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in property damage.

## WARNING

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.



- A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
- B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

### WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
  - Do not touch any electrical switches or use landline phones.
  - From a neighbor's phone, call your gas provider and follow their instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.
  - D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.



## DANGER



### To prevent burns:

- Use the lowest operating temperature setting necessary to provide comfortably-hot water.
- If your household has children or elderly or disabled residents, using a lower temperature setting is recommended.
- Do not leave children, the elderly, or disabled persons unsupervised.
- Do not allow small children to play unsupervised in the bathroom.
- Do not allow anyone to change the water temperature while hot water is running.
- Read all the instructions in this manual carefully before changing the temperature setting.
- Feel the water before using it on children, the elderly, or the disabled.
- If it is necessary to set the water temperature above 125 °F (52 °C), consider installing a thermostatically-controlled mixing valve or temperature-limiting valve. Contact a licensed plumber or your local plumbing authority for more information.



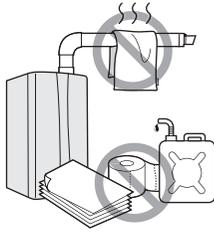
## DANGER

This water heater's water temperature is set to 120 °F (49 °C) at the factory for your safety and comfort. Increasing the temperature increases the risk of accidental scalding. Water temperatures at or above 125 °F (52 °C) can cause instant scalding, severe burns, or death. Before you decide to change the temperature setting, read the following charts carefully.

Water Temperature	Time in which a young child can suffer a full thickness (3rd degree) burn
160 °F (70 °C)	Less than 1 second
140 °F (60 °C)	1 second
130 °F (55 °C)	10 second
120 °F (49 °C)	10 minutes
100 °F (38 °C)	very low scald risk

Before setting the temperature at or above 125 °F (52 °C), consider installing a thermostatically-controlled mixing valve or temperature-limiting valve. Contact a licensed plumber or your local plumbing authority for more information.

 **WARNING**



- **Shut off the gas supply if the water heater is damaged.**

Have your installer or plumber show you the location of the gas shut off valve and demonstrate how to close the valve. If the water heater is damaged as a result of overheating, fire, flood, or any other reason, close the manual shut off valve and do not operate the water heater again until it has been inspected by a qualified technician.

- **Do not store or use gasoline or other flammable liquids near this water heater.**  
Doing so may result in fire or explosion.
- **Do not place combustibles, such as newspapers or laundry, near the water heater or venting system.**  
Doing so may result in a fire.

- **Do not place or use hair sprays, spray paints, or any other compressed gases near the water heater or venting system, including the vent termination.**  
Doing so may result in fire or explosion.

- **Do not remove the front cover unless the power to the water heater is turned off or disconnected.**  
Failure to do so may result in electric shock.

- **Do not operate the water heater with the front cover opened.**  
Doing so may result in fire or carbon monoxide (CO) poisoning, which may result in property damage, personal injury, or death.

 **WARNING**

- **Do not operate this water heater without proper venting.**

Doing so may result in fire or carbon monoxide (CO) poisoning, which may result in property damage, personal injury, or death. Inspect the vent termination and air intake supply annually to ensure proper operation of the water heater. Turn off and discontinue use of the water heater if any of the vent pipes, vent elbows, or intake pipes are damaged in any way, separated at a joint, or show evidence of corrosion, rusting, or melting.

- **Do not touch the power cord or internal components of the water heater with wet hands.**

Doing so may result in electric shock.

California law requires the following Prop 65 warning to be provided:

 **WARNING**

Cancer and Reproductive Harm -  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



## CAUTION

- **Do not attempt to repair or replace any part of the water heater, unless it is specifically recommended in this manual.**

For all other service, contact an authorized technician or licensed professional. Improper adjustments, alterations, service, or maintenance may lead to property damage, personal injury, or death and will void your warranty.

- **Do not operate the water heater if you feel something is wrong with it.**

Doing so may result in product damage or personal injury.

- **Do not allow children to operate or access the water heater.**

Doing so may result in product damage or personal injury.

- **Do not attempt to change the water temperature while the water heater is being used.**

Doing so may result in personal injury.

- **Do not turn on the water heater unless the water and gas supplies are fully opened.**

Doing so may damage the water heater.

- **Do not turn on the water if the cold water supply shut-off valve is closed.**

Doing so may damage the water heater.

- **Do not use this water heater for anything other than its intended purpose, as described in this manual.**

- **When servicing the controls, label all wires prior to disconnecting them.**

Failure to do so may result in wiring errors, which can lead to improper or dangerous operation. Verify proper operation after servicing.

- **Do not use unapproved replacement or accessory parts.**

Doing so may result in improper or dangerous operation and will void the manufacturer's warranty.

- **Do not place anything in or around the vent terminals, such as a clothes line, that could obstruct the air flow in or out of the water heater.**



## CAUTION

- **This water heater has been approved for use in the USA only.**

Using the water heater in any other country will void the manufacturer's warranty.

- **Should overheating occur or the gas supply fail to shut off, turn off the manual gas valve to the appliance.**

- **Do not use this appliance if any part has been under water.**

Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## 2. About the Water Heater

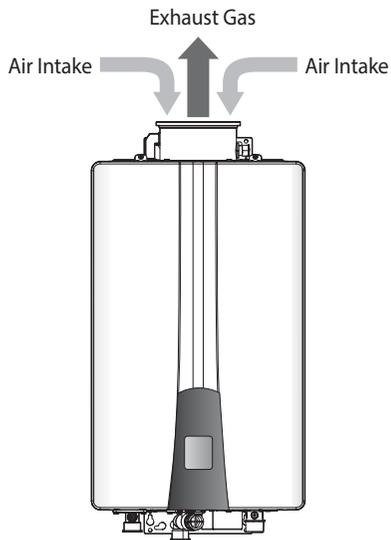
### 2.1 Description of the Water Heater

The NPN-series water heater is available in 7 models: NPN-160U, NPN-180U, NPN-199U, NPN-120E, NPN-160E, NPN-180E, and NPN-199E.

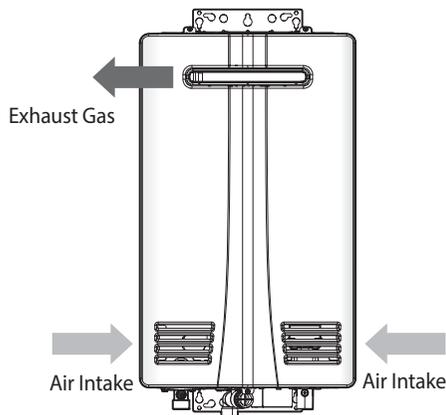
The main features are as follows:

- Potable domestic hot water and combination space heating
- Maximum temperature: 140 °F (60 °C)
- Stainless steel Heat Exchanger with stainless steel piping

### 2.2 Parts of the Water Heater

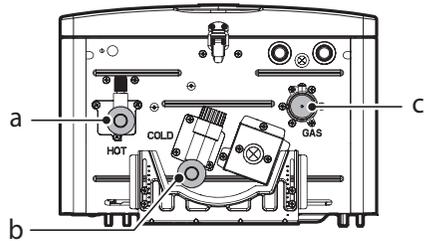


[NPN-160U/180U/199U]



[NPN-120E/160E/180E/199E]

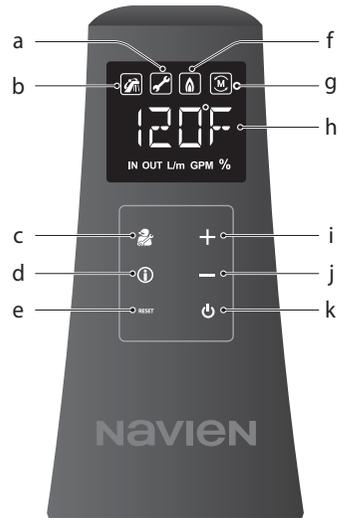
### 2.2.1 Bottom View



#	Description	Remark
a	Hot Water Outlet Connection	
b	Cold Water Inlet Connection	
c	Gas Inlet	

## 2.3 The Front Panel (Indoor Models Only)

The front panel allows you to adjust the water temperature and view the operating status or error codes. Remove the protective sheet from the front panel before using it.



**Error**

A code will appear on the display



**Hot Water Recirculation**

Recirculation Mode



**Diagnostics button**

For installers only



**Information button**

Shows basic information



**Reset button**

Resets the water heater (When an error occurs)



**Combusting**

When the gas burner is on



**Master Unit**

Cascade operation



**Display**



**Up button**

Increases the temperature



**Down button**

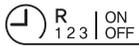
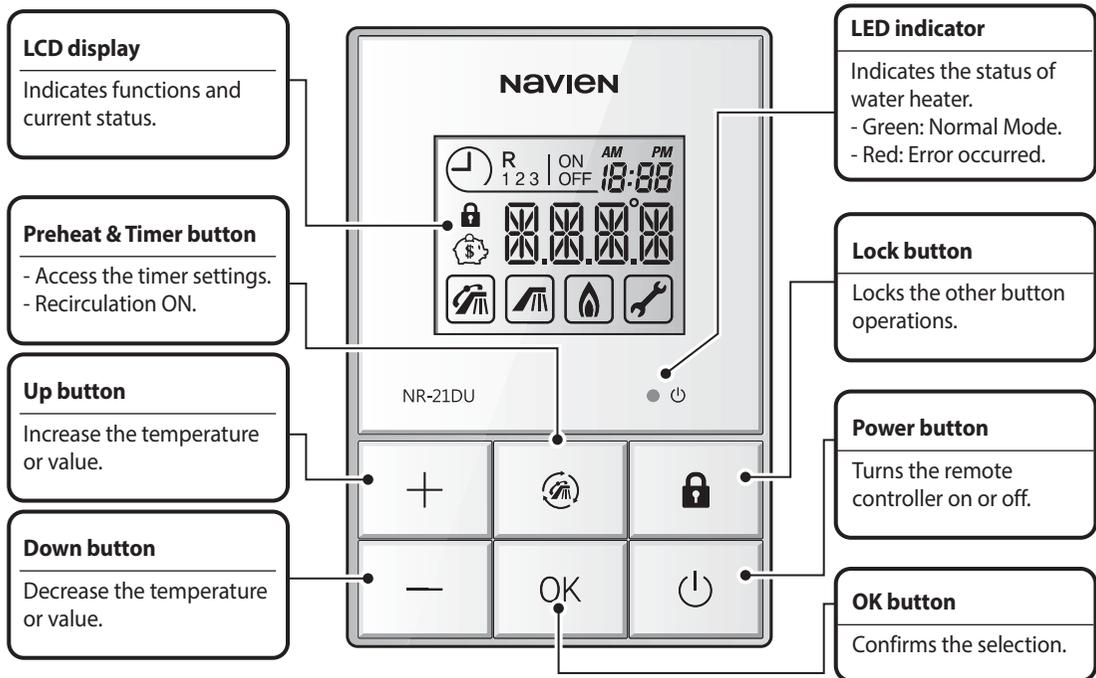
Decreases the temperature



**Power button**

Turns the water heater on or off

## 2.4 Remote Controller (Outdoor Models - Optional for Indoor Models)



Timer is set.



Recirculation Mode.



Displays the current time.



Hot water is in use.



Displays the current set temperature.



Water heater operation is in progress.



Operations are locked.



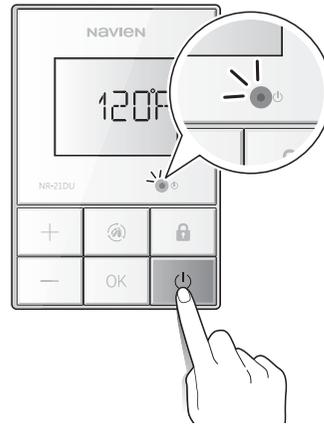
An error code will appear on the display.

### 3. Operating the Water Heater

#### WARNING

Follow the instructions below to avoid unsafe operating conditions that could cause property damage, severe personal injury, or death.

- Ensure that the water heater is filled with water before turning on the water heater.
- If overheating occurs or the gas supply fails to shut off, shut off the gas supply to the water heater at the manual gas valve.
- If any part of the water heater has been submerged in water, do not use this appliance and immediately call a qualified service technician. The water heater must be replaced.

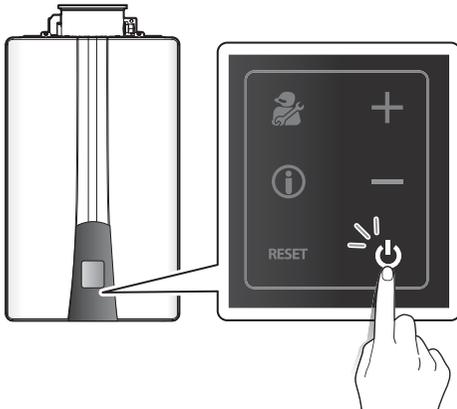


**[Outdoor Models with Remote Controller]**

When the power is on, the temperature will appear on the front panel display.

#### 3.1 Turning the Water Heater On or Off

To turn the water heater on or off, press the Power button.



**[Indoor Models]**



**[Indoor Models]**



**[Outdoor Models with Remote Controller]**

## 3.2 Adjusting the Water Temperature

### WARNING

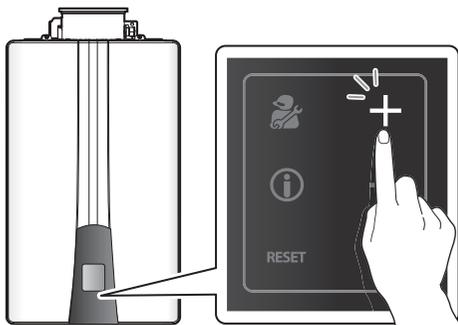
Before adjusting the water temperature, read “To prevent burns:” on page 4 carefully. Water above 120 °F can cause instant scalding, severe burns, or death.

The water heater is set to 120 °F (49 °C) by default. To adjust the water temperature:

1. Make sure that all hot water faucets are closed, and ensure that the internal circulator and any external circulating pumps are off.

**Note** If a hot water faucet is open, you can adjust the temperature only from 98-110 °F (37-43 °C).

2. Press the + (Up) or – (Down) buttons 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.



[Indoor Models]



[Outdoor Models with Remote Controller]

**Note** The water heater will retain your settings during a power outage.

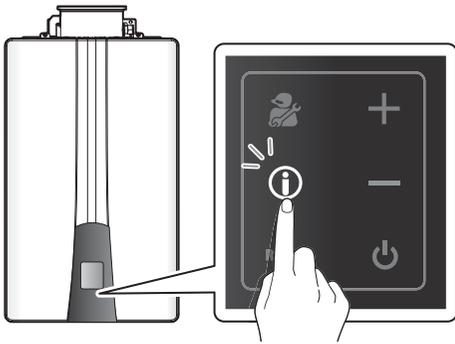
You can adjust the temperature by the increments as shown below based on the desired temperature range.

Temperature range	Adjusting the water temperature
98 °F-140 °F (Fahrenheit mode)	1 °F or 0.5 °C increments
36 °C-60 °C (Celsius mode)	

The water heater will not provide hot water instantly at the hot water faucet unless a recirculation line has been installed from the furthest fixture back to the water heater.

### 3.3 Viewing Basic Information (Indoor Models Only)

To view information about the water heater, press the Information button.



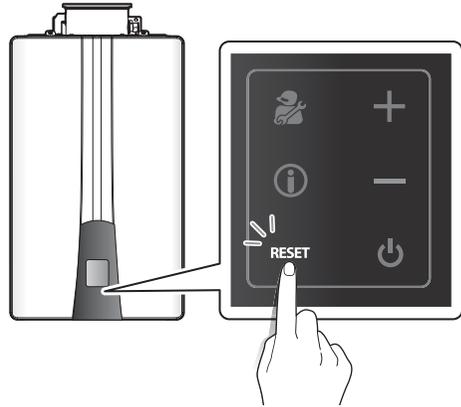
Press the + or – buttons to switch between the information types.

Display	Description
	Flow rate in gallons per minute (GPM).
	Hot water outlet temperature (OUT).
	Cold water inlet temperature (IN).

To exit information mode, press the Reset button.

### 3.4 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 Reset button.



For outdoor installation models, press the OK button once and “RST” will be displayed on the LCD display.



If resetting the water heater does not solve the problem, refer to the Troubleshooting section of this manual or contact Technical Support at 1-800-519-8794.

### 3.5 Entering Lock Mode

To prevent accidental pressing of the buttons and to prevent children from adjusting the controller, you can activate the Temperature Lock Mode.

To activate or deactivate Lock Mode, press the Lock button for 2 seconds.



When Lock Mode is activated,

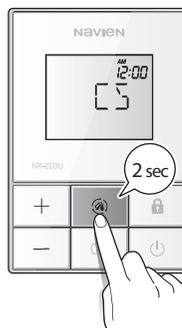
- The Lock icon appears on the display.
- All buttons except for Lock button are locked.

**Note**

- Resetting errors or alarms is still available with Lock Mode activated.
- You can change the settings from the front panel with Lock Mode activated.

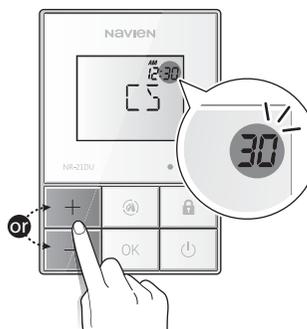
### 3.6 Setting the clock

1. Press the Preheat & Timer button for 2 seconds.

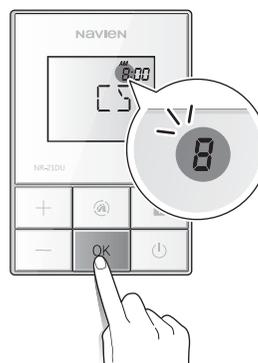


2. Adjust the minutes by pressing the Up or Down Button.

Press the OK button to set the minutes.



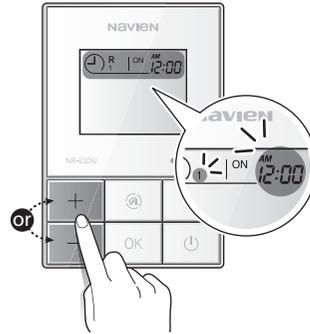
3. Once the minutes are set, adjust the hour by pressing the Up or Down button.



4. Press the OK button to finish and save the updated time.



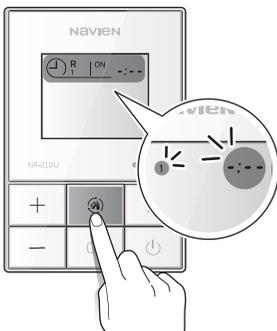
2. Set the recirculation activation time by pressing the Up or Down button.



Then, press the OK button to set the deactivation time.

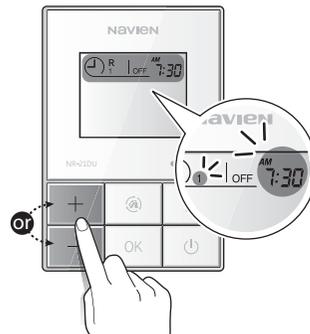
### 3.7 Setting the Recirculation timer

1. Press the Preheat & Timer button to set the Recirculation timer while setting the clock. Reservation Schedule #1 is ready to be set.



**Note** The recirculation timer settings are divided in 30 minute increments.

3. Set the deactivation time by pressing the Up or Down button.

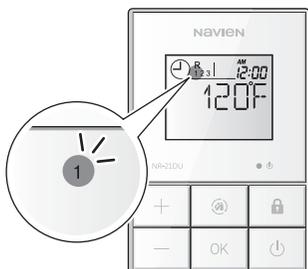


**Note** This feature is available only when external circulating pumps are connected and ON.

- Press the OK button to save the timer setting. Repeat these procedures for Reservation Schedule Settings #2 and #3.



- During the reservation schedule, the preheating icon turns on and the Reservation area starts flashing.



**Note** This is applied to A models with the preheating function only.

### 3.8 Starting Recirculation

Press the Preheat & Timer button to start recirculation immediately, regardless of the reservation schedule.

“HEAT” appears for 4 seconds on the display and then recirculation runs once.



During the recirculation, the preheating icon flashes continuously.

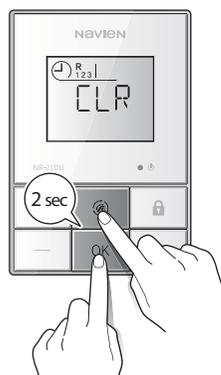
**Note**

- This feature is available only when external circulating pumps are connected and ON.
- This feature runs during the recirculation time set on the front panel which the remote controller is connected to.

### 3.9 Canceling all timer settings

Press and hold the Preheat & Timer and OK button simultaneously for 2 seconds.

“CLR” appears for 3 seconds and all timer settings are canceled.

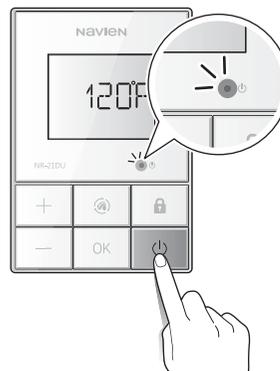


## 4. Maintaining the Water Heater

### 4.1 Cleaning the Water Heater

#### CAUTION

Make sure the water heater is turned off and the power supply is disconnected before cleaning the water heater. The water heater may remain hot for several minutes after it is turned off. To prevent burns, wait until the water heater has cooled down before cleaning.



#### [Outdoor Models with Remote Controller]

To clean the water heater, wipe the outside with a damp cloth. Use a non-acidic, non-abrasive cleaner to remove any surface stains. The front panel is moisture resistant, but it is not waterproof. Keep it as dry as possible.

3. Close the gas valve.

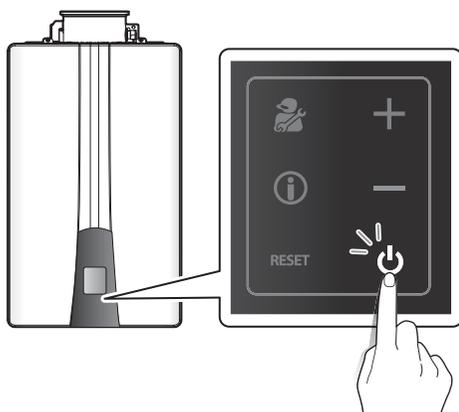
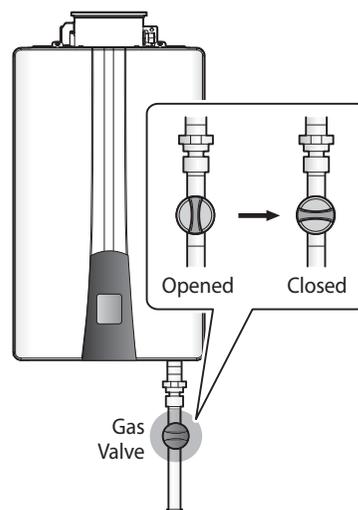
### 4.2 Draining the Water Heater

You need to drain the water heater before performing maintenance tasks, such as cleaning the inlet water filter, or to prevent the water heater from freezing when it will not be used for an extended period.

Refer to the "2.2 Parts of the Water Heater" on page 7 for details about part locations.

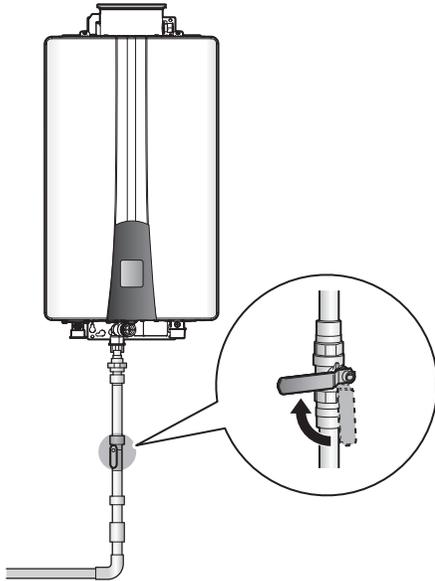
To drain the water heater:

1. Place a bucket under the water heater, to collect the residual water inside the water heater.
2. Press the Power button on the front panel to turn off the power to the water heater.

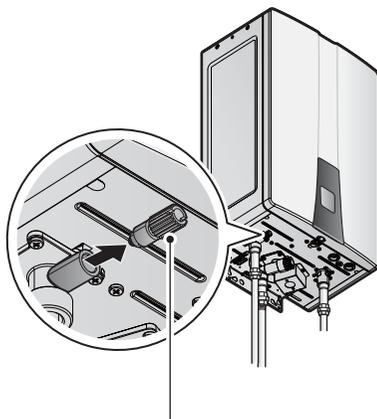


#### [Indoor Models]

- Close the water supply valve on the inlet to the water heater. If there is no valve, turn off the water supply at the water main.



- Open all hot water faucets completely. The water that remains in the plumbing lines will drain out.
- Open the water drain plug.



- Remove the cold water inlet filter.
- Allow the residual water to drain from the water heater.

- When the water is completely drained, reinsert the cold water inlet filter, and then close the water drain plug.
- To refill the water heater follow the steps of "Draining the Water Heater" in reverse.

### 4.3 Flushing the Heat Exchanger

#### CAUTION

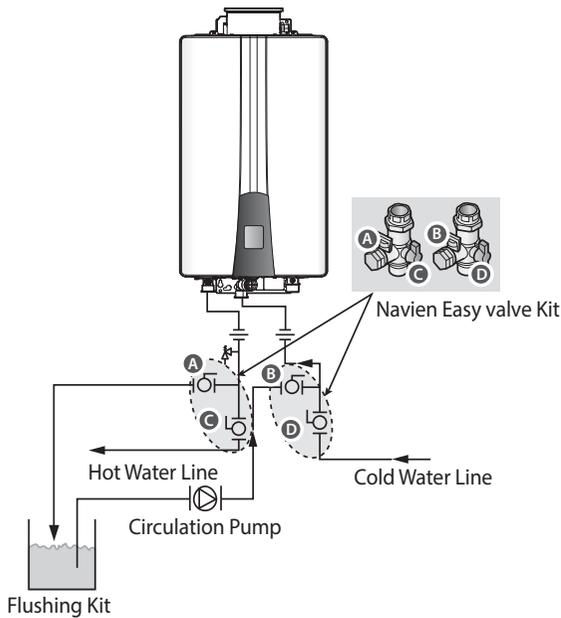
Flushing the Heat Exchanger is a somewhat complicated procedure. Read the following instructions carefully before attempting this procedure. If you are uncertain about any of the steps in the procedure, contact an authorized technician or licensed professional. Keep in mind that improper maintenance can void your warranty.

Refer to the "2.2 Parts of the Water Heater" on page 7 for details about part locations.

Before flushing the Heat Exchanger, gather the following items:

- A bucket that is 5 gallons or larger
- Cleaning solution diluted with water
- 3 hoses
- A water circulation pump

To flush the Heat Exchanger:



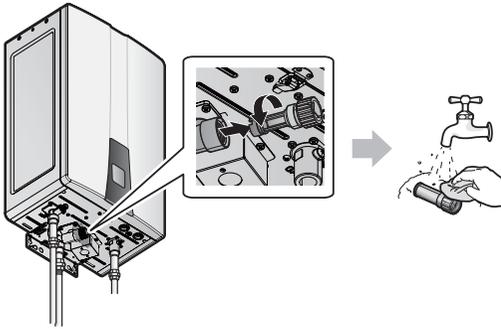
1. Press the Power button on the front panel to turn off the water heater.
2. Disconnect the power supply to the water heater.
3. Close the "C" and "D" valves on the hot and cold water lines.
4. Connect one tube to the "A" valve and place the free end in the bucket.
5. Connect one of the tubes to the circulation pump outlet and the cold water line at the "B" valve.
6. Connect one tube to the circulation pump inlet and place the free end in the bucket.
7. Pour the cleaning solution into the bucket.
8. Open both "A" and "B" valves.
9. Turn on the circulation pump and allow the solution to circulate through the water heater for at least 45 minutes.

10. Rinse the cleaning solution from the water heater:
  - a. Remove the free end of the drain tube from the bucket and place it in the condensate drain or laundry tub (wherever the water heater drains).
  - b. Close the "B" valve and open the "D" valve. Do not open the "C" valve yet.
  - c. Allow water to flow through the water heater for 5 minutes.
  - d. Close the "A" valve and open the "C" valve.
11. Disconnect all tubes.
12. Remove the cold water inlet filter from the water heater and clean out any residue.
13. Reinsert the filter and ensure the filter cap is securely tightened.
14. Reconnect the power supply to the Water Heater.
15. Press the Power button on the front panel to turn on the water heater.

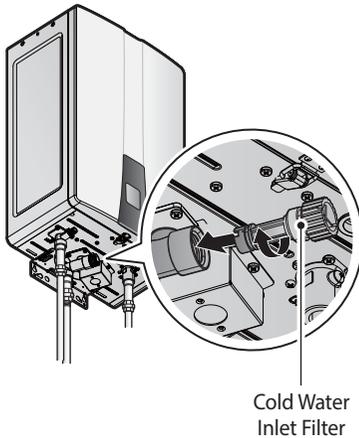
## 4.4 Cleaning the Inlet Water Filter

To clean the filter:

1. Drain the water heater. Refer to “4.2 Draining the Water Heater” on page 16.
2. While the filter is removed, rinse it with clean running water (cold) and, if necessary, scrub it clean with a brush.



3. Reinsert and tighten the filter.



4. Refill the water heater. Refer to “4.2 Draining the Water Heater” on page 16.

## 4.5 Protecting the Water Heater from Freezing

### CAUTION

Damage due to freezing is not covered by the Navien limited warranty.

- Freezing damage is most likely to occur due to back drafting caused by negative pressure in the building. This is not a manufacturing defect, and therefore, Navien will not warrant any damages due to freezing. The installer is responsible for ensuring that there is sufficient make-up air to avoid such a situation and the owner is responsible for ensuring that protection against freezing is maintained.
- To avoid freezing issues, we strongly recommend the use of a direct vent exhaust and intake system. Your installer should ensure that the exhaust vent pipe and the air intake pipe are both connected directly from the collars on the top of the water heater to the outdoors. This type of vent system minimizes air movement within the water heater.
- This water heater has an optional recirculation mode that is used for freeze protection. This mode should prevent the water heater from freezing, even if the intake air duct is not vented directly.
- The water heater is designed for indoor or outdoor installation. However, it should not be installed outdoors in areas that are prone to freezing temperatures.

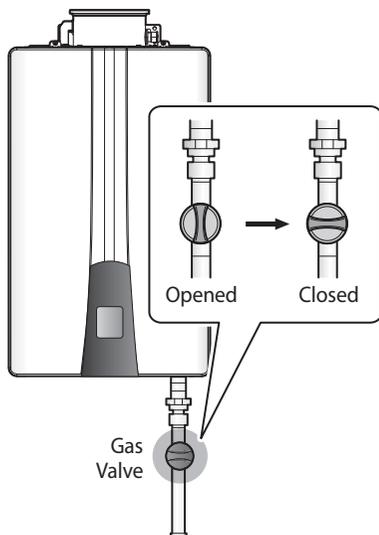
To ensure that the water heater does not freeze, follow these guidelines:

- **Do not unplug the power supply cord**, except for routine maintenance. The water heater has a freeze protection function that requires electricity. The freeze protection function will operate regardless of whether or not the power is turned on or off, as long as the electric supply is still connected.
- **Do not close the gas valve**, except for routine maintenance, as this will limit additional freeze protection.
- If the power or gas supplies must be disconnected for an extended period, drain the water heater. Freezing damage may occur if there is a loss of power or an interruption in the gas supply to the water heater.

**If the water heater will not be used for an extended period, drain the water heater.**

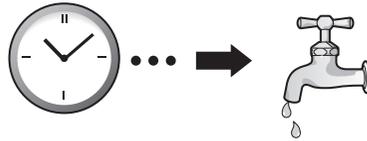
If hot water will not flow and you suspect that the water heater is frozen, follow these steps:

1. Press the Power button on the front panel to turn off the water heater.
2. Close the gas valve.



3. Open the hot water faucet that is closest to the water heater.
4. Use a hair dryer or a portable electric heater to heat up both the primary and secondary Heat Exchangers.

5. Check every few minutes to see if water is running at the open faucet.



6. When the water starts flowing again, check the water heater and piping for leaks. If you detect any leaks or the water heater is not operating properly, contact an authorized technician or licensed professional.

**!** CAUTION

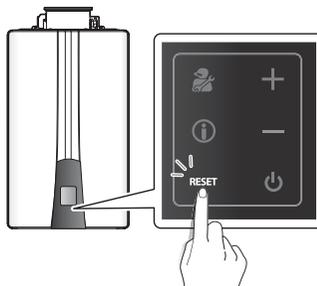
If the unit will not be used immediately, close off all gas and water shutoff valves, drain all of the water out of the unit and the plumbing system to prevent the unit and system from freezing, and bleed the gas out of the gas line.

## 5. Troubleshooting

### 5.1 Solving Basic Problems

If you experience a problem with the water heater, refer to the following chart for possible remedies. Error codes that appear on the front panel display are explained in the following section.

For minor problems, resetting the water heater may resolve the issue. To reset the water heater, press the Reset button on the front panel or the OK button on the remote controller.



[Indoor Models]



[Outdoor Models with Remote Controller]

If resetting the water heater and attempting the remedies suggested below do not resolve the problem, contact an authorized technician, a licensed professional, or Technical Support at 1-800-519-8794 for service instructions.

Problem	Possible Cause(s)	What to do
No water comes out when the hot water tap is opened.	<ul style="list-style-type: none"> <li>Is the cold water inlet filter clean?</li> <li>Is an error code displayed on the front panel?</li> <li>Is the water heater frozen?</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that the shut-off valves on the hot and cold pipes are open.</li> <li>If an error code is displayed, refer to "5.2 Understanding Error Codes" on page 22.</li> </ul>
The water from the hot water faucet is cold or turns cold and stays cold.	<ul style="list-style-type: none"> <li>Is the cold water inlet filter clean?</li> <li>Is the hot water faucet open wide enough draw at least 0.5 gallons of water per minute (GPM) through the water heater?</li> <li>Is an error code displayed on the front panel?</li> <li>If there is an external recirculation system installed, is there a check valve on the recirculation return line?</li> </ul>	<ul style="list-style-type: none"> <li>Clean the cold water inlet filter. See "4.4 Cleaning the Inlet Water Filter" on page 19.</li> <li>Open the hot water faucet completely.</li> <li>If an error code is displayed, refer to "5.2 Understanding Error Codes" on page 22.</li> </ul>
It takes too long for hot water to reach the fixtures.	Are you using the external recirculation mode?	Have a contractor install a recirculation return line from the furthest faucet back to the water heater.
The water is not hot enough.	Is the set temperature too low?	<ul style="list-style-type: none"> <li>Check the water heater's temperature setting. Refer to "3.2 Adjusting the Water Temperature" on page 11.</li> <li>Check for cross plumbing between the cold and hot water lines.</li> </ul>
The water is too hot.	Is the set temperature set too high?	Check the water heater's temperature setting. See "3.2 Adjusting the Water Temperature" on page 11.

## 5.2 Understanding Error Codes

When an error code appears on the front panel, refer to the following chart for a definition and possible remedy for the situation.

Error Code	Reason	Self-diagnostic / Action
E003	Ignition failure	<ul style="list-style-type: none"> <li>• Ensure that the main gas supply valve is open.</li> <li>• Ensure that the gas manifold and the fuel DIP SW setting match the supplied gas type.</li> </ul>
E004	False flame detection	<ul style="list-style-type: none"> <li>• Ensure that the electrical cord is properly grounded.</li> </ul>
E012	Flame loss	<ul style="list-style-type: none"> <li>• Clean the intake air filter. See page 19.</li> <li>• Ensure that the electrical cord is properly grounded.</li> <li>• Ensure that the gas manifold and the fuel DIP SW setting match the supplied gas type.</li> </ul>
E016	Overheating of heat exchanger	<ul style="list-style-type: none"> <li>• Turn off the system for at least 30 minutes, and then restart it.</li> <li>• Clean the cold water inlet filter. See page 19.</li> <li>• Flush the heat exchanger. See page 17.</li> </ul>
E046	Abnormal operation: limit control	Contact Technical Support at 1-800-519-8794.
E056	Abnormal operation: Modulating gas valve	Contact Technical Support at 1-800-519-8794.
E109	Abnormal operation: fan motor	Contact Technical Support at 1-800-519-8794.
E110	Abnormal air pressure	Ensure that the vent pipe is free of obstructions.
E127	Abnormal operation : Air volume Open/Short/Default value/No answer	Contact Technical Support at 1-800-519-8794.
E157	Abnormal operation : Air volume control	Contact Technical Support at 1-800-519-8794.
E170	Antifreeze heater Open/Short	Contact Technical Support at 1-800-519-8794.
E407	Hot water outlet: thermistor open or short circuit	Contact Technical Support at 1-800-519-8794.
E421	Cold water inlet1: thermistor open or short circuit	Contact Technical Support at 1-800-519-8794.
E434	Abnormal operation: water adjustment valve	Contact Technical Support at 1-800-519-8794.
E438	Abnormal operation: circulation pump	External: Ensure that all water supply and return lines are open.
E439	Abnormal operation: flow sensor	Contact Technical Support at 1-800-519-8794.
E441	Hot water inlet2: thermistor open or short circuit	Contact Technical Support at 1-800-519-8794.
E445	Abnormal operation: Bypass mixing valve	Contact Technical Support at 1-800-519-8794.
E515	Abnormal operation: PCB	Ensure that the electrical cord is properly grounded.

Error Code	Reason	Self-diagnostic / Action
E517	Abnormal operation: DIP switch setting	Contact Technical Support at 1-800-519-8794.
E593	Abnormal operation: front panel key	Contact Technical Support at 1-800-519-8794.
E594	Abnormal operation: EEPROM	Contact Technical Support at 1-800-519-8794.
E615	Abnormal operation: input and memory	Contact Technical Support at 1-800-519-8794.
E736	Abnormal operation: cascade communication	Contact Technical Support at 1-800-519-8794.
E740	Abnormal operation: outdoor temperature sensor	Contact Technical Support at 1-800-519-8794.
E760	Flushing/service alarm	Contact the installer to perform routine service.
E762	Vent pipe not properly inserted	Contact Technical Support at 1-800-519-8794.
E773	Abnormal operation: gas connection	Contact Technical Support at 1-800-519-8794.
E782	Abnormal operation: main panel communication	Contact Technical Support at 1-800-519-8794.
E785	Abnormal operation: flow switch/sensor	Contact Technical Support at 1-800-519-8794.
E786	Abnormal operation: panel connection	Contact Technical Support at 1-800-519-8794.

If any of these remedies do not resolve the problem, contact Technical Support at 1-800-519-8794.

# LIMITED WARRANTY NAVIEN, INC.

## Effective

This 15 year limited warranty on heat exchangers, 5 year limited warranty on parts, and 1 year limited-labor warranty (“Warranty”) covers defects in materials or workmanship when the Navien NPN Water Heater (“Product”) is installed by a properly licensed plumber or contractor and operated in strict compliance with the Installation & Operations manual procedures, subject to the terms within this Warranty document. Improper installation or use will void this Warranty. This Warranty runs from date of installation and extends to the original purchaser and subsequent owners, but only while the Product remains at the site of the original installation.

## What is Covered?

Subject to the foregoing terms, Navien will repair or replace the covered Product or any part or component that is defective in materials or workmanship for a period of five (5) years in regard to parts and up to fifteen (15) Years in regard to the heat-exchanger for a Standard<sup>1</sup> or Controlled-Recirculation<sup>2</sup> installation in a Residential\* application. All repair parts must be genuine Navien parts. All repairs and replacements must be performed by an individual or servicing company that is properly licensed to do the type of repair.

When the Product is being used in an Uncontrolled-Recirculation<sup>3</sup> installation in a Residential\* application, then the parts warranty will be reduced to three (3) years and the heat exchanger warranty to five (5) years as indicated in the Warranty Coverage Periods table.

When the Product is being used in an Standard<sup>1</sup> or Controlled-Recirculation<sup>2</sup> installation in a Combi<sup>4</sup> application, then the parts warranty will remain at five (5) years and the heat exchanger warranty will be reduced to five (5) years as indicated in the Warranty Coverage Periods table.

When the Product is being used in an Uncontrolled-Recirculation<sup>3</sup> installation in a Combi<sup>4</sup> or Commercial application, then the parts warranty will be reduced to three (3) years and the heat exchanger warranty to three (3) years as indicated in the Warranty Coverage Periods table.

Navien will pay labor charges for the repair subject to Navien’s prior written approval and in accordance with Navien’s schedule of approved labor allowances for a period of one (1) year from the date of installation.

During the applicable warranty period, replacement of the Product or components may be authorized by Navien only. Navien does not authorize any person or company to assume for it any obligation or liability in connection with the replacement of the Product or its components. If it is determined that repair or replacement of a part, under warranty, is not possible, the Product will be replaced with a new Product having at least the same BTU capacity as the product at issue. The replacement component or product will be warranted only for the unexpired portion of the applicable warranty period for the original component or Product.

Warranty Coverage Periods				
Application		Labor Warranty	Parts Warranty	H/Ex Warranty
Residential*	Standard <sup>1</sup> or Cont-Recirc <sup>2</sup>	1 year	5 years	15 years
	Uncont.-Recirc <sup>3</sup>	1 year	3 years	5 years
Commercial or Combi <sup>4</sup>	Standard <sup>1</sup> or Cont-Recirc <sup>2</sup>	1 year	5 years	5 years
	Uncont.-Recirc <sup>3</sup>	1 year	3 years	3 years

\*Applies only to single family, residential locations

<sup>1</sup> **Standard** means there is no recirculation being used

<sup>2</sup> **Controlled-Recirculation** means recirculation of the water through the water heater is controlled by either the water heater or an external aquastat.

<sup>3</sup> **Uncontrolled-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.

<sup>4</sup> **Combi** refers to a combination potable water and space heating application. Water Heaters cannot be use in space heating only applications or this warranty will be voided.

## How do I get service?

You must contact the original installer of your Product. Your installer will need to contact Navien to report the issue. If the original installer cannot be identified or you no longer choose to use that service provider, you may choose any service provider who is properly licensed to complete the necessary repair. The installer and/or service provider must comply with Navien's warranty service and return policy procedures as available on Navien's website including contacting Navien's Technical Support Department at (800) 519-8794, option 2, prior to commencing any service.

Proof of the date of installation must be provided to Navien. At Navien's request, the defective Product or part must be returned to Navien. When the Product is installed in new construction, the date of installation shall be established as the date upon which the end-user takes title to the real property. If proof of the installation date is unavailable, then six months after the date of manufacture will be used.

## What is not covered?

Navien's Limited Warranty shall be void in the event of an occurrence of any of the following:

- Improper installation, including but not limited to, installation in violation of applicable rules, laws or building codes, inadequate water quality, condensate damage, improper venting, incorrect gas type, water pressure, absence of a drain pan, improper conversion from Natural Gas source to Propane, improper conversion from Propane source to Natural Gas, reinstallation at another location, etc.
- Accident, abuse or misuse including but not limited to installation for non-recommended uses, failure to follow or comply with the User's Operational Manual, etc.
- Improper maintenance including but not limited to, scale buildup, vent blockage, failure to maintain, etc.
- Modification, alteration, addition of non-approved components, or misapplication of the Product in any manner.
- Any damage caused by local adverse conditions including but not limited to water quality, hard water deposits, lime or mineral build-up, operating in corrosive atmospheric elements, alterations in smell or taste of water that have an adverse reaction on the unit, etc.

- Damage or problems caused by gas flow issues, electrical surges, flooding, fire, freezing, abnormal external temperature, force majeure, riot, act of war, or any acts of God.
- Performance problems caused by improper sizing of the boiler, the gas supply line, the venting connection, combustion air openings, electric service voltage, wiring, fusing or any other components, parts or specifications.
- Vibration and noise unless caused by a defect in materials or workmanship. Any other causes other than defects in materials or workmanship.
- Operating the Product at water temperatures outside the factory calibrated temperature limits and/or exceeding the maximum setting of the high limit control.
- Subjecting the heat exchanger to pressures or firing rates greater or lesser than those shown on the rating plate or removal of or alteration to the rating plate.
- Installation at any location outside the United States.
- Improper conversion from natural gas to liquid propane gas or liquid propane gas to natural gas or attempt to operate with a type of gas not specified for the boiler.
- Accidental or intentional damage.
- Operating the Product when it is not supplied with potable water at all times.

There is no warranty on any Product purchased through the internet or from any installer that obtained the Product from a supplier or distributor not authorized by Navien.

## Warranty Limitations

EXCEPT AS EXPRESSLY PROVIDED HEREIN, THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO WARRANTIES OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTEND BEYOND THE DESCRIPTION OF THE WARRANTY HEREIN AND FURTHER NAVIEN SHALL NOT BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL, PUNITIVE OR OTHER SIMILAR DAMAGES THAT MAY ARISE, INCLUDING LOST PROFITS, DAMAGE TO A PERSON OR PROPERTY, LOSS OF USE, INCONVENIENCE, OR LIABILITY ARISING FROM IMPROPER INSTALLATION, SERVICE OR USE OF THE PRODUCT. ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS ARISING UNDER STATE LAW ARE LIMITED IN DURATION TO THE PERIOD OF COVERAGE PROVIDED BY THIS WARRANTY, UNLESS THE PERIOD PROVIDED BY STATE LAW IS LESS.

No one is authorized to make any other warranties on behalf of Navien. Some states do not allow the exclusion or limitation of incidental or consequential damages, or how long an implied warranty lasts, so the above limitation may not apply to you.

This Limited Warranty gives you specific legal rights and you may also have other rights which vary from state to state.



# User's Information Manual

## NPN Non-Condensing Water Heaters

### Getting Service

If your water heater requires service, you have several options for getting service:

- Contact Technical Support at 1-800-519-8794 or on the website: [www.navieninc.com](http://www.navieninc.com).
- For warranty service, always contact Technical Support first.
- Contact the technician or professional who installed your water heater.
- Contact a licensed professional for the affected system (for example, a plumber or electrician).

When you contact Technical Support, please have the following information at hand:

- Model number
- Serial number
- Date purchased
- Installation location and type
- Error code, if any appears on the front panel display

Version: 1.0 (December, 2020)



800.519.8794 | [www.navieninc.com](http://www.navieninc.com)  
20 Goodyear Irvine, CA 92618