



On Demand Recirculation Installation and Instruction Manual



Kit# IHK - NRCP

Applicable for NRCP1112/982 series only.

WARNING

Read this manual carefully and failure to follow these instructions exactly could result in a fire or explosion, serious bodily injury and/or property damage. Installation must be performed by a qualified plumber, a licensed gas fitter, or a professional technician in accordance with all local codes. Improper installation and operation by an unqualified person will void the warranty.

CAUTION

Electrical Shock Hazard

Do not turn the power on until electrical wiring is finished. Disconnect the power before servicing. Failure to do so may result in death or serious injury from electrical shock.

1. About this Kit

NORITZ IHK-NRCP offers the most efficient way to save energy and water by adding Temperature Sensor and setting on the panel. This kit is designed to deliver hot water to your entire home with the press of a button (within a few minutes). There are no standby losses, no stack losses, and no need for extra storage tanks. This kit can be used only on an external recirculation system with a dedicated return line.

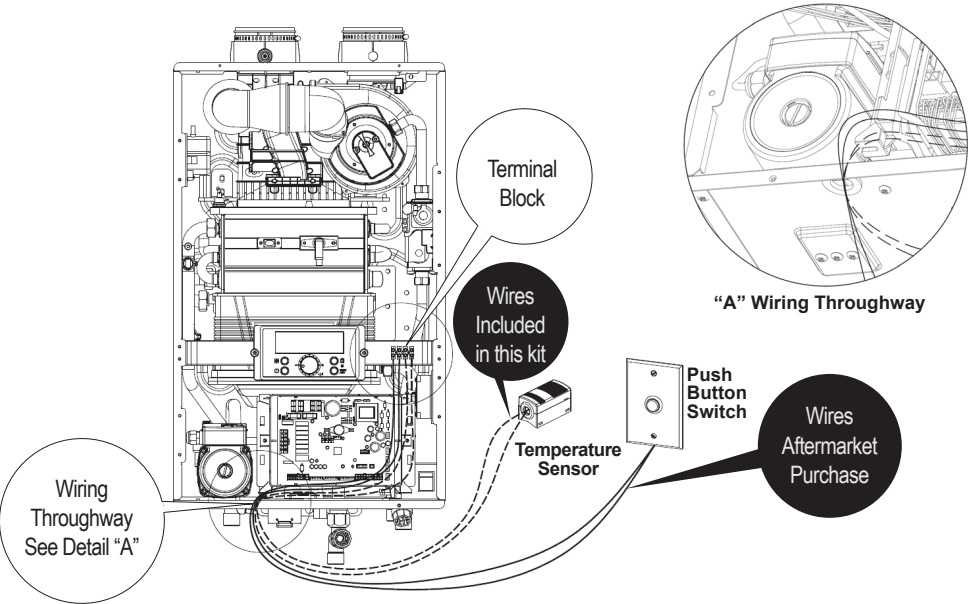
Note> It may take a few minutes depending on the length of the pipe to prepare hot water to the desired fixture.

Items included in the kit

Before installation, verify that all the items below are included .

#	Parts	Shape	Q'ty
1	Temperature Sensor (2 ties included)		1
2	Wire for Temperature Sensor (4.0 ft [1.2 m])		1
3	Push Button Switch		2
4	Instruction		1

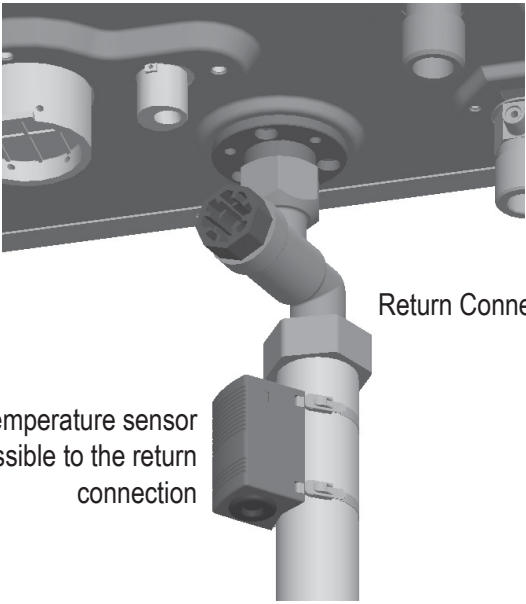
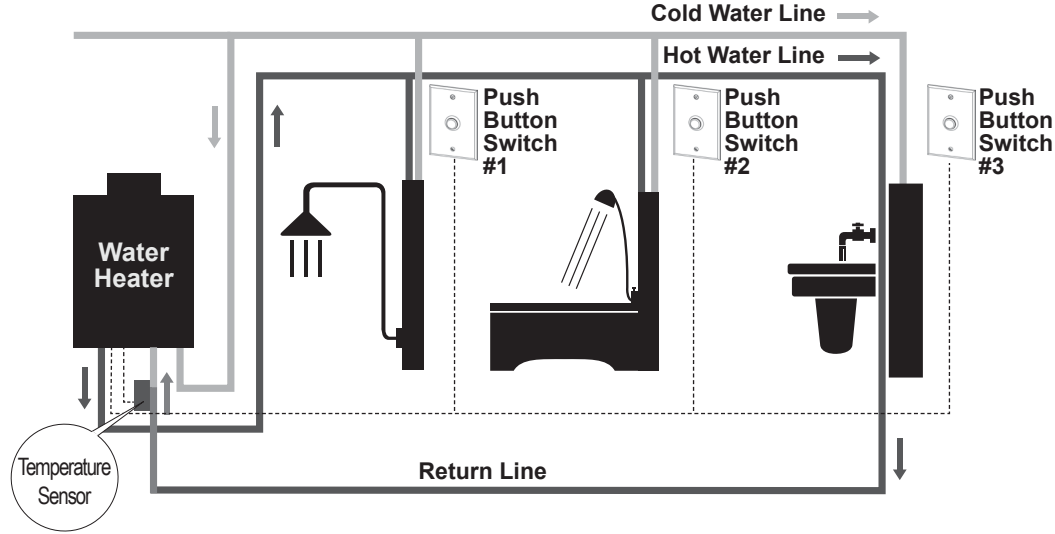
2. Overall installation schematic



Wires for Push Button Switches and Temperature Sensor should be connected to the terminal block located on the right side of the control panel.

3. Installation

1) Schematic diagram



Return Connection

Install temperature sensor as close as possible to the return connection

2) Wiring

- ① Turn off both gas and water supply to the water heater. Turn the power off.
- ② Remove the front cover by loosening the 4 screws. (Figure 1)

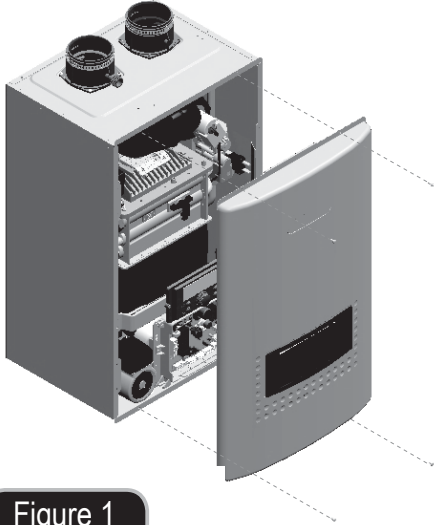


Figure 1

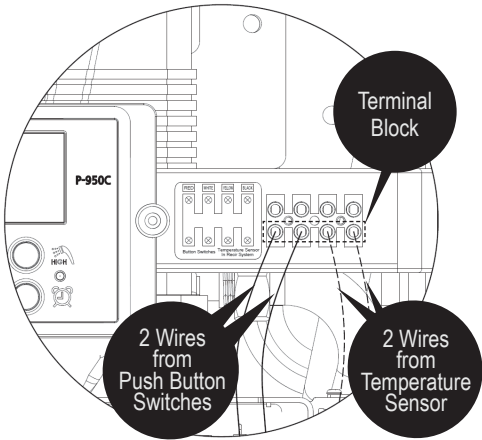
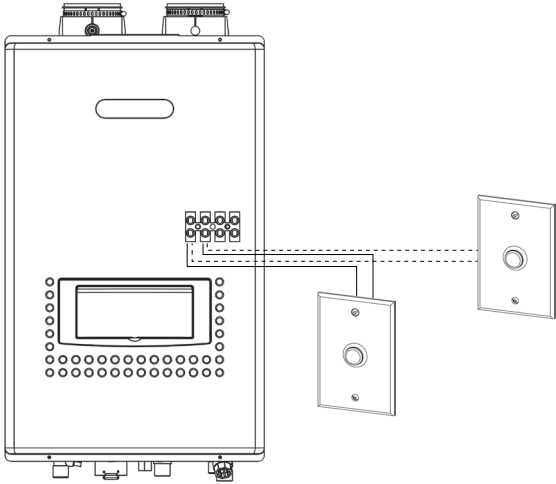


Figure 2

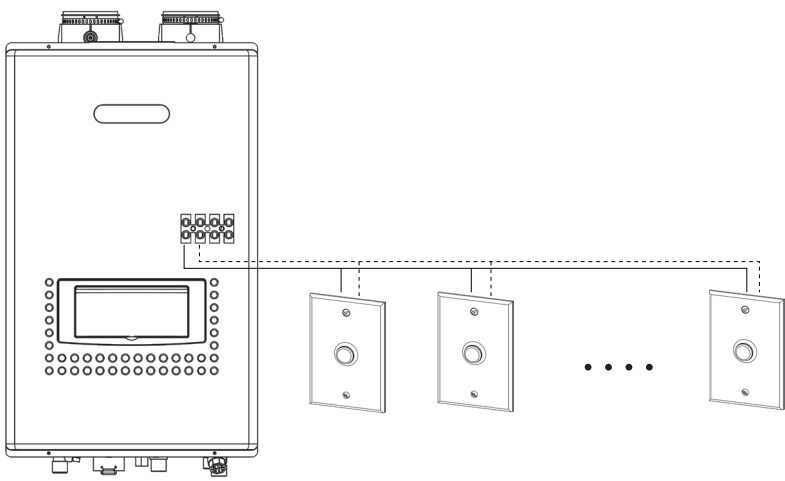
- ③ Connect both push button switch and temperature sensor to the connector on the terminal block. See Figure 2.
- ④ Close the front cover with secure 4 screws.

3) Wiring for Push Button Switches

When you connect the push button switches to the terminal block, you can run cables from each switch directly to the terminal block and connect them to the same terminal. Or, you can run a common branch circuit that runs from the terminal block and connect each switch to the branch.



Multiple switches connected directly to the same terminal at the terminal block.

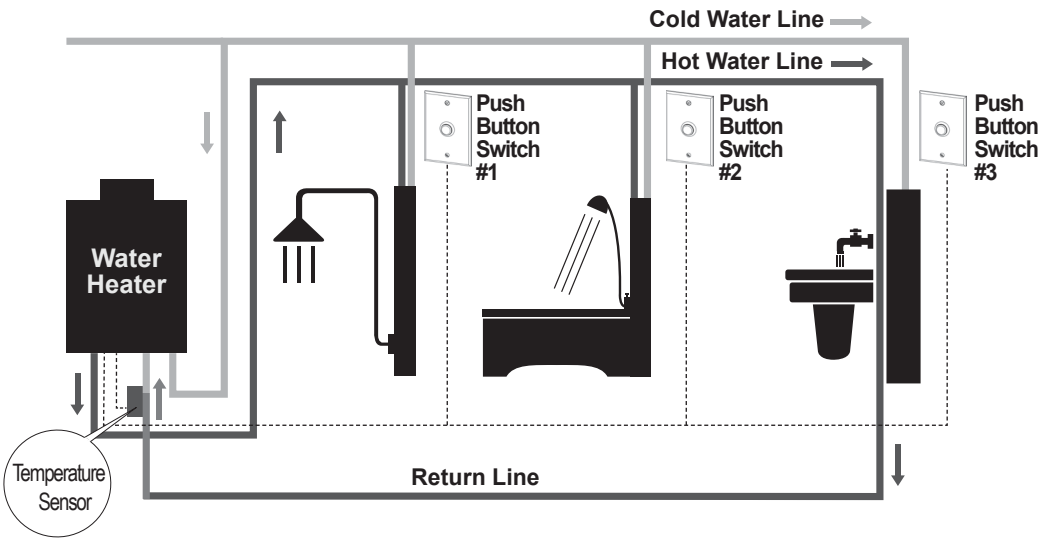


Multiple switches connected to a common branch circuit.

- Note> ① You can connect up to 10 push button switches to one terminal.
 ② Use cables with a diameter of AWG24 or greater.
 ③ Make sure that the total cable length does not exceed 328 feet (100 meters).

5. Installing temperature sensor on recirculation system

The sensor should be installed as close to the return connection of the unit as possible in order to measure the return temperature accurately.



- 1) Open the cover of temperature sensor package. See Figure 3.

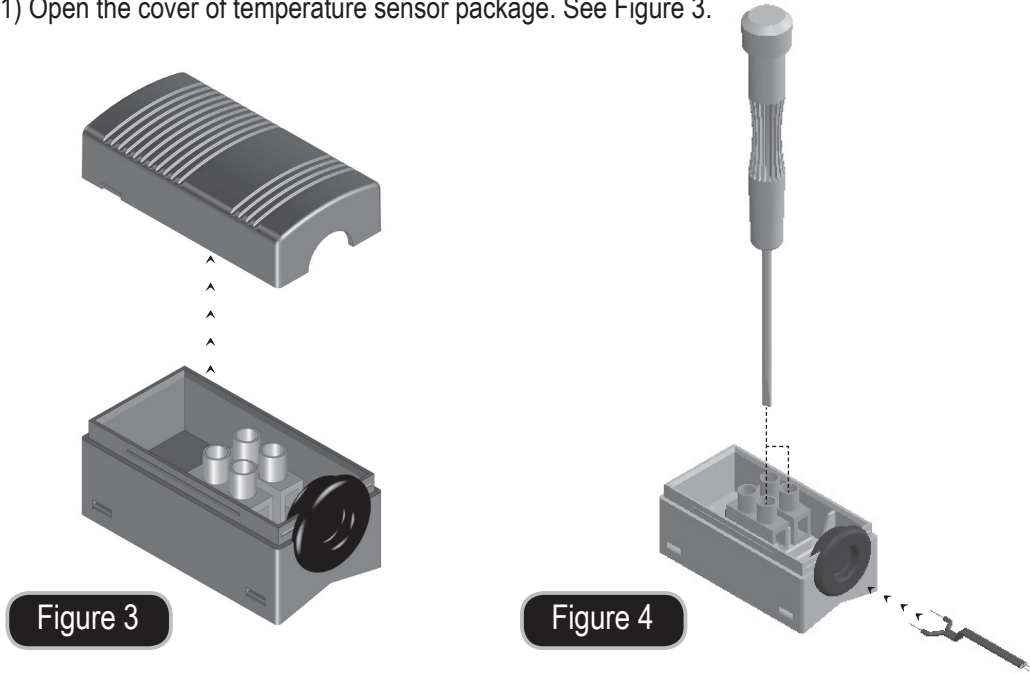


Figure 3

Figure 4

- 2) Connect cables to terminal block. See Figure 4.
 3) Close the cover. See Figure 5.

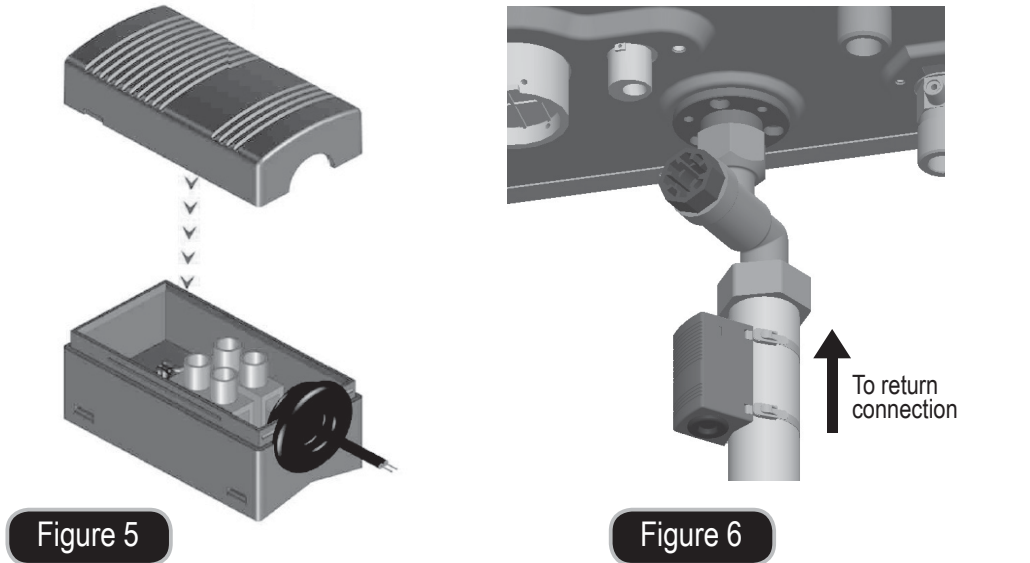


Figure 5

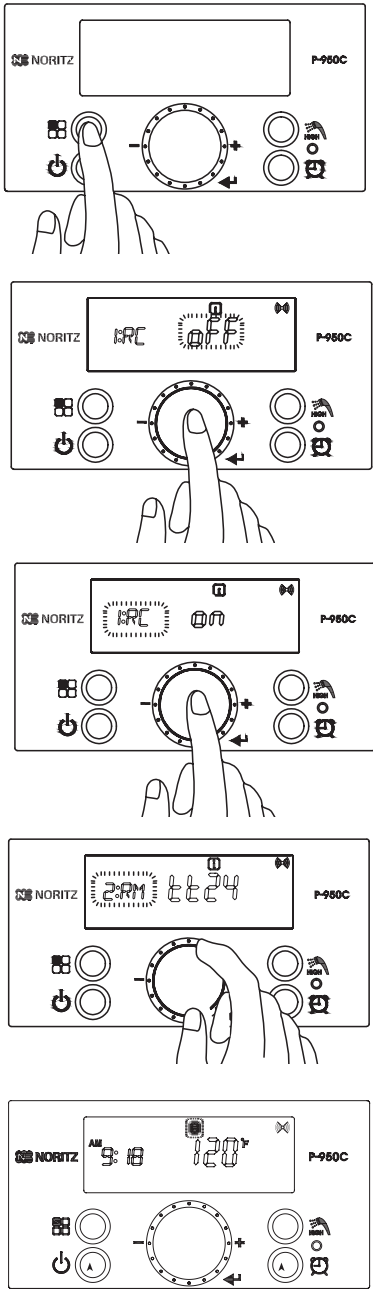
Figure 6

- 4) Install the temperature sensor:
- ① Fasten to the pipe using the included stainless steel tie bands.
 - ② Temperature sensor must be installed in the vertical position.
 - ③ Sensor orientation must be installed as pictured. See Figure 6.

6. Setting on the control panel

To activate the function, follow the procedure below.

- 1) Turn the power off on the remote.
- 2) Press and hold the 'Function Button' to enter 'Installer Mode', '[1:RC]' will be displayed.
- 3) Press the 'Dial Button' so 'oFF' is flashing. (Default setting is 'oFF' and recirculation function is not activated.)
- 4) Turn the 'Dial Button' clockwise so 'on' is flashing. (This will activate the recirculation function.)
- 5) Press the 'Dial Button' to store the current setting mode and return back to 'Installer Mode'.
- 6) Turn the 'Dial Button' to '[2:RM]' then press the 'Dial Button' to save the setting.
- 7) Turn the 'Dial Button' to '[tt24]' (On Demand Recirculation Mode) then press the 'Dial Button' to save the setting.



- Note> ① '[tt24]' (On Demand Recirculation Mode) cannot be accepted if the Temperature Sensor is not connected to the terminal block.
 ② You can find 'TT' icon on the display panel properly setting and connection the Temperature Sensor.

NOTICE Normal recirculation control is overwritten by the following:

1. Set to External recirculation automatically.
2. Recirculation is initiated by pressing a Push Button Switch.
3. Disables automatic timer function.
4. When the temperature reaches 102°F at the Temperature Sensor, recirculation will stop.
5. Or when 5 minutes have passed after pressing the Push Button Switch, recirculation will stop.

7. How to Use

- 1) Before hot water is required, press any of the push button switches.
 - 2) Pump will begin to circulate and prime the lines with hot water. The pump will continue to run until water reaches the most remote fixture.
- Note> The pump run time and delivery time are determined by water pipe distance and size. Longer runs will result in longer run times.
- 3) Pump will shut down automatically once hot water is available.
 - 4) Do not repeatedly press the push button switch.