

# KEY POINTS FOR A SUCCESSFUL INSTALLATION



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### BEFORE PROCEEDING

**STOP** Read the Installation and Operation Manual before you proceed.

- Use the Installation Checklist in the Installation and Operation Manual after completing the installation.
- Refer to the "Water Quality Guidelines" section in the manual for important water quality information.
- Pay close attention when unpacking the water heater carton box as the packing includes additional components.
- Confirm all included parts are located inside the water heater carton box (refer to the water heater manual for a full list of parts).

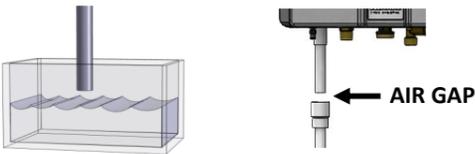
### ISOLATION VALVES

- Purge water line of air and foreign material by closing the hot isolation valve and opening the cold isolation valve and its drain valve.
- Debris will damage the water heater.



### CONDENSATE

The end of the condensate drain should be open to atmosphere.



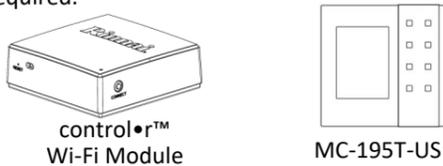
**DO NOT** submerge end of pipe in water. **DO NOT** install an external condensate trap.



### PUMP OPERATION

For RSC models, learning mode is the factory default setting for recirculation. Learning mode allows the water heater to identify when hot water is used, and then operates recirculation on subsequent days to reduce wait time for hot water.

If a fixed recirculation schedule is desired then installation of an MC-195T-US Timer/controller or control•r™ Wi-Fi Module is required.<sup>1</sup>

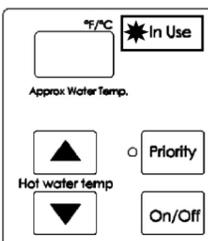


Note: Recirculation parameter setting 04 must be set to your circulation mode. See "Parameter Settings" section in this document for more information. Temporary pump operation can be initiated by resetting power to the appliance.

<sup>1</sup> DO NOT install the control•r™ Wi-Fi Module and MC-195T-US together as they are NOT compatible accessories.

### "IN USE" LIGHT

The integrated controller "In Use" light flashes based on the operation status of the water heater and integrated pump.



#### SOLID LIGHT

Indicates ignition and water flow.

#### SLOW FLASH

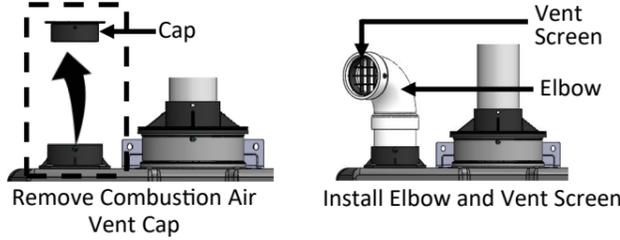
Indicates ignition and pump operation.

#### RAPID FLASH

Indicates pump operation with no ignition.

### VENTING (For Indoor Models Only)

- Ensure vent pipe slopes 1/4" per ft. toward the water heater.
- Ensure vent system doesn't exceed maximum length allowed.
- Room air installations: Remove the combustion air vent cap and install elbow and vent screen (see below).



Refer to the Installation and Operation Manual for complete details on the above information.

### TYPICAL INSTALL

Example Internal (Indoor) Unit



### RECIRCULATION PUMP

RSC199i/e and RSC160i/e Models Only

Select the appropriate recirculation mode (Dedicated or crossover) in the parameter settings.

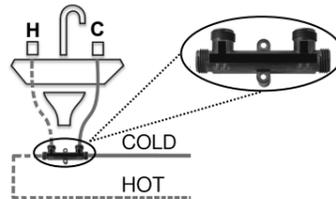
**Dedicated mode (parameter setting 04b):**

Determine maximum pipe length.

**Crossover mode (parameter setting 04c):**

Install crossover valve at the furthest fixture from the tankless water heater.

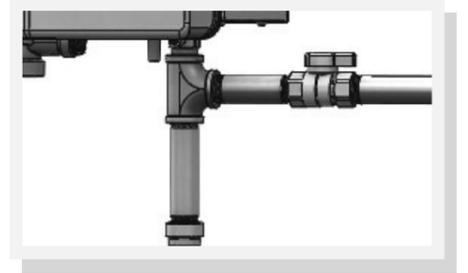
NOTE: To remove air, drain the water during pump operation. If the air is not fully removed, the pump could run dry.



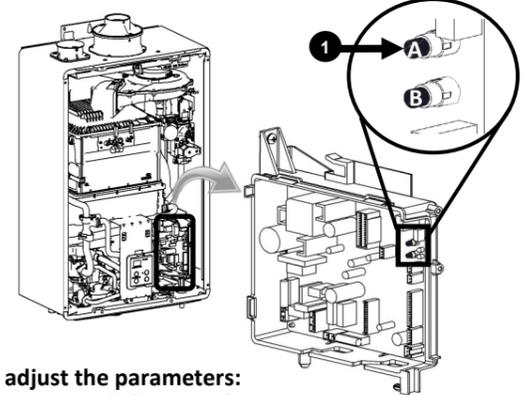
| Maximum Pipe Length (Crossover and Dedicated mode) |         |         |
|--|---------|---------|
| Pipe Diameter                                      | 3/4 in. | 1/2 in. |
| Total  | 400 ft  | 100 ft  |

### GAS

- Purge gas line of air and foreign material; this is especially critical for new propane gas tank installations.
- Confirm inlet gas pressure is within the listed value on the rating plate.

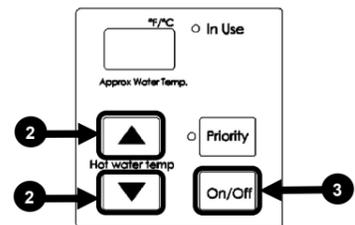


### PARAMETER SETTINGS



To adjust the parameters:

1. Press the "A" button for 1 second.
2. Use the ▼ and ▲ button on the controller to select a setting number (See Parameter Settings Table below).
3. Once the desired setting number is selected, use the "On/Off" button on the controller to change the selection for the setting number.  
**Example:** Display will change from 01A to 01b for Maximum Temperature setting.
4. To exit the parameters, press the "A" button on the PC board for 1 second.



Parameter Settings Table<sup>2</sup>

| SETTING # | SETTING DESCRIPTION                   | SELECTION                               |   |                                       |  |
|-----------|---------------------------------------|---|---|---------------------------------------|--|
|           |                                       | R                                       | b                                       | C                                     | d                                      |
| 01        | Maximum Set Temperature               | Residential: 120°F<br>Commercial: 140°F | Residential: 140°F<br>Commercial: 185°F |                                       |  |
| 02        | High Altitude (Installation Location) | 0 - 2,000 ft<br>(0 - 610 m)             | 2,001 - 5,400 ft<br>(610 - 1,646 m)     | 5,401 - 7,700 ft<br>(1,646 - 2,347 m) | 7,701 - 10,200 ft<br>(2,347 - 3,109 m) |
| 03        | Service Soon                          | Disabled                                | 0.5 Year                                | 1 Year                                | 2 Years                                |
| 04        | Recirculation Settings                | No Recirculation                        | Recirculation (Dedicated)               | Recirculation (Crossover)             |  |
| 05        | Recirculation Mode                    | Economy                                 | Comfort                                 | Commercial <sup>3</sup>               |  |
| 06        | Control Switch                        | BMS                                     | Air Handler (AH)                        |                                       |  |
| 07        | Units in Standby (EZ Connect)         | 2                                       | 1                                       |                                       |  |
| 08        | Cascade                               | Secondary                               | Primary                                 |                                       |  |
| 09        | Units in Standby (Cascade)            | 1                                       | 2                                       | 3                                     | 4                                      |
| 10        | Gas Type (Factory Set)                | NG                                      | LPG                                     |                                       |  |
| 11        | Maximum Flow Rate                     | Standard                                | High                                    |                                       |  |
| 12        | Factory Set Values                    | Without Pump                            | With Pump (RUR)                         | With Pump (RSC)                       |  |
| 13        | Not Adjustable                        | 199 (3237)                              | 180 (2934)                              | 160 (2530)                            | 130 (2024)                             |
| 14        | Internal (Indoor)                     | External (Outdoor)                      |   |                                       |  |
| 15        | Low Activation Mode                   | On                                      | Off                                     |                                       |  |
| 16        | Pump Speed                            | Max                                     | Low                                     |                                       |  |
| 17*       | First Day Pump Operation              | Pump Off                                | Pump On                                 |                                       |  |

<sup>2</sup> Some parameter settings are not available for all models. Refer to the installation and operation manual for complete model-specific parameter settings.

<sup>3</sup> Commercial mode should not be used for residential applications. Application of commercial mode may result in excessive machine wear and energy consumption.

\*For the first 24-hours of operation, Smart-Circ will learn hot water usage patterns and operate pump based on the learned patterns. On the first day, when the tankless water heater has no learned patterns, the unit can be set to no pump operation (Pump Off/No Recirc) for the first 24 hours or to the pump operating (Pump On/Recirc) every 15 to 30 minutes for the first 24 hours.