U344-0661X01(01)
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MC-601Q Universal Water Controller

Installation and Operation Instruction

This guide is for the operation and installation of the Rinnai universal water controller model MC-601Q. These instructions **MUST** be used and installed in conjunction with the Rinnai Continuous Flow Water Heaters, Operation & Installation Manual supplied with compatible Rinnai Continuous Flow Water Heaters.

If the MC-601Q is not listed as being compatible in the Operation & Installation Manual supplied with your Rinnai Continuous Flow Water Heater, then contact Rinnai for advice.

Refer to page 3 of this manual to confirm the maximum number and combination of controllers that can be fitted to a compatible Rinnai Continuous Flow Water Heater model.

This water controller is compatible with the following other Rinnai water controller models: MC-91Q, MC-100V, BC100V & MC-503RC.

IMPORTANT

This water controller to be installed in accordance with:

- **Local Regulations and Municipal Building Codes including local Occupational Health & Safety requirements.**
- **This appliance must be installed, maintained and removed by an Authorised Person.**
- **For continued safety of this appliance it must be installed and maintained in accordance with the manufacturer's instructions.**

OPERATION

Temperature Control

Water controllers allow precise temperature control by the user. When used correctly, the hot water unit will deliver the selected temperature, even when the water flow is varied, or more than one tap is in use.

Only one MC model water controller can be designated as a 'Master' water controller and this is normally used in the kitchen. All the remaining water controllers are designated as 'Sub' water controllers and are for use in bathrooms, toilets and laundries. The maximum temperature limit for all 'Sub' water controllers is restricted to 50°C* to minimise the risk of burns in these areas.

Each water controller can be individually programmed, however the water heater can only deliver one set temperature at any time. The available temperatures (°C) are as follows:

Water Controller Temperatures (°C)	Master (MC)	37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 55*, 60*, 65*, 70*, 75*
	Sub (MC or BC)	37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50

For hygiene in sanitary areas such as bathrooms, the suggested temperature should be 37°C ~ 43°C.

The above is a suggestion only, as you may find higher or lower temperatures more comfortable. However, maintaining lower temperatures also helps to save energy.

To obtain water temperatures lower than 37°C, simply open the cold water tap and add cold water until the desired lower temperature is reached.

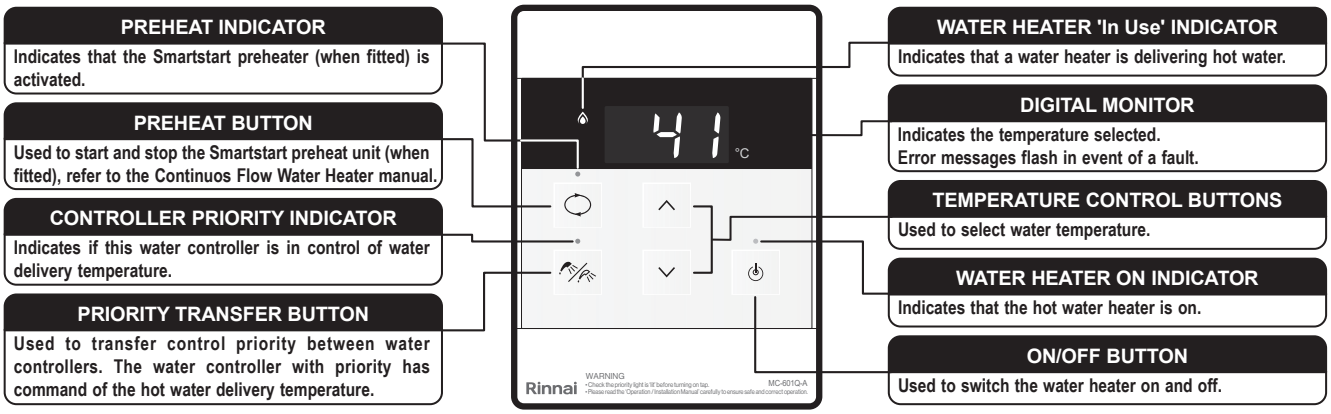
NOTE

*** Temperature may not be available on all installations. Some Rinnai Continuous Flow water heaters can be programmed to deliver higher temperatures from the master water controller.**

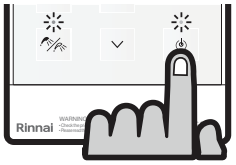
Rinnai Continuous Flow water heaters may be programmed to restrict / deliver maximum temperatures of 40, 42, 50, 55, 60, & 65°C. Contact Rinnai for more details.

Rinnai

Universal Water Controller (MC-601Q) Layout

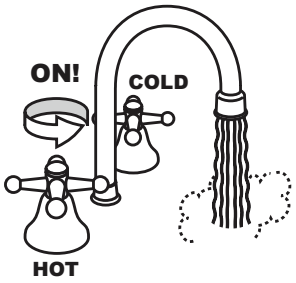


Turning On



If the water controller is switched off (No digits displayed in the digital monitor window) press the On/Off button once. The ON indicator will illuminate, indicating that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Adjusting Temperature



Select the desired temperature using the Hot water temp ∧ or ∨ buttons until the required temperature is displayed on the digital monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' indicator will illuminate on the water controller(s).

Once the hot water is running, if the set temperature is either too hot or cold press the Hot water temp ∧ or ∨ buttons until the desired temperature is reached.

NOTE

Whilst hot water outlets are open, the set temperature may be lowered to a minimum of 37°C. For safety, it cannot then be raised above 43°C until all hot water taps are closed.

If the water heater is turned 'Off' whilst hot water taps are open it can not be turned back 'On' until all hot water taps have been closed.

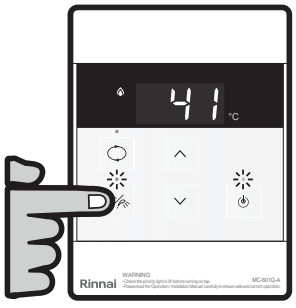
Temperatures higher than 50ºC MUST NOT be able to be selected from water controllers installed in bathrooms, ensuites or toilets. This is to help reduce the risk of burns from hot water. If this is not the case, the water controllers have been incorrectly installed. CONTACT YOUR INSTALLER.

The 'beep' sound can be muted by pressing the ∧ and ∨ buttons simultaneously for more than 3 seconds. To cancel sound muting, simply repeat the process.

CAUTION

Always check outlet water temperature before use. The parent / carer MUST check the temperature before placing dependants in contact with hot water. Read the section "Warning About Hot Water" in the Rinnai Continuous Flow Water Heaters, Operation & Installation Manual.

Transferring Priority



To control the water delivery temperatures when using two or more water controllers it is necessary to have priority transferred to the water controller you wish to use. Transferring of priority will **NOT** be possible if the 'In Use' indicator is currently illuminated, as this indicates hot water is flowing and that another water controller already has priority.

An illuminated Priority indicator confirms that the desired water controller is in control of the water delivery temperature. If the Priority indicator is not illuminated press the Priority Transfer button once. The Priority indicator will illuminate, indicating that hot water temperature control has been transferred and that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Water Controller Combinations & Configurations

Wireless, Universal and Deluxe water controllers can be combined, refer to "Water Controllers Limitations" on page 3 to confirm the maximum number and combination of water controllers that can be fitted.

INSTALLATION

Location

- **DO NOT install water controllers near a heat source, such as a cook top, stove or oven. Heat, steam, smoke and hot oil may cause damage.**
- **DO NOT install water controllers outdoors unless protection from water / dust ingress and sunlight are provided.**
- **The water controller set as the MASTER water controller MUST NOT be installed in a bathroom.**
- **DO NOT install water controllers in direct sunlight.**
- **DO NOT install water controllers against a metal wall unless the wall is earthed in accordance with local electrical authority rules.**
- **Water controllers MUST NOT be installed where chemicals such as benzene, alcohol, turpentine, hydrogen sulphide, ammonia, chlorine or other similar chemicals are in use.**

The Water controller is a water resistant device, however excessive exposure to water may result in damage to the controller. Durability is improved when positioned outside the shower recess.

- **AVOID direct exposure to water or steam as these conditions may cause a malfunction.**
- **Water controllers must be installed in shaded and clean locations. They should be fitted out of reach of children (suggested height from floor to be at least 1500 mm). Water controllers MUST BE installed at least 400 mm above the highest part of a sink, basin or bath.**
- **When cleaning your water controller use ONLY a damp cloth and a mild detergent.**

Communication Cables

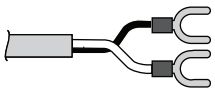
Water controllers operate at an extra low voltage (12 Volts DC) which is supplied from the water heater, a 10 metre long communications cable is supplied for connection to the water heater.

ONLY Rinnai supplied communication cables may be used. Optional longer communication cabling is available from Rinnai.

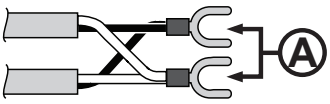
The water heater end of the cables are fitted with spade terminals. Only two pairs of cables (4 spade connectors in total) may be terminated. When attaching three or four cables it is necessary to join the cable terminals as follows:

For each pair cut off the existing spade connectors and re-terminate each pair into a new spade connector Ⓐ (spade connectors are available from your local electrical component retailer) so that there are only two sets of spade connectors (4 spade connectors in total) to be terminated.

Single cables can be used when terminating up to two communication cables.



Paired cables are to be used when terminating three or four communication cables.



Water Controllers Limitations

An installation can have up to 4 universal MC-601Q water controllers.

Deluxe kitchen, bathroom and wireless water controllers are also available and various combinations of universal and the deluxe and wireless controllers can be used with the following limitations:

- A maximum of 4 water controllers can be fitted. Any combination of deluxe and universal water controllers can be used with the following limitations:
- Only **ONE** master controller can be installed. This can be a deluxe kitchen, wireless or universal water controller (when programmed as a master controller).

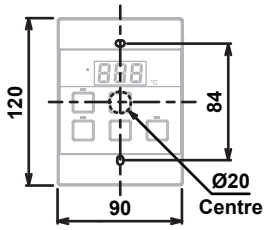
When a deluxe kitchen water controller is fitted it will always functions as a master controller, this is the default setting and can not be changed.

- Up to **TWO** deluxe bathroom water controllers can be installed.
- The **FOURTH** water controller in any installation **MUST BE** a wireless or universal.

For more information regarding deluxe kitchen, bathroom and wireless water controllers, contact Rinnai.

Universal Water Controller (MC-601Q) Installation

1. Determine the most suitable position, refer "Location" on page 3.
2. Mark and drill 3 holes (mounting and cable access) as per the dimensions (mm) below.



Dimensions

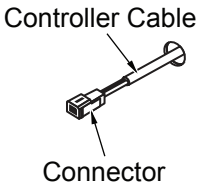


Fig. 1

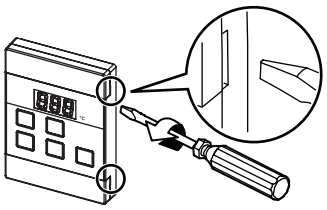


Fig. 2

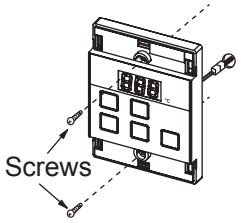


Fig. 3

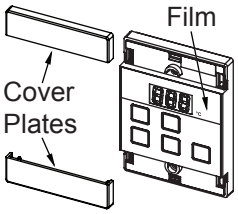


Fig. 4

3. When running cable through the access hole ensure the connector end of the cable is located nearest to the water controller (Fig. 1).
4. Carefully remove the cover plates from the water controller, using a screw driver (Fig. 2).
5. Connect the cable to the water controller. Feed any excess cable lengths into the wall cavity to avoid the pinching of cables between the wall and the water controller.
6. Fix the water controller to the wall using the appropriate fixings (Fig. 3).
7. Remove protective film from the water controller face and replace the cover plates (Fig. 4).

Optional Programming For Universal Water Controllers (MC-601Q)

QUESTION **1** **Are there four water controllers connected?**

IF NO: You have three (or fewer) water controllers, go to Question 2.

IF YES: You will need to activate the fourth water controller as follows:

STEP 1: For the water controller in the KITCHEN ONLY, press and hold the 'Priority Transfer' and 'On/Off' buttons simultaneously (see Fig. 1) until a 'beep' is heard (approximately 5 seconds).

STEP 2: Check that the display on ALL FOUR water controllers is lit and displaying a temperature when 'switched on'. If any ONE of the water controllers displays two dashes (see Fig. 2) repeat STEP 1.

This completes the activation procedure for the fourth water controller, you may ignore Question 2.

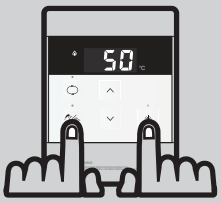


Fig. 1

Fig. 2

QUESTION **2** **Is the water heater marked to state it delivers water not exceeding 50°C?**

IF YES: No further action required.

IF NO: You will need to program the kitchen water controller to enable selection of temperatures higher than 50°C.

STEP 1: For the water controller in the KITCHEN ONLY, press and hold the 'Priority Transfer' and 'On/Off' buttons simultaneously (Fig. 3) until a 'beep' is heard (approximately 5 seconds).

STEP 2: When the water controller fitted in the KITCHEN is switched On, it should be possible to select temperatures higher than 50°C. If not, repeat STEP 1.

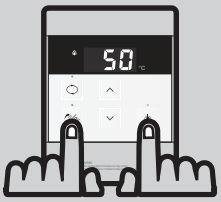


Fig. 3

NOTE

If the water controller in the kitchen is replaced, repeat STEP 1 for the replacement controller.

If the water controller in the kitchen is swapped with another water controller (for example, the water controller fitted in a bathroom), repeat STEP 1 for the water controller moved from the kitchen to the bathroom. Then perform STEP 1 for the water controller moved from bathroom to the kitchen.