

INSTALLATION - GENERAL

■ UNIT

A 230/240 V standard earthed power point is required within 1500 mm of the internal Infinity.

The Internal Infinity weighs 25 kg and the wall on which it is to be mounted must be capable of supporting it and associated pipework. Ensure that suitable fixing screws or bolts are used to secure the Infinity to the wall. Bracket and fixing hole locations are shown overleaf.

The top bracket has a keyhole slot so that the Infinity can be positioned by hanging it on one screw, then the other screws can be secured. After determining the most suitable position, fix the Infinity to the wall.

CHECK PIPE SIZING REQUIREMENT USING AN APPROVED PIPE SIZING CHART (eg: Charts in AG601 NZ S5261).

Connect hot and cold water and gas pipes. Approved valves **MUST BE FITTED** to both the cold water inlet and the gas inlet.

In areas where the water pressure is over 1000 kPa, a pressure limiting valve must also be fitted. Both connections are R³/₄/20. Locations are shown overleaf.

The Internal Infinity uses 160 MJ/h of gas when operating at full capacity.

IF THE GAS PIPE SIZE IS INSUFFICIENT, THE CUSTOMER WILL NOT GET THE FULL PERFORMANCE BENEFIT. An approved isolation valve **MUST BE FITTED** to the gas inlet. Connection size is R³/₄/20. This is not an indication of the size of pipe required. Check the data plate for gas inlet.

The Infinity water heater is not suitable for use as a pool heater.

The internal Infinity must only be installed with the Rinnai Special approved flueing system. Flueing instructions are packed with flue components.

REMOTE CONTROLS

■ REMOTE CONTROLS

The Remote Controls enable the customer to control the functions of the Infinity. Before fitting the Remote Controls, determine the most convenient positions for installation where the customer will benefit the most.

The MC-33 Kitchen Control is intended to be fitted in the kitchen or other convenient area where the majority of hot water is being used.

The BC-45 Bath Control is intended to be fitted conveniently close to the shower, in the bathroom, en-suite or other area where the customer requires priority over water temperature selection.

The BC-45 Bath Control enables the person in the shower/bath area to lock in the selected water temperature, so that the temperature can not be changed from the MC-33 Kitchen Control.

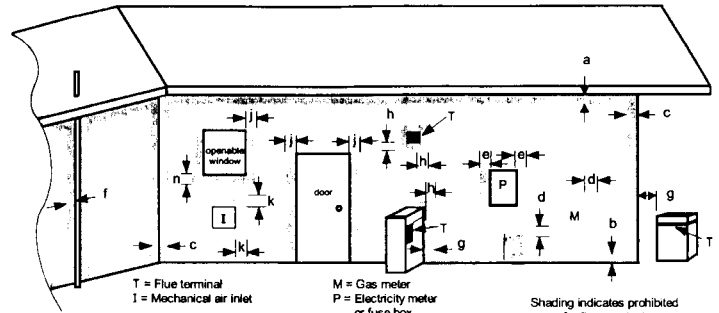
The BSC-45 Bath Control is intended for use in a second bathroom or ensuite.

POSITIONING

- When determining a suitable position for the Infinity, the length of hot water pipe runs should be taken into consideration. In principle, the Infinity should be as close as possible to the most often used taps, or in a central location between taps, showers etc.

- See diagram overleaf for position of gas, water and power connections.

- The location of the flue terminal must comply with the clearances shown in the following diagram.



a - Below eaves, balconies or other projections	300
b - From the ground or above a balcony	300
c - From a return wall or external corner	300
d - From a gas meter (M)	1000
e - From an electricity meter or fuse box (P)	500
f - From a drain or soil pipe	75
g - Horizontally from any building strure or obstruction facing a terminal	500
h - From any other flue terminal, cowl, or combustion air intake	300
j - Horizontally from an openable window, door, inlet, or any other opening into a building, with the exception of sub-floor ventilation	500
k - From a mechanical air inlet, including a spa blower	1000
n - Vertically below an openable window, inlet or any other opening into a building, with the exception of sub-floor ventilation	1500

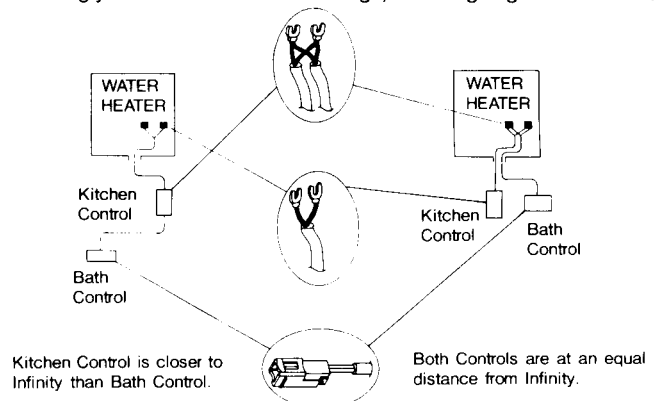
Note: If you are unsure about clearances not indicated here, in general refer to AG601, or NZ 5261 Installation code.

REMOTE CONTROLS

- When deciding on the best positions for the Remote Controls, the following points should be taken into consideration.

1. Fit the Controls out of reach of children. (Suggested height from floor-1500 mm).
2. Avoid positions where the Remote Control will become hot (eg: over hotplates, near ovens or heaters).
3. If possible, avoid direct sunlight (The Digital Monitor is difficult to read in direct sunlight).
4. Avoid areas where Remote Control will be affected by oil splashing or cooking.
5. The BC-45/BSC-45 Bath Control is water resistant, however, it should not be installed where it can come into contact with running water. Durability will be improved if positioned outside a shower recess.
6. Damage caused by harsh cleaning materials will not be covered under warranty.
7. The cables to the Remote Controls only carry 12 V DC (extra low voltage).
8. Cables should run back to the Infinity from the Remote Controls, or cables should run between the Controls then back to the Infinity. Suggested cable arrangements are shown below.

The installation in every application will vary, therefore the Remote Control cable has been provided so that you may cut the length accordingly and fit the horse shoe lugs, ensuring a good connection.



Cables are simply piggy-backed at the Infinity or the Kitchen Control. Polarity is not important when connecting cables.

Either colour wire can be connected to either terminal at both the Infinity or Kitchen Control. If more cable is needed, any multi-stranded cable with similar specification to the cable supplied with the Infinity can be used. Maximum length is 50 m. Best practice is to install the remote control wiring 150 mm away from normal power supply cables to minimise electrical interference.

GAS PRESSURE SETTING PROCEDURE

1. Check gas type switch is in correct position.

IMPORTANT

(Aust./NZ) N.G.	(Aust.) Prop.G	(NZ) LPG

2. Attach pressure gauge to pressure test point.
Turn heater on by opening a tap.
3. Set No.7 switches to ON. Remove plug in base of heater for access to regulator screw. Adjust regulator screw on modulating valve.



4. Adjust pressure if necessary to figure in table below.

PRESSURE SETTING LOW

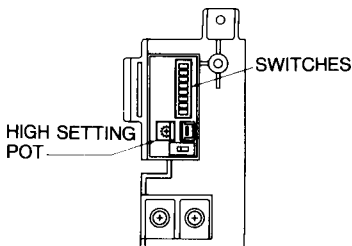
NG	0.06kPa
Prop.G	0.16kPa
LPG(NZ)	0.17kPa

5. Lock Regulator Screw.

6. Switch No.7 "OFF" and switch No.8 "ON".



7. Adjust high pressure by POT on P.C.B. if necessary to figure shown in table below.



PRESSURE SETTING HIGH

NG	0.62kPa
Prop.G	1.80kPa
LPG(NZ)	1.76kPa

8. IMPORTANT : Return switch 7 and 8 switches to the OFF position.



9. Close tap to turn heater off.

10. Remove gauge, replace screw.

11. Replace plug in base.

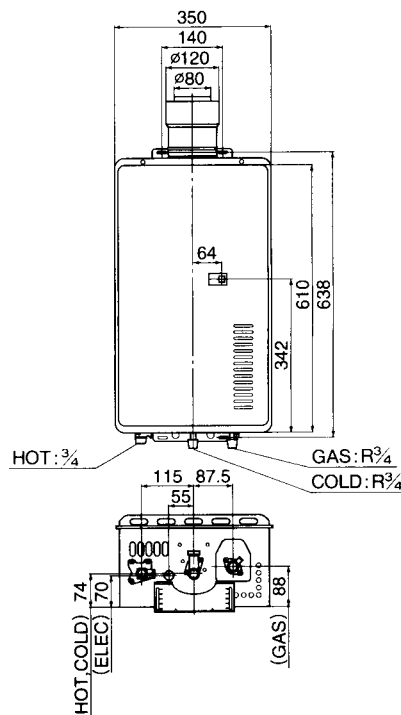
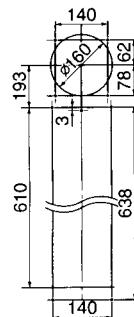
■ TESTING

- Turn on Gas and Water.
- Test for water leaks and gas escapes. Use soapy water to check for gas leaks.
- Remove pressure test point screw, attach pressure gauge to test point.
- Turn power on (Caution 230/240V inside unit).
- Turn Infinity on at Kitchen Remote Control. Set temp to 55°C. Open any hot water tap fully.
- Check test point pressure.
- Refer to tables in gas pressure setting procedure column.
- If the gas pressure is low, there could be various reasons eg. warm incoming water, low water flow, gas pipes too small.
- If it is established that the gas pressure needs adjusting, first check the pressure at the incoming pressure test point (on the gas inlet). If the incoming pressure is correct, follow the instructions EXACTLY according to the information provided above. IF IN DOUBT, CONTACT RINNAI.
- Turn hot water off. Turn power off. Remove pressure gauge and replace test point screw.
- Replace front cover (4 screws).
- Turn power on. Turn Infinity ON at either Remote Control.
- Check operation of appliance by ensuring that the Remote Controls are functioning correctly.

FAULT/FAILURE PROCEDURE

If you are unable to get the Infinity to operate correctly, contact Rinnai, or your local agent.

NOTE: The regulator is factory pre-set, it should not need adjusting. Check incoming pressure before attempting to make any change to the appliance regulator.



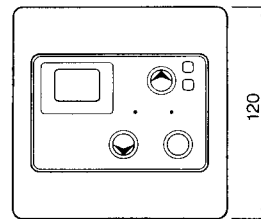
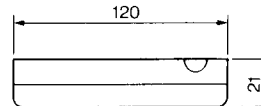
CORRECT GAS PIPE SIZING IS VERY IMPORTANT.

IF GAS PIPE SIZE IS INSUFFICIENT, THE CUSTOMER WILL NOT GET THE FULL PERFORMANCE BENEFIT.

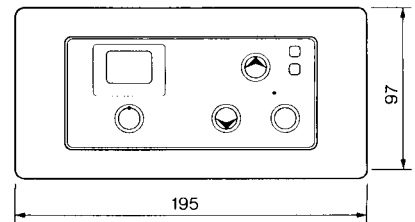
CHECK MAXIMUM CONSUMPTION TO CALCULATE THE PIPE SIZING.

USE A SUITABLE PIPE SIZING CHART (FOR EXAMPLE THE CHARTS IN AG601 NZ S5261) TO CALCULATE PIPE SIZING.

REMOTE CONTROLS

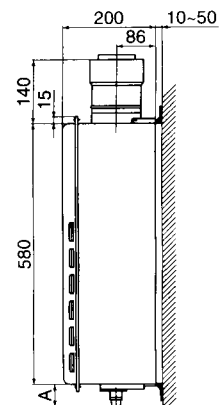


Kitchen Control
MC-33-3A



Bath Control
BC-45-3A
BSC-45-3A

(mm)



NOTE: FLUEING

The internal Infinity must only be installed with the Rinnai Special approved flueing system. Flueing instructions are packed with flue components.

	A DIMENSION
GAS	51
COLD	49
HOT	42

INTERNAL MODEL

■ FITTING THE KITCHEN CONTROL

MC-33

● Determine the most suitable position for the Control. Consider access by children.

● Make 3 holes in the wall, as shown, one for the cable and two for the securing screws. Make holes to ensure remote will be level. (fig 1)

● Run the cable provided between the Control and the Infinity Water Heater.

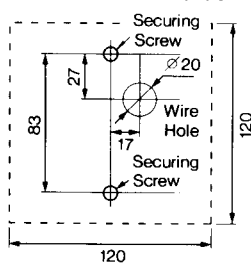
● Remove the face plate from the remote control, using a screw driver. (fig 2)

● Connect the cable to the control as shown. (fig 3)
Either colour wire can be connected to either terminal.

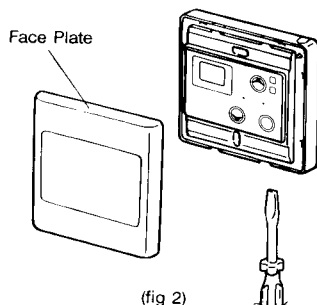
NOTE: If the cable cannot be run in the wall cavity, the plastic "knockout" should be removed from the top or bottom of the control.

● Fix the control to the wall, and replace the face plate. (fig 4)

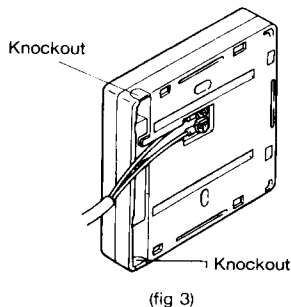
Outline of Remote Control



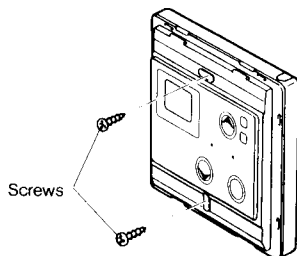
(fig 1)



(fig 2)



(fig 3)



(fig 4)

■ FITTING THE BATH CONTROL

BC-45/BSC-45

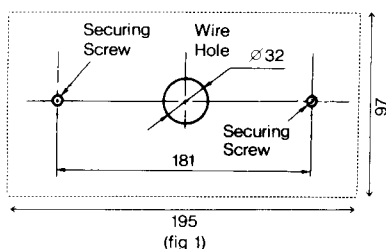
● Determine the most suitable position for the Control. Consider access by children.

● Make 3 holes in the wall, as shown, one for the cable and two for the securing screws. Make sure holes are level. Fit wall plugs (fig 1).

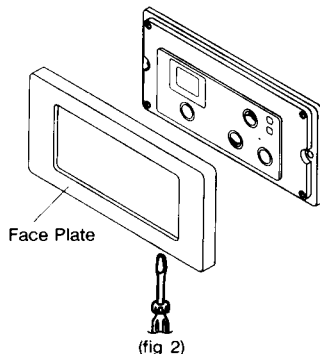
● Run the cable provided between the Control and the Infinity.

● Remove the faceplate from the Remote Control using a screwdriver (fig 2).

Outline of Remote Control



(fig 1)



(fig 2)

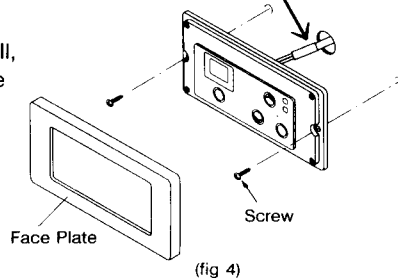
● Connect the BC-45/BSC-45 Control to the cable, using the end of the cable with the connector fitted (fig 3).

→ To Control



(fig 3)

● Fix the Control to the wall, and replace the faceplate (fig 4).



(fig 4)

■ CONNECTING REMOTE CONTROL CABLE TO THE INFINITY

● Disconnect power.

● Remove the cover from the Infinity (4 screws) (fig 1).

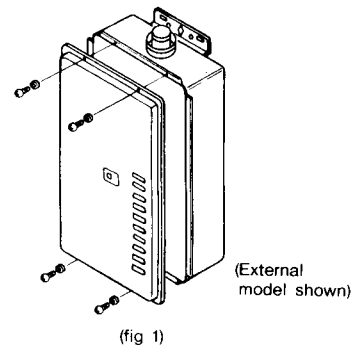
● Remove plastic cover from PCB and electrical connections.

● DO NOT ATTEMPT TO CONNECT REMOTE CONTROL CABLES WITH POWER ON.

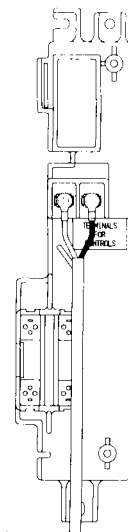
● Thread the cable through the cable access hole at the base of the Infinity, then connect to the Remote Control terminal on the right hand side, bottom of P.C.B. unit (fig 2). Either colour wire can be connected to either terminal.

● Replace plastic cover.

● Secure cable inside Infinity using the clamp provided.



(fig 1)



(fig 2)

■ Purge Gas and Water pipes to remove air and swarf. Swarf in either gas or water supplies may damage the Infinity.

REMOTE CONTROL CABLE

Single wire connection, shown ready for connection. Piggy-back the connection in case of two or three Remote Controls.

WATER ON

GAS ON



APPLICABLE MODELS:

REU-2006FFU

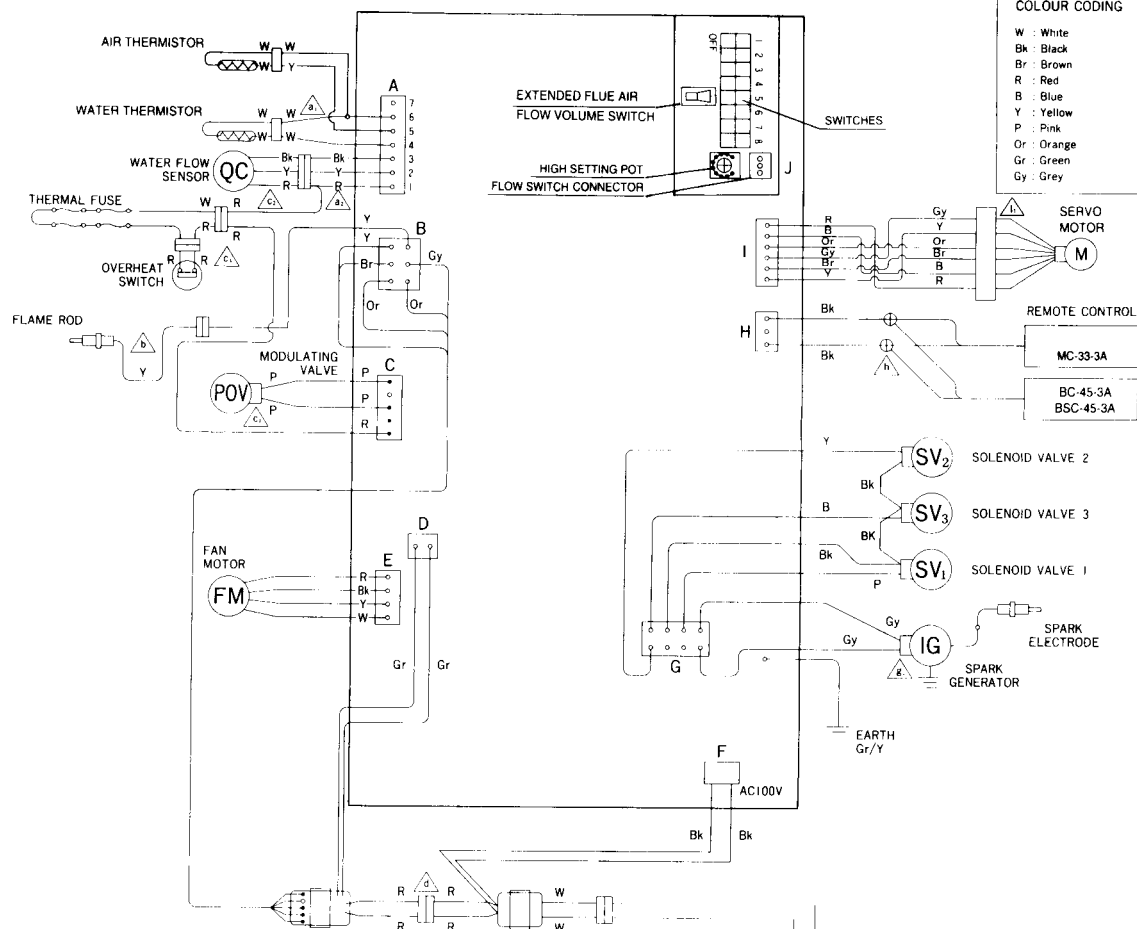


CAUTION
RISK OF ELECTRIC SHOCK



WIRING DIAGRAM












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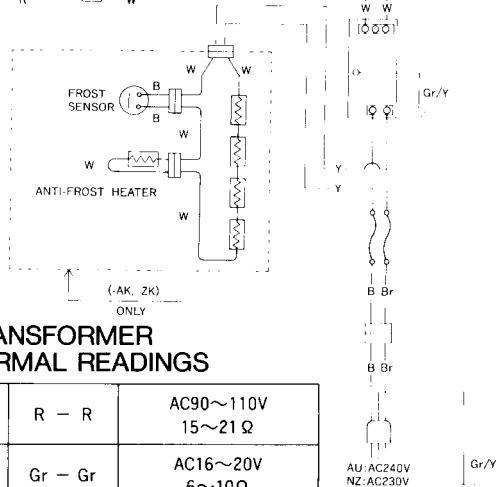


COLOUR CODING

W	: White
Bk	: Black
Br	: Brown
R	: Red
B	: Blue
Y	: Yellow
P	: Pink
Or	: Orange
Gr	: Green
Gy	: Grey

DIAGNOSTIC POINTS

①		R - R	AC90~110V	TRANSFORMER
②		Bk - Bk	DC11~13V	REMOTE CONTROL
③		R - Bk	DC11~13V	WATER FLOW SENSOR
		Y - Bk	DC2~10V	
④	E	W - Bk	DC2~7V	FAN MOTOR
	J		55~170Hz	
⑤		W - W	15℃ 11.4~14 kΩ	WATER TEMPERATURE THERMISTOR
			30℃ 6.4~7.8kΩ	
			45℃ 3.6~4.5kΩ	
			75℃ 1.4~1.8kΩ	
⑥		W - W	15℃ 11.4~14 kΩ	AIR TEMPERATURE THERMISTOR
			30℃ 6.4~7.8kΩ	
			45℃ 3.6~4.5kΩ	
			75℃ 1.4~1.8kΩ	
⑦		W - R	BELOW 1 Ω	THERMAL FUSE
⑧		R - R	BELOW 1 Ω	OVERHEAT SWITCH
⑨		Gy - Gy	AC90~110V	SPARK GENERATOR
⑩	G	P - Bk	DC80~100V 0.9~1.3KΩ	SOLENOID VALVE 1
⑪	G	Y - Bk	DC80~100V 1.3~1.9kΩ	SOLENOID VALVE 2
⑫		P - P	DC0.5~25V 65~90Ω	MODULATING VALVE
⑬		Y - EARTH	AC40~150V ABOVE DC1.μA	FLAME ROD
⑭	G	B - Bk	DC80~100V 1.3~1.9kΩ	SOLENOID VALVE 3
⑮		R - B	DC11~13V 10~30Ω	SERVO MOTOR
		Or - Gy	DC11~13V	



TRANSFORMER NORMAL READINGS

	R - R	AC90~110V 15~21Ω
D	Gr - Gr	AC16~20V 6~10Ω
B	Or - Or	AC13~30V 1.4~1.8Ω
B	Br - Gy	AC30~50V 6~10Ω
B	Y - Gy	AC180~220V 0.4~0.6kΩ



WARNING

During pressure testing of the consumer piping in an installation ensure gas cock situated before unit is shut-off.

Failure to do so may result in serious damage to the appliance and possible injury.