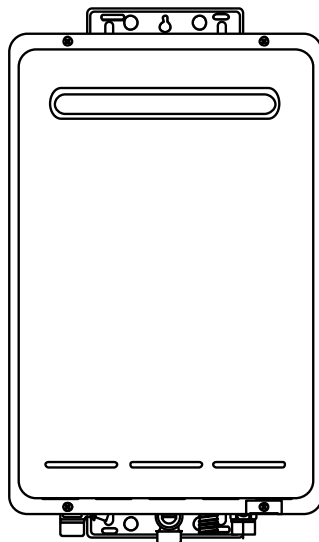


Rinnai

INFINITY 16 REU-V1616W
V1200 REU-V1620W
INFINITY 18 REU-V2018W
INFINITY 20 REU-V2020W

SERVICE MANUAL



Rinnai High Capacity Continuous Flow Gas Hot Water System

NOTE: This manual does not apply to models: REU-V1620WG, REU-V1620WB, REU-V2024WG, REU-V2024WE, REU-V2426WB, REU-V2626WG, REU-VM2630WD, REU-VM2630WC, REU-V2632FFUG, REU-VM2632FFUC



The Australian
Gas Association

All Rinnai products are certified by the Australian Gas Association as compliant to relevant Australian Standards.



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2005 - Issue 2.

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WARNING



Failure to comply with these instructions may result in serious personal injury or damage to the appliance.

ALL WIRING INSIDE THIS APPLIANCE MAY BE AT 240 VOLTS POTENTIAL
ALL SERVICE WORK MUST BE CARRIED OUT BY AN AUTHORISED PERSON.
DO NOT TEST FOR GAS ESCAPES WITH AN OPEN FLAME

This manual has been published by Rinnai Australia Technical Services. We welcome users of this manual to provide feedback and suggestions for improvement purposes.

SM REU-V1616W/
REU-V1620W/
REU-V2018W/
REU-V2020W
Issue N^o2

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Glossary of Terms and Symbols

dB(A)	-	sound pressure level in decibels, “A” range
DC	-	direct current
AC	-	alternating current
WFCD	-	water flow control device
FB	-	feedback information
FF	-	feedforward information
Hz	-	Hertz
IC	-	integrated circuit
kPa	-	kilopascals
LED	-	light emitting diode
L/min	-	Litres per minute
mA	-	milliamps
MJ/h	-	megajoule per hour
mm	-	millimetres
OHS	-	overheat switch
PCB	-	printed circuit board
CPU	-	central processing unit
POT	-	potentiometer
rpm	-	revolutions per minute
SV	-	solenoid valve
∅	-	diameter
Δ °C	-	temperature rise above ambient
POV	-	modulating valve
TE	-	thermal efficiency
TH	-	thermistor
T _{IN}	-	temperature of incoming water
T _{OUT}	-	temperature of outgoing water

1. Introduction

The Rinnai V-Series hot water units represents the latest technology in continuous flow, temperature controlled hot water.

Features

- The Infinity 16, V1200, Infinity 18 and Infinity 20 NEVER RUNS OUT of hot water. Whilst electricity, water and gas supplies are connected, hot water is available whenever hot water taps are open.
- Built into the main micro-processor is the facility to LIMIT THE MAXIMUM TEMPERATURE of the hot water supplied. The water temperature may be limited to various maximum temperatures. This is particularly useful when the hot water unit is installed where young children or the infirm may be using the hot water. The Infinity is delivered with a maximum preset temperature of 50°C or 55°C. If required, the temperature limits can be changed by a service technician. For further information, please contact Rinnai.
- The Infinity is a power flued appliance. It is COMPACT, saving both floor and wall space.
- The temperature of outgoing hot water is CONSTANTLY MONITORED by a BUILT-IN SENSOR. If the temperature of the outgoing hot water rises to more than 3°C above the selected temperature shown on the Digital Monitor (or the pre-set limit when Remote Controls are not fitted), the burner will automatically go out. The burner will ignite again once the outgoing hot water temperature falls below the temperature shown on the Digital Monitor (or the pre-set limit).
- The burner lights automatically when the hot water tap is opened, and goes out when the tap is closed. IGNITION IS ELECTRONIC, therefore there is not pilot light. When the hot water tap is off, no gas is used.
- ‘Standard’ Remote Controllers are available as an optional extra. Depending on the models chosen, these offer the following additional features :
 - Localised Temperature Control for up to one kitchen and two bathroom controllers
- Temperatures selected at the controllers are retained in the SYSTEM MEMORY.
- Operating NOISE LEVEL IS VERY LOW.
- ERROR MESSAGES ARE DISPLAYED on the Remote Controllers, assisting with service.

2. Specifications

Type of appliance	Temperature controlled continuous flow gas hot water system
Operation	With / without remote controls, mounted in kitchen, bathroom etc
Exhaust system	Forced Flue
Rinnai model number	REU-V1616W / REU-V1620W
Installation	Externally mounted
Dimensions	Width - 350 mm Height - 530 mm Depth - 170 mm
Weight	16 kilograms
Gas consumption (Min. / Max.)	Natural gas : 125 ~ 18 MJ/h Propane gas : 125 ~ 18 MJ/h
Output (kW) (Min. / Max.)	27.9 / 4.0
Connections	Gas connection - R3/4 (20A) Cold water connection - R1/2 (15A) Hot water connection - R 1/2 (15A)
Ignition system	Direct electronic ignition
Electrical consumption	Normal - 47 W Standby - 6 W (with 1 remote control) Anti-frost protection - 74 W
Hot water capacity (Raised 25°C)	2.3 to 16 L/min
Thermal efficiency	80%
NOXaf	35 ppm
Temperature range (with remote)	Kitchen controller : 37 ~ 55°C Bathroom controller: 37 ~ 50°C
Default temperature control (without remote)	40°C, 43°C, 50°C, 55°C (factory setting), 65°C, 75°C (set by combination of dip switches on PCB)
Water Temperature control	Simulation feedforward and feedback
Water flow control	Water flow sensor, Electronic water flow control device
Minimum operating water pressure	10 kPa
Nominal operating water pressure	100 kPa ~ 830 kPa
Minimum operating water flow	2.4 L/min
Maximum operating water flow	16 L/min (REU-V1616W) / 20 L/min (REU-V1620W)
Power supply	Appliance - AC 240 Volts 50 Hz Remote control - DC 12 Volts (Digital)
Safety device	Flame failure - flame rod Boil dry - water flow sensor Remaining flame (OHS) - 97°C bi-metal switch Over temperature - 95°C lockout thermistor Fusible link - 129°C Thermal fuse Pressure relief valve - Opens 2060 kPa, Closes: 1470 kPa Combustion fan rpm check - Integrated circuit system Over current - Glass fuse (3 Amp)
Deluxe remote control (optional)	Kitchen control - MC-91Q-2A - MC70-2A Bathroom control - MC91Q-2A - BC70-2A Second bathroom control - MC91Q-2A
Cable (optional)	Non-polarized two core cable

Note 1: The default factory setting is 50°C or 55°C for REU-V1616W / REU-V1620W. The unit can be ordered from Rinnai to be pre-set to any of the other temperatures listed. The unit can be pre-set to any of the temperatures listed by a suitably qualified person. Controllers are available with default temperatures up to 75° C. When fitted with controllers, only temperatures not exceeding the default temperatures can be selected. When fitted without controllers, the unit will deliver water at the default temperature.

REU-V2018W / REU-V2020W

Type of appliance	Temperature controlled continuous flow gas hot water system
Operation	With / without remote controls, mounted in kitchen, bathroom etc
Exhaust system	Forced Flue
Rinnai model number	REU-V2020W (Infinity 20) REU-V2018W (Infinity 18)
Installation	Externally mounted
Dimensions	Width - 350 mm Height - 530 mm Depth - 170 mm
Weight	15.5 kilograms
Gas consumption (Min. / Max.)	Natural gas : 160 ~ 20 MJ/h Propane gas : 160 ~ 21 MJ/h
Output (kW) (Min. / Max.)	36.3 / 4.5
Connections	Gas connection - R3/4 (20A) Cold water connection - R1/2 (15A) Hot water connection - R 1/2 (15A)
Ignition system	Direct electronic ignition
Electrical consumption	Normal - 55 W Standby - 6 W (with 1 remote control) Anti-frost protection - 74 W
Hot water capacity (Raised 25°C)	2.5 to 20 L/min
Thermal efficiency	80%
NOXaf	37 ppm
Temperature range (with remote)	Kitchen controller : 37 ~ 55°C Bathroom controller: 37 ~ 50°C
Default temperature control (without remote)	40°C, 43°C, 50°C, 55°C (factory setting), 65°C, 75°C (set by combination of dip switches on PCB)
Water Temperature control	Simulation feedforward and feedback
Water flow control	Water flow sensor, Electronic water flow control device
Minimum operating water pressure	10 kPa
Nominal operating water pressure	150 kPa ~ 830 kPa
Minimum operating water flow	2.4 L/min
Maximum operating water flow	20 L/min (REU-V2020W) / 18 L/min (REU-V2018W)
Power supply	Appliance - AC 240 Volts 50 Hz Remote control - DC 12 Volts (Digital)
Safety device	Flame failure - flame rod Boil dry - water flow sensor Remaining flame (OHS) - 97°C bi-metal switch Over temperature - 95°C lockout thermistor Fusible link - 129°C Thermal fuse Pressure relief valve - Opens 2060 kPa, Closes: 1470 kPa Combustion fan rpm check - Integrated circuit system Over current - Glass fuse (3 Amp)
Deluxe remote control (optional)	Kitchen control - MC-91Q-2A - MC70-2A Bathroom control - MC91Q-2A - BC70-2A Second bathroom control - MC91Q-2A
Cable (optional)	Non-polarized two core cable

Note 1: The default factory setting is 50° C or 55°C for REU-V2018W / REU-V2020W.

The unit can be ordered from Rinnai to be pre-set to any of the other temperatures listed. The unit can be pre-set to any of the temperatures listed by a suitably qualified person.

Controllers are available with default temperatures up to 75° C. When fitted with controllers, only temperatures not exceeding the default temperatures can be selected. When fitted without controllers, the units will deliver water at the default temperature.

Sensors and Safety Devices

- Heat Exchanger Thermistor: Measures hot water temperature at heat exchanger outlet. If water temperature reaches a predetermined limit, gas supply is stopped.
- Hot Water Delivery Thermistor: Measures hot water temperature at the outlet valve (i.e. the ‘mixed’ temperature).
- Flame Rod: Monitors combustion characteristics inside the combustion chamber. If the flame fails, gas supply is stopped.
- Overheat Switch: Situated on the heat exchanger, gas supply is stopped when water temperature reaches 97°C for a number of seconds.
- Fusible Link: Situated on the heat exchanger, electrical power supply is stopped if the temperature exceeds 129°C.
- Water Pressure Relief Valve: Safeguards the water circuit against excessive inlet pressure. Opens at 2060 kPa, closes at 1470 kPa.
- Electrical Fuse: (3A glass fuse) prevents against over-current.
Surge Protector: prevents against over-current.
- Boil Dry Prevention: If water flow sensor detects no flow, gas supply is stopped.
- Combustion Fan Speed Sensor: In case of combustion fan defect (no rotation of fan) gas supply is stopped.
- Temperature Cutout: If the delivered hot water temperature rises above the required delivery temperature for a number of seconds, the gas supply is stopped.

Combustion Specifications - REU-V1616W / REU-V1620W

Gas Type	Injector Size (mm) Upper / [Lower]	Nominal TPP (kPa) **		Gas Input (MJ/hr)	
		Low	High	Low	High
Natural	ø 0.85 [ø 1.30]	0.181 2.05	0.883 1.13	18.8	125
Propane	ø 0.7 [ø 1.05]	0.178 2.75	0.814 2.75	18	125

Combustion Specifications - REU-V2018W / REU-V2020W

Gas Type	Injector Size (mm) Upper / [Lower]	Nominal TPP (kPa) **		Gas Input (MJ/hr)	
		Low	High	Low	High
Natural	ø 0.85 [ø 1.3]	0.181 2.05	0.922 1.13	20	160
Propane	ø 0.7 [ø 1.05]	0.187 2.75	0.827 2.75	21	160

** The TPP is measured with the cover off the appliance at the regulator test point with supply pressures of 1.13 kPa (NG) and 2.75 kPa (Propane).

3. Water Flow Rates and Pressures

Water Flows

Table 1 shows unmixed and mixed water flow rates and approximate gas consumptions for various temperature rises. The unmixed flow rates are the flow rates available at the given temperature rise directly at the outlet of the water heater. The mixed water flow rates are available at the given temperature rise by mixing hot water from the outlet of the water heater with cold water from the mains supply.

Water Flows can also be calculated by the following formula :

Q = Heat energy available in kW = 28 kW for the REU-V1616W / REU-V1620W

C = Specific heat of water = 4.2KJ/Kg °C. C does not change for the purpose of this calculation.

ΔT = Temperature rise required (°C)

Example:

What is the flow rate available with an incoming water temperature of 10°C and a required temperature of 20°C?

$$\Delta T = 20 - 10 = 10^{\circ}\text{C}$$

$$Q = 28$$

$$C = 4.2$$

$M = 60 \times (28 / (4.2 \times 10)) = 40$ l/min. Since 40 is greater than 16 this flow rate is mixed. This result corresponds with the value in Table 1.

REU-V2018W and REU-V2020W

Q = Heat energy available in kW = 36 kW for the REU-V2018W / REU-V2020W

C = Specific heat of water = 4.2 KJ/Kg °C. C does not change for the purpose of this calculation.

ΔT = Temperature rise required (°C)

Example:

What is the flow rate available with an incoming water temperature of 10°C and a required temperature of 20°C?

$$\Delta T = 20 - 10 = 10^{\circ}\text{C}$$

$$Q = 28$$

$$C = 4.2$$

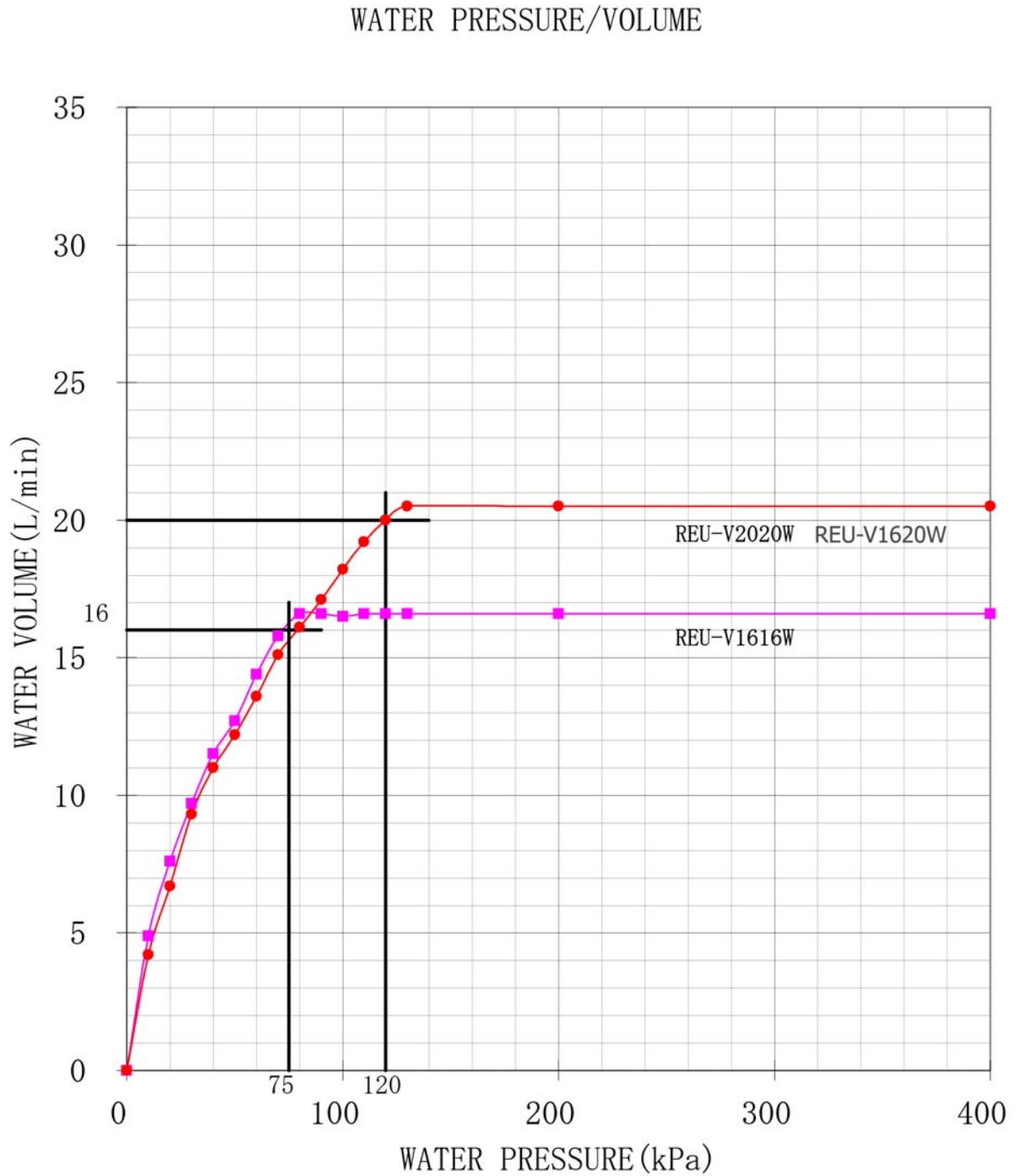
$M = 60 \times (28 / (4.2 \times 10)) = 40$ l/min. Since 40 is greater than 20 (18) this flow rate is mixed. This result corresponds with the value in Table 1.

Table 1: Approximate Water Flows & Gas Usage - REU-V1616W/V1620W/V2020W

Models (All Pre-set Temperatures)	Temp Rise (°C)	5				10				15				20							
		L/sec	L/min	L/hr	Min Water Pressure (kPa)	Approx Gas Cons. (MJ/h)	L/sec	L/min	L/hr	Min Water Pressure (kPa)	Approx Gas Cons. (MJ/h)	L/sec	L/min	L/hr	Min Water Pressure (kPa)	Approx Gas Cons. (MJ/h)	L/sec	L/min	L/hr	Min Water Pressure (kPa)	Approx Gas Cons. (MJ/h)
REU-V1616W - Ext.	18-125 20-125	0.27	16	960	72	25	0.27	16	960	72	50	0.27	16	960	72	75	0.27	16	960	72	100
REU-V2020W - Ext.	21-160	0.33	20	1200	115	31	0.33	20	1200	115	62	0.33	20	1200	115	93	0.33	20	1200	115	124
		25				30				35				40							
Models (All Pre-set Temperatures)	Temp Rise (°C)	25				30				35				40							
REU-V1616W	18-125 20-125	0.27	16	960	72	125	0.22	13.2	792	60	125	0.19	11.4	684	44	125	0.17	10.2	612	35	125
REU-V2020W	21-160	0.33	20	1200	115	155	0.29	17.4	1044	87	160	0.25	15	900	64	160	0.22	13.2	792	50	160
		45				50				55				60							
Models (All Pre-set Temperatures)	Temp Rise (°C)	45				50				55				60							
REU-V1616W	18-125 20-125	0.15	9	540	29	125	0.13	8	480	24	125	0.12	7.2	434	21	125	0.11	6.6	396	20	125
REU-V2020W	21-160	0.19	11.4	684	42	160	0.17	10.2	612	35	160	0.16	9.6	576	29	160	0.14	8.4	504	26	160

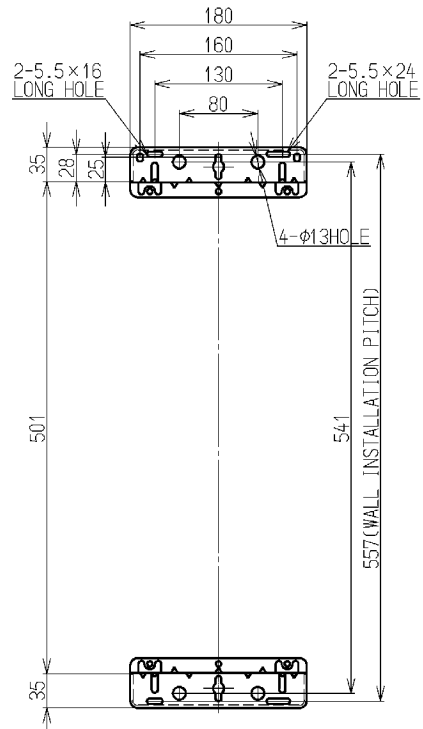
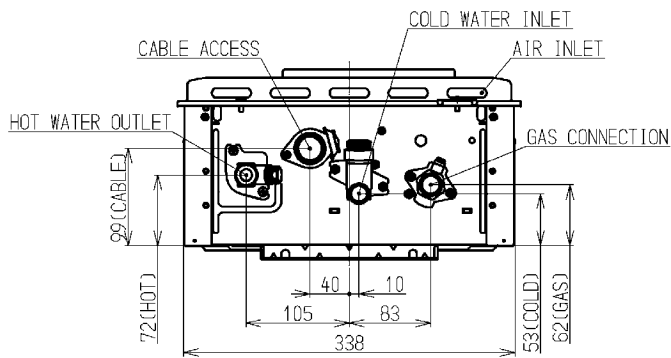
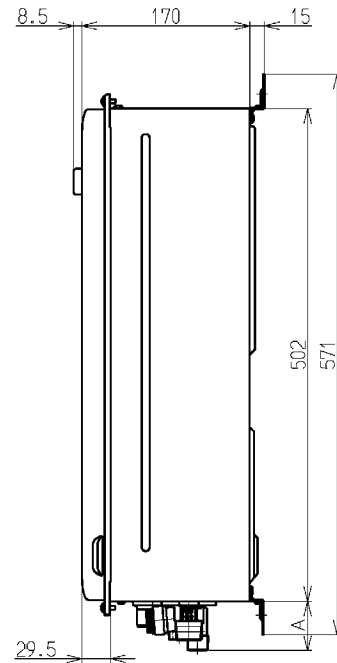
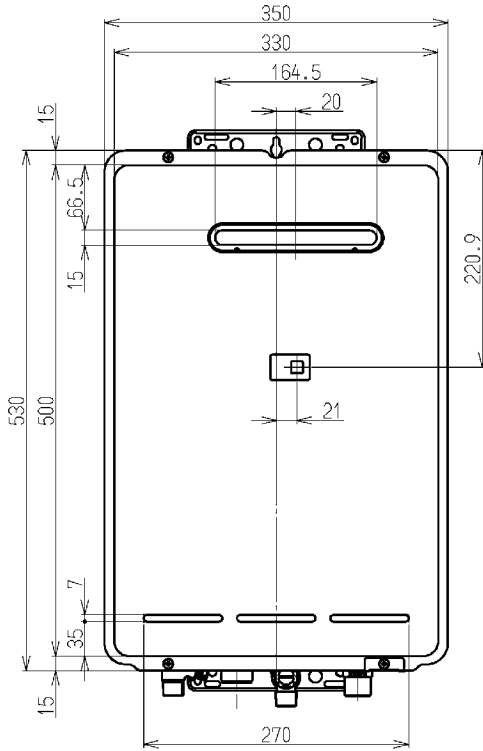
Water Pressure

As seen in the table below a minimum supply pressure of 80 kPa is required to operate at the rated flow of 16 L/min. In an actual installation, pressure losses in the plumbing system also need to be considered.



4. Dimensions

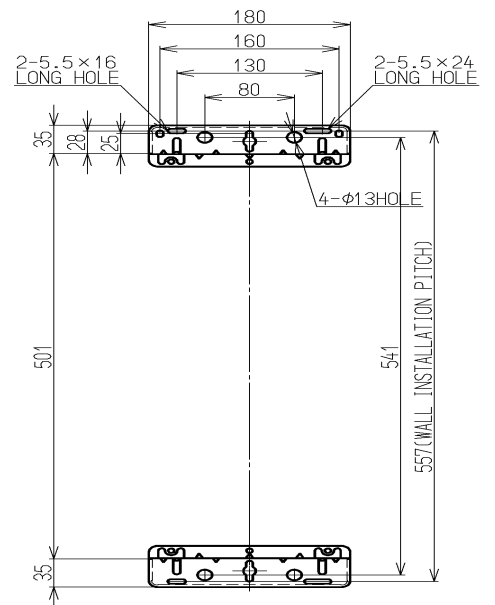
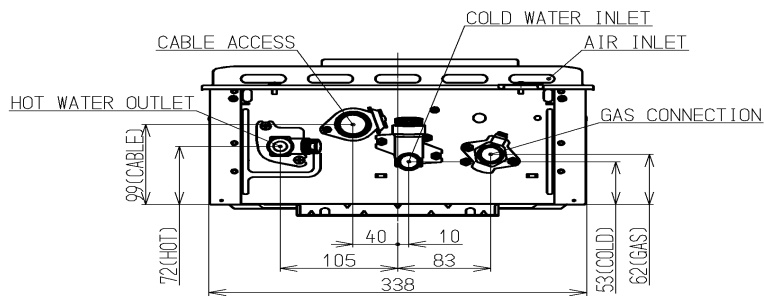
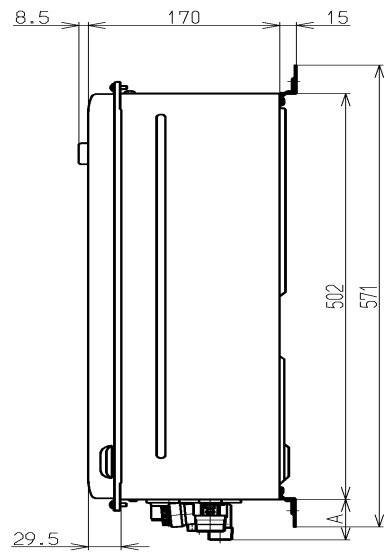
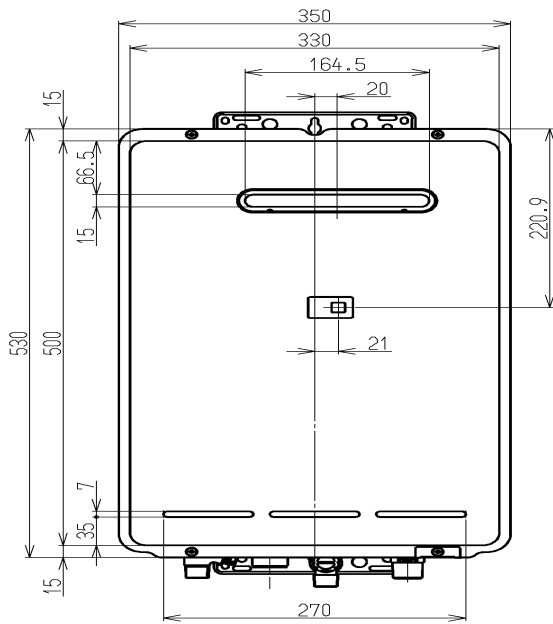
REU-V1616W / REU-V1620W



(mm)

	A DIMENSION
GAS	40
COLD	50
HOT	39
CABLE ACCESS	26

REU-V2018W / REU-V20202W



(mm)

	A DIMENSION
GAS	40
COLD	50
HOT	39
CABLE ACCESS	26

5. Smartstart

At least one temperature controller model MC-91Q must be used in conjunction with the water heater and the Smartstart® system. Alternatively, if Temperature Controllers cannot be used a manual activation switch is available. See separate service manual.

The installation of the water heater and temperature controllers must be performed in accordance with the installation instructions supplied with the water heater.

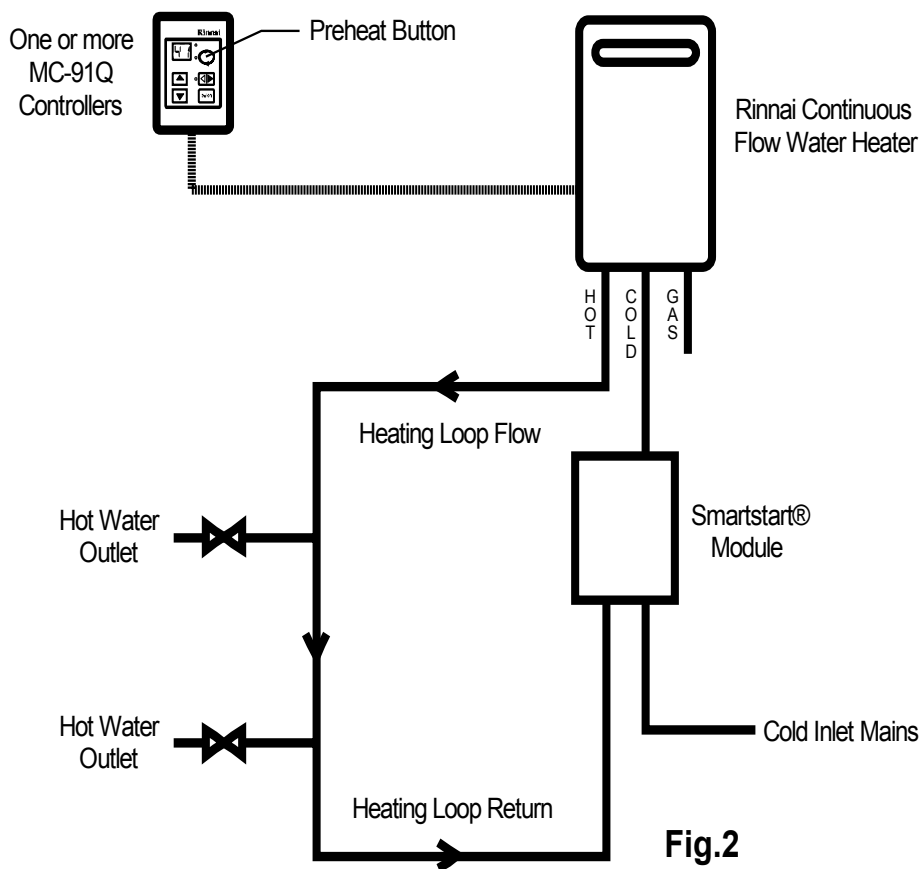
The Smartstart® system is designed for domestic installations. However, it may be suitable for certain non domestic installations. See separate service manual for more information.

Principle of operation (Fig.2)

The "Smartstart®" system heats the water in the pipework water connected between the water heater and the hot water outlets before any outlets are opened using the 'flow and return' pipework principle. This results in water savings and reduced waiting time for heated water delivery from the outlet when opened.

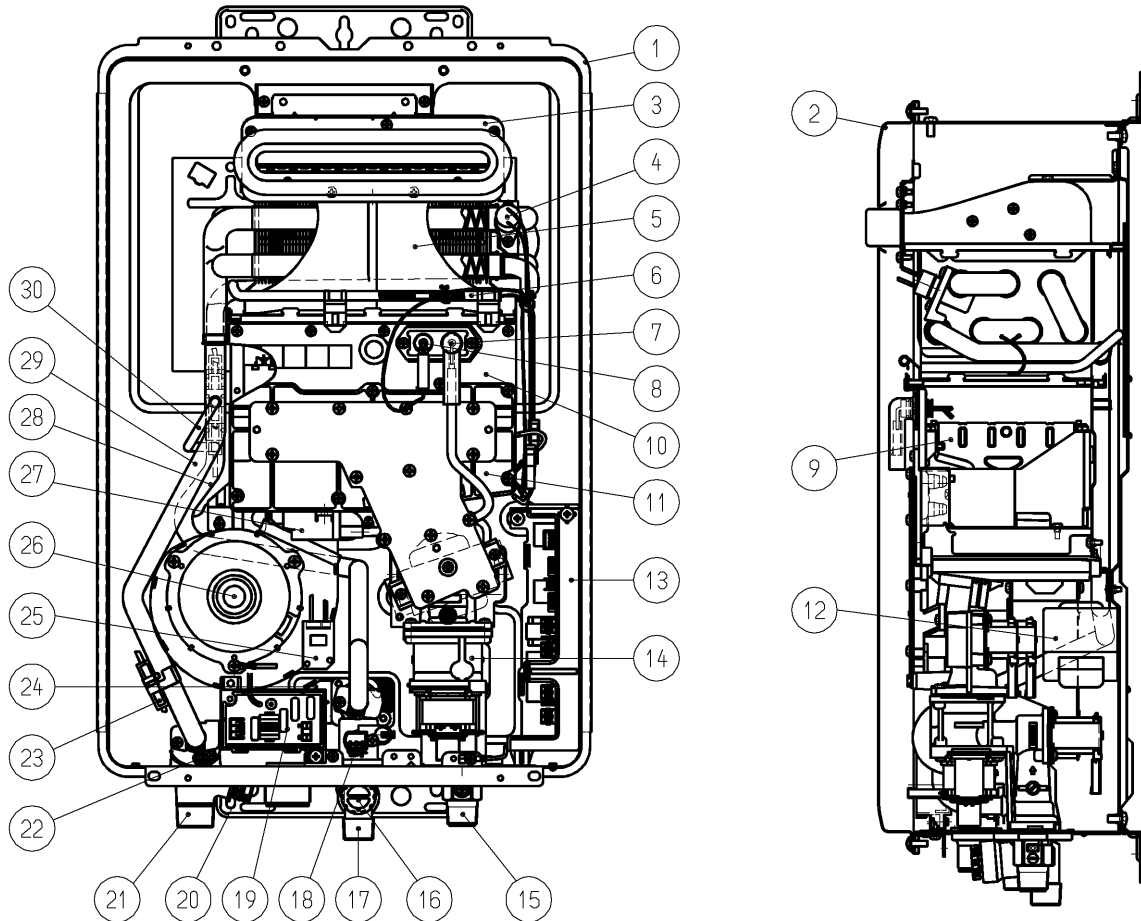
Traditional 'flow and return' systems usually keep the water in the pipework heated continuously. The Smartstart® system however, only heats the water before the outlet is opened. This results in significant energy savings because water is not heated unnecessarily whilst retaining the benefits of traditional flow and return systems.

A schematic of the Smartstart® system installed in conjunction with a Rinnai continuous flow water heater and temperature controller is shown in Fig.2 below.



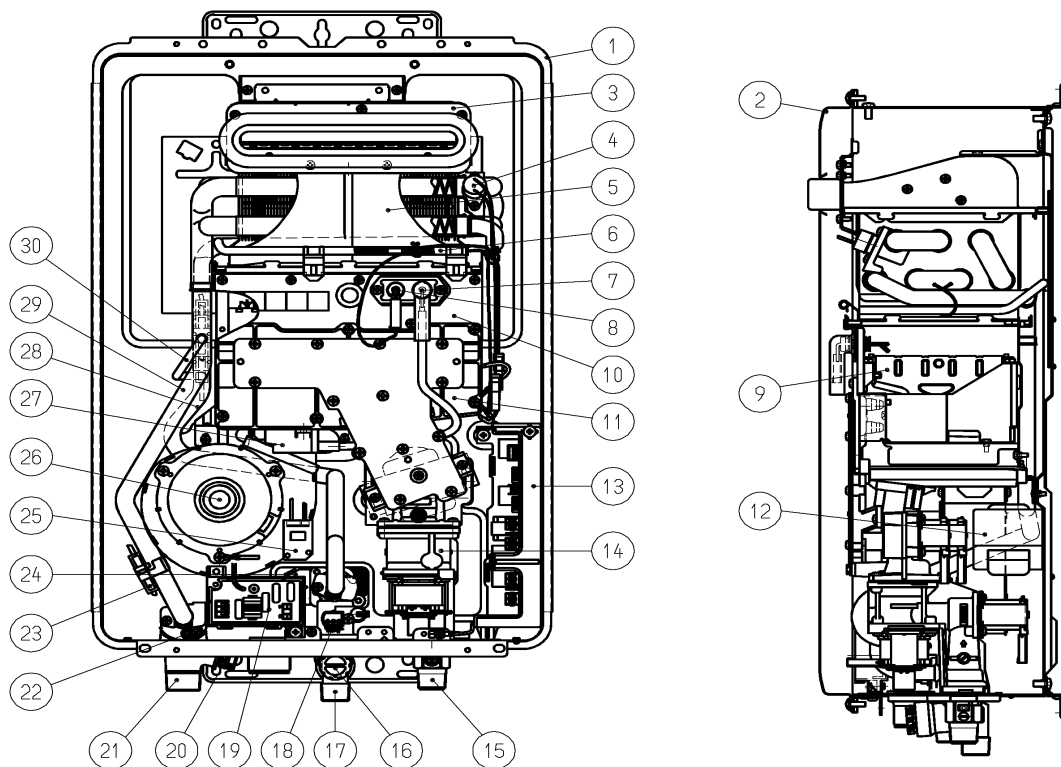
6. Cutaway Diagram

REU-V1616W / REU-V1620W



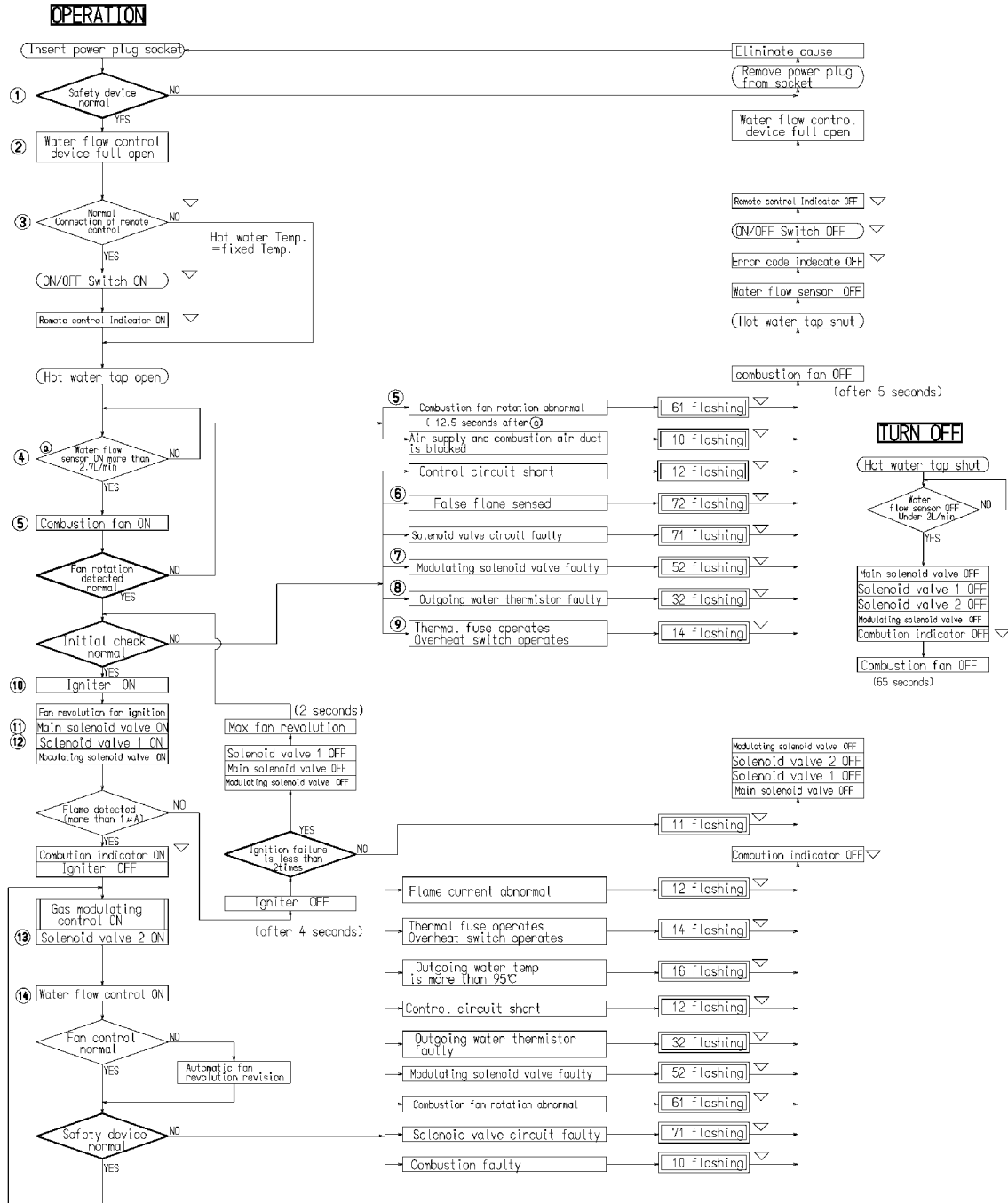
Part No.	Description	Part No.	Description	Part No.	Description
1	Casing Assembly	11	Manifold Assembly	21	Hot Water Outlet
2	Front Panel Assembly	12	Transformer	22	Ongoing Water Thermistor
3	Flue Outlet	13	P.C.B.	23	Anti-Frost Heater
4	Overheat Switch	14	Gas Control Assembly	24	Water Flow Control Device
5	Heat Exchanger	15	Gas Connection	25	Frost Sensing Switch
6	Thermal Fuses	16	Water Filter Assembly	26	Combustion Fan
7	Electrode	17	Water Inlet	27	Igniter
8	Flame Rod	18	Water Flow Sensor	28	Water Connecting Pipe
9	Main Burner	19	Surge Protector	29	Hot Water Connecting Pipe
10	Combustion Chamber Front Plate Assembly	20	Pressure Relief Valve	30	By-pass Pipe

REU-V2018W / REU-V2020W



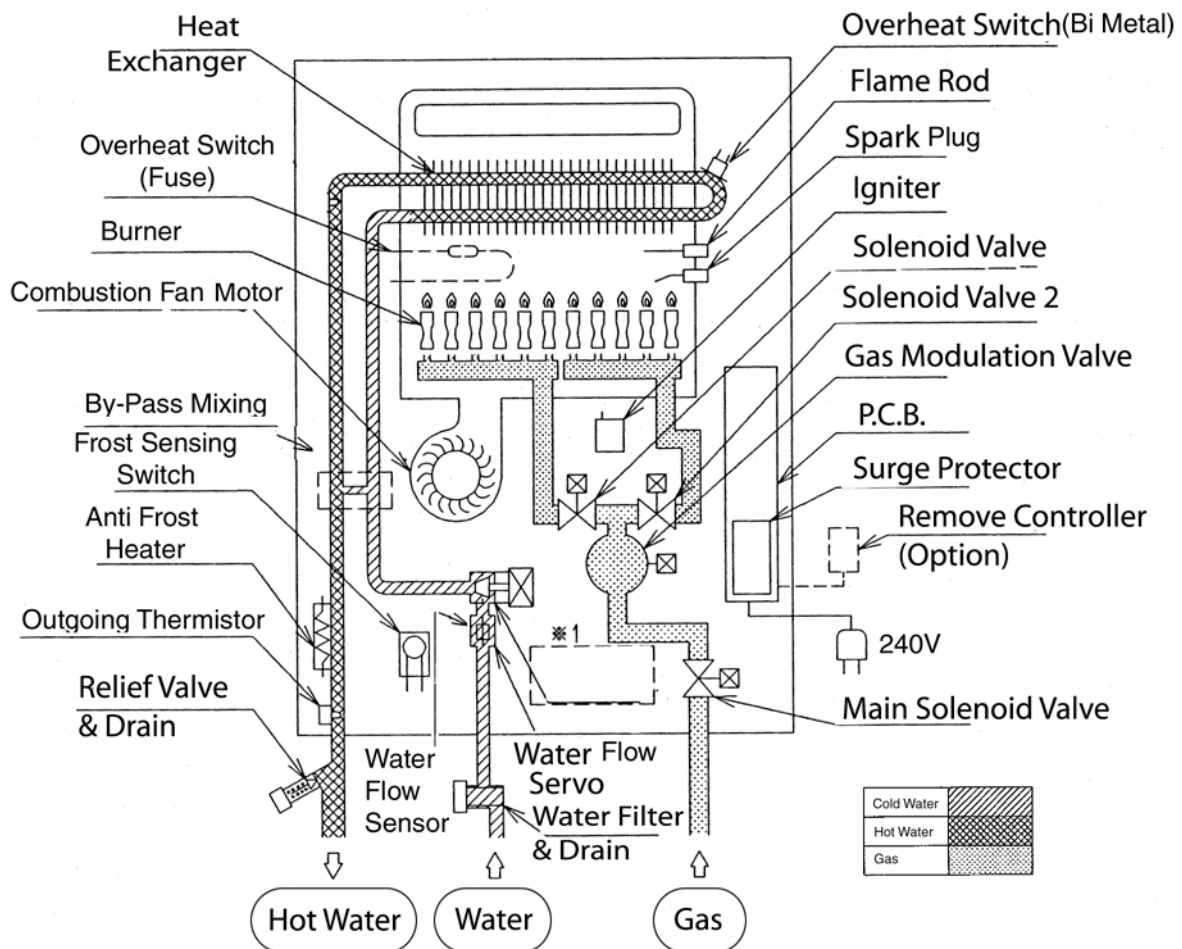
Part No.	Description	Part No.	Description	Part No.	Description
1	Casing Assembly	11	Manifold Assembly	21	Hot Water Outlet
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5	Heat Exchanger	15	Gas Connection	25	Frost Sensing Switch
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8	Flame Rod	18	Water Flow Sensor	28	Water Connecting Pipe
9	Main Burner	19	Surge Protector	29	Hot Water Connecting Pipe
10	Combustion Chamber Front Plate Assembly	20	Pressure Relief Valve	30	By-pass Pipe

7. Operational Flow Chart



▽ : Only applicable when remote control is connected

8. Operation Principles



Hot Water Operation

1. Ignition

- Activate controllers (if fitted) and open the hot water tap (for full details regarding operation of controllers refer to the 'How To Use Your Water Heater' booklet).
- When water flows through the unit, the water flow sensor rotates and sends an electrical 'pulse' signal to the Printed Circuit Board (PCB). This signal is proportional to the water flow rate.
- The PCB sends electrical current to the combustion fan motor causing it to turn. The fan motor sends an electrical pulse signal to the PCB. If fan rotation is OK, the main solenoid and changeover solenoid valves open as required, the spark generator activates and the spark electrode ignites the burner.

2. Water Temperature / Flow Control / Volume Control

- The PCB will automatically control operation of the internal components to achieve the programmed temperature. When a high temperature rise is required, the PCB may cause the Water Flow Servo to close partially resulting in a lower flow rate to achieve the programmed temperature. This is a necessary operational feature of the unit.
- When operating in 'Bath Fill' mode, the signal from the water flow sensor is also used by the PCB to compute the volume of water that has been passed through the unit at any instant whilst the bath is filling.

3. Shut Down

- When operating in 'Bath Fill' mode, the PCB causes the Water Flow Servo to close when the programmed Bath Fill volume has passed through the unit. Alternatively, flow is stopped when the user closes the hot water tap.
- When water flow stops, the water flow sensor stops rotating and the pulse signal to the PCB stops. The PCB then causes the main solenoid and solenoid valves to close and the burner is extinguished. The combustion fan will continue to operate for some time to purge the combustion chamber.

9. Main Components

1) Printed Circuit Board

- The Printed Circuit Board controls all operational functions including Air Supply Control, Gas Control, Water Flow Measurement, Water Flow Control, Combustion System and all sensors and safety devices.

2) Gas Flow Control

- During normal operation, the PCB keeps the main solenoid valve open whilst there is flow through the unit and the burner needs to be lit.
- Gas flow rate is controlled by the modulating valve assembly and three changeover solenoid valves to always ensure constant outlet water temperature, regardless of flow rate or incoming water temperature.
- The modulating valve is electronically controlled by the PCB using signals from the water flow sensor, water flow control device, water temperature thermistors and combustion fan speed sensor. The modulating valve directs gas to the three changeover solenoid valves.
- The three changeover solenoid valves direct gas to each of the two burner banks independently. Any one or two or both of the solenoid valves may be open during operation.
- Gas flow is modulated between 18 and 125 MJ/hr for REU-V1616W/REU-V1620W and between 20 and 160 MJ/hr for REU-V2018W and REU-V2020W by a combination of the modulating valve and changeover solenoid positions.
- The maximum gas rate is predetermined and the appliance cannot be overloaded when correctly installed.

3) Water Flow Control

- Water flow is detected by a turbine coupled to a magnetic pulse generating device. The magnetic pulses are detected and counted by the PCB. The PCB calculates the exact water flow from the frequency of pulses generated by the turbine. A minimum flow rate of 2.4 L/min. is required for the burner to ignite.
- Water flow control is achieved through the use of servo driven water flow and fixed bypass. Servo motor is controlled by the PCB. The 'Water Flow Valve' restricts the flow of water into the heat exchanger assembly if the programmed temperature cannot be achieved. During normal operation, cold water from the inlet valve is mixed with hot water from the heat exchanger outlet.
- The 'Bypass' mixes cold and hot water to ensure hot water delivery temperature over the available range of flow rates.

4) Air Supply Control

- Air for combustion is supplied by a centrifugal fan driven by a variable speed DC motor. The voltage to the motor is determined by the PCB based on water flow, delivered water temperature and programmed water temperature. The actual fan speed is monitored by a magnetic pulse counter. This counter emits a signal to the PCB. From the voltage supplied to the DC motor and the fan speed signal, the PCB determines whether an error condition exists with the fan.

5) Combustion System

The combustion chamber is housed within the heat exchanger assembly and comprises:

- Aluminium alloy manifold with a total of 28 integral injectors. Gas flow to each chamber is controlled by an electronic solenoid valve (refer 'Gas Flow Control' above).
- A burner assembly comprising fourteen identical modular stainless steel bunsen burners secured by an aluminised steel framework. The manifold is attached to the front of the burner module. Each bunsen burner is supplied by two injectors.
- A combustion chamber. Integrated into the combustion chamber front panel are the flame rod and two ignition electrodes.

10. Remote Controls

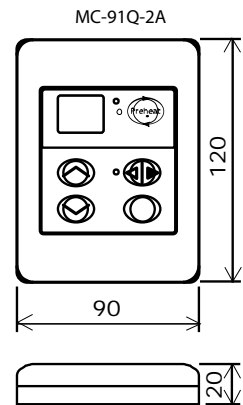
Remote Controls

Remote Controllers are an optional extra. 'Standard' and 'Deluxe' controllers can be fitted.

Standard controllers allow temperature selection only. Deluxe controllers have temperature selection, bath-fill and voice prompting functions. For detailed information regarding controller operation refer to the 'How to use your water heater' booklet supplied with the appliance. Other manufacturers' controllers are NOT compatible with this appliance.

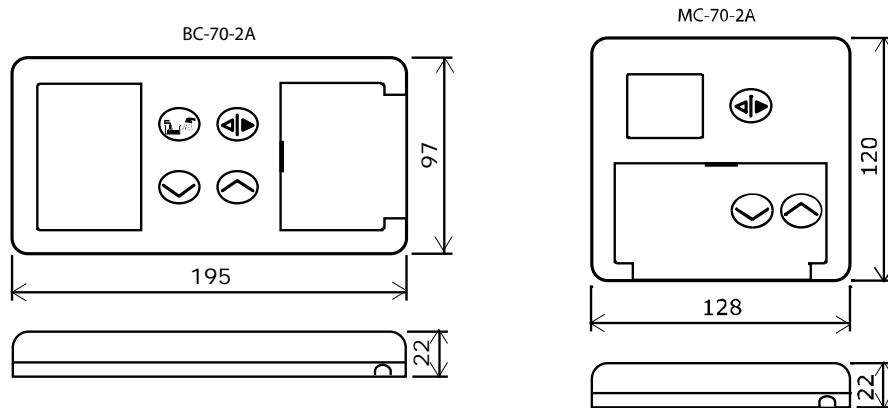
Standard Controller (Model MC-91Q)

Up to 3 Standard Controllers can be fitted to the appliance. They are normally installed in the areas where the majority of hot water is used, for example, the kitchen, bathroom, ensuite and laundry.



Deluxe Kitchen Remote Control (MC-70)and (BC-70A)

Deluxe controllers have 'Kitchen' (MC-70-2A) and 'Bathroom' (BC-70-2A) versions. 'Kitchen' controls are intended for the Kitchen or other convenient area where the majority of hot water is used. Bathroom Controllers are intended to be fitted in the bathroom or ensuite and allow the user to have a bath filled to the required level and temperature automatically.



:

Up to three 'Deluxe' Controllers can be connected		
Kitchen	Bathroom	Ensuite
MC91Q-2A		
MC91Q-2A		
MC70-2A	BC70-2A	
MC70-2A	BC70-2A	MC91Q-2A

Positioning of Controllers

Controllers must be installed in shaded and clean locations. They should be fitted out of reach of children (suggested height from floor at least 1500mm). Controllers are water resistant, however, durability is improved when positioned outside the shower recess or at least 400mm above the highest part of a sink, basin or bath.

DO NOT INSTALL THE CONTROLLERS

- NEAR A HEAT SOURCE, SUCH AS A COOK TOP, STOVE OR OVEN. HEAT, STEAM, SMOKE AND HOT OIL MAY CAUSE DAMAGE
- IN DIRECT SUNLIGHT
- OUTDOORS UNLESS AN ENCLOSURE IS PROVIDED WHICH PROTECTS THE CONTROLLER AGAINST SUNLIGHT AND DUST INGRESS.
- AGAINST A METAL WALL UNLESS THE WALL IS EARTHED IN ACCORDANCE WITH AS/NZ3000.

Remote Controller Connection

Remote controls operate at extra low voltage (12 Volts DC) which is supplied from the appliance. Controllers are supplied with 15 m of electrical cable. The cable wires for connection to the appliance are fitted with spade terminals.

Extension cables are available from Rinnai. Alternatively, a two core sheathed (double insulated) flex with minimum cross-sectional area of 0.5 mm² can be used. Maximum cable length is 50 m.

For connection refer to the “CONNECTING REMOTE CONTROL CABLES” section.

If the front cover of the appliance contains the following text install it in accordance with Diagram 1 below:

Water Heater and Controller installation configurations

**"THIS APPLIANCE DELIVERS WATER
NOT EXCEEDING 50°C IN ACCORDANCE WITH AS 3498"**

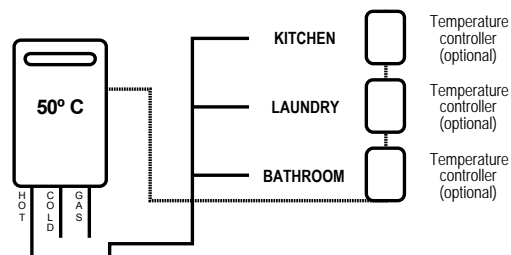


Diagram 1. 50° C Appliance

If the front cover of the appliance does NOT contain the above text install it in accordance with Diagram 2:

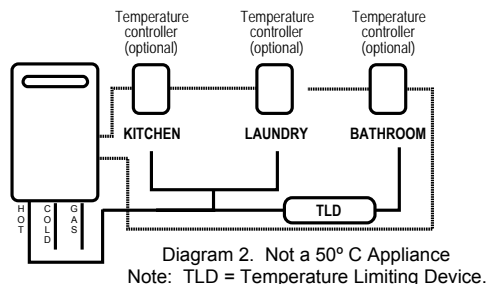


Diagram 2. Not a 50° C Appliance
Note: TLD = Temperature Limiting Device.

IMPORTANT: If the appliance is to deliver water primarily for the purposes of personal hygiene in an early childhood centre, primary or secondary school, nursing home or similar facility for young, aged, sick or disabled persons as defined in AS/NZ3500.4 a Temperature Limiting Device (TLD), such as a Tempering Valve, may be required even if the appliance is set to 50° C or less. For these types of applications contact Rinnai.

Connecting remote control cables



Do not attempt to connect the remote control cable terminals to the appliance with the power on.
RISK OF ELECTRICAL SHOCK.

Connecting One or Two Controllers

1. Isolate the power supply
2. Remove the front cover from the Appliance (4 screws) fig. 1.
3. Thread the cable(s) through the cable access hole at the base of the appliance.
4. Connect the spade connectors to the terminals marked "Remote Control" on the printed circuit board (fig. 2). Polarity is not important. Either wire colour can be connected to either terminal.
5. Replace cover of the Appliance. Ensure that the screw with the star washer is placed at the bottom right hand corner for earthing purposes.

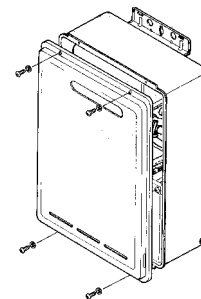
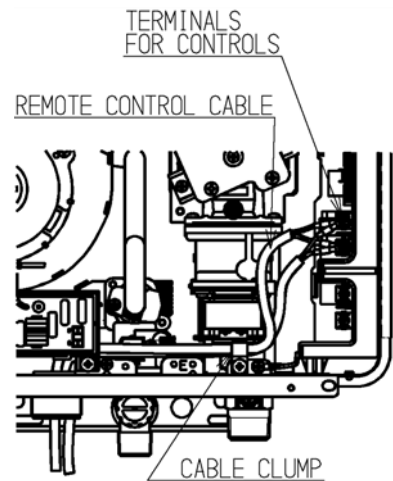


fig.1.

Connecting Three Controllers

6. Isolate the power supply.
7. Remove the front cover from the Appliance (4 screws) fig.1.
8. Cut the spade connectors from 2 of the controller cables to be connected to the appliance (4 spade connectors should be cut off) and discard. Connect the wires from these two cables and terminate into two new spade connectors as shown in fig.3. Spade connectors are available from your local electrical component retailer.
9. Thread the 3 cables through the cable access hole at the base of the appliance. Connect the 4 spade connectors to the terminals marked "Remote Control" on the printed circuit board (fig.2). Polarity is not important. Either wire colour can be connected to either terminal.
10. Replace cover of the Appliance. Ensure that the screw with the star washer is placed at the bottom right hand corner for earthing purposes.

For the Controller in the 'KITCHEN' only, press and hold the 'Transfer' and 'On/Off' buttons simultaneously (see fig. 1) until a 'beep' is heard (approximately 5 seconds).



Question 2: Is your water heater labelled "THIS APPLIANCE DELIVERS WATER NOT EXCEEDING 50° C IN ACCORDANCE WITH AS 3498" On the front cover ?

IF YES: No further action required.

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

STEP 1:

For the controller in the KITCHEN only, press and hold the 'Transfer' and 'On/Off' buttons simultaneously (see fig 1.) until a 'beep' is heard (approximately 5 seconds).

STEP 2:

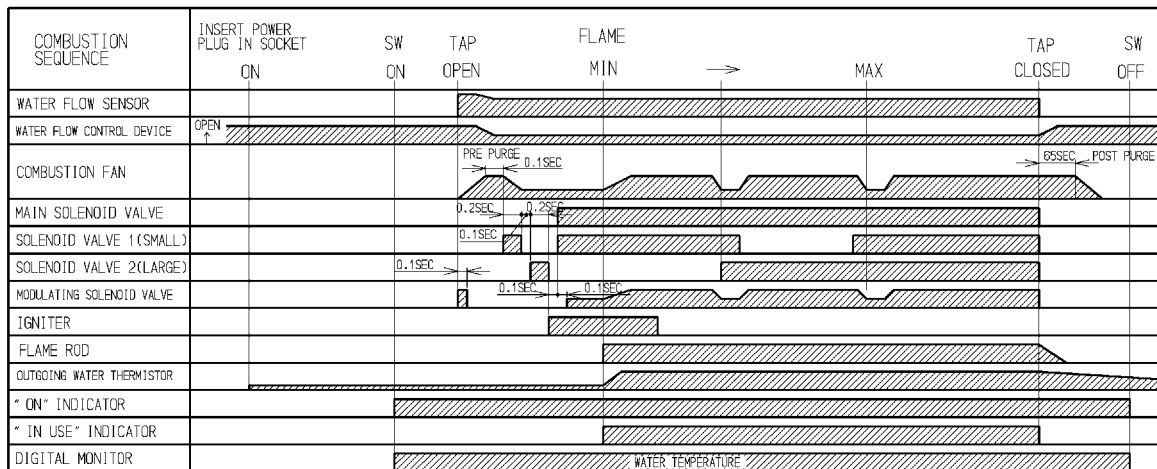
When the controller fitted in the KITCHEN is switched on, it should be possible to select temperatures higher than 50° C. If not, repeat Step 1.

Note:

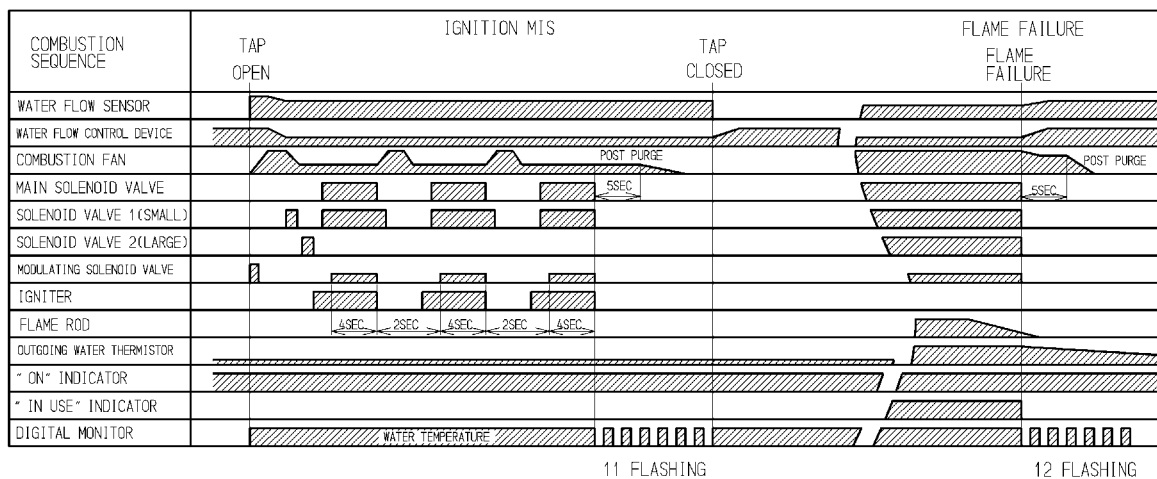
- If the kitchen controller is replaced, repeat STEP 1 above for the replacement controller.
- If the kitchen controller is swapped with another controller (for example, the controller fitted in a bathroom), repeat STEP 1 for the controller moved from the kitchen to the bathroom. Then perform STEP 1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

11. Time Charts

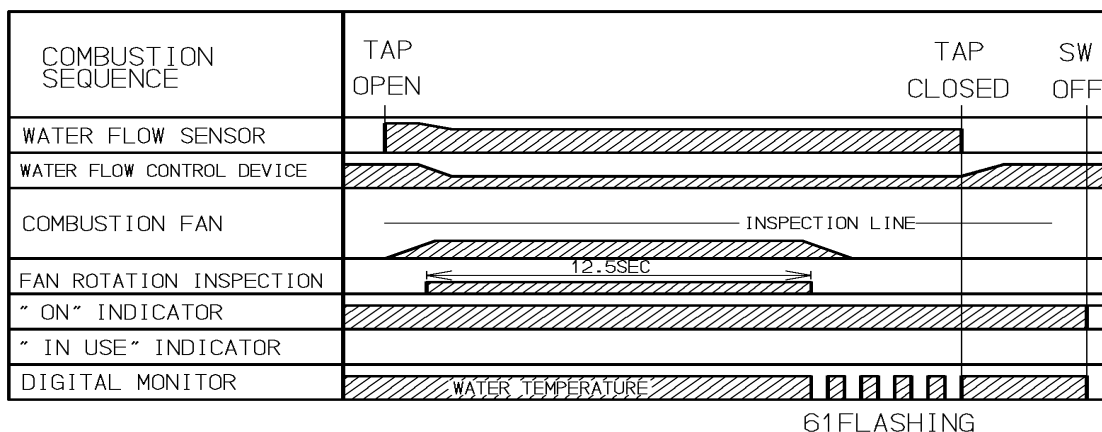
Normal Combustion



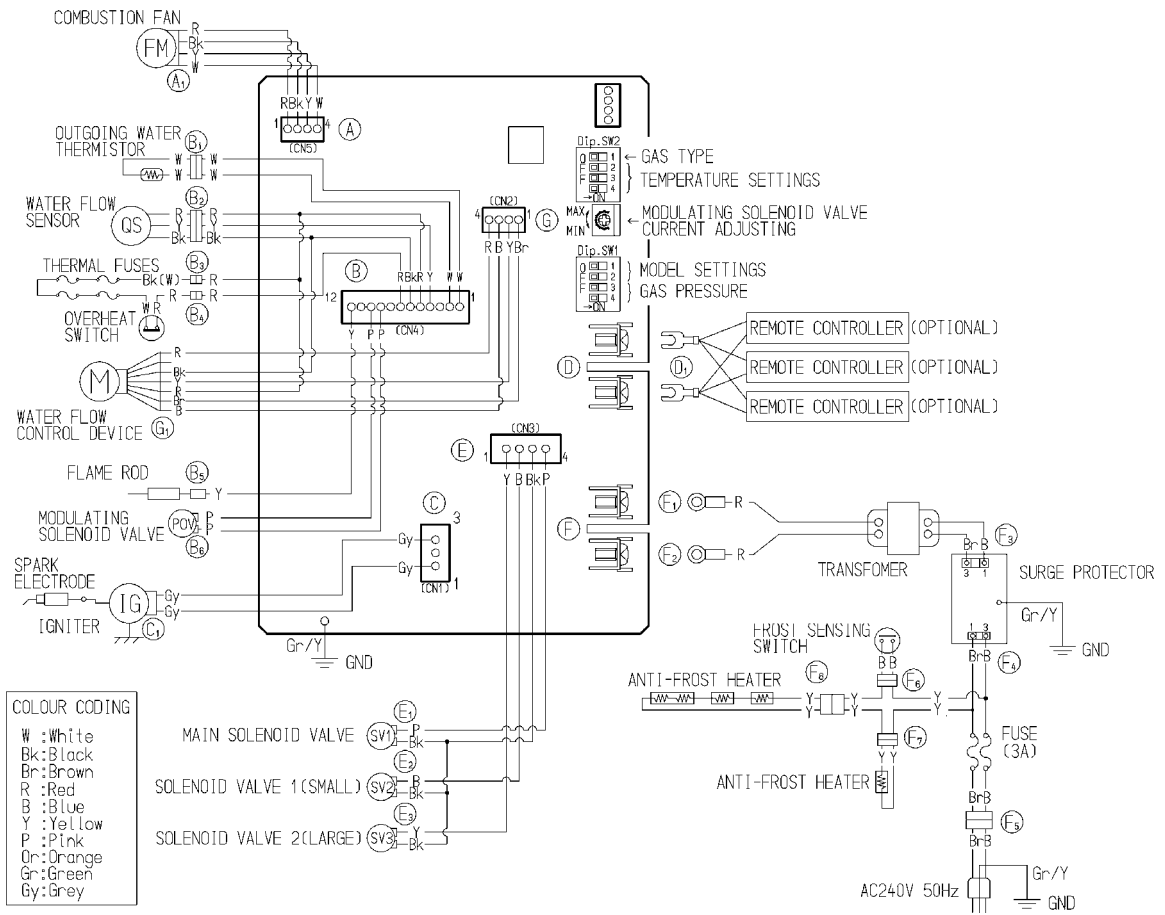
Mis-Ignition / Flame Failure



Abnormal Pre-Purge (Air Supply/Exhaust Blockage)

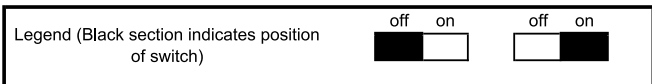
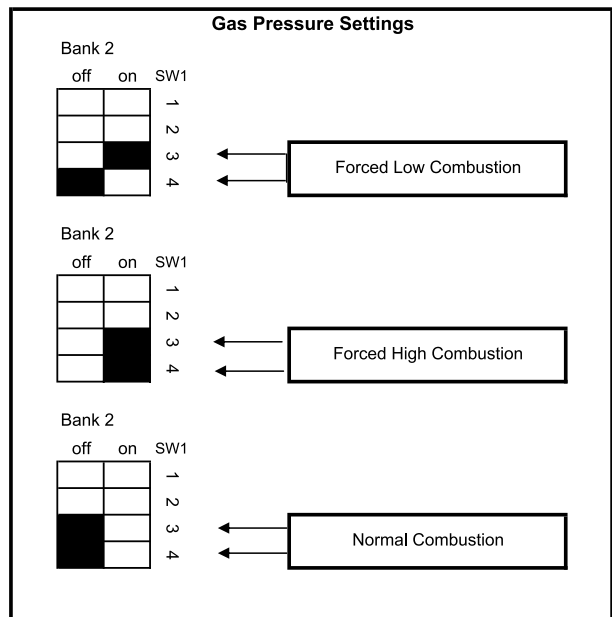
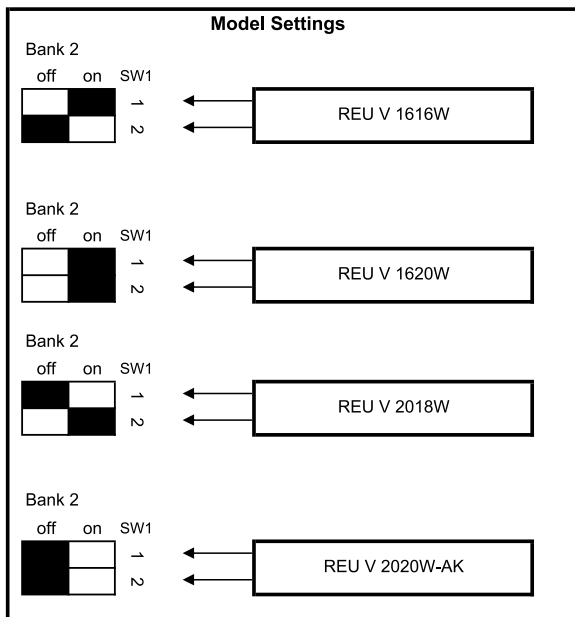
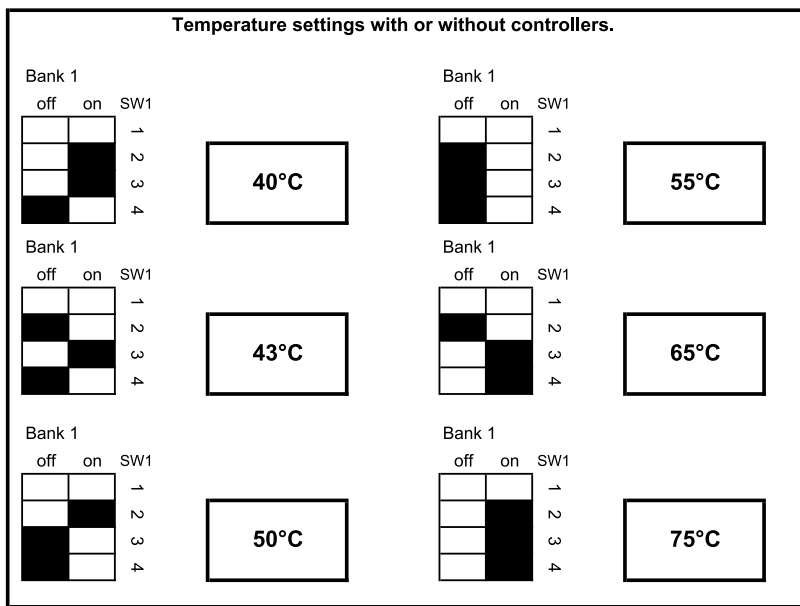
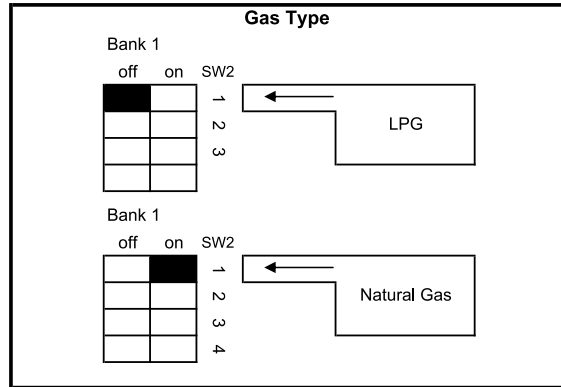
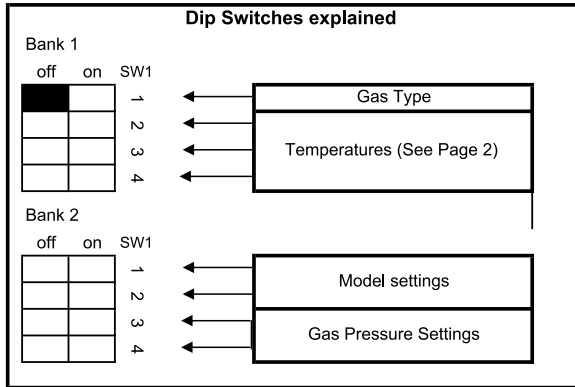


12. Wiring Diagram



13. Dip Switch Settings

Dip Switch Settings REU-V1616W-AK, REU-V1620W, REU V2018W-AK & REU-V2020W-AK



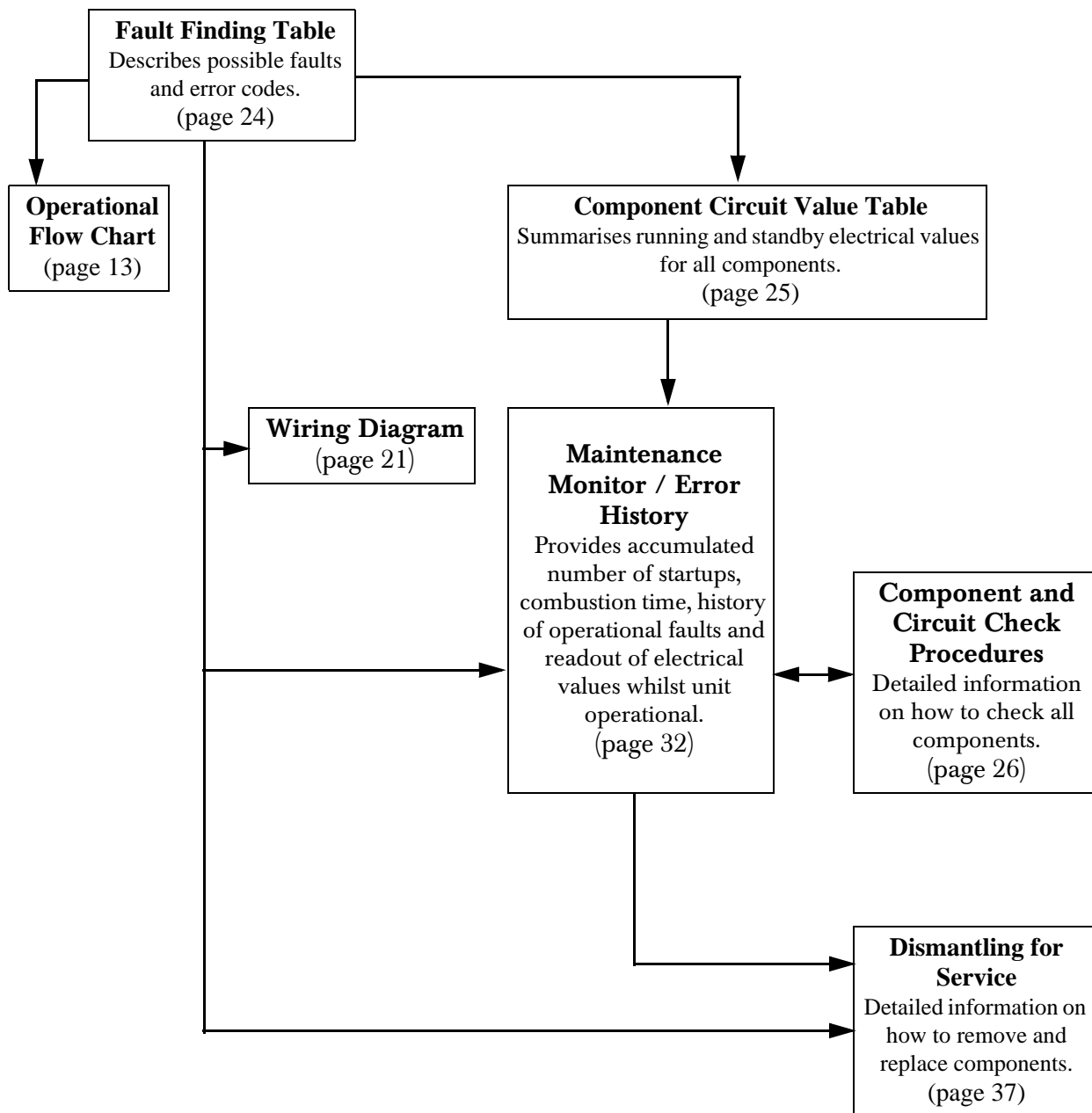
01-December-2004

14. Fault Finding



If there is a fault with the appliance, and controllers are installed, a numerical fault code may appear on the digital display controller. If controllers are not installed, one may be fitted to find out the fault code. Fault finding without controllers (and thus fault codes) is possible but more time consuming.

To diagnose and rectify faults, the **Fault Finding Table** is used as illustrated below:



Fault Finding Table

Code on Controller	Fault	Table	Action
03	Power interruption during Bathfill. Water will not flow when power restored.		1. Turn off all hot water taps. 1. Press the ON/OFF button on a controller twice.
10	Combustion fan current too high. Unit operates, then stops.	E	1. Check blockage of air intake/flue outlet. 2. Check combustion fan.
11	No ignition. Unit stops without flame igniting	C	1. Check gas supply 2. Check sparker unit 3. Check gas valves
12	Flame Failure / Earth Leakage		1. Check gas supply 2. Check flame rod 3. Check earth wire lead 4. Check remote control
14	Thermal fuse and/or overheat switch activated. Unit operates, then stops.		1. Check thermal fuse 2. Check overheat switch IMPORTANT- If thermal fuse or overheat switch were faulty : a. Check heater for damage b. Confirm "Gas Type" and "Combustion" dip switch settings (page 22) c. Confirm test point pressures (page 26).
16	Over temperature warning. Unit operates, then stops.		1. Confirm "Gas Type" and "Combustion" dip switch settings (page 22) 2. Confirm test point pressure (page 26)
		C	3. Check gas valves
		D	4. Check water flow sensor
		B	5. Check water flow servo
		A	6. Check heat exchanger outlet temperature thermistor 7. Check hot water outlet temperature thermistor
32	Outlet water thermistor flow	A	Check hot water outlet thermistor
33	Heat exchanger thermistor error	A	Check heat exchanger thermistor
52	Modulating solenoid valve fault. Unit stops without flame ignition.	C	Check modulating solenoid valve
61	Combustion fan rotation error	E	Check combustion fan
65	Water flow control device error. Water flow is not controlled. Water temperature too low.	B	Check water flow servo
71	Solenoid valve circuit error. Unit does not operate.	C	Check gas valves
72	Flame rod circuit error. Unit does not operate.		Check flame rod
-	Appliance does not operate at all. No display on the remote controllers (if fitted).		1. Check power cord plugged in and supply turned on. 2. Check power supply voltage. 3. Check electrical fuse. 4. Check transformer.
		C	5. Check gas valves
			6. Check sparker unit. 7. Check earth leads and connections. 8. Check for short circuits. 9. Check remote controller(s) - if fitted.
		D	1. Check water flow sensor. 2. Check flame rod.
		A	3. Check heat exchanger outlet thermistor.
		A	4. Check hot water outlet thermistor.
		E	5. Check combustion fan.
			6. Check the sparker unit.
		C	7. Check gas valves. 8. Check thermal fuse. 9. Check overheat switch. IMPORTANT - If thermal fuse or overheat switch were faulty: a) check heater for damage; b) confirm "Gas Type" and "Combustion" dip switch settings; c) confirm test point pressure.
-	Combustion stops during operation.		1. Check gas supply 2. Check flame rod 3. Check earth leads and connections.
-	Cannot adjust the hot water temperature via the controller(s) - only if controller(s) fitted.	A	1. Check hot water outlet thermistor. 2. Check heat exchanger outlet thermistor.
		C	3. Check gas valves
		B	4. Check water flow servo.
			5. Check bypass servo.
		F	1. Check anti-frost heater components 2. Check frost sensing switch

15. Component Circuit Value Table

Table reference	Component	Measurement Point		Normal Value	A Note
		CN	Wire Colour		
	Surge Protection		B-Br	AC207~264V	
	Water Flow Control Device	G ₁	R(CN2-NO.4)-B	±DC11~13V (Only When Operating)	Operate Electricity
			R(CN4-NO.5)-Bk	DC11~13V	Control Electricity
			Bk-Y	Below DC1V (Limiter On)	Full Open Position
				DC4~6V (Limiter Off)	
Bk-Br	Below DC1V (Limiter On)	Full Close Position			
	DC4~6V (Limiter Off)				
	Remote Control	D	(TERMINAL)	DC11~13V	
3	Water Flow Sensor	B ₂	R-Bk	DC11~13V	On 2.4L/min (33Hz) Over 1980 PULSE/min Off 1.7L/min (23Hz) Below 1380 PULSE/min
			Y-Bk GND	DC4~7V (Pulse 20~320Hz)	
8	Combustion Fan	A ₁	R-Bk	DC15~46V	
			Y-Bk	DC11~13V	
			W-Bk GND	DC5~10V (33~400Hz)	
	Flame Rod	B ₅	Y-FLAME ROD	Over DC1μA	Flame Condition
	Modulating Valve	B ₆	P-P	DC2~15V 65~85Ω	
2	Outgoing Thermistor	B ₁	W-W	15° C... 11.4 ~ 14.0kΩ	
				30° C... 6.4 ~ 7.8kΩ	
	Thermal Fuse	B ₃	R-R	Below 1Ω	
		B ₄	R-Bk		
	Igniter	C ₁	Gy-Gy	AC90~110V	
7	Main Solenoid Valve	E ₁	P-Bk	DC80~100V 1.7~2.1kΩ	
	Solenoid Valve 1 (Small)	E ₂	B-Bk	DC80~100V 1.7~2.1kΩ	
	Solenoid Valve 2 (Large)	E ₃	Y-Bk	DC80~100V 1.7~2.1kΩ	
1	Transformer	F	R-R	AC90~110V 11~13kΩ	
		F ₁	B-Br	31~36kΩ	
10	Valve Heater	F ₅	Y-Y	1kΩ	
	Pipe Heater	F ₆	Y-Y	125kΩ~156kΩ	Pipe Heater Only
10	Fan Current REU-V1616W	Gas Type	Current	On High	On Ignition
		Prop Nat	660 ± 66mA 585 ± 59mA	297Hz / 4455rpm 279Hz / 4185rpm	180Hz / 2700rpm 180Hz / 2700rpm
10	Fan Current REU-V2020W REU-V2018W	Gas Type	Current	On High	On Ignition
		Prop Nat	845 ± 85mA 770 ± 77mA	308Hz / 4620rpm 290Hz / 4350rpm	195Hz / 2925rpm 195Hz / 2925rpm
4	Gas Secondary Pressure			Secondary	
	Gas Type	Primary	High	Low	
	Propane Natural	2.75kPa 1.13kPa	0.81kPa 0.88kPa	0.18kPa 0.18kPa	

16. Component and Circuit Checks



1. Combustion Fan Circuit

Check the Motor

Check the combustion fan if the error indicator displays “61”.

Measure voltages between Black and Red of the PCB connector (A).

Normal: DC15~46V (when fan ON)

DC0V (when fan OFF)

If normal proceed to check the rotation sensor

Faulty: Replace PCB

Check for the Fan Rotation Sensor

a.) Measure voltages between Black and Yellow of connector (A).

Normal: DC11~13V

If normal proceed to b.).

Faulty: Replace PCB.

b.) Measure voltages between Black and White of connector (A).

Normal: DC5~10V

If normal proceed to Sparker Circuit 2.

Faulty: Replace Combustion Fan.

2. Sparker Circuit

a.) Measure voltages between Grey and Grey of connector (C₁).

Normal: AC90~110V

If Normal proceed to b.).

Faulty: Replace PCB.

b.) Disconnect connector (C₁) and measure resistance between both terminals of the sparker.

Normal: 1MΩ

If not sparking, adjust or replace ignition plug.

Faulty: Replace Sparker.

3. Main Solenoid Valve (SV₁) Circuit

Check the main solenoid if error indicator “11” is displayed.

a.) Disconnect Main Solenoid connector (E₁) and measure resistance between Pink and Black

Normal: 1.7 ~2.1kΩ

If normal, proceed to b.).

Faulty: Replace Main Solenoid.

b.) Measure voltage between Pink-Black of Main Solenoid connector.

Normal: DC80~100V

If normal, proceed to Solenoid Valve SV₂

Faulty: Replace PCB.

4. Solenoid Valve 1 (SV₂) Circuit

Check Solenoid 1 if error indicator “11” is displayed.

- a.) Disconnect Solenoid 1 connector (E₂) and measure resistance between Blue and Black.

Normal: 1.7 ~2.0kΩ

If normal, proceed to b.

Faulty: Replace Solenoid 1.

- b.) Measure voltage between Blue and Black of Solenoid 1 connector.

Normal: DC80~100V

If normal, proceed to Solenoid Valve 2 (SV₃) Circuit

Faulty: Replace PCB.

5. Solenoid Valve 2 (SV₂) Circuit

- a.) Disconnect Solenoid Valve 2 connector (E₃) and measure resistance between Yellow and Black.

Normal: 1.7 ~2.1kΩ

If normal, proceed to b.).

Faulty: Replace Solenoid Valve 2.

- b.) Measure voltage between Yellow and Black of Solenoid Valve connector.

Normal: DC80~100V

If normal, proceed to Thermal fuse Circuit.

Faulty: Replace PCB.

6. Modulating Valve Circuit

- a.) Disconnect Modulating Valve fasten terminals and measure resistance between terminals.

Normal: 65~85Ω

If normal, proceed to b.).

Faulty: Replace Modulating Valve.

- b.) Measure voltage between Pink and Pink of Modulating Valve fasten terminal.

Normal: DC2.0~15V

If normal, proceed to c.).

Faulty: Replace PCB.

- c.) Check the gas secondary pressure change when set temperature on the remote control changes from 37°C to 55°C.

Normal: If secondary pressure changes, go to Water Flow Servo Circuit.

Faulty: Replace Modulating Valve.

7. Flame Rod Circuit

Check flame rod.

Disconnect flame rod terminal (B₅), and re-operate.

“72” indicated:- Proceed to 3.

“72” is not indicated:- check for electrical leaks from the flame rod.

Measure resistance between flame rod terminal (B₅) and appliance earth.

Normal: >1MΩ

If normal, replace PCB.

Faulty: Replace flame rod.

a.) Remove the Flame Rod terminal (B₅) repeat operation procedure, if “72” is displayed again check the Hot water outlet thermistor.

If “72” is not displayed check current leakage from the Flame Rod.

b.) Measure voltage between body earth and Flame Rod terminal (B₅).

Normal: Voltage AC100~160V

If normal, replaced PCB

Faulty: Replace Flame Rod.

c.) Check if the Flame Rod is securely fitted.

Normal: replace the PCB

Faulty: Adjust the fitting of the Flame Rod

8. Earth Lead

Confirm the Earth Lead connection is secure (at round terminal), and check for broken or short circuits in the lead.

If normal, check other possible causes for flame failure (is gas valve open?, is the filter blocked? etc.).

If faulty, tighten the earth lead, PCB, power cord and surge arrester.

9. Thermal Fuse Circuit

Check the Thermal Fuse.

Disconnect relay connector (B₃) and measure resistance between Black and Red.

Normal: < 1Ω

If normal, replace PCB.

Faulty: Replace Thermal Fuse if after confirming there is no damage to the appliance.

10. Overheat Switch Circuit

Measure resistance between Overheat Switch terminals. (B₄).

Normal: < 1Ω

If normal, replace PCB.

Faulty: Replace Overheat Switch.

Note: If Thermal fuse or Overheat Switch were faulty.

- a.) Check heater for damage
- b.) Confirm gas type and combustion dipswitch settings
- c.) Confirm test point pressure.

11. Water Flow Sensor

a.) Measure voltage between Red - Black of relay connector (B₂).

Normal: DC 11~13V

If normal, proceed to b.

Faulty: Replace PCB.

b.) Measure voltage between Yellow - Black of relay connector (B₂).

Normal: DC 4~7V

If normal, proceed to 2.

Faulty: Replace water flow sensor.

Note: For controller readout of water flow whilst operational refer maintenance monitor. (Chapter 17) No. 1.

12. Water Flow Servo Circuit

a.) Disconnect relay connector (G₁), and measure voltage between Red (+) and Black (-) on PCB unit side.

Normal: DC11-13V

If normal: proceed to c.).

Faulty: Replace PCB unit.

b.) Measure voltage between Black and Yellow with relay connector (G₁) connected (with no water flowing, water flow servo fully open).

Normal: DC4~6V

Faulty: Replace Water Flow Servo with Water Flow Servo.

c.) Measure voltage between Black and Brown with relay connector (G₁) connected (with no water flowing, water flow servo fully open).

Normal: DC4~6V

Faulty: Replace Water Flow Servo and Water Flow Sensor.

13. Hot Water Outlet Thermistor Circuit

Check Hot Water Thermistor if error code “32” is displayed.

Disconnect relay connector (B₁) and measure resistance White -White.

When disconnected: resistance >1MΩ

When short circuit: resistance > 1 Ω

Normal: Check Heat exchanger outlet thermistor

Faulty: Replace hot water outlet thermistor.

Normal

Temp.	15°C	30°C	45°C	60°C
Resistance	11.4~14 kΩ	6.4~7.8 kΩ	3.6~4.5 kΩ	2.2~2.7 kΩ

If normal proceed to Flame Rod circuit.

Faulty: Replace the Hot water Outlet Thermistor.

Note: For controller readout of thermistor temperature whilst operational refer maintenance monitor.

Disconnect relay connector (B₁) and measure resistance White -White.

14. Surge Protector

Check the fuse.

a.) Unplug the power plug.

b.) Check whether or not the fuse (3A) x 2 has blown by measuring the resistance.

Normal: <1Ω

If normal go to step Electrical Fuse 13.

Faulty: Replace fuse/s (3Ax2). Check for a short next time it's turned off.

15. Electrical Fuse

a.) Measure voltage between Blue and Brown on the connector (F₂)

Normal : AC 207~264V

If normal proceed to b.). (11~13Ω)

Faulty: Check if voltage on the fuse terminal is AC207~264V

b.) Measure voltage between white and white on the (F₁).

Normal: AC207~264V.

Faulty: replace surge protector unit.

16. Transformer

Check for the transformer

a.) Measure the voltage between white and white on the transmission connector (F).

Normal: AC207~264V (11~13 Ω)

If normal proceed to b.). (11~13Ω)

Faulty: Check if the voltage on fuse terminals is AC207-264V.

17. Remote Control

Check the voltage between the 2-core remote control cable.

Measure the voltage between terminals on the remote control terminal (D).

Normal: DC 11~13V

If normal, replace the remote control after confirming that the cable hasn't been damaged or shorted.

Faulty: Because normal voltage is not given due a short circuit, despite the PCB being in normal state, check Water Flow Servo circuit.

If solution is not given from the above replace PCB.

18. Anti-frost Heater Circuit

a.) Disconnect relay connectors (F₄) and (F₅) and measure resistance between Yellow and Yellow on heater side (water flow servo and HW connection).

Normal: 53Ω

If normal, proceed to b.).

Faulty: Replace Valve Heater.

b.) Disconnect relay connector (F₄) and (F₅) and measure resistance between Yellow and Yellow on each connector on heater side.

Normal: 618Ω

If normal, proceed to c.).

Faulty: Replace Anti-frost Heater.

19. Frost Sensing Switch

a.) Disconnect relay connector (F₄) and measure resistance between Blue and Blue.

Normal: < 1Ω

If normal, check wiring (AC240V circuit).

Faulty: Replace Frost Sensing Switch.

18. Maintenance Monitor / Error History

Wireless Controllers



Maintenance Function - Wireless Controller Transceiver

- 1.) Press maintenance button once.
- 2.) Temperature light (orange) will illuminate & the Led display will show current water temperature in heat exchanger.
- 3.) Press maintenance button again.
'Volume' light - (orange) will illuminate. Led display to show l/min water flow through the Infinity.
- 4.) Press maintenance button again and the previous 10 error codes will be displayed.



First number shown on Led display will be 1 - followed by error code then 2 and the error code.

If error code reads — —, it means there was no error recorded.

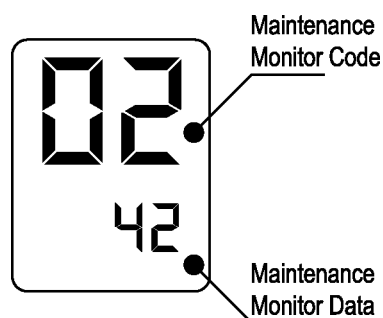
Press maintenance button again to return to transceiver to normal mode.

This feature is available where the appliances are connected with a deluxe controller This will enable service personnel to locate the maintenance history and faulty components, with the appliance in operation.

NB. When the maintenance information, error history is shown, use only one controller. If two or more water controllers are used at the same time, it may not operate correctly.

To display Maintenance Information

1. With the controller in the "OFF" position press the Water Temperature "DOWN" (Cooler) button while holding the "ON/OFF" button to activate the maintenance monitor. Press the "ON/OFF" button a second time to set the controller in the "ON" mode. This feature can now be used with the appliance in operation.
2. The maintenance number will be shown in the Water Temperature display.
3. Data will be shown in the Clock display.
4. To select the required maintenance number, press the Water Temperature "UP" and "DOWN" buttons.



Display Monitor Contents			
No.	Contents	Units	Data Range
01	Water flow sensor recognition flow (Example 123 = 12.3L/min).	0.1L/min	0~400
02	Hot water Outlet thermistor temperature (Example 20 = 20°C)	°C	0~999
03	Hot water combustion time (Example 6 = 600 hours)	100 hours	000~999
04	Hot water operation frequency (Example 6 = 600 Operations)	100	0~999
05	Hot water fan frequency	Hz pulses/sec	0~999 * Note 1

***Note 1 Fan Frequency rpm Conversion**

$$(rpm) = (Hz) \times 15$$

06	Water control connection	none	0 or 1 * Note 2
----	--------------------------	------	------------------------

***Note 2 Water Control Connections**

Bathroom Controller		Controls connected	Display
Additional controller	Kitchen controller	No	"0"
"0"	"1"	Yes	"1"

07	Water flow servo present recognising positioning	None	0~2 * Note 3
----	--	------	---------------------

***Note 3 Water Flow Servo Positioning**

Servo Position	Open	Centre	Closed
Display	"1"	"0"	"2"

08	Inlet water temperature (PCB recognition value) (Example 25 = 25°C)	°C	0 ~ 999
09	Hot water fan current flow value (Example 6 x 10 = 60 mA)	10 mA	0 ~ 999
10	Bath fill amount (this counts the litres during bath fill operation).	Litres	0 ~ 999
11	Heat exchanger exit thermistor temperature (Example 55 = 55°C)	°C	0 ~ 999
12	Bypass servo present recognition positioning (Example 0 = Closed 250 = Half open 500 = Open)	Degrees	0 ~ 500

To return to normal operation

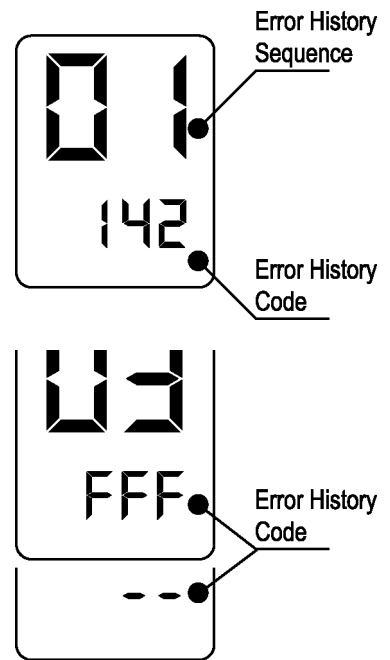
- Press the ON/OFF button again while holding down the Water Temperature "DOWN" (Cooler) button.

Error History

To Display Error Memory (History)

(This feature will show the last 10 faults in sequence)

1. Turn off at the ON/OFF button. (This can be done during operation)
2. Press the ON/OFF button while holding the Water Temperature "UP" (Hotter) button.
 - The Sequence will be shown in the Water Temperature display.
 - Error Code will be shown in the Clock display. (See service Manual for error codes).
 - Where there are less than a total of 9 errors, "FFF" or " - - " will be displayed in the Clock display.



To return to normal operation.

- Press the ON/OFF button again while holding the Water Temperature "UP" (Hotter) button.
- This feature will automatically shut down after 3 minutes.

11) Remove rubber access plug and adjust the regulator screw on the modulating valve (fig. 4) as required to the pressure. Table 1. Replace rubber access plug.

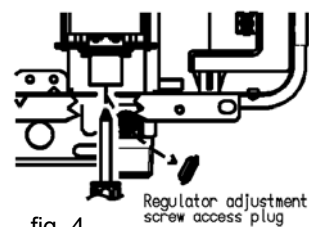


fig. 4

12) Set the Infinity to 'Forced High' combustion by setting both No. 3 and No. 4 dip switches of the bottom (SW1) set to 'ON'. (fig. 5) ensure maximum water flow.

13) Check the burner test point pressure.

14) Adjust the high pressure Potentiometer (POT) on the Printed Circuit Board (PCB) as required to the pressure shown Table 2. (fig. 1).



fig.5

Pressure Setting High (kPa)		
	Natural Gas	LPG (Propane Gas)
REU-V1616W	0.88	0.81
REU-V1620W		
REU-V2020W	0.92	0.84
REU-V2020W		

Table 2

15) **IMPORTANT:** Set dip switches No's 3 and 4 on the bottom (SW1) set of dip switches to 'OFF' to return the appliance to 'Normal' combustion. (fig. 6).



fig.6

16) Close hot water tap.

17) Turn OFF the gas supply and 240V power supply.

18) Remove pressure gauge, and replace sealing screw.

19) Turn 'ON' the gas supply and 240V power supply.

20) Operate unit and check for gas leaks at test point.

21) Replace the front cover of the appliance.

Warning

DURING PRESSURE TESTING OF THE 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.

19. Gas Conversion Procedure



Conversion Method

Warning-Ensure that the power cords is disconnected from the power point (240V potential) and isolate gas supply.

1. Remove outer cover, 4 screws.
 2. Delete "Natural" from the combustion chamber cover and replace with "Propane". (Use a black marking pen).
 3. Delete gas type from small paper sticker on bottom edge of inner casing.
 4. Replace small gas label on gas inlet.
 5. Replace large gas label on top of appliance.
 6. Place "Propane" very small gas label over "Natural" on Data Plate.
 7. Lift PCB protective plastic cover up.
 8. Disconnect Flame rectification and sparker leads (2). (if needed)
 9. Remove manifold, 9 screws.
 10. Disconnect leads to solenoid (Polarized Plug).
 11. Remove Natural Gas manifold.
 12. Place the Propane manifold in the correct location ensuring,
 - The "O" rings are correctly positioned
 - No wires are trapped.
 - Manifold is marked with the correct gas type. ("A" for Propane)
 13. Carefully replace the 9 screws to secure the manifold (Including the Wire ties)
 - Reconnect the Solenoids Wires (Polarized plug Brown and Black wires).
 14. Refit flame rectification and sparker leads (2).
 15. Connect appliance to gas, water.
 16. Check for gas escapes.
 17. Connect the appliance to the electricity.
 18. Follow gas pressure setting and dipswitch setting procedures (see next page).
 19. Disconnect appliance from services.
 20. Replace front cover, star washer must be on bottom right hand screw
-

20. Dismantling for Service



240 volt potential exposure. Isolate the appliance and reconfirm with a neon screwdriver or multimeter.

<i>Item</i>	<i>Page</i>
1. “Removal of Front Panel”	34
2. “Removal of the PCB Unit”	34
3. “Removal of the Water Flow Sensor and Servo”	34
4. “Removal of Sparker”	34
5. “Removal of Fan Motor”	34
6. “Removal of Outgoing Water Thermistor”	35
7. “Removal of Transformer”	35
8. “Removal of Manifold and burner”	35
9. “Removal of Gas Control”	36
10. “Removal of Heat Exchanger”	36
11. “Removal of Thermal Fuse”	36

Unless otherwise stated, re-assembly is the reverse of dismantling.

IMPORTANT

For some areas of dismantling you may need to isolate any or all of the following:

- * Isolate gas supply.
- * Disconnect electrical supply from wall socket.
- * Isolate water supply.
- * Drain **all** water from appliance.

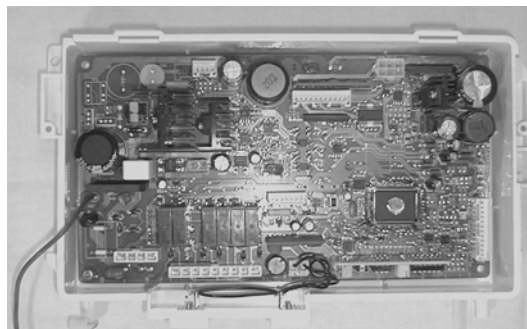
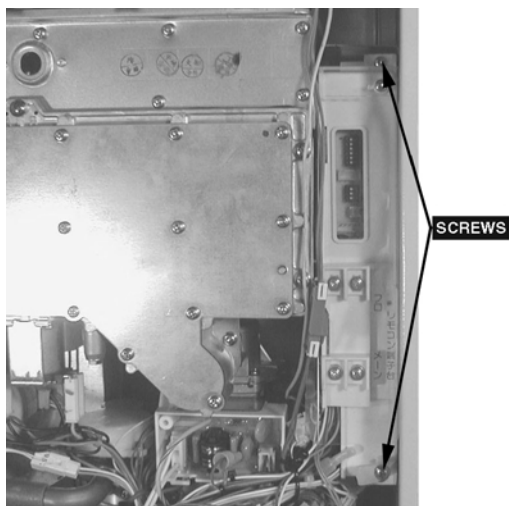
1) Removal of **Front Panel**

- a. Remove four (4) screws.



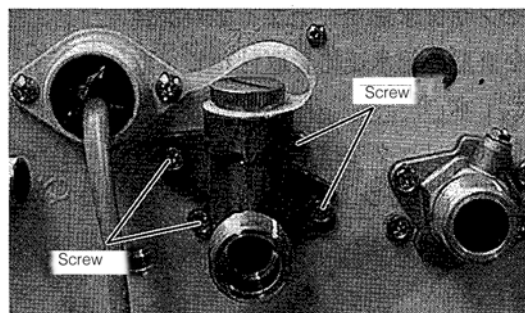
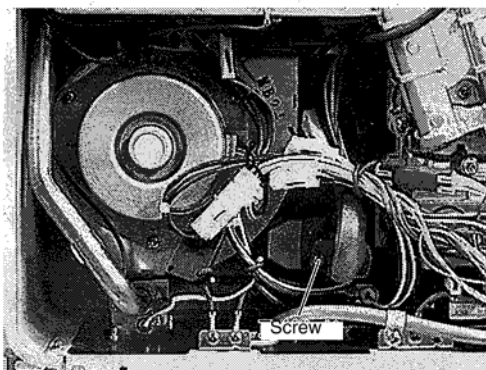
2) Removal of the **PCB Unit**

- a. Remove the front panel. (Refer Item 1.)
- b. Remove one (1) screw and take off plastic cover.
- c. Remove two (2) screws and take off earth wire.
- d. Remove two (2) screws and pull out two (2) red wires from transformer.
- e. Remove two (2) screws and pull off PCB unit.
- f. Remove connectors from PCB unit.



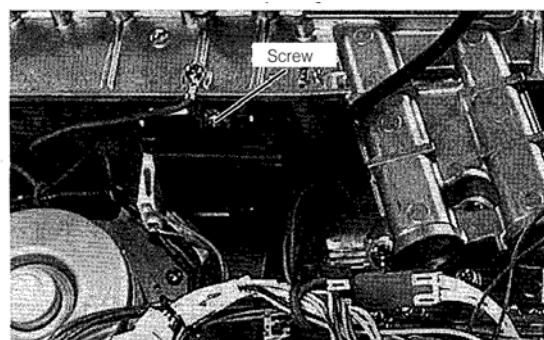
3) Removal of the **Water Flow Sensor and Servo**

- a. Remove one (1) screw and pull off heat exchanger inlet water connection tube.
- b. Remove lock bracket and pull off inlet water connection tube. Ensure O- ring not lost or damaged.



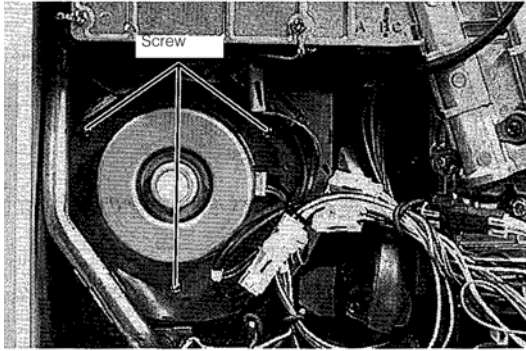
4) Removal of **Sparker**

- a. Remove connector from sparker.
- b. Remove screw from sparker and take out sparker.
- c. Pull off high tension lead.

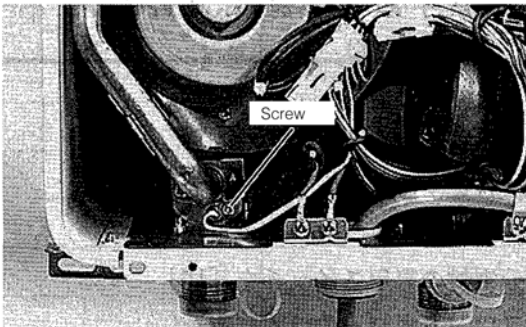


5) Removal of **Fan Motor**

- a. Remove screws three (3) and pull off combustion fan.
- b. Remove connector (4P).



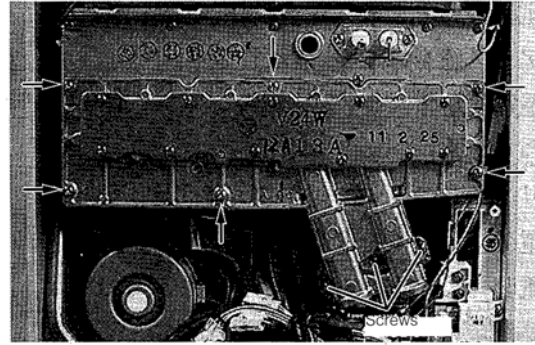
- 6) **Removal of Outgoing Water Thermistor**
- Remove one (1) screw of Heat Exchanger outlet water tube.
 - Unlock bracket and pull off inlet water tube. Ensure O-ring is not lost or damaged.
 - Remove one (1) screw and pull off outgoing water thermistor.



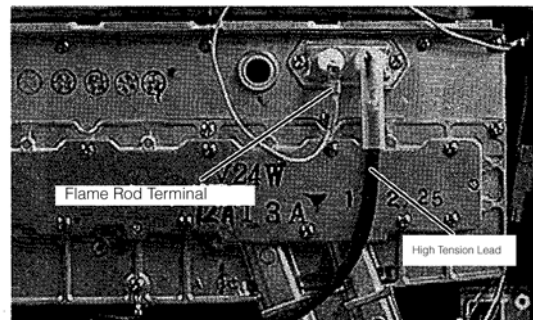
- 7) **Removal of Transformer**
- Remove PCB (refer item 2)
 - Remove two (2) screws and pull off transformer.



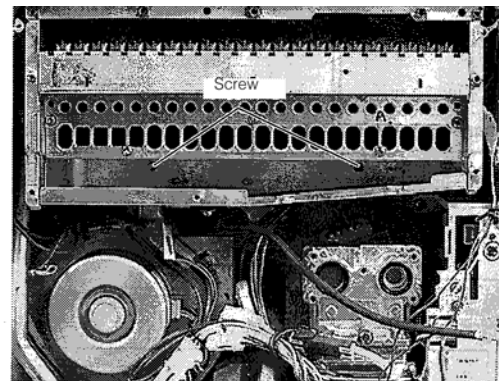
- 8) **Removal of Manifold and burner**
- Remove screws (6 + 3) and pull off manifold.



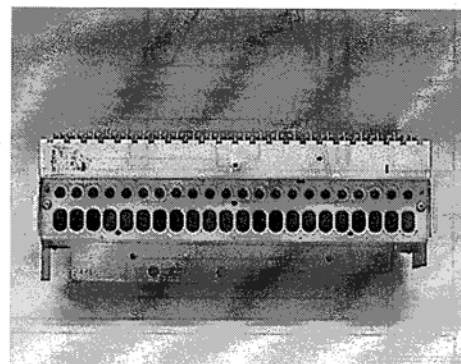
- Remove flame rod terminal (yellow)
- Remove combustion chamber front panel (6 screws)

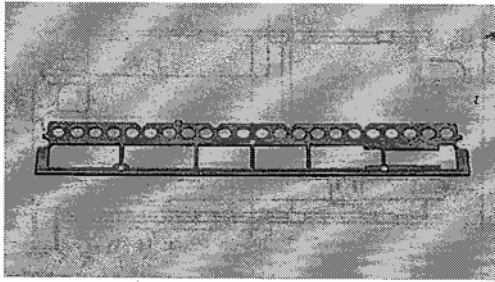


- Remove two (2) screws and pull off the burner unit.



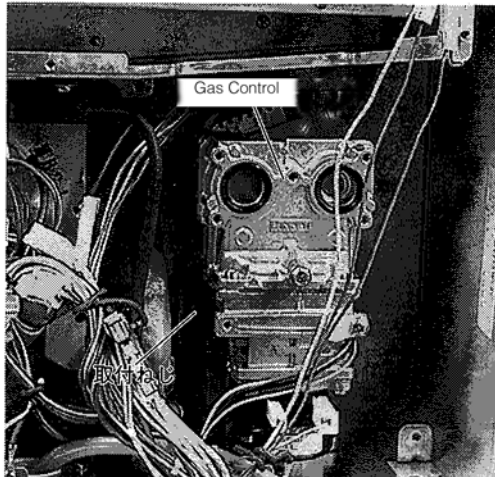
- Remove three (3) screws and pull off damper





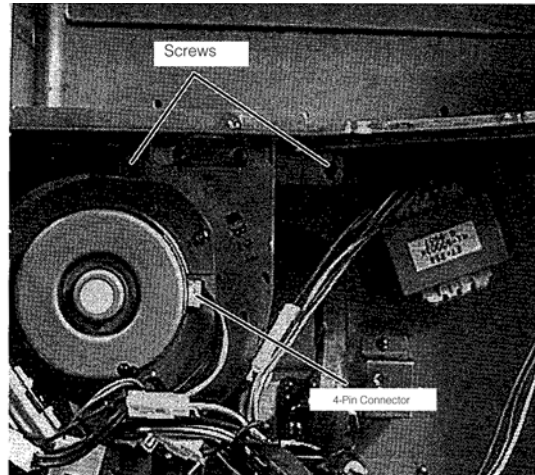
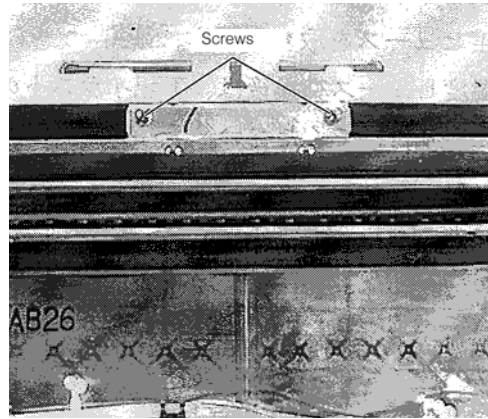
9) **Removal of Gas Control**

- a. Remove manifold (refer item 8)
- b. Remove front panel (4 screws). (refer item 1).
- c. Remove four (4) screws on gas connection inlet and gas control (assy), and pull out the gas connection. Handle O-ring carefully.

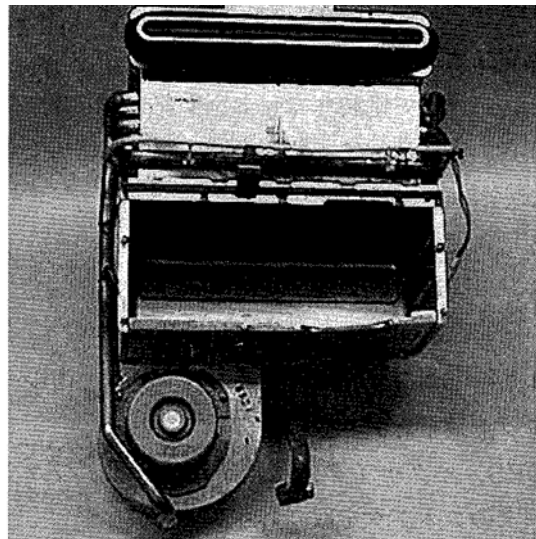


10) **Removal of Heat Exchanger**

- a. Remove PCB (refer item 2)
- b. Remove Heat Exchanger inlet water tube (refer item 3)
- c. Remove outlet water tube (refer item 6).
- d. Remove three (3) screws from the manifold (refer item 8).
- e. Pull off high tension lead and flame rod terminal (refer item 4).
- f. Remove connectors of OHS, Sparker, Anti Frost heater and fan motor.
- g. Remove four (4) screws from heat exchanger.



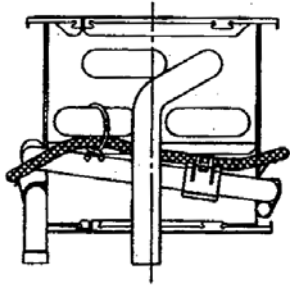
h. Pull off Heat Exchanger



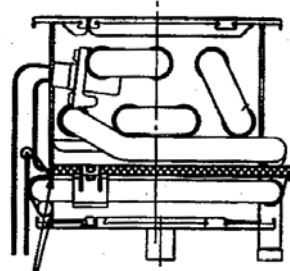
11) **Removal of Thermal Fuse**

- a. Pull off heat exchanger (refer item 10).
- b. Remove thermal fuse .

When Thermal Fuse is replaced, mount the thermal fuse as follows:

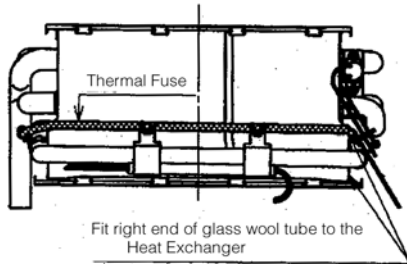


Heat Exchanger LH side



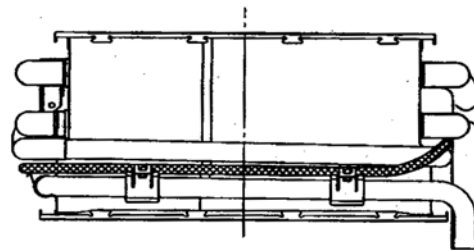
Fit Left end of glass wool tube to Heat Exchanger

Heat Exchanger RH side



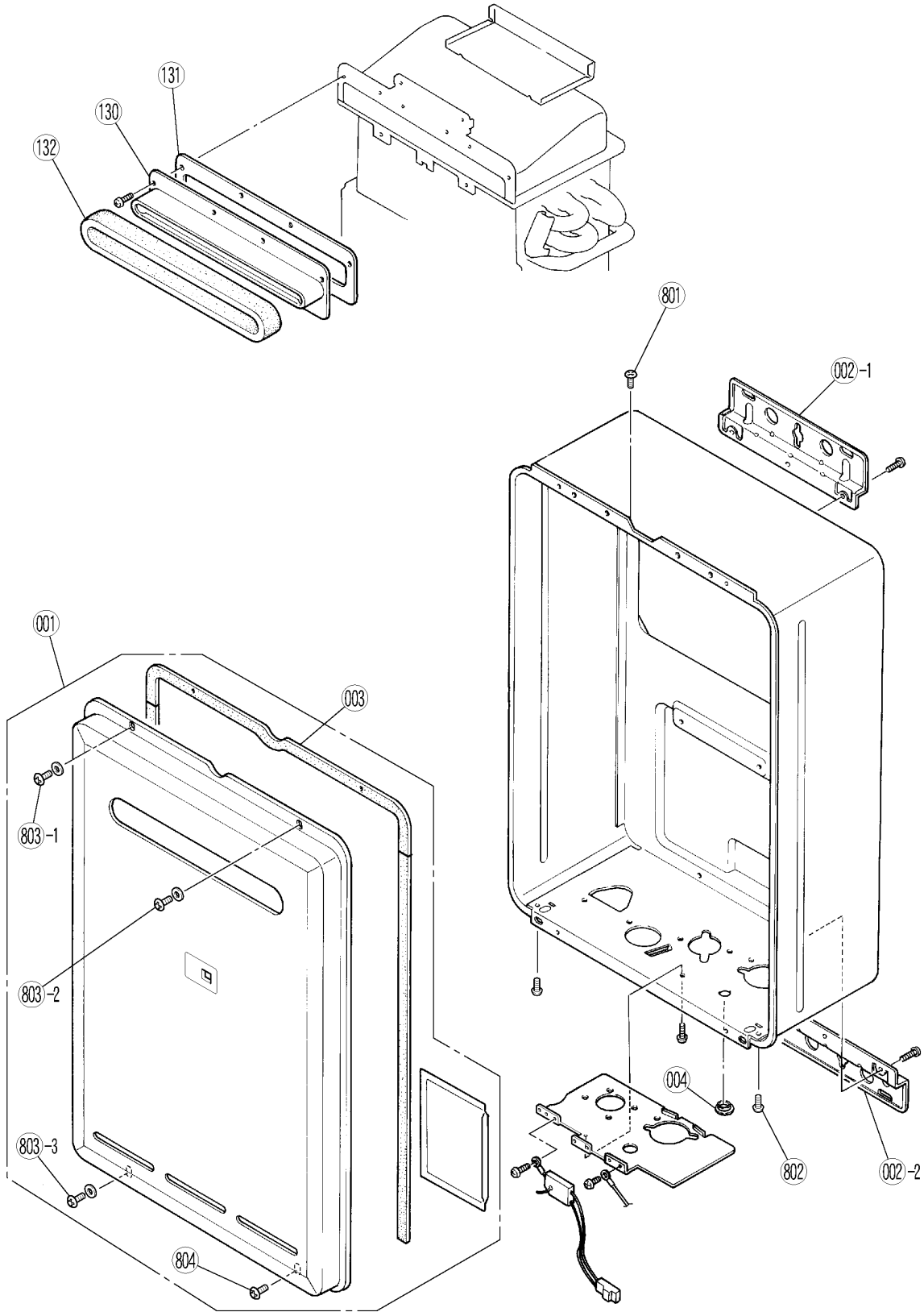
Fit right end of glass wool tube to the Heat Exchanger

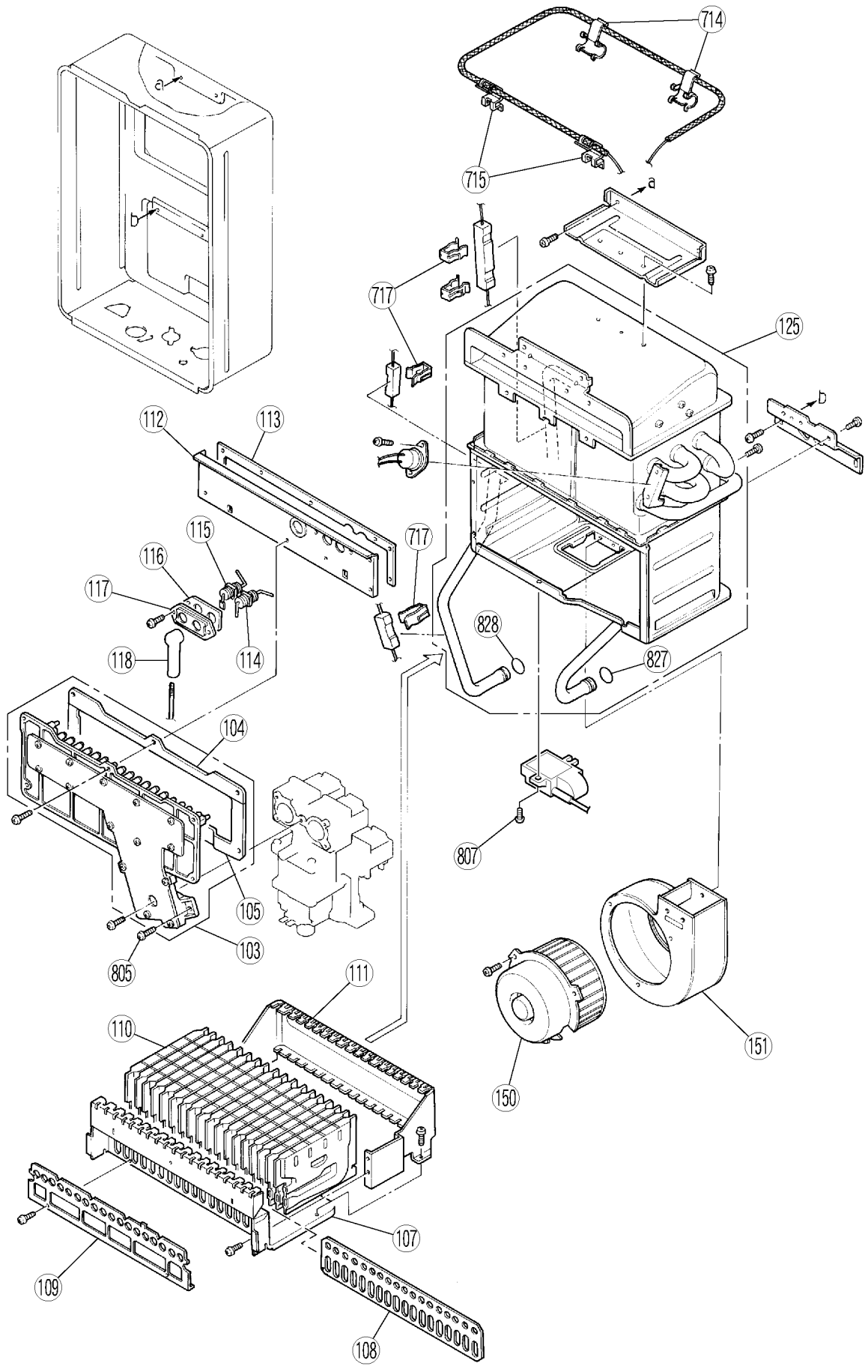
Heat Exchanger Front

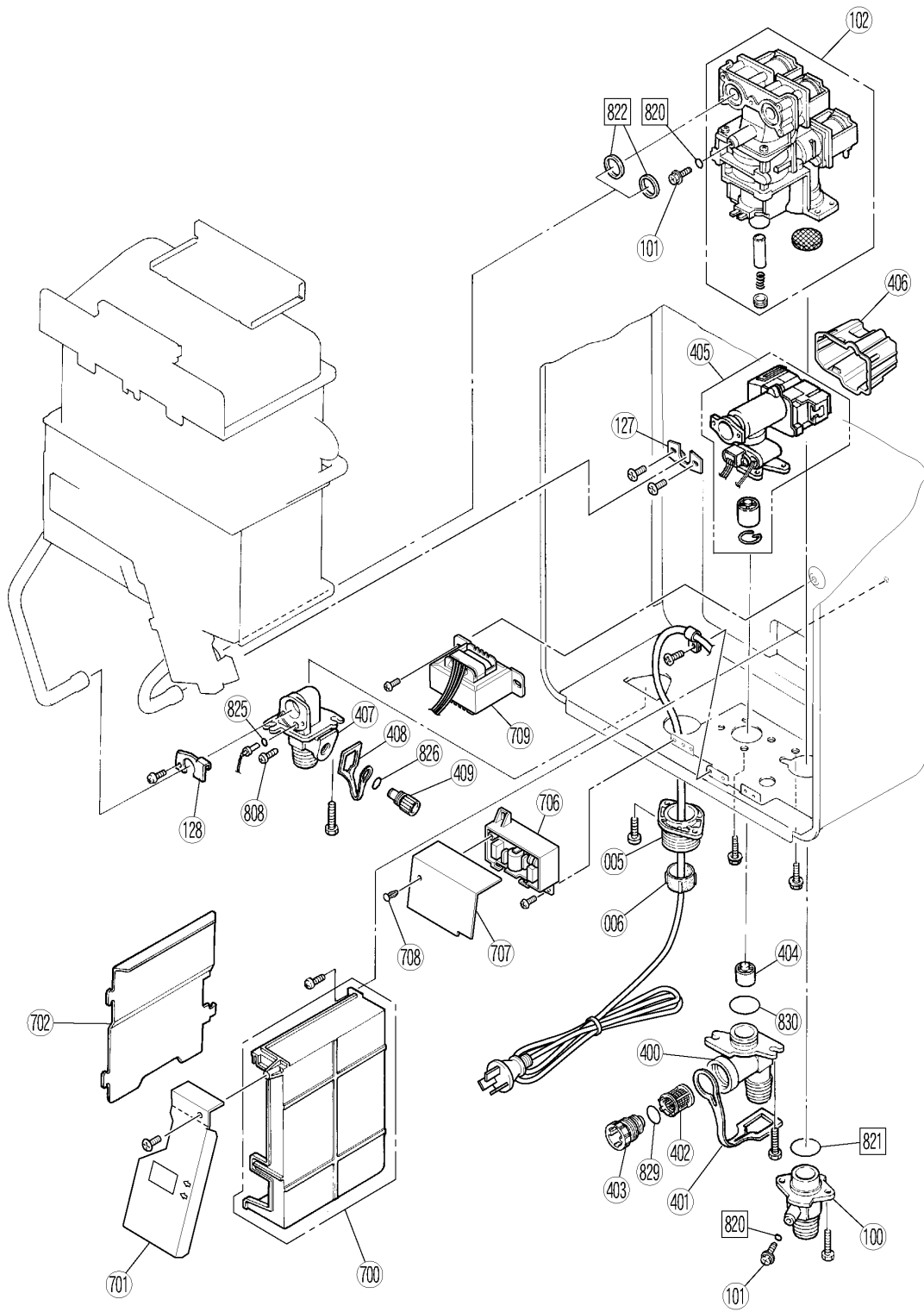


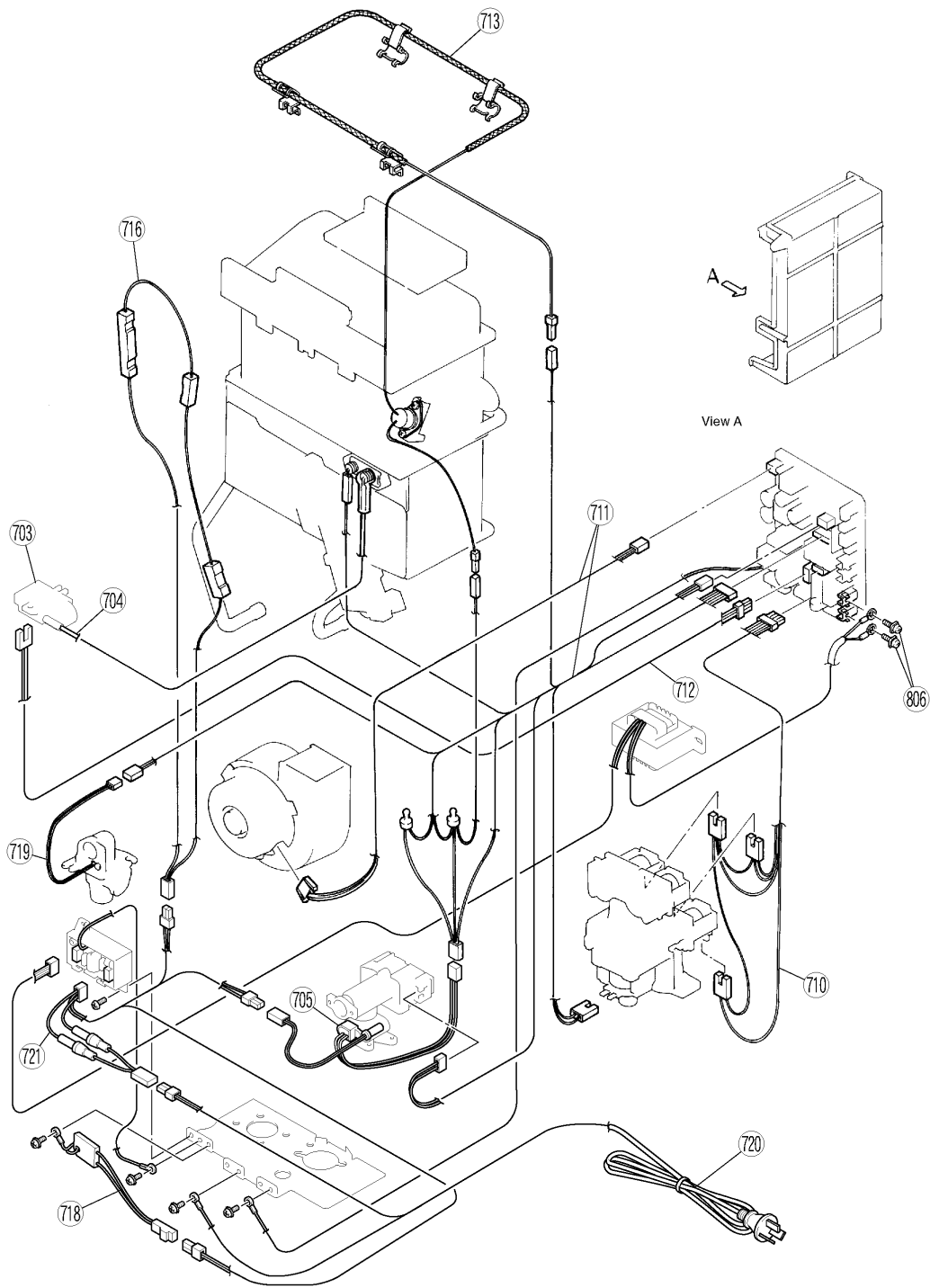
Heat Exchanger Back

21. Exploded Diagram









19. Parts List

“REU-V1616W” on page 41

“REU-V1620W” on page 44

“REU-V2018W” on page 47

“REU-V2020W” on page 50

REU-V1616W

REU-V1616W

Effective: 06/04/04
Supersedes: 05/04/04

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
001	BODY Assy, Main	92093590	1	019-1967000
002	BRACKET, Wall Mount.		2	106-329-000
003	PANEL, Fr		3	580-0039000
004	PLUG		1	510-893-000
005	GROMMET, Cable	92073352	1	106-104-000
006	GASKET, Cable		1	580-0105000
100	CONNECTION, R3/4 Gas	92081587	1	106-290-000
101	SCREW, TP. Seal		2	501-275-005
102	CONTROL, Gas	92093608	1	120-162-000
103	MANIFOLD 'A' Assy LPG	92093624	1	101-592-000
103	MANIFOLD 'B' Assy NG	92093632	1	101-593-000
104	GASKET, Manif. Upr		1	580-0106000
105	GASKET, Manif. Lwr		1	580-0107000
107	BURNER CASE, Fr		1	098-0624000
108	GASKET, Burner		1	580-589-000
109	DAMPER		1	140-722-000
110	BURNER ASSY		14	157-083-000
111	BURNER CASE, Rr		1	098-402-000
112	FRONT PLATE, Comb. Cmbr		1	019-715-000
113	SEALING UPPER, Comb.Cmbr		1	580-591-000
114	ELECTRODE	92086974	1	202-156-000
115	ELECTRODE, FR	92093640	1	230-057-000
116	GASKET, Electrode	92086990	1	580-507-000
117	HOLDER, Electrode	92087006	1	580-505-000
118	SLEEVE, Electrode	92087030	1	518-035-000
125	HEAT EXCH. Assy	92093657	1	314-538-000
127	BRACKET Thermistor	92093315	1	538-615-000
128	BRACKET Heat Exchanger	92099548	1	537-502-000
130	TERMINAL, Flue		1	055-787-000
131	GASKET, Flue Term		1	580-593-000
132	PACKING, Flue Term		1	580-594-000
150	FAN MOTOR, Assy	92093665	1	222-512-000
151	FAN CASING, Assy		1	035-870-000

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
400	CONNECTION 1/2, In. Water		1	333-300-000
401	STRAP, Plug		1	553-119-000
402	FILTER, Inlet Water	92083773	1	017-268-000
403	FILTER, Plug		1	196-031-000
404	RECTIFIER		1	330-107-000
405	SERVO, Water Flow	92093673	1	301-100-000
406	COVER, Water Flow Sy.		1	098-0781000
407	CONNECTION, 1/2 HW		1	333-303-000
408	STRAP, Plug		1	553-043-000
409	DRAIN VALVE, Assy	92081751	1	337-048-000
700	PCB, Assy	92093681	1	210-604-000
701	COVER-A, EC		1	098-0782000
702	COVER, EC		1	098-0627000
703	SPARKER	92072776	1	261-015-000
704	LEAD, High Tension	92092253	1	203-828-000
705	MR SENSOR, Assy	92092279	1	243-072-000
706	EMC BOARD, Assy	92093699	1	210-605-000
707	COVER, EMC Board		1	098-0784000
708	CLIP		1	504-058-000
709	TRANSFOMER, Assy	92093616	1	224-332-000
710	HARNESS, Solenoid Valve		1	290-0488000
711	HARNESS, Sensor		1	290-0643000
712	HARNESS, Breaker		1	290-0644000
713	HARNESS, Thermal Fuse		1	290-0491000
714	HOLDER, Thermal Fuse		2	537-505-000
715	HOLDER, Thermal Fuse		2	537-0110000
716	VALVE HEATER		1	213-001-000
717	BRACKET, Heater	92076123	4	537-174-000
718	SENSOR SWITCH, Low Temp		1	234-444-000
719	THERMISTOR, Inlet	92073675	1	233-108-000
720	SWITCH, Low Temp.	92089051	1	206-226-000
721	HARNESS, Fuse			290-0645000
721	HARNESS, Fuse		1	290-0646000

REU-V1616W

Effective: 06/04/04
 Supersedes: 05/04/04

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
801	SCREW		2	501-865-000
802	SCREW		2	501-827-000
803	SCREW		3	501-856-000
804	SCREW		1	501-889-000
805	SCREW		3	501-400-000
806	SCREW		2	501-296-000
807	SCREW		1	501-737-000
808	SCREW		1	501-295-000
820	O-RING		2	520-300-010
821	O-RING	92072859	1	520-043-010
822	WASHER		2	580-180-000
825	O-RING	92062249	1	520-209-010
826	O-RING	92062348	1	520-281-010
827	O-RING	92071422	1	520-255-010
828	O-RING	92062207	1	520-193-010
829	O-RING	92062199	1	520-048-010
830	O-RING	92071182	1	520-049-010
888	CUSTOMER INST.		1	623-912-100
889	INSTALLATION INST.		1	K23-912-100

REU-V1620W

Effective: 04/08/06

REU-V1620WG-AK / REU-V1620WB-AK / REU-V1620WS-AK

NO	Part Name	RA Part No.	11 Digit Code	REU-V1620WG-AK	REU-V1620WB-AK	REU-V1620WS(60)-AK
				Quantity		
000	Main Body (Outer Case)	92092049	014-445-000	1		
000	Main Body (Outer Case)	92092050	014-445-000		1	
000	Main Body (Outer Case)	92092050	014-445-000			1
001	Panel Front	92099952	019-3426000	1		
001	Panel Front - Dune	92099953	019-3427000		1	
001	Panel Front - Dune	92099954	019-3435000			1
002	Panel Front Packing		580-0039000	3	3	3
010	Wall Hang Bracket		106-329-000	2	2	2
011	Blind Packing		510-893-000	1	1	1
012	Rubber Bushing C		194-140-000	1	1	1
013	Harness Easy Connect	92099955	106-651-000	1	1	1
014	Cable Seal Packing	92099984	580-0105000	1	1	1
015	Piping Reinforce		044-156-000	1	1	1
100	Inlet (3/4") Gas	92081587	106-290-000	1	1	1
101	Screw Test Point	92099956	501-275-005	2	2	2
102	Gas Control	92095018	120-0015000	1	1	1
103	Manifold LP	92093624	101-592-000	1	1	1
103	Manifold NG	92093632	101-593-000	1	1	1
104	Manifold Packing Upper		580-0106000	1	1	1
105	Manifold Packing Lower		580-0107000	1	1	1
106	Burner Case Front		098-0624000	1	1	1
107	Packing		580-589-000	1	1	1
108	Dumper		140-722-000	1	1	1
109	Lean & Rich Bunsen Burner		157-083-000	14	14	14
	Burner Assembly		157-137-000	1	1	1
110	Burner Case Rear		098-402-000	1	1	1
111	Combustion Chamber Front Panel		019-715-000	1	1	1
112	Combustion Chamber Front Panel Upper		580-591-000	1	1	1
113	Electrode	92086974	202-156-000	1	1	1

REU-V1620WG-AK / REU-V1620WB-AK / REU-V1620WS-AK

NO	Part Name	RA Part No.	11 Digit Code	REU-V1620WG-AK	REU-V1620WB-AK	REU-V1620WS(60)-AK
114	Electrode FR	92093640	230-057-000	1	1	1
115	Packing Electrode RH	92086990	580-507-000	1	1	1
116	Electrode Holder RH	92087006	580-505-000	1	1	1
117	Sleeve Electrode	92087030	518-035-000	1	1	1
120	Heat Exchanger	92093657	314-538-000	1	1	1
121	Water Connecting Tube Retainer		538-615-000	1	1	1
122	Bracket H/Exchanger Outlet	92099548	537-502-000	1	1	1
127	Bracket Thermistor	92093315		1	1	1
128	Bracket Heat Exchanger	92099548		1	1	1
130	Exhaust Flue	92098466	055-787-000	1	1	1
131	Exhaust Opening Packing		580-593-000	1	1	1
132	Front Panel Seal Packing		580-594-000	1	1	1
150	Comb Fan Motor	92093665	222-512-000	1	1	1
151	Fan Casing Assembly		035-870-000	1	1	1
	Comb Fan Assy		222-612-000			
400	Inlet (1/2") Water	92097906	333-300-000	1	1	1
401	Plug Band		553-119-000	1	1	1
402	Filter Water O Large	92083773	196-062-000	1	1	1
404	Rectifier		330-107-000	1	1	1
405	Water Flow Servo	92099957	301-152-000	1	1	1
406	Water Flow Servo Cover		098-1445000	1	1	1
408	Connection (1/2") H/W	92098458	333-303-000	1	1	1
409	Hot Water Plug Band		553-043-000	1	1	1
410	Valve Press Relief	92081751	337-048-000	1	1	1
700	PCB Main	92099958	200-0418000	1	1	1
701	EC Cover -2-A		098-1853000	1	1	1
701	EC Cover -2-Z		098-1854000			
702	Electric Control Cover		098-0627000	1	1	1
703	Sparker	92095026	261-157-000	1	1	1
704	Lead HT	92092253	203-828-000	1	1	1

REU-V1620WG-AK / REU-V1620WB-AK / REU-V1620WS-AK

NO	Part Name	RA Part No.	11 Digit Code	REU-V1620WG-AK	REU-V1620WB-AK	REU-V1620WS(60)-AK
705	Ignitor Bracket		537-0619000	1	1	1
706	Surge Arrestor	92093699	210-605-000	1	1	1
707	Sub Circuit Board Cover		098-1855000	1	1	1
708	Bracket		537-0618000	1	1	1
709	Elec Cord	92089051	206-226-000	1	1	1
710	Harness Fuse	92099959	290-1284000	1	1	1
711	Heater Anti frost	92098318	213-001-000	1	1	1
712	Switch Thermal	92097187	234-444-000	1	1	1
713	Heater Fixing Plate		537-0440000	4	4	4
715	Harness Power	92095027	290-1285000	1	1	1
716	Harness Magnet	92095028	290-1286000	1	1	1
717	Harness Sensor	92099960	290-1292000	1	1	1
718	Fuse Thermal	92098300	290-0491000	1	1	1
719	Thermal Fuse Fixing Plate		537-505-000	2	2	2
720	Thermal Fuse Fixing Plate		537-0110000	2	2	2
721	Sensor MR	92092288	243-072-000	1	1	1
722	Thermistor	92095030	233-246-000	1	1	1
725	Harness Remote Control	92099961	290-1288000	1	1	1
800	Earth Screw		501-889-000	1	1	1
801	Truss Screw		501-973-010	3	3	3
802	Screw		501-0064000	3	3	3
803	Tapping Screw		501-737-000	1	1	1
804	Thermistor Fixing Screw		501-295-000	1	1	1
820	O-Ring	90195165	520-300-010	2	2	2
821	O-Ring Gas Con	92072859	520-043-010	1	1	1
822	O-Ring Gas Control	92096502	580-180-000	2	2	2
825	O-Ring Thermistor	92062249	520-209-010	1	1	1
826	O-Ring	92062348	520-281-010	1	1	1
827	O-Ring Heat Exchanger	92072800	520-255-010	1	1	1
828	O-Ring Heat Exchanger	92062207	520-193-010	1	1	1

REU-V2018W

REU-V2018W

Effective: 06/04/04
Supercedes: 05/04/04

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
001	PANEL Assy, Front	92093798	1	019-1971000
002	BRACKET, Wall Mount.		2	106-329-000
003	PANEL, Fr		3	580-0039000
004	PLUG		1	510-893-000
005	GROMMET, Cable	92073352	1	106-104-000
006	GASKET, Cable		1	580-0105000
100	CONNECTION, R3/4 Gas	92081587	1	106-290-000
101	SCREW, TP. Seal		2	501-275-005
102	CONTROL, Gas	92093608	1	120-162-000
103	MANIFOLD 'A' Assy LPG	92093764	1	101-594-000
103	MANIFOLD 'B' Assy NG	92093814	1	101-595-000
104	GASKET, Manif. Upr		1	580-0108000
105	GASKET, Manif. Lwr		1	580-0109000
107	BURNER CASE, Fr		1	098-0625000
108	GASKET, Burner		1	580-590-000
109	DAMPER		1	140-723-000
111	BURNER CASE, Rr		1	098-403-000
112	FRONT PLATE, Comb. Cmbr		1	019-1676000
113	SEALING UPPER, Comb.Cmbr		1	580-596-000
114	ELECTRODE	92086974	1	202-156-000
115	ELECTRODE, FR	92093640	1	230-057-000
116	GASKET, Electrode	92086990	1	580-507-000
117	HOLDER, Electrode	92087006	1	580-505-000
118	SLEEVE, Electrode	92087030	1	518-035-000
125	HEAT EXCH. Assy	92093822	1	314-539-000
127	BRACKET Thermistor	92093315	1	538-615-000
128	BRACKET Heat Exchanger	92099548	1	537-502-000
130	TERMINAL, Flue		1	055-788-000
131	GASKET, Flue Term		1	580-592-000
132	PACKING, Flue Term		1	580-600-000
150	FAN MOTOR, Assy	92093665	1	222-512-000
151	FAN CASING, Assy		1	035-870-000

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
400	CONNECTION 1/2, In. Water		1	333-300-000
401	STRAP, Plug		1	553-119-000
402	FILTER, Inlet Water	92083773	1	017-268-000
403	FILTER, Plug		1	196-031-000
404	RECTIFIER		1	330-107-000
405	SERVO, Water Flow	92093673	1	301-100-000
405	SERVO, Water Flow		1	301-043-000
406	COVER, Water Flow Sy.		1	098-0781000
407	CONNECTION, 1/2 HW		1	333-303-000
408	STRAP, Plug		1	553-043-000
409	DRAIN VALVE, Assy	92081751	1	337-048-000
700	PCB, Assy	92093681	1	210-604-000
701	COVER-A, EC		1	098-0782000
702	COVER, EC		1	098-0627000
703	SPARKER	92072776	1	261-015-000
704	LEAD, High Tension	92092253	1	203-828-000
705	MR SENSOR, Assy	92092279	1	243-072-000
706	SURGE ARRESTOR	92093699	1	210-605-000
707	COVER, EMC Board		1	098-0784000
708	CLIP		1	504-058-000
709	TRANSFOMER, Assy	92093616	1	224-332-000
710	HARNESS, Solenoid Valve		1	290-0488000
711	HARNESS, Sensor		1	290-0643000
712	HARNESS, Breaker		1	290-0644000
713	HARNESS, Thermal Fuse		1	290-0492000
714	HOLDER, Thermal Fuse		2	537-505-000
715	HOLDER, Thermal Fuse		2	537-0110000
716	VALVE HEATER		1	213-001-000
717	BRACKET, Heater	92076123	1	537-174-000
718	SENSOR SWITCH, Low Temp		1	234-444-000
719	THERMISTOR, Inlet	92062322	1	233-108-000
720	SWITCH, Low Temp.	92089051	1	206-226-000

No.	PART NAME	RA PART No.	QTY	11 DIGIT CODE
721	HARNESS, Fuse		1	290-0645000
721	HARNESS, Fuse		1	290-0646000
801	SCREW		2	501-865-000
802	SCREW		2	501-827-000
803	SCREW		3	501-856-000
804	SCREW		1	501-889-000
805	SCREW		3	501-400-000
806	SCREW		2	501-296-000
807	SCREW		1	501-737-000
808	SCREW		1	501-295-000
820	O-RING		2	520-300-010
821	O-RING	92072859	1	520-043-010
822	WASHER		2	580-180-000
825	O-RING	92062249	1	520-209-010
826	O-RING	92062348	1	520-281-010
827	O-RING	92071422	1	520-255-010
828	O-RING	92062207	1	520-193-010
829	O-RING	92062199	1	520-048-010
830	O-RING	92071182	1	520-049-010
888	CUSTOMER INST.		1	623-912-100
889	INSTALLATION INST.		1	K23-912-100

REU-V2020W

REU-V2020W

Effective: 06/04/04

Supersedes: 05/04/04

No.	PART NAME	RA PART No.	QTY	RJ PART CODE
001	BODY Assy, Main	92093756	1	019-1969000
002	BRACKET, Wall Mount.		2	106-329-000
003	PANEL, Fr		3	580-0039000
004	PLUG		1	510-893-000
005	GROMMET, Cable	92073352	1	106-104-000
006	GASKET, Cable		1	580-0105000
100	CONNECTION, R3/4 Gas	92081587	1	106-290-000
101	SCREW, TP. Seal		2	501-275-005
102	CONTROL, Gas	92093608	1	120-162-000
103	MANIFOLD 'A' Assy LPG	92093764	1	101-594-000
103	MANIFOLD 'B' Assy NG	92093814	1	101-595-000
104	GASKET, Manif. Upr		1	580-0108000
105	GASKET, Manif. Lwr		1	580-0109000
107	BURNER CASE, Fr		1	098-0625000
108	GASKET, Burner		1	580-590-000
109	DAMPER		1	140-723-000
111	BURNER CASE, Rr		1	098-403-000
112	FRONT PLATE, Comb. Cmbr		1	019-1676000
113	SEALING UPPER, Comb.Cmbr		1	580-596-000
114	ELECTRODE	92086974	1	202-156-000
115	ELECTRODE, FR	92093640	1	230-057-000
116	GASKET, Electrode	92086990	1	580-507-000
117	HOLDER, Electrode	92087006	1	580-505-000
118	SLEEVE, Electrode	92087030	1	518-035-000
125	HEAT EXCH. Assy	92093822	1	314-539-000
127	BRACKET Thermistor	92093315	1	538-615-000
128	BRACKET Heat Exchanger	92099548	1	537-502-000
130	TERMINAL, Flue		1	055-788-000
131	GASKET, Flue Term		1	580-592-000
132	PACKING, Flue Term		1	580-600-000
150	FAN MOTOR, Assy	92093665	1	222-512-000
151	FAN CASING, Assy		1	035-870-000

No.	PART NAME	RA PART No.	QTY	RJ PART CODE
400	CONNECTION 1/2, In. Water		1	333-300-000
401	STRAP, Plug		1	553-119-000
402	FILTER, Inlet Water	92083773	1	017-268-000
403	FILTER, Plug		1	196-031-000
404	RECTIFIER		1	330-107-000
405	SERVO, Water Flow	92093673	1	301-100-000
406	COVER, Water Flow Sy.		1	098-0781000
407	CONNECTION, 1/2 HW		1	333-303-000
408	STRAP, Plug		1	553-043-000
409	DRAIN VALVE, Assy	92081751	1	337-048-000
700	PCB, Assy	92093681	1	210-604-000
701	COVER-A, EC		1	098-0782000
702	COVER, EC		1	098-0627000
703	SPARKER	92072776	1	261-015-000
704	LEAD, High Tension	92092253	1	203-828-000
705	MR SENSOR, Assy	92092279	1	243-072-000
706	SURGE ARRESTOR	92093699	1	210-605-000
707	COVER, EMC Board		1	098-0784000
708	CLIP		1	504-058-000
709	TRANSFOMER, Assy	92093616	1	224-332-000
710	HARNESS, Solenoid Valve		1	290-0488000
711	HARNESS, Sensor		1	290-0643000
712	HARNESS, Breaker		1	290-0644000
713	HARNESS, Thermal Fuse		1	290-0492000
714	HOLDER, Thermal Fuse		2	537-505-000
715	HOLDER, Thermal Fuse		2	537-0110000
716	VALVE HEATER		1	213-001-000
717	BRACKET, Heater	92076123	4	537-174-000
718	SENSOR SWITCH, Low Temp		1	234-444-000
719	THERMISTOR, Inlet	92062322	1	233-108-000
720	SWITCH, Low Temp.	92089051	1	206-226-000
721	HARNESS, Fuse			290-0645000
721	HARNESS, Fuse		1	290-0646000

REU-V2020W

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No.	PART NAME	RA PART No.	QTY	RJ PART CODE
801	SCREW		2	501-865-000
802	SCREW		2	501-827-000
803	SCREW		3	501-856-000
804	SCREW		1	501-889-000
805	SCREW		3	501-400-000
806	SCREW		2	501-296-000
807	SCREW		1	501-737-000
808	SCREW		1	501-295-000
820	O-RING		2	520-300-010
821	O-RING	92072859	1	520-043-010
822	WASHER		2	580-180-000
825	O-RING	92062249	1	520-209-010
826	O-RING	92062348	1	520-281-010
827	O-RING	92071422	1	520-255-010
828	O-RING	92062207	1	520-193-010
829	O-RING	92062199	1	520-048-010
830	O-RING	92071182	1	520-049-010
888	CUSTOMER INST.		1	623-912-100
889	INSTALLATION INST.		1	K23-912-100

Notes

Rinnai

Rinnai Australia Pty. Ltd. ABN 74 005 138 769

Head Office

10-11 Walker Street,
Braeside, Victoria 3195
P.O. Box 460
Tel: (03) 9271 6625
Fax: (03) 9271 6622

Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires a service, please call our Hot Water Service Line. Rinnai recommends that this appliance be serviced every 3 years.

Internet: www.rinnai.com.au E-mail: enquiry@rinnai.com.au

National Help Lines

Spare Parts & Technical Info

Tel: 1300 555 545*

Fax: 1300 300 141*

**Cost of a local call Higher from mobile or public phones.*

Hot Water Service Line

Tel: 1800 000 340

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