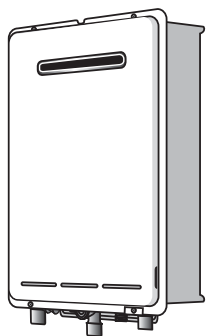


Rinnai

SERVICE MANUAL



To Suit Models:

REU-VR1620WG

REU-VR1620WB

REU-VR1620WS

REU-VR2024WG

Does NOT Suit any other Models.



The Australian
Gas Association

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



Quality
Endorsed
Company

ISO 9001 Lic 4983
SAI Global

Head Office Certified

Distributed and serviced in Australia under a Quality System certified as complying with ISO 9001 by SAI Global

Rinnai Australia Head Office is certified as complying with ISO 9001 by SAI Global.



Quality
Endorsed
Company

ISO 9001 Reg 415

Rinnai New Zealand has been certified to ISO 9001 Quality Assurance by Telarc.

Certified
Product



WaterMark

AS3498 Lic W208
SAI Global

All Rinnai products are Certified to WaterMark by SAI Global. WaterMark certification is awarded to products and fittings complying with safety and water contamination standards.

© Copyright Rinnai Australia Pty Ltd ABN 74 005 138 769
All rights reserved
Produced by Engineering & Technical Group

No portion or part of this manual may be copied without prior permission from Rinnai Australia.

Rinnai Australia reserves the right to make modifications and change specifications without notice.



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.**

This manual has been published by Rinnai Australia Engineering & Technical Group.

We welcome users of this manual to provide feedback and suggestions for improvement purposes.

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

Table of Contents

Glossary of Terms and Symbols	iv
1. Specifications	1
2. Water Flow Rates and Pressures	4
3. Dimensions	5
4. Water Controllers	6
5. Smartstart	8
6. Cutaway Diagram	10
7. Operational Flow Chart	12
8. Operation Principles	13
9. Main Components	14
10. Time Charts	15
11. Wiring Diagram	16
12. Dip Switch Settings	17
13. Fault Finding	18
14. Component and Circuit Checks	20
15. Gas Pressure Setting Procedure	25
16. Gas Conversion Procedure	25
17. Maintenance Monitor / Error History	26
18. Dismantling for Service	29
19. Parts List	38
REU-VR1620WG / REU-VR1620WB / REU-VR1620WS	39
REU-VR2024WG	42
20. Exploded Diagram	45

1. Specifications

Rinnai model number	REU-VR1620WG REU-VR1620WB REU-VR1620WS
Type of appliance	Temperature controlled continuous flow gas hot water system
Exhaust system	Fan Forced Flue
Installation	External
Dimensions	Width - 350 mm Height - 530 mm Depth - 194 mm
Weight	15 kilograms
Gas consumption (Min. / Max.) REU-V1620WG / REU-V1620WB	Natural gas : Approx. 14 ~ 125 MJ/h Propane gas : Approx. 14 ~ 125 MJ/h
Output (kW) (Maximum)	28 kW
Connections 1620WG / WB	Gas connection - R3/4 (20A) Cold water connection - R 1/2 (15A) Hot water connection - R 1/2 (15A)
1620WS	Cold water connection - R 3/4 (20A) Hot water connection - R 3/4 (20A)
Ignition system	Direct electronic ignition
Electrical consumption	Normal - 47 W Standby - 2 W (with 1 water control) Anti-frost protection - 74 W
Hot water capacity (Raised 25°C)	2.3 to 16 L/min
Temperature range (with controller)	Kitchen water controller : 37 ~ 55°C Bathroom water controller: 37 ~ 50°C
Delivery temperatures	40°C, 42°C, 50°C, 55°C, 65°C, 75°C (set by combination of dip switches on PCB) NOTE: 1620WS must be preset to 60°C
Water flow control	Water flow sensor, Electronic water flow control device
Maximum hot water capacity, raised @ 25°C	16 L/min
Water pressure required to achieve maximum hot water capacity	75 kPa
Maximum water flow	20 L/min
Water pressure required to achieve maximum hot water flow	120 kPa
Maximum water flow, outlet temp>60°C	L/min
Minimum water flow	2.4 L/min
Power supply	Appliance - AC 240 Volts 50 Hz Water controller - DC 12 Volts
Water controllers (optional) Water controllers not compatible with 1620WS	A maximum of 4 water controllers can be fitted. Any combination of deluxe, universal and wireless controllers can be used with the following limitations: Only ONE master controller can be installed. This can be a MC-100V, a MC-91Q (when programmed as a mater controller) or a MC-502RC/ MC-503RC water controller. Up to TWO BC-100V water controllers can be installed. The FOURTH water controller in any installation MUST be a MC-502RC / MC-503RC or a MC-91Q.
Water Controller Cable	Cables are supplied with water controllers. Alternatively, two core sheathed (double insulated) flex with minimum cross sectional area of 0.5 m ² may be used. Maximum individual cable runs should not exceed 50 m.

Rinnai model number	REU-VR2024WG
Type of appliance	Temperature controlled continuous flow gas hot water system
Exhaust system	Fan Forced Flue
Installation	External
Dimensions	Width - 350 mm Height - 530 mm Depth - 194 mm
Weight	15 kilograms
Gas consumption (Min. / Max.) REU-V1620WG / REU-V1620WB	Natural gas : Approx. 14 ~ 160 MJ/h Propane gas : Approx. 14 ~ 160 MJ/h
Output (kW) (Maximum)	35.5 kW
Connections	Gas connection - R3/4 (20A) Cold water connection - R 3/4 (20A) Hot water connection - R 3/4 (20A)
Ignition system	Direct electronic ignition
Electrical consumption	Normal - 65 W Standby - 2 W (with 1 water control) Anti-frost protection - 100 W
Delivery temperatures	40°C, 42°C, 50°C, 55°C, 65°C, 75°C (set by combination of dip switches on PCB)
Water flow control	Water flow sensor, electronic water flow control device
Maximum hot water capacity, raised @ 25°C	20 L/min
Water pressure required to achieve maximum hot water capacity	120 kPa
Maximum water flow	24 L/min
Maximum water flow, outlet temp < 60°C	L/min
Water pressure required to achieve maximum water flow	160 kPa
Minimum water flow for operation	2.4 L/min
Power supply	Appliance - AC 240 Volts 50 Hz Water controller - DC 12 Volts
Water controllers (optional) - Wireless water controller only installations - Wired & Wireless Water Controller Installations	A maximum of 4 water controllers can be fitted. Any combination of deluxe, universal and wireless controllers can be used with the following limitations: Only ONE master controller can be installed. This can be a MC-100V, a MC-91Q (when programmed as a mater controller) or a MC-502RC/ MC-503RC water controller. Up to TWO BC-100V water controllers can be installed. The FOURTH water controller in any installation MUST be a MC-502RC / MC-503RC or a MC-91Q.
Water Controller Cable	Cables are supplied with water controllers. Alternatively, two core sheathed (double insulated) flex with minimum cross sectional area of 0.5 m ² may be used. Maximum individual cable runs should not exceed 50 m.

Sensors and Safety Functions

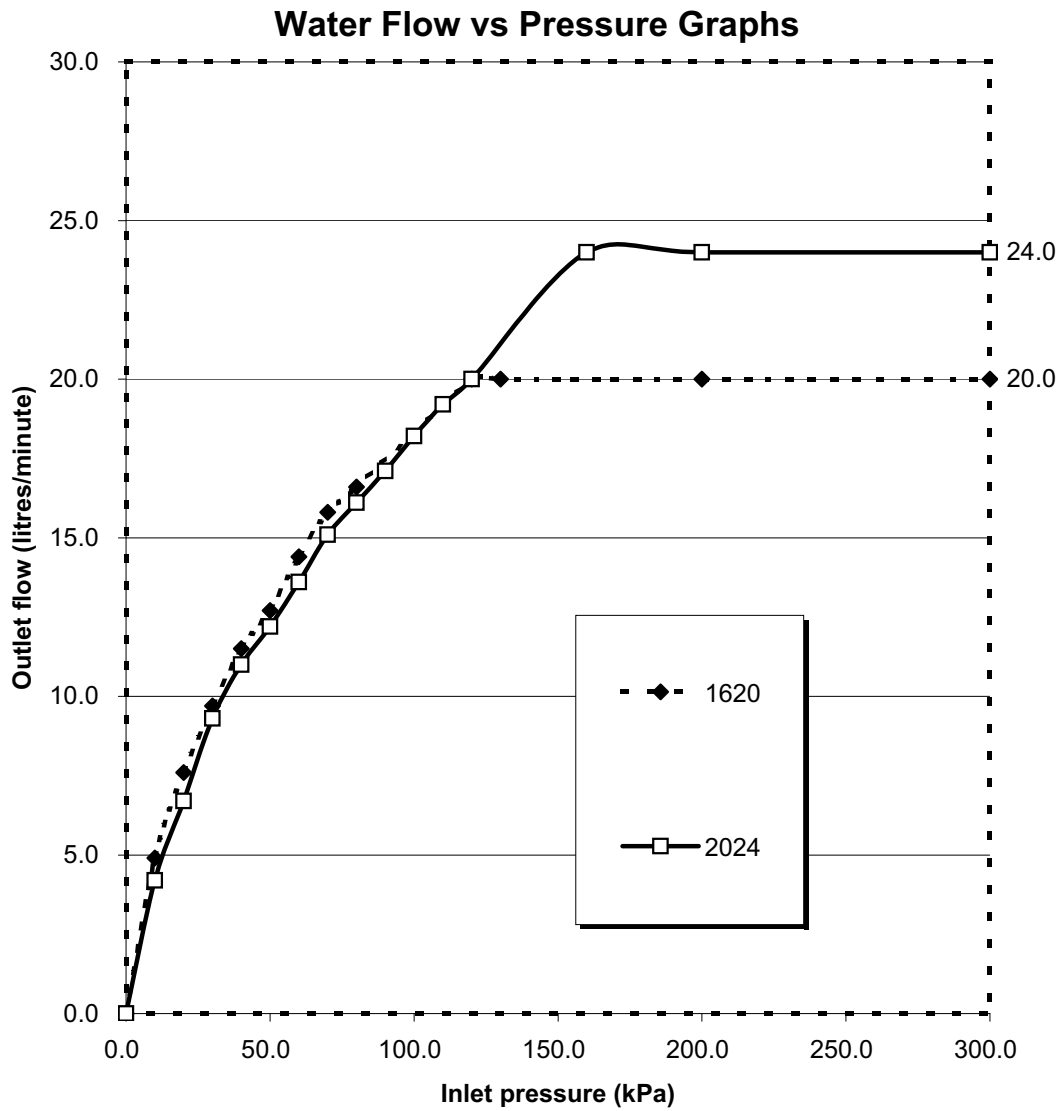
- **Hot Water Delivery Thermistor:** Measures hot water temperature at the outlet valve (i.e. the 'mixed' temperature).
- **Flame Rod:** Monitors combustion characteristics inside the combustion chamber. If the flame fails, gas supply is stopped.
- **Overheat Switch:** Situated on the heat exchanger, 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 power surges.
- **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 blades) 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

Refer to dataplate on the appliance.

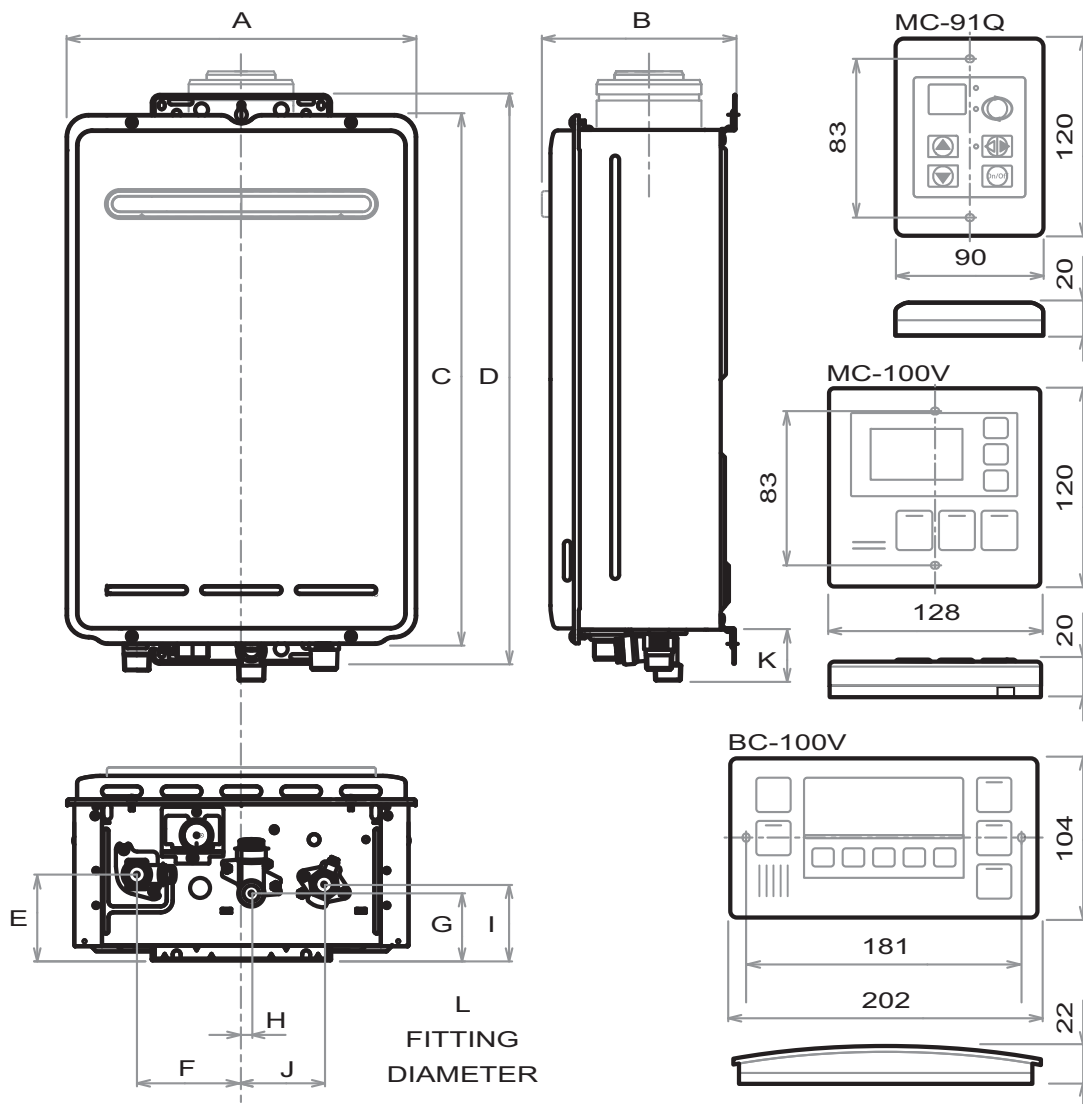
2. Water Flow Rates and Pressures

Water flow rate and pressure characteristics are shown below:



1620																
P(kPa)	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	120.0	130.0	200.0	300.0			
Q(L/min)	0.0	4.9	7.6	9.7	11.5	12.7	14.4	15.8	16.6	20.0	20.0	20.0	20.0			
2024																
P(kPa)	0.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	160.0	200.0	300.0
Q(L/min)	0.0	4.2	6.7	9.3	11.0	12.2	13.6	15.1	16.1	17.1	18.2	19.2	20.0	24.0	24.0	24.0

3. Dimensions



Dim'	Description	REU-VR1620WG REU-VR1620WB REU-VR1620WS REU-VR2024WG
A	Width	350
B	Depth	194
C	Height - Unit	530
D	Height - Including Brackets	571
E	Hot Water outlet (from wall)	87
F	Hot Water outlet (from centre)	105
G	Cold Water inlet (from wall)	68
H	Cold Water inlet (from centre)	10
I	Gas Connection (from wall)	77
J	Gas Connection (from centre)	83
	Gas: Length (from base)	40
K	Cold: Length (from base)	50
	Hot: Length (from base)	39
	Gas: Fitting Diameter	20
L	Cold: Fitting Diameter	15
	Hot: Fitting Diameter	15

* Please note that this measurement is to the left of the centre line.

4. Water Controllers



All water controllers must be installed in accordance with the relevant operation/installation instructions supplied with the water heater or controllers.



Care should be taken to ensure power supply to the Infinity is isolated when connecting / disconnecting controller wiring or transponder on wireless controllers. Failure to isolate power supply may result in damage to the appliance PCB.

Care should be taken when closing the Ezi-connect access panel, to ensure internal wiring for controllers is not shortened or crushed.

Trouble shooting

Water Controller not showing display - (Wired Water Controllers)

- Check that the correct number and combination of controllers have been installed for the specific model Infinity. Refer to controller compatibility table below.
- Check controller is turned ON.
- Check there is 12VDC power supply available to the controller from the Ezi-connect terminals.
- If there is 12VDC available from the Ezi Connect but no controller display, check wiring between Ezi-connect and controller is sound.
- If there is no power from the Ezi-connect terminals, but the hot water functions correctly, replace PCB.

Error Code 12 as soon as hot water tap is turned ON.

- Check 12VDC internal wiring to Ezi-connect terminal is not crushed, or shortened.
- Rectify wiring and re-close Ezi-connect cover carefully.

Water Controller not showing display - (Wireless Water Controllers)

- Ensure transceiver module is mounted in the correct location, as per wireless controller installation instructions.
- Ensure 2 x AA batteries are in good working order and installed with the correct polarity within the wireless controller. (Battery polarity details on rear of wireless controller)
- Ensure distance between wireless controller and transceiver does not exceed 50 metres.
- Ensure channel has been allocated to each wireless controller.
- Ensure wireless controller has been programmed to the transceiver correctly, as per wireless controller installation instructions.

Water Controller Compatibility Table

Wireless Only Installation	A maximum of 4 wireless water controllers can be fitted with the following limitation: Only <u>ONE</u> MC-502RC or MC-503RC can be set as the Master Controller.
Wired & Wireless Installations	A maximum of 4 water controllers can be fitted. Any combination of deluxe, universal and wireless controllers can be used with the following limitation: Only <u>ONE</u> master controller can be installed. This can be a MC-100V, a MC-91Q (when programmed as a master controller) or a MC-502RC or MC-503RC water controller. Up to <u>TWO</u> BC-100V water controllers can be installed. The <u>FOURTH</u> water controllers in any installation MUST BE a MC-502RC/MC-503RC or a MC91Q.

PROGRAMMING FOR THE 'UNIVERSAL' WATER CONTROLLER (MC-91Q)



1 Are there four water controllers connected?

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

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

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

STEP 2: Check that the display on ALL FOUR water controllers is lit and displaying a temperature when 'switched on'. If any ONE of the controller displays two dashes (see Fig. 6) repeat STEP 1.

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

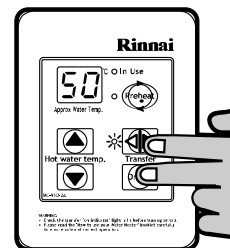


Fig. 5



Fig. 6



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

IF YES: No further action required.

IF NO: You will need to program the kitchen 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 (Fig. 7) 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.

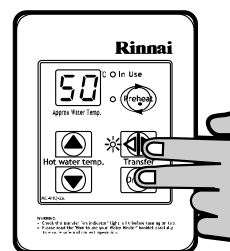


Fig. 7



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

If the water controller in the kitchen 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 bathroom to the kitchen.

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 water controllers cannot be used a manual activation switch must be used. Water Controllers cannot be used with the 1620WS model.

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.

If problems are experienced with Smartstart® operation refer to the Smartstart® Service Manual.

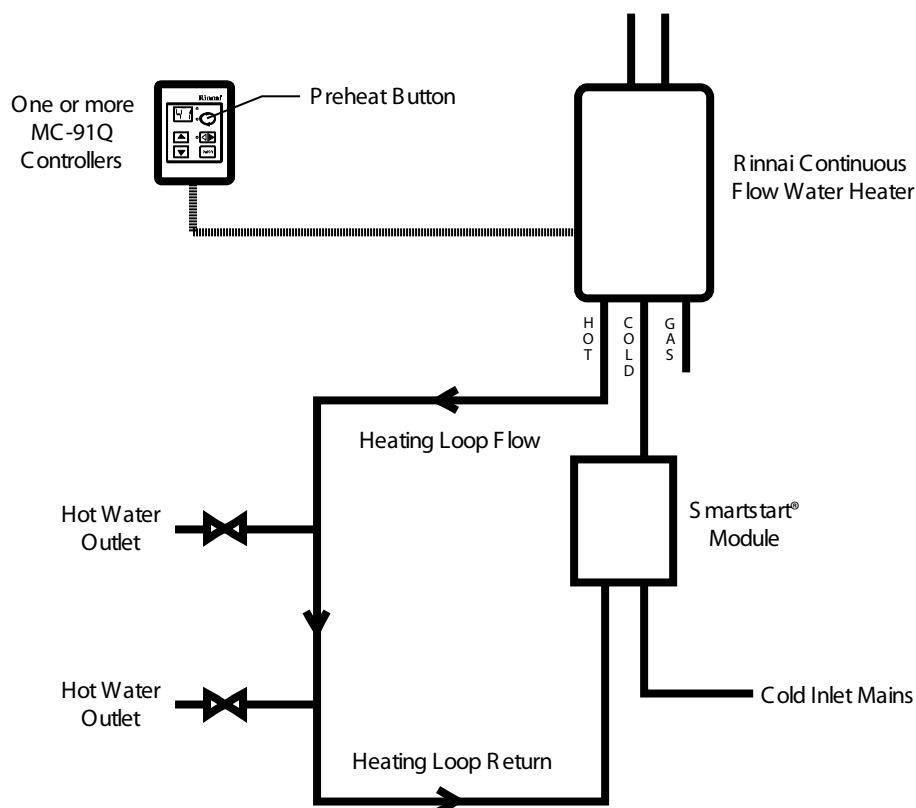
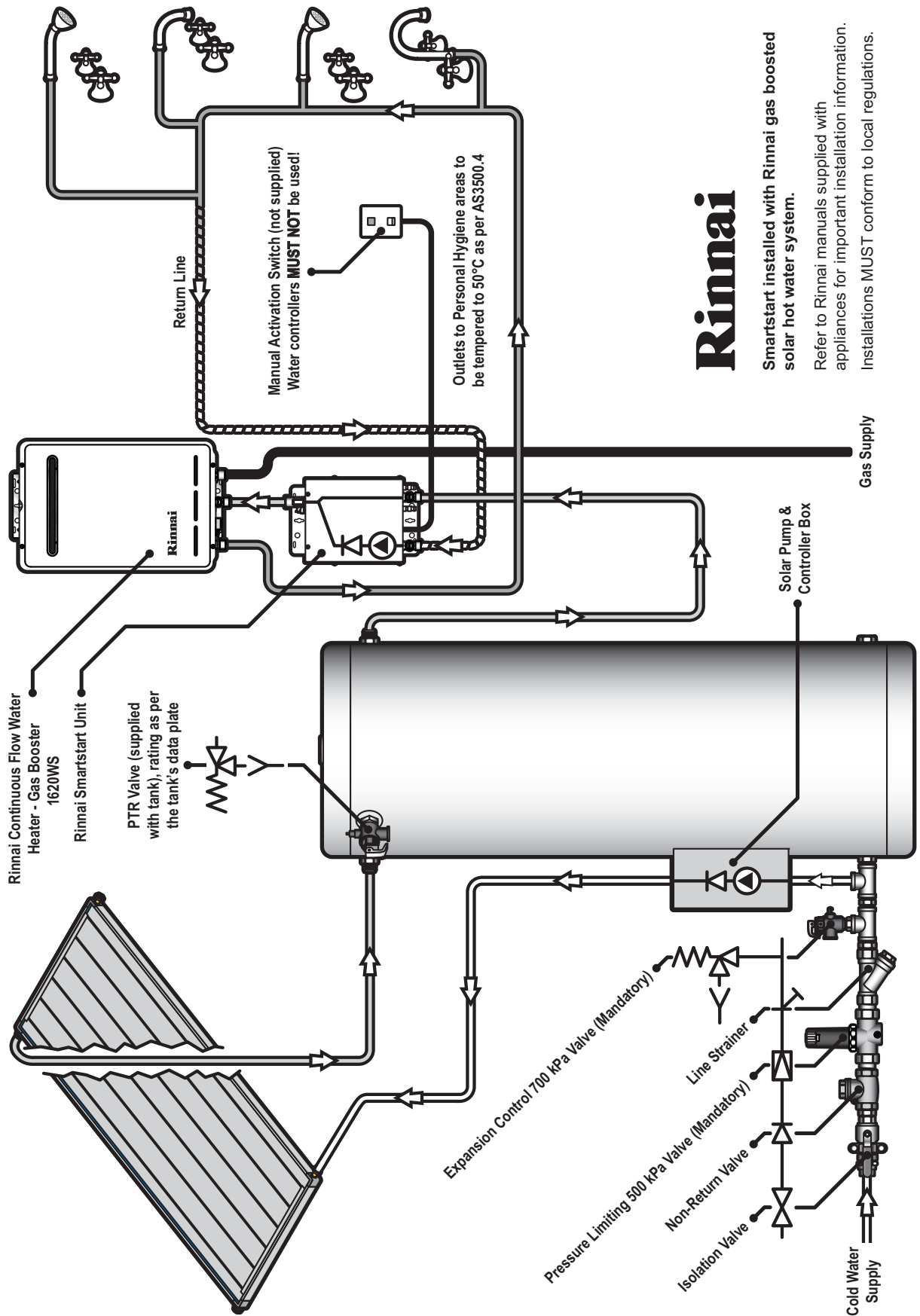


Figure 2 - Non Solar Hot Water Systems

Principle of Operation - Solar Hot Water Systems Only



Rinnai

Smartstart installed with Rinnai gas boosted solar hot water system.

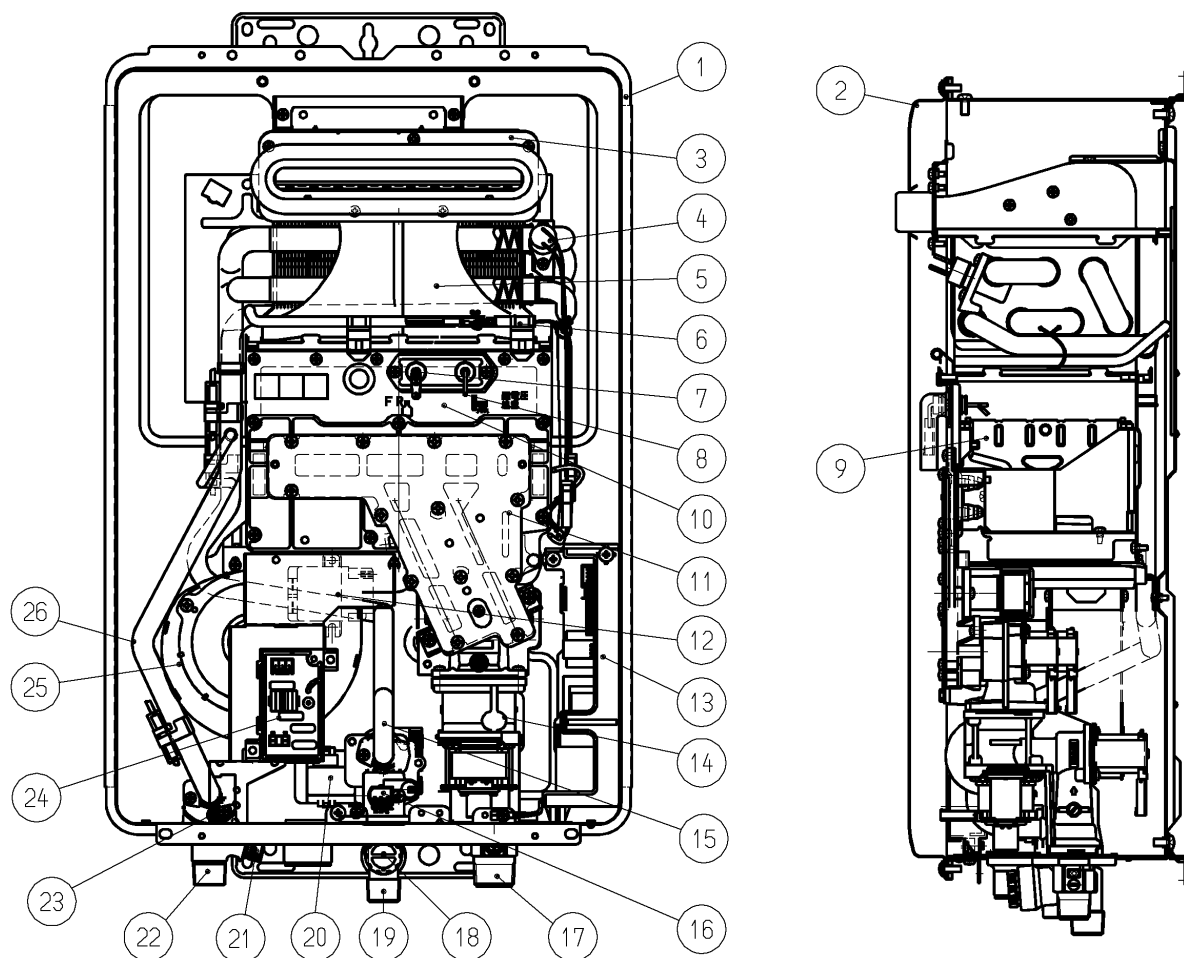
Refer to Rinnai manuals supplied with appliances for important installation information. Installations **MUST** conform to local regulations.

Figure 3 - Principle of Operation - Solar Hot Water Systems Only

6. Cutaway Diagram

NOTE: This diagram is of a general nature. Some details may be different on some models

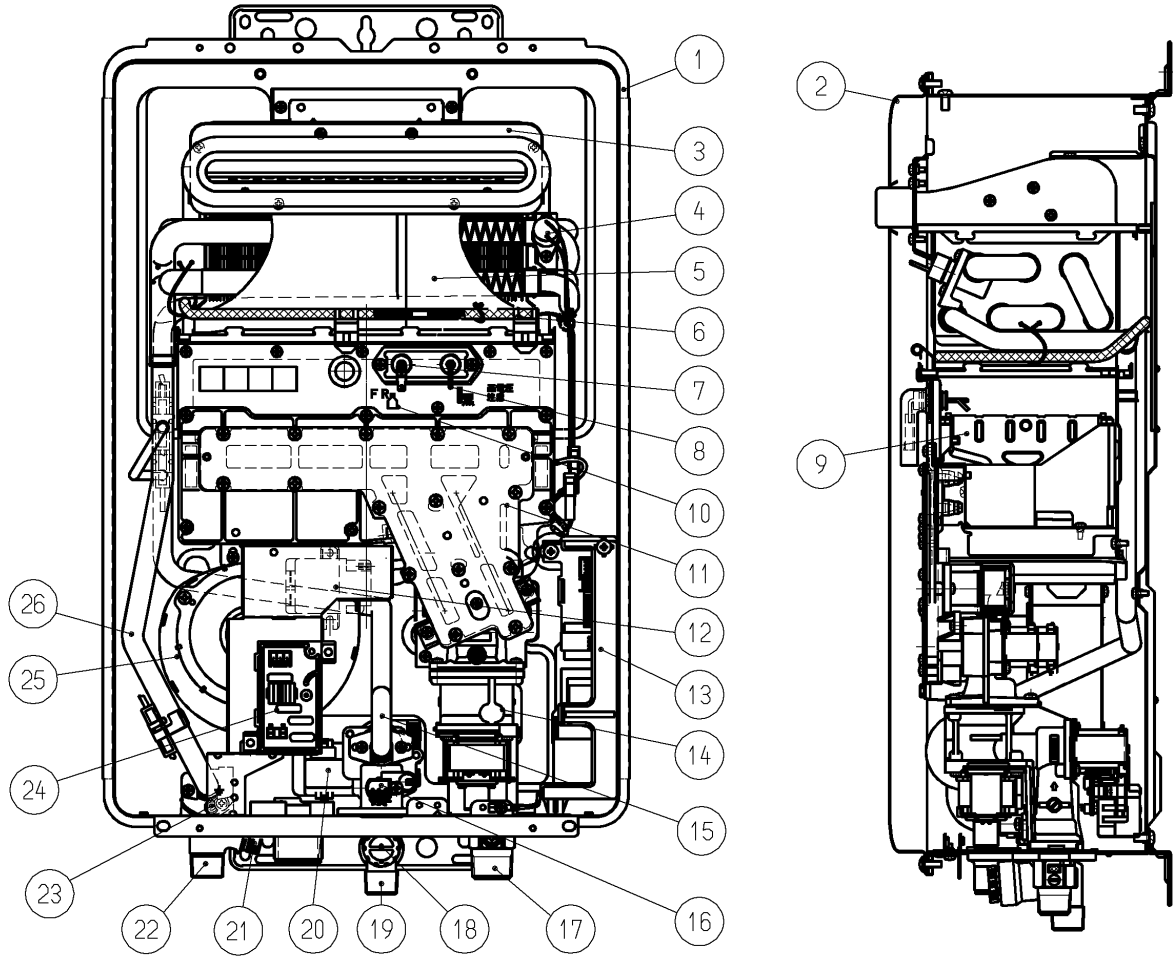
REU-VR1620



NO.	NAME	MATERIAL
1	CASING ASS'Y	PREPAINTED HOT-DIP ZINC-COATED STEEL SHEET
2	FRONT PANNEL ASS'Y	PREPAINTED HOT-DIP ZINC-COATED STEEL SHEET
3	FLUE OUTLET	STAINLESS STEEL
4	OVERHEAT SWITCH	
5	HEAT EXCHANGER	COPPER
6	THERMAL FUSES	
7	FLAME ROD	
8	ELECTRODE	
9	MAIN BURNER	STAINLESS STEEL
10	COMBUSTION CHAMBER FRONT PLATE ASS'Y	HOT-DIPPED ALUMINUM COATED STEEL SHEET
11	MANIFOLD ASS'Y	ALUMINUM CASTING
12	IGNITER	
13	P.C.B.	

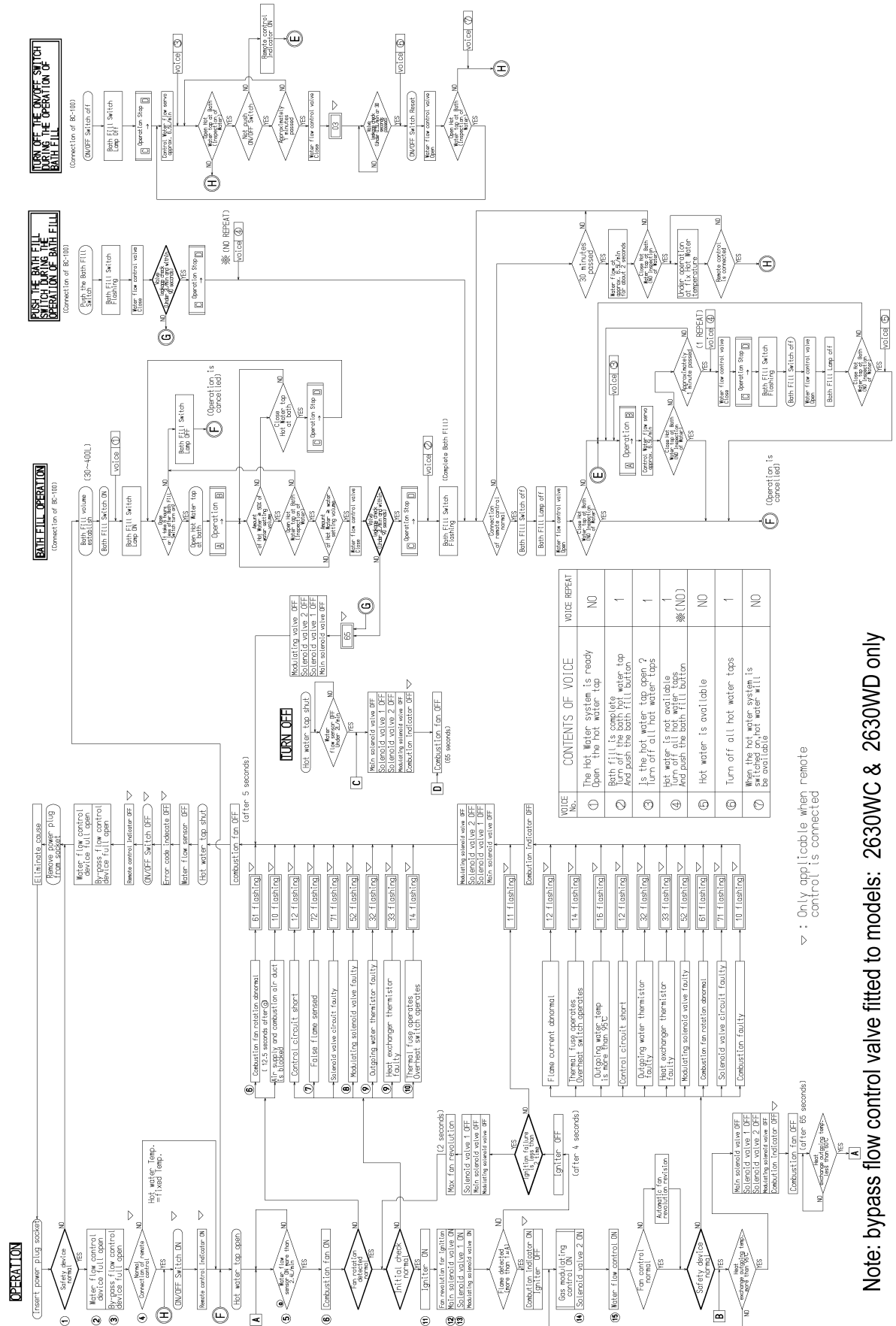
NO.	NAME
14	GAS CONTROL ASS'Y
15	WATER CONNECTING PIPE
16	WATER FLOW SENSOR
17	GAS CONNECTION
18	WATER FILTER ASS'Y
19	WATER INLET
20	WATER FLOW CONTROL DEVICE
21	PRESSURE RELIEF VALVE
22	HOT WATER OUTLET
23	OUTGOING WATER THERMISTOR
24	SURGE PROTECTOR
25	COMBUSTION FAN
26	HOT WATER CONNECTING PIPE

REU-VR2024



NO.	NAME	MATERIAL	NO.	NAME	MATERIAL
1	CASING ASS'Y	PREPAINTED HOT-DIP ZINC-COATED STEEL SHEET	14	GAS CONTROL ASS'Y	ALUMINUM CASTING
2	FRONT PANNEL ASS'Y	PREPAINTED HOT-DIP ZINC-COATED STEEL SHEET	15	WATER CONNECTING PIPE	COPPER
3	FLUE OUTLET	STAINLESS STEEL	16	WATER FLOW SENSOR	
4	OVERHEAT SWITCH		17	GAS CONNECTION	ALUMINUM CASTING
5	HEAT EXCHANGER	COPPER	18	WATER FILTER ASS'Y	
6	THERMAL FUSES		19	WATER INLET	BRASS
7	FLAME ROD		20	WATER FLOW CONTROL DEVICE	
8	ELECTRODE		21	PRESSURE RELIEF VALVE	BRASS
9	MAIN BURNER	STAINLESS STEEL	22	HOT WATER OUTLET	BRASS
10	COMBUSTION CHAMBER FRONT PLATE ASS'Y	HOT-DIPPED ALUMINUM COATED STEEL SHEET	23	OUTGOING WATER THERMISTOR	
11	MANIFOLD ASS'Y	ALUMINUM CASTING	24	SURGE PROTECTOR	
12	IGNITER		25	COMBUSTION FAN	
13	P.C.B.		26	HOT WATER CONNECTING PIPE	COPPER

7. Operational Flow Chart



∇ : Only applicable when remote control is connected

Note: bypass flow control valve fitted to models: 2630WC & 2630WD only

8. Operation Principles

Hot Water Operation

1. Ignition

- Activate controllers (if fitted) and open the hot water tap (for full details regarding operation of water controllers refer to the 'Customer Operation and Installation' manual).
- 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 (PCB)

- 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 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 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, as well as the volume of water that has passed through the unit at any instant during 'Bath fill' operation.
- Water flow control is achieved through the use of servo driven water flow and fixed bypass valves. (Note: only some models have a bypass valve fitted). Both servo motors are 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.
- For models fitted with a 'Bypass' valve, it mixes the correct proportion of cold and hot water to ensure accurate hot water delivery temperature over the available range of flow rates. The water flow and bypass valves are a combined assembly on the cold water inlet of the appliance.

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

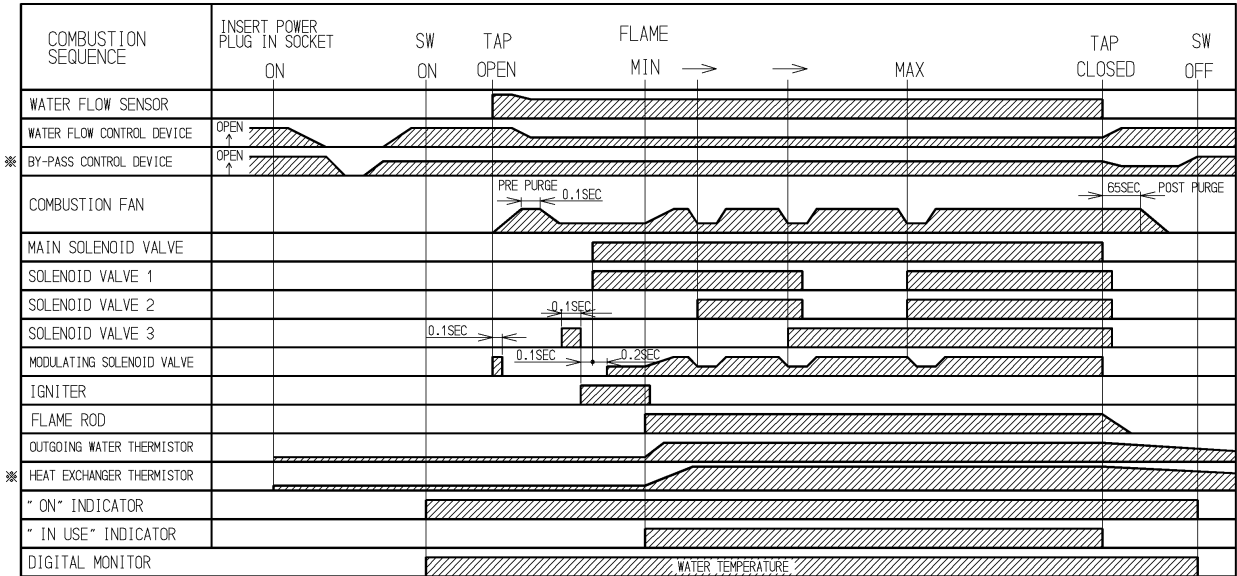
The combustion chamber is housed within the heat exchanger assembly and comprises:

- A multi chamber aluminium alloy manifold with a multiple integral injectors. Gas flow to each chamber is controlled by an electronic solenoid valve (refer 'Gas Flow Control' above).
- A burner assembly comprising multiple 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 ignition electrode(s).

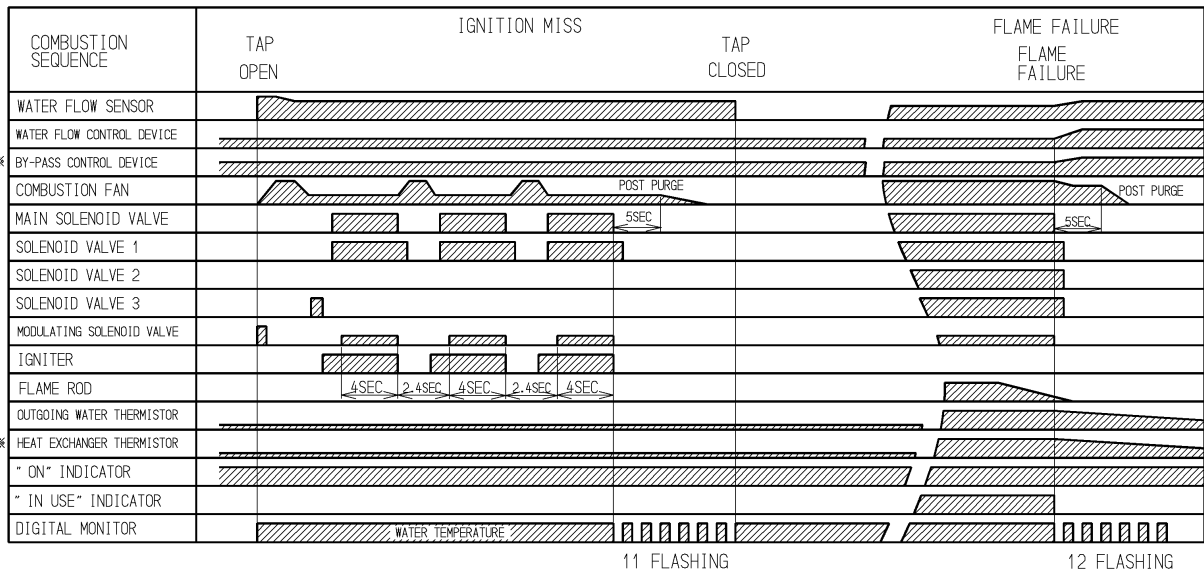
10. Time Charts

(* This Model only for the 2630 Series range)

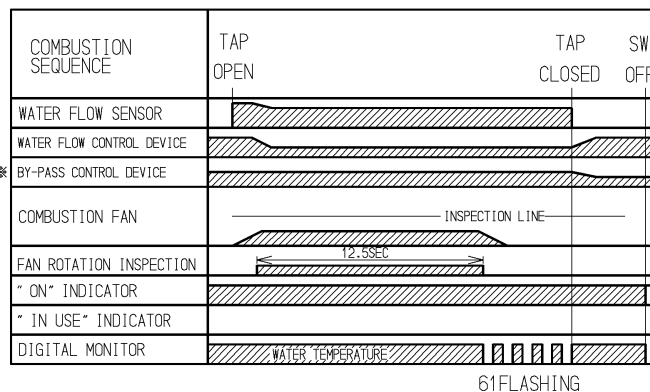
Normal Combustion Sequence



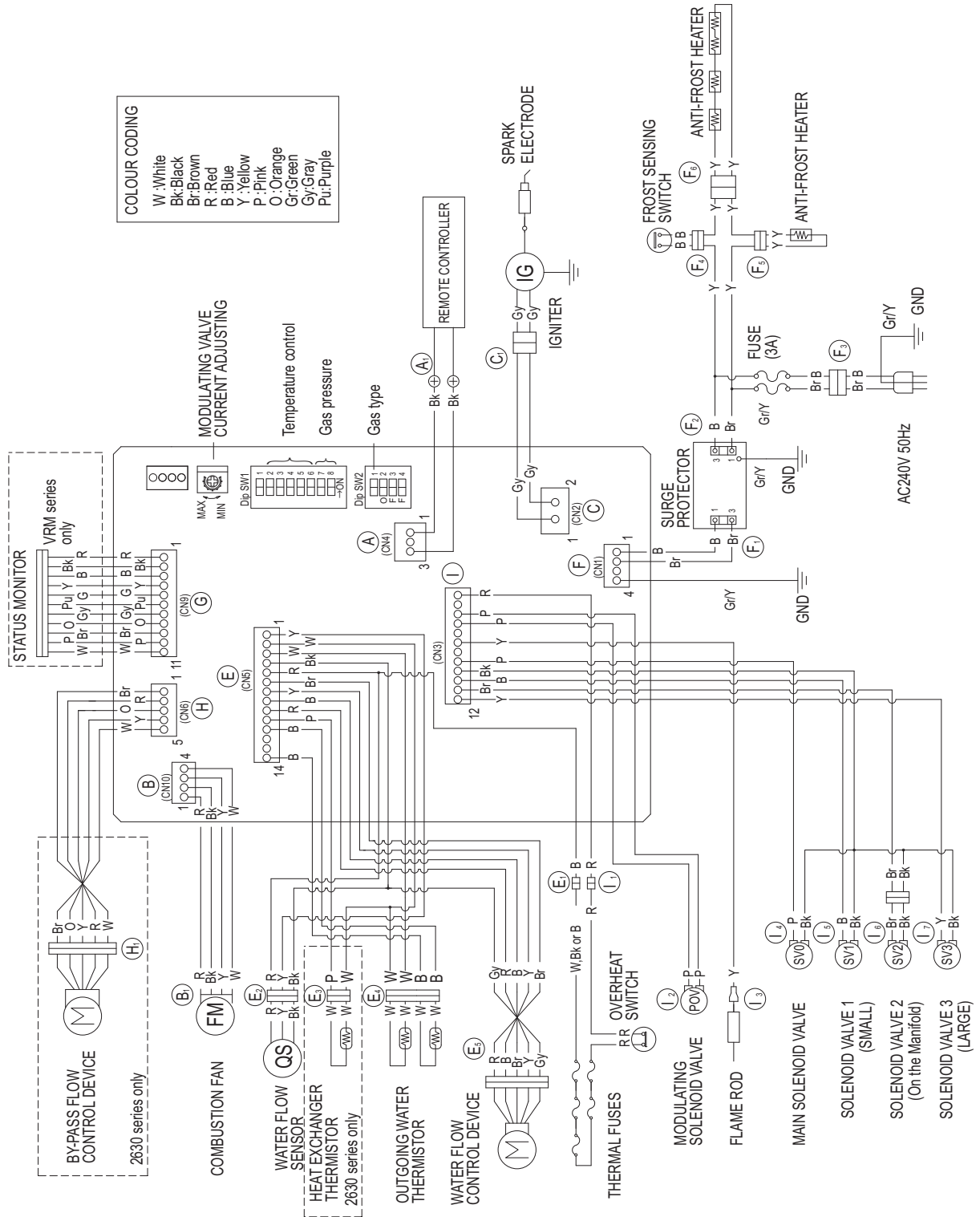
Error Sequence (Ignition Flame Failure)



Pre-Purge Defect Sequence



11. Wiring Diagram



DIAGNOSTIC POINTS TABLE

Wiring Diagram Measurement Point

FLOW CHART No.	COMPONENT	MEASUREMENT POINT		NORMAL VALUE	COMMENT
		CN	WIRE COLOUR		
①	SURGE PROTECTOR	F ₃	B-Br	AC207~264V	
②	WATER FLOW CONTROL DEVICE	E ₅	R-B	±DC11~13V (ONLY WHEN OPERATING)	OPERATE ELECTRICITY
			Y-Gy	BELOW DC1V(LIMITER ON) DC4~6V(LIMITER OFF)	FULL OPEN POSITION
			Br-Gy GND	BELOW DC1V(LIMITER ON) DC4~6V(LIMITER OFF)	FULL CLOSE POSITION
③	BY-PASS FLOW CONTROL DEVICE	H ₁	Br-W O-W Y-W R-W GND	DC12V(OPERATING DC2~6V) 15~35Ω	2630 series only
④	REMOTE CONTROL	A ₁	Bk-Bk	DC11~13V	
⑤	WATER FLOW SENSOR	E ₂	R-Bk	DC11~13V	ON2.4L/MIN (33Hz) OVER 1980PULSE/MIN OFF1.7L/MIN (23Hz) BELOW 1380PULSE/MIN
			Y-Bk GND	DC4~7V(PULSE 20~320Hz)	
⑥	COMBUSTION FAN	B ₁	R-Bk	DC15~46V	
			Y-Bk	DC11~13V	
			W-Bk GND	DC5~10V (20~400Hz)	
⑦	FLAME ROD	I ₃	Y-FLAME ROD	OVER DC1μA	FLAME CONDITION
⑧	MODULATING SOLENOID VALVE	I ₂	P-P	DC2~15V 65~85Ω	
⑨	HEAT EXCHANGER THERMISTOR	E ₃	W-W	15°C...11.4~14.0kΩ 30°C...6.4~7.8kΩ 45°C...3.6~4.5kΩ 60°C...2.2~2.7kΩ 105°C...0.6~0.8kΩ	2630 series only
	OUTGOING WATER THERMISTOR	E ₄	W-W B-B		
⑩	THERMAL FUSES	I ₁	W-R (16 series) Bk-R (20 series) B-R (24/26 series)	BELOW 1Ω	
		E ₁			
⑪	IGNITER	C ₁	Gy-Gy	AC207~264V	
⑫	MAIN SOLENOID VALVE	I ₄	P-Bk	DC11~13V 37~43Ω	
⑬	SOLENOID VALVE 1 (SMALL)	I ₅	B-Bk	DC11~13V 35~41Ω	
⑭	SOLENOID VALVE 2 (On the Manifold)	I ₆	Br-Bk	DC11~13V 35~41Ω	
⑮	SOLENOID VALVE 3 (LARGE)	I ₇	Y-Bk	DC11~13V 37~43Ω	

12. Dip Switch Settings

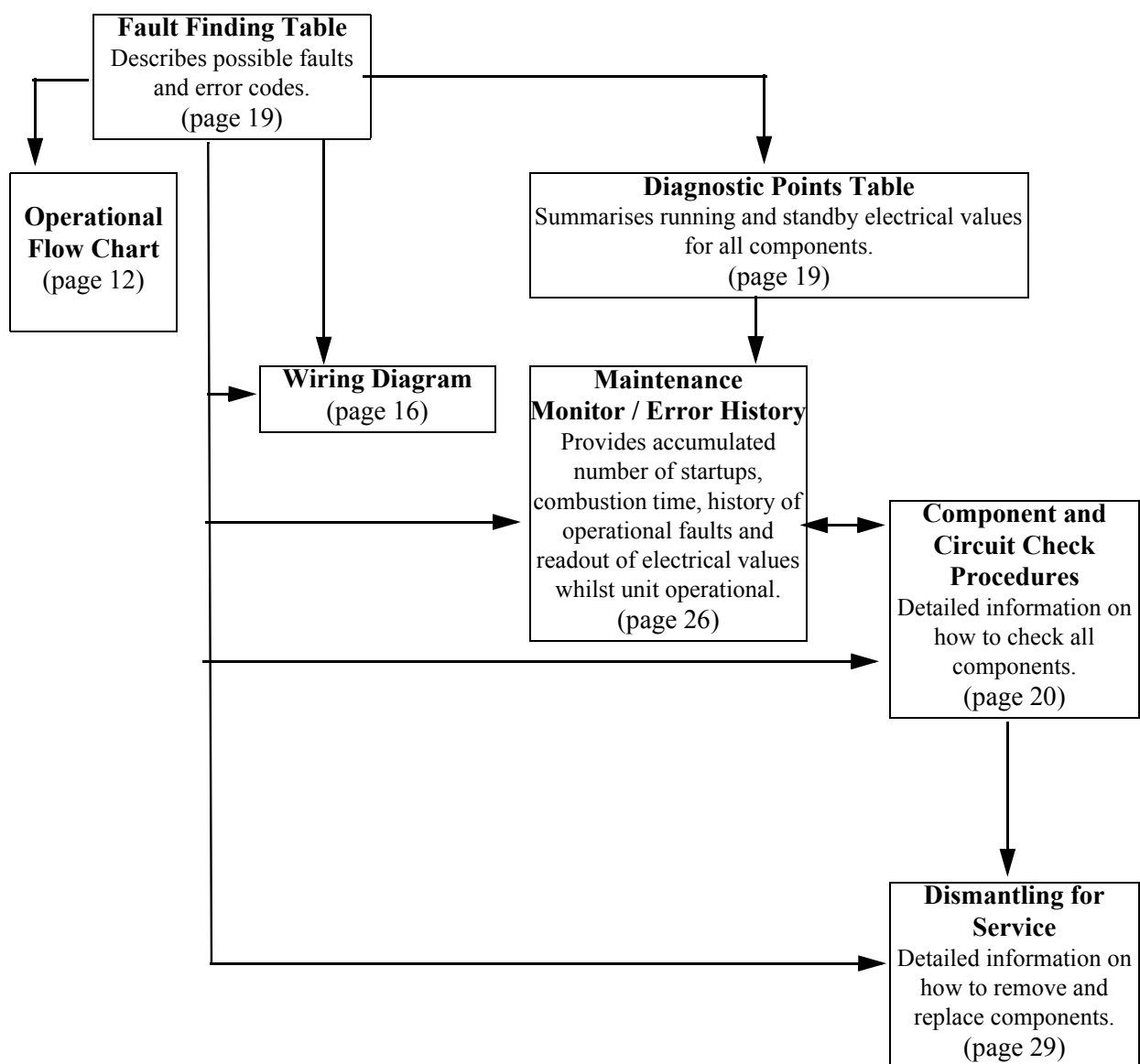
Contact Rinnai for Dip Switch Settings.

13. 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	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.	1. Check blockage of air intake/flue outlet. 2. Check combustion fan.
11	No ignition. Unit stops without flame igniting	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 c. Confirm test point pressures .
16	Over temperature warning. Unit operates, then stops.	1. Confirm "Gas Type" and "Combustion" dip switch settings 2. Confirm test point pressure 3. Check gas valves 4. Check water flow sensor 5. Check water flow servo 6. Check heat exchanger outlet temperature thermistor 7. Check hot water outlet temperature thermistor
32	Outlet water thermistor flow	Check hot water outlet thermistor
33	Heat exchanger thermistor error	Check heat exchanger thermistor
52	Modulating solenoid valve fault. Unit stops without flame ignition.	Check modulating solenoid valve
61	Combustion fan rotation error	Check combustion fan
65	Water flow control device error. Water flow is not controlled. Water temperature too low.	Check water flow servo
71	Solenoid valve circuit error. Unit does not operate.	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 water 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. 5. Check gas valves 6. Check sparker unit. 7. Check earth leads and connections. 8. Check for short circuits. 9. Check water controller(s) - if fitted.
-	No combustion despite remote control indicating that combustion is occurring - if water controller(s) fitted.	1. Check water flow sensor. 2. Check flame rod. 3. Check heat exchanger outlet thermistor. 4. Check hot water outlet thermistor. 5. Check combustion fan. 6. Check the sparker unit. 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 water controller(s) fitted.	1. Check hot water outlet thermistor. 2. Check heat exchanger outlet thermistor. 3. Check gas valves 4. Check water flow servo. 5. Check bypass servo.
-	Anti-frost heater does not operate.	1. Check anti-frost heater components 2. Check frost sensing switch

14. Component and Circuit Checks



1. Combustion Fan Circuit

- a) Check the Motor
- b) Check the combustion fan if the error indicator displays “61”.
- c) Measure resistance between Black-Red of the PCB connector (**B₁**).

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 resistance between Black-Yellow of connector (**B₁**).

Normal: DC11~13V
If normal proceed to b.).
Faulty: Replace PCB.

- b) Measure resistance between Black-White of connector (**B₁**).

Normal: DC5~10V (20~400Hz)
If normal proceed to Sparker Circuit 2.
Faulty: Replace Combustion Fan.

2. Igniter Circuit

- a) Measure resistance between Grey-Grey of connector (**C₁**).

Normal: AC207~264V
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 (SV₀)

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

- a) Measure resistance between pink-black wires of main solenoid connector (**I₄**)

Normal: DC11~13V
If normal, proceed to b.).
Faulty: Replace PCB

- b) Measure resistance between Main Solenoid connectors.

Normal: 37~43Ω
If normal, proceed to Solenoid Valve SV₁ **Faulty:** Replace Main Solenoid.

4. Solenoid Valve 1 (Small) (SV₁)

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

- a) Measure resistance between Blue-Black wires of solenoid connector (I₅)

Normal: DC11~13V

If normal, proceed to b.

Faulty: Replace PCB.

- b) Measure resistance between Solenoid 1 connectors.

Normal: 35~41Ω

If normal, proceed to Solenoid Valve 2 (SV₂) Circuit

Faulty: Replace Solenoid 1

5. Solenoid Valve 2 (on manifold)

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

- a) Measure resistance between Blue-Black wires of main solenoid connector (I₆)

Normal: DC11~13V

If normal, proceed to b.

Faulty: Replace PCB.

- b) Measure resistance between Solenoid 1 connectors.

Normal: 35~41Ω

If normal, proceed to Solenoid Valve 2 (SV₂) Circuit

Faulty: Replace Solenoid 1

6. Solenoid Valve 3 (Large) (SV₃)

- a) Measure voltage between black-yellow and black wires of solenoid connector (I₇)

Normal: DC11~13V

If normal, proceed to b.).

Faulty: Replace PCB.

- b) Measure resistance between Solenoid Valve 2 connectors.

Normal: 37~43Ω

If normal, proceed to Modulating Valve Circuit.

Faulty: Replace Solenoid Valve 2.

7. Modulating Solenoid Valve (POV)

- a) Measure voltage between pink-pink wires of the modulating solenoid valve.(I₂).

Normal: DC2.0~15V

If normal, proceed to c.).

Faulty: Replace PCB.

- b) Measure resistance between modulating solenoid valve connectors.

Normal: 65~85Ω

If normal, proceed to b.).

Faulty: Replace PCB.

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

Normal: Burner gas pressure changes. Go to Water Flow Servo Circuit.

Faulty: Burner gas pressure does not change. Replace Modulating Valve.

8. Flame Rod Circuit

Operate appliance and check flame rod (**I₄**)

Check Dc current flow is between yellow flame rod wire and earth is over DC1 μ A

Disconnect flame rod terminal (**I₄**), and re-operate appliance.

“72” indicated:- Proceed to **c**).

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

Measure voltage between flame rod terminal (**I₄**) and appliance earth.

Normal: >1M Ω

If normal, Check all power inputs into PCB if power inputs okay replace PCB.

If resistance abnormal replace flame rod.

a) Remove the Flame Rod terminal (**I₄**) repeat appliance 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 (**I₄**).

Normal: resistance AC100~160V

If normal, check all power inputs into PCB. If power inputs okay replace PCB.

Faulty: Replace Flame Rod.

c) Check if the Flame Rod is securely fitted.

Normal: Check all power inputs into PCB. If power inputs okay replace PCB.

Faulty: Adjust the fitting of the Flame Rod.

Check all appliance earth connections are clean and secure.

8. Overheat Switch and Thermal Fuse Circuit

1. Disconnect overheat switch terminals from Red-Red and measure resistance between overheat switch terminals.

Normal: < 1 Ω

If normal replace overheat switch.

Faulty: Reconnect overheat switch terminals and proceed to step 2.

2. Disconnect relay connectors **I₁** and **E₁** measure resistance between :

(16 Series) White-Red

(20 Series) Black-Red

(24/26 Series) Blue-Red

Normal: < 1 Ω

If not normal replace thermal fuse.

If normal replace PCB

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.

10. Water Flow Sensor

a) Measure voltage between Red-Black of relay connector (**E₂**).

Normal: DC 11~13V

If normal, proceed to b).

Faulty: Replace PCB.

b) Measure voltage between Yellow-Black of relay connector (**E₂**).

Normal: DC 4 ~ 7 V

If normal, proceed to 2.

Faulty: Replace water flow sensor.

Note: For controller readout of water flow whilst operational refer maintenance monitor. (Chapter 15) No. 1.

11. Water Flow Control Device Circuit

a) Disconnect relay connector (**E₅**), and measure voltage between Red (+) and Black (-) on PCB unit side (while operating).

Normal: DC11-13V

If normal: proceed to **b.**

Faulty: Replace PCB unit.

b) Measure resistance between Black and Yellow with relay connector (**E₂**) connected (with no water flowing, water flow servo fully open).

Normal: DC4~6V (Pulse 20~320Hz)

Faulty: Replace Water Flow Servo. If normal proceed to **c.**

c) Measure voltage between Brown and Grey with relay connector (**G₁**) connected.

Normal: DC4~6V

Faulty: Replace Water Flow Servo.

12. Thermistor Circuit

Check Thermistor if error code “32” is displayed.

Disconnect relay connector (**E₄**) and/or (**E₃**) and measure resistance White -White.

When disconnected: resistance >1MΩ

When short circuit: resistance < 1 Ω

Operating: Check Heat exchanger outlet thermistor

Resistance matches table below.

Faulty: Replace hot water outlet thermistor.

Normal

Temperature	15°C	30°C	45°C	60°C	105°C
Resistance	11.4~14 kΩ	6.4~7.8 kΩ	3.6~4.5 kΩ	2.2~2.7 kΩ	0.6~0.8 kΩ

If normal proceed to Flame Rod circuit.

Faulty: Replace Thermistor.

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

13. Surge Protector (**F₁**)

a) Check the electrical fuses between **F₂** and **F₃**. Normal resistance across fuse < 1 Ω. If blown, replace with fuses of the correct rating (240V, 3A). If okay, go to **b.**

b) Check supply voltage at **F₂**. Voltage between blue and brown wires 207 - 264 V. If supply voltage incorrect check power supply to appliance. If okay go to **c.**

c) Check voltage at **F₁**. Voltage between blue and brown wires 207 - 264V.

If voltage is zero repeat **a.** If fuses are okay replace Surge Protector.

14. Anti-frost Heater Circuit

a) Disconnect relay connectors (**F₅**) and measure resistance between yellow wires on the inlet valve frost heater at the frost heater side.

Normal: 53Ω

If normal, proceed to b).

Faulty: Replace Valve Heater.

b) Disconnect relay connector (**F₆**) and measure resistance between the yellow wires on the pipe frost heater at the frost heat side.

Normal: 618 Ω

Faulty: Replace Anti-frost Heater.

15. Frost Sensing Switch

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

At Room temperature resistance should be > 1 MΩ

Cool switch to below 2°C then measure resistance.

Resistance should be < 1MΩ

Faulty: Replace Frost Sensing Switch.

15. Gas Pressure Setting Procedure



Refer separate Rinnai document behind front cover of appliance.

16. Gas Conversion Procedure



Refer separate document available from Rinnai.

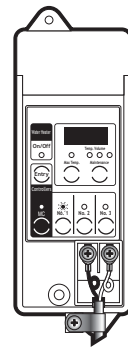
17. Maintenance Monitor / Error History

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.



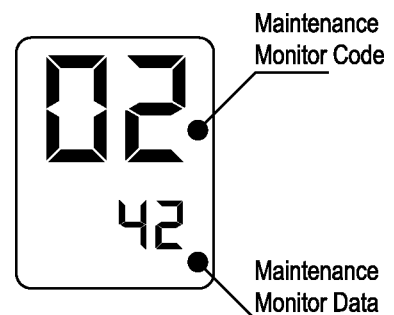
First number shown on Led display will be 1 - followed by error code then 2 and the error code.
If error code reads — —, it means there was no error recorded.
Press maintenance button again to return to transceiver to normal mode.

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

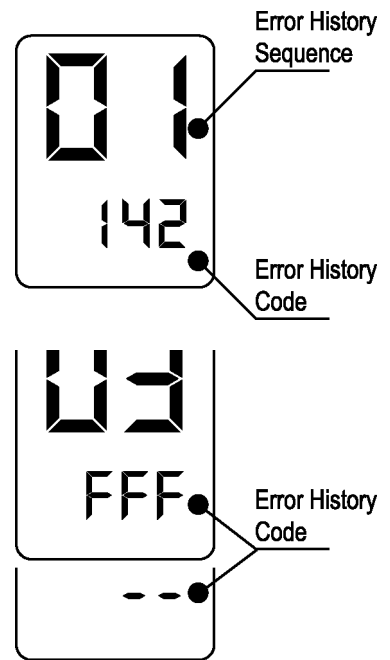
- Press the ON/OFF button again while holding down the Water Temperature "DOWN" (Cooler) button.

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.

18. Dismantling for Service



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

NOTE: As this manual covers a wide range of models, some details of the dismantling procedure may be slightly different to those depicted in this manual.

Item	Page
1. Removal of the Front Panel	30
2. Removal of the PCB Unit	30
3. Removal of the Water Flow Sensor, Servo and Bypass Servo	30
4. Removal of the Bypass Servo	31
5. Removal of Transformer	31
6. Removal of Sparker	31
7. Removal of the Manifold and Burner unit	31
8. Removal of the Gas Control	32
9. Removal of Flame rod and spark plug	33
10. Removal of Outgoing Water Thermistor	33
11. Removal of Heat Exchanger Thermistor	33
12. Removal of Bypass Servo	34
13. Removal of Anti Frost Switch	34
14. Removal of Anti Frost heater	35
15. Removal of the Fan Motor	35
16. Removal of Heat Exchanger	36
17. Removal of Thermal Fuse	37

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 the Front Panel

- a. Remove four (4) screws.



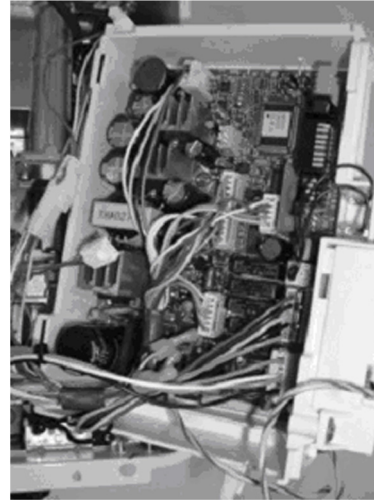
2) Removal of the PCB Unit

- a. Remove the front panel. (Refer Item 1.)
- b. Remove two (2) PCB unit fixing screws and pull out forward.



3) Removal of the Water Flow Sensor, Servo and Bypass Servo

- a. Remove the front panel. (Refer Item 1.)
- b. Remove two (2) screws and locking plates located on the water supply pipe and bypass pipe. Pull bypass pipe and water supply pipe forward to clear servo valves. Ensure O-rings are not lost or damaged.



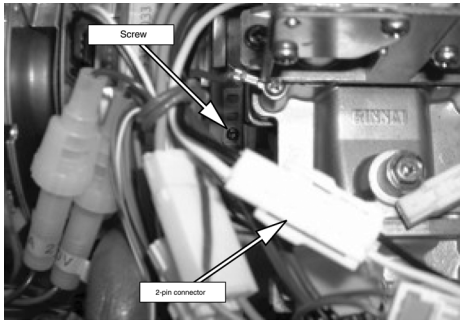
4) Removal of the Bypass Servo (2630 ONLY)

- a. Remove two (2) screws from the water flow servo body, and pull the bypass servo out forwards. Ensure O-rings are not lost or damaged.

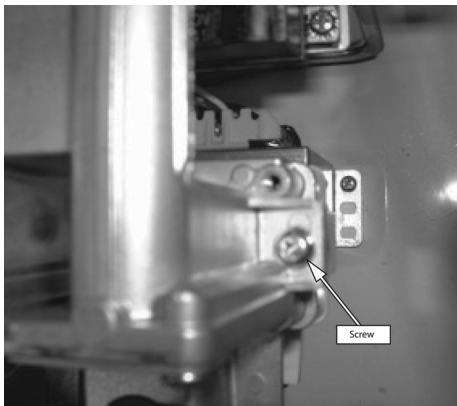


5) Removal of Transformer

- a. Remove PCB (Refer to 2)
- b. Remove 100 V harness and 2-pin connection

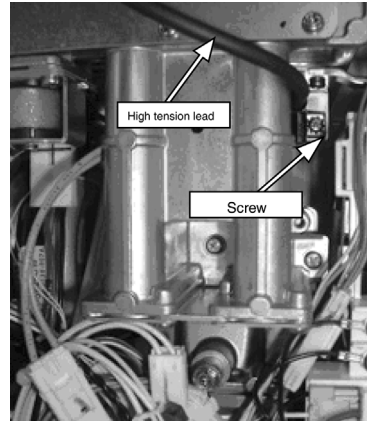


c. Removal Transformer



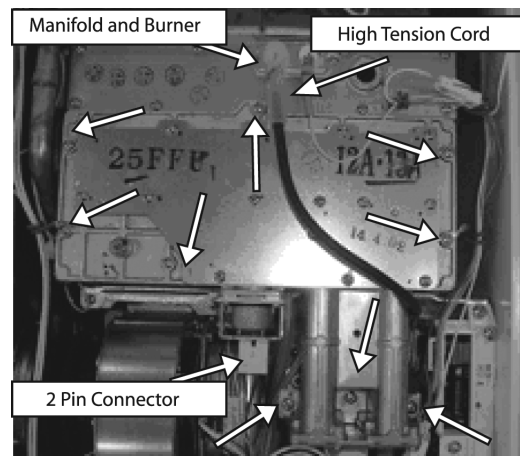
6) Removal of Sparker

- a. Remove sparker
- b. Remove 3 pin connector
- c. Remove high tension cord

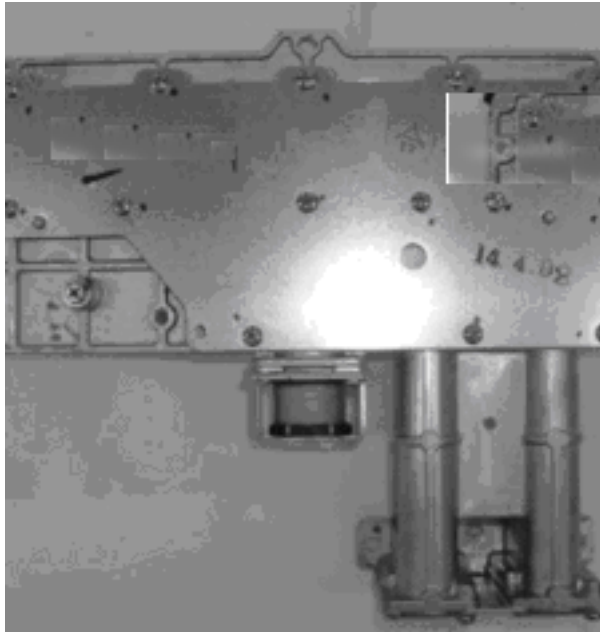


7) Removal of the Manifold and Burner unit

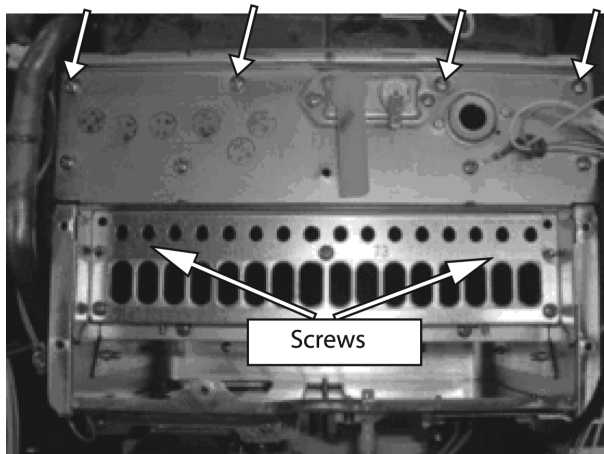
- a. Remove high tension cord and flame rod.
- b. Remove 2 pin connection of the solenoid valve
- c. Remove manifold.



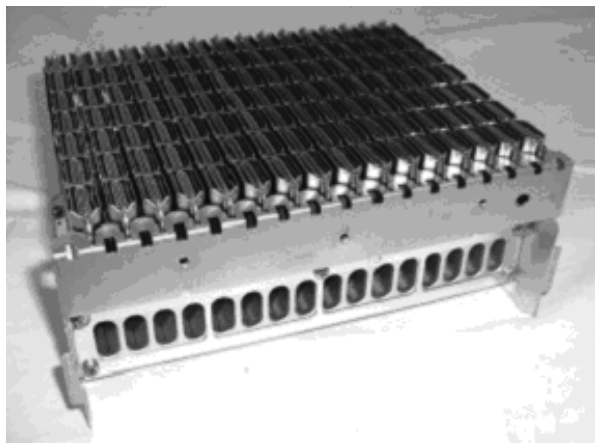
Manifold Assembly



- a. Remove combustion chamber front panel.
- b. Remove burner unit.

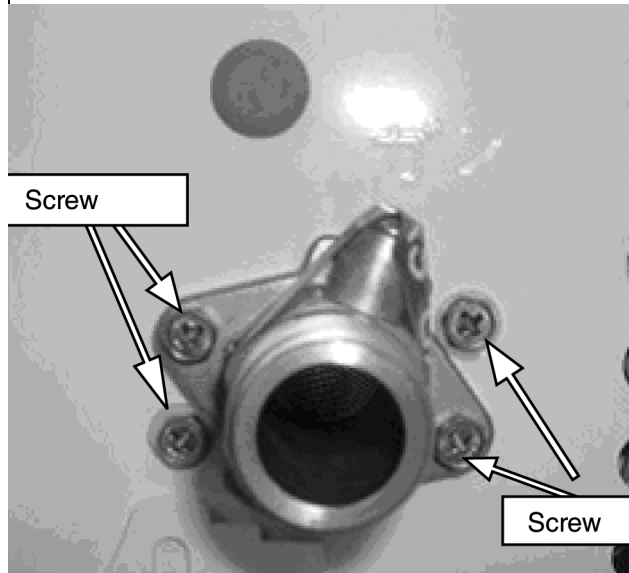


- c. Pull off burner unit

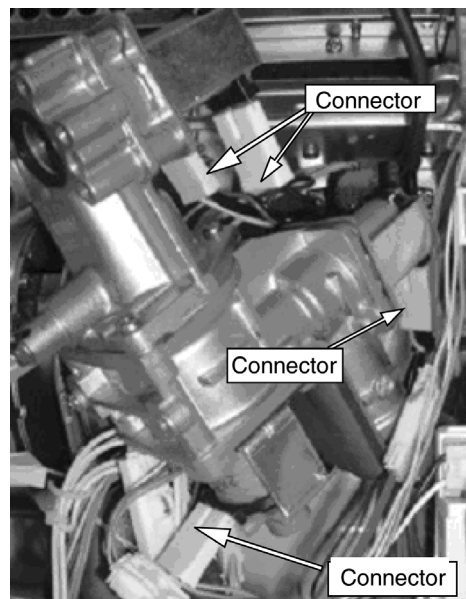


8) Removal of the Gas Control

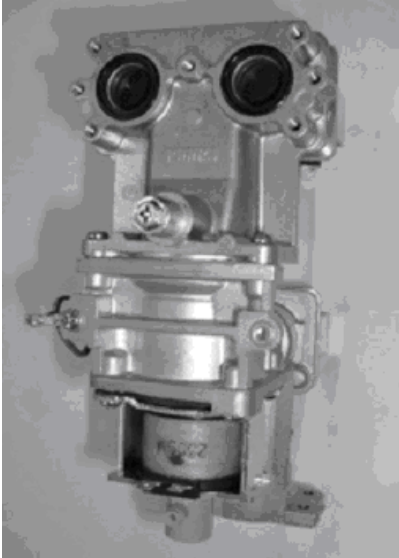
- a. Remove manifold (refer to point 7)
- b. Remove back tube
- c. Remove gas connection.



- a. Pull off connectors for gas control modulation valve and solenoid valve.

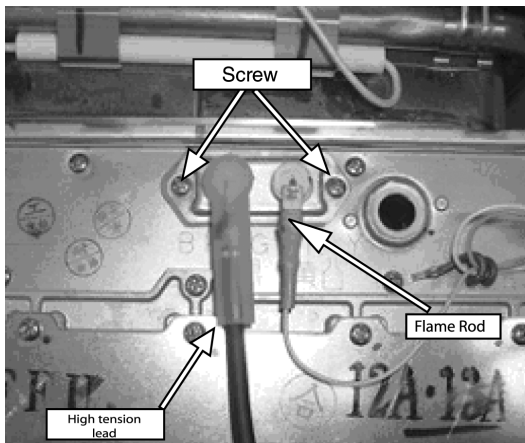


Gas Control

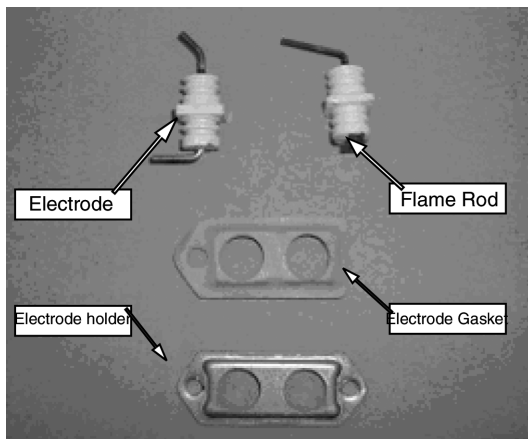


9) Removal of Flame rod and spark plug

- Remove flame rod terminal and tighten sparkler lead.
- Remove flame rod and spark plug.

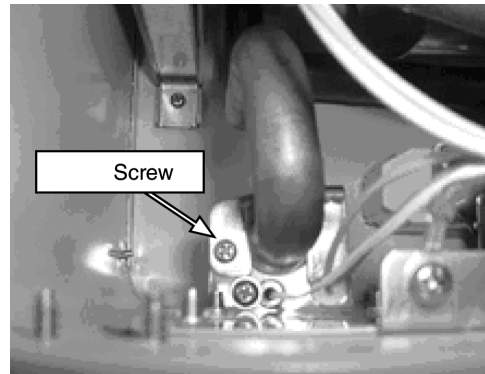


- Remove of High Tension lead



10) Removal of Outgoing Water Thermistor

- Remove thermistor fixing screw.
- Remove 2 pin connection outgoing water thermistor

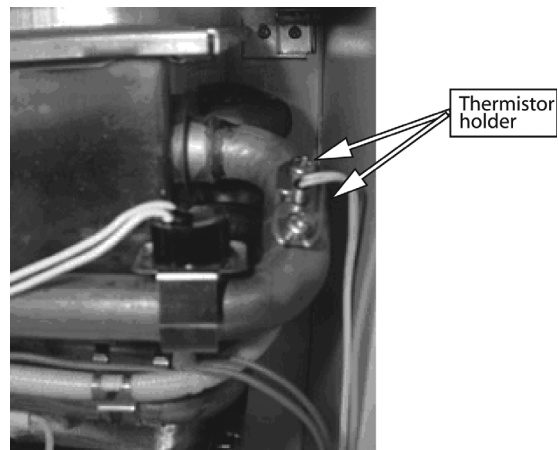


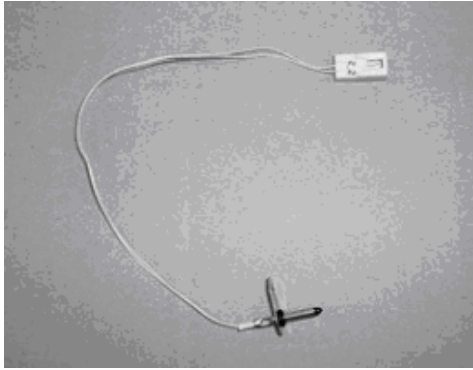
Heat Exchanger Thermistor



11) Removal of Heat Exchanger Thermistor 2632WC ONLY

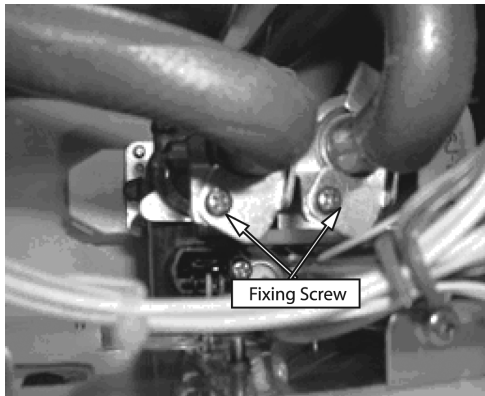
- Remove thermistor holder
- Remove 2 pin connector



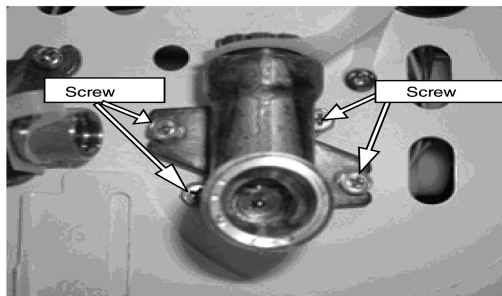


**12) Removal of Bypass Servo
REU-V2632WC - (HD200E) ONLY**

- a. Remove fan motor (Refer to point 16)
- b. Remove 3 pin connector
- c. Remove 2 pin connector
- d. Remove 6 pin connector and 5 pin connector
- e. Remove bracket for water connection tube.

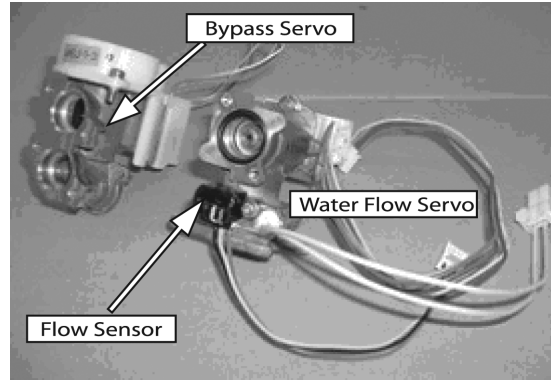


f. Removal of inlet water connection



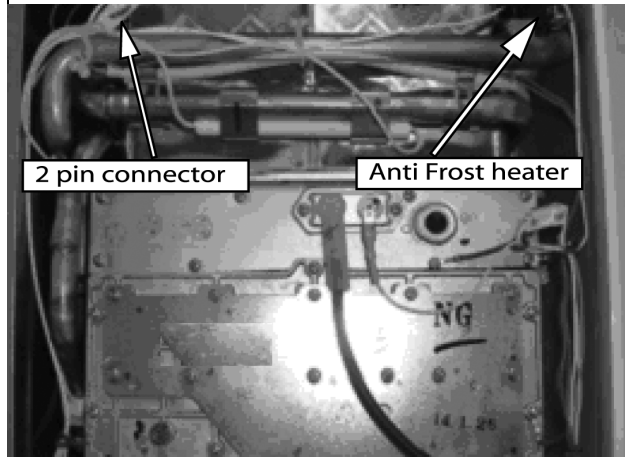
- g. Remove bypass servo and water flow servo
- h. Remove fitting screws of bypass servo

i. Flow sensor and water flow servo



13) Removal of Anti Frost Switch

- a. Remove 2 pin connection for anti frost switch
- b. Remove Anti Frost switch

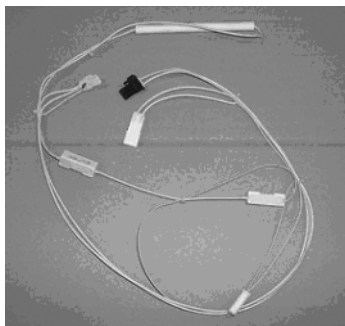
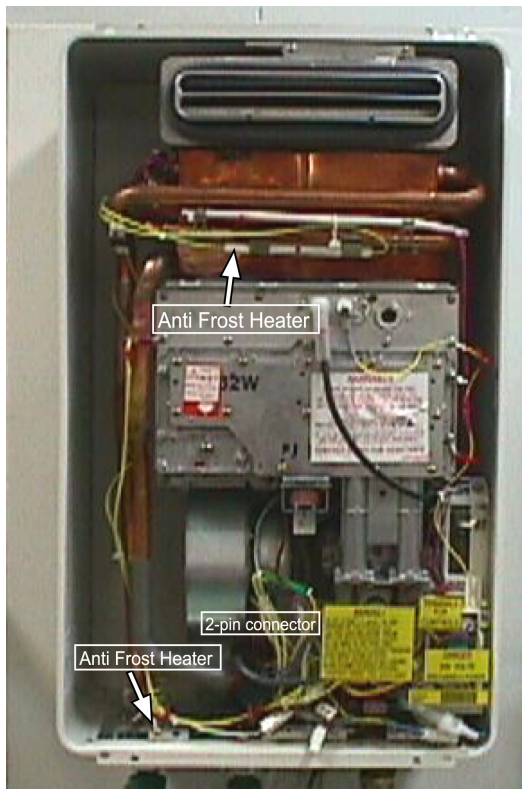


c. Anti Frost switch



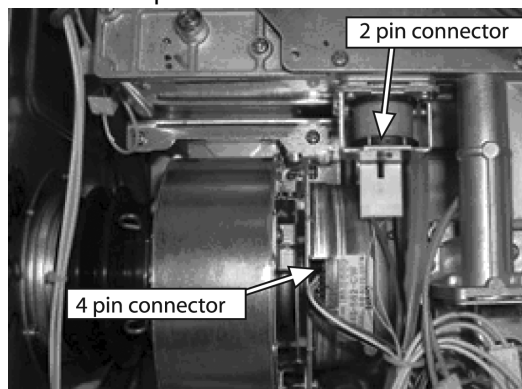
14) Removal of Anti Frost heater

- a. Remove 2 pin connection of Anti Frost heater
- b. Remove bracket on hot water connection.
- c. Remove Anti Frost heater.



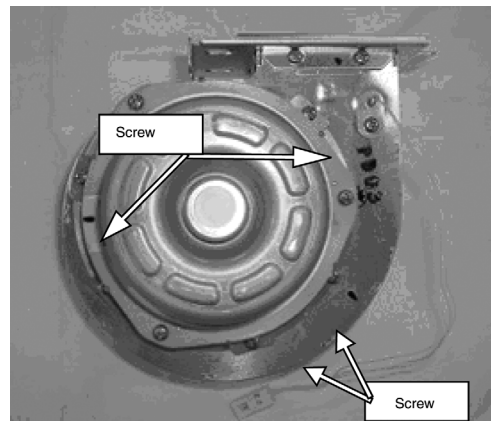
15) Removal of the Fan Motor

- a. Remove 4 pin connector to fan motor.
- b. Remove 2 pin connector of solenoid valve.

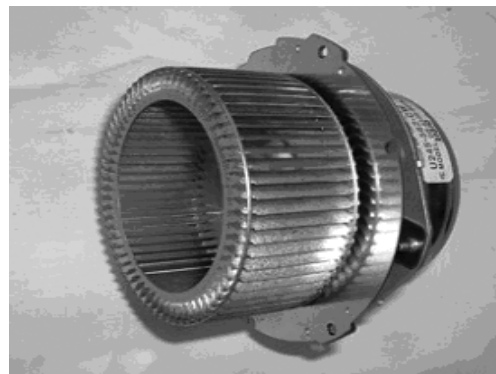


- c. Remove fan motor screws (x 2)

- d. Remove fan motor assembly by sliding forward

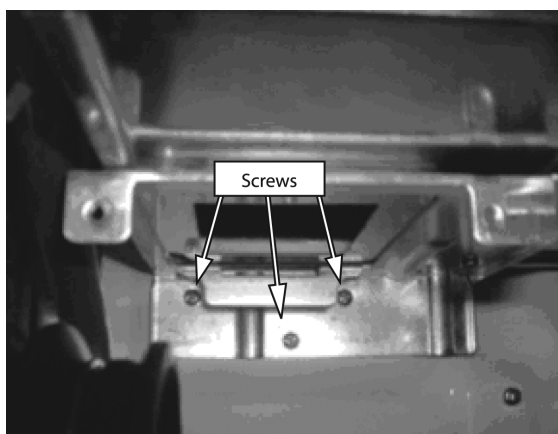
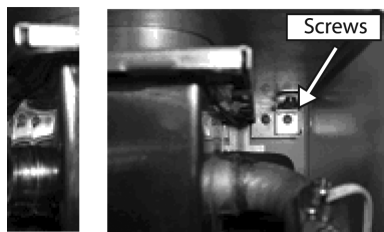
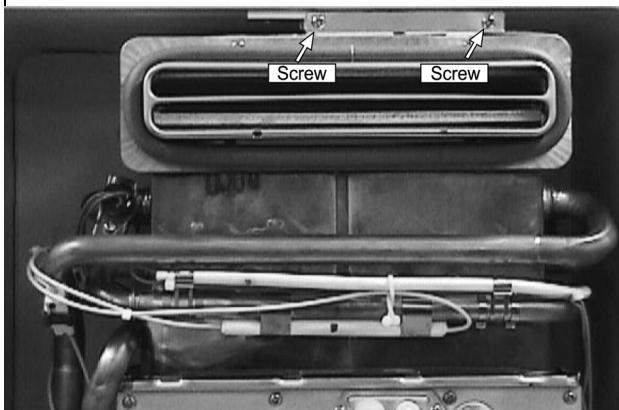


- e. Remove fan motor from housing via 3 screws

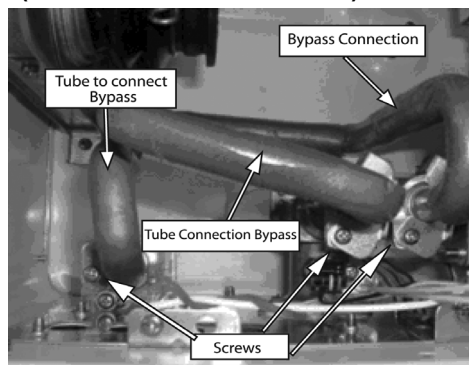


16) Removal of Heat Exchanger

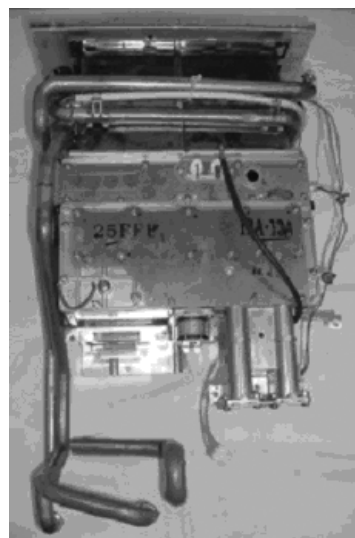
- a. Remove PCB
- b. Remove fan motor
- c. Remove 2 pin connector of thermal fuse
- d. Remove flame rod terminal of high tension cord
- e. Remove anti frost heater switch
- f. Remove 2 pin connector
- g. Remove 3 pin connector
- h. Remove fixing screws of the heat exchanger unit
- i. Remove heat exchanger screws



j. Remove Bypass tube - (REU-V2630 Models ONLY)



k. Pull out heat exchanger screws



- l. Remove **manifold and burner unit.**
- m. Remove **thermal fuse, over heat switch, sparker, hex thermister and back pressure joint.**

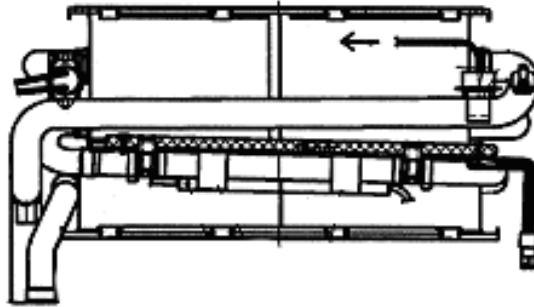


17) Removal of Thermal Fuse

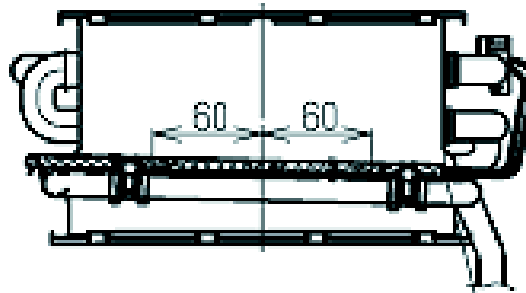
- a. Remove heat exchanger.
- b. Remove Thermal Fuse.

After removal of thermal fuse fitting procedure is as follows:

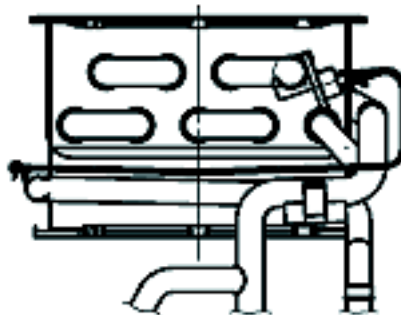
Heat Exchanger Front



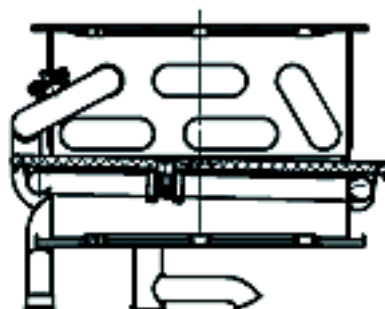
Heat Exchanger Right



Heat Exchanger Left



Heat Exchanger Right



19. Parts List

NOTE:

**Some Part details may have changed since publication of this manual.
Contact Rinnai to confirm spare parts details before ordering.**

“REU-VR1620WG / REU-VR1620WB / REU-VR1620WS” on page 39

“REU-VR2024WG” on page 42

REU-VR1620WG / REU-VR1620WB / REU-VR1620WS

Effective: 17/3/09

NO	PART NAME	RA CODE	RJ 11-DIGIT CODE	REU-VR1620WG	REU-VR1620WG-50	REU-VR1620WB	REU-VR1620WB-50	REU-VR1620WS
001	Panel Front - White	92099188	019-4071000	1				
001	Panel Front - White 50c	92099190	019-4077000		1			
001	Panel Front - Dune	92099192	019-4072000			1		
001	Panel Front - Dune 50c	92099194	019-4078000				1	
001	Panel Front - Dune	92099196	019-4079000					1
002	Panel Front Packing		580-0039000	3	3	3	3	3
005	Outer Case Euro White	92092049	014-445-000	1	1			
005	Outer Case Dune	92092050	014-446-000			1	1	1
010	Wall Hang Bracket	92093377	106-329-000	2	2	2	2	2
011	Blind Packing		510-893-000	1	1	1	1	1
012	Rubber Bushing C		194-140-000	1	1	1	1	1
013	Harness Easy Connect	92099955	106-651-000	1	1	1	1	1
014	Cable Seal Packing	92099984	580-0105000	1	1	1	1	1
015	Piping Reinforce		044-156-000	1	1	1	1	1
100	Inlet (3/4") Gas	92081587	106-290-000	1	1	1	1	1
101	Screw Test Point	92099956	501-275-005	1	1	1	1	1
102	Gas Control	92099198	120-0028000	1	1	1	1	1
103	Manifold LPG - 16	92099202	101-749-000	1	1	1	1	1
103	Manifold NG - 16	92099204	101-750-000	1	1	1	1	1
104	Manifold Packing Upper	92099206	580-0106000	1	1	1	1	1
105	Manifold Packing Lower	92099208	580-0567000	1	1	1	1	1
106	Burner Case Front		098-0624000	1	1	1	1	1
107	Packing		580-589-000	1	1	1	1	1
108	Dumper		140-722-000	1	1	1	1	1
109	Lean & Rich Bunsen Burner		157-083-000	14	14	14	14	14
110	Burner Case Rear		098-402-000	1	1	1	1	1
111	Comb.Chmb Front Panel		019-4073000	1	1	1	1	1
112	Comb. Chmb Front Panel Packing		580-0568000	1	1	1	1	1
113	Electrode	92086974	202-156-000	1	1	1	1	1
114	Electrode FR	92095598	202-215-000	1	1	1	1	1
115	Packing Electrode	92099214	580-0569000	1	1	1	1	1
116	Electrode Holder	92099216	538-0572000	1	1	1	1	1
117	Sleeve Electrode	92087030	518-035-000	1	1	1	1	1
119	Buner Assembly	92099218	157-137-000	1	1	1	1	1
120	Heat Exchanger Assy	92099220	314-755-000	1	1	1	1	1
121	Water Connecting Tube Retainer	92093315	538-615-000	1	1	1	1	1
122	Bracket H/Exchanger Outlet	92099548	537-502-000	1	1	1	1	1

REU-VR1620WG/VR1620WG-50/ REU-VR1620WB/REU-VR1620WB-50/REU-VR1620WS				REU-VR1620WG	REU-VR1620WG-50	REU-VR1620WB	REU-VR1620WB-50	REU-VR1620WS
NO	PART NAME	RA CODE	RJ 11-DIGIT CODE					
130	Exhaust Flue	92098466	055-787-000	1	1	1	1	1
131	Exhaust Opening Packing		580-593-000	1	1	1	1	1
132	Front Panel Seal Packing		580-594-000	1	1	1	1	1
150	Comb Fan Motor		222-595-000	1	1	1	1	1
151	Fan Casing Assembly		035-870-000	1	1	1	1	1
152	Comb Fan Assy	92099222	222-642-000	1	1	1	1	1
400	Inlet (1/2") Water	92097906	333-300-000	1	1	1	1	
400	Inlet (3/4") Water	92095901	333-483-000					1
401	Plug Band		553-119-000	1	1	1	1	1
402	Filter Water O Large	92083773	196-062-000	1	1	1	1	1
404	Rectifier	92093552	330-107-000	1	1	1	1	1
405	Water Flow Servo	92099957	301-152-000	1	1	1	1	1
406	Water Flow Servo Cover		098-1445000	1	1	1	1	1
408	Connection (1/2") H/W	92098458	333-303-000	1	1	1	1	
408	Connection (3/4") H/W	92099970	333-304-000					1
409	Hot Water Plug Band		553-043-000	1	1	1	1	1
410	Valve Press Relief	92099944	337-152-000	1	1	1	1	1
700	PCB Main	92099224	210-950-000	1		1		1
700	PCB Main	92099226	210-951-000		1		1	
701	EC-Cover-2-A		098-1853000	1	1	1	1	1
702	Electric Control Cover		098-0627000	1	1	1	1	1
703	Sparker	92095026	261-157-000	1	1	1	1	1
704	Lead HT (L=360)	92099228	203-877-000	1	1	1	1	1
705	Ignitor Bracket		537-0619000	1	1	1	1	1
706	Surge Arrestor	92093699	210-605-000	1	1	1	1	1
707	Sub Circuit Board Cover		098-1855000	1	1	1	1	1
708	Bracket		537-0618000	1	1	1	1	1
709	Elec Cord	92089051	206-226-000	1	1	1	1	1
710	Harness Fuse	92099959	290-1284000	1	1	1	1	1
711	Heater Anti frost	92098318	213-001-000	1	1	1	1	1
712	Switch Thermal	92097187	234-444-000	1	1	1	1	1
713	Heater Fixing Plate	92096225	537-0440000	4	4	4	4	4
715	Hannress Power	92095027	290-1285000	1	1	1	1	1
716	Harness Solenoid	92099230	290-1746000	1	1	1	1	1
717	Harness Sensor	92099232	290-1747000	1	1	1	1	1
718	Fuse Thermal	92098300	290-0491000	1	1	1	1	1
719	Thermal Fuse Fixing Plate		537-505-000	2	2	2	2	2

REU-VR1620WG/VR1620WG-50/ REU-VR1620WB/REU-VR1620WB-50/REU-VR1620WS				REU-VR1620WG	REU-VR1620WG-50	REU-VR1620WB	REU-VR1620WB-50	REU-VR1620WS
NO	PART NAME	RA CODE	RJ 11-DIGIT CODE					
720	Thermal Fuse Fixing Plate		537-0110000	2	2	2	2	2
721	Sensor MR	92099988	243-133-000	1	1	1	1	1
722	Twin Thermistor	92099234	233-278-000	1	1	1	1	1
725	Harness Remoter Control	92099961	290-1288000	1	1	1	1	1
728	Harness Relay Solenoid	92099236	290-1748000	1	1	1	1	1
800	Earth Screw		501-889-000	1	1	1	1	1
801	Truss Screw		501-973-010	3	3	3	3	3
802	Screw		501-0064000	3	3	3	3	3
803	Tapping Screw		501-737-000	1	1	1	1	1
804	Thermistor Fixing Screw		501-295-000	1	1	1	1	1
820	O-Ring	90195165	520-300-010	1	1	1	1	1
821	O-Ring Gas Connection	92072859	520-043-010	1	1	1	1	1
822	O-Ring Gas Control	92096502	580-180-000	2	2	2	2	2
825	O-Ring Thermistor	92062249	520-209-010	1	1	1	1	1
826	O-Ring	92062348	520-281-010	1	1	1	1	1
827	O-Ring Heat Exchanger	92072800	520-255-010	1	1	1	1	1
828	O-Ring Heat Exchanger	92062207	520-193-010	1	1	1	1	1
829	O-Ring Heat Exchanger Inlet	92062199	520-048-010	1	1	1	1	1
830	O-Ring In/Out Water	92071182	520-049-010	1	1	1	1	1

REU-VR2024WG

Effective: 17/3/2009

				REU-VR2024WG	REU-VR 2024WG-50
NO	DESCRIPTION	RA PART	RJ 11 DIGIT CODE		
001	Panel Front - WHITE	92099238	019-4082000	1	
001	Panel Front - WHITE 50C	92099240	019-4083000		1
002	Panel Front Packing		580-0039000	3	3
005	Outer Case - WHITE	92092049	014-445-000	1	1
010	Wall Hang Bracket	92093377	106-329-000	2	2
011	Blind Packing		510-893-000	1	1
012	Rubber Bushing C		194-140-000	1	1
013	Harness Easy Connect	92099955	106-651-000	1	1
014	Cable Seal Packing	92099984	580-0105000	1	1
015	Piping Reinforce		044-156-000	1	1
100	Inlet (3/4") Gas	92081587	106-290-000	1	1
101	Screw Test Point	92099956	501-275-005	1	1
102	Gas Control	92099198	120-0028000	1	1
103	Manifold LPG	92099260	101-751-000	1	1
103	Manifold NG	92099262	101-752-000	1	1
104	Manifold Packing Upper	92099286	580-0108000	1	1
105	Manifold Packing Lower	92099290	580-0574000	1	1
106	Burner Case Front		098-0625000	1	1
107	Packing		580-590-000	1	1
108	Dumper		140-723-000	1	1
109	Lean & Rich Bunsen Burner		157-083-000	18	18
110	Burner Case Rear		098-403-000	1	1
111	Comb.Chmb Front Panel - 20		019-4084000	1	1
112	Comb. Chmb Front Panel Packing - 20		580-0575000	1	1
113	Electrode	92086974	202-156-000	1	1
114	Electrode FR	92095598	202-215-000	1	1
115	Packing Electrode	92099214	580-0569000	1	1
116	Electrode Holder	92099216	538-0572000	1	1
117	Sleeve Electrode	92087030	518-035-000	1	1
119	Buner Assembly	92099268	157-138-000	1	1
120	Heat Exchanger Assy	92099278	314-757-000	1	1
121	Water Connecting Tube Retainer	92093315	538-615-000	1	1
122	Bracket H/Exchanger Outlet	92099548	537-502-000	1	1
130	Exhaust Flue	92099967	055-788-000	1	1
131	Exhaust Opening Packing		580-592-000	1	1
132	Front Panel Seal Packing		580-600-000	1	1

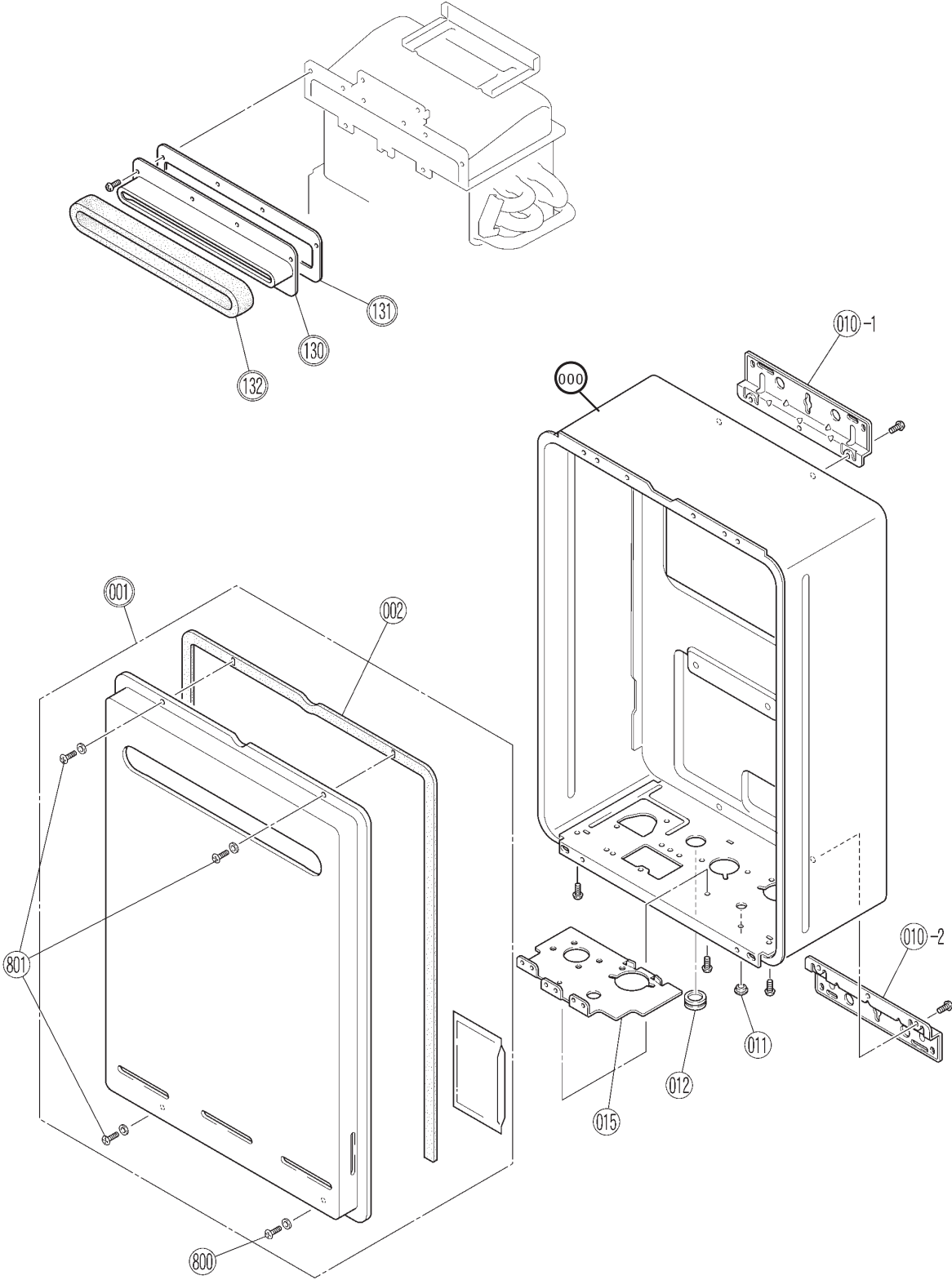
REU-VR2024WG / REU-VR2024WG-50				REU-VR2024WG	REU-VR 2024WG-50
NO	DESCRIPTION	RA PART	RJ 11 DIGIT CODE	QUANTITY	
150	Comb Fan Motor		222-595-000	1	1
151	Fan Casing Assembly		035-870-000	1	1
152	Comb Fan Assy	92099222	222-642-000	1	1
400	Inlet (3/4") Water	92095901	333-483-000	1	1
401	Plug Band		553-119-000	1	1
402	Filter Water O Large	92083773	196-062-000	1	1
404	Rectifier	92093552	330-107-000	1	1
405	Water Flow Servo	92099957	301-152-000	1	1
406	Water Flow Servo Cover		098-1445000	1	1
408	Connection (3/4") H/W	92099970	333-304-000	1	1
409	Hot Water Plug Band		553-043-000	1	1
410	Valve Press Relief	92099944	337-152-000	1	1
700	PCB Main	92099224	210-950-000	1	
700	PCB Main 50c	92099226	210-951-000		1
701	EC-Cover-2-A		098-1853000	1	1
702	Electric Control Cover		098-0627000	1	1
703	Sparker	92095026	261-157-000	1	1
704	Lead HT (L=360)	92099228	203-877-000	1	1
705	Ignitor Bracket		537-0619000	1	1
706	Surge Arrestor	92093699	210-605-000	1	1
707	Sub Circuit Board Cover		098-1855000	1	1
708	Bracket		537-0618000	1	1
709	Elec Cord	92089051	206-226-000	1	1
710	Harness Fuse	92099959	290-1284000	1	1
711	Heater Anti frost	92098318	213-001-000	1	1
712	Switch Thermal	92097187	234-444-000	1	1
713	Heater Fixing Plate	92096225	537-0440000	4	4
715	Hanrness Power	92095027	290-1285000	1	1
716	Harness Solenoid	92099230	290-1746000	1	1
717	Harness Sensor	92099232	290-1747000	1	1
718	Fuse Thermal	92099621	290-0492000	1	1
719	Thermal Fuse Fixing Plate		537-505-000	2	2
720	Thermal Fuse Fixing Plate		537-0110000	2	2
721	Sensor MR	92099988	243-133-000	1	1
722	Twin Thermistor	92099234	233-278-000	1	1
725	Harness Remoter Control	92099961	290-1288000	1	1

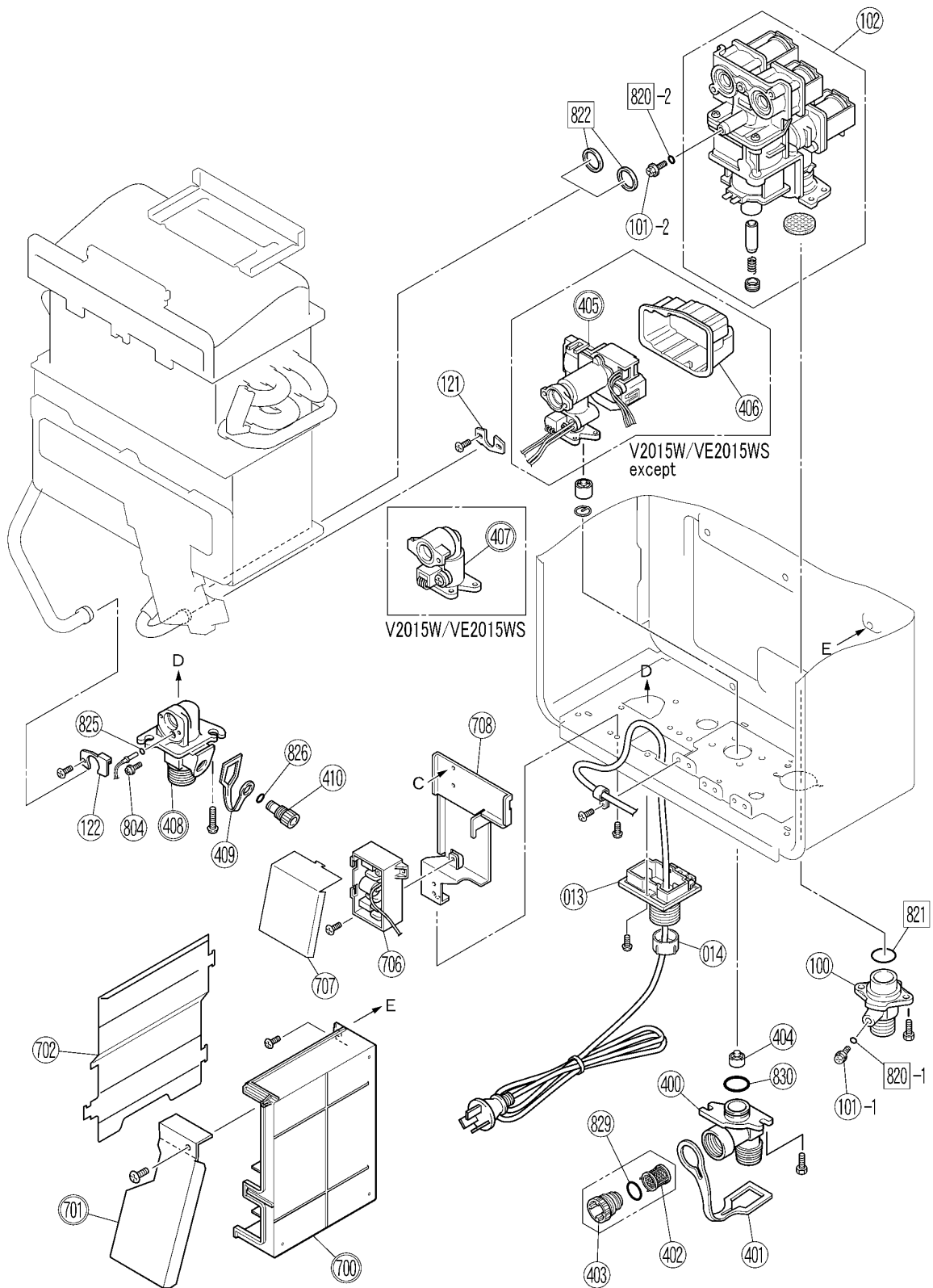
Effective: 17/3/2009

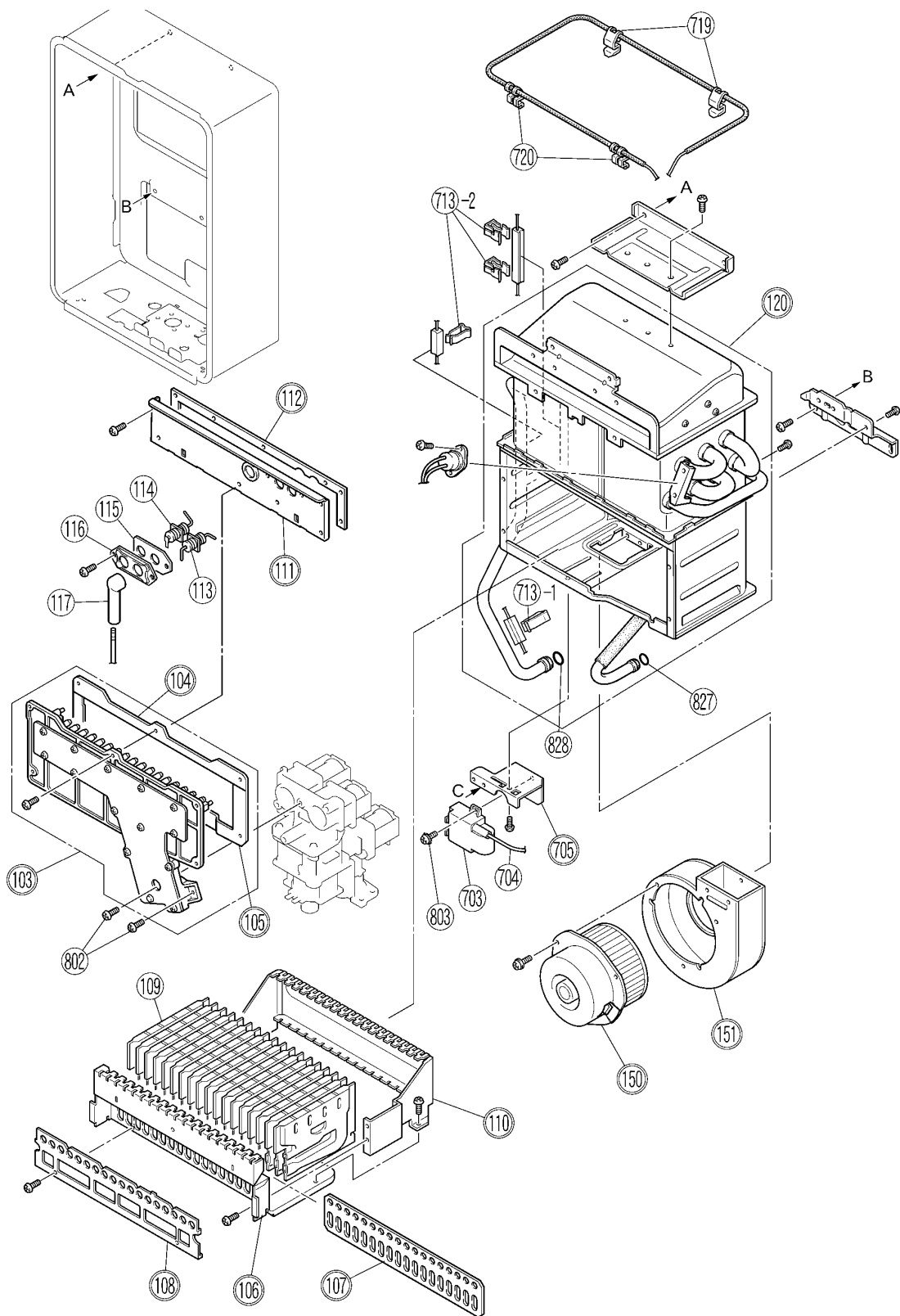
REU-VR2024WG / REU-VR2024WG-50				REU-VR2024WG	REU-VR2024WG-50
NO	DESCRIPTION	RA PART	RJ 11 DIGIT CODE	QUANTITY	
728	Harness Relay Solenoid	92099236	290-1748000	1	1
800	Earth Screw		501-889-000	1	1
801	Truss Screw		501-973-010	3	3
802	Screw		501-0064000	3	3
803	Tapping Screw		501-737-000	1	1
804	Thermistor Fixing Screw		501-295-000	1	1
820	O-Ring	90195165	520-300-010	1	1
821	O-Ring Gas Connection	92072859	520-043-010	1	1
822	O-Ring Gas Control	92096502	580-180-000	2	2
825	O-Ring Thermistor	92062249	520-209-010	1	1
826	O-Ring	92062348	520-281-010	1	1
827	O-Ring Heat Exchanger	92072800	520-255-010	1	1
828	O-Ring Heat Exchanger	92062207	520-193-010	1	1
829	O-Ring Heat Exchanger Inlet	92062199	520-048-010	1	1
830	O-Ring In/Out Water	92071182	520-049-010	1	1

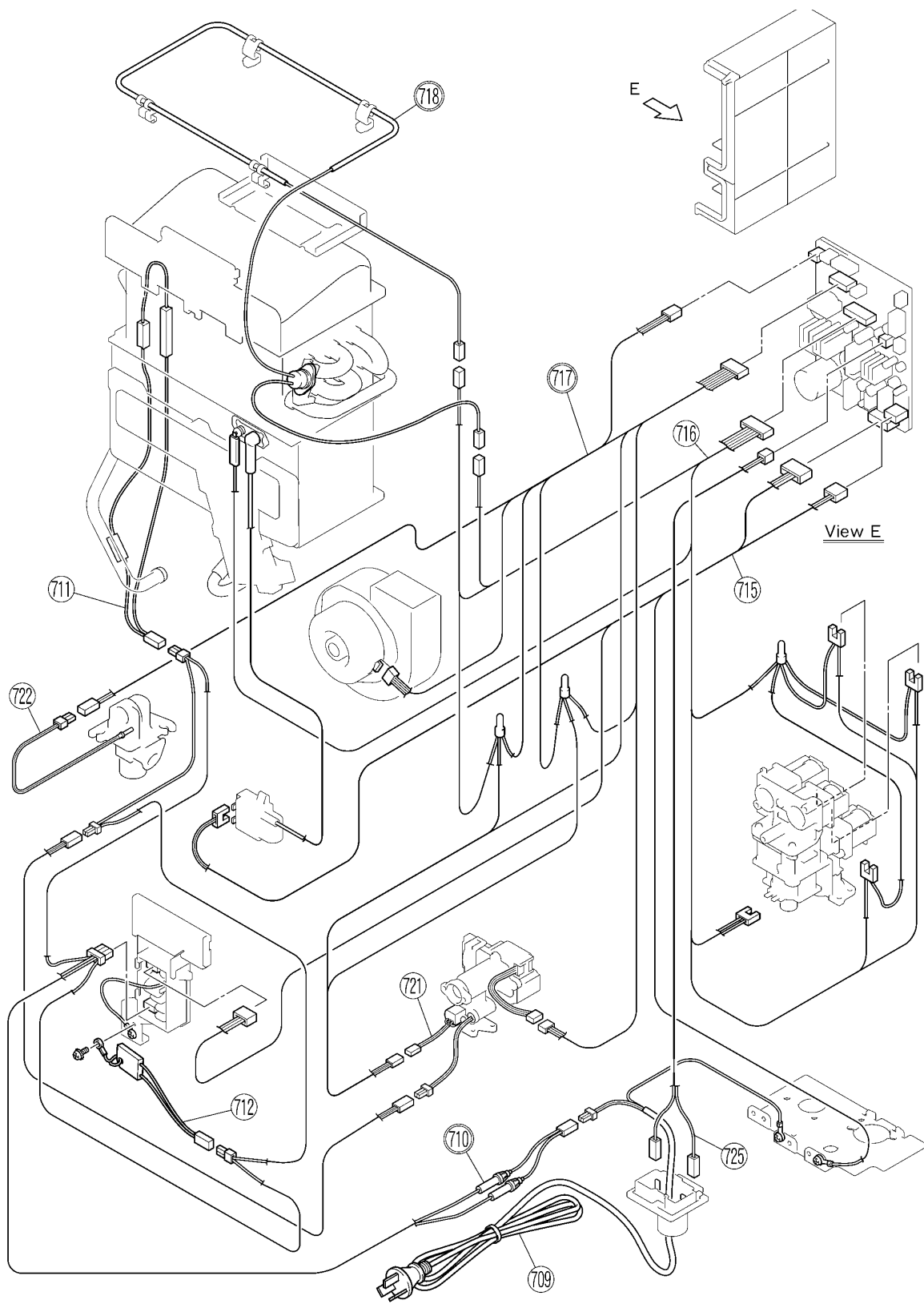
20. Exploded Diagram

REU-VR1620WG/REU-VR1620WB/REU-VR1620WS/ REU-VR2024WG



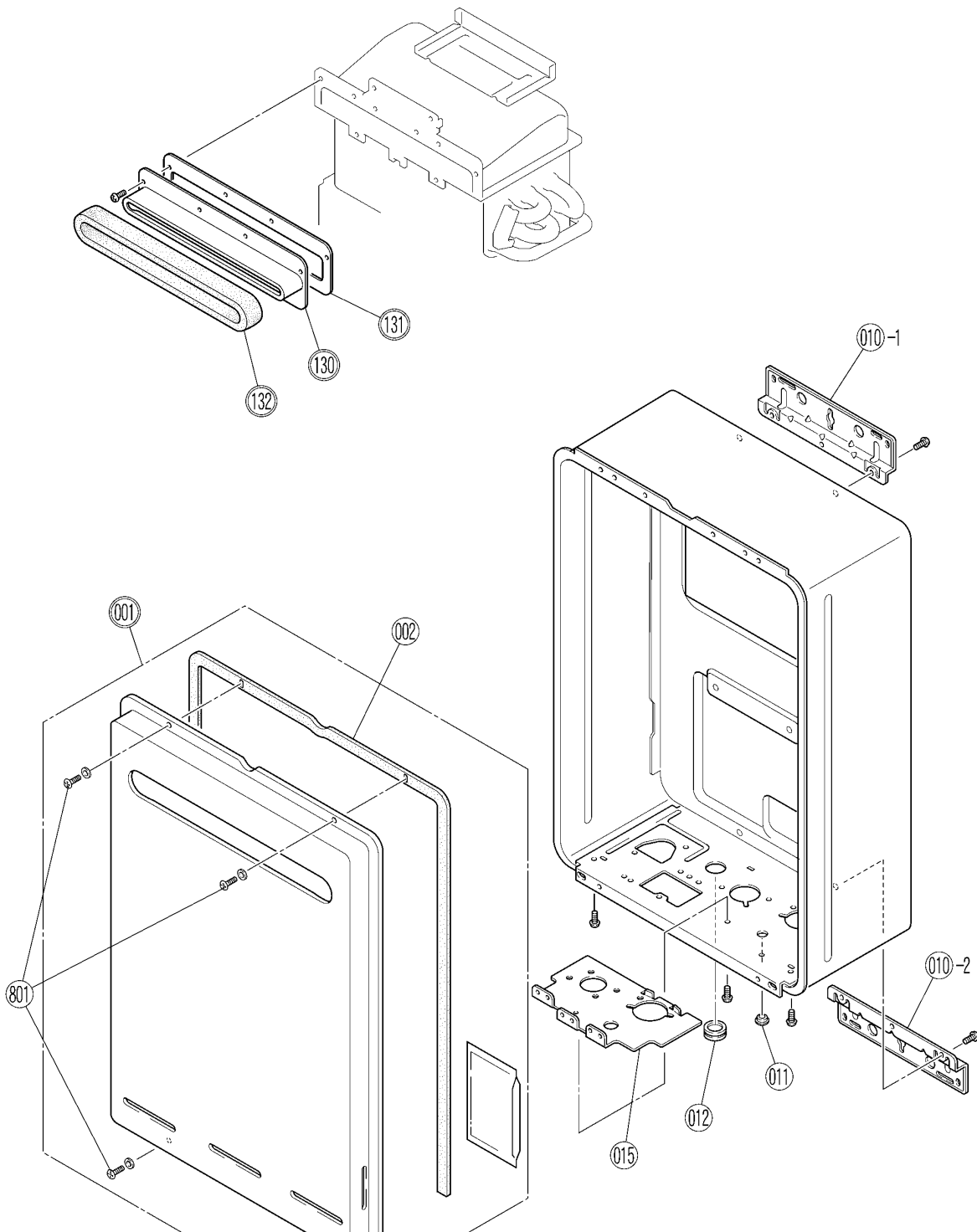


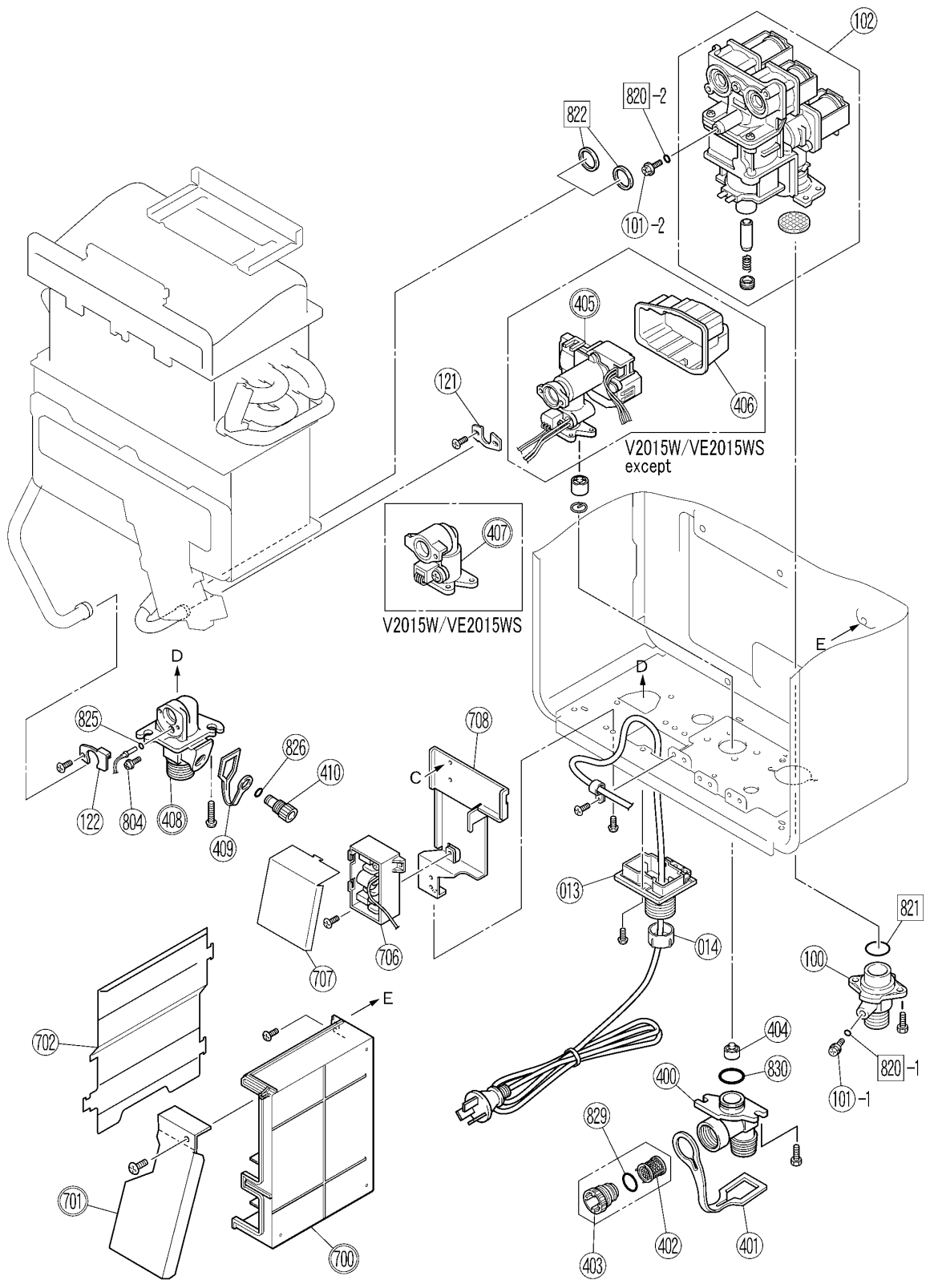


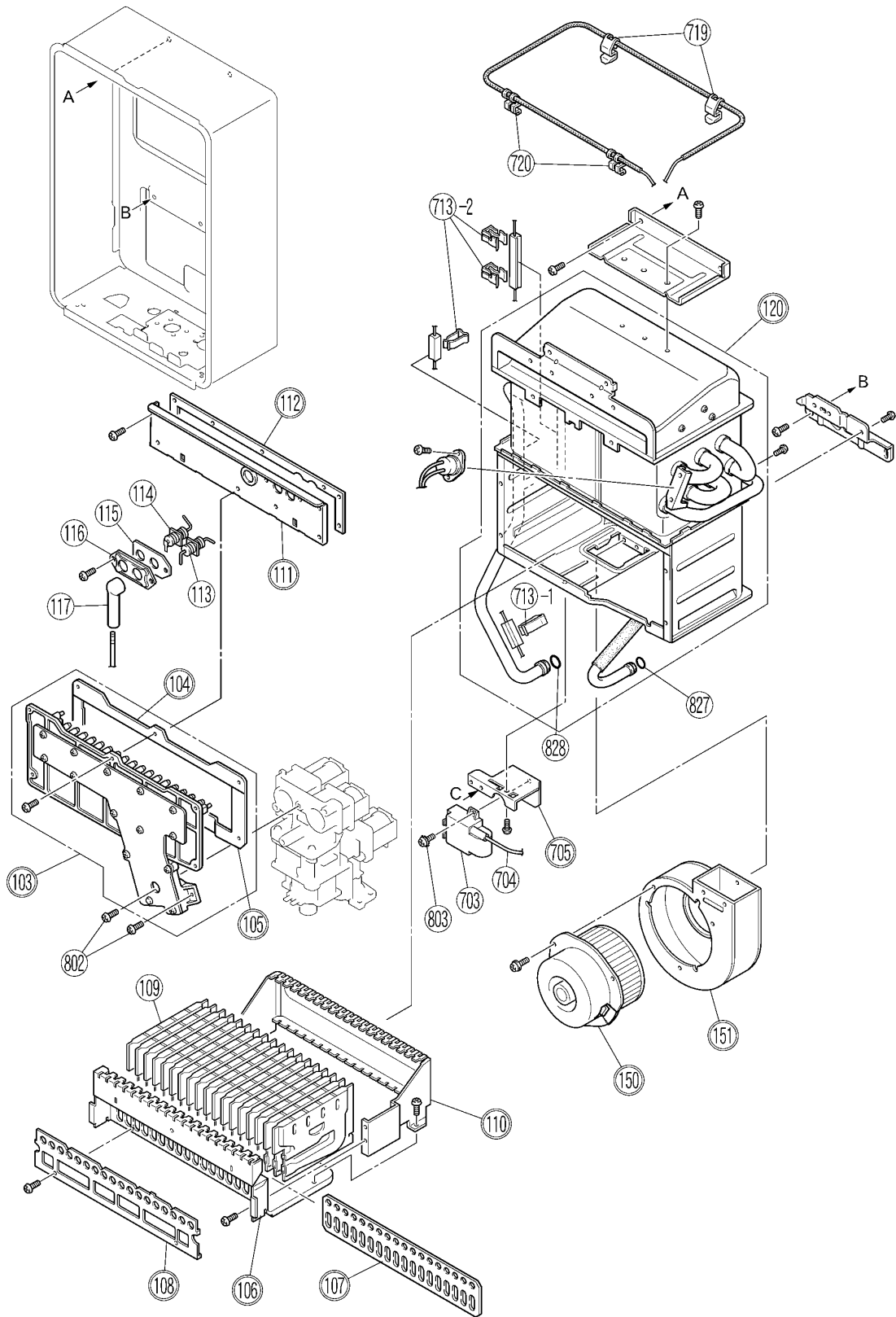


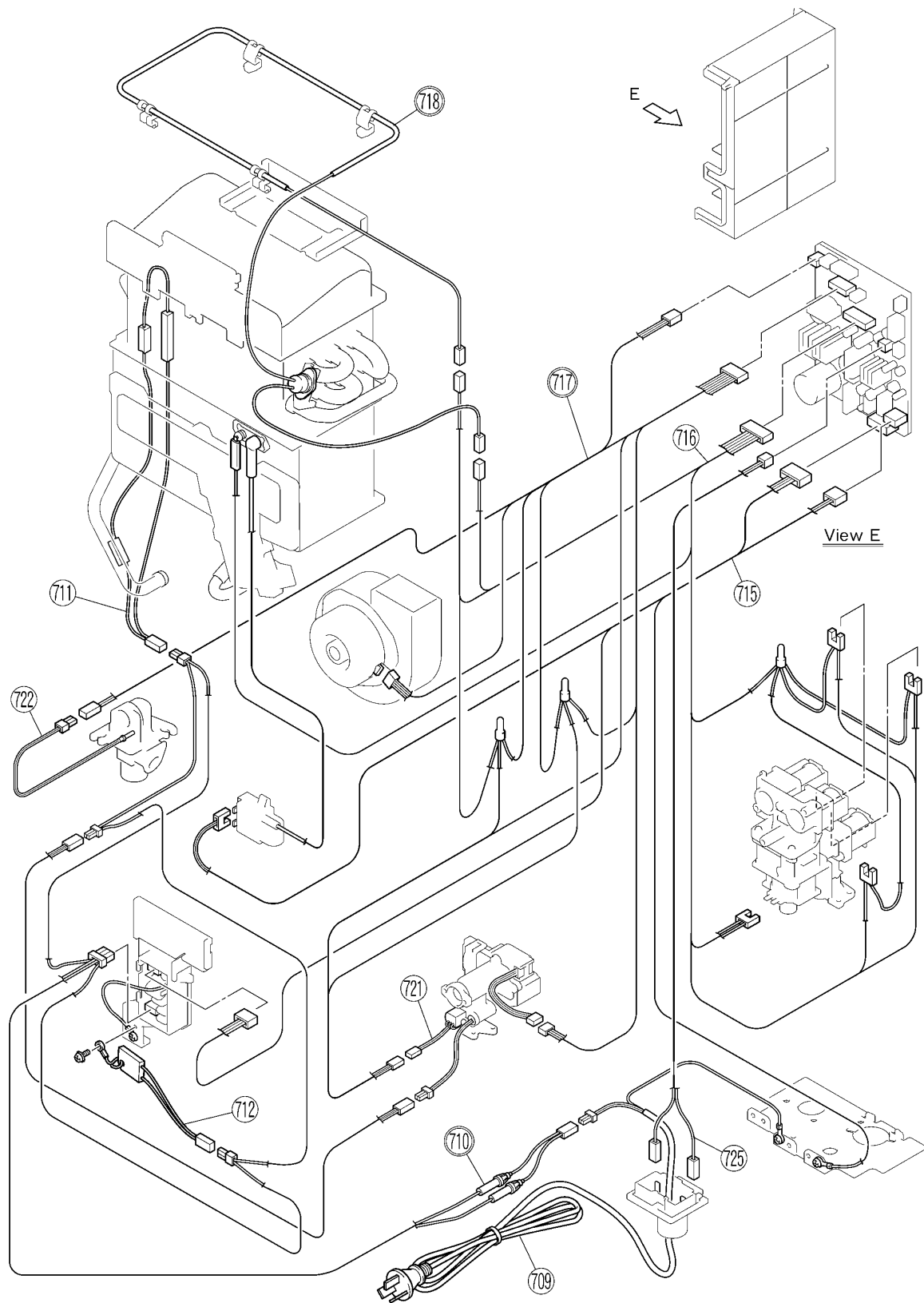
REU-VR2024WG

REU-V 1620W/V2024W/V2015W/V2426W/V2626W-AK
REU-V 1620W/V1818W/V2024W/VE2015WS/V2426W/V2422WS-ZK









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 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