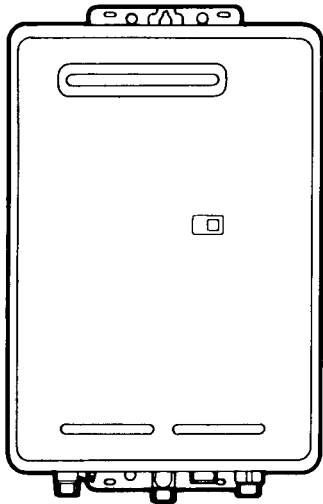


How to use your Water Heater



**Rinnai
ECO 16**

Customer
→ page 2

Installer
→ page 7

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Features	2
Safety Points	3
Turning System ON	4
About Hot Water	5
Guarantee	6
Installation	7
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24 Hr SERVICE
In metropolitan areas.
Melb (1800) 632 386
Syd/Can (02) 9729 0468
A' del (08) 8345 5185
Perth (08) 9324 4145
Bris (0419) 704 956

IMPORTANT

Rinnai Australia has a service and spare parts network in all states.

Our service network personnel are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance needs service, please ring one of the service contact numbers on the back of this booklet. Rinnai recommend that this appliance be serviced every 3 years.

This appliance shall be installed in accordance with:

- Manufacturer's Installation Instructions
- Current AS3500. 4
- Current AS3000
- Local Water Authority Regulations
- Local Gas Fitting Regulations
- Municipal Building Codes
- AG601, A.G.A. Installation Code for Gas Burning Equipment
- Any other relevant Statutory Regulation

This ECO 16 must be installed correctly by an authorised person. The installation of gas, water, and electricity must conform to local regulations.

The installation must also comply with the instructions supplied by Rinnai.

Your water heater has been approved by the Australian Gas Association
A.G.A. Approval Number refer to Data plate.

Please keep this instruction booklet in a safe place for future reference.

All dimensions referred to in these instructions are in millimeters,
unless otherwise specified.

Rinnai Corporation - Japan



AS/NZS ISO 9001
APPROVED BY BVQI

Manufactured under a Quality
System Certified as complying
with AS/NZS ISO 9001
by an Accredited Certification
Body

Bureau Veritas
Quality International

This Certificate is for Quality Management System, not for product.



The Australian
Gas Association

Proudly a member of the AGA
All of our gas products are AGA
tested and approved



Quality
Endorsed
Company

ISO 9002 Lic 4983
Standards Australia

Distributed and Serviced in Australia under a Quality
System certified as complying with ISO 9002 by
Standards Australia Quality Assurance Services

FEATURES

The ECO 16 is one of a range of the most advanced instantaneous water heaters available.

The ECO 16 is an externally mounted, power flued appliance. It is very compact, saving both floor and wall space.

The ECO 16 comes supplied pre-set to a maximum water temperature of 55°C.

The ECO 16 never runs out of hot water. While electricity, water and gas supplies are connected, hot water is available whenever the hot water tap is open.

2 The burner lights automatically when the hot water tap is opened, and goes out when the tap is closed. Ignition is electronic; there is no pilot light. When the hot water tap is off, no gas is used.

A.G.A.'s 4 Star Energy Rating shows that the ECO 16 is one of the most efficient water heaters available.

Operating noise level is very low.

TROUBLE SHOOTING

The ECO 16 has the ability to monitor its own operation continuously. If hot water does not flow, ensure all tap outlets are closed, turn off the power supply to the appliance for a minimum of 5 seconds.

Then switch the power ON again to the appliance. Open a hot water tap somewhere in your home and confirm the ECO 16 is operating correctly.

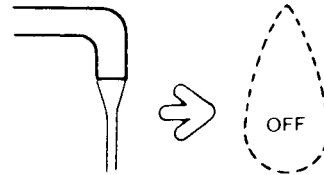
If the problem persists, contact Rinnai on one of the telephone numbers shown on the covers of this booklet.

SAFETY

Always check water temperature by hand before entering the shower or bath.



Hot water temperature may vary at low water flows, or the ECO 16 may go out without warning.



If the ECO 16 is disconnected from the power supply and freezing conditions are expected, turn off water and gas, and drain all water from the appliance.

Water Off

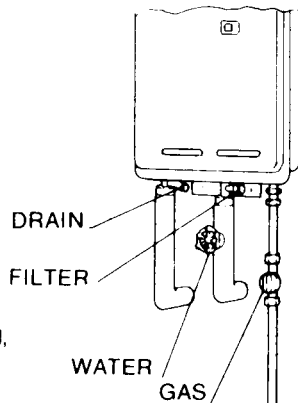


Gas Off

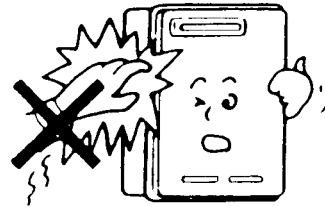


Drain Water

If power and the automatic frost protection is connected, freezing will be prevented.
("K" Series only)

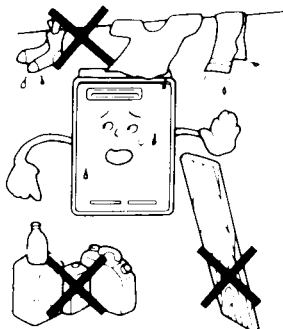


Do not touch cover or insert objects into the flue outlet when the ECO 16 is in operation.



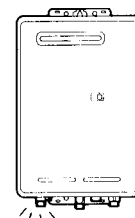
On cold days steam may be discharged from the flue outlet, this is normal with a high efficiency appliance and does not indicate a fault.

Keep flammable materials, trees, shrubs etc. away from the ECO 16.

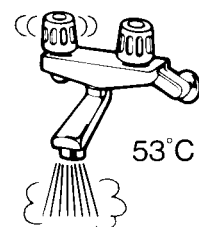


Do not spray water directly into the flue terminal.

Depending on the weather conditions and the length of the pipe between the hot water unit and the tap in use, there may be a variation between the temperatures leaving the unit and the temperature of the water at the tap.



55°C

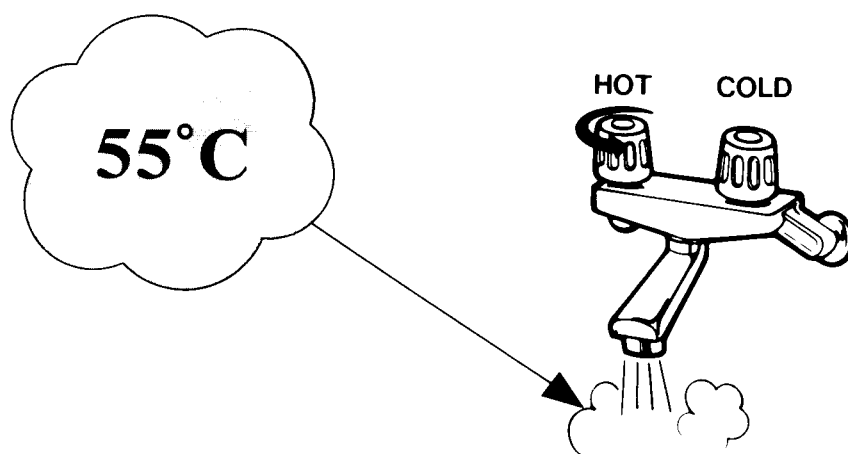


53°C

OPERATION-WITHOUT REMOTES

The ECO 16 has no pilot light and will operate automatically as soon as a hot water tap is opened. The burner ignites with electronic ignition and the flame extinguishes as soon as water stops flowing through the appliance (usually when the hot water tap is closed).

Simply, Open a hot water tap.



The ECO 16 is supplied with the hot water supply pre-set to 55°C.

WARNING

Excessively hot water is dangerous, especially for young children and the infirm. The ECO 16 is delivered pre-set to 55°C.



Water temperature over 50°C can cause severe burns instantly or death from scalds.

Children, disabled, and the elderly are at highest risk of being scalded.

Feel water before bathing or showering.

DO

Do stay with children whenever they are in the bathroom. (Take the phone off the hook).

Do take them out of the bathroom if you need to answer the phone or door.

Do test the temperature of the water with your elbow before placing your child in the bath.

Do make sure that the tap is turned off tightly.

Do install a child proof tap cover OR,

Do install a child resistant tap.

DON'T

Don't leave a toddler in the care of another small child. The older child may not have set the water temperature to a safe level.

- **Consider child-resistant taps or inexpensive tap covers**, both of which prevent a small hand being able to turn on the tap.

- **Consider reducing the temperature of the water coming from the hot tap to 50°C.**

This approach can be extremely valuable because it requires a one time action for a long-term reduction in the risk of scalds.

This type of automatic protection is important during times when a parent or carer has been distracted.

SCALDS - FIRST AID

1. REMOVE CLOTHING

Remove all wet clothing quickly, as clothing retains the heat.

2. APPLY COLD WATER FOR 30 MINUTES

Immediately submerge the burnt area in cold water for 30 minutes to reduce the heat in the skin, preventing deeper burning.

Never use butter, oils, ointments to cover the burn as they may retain the heat.

Never use ice. Children can be dangerously chilled in iced water.

3. KEEP THE CHILD WARM

Place a blanket around your child.

4. SEEK MEDICAL ADVICE

Seek medical advice if the scald involves the face or hands or is larger than your palm.

GUARANTEE

The benefits conferred by this warranty are in addition to all other rights and remedies in respect of the product which you have under the Trade Practices Act and similar State and Territory Laws.

Given installation is in accordance with the manufacturers specification, this appliance is warranted by Rinnai for the cost of labour and components in the event of defects arising from faulty materials and/or workmanship with the ensuing warranty conditions.

Domestic Use:	Free Labour	Free Parts	Commercial Use:	Free Labour	Free Parts
Heat Exchanger	3 Years	10 Years	Heat Exchanger	1 Year	1 Year
All other Parts	3 Years	3 Years	All other Parts	1 Year	1 Year

* All terms are effective from date of installation.

Please record below the following information for your own records.

Your Retailer:

Address:

Phone:

Date of Purchase:

Your Installer:

Installer's Licence No.

Address:

Phone:

Date of Installation:

INSTALLATION INSTRUCTIONS

THE FOLLOWING PAGES CONTAIN INFORMATION FOR THE INSTALLER.

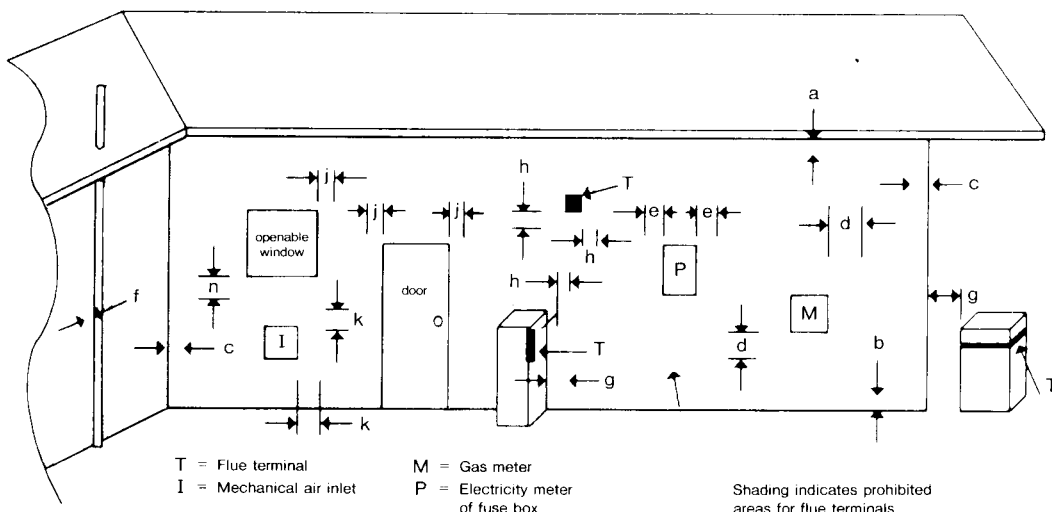
**Please read information printed on
page one.**

**The installer is responsible for the
correct installation of your ECO
16.**

- Read warnings on page one before starting installation.
- Check for damage, if the ECO 16 is damaged, contact the supplier or Rinnai.
Do not install a damaged appliance before checking with the supplier or Rinnai.
- Check that the ECO 16 supplied is correct for the gas type in the area.
Refer to local gas authority for confirmation of gas type if in doubt.
Refer to data plate located on left hand side panel of the ECO 16.

POSITIONING

- The ECO 16 is an externally mounted, power flued appliance. **IT MUST ONLY BE FITTED OUTSIDE THE BUILDING.**
- When determining a suitable position for the ECO 16, the length of hot water pipe runs should be taken into consideration. In principle, the ECO 16 should be as close as possible to the most often used taps, or in a central location between taps, showers etc.
- See diagram on page 11 for position of gas, water and power connections.
- The location of the flue terminal must comply with the clearances shown below.



a - Below eaves, balconies or other projections:	500
b - From the ground or above a balcony	1500
c - From a return wall or external corner	500
d - From a gas meter (M)	1000
e - From an electricity meter or fuse box (P)	500
f - From a drain or soil pipe	150
g - Horizontally from any building structure or obstruction facing a terminal	500
h - From any other flue terminal, cowl, or combustion air intake	500
j - Horizontally from an openable window, door, inlet, or any other opening into a building, with the exception of sub-floor ventilation	500
k - From a mechanical air inlet, including a spa blower	1500
n - Vertically below an openable window, inlet or any other opening into a building, with the exception of sub-floor ventilation	1000

Note: If you are unsure about clearances not indicated here, in general refer to AG601, or your local authority.

GAS PIPE SIZING

NATURAL GAS THROUGH STEEL PIPE LENGTH OF STRIGHT PIPE IN METRES												
NOMINAL SIZE MM	2	4	6	8	10	12	14	16	18	20	25	30
20	392	270	217	185	164	140	129	122				
25	724	498	400	342	303	275	253	235	221	208	185	167

NATURAL GAS THROUGH COPPER PIPE LENGTH OF STRAIGHT PIPE IN METRES												
NOMINAL SIZE MM	2	4	6	8	10	12	14	16	18	20	25	30
20	207	137	108									
25	456	313	252	215	191	173	151	141	134	128		
32	871	599	481	412	365	331	304	283	265	251	222	221

L.P.G. THROUGH STEEL PIPE LENGTH OF STRAIGHT PIPE IN METRES												
NOMINAL SIZE MM	2	4	6	8	10	12	14	16	18	20	25	30
15	585.6	402.5	323.2	276.6	245.2	222.1	204.4	190.1	178.4	168.5	140.0	126.0
20	1282.0	881.0	707.0	605.0	537.0	486.0	447.0	416.0	390.0	369.0	327.0	296.0

L.P.G. THROUGH COPPER PIPE LENGTH OF STRAIGHT PIPE IN METRES													
NOMINAL SIZE MM	2	4	6	8	10	12	14	16	18	20	25	30	40
15	204.5	142.0	113.0										
20	676.1	464.7	373.1	319.4	283.0	256.5	235.9	219.5	205.9	194.5	172.4	142.0	131.0

PIPESIZING IS IMPORTANT.

This guide will help you to size the gas pipe for this appliance correctly.

Calculate the length of pipework and total load in MJ/h.

Shaded boxes indicate MJ/h capacity of pipe. (Based on information from AG601).

In Western Australia refer to Gas Fitters Guide Handbook.

INSTALLATION-GENERAL

■ ECO 16

A 240 V weatherproof earthed power point is required within 1500 mm of the ECO 16.

The ECO 16 weighs 15 kg, and the wall on which it is to be mounted must be capable of supporting it and the pipework. Ensure that suitable fixing screws or bolts are used to secure the ECO 16 to the wall. Bracket and fixing hole locations are shown on page 11.

The top bracket has a keyhole slot so that ECO 16 can be positioned by hanging it on one screw, then the other screws can be secured.

After determining the most suitable position, fix the ECO 16 to the wall.

Connect hot and cold water pipes. An approved gate valve **MUST BE FITTED** to the cold water inlet. In areas where the water pressure is over 1000 kPa, a pressure limiting valve must also be fitted.

Water connections are R $\frac{1}{2}$ /15. Locations are shown on page 11.

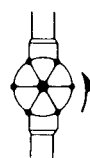
Connect the gas. **CHECK PIPE SIZING REQUIREMENT USING AN APPROVED PIPE SIZING CHART** (eg: Charts in AG601).

The ECO 16 uses 125 MJ/h of gas. **IF THE GAS PIPE SIZE IS INSUFFICIENT, THE CUSTOMER WILL NOT GET THE FULL PERFORMANCE BENEFIT.** An approved isolation valve **MUST BE FITTED** to the gas inlet. Connection size is R $\frac{3}{4}$ /20. This is not an indication of the size of pipe required.

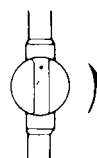
The ECO 16 water heater is not suitable for use a pool heater.

Purge Gas and Water pipes to remove air and swarf. Swarf in either gas or water supplies may damage the ECO 16.

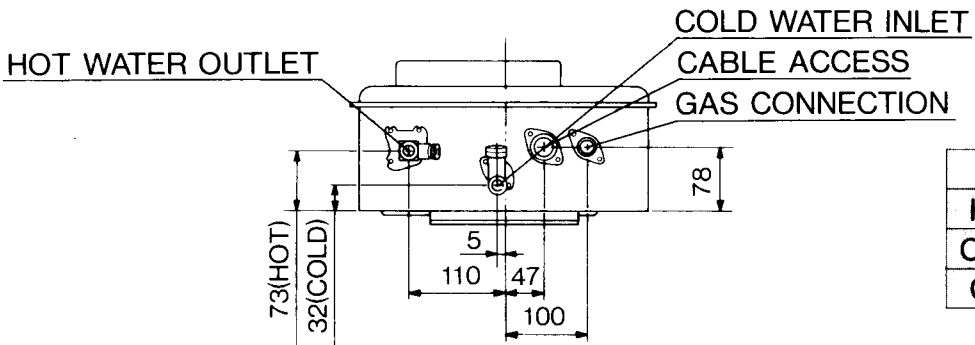
WATER ON



GAS ON



ECO 16



	A DIMENSION
HOT	40
COLD	49
GAS	41

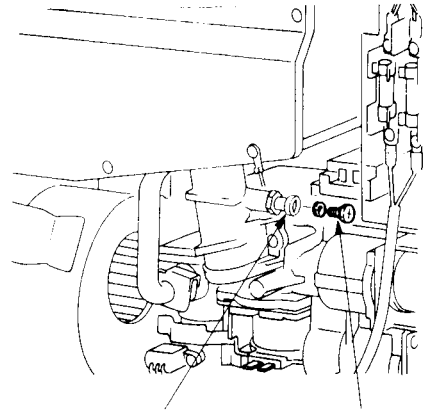
TESTING

■ TESTING

- Turn on Gas and Water.
- Test for water leaks and gas escapes. Use soapy water to check for gas leaks.
- Remove pressure test point screw, attach pressure gauge to test point.
- Turn power on (Caution 240V inside unit).
- Open any hot water tap fully.
- Check test point pressure.
Information is provided in a pouch, rear of front panel.
- If the pressure is low, there could be various reasons eg. warm incoming water, low water flow, gas pipes too small.
Water flow will need to be at least 10 litres/min if incoming water temp. is 15°C.
- If it is established that the gas pressure needs adjusting, follow the instructions EXACTLY according to the information provided in the pouch, rear of front panel.
IF IN DOUBT, CONTACT RINNAI.
- Turn hot water off. Turn power off. Remove pressure gauge and replace test point screw.
- Replace front cover (4 screws).
- Turn power on.
- Explain the operation of the ECO 16 to the customer.

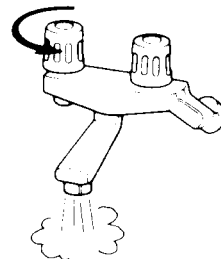
FAULT/FAILURE PROCEDURE

If you are unable to get the ECO 16 to operate correctly, contact Rinnai, or your local agent.



Test point Screw and washer

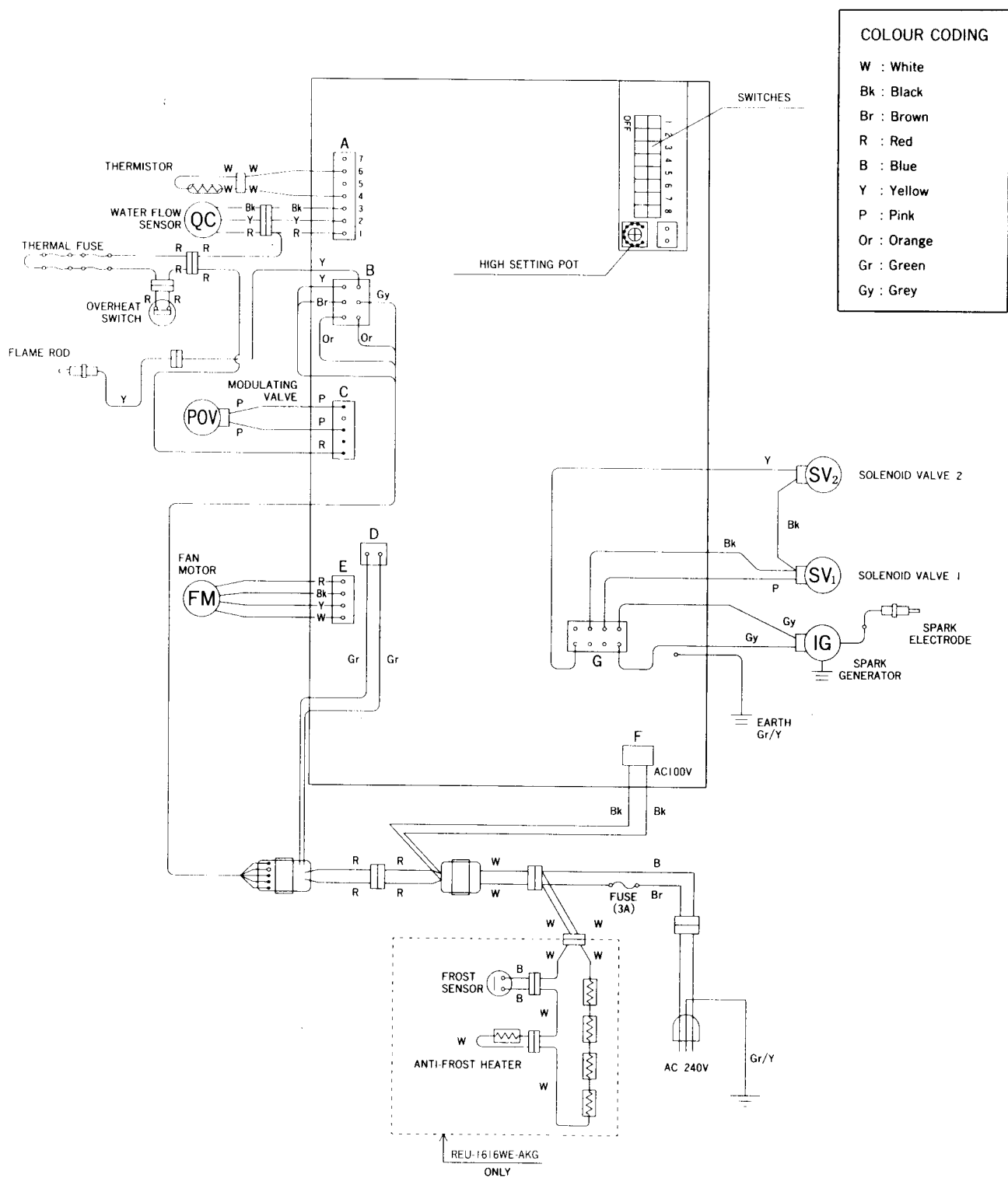
	NATURAL	PROPANE	TOWN
LOW	0.08 kPa	0.16 kPa	0.06 kPa
HIGH	0.73 kPa	1.91 kPa	0.40 kPa



HOT WATER TAP OPEN

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

WIRING DIAGRAM



SPECIFICATION

DESCRIPTION	REU-1616WE-A(K)G
TYPE	EXTERNALLY MOUNTED, POWER FLUED CONTINUOUS FLOW WATER HEATER.
GAS TYPE	NATURAL/PROPANE/TOWN
INPUT	MODULATING – 125 MJ/h HIGH, 32 MJ/h LOW.
GAS CONTROL	RINNAI ELECTRONIC CONTROL AND SOLENOIDS.
BURNER	STAINLESS STEEL.
GAS INLET	R $\frac{3}{4}$ /20 ($\frac{3}{4}$ " BSP MALE).
TEST POINT PRESSURE	SEE DATA PLATE AND PRESSURE INFORMATION WITH APPLIANCE.
FLUE	FORCED FLUE.
FLUE TERMINATION	SUPPLIED WITH APPLIANCE.
IGNITION	ELECTRONIC WITH AUTOMATIC FLAME SENSING.
ELECTRICAL SUPPLY	240v 50Hz

Rinnai are continually updating and improving products, therefore specifications are subject to change without prior notice.

SERVICE CONTACT POINTS

Rinnai Australia PTY. LTD. ACN 005 138 769 ABN 74 005 138 769

Internet: <http://www.rinnai.com.au>

E-mail: enquiry@rinnai.com.au

Head Office:

	10-11 Walker Street, Braeside, VIC 3195.
	Tel: (03) 9271 6625. Fax: (03) 9271 6622.
Sales	Tel: (03) 9271 6666. Fax: (03) 9271 6611.
Service	Tel: (03) 9271 6699. Fax: (03) 9271 6688.
Spare Parts	Tel: (03) 9271 6600. Fax: (03) 9271 6688.
24 hr Hot Water	Tel: (1800) 632 386

N. S. W. Branch:

	62 Elizabeth Street, Wetherill Park, NSW 2164
	Tel: (02) 9609 2111. Fax: (02) 9609 5260.
Sales	Tel: (02) 9609 2888. Fax: (02) 9609 5260.
Service	Tel: (02) 9609 2600. Fax: (02) 9729 0467.
24 hr Hot Water	Tel: (02) 9729 0468.

S. A. Branch:

	140 Days Road, Ferryden Park, SA 5010
	Tel: (08) 8345 0292. Fax: (08) 8345 4760.
24 hr Hot Water	Tel: (08) 8345 5185.

W. A. Branch:

	18 Belgravia Street, Belmont, WA 6104
	Tel: (08) 9478 3355. Fax: (08) 9277 2531.
Sales	Tel: (08) 9478 3345. Fax: (08) 9277 2531.
Service	Tel: (08) 9478 3345. Fax: (08) 9277 2531.
Spare Parts	Tel: (08) 9324 4145.
24 hr Hot Water	

QLD Branch:

	1/6 Booran Drive, Woodridge, QLD 4114.
	Tel: (07) 3209 4622. Fax: (07) 3209 4722.
After Hrs Hot Water	Tel: 0412 747 717.

Tasmania:

Contact Rinnai Melbourne Head Office: