

Mercury RV Water Heaters

Duoetto MK2

Aqueous MK2

DUO-10/AQU-10

Warning

**DO NOT power on the water heater without water.
Permanent damage will result.**

www.ausj.com.au

sales@ausj.com.au

Last updated: 09/06/20

The most up-to-date version of the manual is available at www.ausj.com.au.

Thank you for your purchase of the Duoetto MK 2 Dual Voltage Water Heater! This device is approved to European Quality Standards, CE, AS/NZS 60335.2.21 : 2002 A1-3 and has obtained WaterMark certification. This unit is a simple system with high quality parts designed to meet your needs. Please read the instruction manual for maintenance and correct installation and operation of your heater.

Should any fittings be required for your installation, we have a range which can be viewed on our website.

1. Quick Installation

Aqueous MK2

1. Mount Heater (refer section 7 Installation)
2. Connect pressure relief valve to cold water inlet
3. Connect cold water hose to pressure relief valve and fit the provided clear hose to pressure relief valve safety outlet (refer diagram 2) with cable tie or plumbing band hose clamp (not included)
4. Connect hot water hose to hot water outlet
5. Check all hose connections for leaks by pressuring the unit
6. Plug in to power (standard household power point)
7. Switch on

Duoetto MK2

1. Mount Heater (refer section 7 Installation)
2. Connect pressure relief valve to cold water inlet
3. Connect cold water hose to pressure relief valve and fit the provided clear hose to pressure relief valve safety outlet (refer diagram 2) with cable tie or plumbing band hose clamp (not included)
4. Connect hot water hose to hot water outlet
5. Check all hose connections for leaks by pressuring the unit
- 6(a). Plug in to power (standard household power point)
- 6(b). Connect large red wire to 12v POSITIVE (+) power source and large black wire to NEGATIVE (-).
- 6(c). Connect small red wire to 12v POSITIVE (+) power source and small black wire to NEGATIVE (-).
7. Switch on

2. What's in the box

No.	Item	Quantity
1	Duoetto/Aqueous MK2 water heater	1
2	Mounting brackets	2
3	Bracket bolts and washers	4
4	Self-tapping screws	8
5	Combined pressure relief valve	1
6	Owner's manual	1

3. Product Features

Intelligent

The Duoetto MK2 and Aqueous MK2 units have an advanced thermostat. This thermostat allows the water temperature to be set between 30°C and 75°C on 240VAC or between 30°C and 70°C on 12VDC via the digital display.

Durable and Elegant

The exterior shell is made of impact resistant ABS plastics. The tank inside is made of SPCC steel & enamel coating.

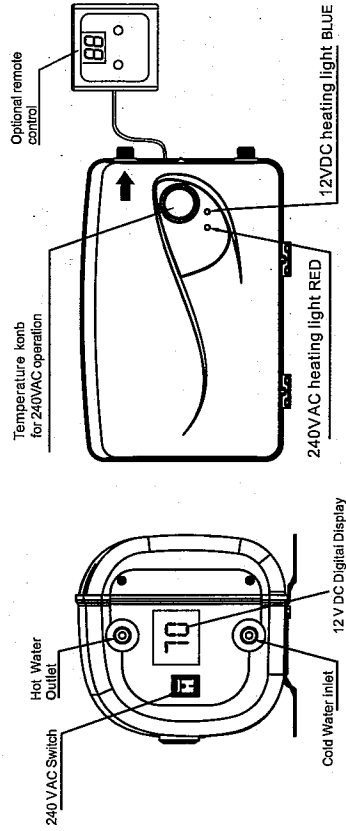
Environmentally Friendly and Efficient

The polyurethane insulation provides excellent heat preservation, saving electricity by maintaining the temperature.

Multi-Functional Protection

Over-temperature cutout, run dry and over pressure protections all work in sync to make this a reliable and safe water heating option.

4. Product Diagram



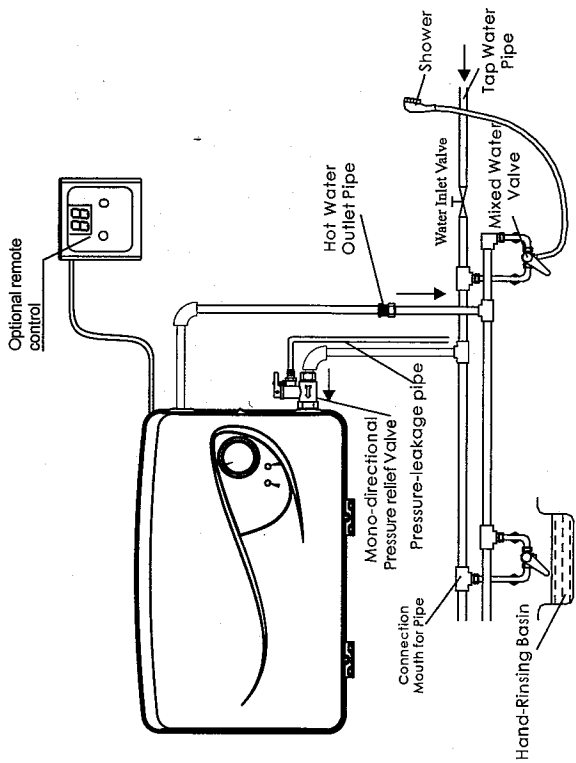


Diagram 1

5. List of Technical Parameters

	DUO-10	AQU-10
Rated Voltage (V)	240V AC	240V AC
Rated Power(W)	1000W	1000W
Rated Current(A)	4.2A	4.2A
Rated Frequency (Hz)	50Hz	
Rated Tank Pressure(MPa)	0.85MPa / 117 psi	0.85MPa
Weight(Kg)	7.4kg	7.4kg
Dimensions(mm)	409x267x269mm	409x267x269mm
Mounting Mode	Horizontal	Horizontal
Rated Volume (L)	10L	10L
Rated Temperature (C)	30°C to 75°C	30°C to 75°C
Rated Voltage (V)	240V AC	240V AC
Rated Power(W)	1000W	1000W
Rated Current(A)	4.2A	4.2A
Rated Frequency (Hz)	50Hz	
Rated Tank Pressure(MPa)	0.85MPa / 117 psi	0.85MPa
Weight(Kg)	7.4kg	7.4kg
Dimensions(mm)	409x267x269mm	409x267x269mm
Mounting Mode	Horizontal	Horizontal

6. Safety Cautions

Electrical safety requires that this unit be earthed according to the working rules of installations of electrical goods.

The location this water heater is installed in should be able to support four times the weight of the water system when it is full of water (Approx. 40kg).

The water heater must be filled with water before being given power during the first use. The water heater is not allowed to heat without water (run dry).

The power socket must be earthed.

Don't handle the plug with a wet hand.

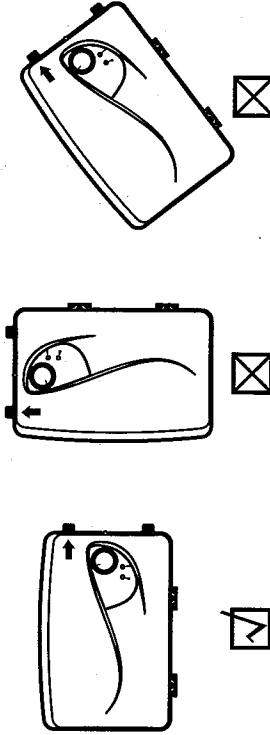
Do not operate this device if the cord, feed or plug is damaged in any fashion.

Don't replace the safety valve with any unauthorized products.

7. Installation

Installation is the responsibility of the buyer and the manufacturer does not bear the responsibility for any damages caused by incorrect installation, damage due to poor quality plumbing and parts, non-standard water or not following these instructions.

Mounting the Heater (must be horizontal)



- Fit the brackets to the unit using the bolts and washers supplied

- Using the supplied screws, fix the brackets to the floor/wall (you may have to predrill holes)

It is recommended that the water heater be as close as possible to the place of use to reduce loss of heat in piping.

Warning: The wall or floor must be strong enough to support four times the weight of the heater filled with water (Approx. 40kg). The unit should be mounted to a load bearing fixture.

Pipe Connection

1. Screw the combined pressure relief / non return valve onto the cold water inlet. It is recommended that you use a liquid thread sealer to ensure a non-leaking fitting.
2. Connect the cold water hose to the pressure relief valve and fit the provided clear hose to pressure relief valve safety outlet (diagram 2) with cable tie or plumbing band hose clamp (not included). Clear hose must be routed to drainage in a continuous downward direction for gravity draining.

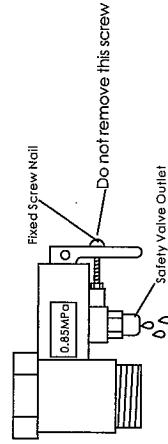


Diagram 2

3. Connect the hot water hose to the water heater outlet (1/2" BSP).

Notices:

- No responsibility is taken by the manufacturer for damage caused to the unit when not using the supplied pressure relief valve.
- If the water pressure exceeds 0.85MPa or water flows constantly from the pressure relief valve hose, a pressure reducing valve must be used on the cold water inlet.
- We recommend adding a thermostatic valve or mixer valve to avoid the chance of the outlet water temperature being too high.

Use of the Duoetto/Aqueous

- Open the outlet and inlet pipelines until water flows out normally, demonstrating that the inlet and outlet works normally and the heater is full of water.
- Close the outlet valve.
- Check all joints to see if there is any leakage.
- When first using the water heater, ensure that the water heater is filled with water and that water flows from the outlet and only then introduce any power to the system.

Power Connection

Before introducing any power to the water heater make sure the water heater is filled with water.

240V AC Installation

1. Power supplies must be on a network with an alternating current of 50Hz 240VAC.
2. The water heater is equipped with a standard 10-amp cord and power plug.
3. The socket should be grounded and protected from moisture.
4. The device must maintain circuit breaker protection.

12V DC Installation (Duoetto MK2 only)

All appliance installations should be only carried out by a qualified individual.

1. Connect the red 4mm² large wire directly to house battery or another suitable power source, depending on the length of your wiring you may need to step up the cabling, we recommend a 50-amp fuse. Refer to section 9 for appropriate cable sizing.
2. Connect the black 4mm² negative wire to a common ground or a negative battery terminal, depending on the length of your wiring you may need to step up the cabling, refer to section 9 for appropriate sizing.
3. Connect the small black ground wire to a common negative and the small red wire to a switched power source; this is crucial for 12V DC operation of the heater.

Important: To avoid draining the engine crank battery, the red small positive wire must be connected to a switch or an ignition source. (Applicable for the DUO-10/12V DC type only).

8. Methods of Usage

- Plug in the water heater after making sure it is filled with water.
- Turn the thermostat to the desired temperature and switch the heater on. Indicator lights indicate the heater is functioning.
- Water temperature is adjustable from 30°C to 75°C on 240V AC, and 30°C to 70°C on 12V DC via the digital display.
- The Duoetto MK2 and Aqueous MK2 water heaters are auto thermostatic. They automatically cycle on and off when they reach the set temperature.

On/Off Switch: Controls 240VAC heating. When it switches on, the 12V DC heating will not work. The water heater will be heating on 240VAC power Only.

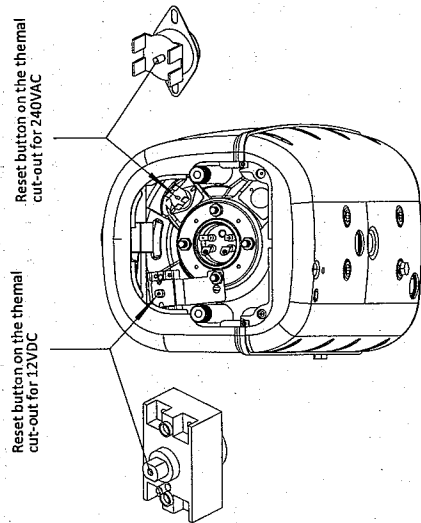
DC LED: A blue light indicates 12V DC heating. It will turn off when the heater is being powered by 240V AC.

Digital Display: +/- button will set the 12V DC heating temperature in 1 °C increments. Digital display shows the setting temperature and actual temperature.

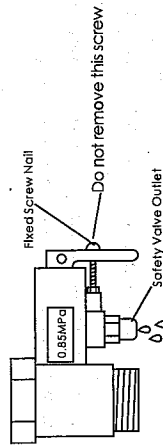
Normally the digital display will be displaying the actual water temperature. When setting the temperature via the +/- buttons the setting temperature will be displayed for 5 seconds before returning to displaying the actual temperature.

Thermostat: The thermostat controls 240V AC heating.

Over Temperature Protection: This protects the water heater from overheating. It disconnects a heating element from the network at temperatures in excess of 85 °C (12VDC) or 90°C (240VAC). Safety systems cannot automatically reset, it will require opening the inspection plate and manually pressing the reset button (see below graphic).



Over Pressure Protection: When the internal pressure is higher than the rated tank pressure the safety valve will automatically release pressure. It is normal that water is draining from the pressure relief outlet.



Water Maintenance: If you have brown coloured water that you think looks like rust coming from your hot water outlet when you turn on the tap first thing in the morning then you have a problem with hard water or Calcium deposits, one of the leading causes of water heater malfunction is Calcium buildup around the heating element it begins disrupting the heating process by stifling the heating elements With their heat conveyors caked in calcium, the water heaters must work extra hard to produce hot water. As a result, the water in your heater also takes longer to heat up. The hotter the water is, the more calcium and magnesium comes out of your hot water and forms solid deposits on the elements in your hot water heater.

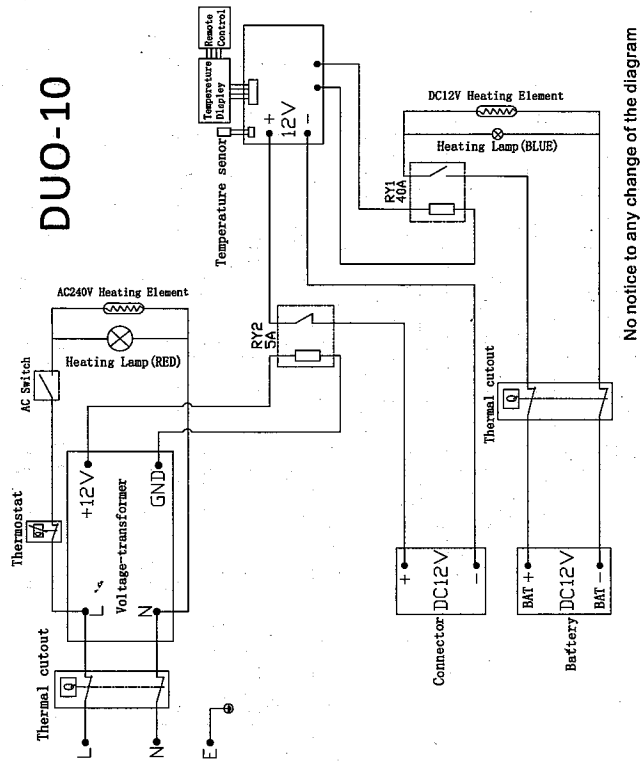
Flushing

To treat this you will need to drain your system of water and fill the heater with vinegar and let it sit for about six hours. This will clean any existing mineral build up from your system. To prevent this from reoccurring we recommend a water softening system. If left untreated this can cause heating element failure. Vinegar is a weak acid that is generally quite safe to use.

9. Circuit Diagram

Only install your appliance in accordance with any state or territory regulations with a qualified installer.

ELECTRICITY DIAGRAM



No notice to any change of the diagram

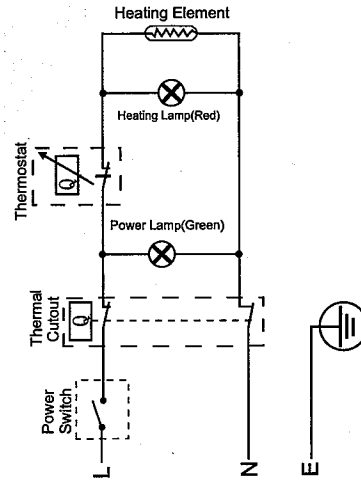


Diagram 3

10. 12V DC Cable Length and Current Capacity Guide

Current, Length (full return positive and negative length) to area (sq mm)
 12.6V DC, current carrying capacity(CCC)(top) then follows 5% volt drop to 70 sq mm.

Current, length (twin) to area (sq mm)
 12.6V DC, current carrying capacity (CCC) (top)
 then follows 5% volt drop to 70 sqmm

length, red & black metres	Current in amps																			
	12	16	20	25	32	50	63	80	106	125	155	1	2.5	4	6	10	16	25	35	50
1	1.5	2.5	4	6	10	16	25	35	50	70	1	2.5	4	6	10	16	25	35	50	70
2	2.5	4	6	10	16	25	35	50	70	2	4	6	10	16	25	35	50	70		
3	4	6	10	16	25	35	50	70	3	6	10	16	25	35	50	70				
4	6	10	16	25	35	50	70	4	10	16	25	35	50	70						
5	10	16	25	35	50	70	5	16	25	35	50	70								
6	16	25	35	50	70	6	25	35	50	70										
7	25	35	50	70	7	35	50	70												
8	35	50	70	8	50	70														
9	50	70	9	70																
10	70	10	16	25	35	50	70	10	70											
11	16	25	35	50	70	11	70													
12	25	35	50	70	12	over														
13	35	50	70	13	over															
14	50	70	14	over																
15	70	15	over																	
16	over	16	over																	
17	over	17	over																	
18	over	18	over																	
19	over	19	over																	
20	over	20	over																	
30	over	30	over																	
40	over	40	over																	
50	over	50	over																	
60	over	60	over																	
70	over	70	over																	

Please fill in all details correctly.

Retain this card with original purchase invoice for any future warranty claim.

Please note in the event of this document and the original purchase invoice not being provided, warranty will commence from the date of manufacture.

Owner's Details:

Surname..... Initial.....
 Address.....
 Date of Purchase..... Purchased from.....
 Model..... Serial Number.....

Installer's Details

Date of Installation..... Installer's Name.....
 Address.....
 Installer's Signature.....