

Mercury RV Water Heaters

Duoetto/Aqueous

HCE-10/HCE-5

Dual Voltage 12VDC/240VAC

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

Thank you for your purchase of the Duoetto Dual Voltage Water Heater! This device is approved to European Quality Standards, CE, as well as AS/NZS 60335.2.21 : 2002 A1-3. The Duoetto 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 the Duoetto.

Should any fittings be required for your installation, we have a range which can be viewed on our website. A sample elbow fitting has been included with your purchase.

1. Product Features

Intelligent

The Duoetto has an advanced thermostat. This thermostat allows the water temperature to be set between 30°C and 75°C. It will sustain the set temperature when in operation.

The Aqueous 5L unit has a fixed thermostat set at 75°C.

Durable and Elegant

The exterior shell is made of high quality plastics and is both elegant and durable. The tank inside is made of high-quality 304 food grade stainless steel.

Environment Friendly and Efficient

High-Density non-fluorine thermal layer provides excellent heat preservation, saving electricity through maintaining the temperature.

Multi-Functional Protection

Creepage proof, over-temperature proof, dry burning proof and over pressure protection all work in sync to make this a reliable and safe water heating option.

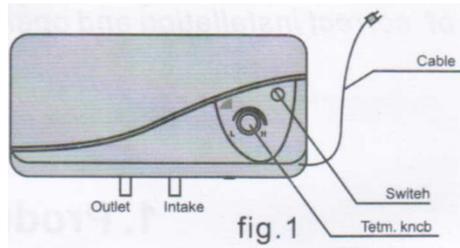
MODEL: HCE-10, HCE-5

Electric Storage Water Heater

2. Accessories and Data

The following accessories should be included with your unit.

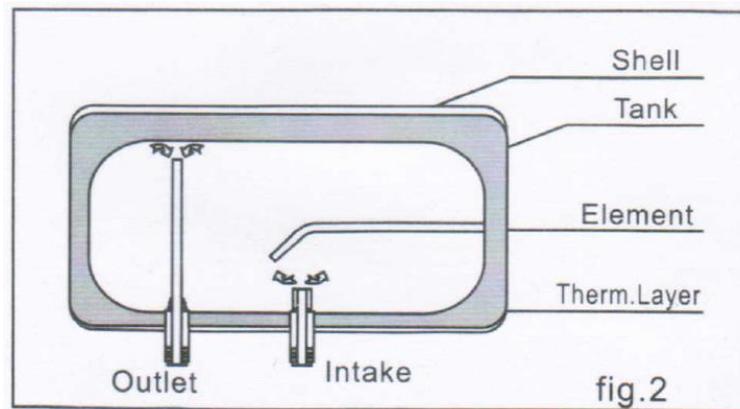
No.	Item	Quantity
1	Duoetto Water Heater	1
2	Self-Tap Screws	4
3	Combined Pressure Relief Valve	1
4	Owner's Manual	1
5	Hose	1
6	DVD	1



3. List of Technical Parameters

Feature	HCE-10		HCE-5	
	AC240v	DC12v	AC240v	DC12v
Rated Capacity(L)	10L		5L	
Rated Voltage(V)	220~V	12v	220~V	12v
Rated Power(W)	1000W	300W	1000W	180W
Rated Current(A)	4.6A	25A	4.6A	15A
Rated Tank Pressure(Mpa)	0.6Mpa / 85PSI		0.6Mpa / 85 PSI	
Net Weight(Kg)	5kg		3kg	
Gross Weight(Kg)	5.5kg		3.5kg	
Dimensions(mm)	425x235x235mm		210x220x265mm	
Mounting Mode	Horizontal		Horizontal	

4. Water Flow Scheme



5. Safety Cautions

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

The location this Duoetto water heater is installed in should be able to support the weight of the water system when it is full of water (Approx. 15kg). A strap is required to secure and support the unit.

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

Ensure that the electrical installation has wiring sufficient for the Duoetto unit (Please refer to section 11).

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.

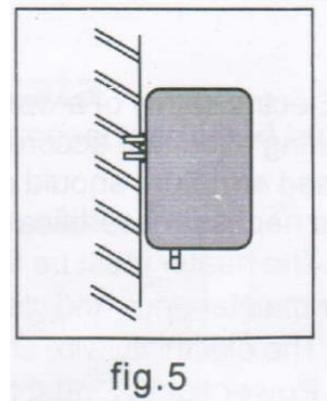
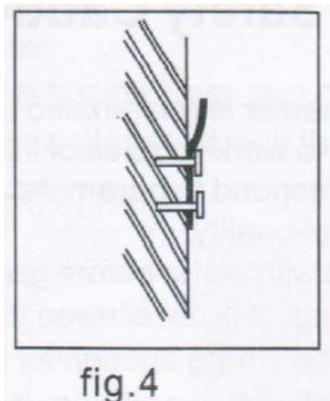
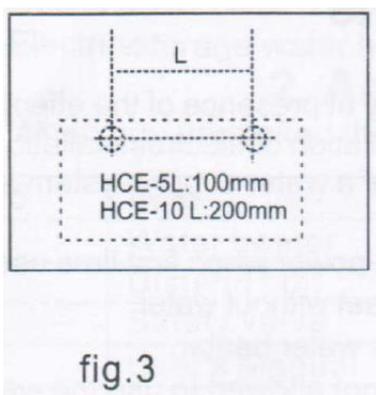
The blowdown hose on the outlet of the pressure relief valve should be kept downward and open to the air. If the blowdown hose is raised above the level of the pressure relief valve, water may leak from the pressure relief valve. Water release from the hose is normal due to pressure within the tank, do not block this hose or remove the small screw.

6. 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

- Drill 2 holes on a firm wall. Distance between the two holes is 200mm for the HCE-10 Duoetto and 100mm for the HCE-5 Aqueous. (Shown in Fig 3)
- Screw the hooks on until they are tight, keep the hooks upward. (Shown in Fig 4)
- Hang the heater on the hooks. (Shown in Fig 5)
- Having a strap supporting the heater is also required.



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

Fitting a strap around the water heater is required to add strength to the mounting.

Warning: The wall must be strong enough to support the Duoetto's weight filled with water (Approx. 15kg).

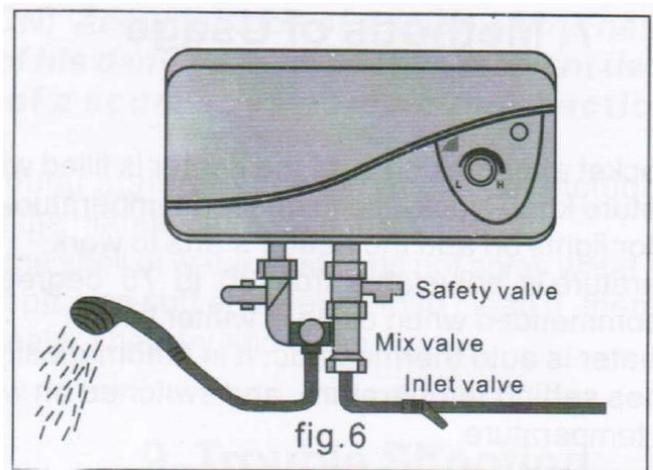
Pipe Connection

- Screw the pressure relief safety valve onto the cold water inlet, with the arrow on the valve pointing upward toward the water heater. Do not remove the small screw on the pressure relief valve.
- Connect the inlet to the water supply. (Fig 6)

During operation you may observe a small leak of water from the drainage hose connected to the pressure relief valve, this is normal due to the expansion of water while heating.

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 0.6Mpa or 85PSI a pressure reducing valve must be used.**



Use of the Duoetto

- 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 Duoetto Water Heater make sure the water heater is filled with water.

240V Installation

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

12V Installation

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

1. Connect the red 5mm 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, refer to section 11 for appropriate sizing.
2. Connect the black 5mm large ground wire to an earth point or a negative battery terminal, depending on the length of your wiring you may need to step up the cabling, refer to section 11 for appropriate sizing.
3. **(Duoetto Only)** Connect the small black ground wire to an earth point and the small red wire to a switched power source; this is crucial for 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 HCE-10/12V Type Only).

7. Methods of Usage

Heat Up

- Plug in the Duoetto 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.
- The Duoetto Water Heater is auto thermostatic. It automatically cycles on and off when it reaches the set temperature.

On/Off Switch: Controls 240VAC heating. When it switches on, the 12V heating will not work. The Duoetto will be heating on 240VAC power. The red light will not turn off even when the heater stops heating.

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

Thermostat: The thermostat controls both 12V and 240V heating, it controls the DC LED but not the AC light.

Over Temperature Protection

This protects the Duoetto Water Heater from overheating. It disconnects a heating element from the network at temperatures in excess of 85°C. Safety systems cannot automatically reset. Refer to troubleshooting (section 8) for resetting.

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 blown down from the pressure relief outlet.

8. Troubleshooting

Problem	Possible Cause	Possible Resolution
The pressure of the hot water from the Duoetto has decreased. The cold water pressure remains the same however.	Contamination of the inlet aperture or the safety valve.	Try removing the valve and washing it out in clean, pure water.
Time to heat the water has increased.	The heating element may be covered in scale.	Clean the heating element.
	The electric system may have developed a fault.	Service the electrical system.
The over-temperature protector is triggered during operation. Indicated by the device not powering on.	The temperature is close to its limit.	To reset the device after the over temperature protection has been activated, disconnect the unit from all power sources and open the inspection plate on the side of the unit. The reset button is the white nub in the centre of the picture below. 
	The tube of the thermostat has become covered with scum.	Clear the tube of scum.
Water is not flowing correctly from the heater. (Only applicable if using a pump).	There may be an air pocket in the heater.	Clear the air pocket from the heater via turning the heater upside down and filling it with water so that the pocket cannot form. This is only applicable if using a pump as the pump may not have sufficient pressure to overcome the air pocket.

Warnings:

Water Heaters using 240VAC must use a reliable grounding socket.

If you find any earth failure or abnormality, stop using the water heater immediately, unplug the heater and contact your supplier for service.

9. Guarantee Certificates

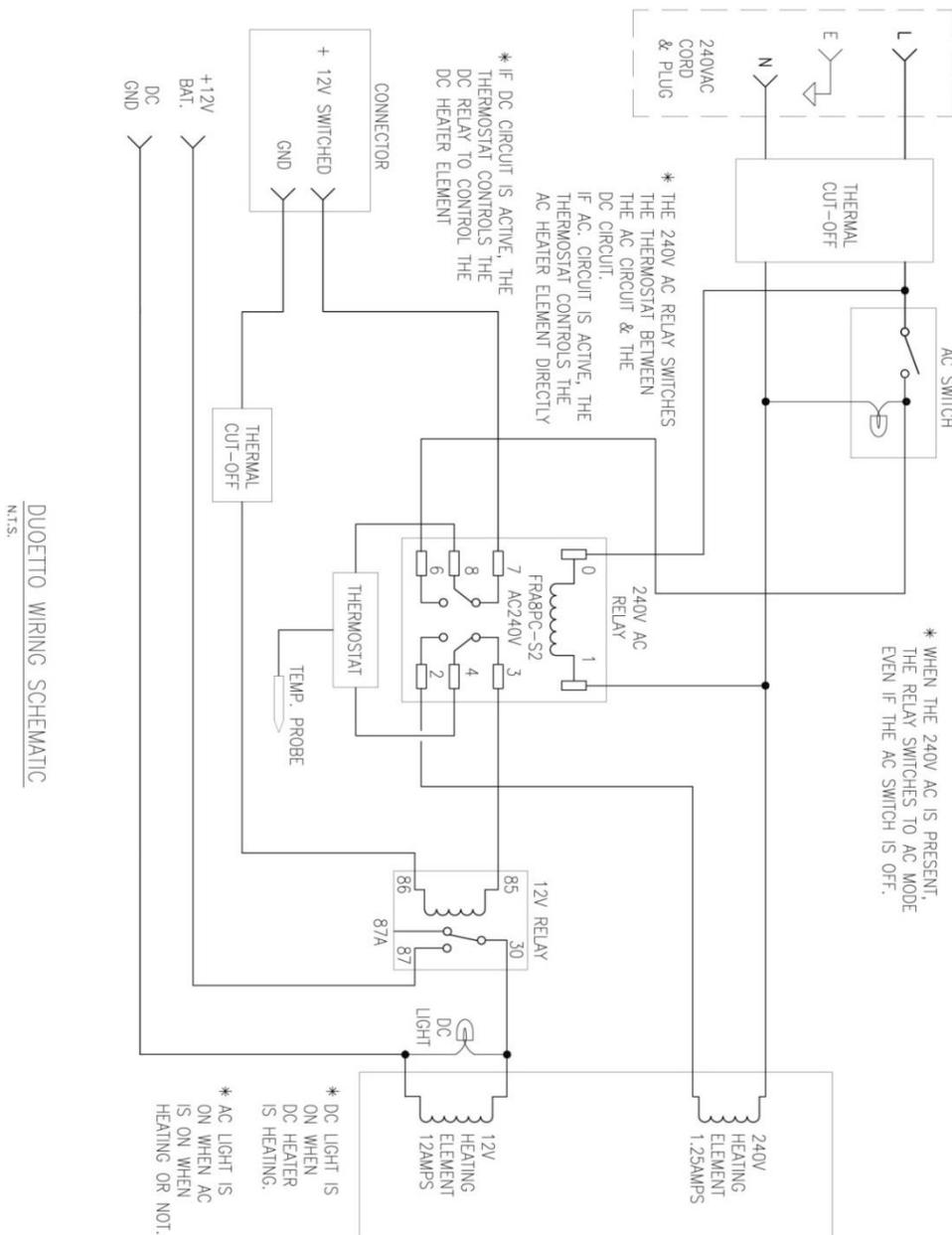
The guarantee on this water heater is 12 months' supply of parts within Australia (from the date of sale).

Supply of spare parts is carried out free of charge within the warranty period.

Note: Infringement of the instruction manual procedures cancels the warranty period and any complaints will not be accepted.

10. CIRCUIT DIAGRAM

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



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.....