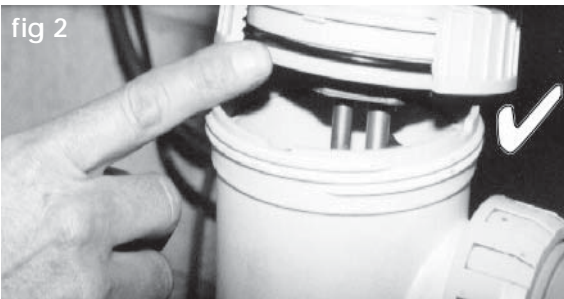
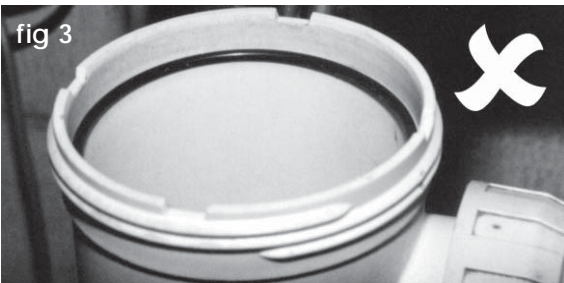


PRESSURE SWITCH
ADJUSTMENT

Turn screw clockwise if pressure holds heating element on. Turn anticlockwise if pressure insufficient to operate heater. The above adjustments can only be done if the pool is below the thermostat setting.



The 'O' ring must be fitted to the control head against the retaining edge before fitting to heater body. Do not rely on locking ring to pull head and body together. Use downward pressure while tightening locking ring, making sure that locators engage correctly. Hand tighten only.



DO NOT assemble heater with 'O' ring as shown. This will dislodge when head and body are engaged causing water damage to the electrics. However, lightly lubricating the inside of this lip is permissible and will help assembly.

SPA-QUIP

SPA POOL WATER HEATER

IMPORTANT

**PLEASE READ INSTRUCTIONS
BEFORE INSTALLING**

SPA-QUIP LTD, PO BOX 302-114, NORTH HARBOUR POST CENTRE
AUCKLAND NEW ZEALAND Ph. 415-8622 Fax 415-8621

INSTALLATIONS INSTRUCTIONS — PLEASE READ CAREFULLY

GENERAL

The spa heater is the first of a new generation of heaters that have been totally redesigned to incorporate all the latest concepts in safe water heating. The heater is reliable, easy to install, simple to operate and easy to maintain. It includes all its own control and safety devices. It is designed to look after itself.

All the control system of the spa pack has to do is turn on the pump. The heater detects the water pressure change and operates accordingly.

INSTALLATION

Before planning any installation please note the following:

1. The heater power supply is not controlled by the spa control box.
2. Heaters up to 2.4kW are normally used for portable spa pools and thus the heater is provided with a 3 pin socket to permit the connection of a suitable control box directly to the heater without additional wiring.
3. It is strongly recommended that the supply of all spa installations be protected by an *EARTH LEAKAGE CIRCUIT BREAKER* [ELCB] [RCD] preferably fitted at the switchboard.
4. All installations must comply with AS3000 and the special requirements of section 6 and any additional requirements of your local supply authority bylaws.

PHYSICAL LOCATION

The heater should be located in the spa system as follows:

1. On the pressure side of the pump.
2. Before the filter in the return line.
3. Where it is accessible for maintenance with enough clear room to remove control head from heater body.
4. In a vertical position, or if horizontal, so that the side port faces down.
5. Level — definitely not plumbed at an angle.
6. Protected from rain, water splashes, hosing etc.
7. In an ambient temperature not exceeding 55°C.

Where the heater is being installed in a position exposed to the weather, splashing and the like, it must be protected by an additional enclosure having a degree of protection to IP24-AS1939.

WIRING

ALL FIXED ELECTRICAL WIRING MUST BE COMPLETED BY A SUITABLY QUALIFIED PERSON.

1. Check the kilowatt rating of the heater. Ensure the correct size cable is being used.
2. The cable entry point is via one of three knockouts provided on the underside of the heater head. Use the correct size grommets and conduits when installing.
3. Check that wiring to terminal blocks is secured firmly and to the correct terminals.

PLUMBING

1. The heater body may be plumbed so the water flow can be in either direction. The head of the heater may be turned to any of the four keyed directions (90°) to give best access to the thermostat control.

2. When installing the heater head the 'O' ring must be carefully located on the element carrier and NOT in the body. When fitting head make sure the 'O' ring doesn't become dislodged and fall into the body. To assist assembly it is recommended that a light lubricant be used on the inside of the body barrel to help the components to slide together easily. REFER FIG.2 & 3.

3. When connecting pipework to heater make sure the 'O' rings are properly seated in the mac union fitting. **NB.** Hand tighten only. Using tools will distort the fittings.
4. Make sure the heater is mounted on its stand or secured firmly so that vibration is minimised.
5. It is recommended that the pipework has shut off valves so the heater head can be removed for service without loss of water or downtime due to reheating.

TESTING

1. Double check that all plumbing is connected correctly and that the supply is available for heater and control box.
2. Before switch on check that gate valves (if fitted) are open and the thermostat is turned fully anti clockwise.
3. The heater lid should be off for setting up pressure switch adjustment.
4. Apply a voltmeter, neon indicator or such test device at element terminal or control relay. If preferred, a current meter could be used.
5. Apply power. There should be no indication that the element is alive.
6. Start pump and check for water leaks, paying particular attention to the join between heating head and body.
7. After checking the system is free of plumbing problems, allowing sufficient time for all air to be purged, advance the thermostat setting to full on.
8. The test device should now indicate heating. Turning the thermostat control through its full range should switch test indicators on and off.
9. Leave the thermostat setting at the fully clockwise position so the test indicator is active and stop the pump. The indicator should switch off almost immediately. If it fails to switch off restart pump quickly and adjust the screw on the pressure switch clockwise until heating stops. Adjust back until heating restarts and then one further full turn. **Stop/start pump several times until you are happy that the heating is switching on and off consistent with the pump running.** REFER FIG 1.

N.B. If the heater is fitted to a portable pool or the equipment is mounted at about the same level as the pool water the pressure switch will probably not require adjustment. CHECK IT ANYWAY.
It the equipment is mounted below the level of the pool water the static water pressure could be enough to hold the heating on after the pump stops. It is important for safety that this condition does not occur. FAILURE TO SET THE PRESSURE SWITCH CORRECTLY WILL VOID THE WARRANTY.