

## 6.5 Installation of Water Pipes

The Eco Cube has two threaded 25mm (G1) BSP-P water connection ports on the rear of the unit. For convenience 2 x 32mm/38mm hose connector fittings (SKU: CHP-OT3832) and 2 x 21-38mm stainless steel hose clamps (SKU: CHP-HC2138) are provided for fast, simple connection of flexible water pipes without the need to use pipe glue\*.

When connecting the Eco Cube to a new spa pool, your spa manufacturer should have already provisioned 2 x 32mm or 38mm water ports underneath the spa cabinet. Where the Eco Cube is being retrofitted to an existing spa pool or being installed on a spa which is not plumbed 'heat pump ready' you can utilise our 40mm/32mm reducing bushes (SKU: CHP-RB4032) to convert 40mm pressure pipe down to 32mm flexible pipe. These can be purchased from Spanet separately.



SKU | CHP-OT3832



SKU | CHP-HC2138



SKU | CHP-RB4032



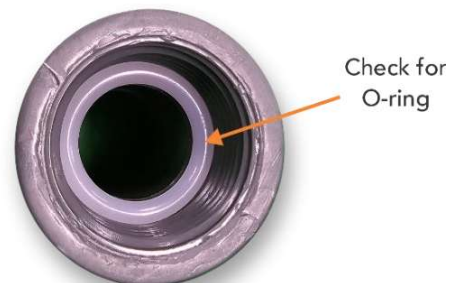
### IMPORTANT

\* **NOTE** - Whilst it is acceptable to fit the water pipes without glue using only the hose clamps, some installers may prefer to use PVC pipe cement as well as the hose clamps for a superior long-term connection. **However, if the Eco Cube is to be installed in an area that experiences sustained sub-zero temperatures during Winter, we do NOT recommend using PVC cement as it will make the Winterization process difficult to drain water from the Eco Cube as required.**

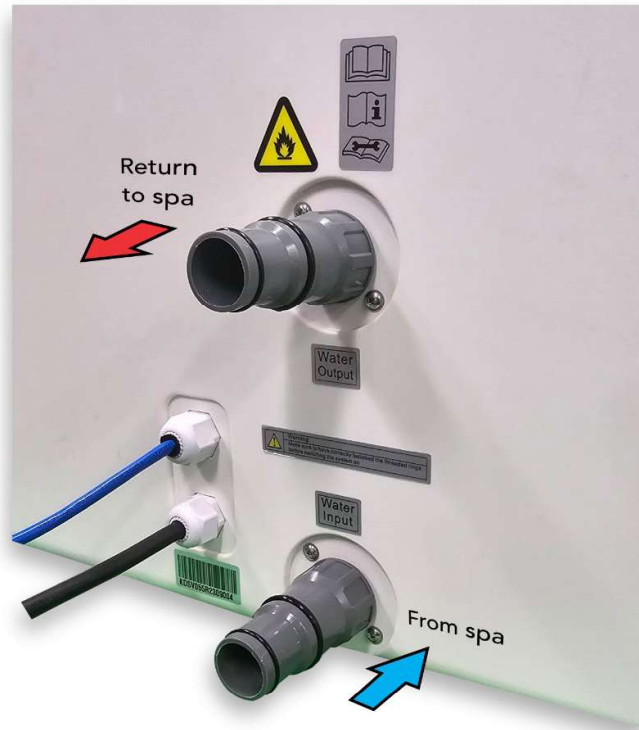
### 6.5.1 Connecting Water Pipes to Eco Cube

Water flow through the heat pump is directional. If the Eco Cube is plumbed incorrectly the heat pump will not operate due to a "Heat Pump Flow Error". Before you begin, ensure you have studied the plumbing diagram within this manual to familiarize yourself with the required water flow direction. Water should flow out from the spa to the bottom inlet port of the heat pump, then return to the spa from the top outlet port of the heat pump.

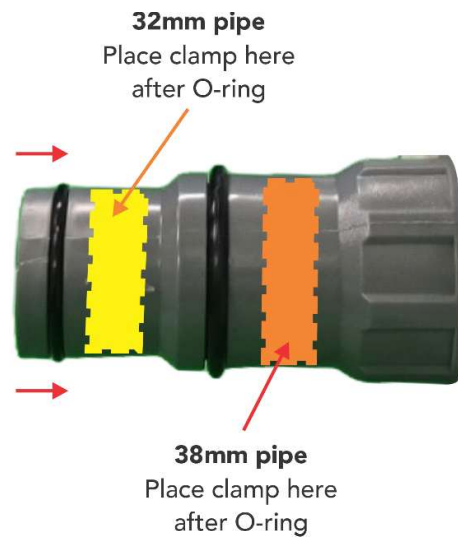
**Step 1:** Check each 32/38mm hose connector has the O-ring seated at the base of the thread.



**Step 2:** Tightly screw hose connectors onto the heat pump inlet and outlet ports as pictured below.



**Step 3:** Use a heat gun to lightly heat the flexible pipe to make the plastic supple then push onto the hose connector taking care to push the pipe well past the O-ring\*. Then seat the hose clamp at the end of the hose (ensure the clamp is positioned after the connector O-ring) and tighten securely.



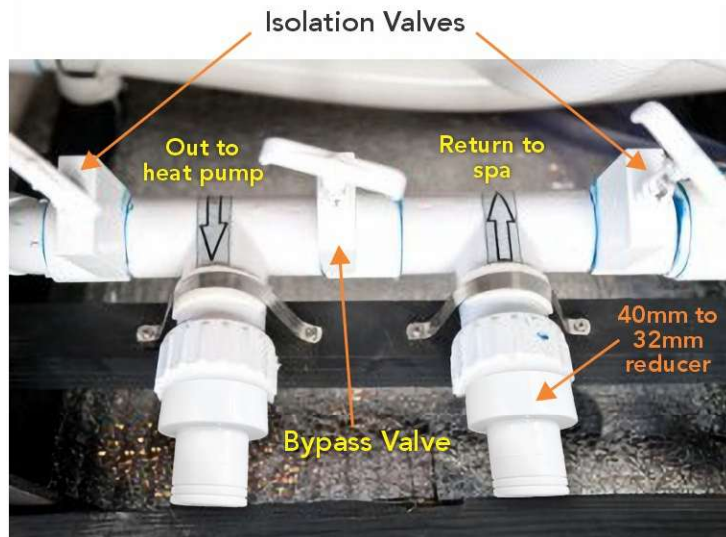
*\*If you wish to use PVC pipe cement add glue after heating but before pushing pipe onto connector.*

**Step 4:** Repeat the process in step 3 for the second pipe.



### 6.5.2 Connecting Water Pipes to Spa Pool

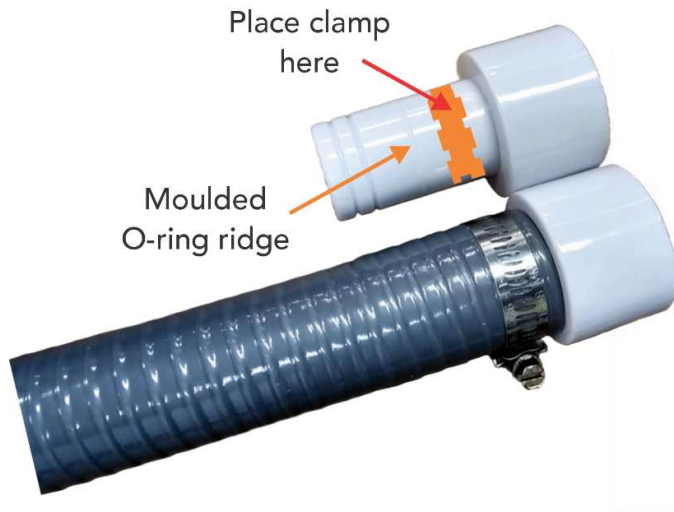
Remove the spa cabinet to access the equipment bay and locate the 'heat pump ready' connection ports provided by your spa manufacturer (example shown in picture below). Study the plumbing to identify flow direction and connect pipes accordingly. Upon completion of pipe connection, the valve positions will need to be checked/adjusted as per comments in the Plumbing Diagram in this manual.



#### **⚠ WARNING**

Connection points will vary among different spa manufacturers. Some may even direct plumb to the heat pump without using a bypass valve. A bypass valve is not required unless a 2-speed filter pump is fitted where it MUST be used to limit water flow through heat pump in high speed.

**Step 1:** Use a heat gun to lightly heat the flexible pipe to make the plastic supple then push onto the reducing bush taking care to push the pipe well past the moulded O-ring ridge\*. Then seat the hose clamp at the end of the hose (ensure clamp is positioned after O-ring ridge) and tighten securely.



*\* If you wish to use PVC pipe cement add glue after heating but before pushing pipe onto connector.*

**Step 2:** Repeat the process in step 1 for the second pipe.



**Step 3:** Adjust the position of the bypass and isolation valves (if fitted) as per the comments in the plumbing diagram contained in this manual.

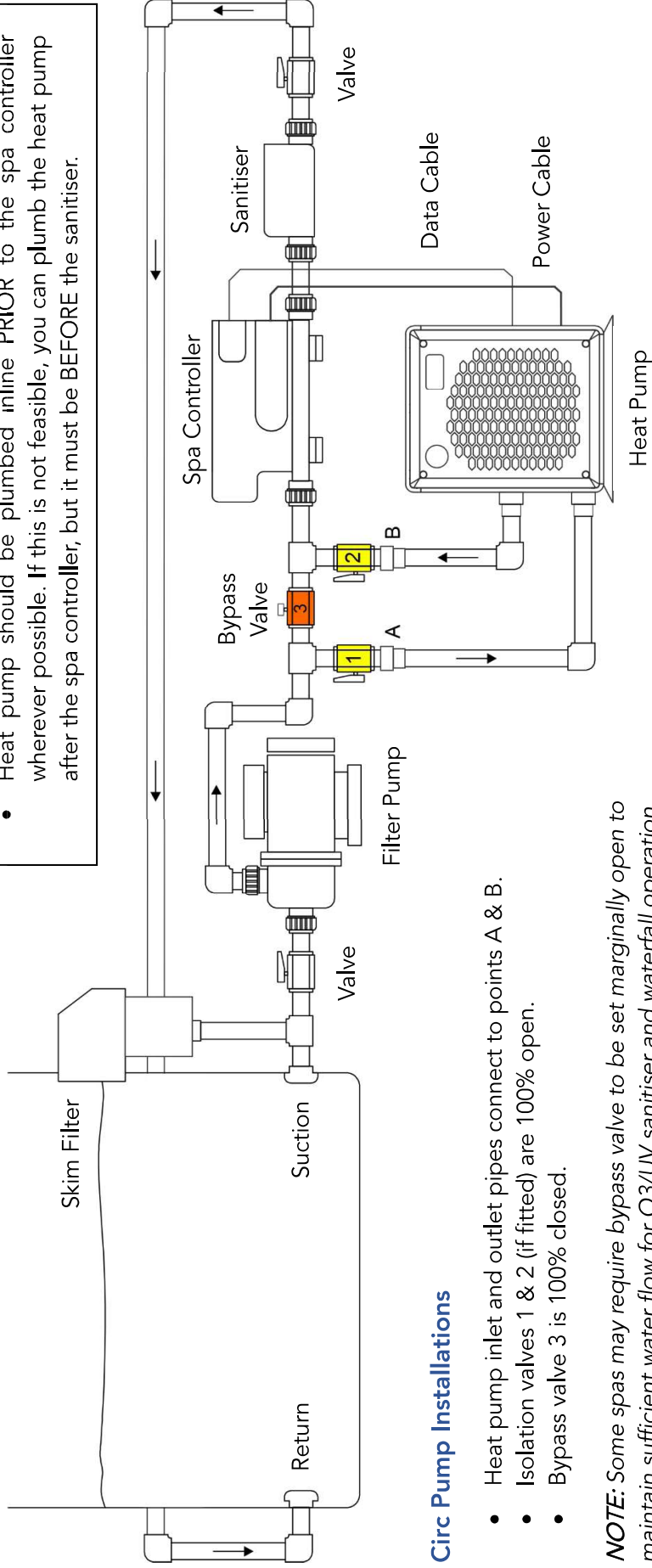
**⚠ WARNING**

Once the pipe work is full of water it will become heavy and will place strain on the heat pump outlets if the pipe work is not supported. **DO NOT have long runs of pipe in mid-air above the ground without support.** If the pipe work is unsupported the strain could cause stress damage to the outlets and potential leaks. **IT IS THE INSTALLER'S RESPONSIBILITY TO ENSURE THE PIPE WORK IS ADEQUATELY SUPPORTED TO PREVENT MOVEMENT AND STRESS.**

## 6.6 Plumbing Diagram

**⚠ WARNING**

- Heat pump should be plumbed on the DISCHARGE side of filter pump.
- Heat pump should be plumbed inline PRIOR to the spa controller wherever possible. If this is not feasible, you can plumb the heat pump after the spa controller, but it must be BEFORE the sanitiser.



### Circ Pump Installations

- Heat pump inlet and outlet pipes connect to points A & B.
- Isolation valves 1 & 2 (if fitted) are 100% open.
- Bypass valve 3 is 100% closed.

*NOTE: Some spas may require bypass valve to be set marginally open to maintain sufficient water flow for O3/UV sanitiser and waterfall operation.*

### 2-speed Pump Installations

- Heat pump inlet and outlet pipes connect to points A & B.
- Isolation valves 1 & 2 (if fitted) are 100% open.
- Bypass valve 3 is 50% closed / 50% open.

*NOTE: With small HP 2-spd pumps the bypass valve may need to be further closed to maintain sufficient water flow through heat pump in low speed.*