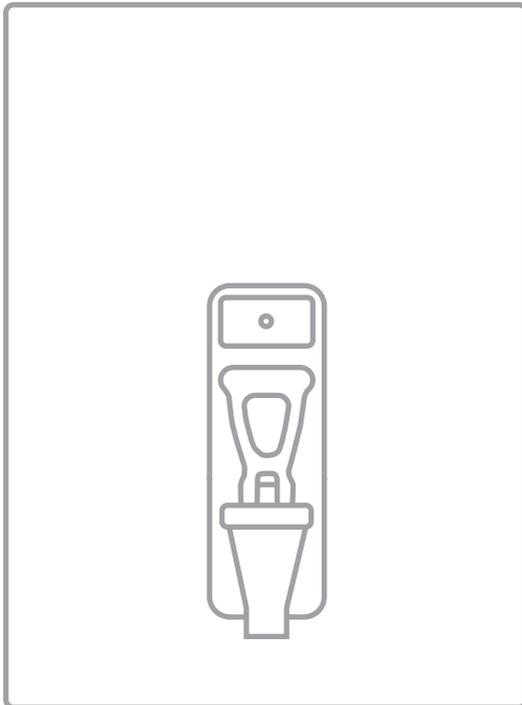




Product Instruction Manual

Microboil



Available in 3-25 Litre models
Automatic Boiling Water Unit

Thank you for purchasing from our Microboil range of wall mounted automatic boiling water units. Available in sizes ranging from 3 to 25 Litres, the Hyco Microboil is a great way to provide the hot drinks that will keep a busy work team happy and productive. The Microboil comes with a white powder coated steel outer casing as standard, stainless steel covers are available on request. Please read and follow these instructions carefully to ensure that installation and operation is simple and safe.

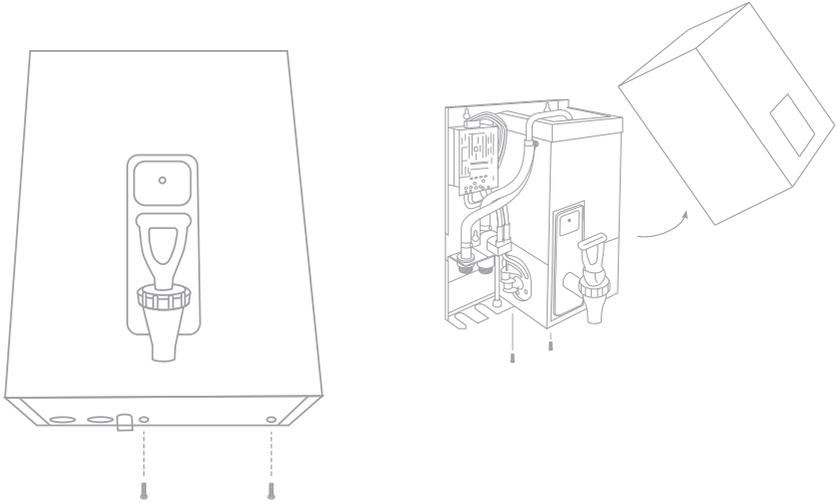
1. Important safety points

- This unit dispenses near-boiling water. Never leave children or the infirm unattended near this appliance as boiling water can cause severe injury.
- This appliance can be used by children aged 12 and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of this appliance in a safe way.
- This product is not suitable for outdoor use or use in damp conditions.
- Parts of this appliance - especially the tap and the vent pipe - can become very hot in use and can also generate steam. Take adequate precautions to avoid injury or damage to property.
- The unit must be vented and will malfunction if steam can not easily escape via the vent pipe. Please follow the installation instructions.
- Any plastic pipework or fittings connected to the vent must be rated to 100 degrees.
- The unit must be installed by a suitably qualified person in accordance with the latest edition of iee wiring regulations and uk water fitting regulations.
- The supply cord cannot be replaced by the user. If the cord is damaged the appliance should be returned to the manufacturer or an authorised service agent for replacement.
- It is recommended that a filter is installed in the pipework to protect against lime-scale build up, reduce service cost and extend product life. Lime scale damage is not covered by the warranty.

2. Installation

Step 1: Remove the Cover

The cover is attached to the back by means of two pins located at the top of the unit and two screws at the base of the unit. Remove the screws first, then lift cover upwards over the tap stem (see right).



Step 2: Wall Mounting (positioning)



Before commencing any drilling always ensure there are no pipes or electrical cables hidden in the intended drilling surface.

Position the unit bearing in mind it will contain scalding water and should not be accessible to children or the infirm. Units are typically mounted above a draining board or drip tray in a kitchen or similar setting. The tap height should be convenient for the operator and such that visual contact is maintained with the liquid level of any vessel being filled.

When selecting the final mounting position of the boiler it is important to consider the surface and wall fixings are suitable for the weight of the boiler when full (see the Technical Specification section for details). In addition a minimum clearance of 40mm above the boiler is required to facilitate easy removal of the boiler jacket during any future maintenance.

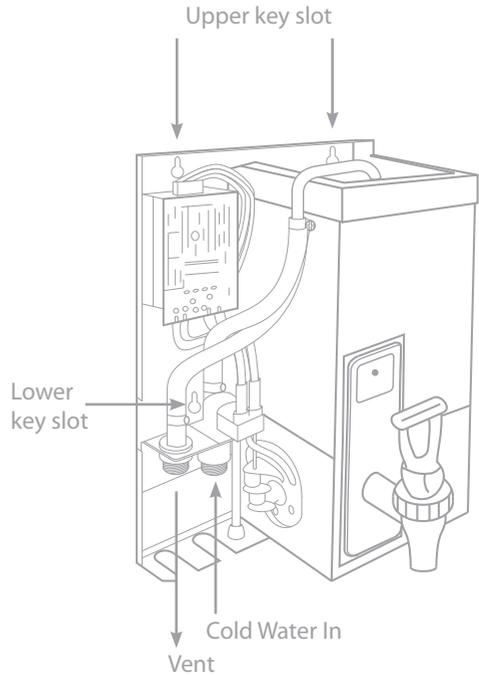
Step 3: Fixing

The unit should be fixed to the wall using the three key hole slots as shown in the picture.

With the aid of a spirit level or similar, mark and drill the two upper wall plug positions. Insert the wall plugs and screws, leaving approx. 4mm of the screw head protruding. Hang the boiler via the two upper key hole slots and then mark the lower wall plug position.

Remove the boiler from the wall and drill and insert the final wall plug and screw, again leaving approx. 4mm of the screw head visible.

Return the boiler to the wall and mount via all three key hole slots, tighten the screws to lock the boiler in place.



Step 4: Plumbing connections

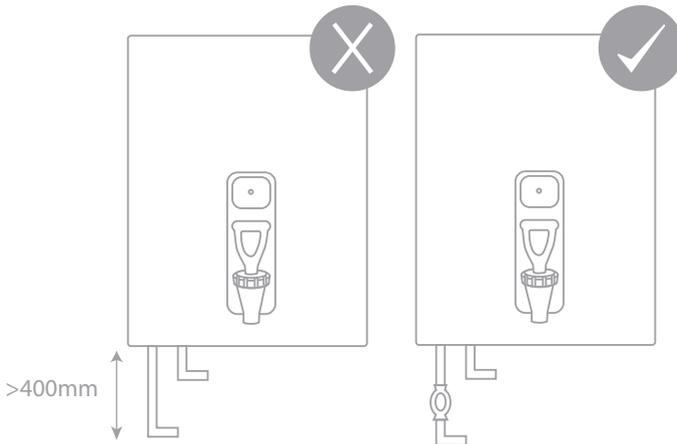
Recommended fittings (not supplied): 2 x 1/2" female to 15mm compression.

Connect the cold water supply to the right side connection (when viewed from the front) as per the diagram. It is recommended a service valve is fitted as close to the inlet as is convenient to aid future maintenance.

For the vent connection (left side connection) it is important that the vent pipe installation adheres to the following specification:

- Falls continuously.
- Has a maximum total length of 400mm.
- Is open to the atmosphere (no blockages).
- All Fittings must be rated for continuous operation at a minimum of 100° C.

It is possible to pipe the vent beyond the 400mm specification but to do so a tundish or other air gap device must be fitted within the 400mm distance to the unit (see example below).



Failure to comply with the requirements for venting the boiler will invalidate the warranty and may cause damage to the boiler or damage to property.

Step 5: Electrical Connection

Electrical connection should be made via a 13A switched fused spur in accordance with the latest edition of the IEE Wiring Regulations.

- Ensure a water supply is present prior to turning on the electrics.
- This appliance **MUST BE EARTHED**.
- Make the connections as:
 - Green/Yellow earth wire to terminal marked or "E"
 - Brown live wire to the terminal marked "L"
 - Blue neutral wire to the terminal marked "N"

Step 6: Commissioning and Operation

- Ensure water supply is on.
- Turn on the power, the Power LED on the front of the boiler will illuminate to indicate power is present.
- The unit will now commission by first filling the tank to maximum capacity and then bringing the water to temperature.
- The unit will now switch to normal operation which will prioritise boiling over filling, so you will only ever receive near boiling water.
- Powering off and then on the unit via the switched fused spur will initiate commissioning mode again.

4. User operation

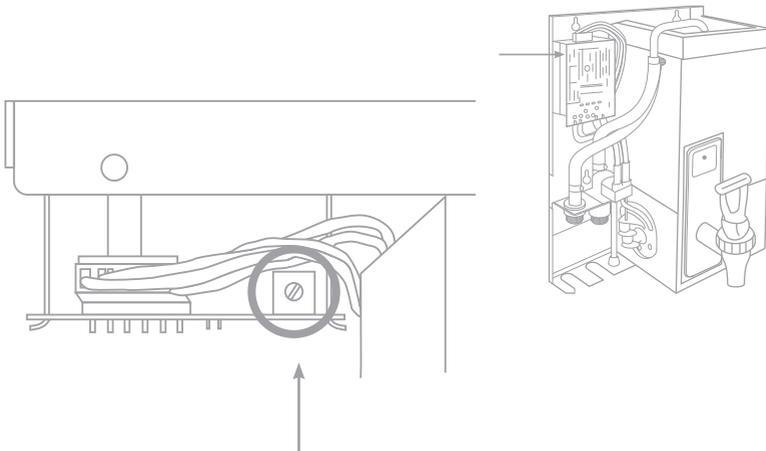
The unit can be left on permanently or controlled by any timer capable of switching 13A.

- Always switch the electrical power off if the water supply needs to be disconnected for more than a few minutes. Failure to do this can damage the solenoid valve.

The tap can be set to self-return or remain open (for filling larger vessels), to adjust between the two modes rotate the tap handle 180°.

Once the boiler has reached its target temperature it will not be possible to dispense water that is below this temperature, even when recovering from heavy usage. If the water ceases to flow it is likely the useful water has been exhausted and the boiler will require time to recover all or part of its capacity before dispensing further water.

All boilers are factory set to near boiling (96 - 98° C) but it may be necessary to adjust this temperature due to factors such as atmospheric pressure. If adjustment is required this can be achieved by turning the potentiometer (located on the top of the PCB controller), clockwise to increase and counter clockwise to decrease (see diagram below). Keep in mind that the nearer the set point is to boiling the greater the volume of steam the boiler will produce.



5. Care and service policy



Before attempting any maintenance on this product ensure it is isolated from the electrical supply and the water contained within has cooled.

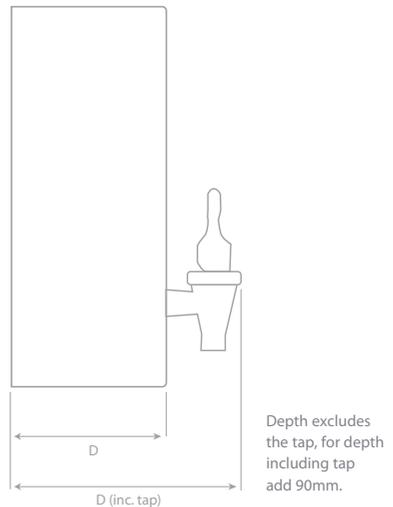
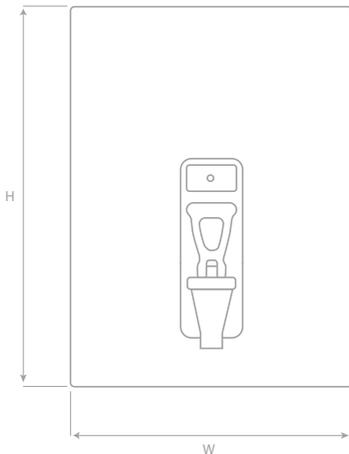
- Clean with a damp cloth only - do not use abrasives.
- The unit is fitted with a resettable thermal cut-out located on the element, a reset should only be attempted when the power is off and by a competent person. If you get repeated cut-outs this indicates a problem and you should consult the manufacturer for advice.
- In the event of a dripping tap, drain all water from the tank and unscrew the tap handle, ensure the silicone seal contained within is free from scale or other debris and then reseal.
- Periodically (at least every 6 months) remove internal lime-scale build up using a standard domestic kettle de-scaling compound. Access to the tank is via the lid at the top of the unit. You may wish to remove the unit from the wall to aid access to the unit for de-scaling. We recommend that this is done by a competent person.

6. Technical specification

Model	MBS3	MBS6	MBS8	MBS16	MBS25
Power	2.4 kW				
Initial draw off (Cups)	20	38	50	100	156
Recovery rate (Cups/hr)	150	150	150	150	150
Voltage	230V ~				
Frequency	50 Hz				
Min working pressure	0.2 bar				
Max working pressure	10 bar				
Protection	IPX1	IPX1	IPX1	IPX1	IPX1
Dimensions (HxWxD)	370 x 269 x 153 mm	420 x 312 x 171 mm	510 x 312 x 171 mm	545 x 364 x 218 mm	550 x 414 x 264 mm
Weight (Full)	8.6 KG	14.8 KG	17.2 KG	28.8 KG	37.8 KG

*Based on 167ml cup.

*For stainless steel models add the suffix 'SS' to the product code e.g. MBS3SS.



7. Troubleshooting

Symptom	Possible Cause	Solution
Unit fills but takes a long time to heat up from first installation, or does not heat at all.	<p>This could be normal - it can take up to 15 minutes to boil from cold.</p> <p>Thermal cut out tripped.</p> <p>Element has failed.</p> <p>Electronic controller fault.</p>	<p>Allow sufficient time - water should get progressively warmer.</p> <p>Reset thermal cut-out by pressing button located on element.</p> <p>Verify 230V mains power present at element and that element resistance is approximately 20 Ohms. Replace if faulty.</p> <p>Replace.</p>
Unit boils constantly, or produces excess steam at vent.	<p>Temperature setting is too high.</p>	<p>The temperature can be adjusted by turning the potentiometer on the circuit board with a small screwdriver.</p>
Water is too cold.	<p>Temperature setting is too low.</p>	<p>The temperature can be adjusted by turning the potentiometer on the circuit board with a small screwdriver.</p>
Tap drips.	<p>Seal failure.</p>	<p>Empty tank and allow to cool. Unscrew plastic rim of tap, remove and reseal / replace silicone seal.</p>
Constant flow of tepid or cold water from vent pipe.	<p>Solenoid valve seized in the open position. This symptom will persist even with the power off.</p> <p>Water level sensor does not recognize when the tank is full, or the circuit board is faulty. This fault will only occur with the power on.</p>	<p>Replace solenoid valve.</p> <p>Check for limescale on probe, and that electrical connection to circuit board is sound.</p>
Unit does not fill.	<p>Water supply is off (solenoid LED will be on).</p> <p>Power is off (All LEDs will be off).</p> <p>Level sensor fault.</p> <p>Circuit board fault.</p> <p>Solenoid valve faulty.</p>	<p>Switch on water supply.</p> <p>Switch on power.</p> <p>Remove connection from circuit board to level probe. If the unit now fills, ensure there is no short circuit between the level probe and the tank.</p> <p>Replace circuit board.</p> <p>Verify Solenoid LED is on, and that 24V DC is supplied to the valve. If so, replace solenoid.</p>

7. Troubleshooting *continued*

Symptom	Possible Cause	Solution
Water splutters under pressure from tap, or water flow is erratic.	Vent pipe is restricted, causing a partial vacuum or positive pressure in the tank.	Temporarily disconnect vent. If unit now works correctly, fix the vent pipe so there are no restrictions. If necessary, fit a tundish (air break device).

8. Guarantee and service policy

This product is guaranteed against faulty materials and manufacture for a period of one year from the date of purchase. Hyco will in its sole discretion replace, repair or refund any faulty unit. Incorrect installation and failure to follow correct operating instructions are excluded. Consequential costs such as labour charges or damage to surroundings are expressly excluded.



INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT IN ACCORDANCE WITH THE EUROPEAN DIRECTIVE 2002/96/E.

At the end of its working life this equipment must not be disposed of as household waste. It must be taken to a local authority waste collection centre or to a dealer providing this service. Disposing of electrical and electronic equipment separately enables its components to be recovered and recycled to obtain significant savings in energy and resources. In order to underline the duty to dispose of this equipment separately, the product is marked with a crossed out dustbin.

Hycos Manufacturing Ltd
Normandy Court
Express Way
Castleford, WF10 5NR

T 01924 225 200
F 01924 225 210
E sales@hycos.co.uk

hycos.co.uk