Troubleshooting:

The Ready/Status light signals various errors or problems. A cycle of red flashes indicates an error. The number of flashes in a cycle corresponds to the symptom in the table below:

Status/Diagnostic light guide:

No of flashes	Symptom	Action required
2	Water level below elements. Normal when machine first fills.	Check water pressure , if this is OK then call service agent.
3	Temperature sensor failure (o/c)	Call service agent
4	Water not heating	Call service agent
5	Temperature sensor failure (s/c)	Call service agent
6	Machine not filling	Check water pressure, if OK then call service agent.

Cleaning:
The exterior of these machines may be cleaned with a damp cloth and a light detergent. Do not use abrasive cloths or creams, as this will spoil the finish of the machine. Do not use a water jet or spray. Beware of accidentally operating the draw off tap when cleaning the front of the machine.

Limescale:
In common with all water boiler manufacturers, service calls resulting from limescale are not covered by warranty. Fitting a scale reducer is recommended, especially in hard water areas. This can reduce the build-up of scale but may not stop it altogether. The frequency that descaling is required depends on the local water supply; hard water areas need more attention. Machines typically need descaling every 3-6 months. Descaling of the machine requires removal of panels and must only be carried out by qualified service personnel who must read the full warnings contained in this manual, and must contact the manufacturer for detailed descaling instructions. Aggressive descaling agents can damage the stainless steel tank. Citric acid based descaling agents are recommended, the tank must be fully flushed through at least twice to remove all residues.

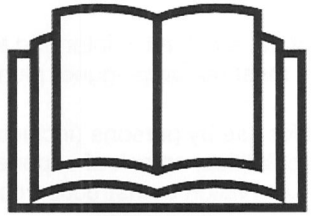
Date of Manufacture:
The first four numbers of the serial number indicate the month and year of manufacture MMYY. The last numbers are an identification number unique to that machine in that month. e.g. 07125555 -this machine was made in July 2012 with an identification number of 5555.

Manufactured by: Marco Beverage Systems Ltd. Contact: www.marco.ie

Operator's Manual for Model

AT10

Part/Model Number: 1000760, 1000760#
(where # is a suffix of one or more letters)



Read this operator's manual fully before installation and use.

Save this manual for future reference

Voltage	Current	Power	IP Code
230V ac 50-60Hz	12.2A	2.8kW	IP21
240V ac 50-60Hz	12.7A	3kW	IP21

Permissible mains inlet water pressure:
Minimum 20kPa / 0.02MPa / 0.2bar / 2.9psi
Maximum 1000kPa / 1MPa / 10bar / 145psi
The inlet water must be potable and free of contaminants.
Inlet water should be 5-30°C, pH 6.5-8.5, maximum chlorine content of 100 mg per litre, total hardness of 60-180ppm. Do not connect the machine to pure reverse osmosis water or other aggressive types of water.
Ensure that the equipment is installed according to local plumbing & water regulations.

Covers shall only be removed by authorised personnel only. The appliance must be fully disconnected from mains (the switch on the front panel is a standby switch and does not switch mains voltage)

Warning. Live electrical voltages are present behind the cover(s) marked with this symbol.

Warnings:

- Installation should only be carried out by a competent service engineer.
- This appliance must be placed/installed on a horizontal flat stable surface.
- This appliance is not suitable for outdoor use.
- The ambient temperatures this unit should operate within are 5ºC - 35ºC.
- This appliance should not be installed in a tightly enclosed area (such as a cupboard). Air should be able to freely circulate around it.
- This appliance dispenses hot water at near boiling point and is a potential scald/burn hazard.
- Beware of accidentally operating the water draw off tap especially when cleaning the front of the boiler.
- Steam & hot water may discharge from the vent outlet at the bottom from of the machine.
- The vent outlet at the bottom of the machine is intended to drain condensate into the supplied driptray. This vent must not be plugged, plumbed or obstructed in any way.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- This appliance may be placed in self-service areas if attended to by trained personnel.
- The electrical power supply must be connected in accordance with the applicable regulations of the country of installation.
- The appliance must be fully disconnected from mains power before removing any panels or during general servicing; the button on the front is standby only and does not switch mains power on/off. (i.e. you must unplug fully at the power socket).
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Check your National water supply authorities for any specific requirements.
- Check your National health/kitchen authorities for any specific requirements.
- The new water inlet hose-set (if) supplied with the appliance is to be used.
- Any old water inlet hose-set(s) should not be reused.
- Risk of flooding. A hose is not a permanent connection. It is, therefore, advisable to switch off boiler and close the stopcock valve when boiler is not in use, e.g. overnight, weekends etc.
- The utmost care has been taken in the manufacture and testing of this appliance. Failure to install, maintain and/or operate this boiler according to the manufacturer's instructions may result in conditions that can cause injury or damage to property. If in any doubt about the serviceability of the boiler always contact the manufacturer or your own supplier for advice.
- The default temperature set point of this machine is approx 96°C using this machine at high altitudes could result in boiling and excess steam, with little water being able to be dispensed. Contact the manufacturer in this case.
- Before any attempt is made to move or service the boiler ensure it is unplugged, and drained via the tap and allowed to full cool fully.

Installation details:

- A suitable 230-240V.power socket outlet is required in accordance with the local regulations. Be sure other high power appliances are not on the same circuit which could cause tripping.

Installation procedure:

- Fit a stop valve and suitable fitting on a cold water line (e.g. 3/4" x 1/2" 311 or washing machine type stop valve).
- The boiler requires a suitable foodgrade inlet hose with 3/4" BSP female elbow fitting which will attach to the underside of the boiler.
- Make sure that the pre-attached sealing washer is fitted on both ends.
- Turn on the water to flush any impurities, dust etc from the inlet hose and water pipe. Allow several gallons through.
- Connect right-angled tailpiece of the hose to the inlet valve of the boiler (again 3/4" BSP). Make sure the sealing washer is fitted here again.
- Turn on water and check for leaks.

NOTE: Using a non-foodgrade hose (e.g. a washing machine hose) will usually result in off-tastes & smells in the water, and can possibly be toxic.

Operating boiler for the first time:

- Check that all installation procedures have been carried out, and all warnings have been noted and understood.
- Ensure water valve is on.
- Connect to appropriate power supply (as per installation details above) and turn power on at switch in the front of the machine.
- The orange "power on" light (on the left, looking at the machine) will glow and the machine will fill to a safe level, above the elements, before heating. The red "Ready/Status" light on the right will cycle two flashes while the machine is filling to the safe level.
- After this amount of water has heated to about 96ºC the boiler will draw more water in until the temperature drops by 1 or 2 degrees. The boiler will then heat again. This heat fill cycle continues until the boiler is full (approx. 25 mins). The green "Ready/Status" light illuminates when the machine is both full and up to normal operating temperature.
- The boiler is now ready for use.
- When full and connected to a mains supply of water the boiler can output approx 10L in approx 2.5minutes. It will recover water at a rate of approx 450ml/minute. When water is drawn off the heat/fill cycle re-continues so no cold water can be dispensed.

NOTE: Because the boiler is electronically controlled no priming is necessary. The element cannot switch on until a safe level of water is reached.