

SANTON

February 2019

Aqualine

Unvented Electric
Water Heating

Unvented Water Heaters



Aqualine Unvented Water Heaters

Commercial Unvented Water Heaters – with TMV2 Thermostatic Blending Valve

Aqualine is the ultimate in electric unvented water heating. All operational and safety controls are contained within the case. This includes a TMV2 thermostatic blending valve which allows the unit to store water at a high temperature and dispense at handwash temperature. Water stored above 60°C not only gives more useable blended water output, it also considerably reduces the possibility of harbouring bacteria, making Aqualine the ideal product where 'safe' hot water is required – for example schools, nursing homes and nurseries.



The range features 7, 10 and 15 litre models, with the latter available in 3kW and 4.5kW loadings. This enables the specifier and installer to cover applications from light duty commercial handwashing to multi-outlet installations.

Each unit contains a factory-fitted pressure and temperature relief valve, TMV2 thermostatic blending valve, a control thermostat and a resettable over temperature cut-out for additional safety.

Commercial Unvented Selection Guide

Capacity of Water Heater	Number of Basins
7 litres	1-2
10 litres	2-3
15 litres	3-4

Note: These figures are for guidance only and local conditions should be taken into account when sizing the installation.



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Installing Commercial Unvented Water Heaters and Kit Selector

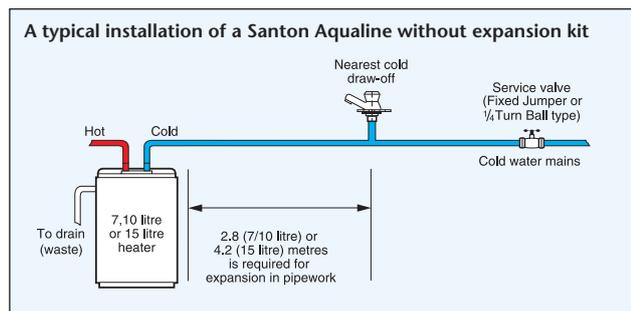
The following information is intended as a guide – if in any doubt, please contact our Specification Advice Hotline on 01603 420128 or fax 01603 420229.

Aqualine Installation (Up to 15 litres in capacity)

When water is heated, it expands and increases in volume by up to 4%. This increase needs to be accommodated within the system.

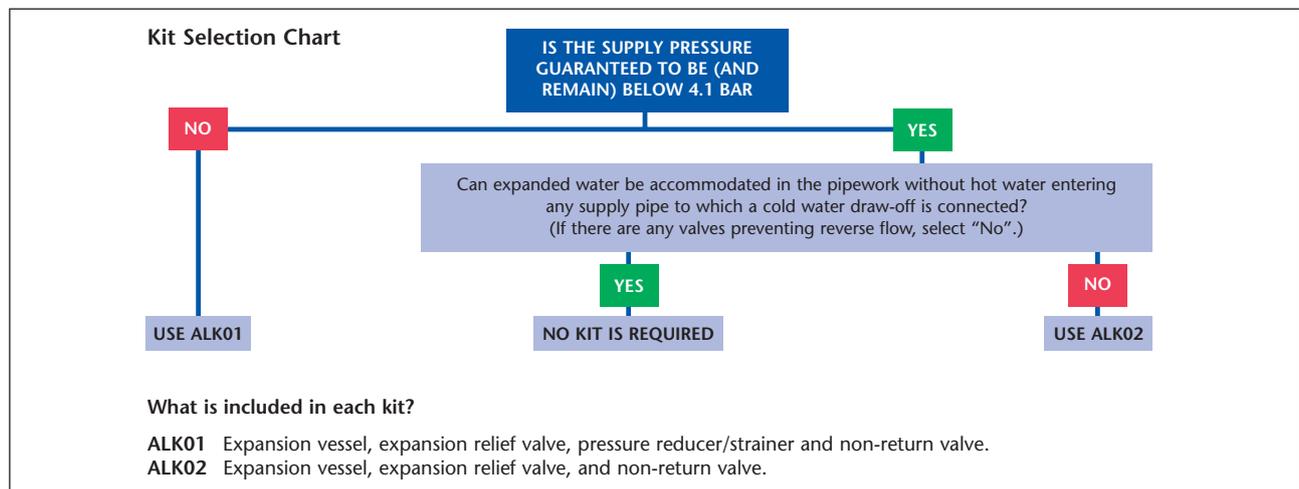
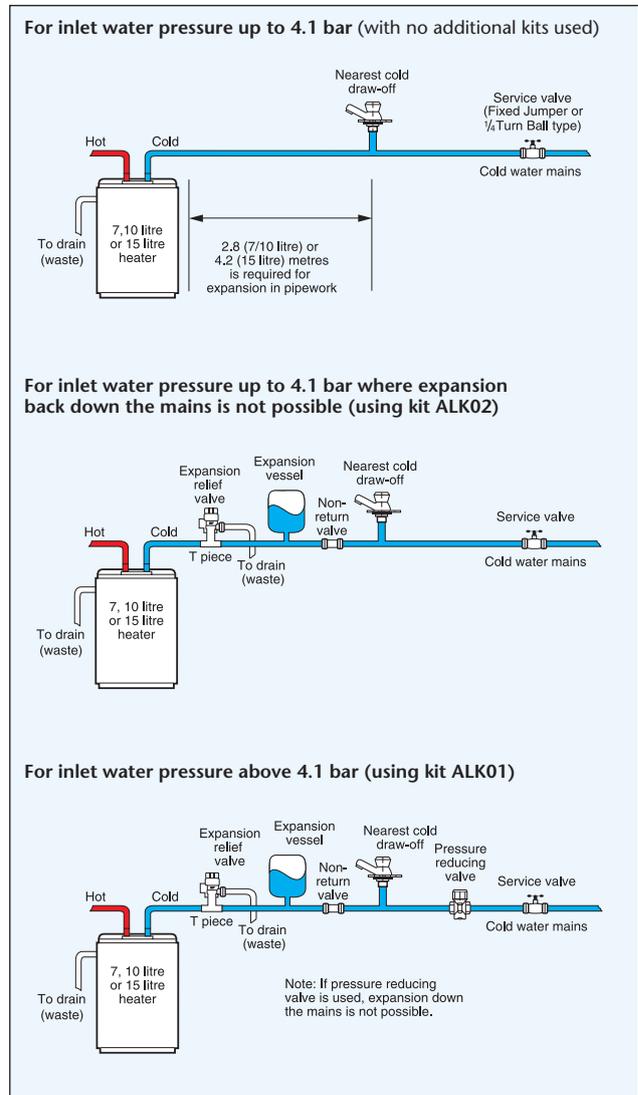
With unvented water heaters below 15 litres in capacity, such expansion may be accommodated within the cold water supply pipe provided all of the following conditions are met:

- The maximum supply pressure is below 4.1 bar.
- The minimum length of the supply pipework from the heater to the nearest cold draw-off is not less than that specified for the heater used.
- The expansion in the cold water main is not prevented or restricted by a stop valve, non-return valve, water meter or similar device.



For installations where any of the above conditions cannot be met, an expansion vessel and other relevant accessories must be used to accommodate expansion.

In all installations where the supply pressure exceeds 4.1 bar, a pressure reducing valve must be fitted along with other necessary valves.



Accessories

A full range of accessories is available for installation with Aqualine unvented water heaters. These are supplied as 'accessory kits' to suit different applications. When installing small unvented water heaters, it is essential that the correct accessory kits are used. A knowledge of the maximum incoming water pressure is an essential requirement; where this is not known, the local water authority should be consulted.



Connections

- Pressure reducing valve ½" BSP female.
- Expansion vessel ½" BSP male.
- Expansion relief valve inlet ½" BSP male, discharge ½" BSP female.
- Non-return valve
15mm x 15mm compression.

ALK01 – Order Code 94 970 008

Expansion vessel, expansion relief valve, pressure reducer/strainer and non-return valve.

For all situations where the mains pressure is greater than 4.1 bar. The pressure reducing valve reduces incoming pressure to 3.5 bar while the strainer filters coarse impurities from the incoming water. The expansion valve acts as a back-up to the expansion vessel, opening at 6 bar. The non-return valve prevents back-flow of hot water which could cause cross-contamination of the inlet water. The pressure reducing valve must be installed on the mains side of the expansion vessel. For balanced hot/cold water supplies, the pack should be fitted on the mains side of the cold water draw off; this is particularly important where mixers are used.



Connections

- Expansion vessel ½" BSP male.
- Expansion relief valve inlet ½" BSP male, discharge ½" BSP female.
- Non-return valve
15mm x 15mm compression.

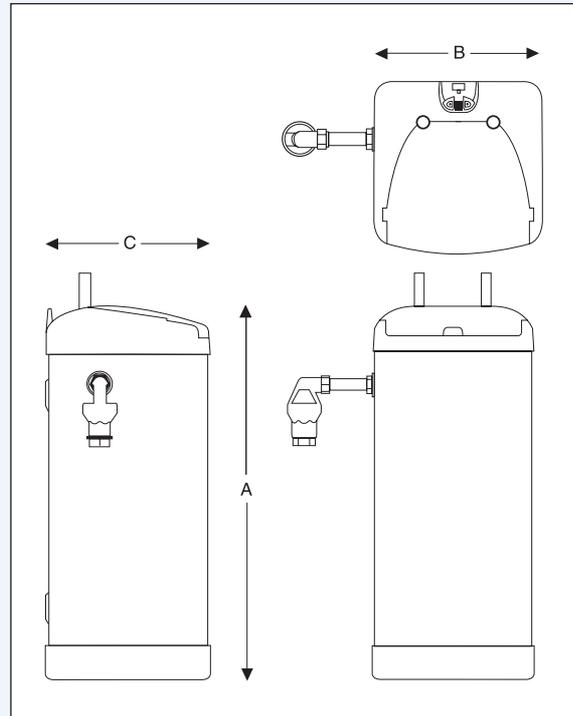
ALK02 – Order Code 94 970 009

Expansion vessel, expansion relief valve, and non-return valve.

For heaters where expanded water cannot be accommodated in the pipework and where the mains pressure is guaranteed never to exceed 4.1 bar. The expansion vessel, when fully charged, will absorb all expanded water produced by the heater. Supplied pre-charged to 4.1 bar. The expansion valve acts as a back-up to the expansion vessel, opening at 6 bar. The non-return valve prevents back-flow of hot water which could cause cross-contamination of the inlet water.

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Technical Specification



Specification

Element

Alloy sheathed element, incorporated into an easily removable heater element plate, should replacement be necessary.

Inner Container

Heavy gauge copper suitable for a maximum working pressure of 6 bar (pressure tested to 15 bar). A minimum supply pressure of 1 bar recommended.

Outer Casing

The main body is substantial gauge sheet steel, anti-corrosion treated, and finished in white stoved enamel. End covers are moulded in grey ABS. The back has three fixing points for wall mounting.

Insulation

Approved CFC/HCFC-free (ODP zero) polyurethane foam. GWP 2.72 (Global Warming Potential).

Safety Feature

IPX4 rated.

TMV2 Thermostatic Blending Valve

Precise control of outlet temperature (range 35°C to 60°C) and lockable control knob. Temperature stability $\pm 2^\circ\text{C}$.

Expansion/Pressure Kits

If the inlet water pressure is in excess of 4.1 bar, it is essential that the Santon unvented kit ALK01 is also installed with the heater. This kit comprises expansion vessel, expansion relief valve, non-return valve and pressure reducer/strainer.

In instances where the water pressure is below 4.1 bar, but expansion cannot occur back down the mains, kit ALK02 must be used (comprises expansion vessel, expansion relief valve and non-return valve).

Pressure and Temperature Relief Valve

This is factory-fitted to the unit, accessible beneath the removable access cover and is set at 7 bar / 90°C.

Thermostat

Rod type, adjustable 10°C to 70°C with integral manually-resettable over-temperature cut-out.

Dimensions

Model	A (mm)	B (mm)	C (mm)	Weight (kg)	
				Empty	Full
AL07/3	456	240	240	6.5	13.5
AL10/3	542	240	240	7.5	17.5
AL15/3	517	330	330	11.6	26.6
AL15/4.5	517	330	330	11.6	26.6

Ordering Guide

Model	ErP rating	Product Code	Litres	Rating
AL07/3	B	94 050 012	7	3.0kW @ 240V (2.75kW @ 230V) single phase AC
AL10/3	B	94 050 013	10	3.0kW @ 240V (2.75kW @ 230V) single phase AC
AL15/3	B	94 050 014	15	3.0kW @ 240V (2.75kW @ 230V) single phase AC
AL15/4.5	B	94 050 015	15	4.5kW @ 240V (4.1kW @ 230V) single phase AC

Installation

Plumbing Connections

Inlet and outlet are 15mm copper tails. The factory-fitted temperature and pressure relief valve discharge pipe must be connected to waste (drain) via the tundish supplied. The drain pipe from the tundish must fall continuously and be 22mm diameter copper pipe. It must discharge in a visible and safe place. The pipe must not be reduced in bore or blocked under any circumstances and should be protected from frost.

Electrical

This unit is supplied with 1 metre of 3-core cable fitted. The installation must comply with BS 7671 'Requirements for electrical installations' (IEE Wiring Regulations). It must be fully earthed and permanently connected to the electrical supply through a double pole linked isolating switch with minimum breaking capacity suitable for the loading.

Approvals

3kw models – Kiwa and Nemko approved. CE marked.

4.5kW models – Kiwa approved. CE marked.

Manufactured in the UK in a BS EN ISO 9001:2008, ISO 14001:2004, BS OHSAS 18001:2007 and ISO 50001:2011 registered factory.

Warranty

Two years product warranty, from date of purchase, with on-site service support. Full details are contained in the Installation Instructions supplied with each unit.



Products

Unvented Water Heating Aquaheat | Aqualine

Vented Water Heating Aquarius | Taps

Drinking Water Speediboil

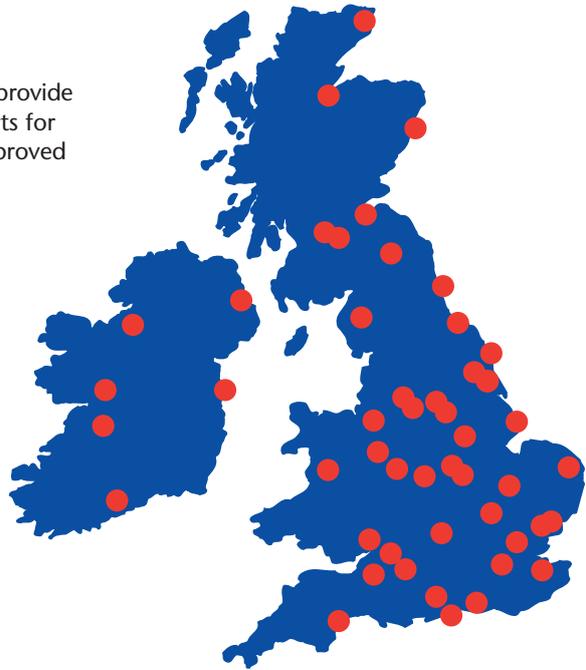
Hand Hygiene EV 2008

Instantaneous Water Heating PowerPack

Immersions Industrial

National Service Network

A nationwide network of experienced engineers is available to provide fast and efficient on-site service support if required. Spare parts for Santon products are readily available through a network of approved spares stockists.



SANTON

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Specification Advice Hotline

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Website

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Please recycle this product once you have finished with it.