

Water Purification

Water stills, Aquatron[®], A4000, A8000 & A4000D

- Fully automatic operation
- High purity pyrogen free output
- Low temperature distillate
- Operates from any raw water supply
- Reservoir level control
- Simple conversion to pre-treated feed
- Supplied with wall mounting bracket
- Safety features allow unattended operation
- Simple to clean

Three models are available giving outputs of 4 or 8 litres/hour single or 4 litres/hour double distilled water.

The high quality borosilicate glassware coupled with silica sheathed heaters gives pyrogen free distillate of the highest purity from virtually any raw water supply.

The unique condenser design ensures that the droplets of distilled water remain in contact with the cooling coil for the longest possible time ensuring maximum energy transfer. This produces cold distilled water ready for immediate use and pre-heats the boiler feed to increase efficiency.

All glass construction allows rapid descaling using strong mineral acids. A built in "clean" function and integral acid addition funnel make the cleaning operation simple and safe with no need to dismantle any of the glassware. A large bore stopcock with PTFE key is fitted for easy draining of chemicals after cleaning.

A flow sensing device will detect any reduction in the flow of cooling water to below the required level and will turn off the still before it can overheat. Sensing the flow of cooling water rather than its pressure is safer and allows the still to run normally on low pressure supplies down to 3psi (20kPa). As a fail-safe device there is an over-temperature thermostat mounted in the boiling chamber.

The Aquatron is very easy and safe to assemble and maintain. Both the acrylic safety screen and the cabinet lid are removable giving unrivalled access to the glassware components. Screwthreads are incorporated on all water connections so hoses can be fitted and removed easily and safely without risk of breakage.

Every Aquatron[®] water still is supplied with a reservoir level control. The control is a simple and effective system which can be fitted to virtually any type of reservoir vessel. It will turn the still off when the reservoir is full and restart it when the level in the reservoir drops as distilled water is removed for use making it fully automatic.



A4000



Aquatron® models

A4000

Produces 4 litres/hour single distilled water.

Can operate standing on the laboratory bench or be wall mounted. Supplied with easy to fit wall mounting bracket.

A8000

Produces 8 litres/hour single distilled water, ideal for the larger laboratory.

Glassware is enclosed in the same cabinet as the A4000 so can operate standing on the laboratory bench or be wall mounted. Supplied with easy to fit wall mounting bracket.

A4000D

Produces 4 litres/hour double distilled water for higher purity levels.

The first stage distillation is carried out in a glassware set mounted at the front of the cabinet allowing easy access for descaling. The distilled water is fed to a second set of glassware mounted at the rear and distilled a second time. The rear glassware is fitted with a level sensor to ensure the heater is only activated when there is sufficient water in the boiler.

Conductivity and resistivity are affected by the presence of dissolved carbon dioxide. All figures given in this catalogue are based on tests carried out on the still output at 20°C and free from carbon dioxide.

Technical specification

	A4000	A8000	A4000D
Output, l/hr	4, single	8, single	4, double
pH	5.0 – 6.5	5.0 – 6.5	5.0 – 6.5
Conductivity, μScm^{-1}	1.0 – 2.0	1.0 – 2.0	1.0 – 1.5
Resistivity, mOhm-cm	0.5 – 1.0	0.5 – 1.0	0.7 – 1.0
Temperature, °C	25 - 35	25 - 35	25 - 35
Pyrogen content*	Pyrogen free	Pyrogen free	Pyrogen free
Water supply	1 l/min 3-100psi (20-700kPa)	2 l/min 3-100psi (20-700kPa)	2 l/min 3-100psi (20-700kPa)
Electrical supply	220 or 240V, 50-60Hz, single phase	220 or 240V, 50-60Hz, single phase	220 or 240V, 50-60Hz, single phase
Max. power, kW	3	6	6
Dimensions, mm (w x d x h),	550 x 240 x 410	550 x 240 x 410	550 x 410 x 410
IP Rating	21	21	21

* care is required to produce pyrogen free water and the output should be tested before use.

The pH of distilled water

Pure water, whether from a still, deioniser or reverse osmosis system, is an excellent solvent and will quickly dissolve carbon dioxide from the air to form a very dilute solution of carbonic acid. In a water still this solution can form as the steam liquifies in the condenser, resulting in a distillate output with a pH of 5 - 6.5. This is a normal level which has little effect on most laboratory procedures. A slightly acidic pH value does not mean that the water is grossly contaminated as a carbon dioxide level of less than one part per million will cause a pH of 5. If necessary the carbon dioxide may be removed by boiling the water. It is then vital to protect the water from the air otherwise the carbon dioxide will be re-absorbed quickly.

Ordering information

Model	Description
A4000	Aquatron water still, 4 l/hr, single distilled, 240V
A4000/220	Aquatron water still, 4 l/hr, single distilled, 220V
A8000	Aquatron water still, 8 l/hr, single distilled, 240V
A8000/220	Aquatron water still, 8 l/hr, single distilled, 220V
A4000D	Aquatron water still, 4 l/hr, double distilled, 240V
A4000D/220	Aquatron water still, 4 l/hr, double distilled, 220V