Water Treatment Solutions for Coffee Lovers

Making Water Work For You

In the world of speciality coffee, a lot of attention is paid to the type of beans and the way they're roasted. However, there is another ingredient in coffee that's often overlooked - water. Brewed coffee is over 98% water with the remainder being oils and compounds extracted from the ground coffee bean. The quality of that water will make a big difference to how well it absorbs those compounds and will also affect the flavour when the coffee is consumed.

Top of the Shops

Water treatment gives you the opportunity to reduce the hard minerals that negatively affect the flavour of coffee whilst reverse osmosis (R.O.) allows operators to remove the hard minerals entirely. A blending valve fitted to some R.O. systems then allows a variable amount of mineral-containing water to be mixed back in, allowing operators to effectively tailor their water to obtain the optimum amount of coffee absorption and the best and most balanced flavour. The ability to obtain the correct water profile in this way is quite a new development in the coffee market but with unparalleled competition in the high street coffee market and three new coffee shops opening every day in the UK, can you afford not to have the best tasting coffee in town?

Scaling New Heights

Aside from tailored water, filtration also allows operators to tackle one of the biggest causes of machine inefficiency and breakdowns - scale. Hard minerals in your feed water are left behind inside boilers in the form of limescale. This adheres to heating elements forming an insulating layer, which dramatically reduces the efficiency of your equipment making it more expensive to run. According to British Water, just 1.6mm of scale in a heating system causes a 12% loss in heat transfer. This means heating elements have to work harder to heat the same amount of water and can make them more likely to fail. Scale can also break off and damage boilers and internal waterways leading to expensive breakdowns and down time.

Water treatment reduces or removes scale causing minerals improving equipment efficiency, reducing running costs and reducing the chance of equipment breakdowns. Once the costs of downtime, repairs and replacement components are added up, preventing potential issues via filtration starts to look like something of a no-brainer.

Mains Water Woes

As well as issues caused by water hardness, there are several other tricks mains water can play to ruin your coffee. Any particulate, sediment or rust from old water mains can block the small valves and damage seals on modern brewing equipment while excessive chlorine taste and odour is recognisable even to the very least discerning of coffee cognoscenti. To resolve this, even the most basic form of filtration usually incorporates a simple sediment filter and some form of carbon filter to reduce the taste of chlorine, while top end R.O. systems allow unparalleled flexibility and total control of water properties for true coffee lovers.

Reverse Osmosis System Selector

Reverse osmosis systems are an ideal water treatment solution for coffee and espresso machines but selecting the right one for your requirements can be difficult. For this reason we've put together a handy system selector table which outlines the main details of each system we recommend for use with espresso machines.

Please note: The systems below require an incoming water pressure of 2.75 bar. If your water pressure is below 2.75 bar, please call us to find out about our Shurflo water boost system.

Model	Espresso Shots Per Hour*	Blend Valve	Calcite Feeder	Storage Tank	Installation	Dimensions	Page
 Conserv®	100	✓	✓	Built-In Additional Tank Available	Countertop or Under Counter	47.5 cm (h) x 43.1 cm (w) x 26.3 cm (d)	4-5
 MRS-225 Range	230	Model Dependant	Model Dependant	Optional (Recommended)	Wall Mount	96.5 cm (h) x 38.1 cm (w) x 20.3 cm (d) 52.1 cm wide with optional pre-filter	6-7
 MRS-350 Range	355	Model Dependant	Model Dependant	Optional (Recommended)	Wall Mount	96.5 cm (h) x 38.1 cm (w) x 20.3 cm (d) 52.1 cm wide with optional pre-filter	6-7
 MRS-600 HE	735	✓	✓	Built-In Additional Tank Available	Wall Mount	81.3 cm (h) x 58.4 cm (w) x 34.5 cm (d)	8-9

The 4 reverse osmosis systems above are the key systems we recommend for most installs but we understand that at some locations, install space will be at a premium and the systems above will simply be too large to be a viable solution.

Luckily for those installs where there is less space to work with, we offer a number of solutions that are especially suited to coffee. From an ultra compact reverse osmosis system which is small enough to be installed behind a counter plinth panel to high performance under counter cartridge based systems, we have something for everyone.

Model	System Type	Page
Binature	Reverse Osmosis	10
Claris Ultra	Cartridge	11
Claris Prime	Cartridge	11

*Espresso shots per hour based on a typical 100ml shot (50ml shot, 50ml group head purge) and a standard system setup.

Better Water for a Great Taste

SUITABLE FOR UP TO
100
ESPRESSO SHOTS
PER HOUR*

PENTAIR

EVERPURE®

Conserv® 75E

High Efficiency Reverse Osmosis System

The Everpure® Conserv® 75E is a solution that brings the benefits of reverse osmosis (R.O.) water to coffee applications. It combines a carbon filter, scale inhibition, calcite feeder and blending to create the right balance of minerals to prevent both corrosion and scale formation, differentiating it from conventional R.O. systems.

It is a reliable, simple to install and easy to operate solution that requires cartridge changes only once a year.

The system helps users meet equipment manufacturers' water specification requirements, maintaining warranty compliance, reducing premature warranty claims, increasing equipment life, and ensuring customer satisfaction.

SMALL FOOTPRINT

UP TO **50%** RECOVERY RATE

BETTER TASTE

SCALE AND **CORROSION** PROTECTION

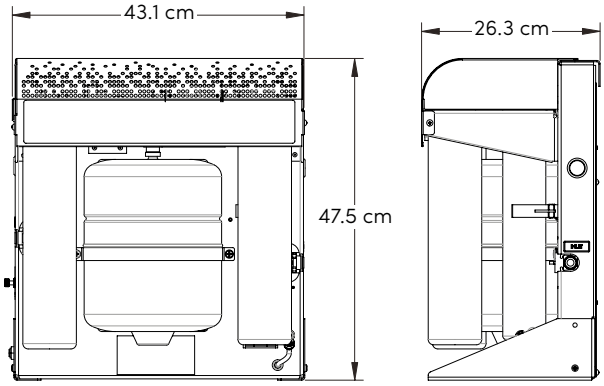
Key Information

191 LITRES OF WATER
PER DAY

UP TO **100 ESPRESSO** SHOTS
PER HOUR*

BLENDING VALVE FOR **MINERAL BALANCE**
ADJUSTMENT

EXCELLENT **WATER RECOVERY**
RATE OF UP TO **50%**



Compact design allows for countertop or under counter installation.

One centralised unit that only requires 1 service per year regardless of area of installation and equipment manufacturer.

Protects against taste and odour causing contaminants while removing dirt, particulates and dissolved minerals.

NSF/ANSI Standard 58 certified to reduce cysts such as Cryptosporidium and Giardia by mechanical means.

Daily Production Rate
191 Lpd

Service Flow Rate
1.9 L @ 3.4 - 5.8 bar

Inlet/Outlet Connection
3/8" OD John Guest® fitting

Wastewater Connection
1/4" OD John Guest® fitting

Operating Pressure Requirements
2.7 - 5.8 bar, non-shock

Maximum Operating Pressure
8.6 bar

Inlet Temperature
0 - 37.7°C

Inlet TDS
1,000 ppm maximum

Storage Tank Capacity
7.6 L tank
3.8 L effective/usable capacity

Overall Dimensions
47.5 cm (h) x 43.1 cm (w) x 26.3 cm (d)

Operating Weight
24.04 kgs

*Espresso shots per hour based on a typical 100ml shot (50ml shot, 50ml group head purge) and a standard system setup.

Better Water for a Great Taste

SUITABLE FOR UP TO
230 - 355
ESPRESSO SHOTS
PER HOUR*

MRS-350BL

PENTAIR

EVERPURE®

MRS-225 & 350

Configurable Reverse Osmosis Systems

The Everpure® MRS-225 and 350 are high performance wall mounted reverse osmosis systems which can produce either 852 litres (MRS-225) or 1,325 litres (MRS-350) of recipe quality water per day.

Available in 2 versatile configurations:

BL Models:
Include an adjustable blend valve to allow for custom tailoring of dissolved mineral content in the treated water.

CC Models:
Introduce a controlled amount of hardness minerals back into the product water.

WALL MOUNTED

UP TO **35%** RECOVERY RATE

BETTER TASTE

SCALE AND **CORROSION** PROTECTION

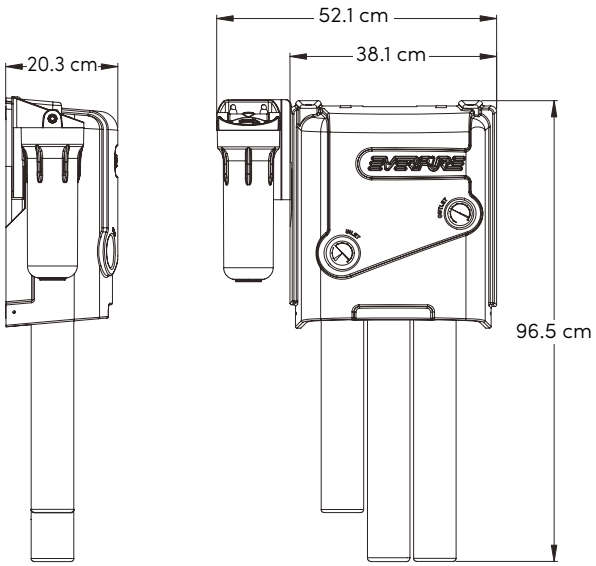
Key Information

852 - 1,325 LITRES OF WATER PER DAY

UP TO **230 - 355 ESPRESSO** SHOTS PER HOUR*

BLENDING VALVE FOR **MINERAL BALANCE** ADJUSTMENT ON BL MODELS

EXCELLENT **WATER RECOVERY** RATE OF UP TO **35%**



Versatile system available in 2 configurations and with an optional pre-filter.

Filter cartridges require replacement every 6 months and membrane cartridges every 24 months.

Reduces chlorine taste and odour and other offensive contaminants that can adversely affect taste of water and coffee.

Wall-mount design allows flexible installation.

Daily Production Rate
852 - 1,325 Lpd

Service Flow Rate
Dependant on water pressure in storage tank and line size(s) to equipment

Inlet/Outlet Connection
3/8" OD tube connection

Wastewater Connection
1/4" OD tube connection

Operating Pressure Requirements
1.72 - 5.52 bar, non-shock

Maximum Static Pressure Requirements
6.89 bar

Inlet Temperature
4 - 38°C

Inlet TDS
1,500 ppm maximum

Overall Dimensions
96.5 cm (h) x 38.1 cm (w) x 20.3 cm (d), 52.1 cm wide with optional pre-filter

Operating Weight
15.9 kgs (excludes external storage tank/s)

*Espresso shots per hour based on a typical 100ml shot (50ml shot, 50ml group head purge) and a standard system setup.

Better Water for a Great Taste

SUITABLE FOR UP TO
735
ESPRESSO SHOTS
PER HOUR*

PENTAIR

EVERPURE®

MRS-600 HE

High Output Reverse Osmosis System

The Everpure® MRS-600 HE is a high output reverse osmosis system which has an average water recovery rate of 78%. Its high recovery R.O. technology yields significant savings in water and sewer charges with a minimal environmetal footprint.

With a 2,271 litre per day production rate and tailored blending process for removing just the right amount of dissolved solids from the feed water, the MRS-600 HE is for production on a large scale.

WALL MOUNTED

UP TO **78%** RECOVERY RATE

BETTER TASTE

SCALE AND **CORROSION** PROTECTION

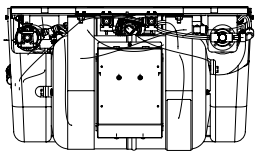
Key Information

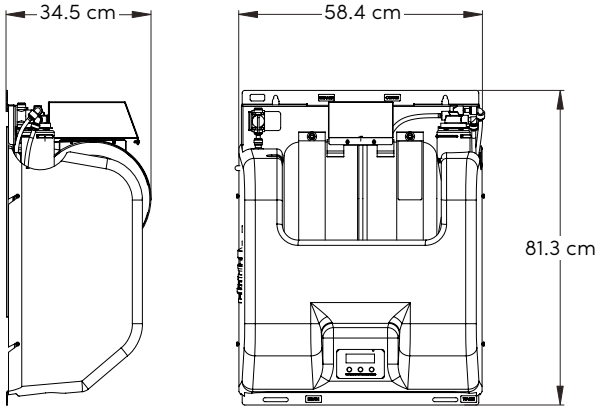
2,271 LITRES OF WATER PER DAY

UP TO **735 ESPRESSO** SHOTS PER HOUR*

BLENDING VALVE FOR **MINERAL BALANCE** ADJUSTMENT

EXCEPTIONAL **WATER RECOVERY** RATE OF UP TO **78%**





High output system with average recovery of 78%, which equates to approximately 1/4 cup of water for each cup of water dispensed.

Filter cartridges require replacement every 6 months and membrane cartridges every 12 months.

Reduces chlorine taste and odour and other offensive contaminants that can adversely affect taste of water and coffee.

Wall-mount design allows flexible installation.

Daily Production Rate
2,271 Lpd

Service Flow Rate
Dependant on water pressure in storage tank and line size(s) to equipment

Inlet/Outlet Connection
3/8" OD tube connection

Wastewater Connection
3/8" OD tube connection

Operating Pressure Requirements
1.72 - 5.52 bar, non-shock. Pressure below 3.45 bar may affect blend system performance.

Minimum Static Pressure Requirements
6.89 bar, non-shock

Inlet Temperature
4.4 - 38°C

Inlet TDS
1,000 ppm maximum

Overall Dimensions
81.3 cm (h) x 58.4 cm (w) x 34.5 cm (d)

Operating Weight
40.8 kgs (excludes external storage tank/s)

*Espresso shots per hour based on a typical 100ml shot (50ml shot, 50ml group head purge) and a standard system setup.

Better Water for a Great Taste

COMPACT SOLUTION

BINATURE

Compact Reverse Osmosis System

The Binature is a highly efficient yet extremely compact direct flow reverse osmosis system. At only 44.5cm (h) x 13.5cm (w) x 43.5cm (d), the Binature is small enough for under counter installation when in an upright position but can also be installed behind a plinth panel when positioned on it's side.

The Binature's small size doesn't mean any compromise on performanace as it features a sediment filter, carbon filter, two reverse osmosis membranes and a blending valve for tailoring the water recipe.

COMPACT DESIGN

EFFICIENT OPERATION

BETTER TASTE

SCALE AND CORROSION PROTECTION

We also offer a range of cartridge based solutions which are especially suited to coffee applications.

Cartridge Systems

claris ultra

claris™ prime

Claris Ultra

Used by some of the worlds leading coffee houses, the Pentair Everpure® Claris Ultra range is designed to help find the best balance between protecting equipment and achieving the desired quality of brewed coffee and espresso by consistently maintaining an acceptable acidity level.

Available in 6 sizes with incremental capacities suitable for low to very hard water areas and for small to high volume operations. With a large capacity to cartridge size ratio and the ability to be mounted horizontally or vertically, the Claris Ultra range is ideal for installations where limited space is available.

Description	Height - Ex. Head (mm)	Height - Inc. Head (mm)	Diameter (mm)	Capacity (Litres)*
Claris Ultra 170	245	295	94	1,700
Claris Ultra 250	315	365	94	2,500
Claris Ultra 500	426	476	94	4,200
Claris Ultra 1000	360	410	136	8,500
Claris Ultra 1500	471	521	136	12,100
Claris Ultra 2000	471	521	175	20,000

*Capacity based on influent water hardness of 180ppm with standard bypass settings.

Claris Prime

An adjustable ion selective filter which offers tailored reduction of TDS to protect equipment from scale and mineral induced corrosion in areas with high chloride and sulphate content in the feed water.

Description	Height - Ex. Head (mm)	Height - Inc. Head (mm)	Diameter (mm)	Capacity (Litres)*
Claris Prime	475	525	175	4,750

*Capacity based on influent water TDS of 150-300ppm, hardness of 180ppm and chloride of 60ppm with standard bypass settings.

Claris DuoBlend Head

The Claris Ultra and Claris Prime use the unique Claris DuoBlend head, which features a bypass valve for tailored filtration.

AUTHORISED DISTRIBUTOR

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EVERPURE®

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