

Laboratory Water Systems

Fistreem Range
Brochure



 **FISTREEM**™

Fistreem International produces a range of world-leading water purification products



About Fistreem

In October 2004, Fistreem International Limited was formed with the purchase of part of Sanyo Gallenkamp Plc and its related manufacturing businesses of Water Purification. Although young in organisational terms, the company has immense experience. The management team has many years of Fistreem product experience before divesting from Sanyo Gallenkamp.

Our principal activity is in the manufacture of Water Purification. Products of which the Cyclon Water Still is recognised as a world-leading brand. Our other water purification products include:

- Calypso and Cyclon brand Water Stills
- A range of Deionisers
- Pre-treatment under the Fistreem Puri-Fi brand

Fistreem products are distributed in many countries around the world. The team includes knowledgeable and skilled support experts dedicated to outstanding customer service and support. When you buy a water still from Fistreem, each instrument undergoes an extensive checklist before shipment and includes a 1-year warranty.



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Please refer to
www.fistreeminternational.com
for all ordering information.

Which applications can our products be used for?

While safe to drink, tap water contains numerous contaminants, and even trace impurity levels can affect various scientific applications putting your scientific data at risk.

In a laboratory, water has multiple uses, from rinsing glassware to making biological media and buffers. We understand that you need the right water for your application; this means different purity, dilution and filtration levels.

Our Fistreem range focuses on Type II Water Applications, which are used in the following ways:

- **Applications requiring higher ionic purity**
- **Preparing buffers and reagents**
- **Media production**
- **Sample dilution and reagent preparation**
- **General chemistry applications**
- **Glassware rinsing and washing**
- **General environmental analysis**
- **Cell culture preparation**
- **Clinical biochemistry**

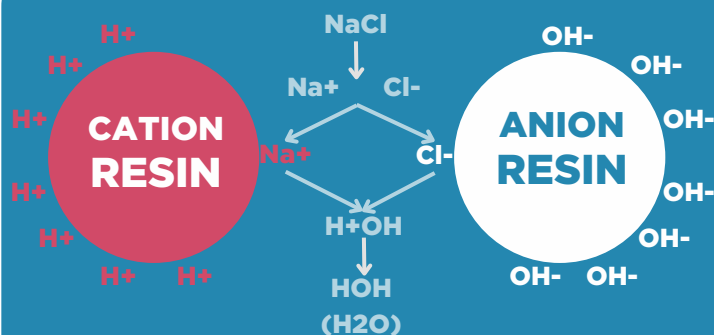


The Technology behind our systems

Water purification is the process of removing contaminants, including biological contaminants, suspended solids and gases from water. Using water with these impurities removed is vital to get reliable and accurate scientific data from your experiments. You should always use purified water when making up buffers or rinsing glassware.

When it comes to choosing your water purification system, it is essential to know what your application and impurities are.

Deionisation



Deionisation uses synthetic ion-exchange resins to remove ions from feedwater chemically. The water passes through the ion exchange of hydrogen and hydroxide ions for dissolved minerals and then recombines to form water.

Distillation



Distillation is a long-established method that separates water from contaminants by changing the state from a liquid to a gas and then back to a liquid.

Laboratory Grade Water Purification Systems

Fistreem offers a range of water distillers made to meet your water quality requirements and cover your application needs.

Our laboratory-grade water purification distillers are developed and built to guarantee purity. Each water still incorporates the 'Cyclonic' vapour trap, generating the highest quality pyrogen-free water.

The Pre-Treatment Kit offers an economical supply of pre-treated (deionised) water to Calpyso and Cyclon water stills. In addition, the matching reservoir tank enables additional cost-effective water usage and efficient operation of these water purification systems.



The Importance of Water Purification

Water is one of the most utilised reagents in the laboratory, and it is critical to find the proper water for your application. Several different technologies can be used to produce pure water that is suitable for scientific applications. The Fistreem range of water stills uses the distillation process to remove impurities from water generating Type II water.



Type I Water Ultrapure

Used for highly-sensitive procedures like HPLC, AAS and Mammalian Cell Culture.



Type II Water Purified

Used for general lab use in things like media preparation or buffer creation.



Type III Water Primary Grade

Used for non-critical work like rinsing beakers, filling water baths or feeding autoclaves.

Fistreem Product Selector

The chart below shows the comparison of our Fistreem Systems. Find the right System for your needs by comparing the features.



Calypso



Cyclon



Cyclon Bi-Distiller

Applications			
General Laboratory	✓	✓	✓
Preparing Buffers and Reagents	✓	✓	✓
Media Production	✓	✓	✓
General Chemistry	✓	✓	✓
Glassware Rinsing and Washing	✓	✓	✓
Cell Culture Preparation	✓	✓	✓
Clinical Biochemistry	✓	✓	✓
Water Type	Single Distilled	Single Distilled	Double Distilled
Capacity	2 or 4 Lt/hr	4 or 8 Lt/hr	4 Lt/hr
Flow Rates	0.5 litre/min - 1 litre/min	1 litre/min - 2 litre/min	1 litre/min
Feed Water	Tap Water or Pre-treated Water	Tap Water or Pre-treated Water	Tap Water or Pre-treated Water
Conductivity	1µs/cm	1µs/cm	<1µs/cm
pH Level	5.6 - 6.0	5.6 - 6.0	5.6 - 6.0
Pyrogen Free	Yes	Yes	Yes
Power Rating	1.8kW	3Kw - 6kW	6KKw
Dimensions (HxWxD, mm)	790 x 260 x 325	750 x300 x 350 (8 litre) 750 x 490 x 380	750 x 490 x 380
Weight	15Kg	25Kg - 29Kg	29Kg
Features		Automated Cleaning	Automated Cleaning



CALYPSO

Perfect for smaller laboratories providing pure water in two convenient production rates of 2 or 4 Lhr-1. Our innovative 'cyclonic' vapour trap guarantee's the highest quality, Type II, pyrogen-free water

Safe and Easy to Use

The operator is kept safe through the completely enclosed glassware. In addition, the high-temperature cut-off protects the heaters in the event of water failure.

Pre-Treated Feed Options

A suitable pre-treated supply of deionised, reverse osmosis or already distilled water is supplied to the still using the pre-treatment feed kit.

Economical

An automatic flow controller governs the rate of the cooling water consumption and allows the still to be used efficiently over a wide tap water pressure range.

Flexible

This space-saving water distiller can be benchtop or wall mounted.

Applications

The Calypso distiller is ideally suited for the following:

- General Laboratory applications
- Preparing Buffers and Reagents
- Media Production
- Sample dilution & reagent preparation
- General Chemistry
- Glassware rinsing and washing
- General environmental analysis
- Cell culture preparation
- Clinical biochemistry

Model	WCA002	WCA004
Output Capacity	2L/hr Single Distilled	4L/hr Single Distilled
Pyrogen Free	Yes	Yes
pH Level	5.6 – 6.0	5.6 – 6.0
Conductivity	1µS/cm	1µS/cm
Power Rating	1.8kW	3.0kW
Tap Water Pressure (min – max)	70 – 560kPa 10 – 80 lbf/in ⁻² (PSI)	70 – 560kPa 10 – 80 lbf/in ⁻² (PSI)
Minimum Water Pressure for Pre-Treated Flow Rate	15kPa 2lbf/in ⁻² (PSI)	15kPa 2lbf/in ⁻² (PSI)
Tap Water Flow (min)	0.5L/min ⁻¹	1L/min ⁻¹
Dimensions (HxWxD) mm	790x260x325	790x260x325
Weight	15kg	15kg

CYCLON

The Cyclon water distiller is an integrated water purification system, available in 4L and 8L single or 4L double distillers as a complete water purification system with matching pre-deionised and distillate reservoirs. In addition, the 'cyclonic' vapour trap eliminates all carry-over, and the advanced borosilicate glassware design removes the foaming risk, improving purity levels.

The double (Bi-)distiller is ideal for life science applications requiring a higher-grade distillate for increased purity. The Cyclon is comprised of two identical sets of glassware and heaters. The first distillation is fed to the second boiler for further distillation, thus eliminating any possible carry-over of impurities.

Safe for your Operator

Enclosed glassware and a built-in spill tray provide the operator protection. In addition, the thermistor protects the still against interruption in the water supply by controlling the heater operation. Finally, the thermal cut-out fuse prevents any risk of overheating.

Pre-Treated Feed Options

When combined with a microprocessor, the thermistor sensor precisely controls the still. This process simplifies operation and cleaning procedures.

Easy to Clean

Descaling the still is simplified by an automated cleaning facility requiring no dismantling of the glassware.

Flexible

This space-saving water distiller can be benchtop or wall mounted to suit your lab's needs.

Applications

The Cyclon distiller is ideally suited for the following:

- General Laboratory Applications
- Preparing Buffers and Reagents
- Media Production
- Sample Dilution and Reagent Preparation
- General Chemistry
- Glassware Rinsing and Washing
- General Environmental Analysis
- Cell Culture Preparation
- Clinical Biochemistry



Model	WSC004	WSC044	WSC008
Output Capacity	4L/hr Single Distilled	8L/hr Double Distilled	8L/hr Single Distilled
Pyrogen Free	Yes	Yes	Yes
pH Level	5.6 - 6.0	5.6 - 6.0	5.6 - 6.0
Conductivity	1µS/cm	1µS/cm	1µS/cm
Power Rating	3.0kW	6.0kW	6.0kW
Tap Water Pressure (min - max)	70 - 560kPa 10 - 80 ⁻¹ lbf/in ⁻¹ (PSI)	70 - 560kPa 10 - 80 ⁻¹ lbf/in ⁻¹ (PSI)	70 - 560kPa 10 - 80 ⁻¹ lbf/in ⁻¹ (PSI)
Tap Water Flow (min)	1L/min	2L/min	2L/min
Dimensions (HxWxD) mm	750x300 x380	750x490 x380	750x490 x380
Weight	25kg	29kg	29kg



RESERVOIR

The 30L matching Reservoir tank is available for the Calypso and Cyclon water distillers. The Reservoir incorporates a fast flow tap and a sight tube, showing the volume of the contents of the Reservoir. Our range of storage reservoirs has been designed to maintain the optimum purity of stored water, protecting against airborne contaminants.

Easy to Use

The Reservoir contains special ports to feed deionisation systems, and the sight tube allows for early water level observation. The storage reservoir is easy to clean, as you can open it up for easy accessibility.

Filtered

A vent filter prevents airborne contamination from bacteria, particulates, and organic vapours.

Polyethylene Construction

Each Reservoir is fitted with a polyethene liner.

Automated

The electronic float switch shuts off the still on a full reservoir tank and restarts it automatically when water is drawn.

Space Saving

All models are wall or benchtop mountable.

Model	WCA002
Capacity	30L
Max Pressure psig (kg/cm ²)	80 (5.6)
Min Pressure psig (kg/cm ²)	10 (0.7)
Auto Start/ Stop Controls	Yes - when connected to a still or using level monitor provided
Auto Drain	Yes
Low Water Cut-Off	Yes
Dimensions (HxWxD) mm	300x380x750
Weight	15kg

PRE-TREATMENT KIT

Depending on the frequency of use, purpose and quality of water, a pre-treatment is sometimes necessary to maximise the effectiveness of water purification systems. The Pre-treatment kit can be used with both the Calypso and Cyclon water stills.

Quick Installation

The pre-treatment can be installed in moments. The cartridge is secured in convenient and easy-to-use wall mounting brackets supplied with the water isolating valve and a suitable pressure hose with fittings.

High-Quality

The Puri-Fi disposable deioniser in your kit contains a high-quality ion exchange resin with 1-10µS cm conductivity. This incorporates a 50-micron filter to remove particulates.

Flexible

This space-saving water distiller can be benchtop or wall mounted.



Model	WSC905.PTK5
Type	Deioniser
Resin Type	High-Quality Ion Exchange Resin
Flow Rate	30L/hr
Pressure	500kPa
Length (mm)	390 and 690
Diameter (mm)	77
Applications	Purifying Water In-Line Applications



Fistreem Service Contracts

Our Service contracts (Bronze, Silver, and Gold) offer great value for money and flexibility to meet your specific needs to ensure that you find the contract that will work for you. Fistreem also offers a variety of value-added services for our water purification systems.

Installation and Commissioning

When you purchase new equipment for your laboratory the reliability and lifetime of your instruments depend on them being installed and commissioned correctly.

Service Pack

The service pack contains spare parts to ensure that your instrument continues operating smoothly throughout its life. This service pack is also available for overseas customers.

Our range of service contracts are built to fit your needs and ensure that your equipment is always performing to its best.

	Bronze Package	Silver Package	Gold Package
Length of Contract	1 YEAR	1 YEAR	1 YEAR
Onsite Visit	NO	NO	YES
Cost of Labour	YES	YES	YES
Spare Parts Covered	YES	YES	YES
Preventative Maintenance	NO	NO	YES
	Available for the Calypso system only		



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