

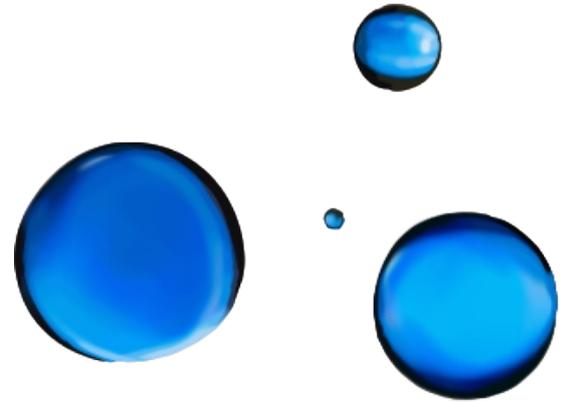
# Fistream Cyclon and Calypso Water Stills

Advanced Design.  
Highest Purity Distillate.  
Automatic Operation.



# Cyclon

## Ultrapure Water Still



Fistreem has been a leader in water still innovation for many years with a worldwide reputation for design, quality and reliability.

Distillation is recognised as offering considerable advantages being, fail-safe in concept and consistently free from impurities including inorganics, organics, microorganisms and pyrogens.

Fistreem Ultrapure Water Stills improve on this concept through a unique patented vapour trap which creates a 'cyclonic' effect eliminating all vapour borne droplets, ensuring that there is no carry over of impurities in the distillate. The resultant pyrogen free water is therefore at the highest purity - at all times. Featured here are the high specification Cyclon systems together with the budget Calypso range.

The Fistreem Cyclon is a revolutionary concept in distillation, surpassing all accepted purity, performance and reliability levels of traditional water stills.

The Cyclon has been designed to provide the many benefits of distillation with the minimum of fuss and maintenance.

Through microprocessor control, a thermistor sensor, manages many aspects of the Still's operation by automatically sensing water levels in the glassware. This includes operation by automation of the heating elements, pretreated water feed flow and functions within the Still's cleaning cycle.

Highest purity, pyrogen free distillate

Patented vapour trap

Outputs of 4, 4 bi-distilled and 8L/hr

Pretreated feed option

Advanced microprocessor control

Safe, reliable operation

Matching deioniser and reservoir tank

# Cyclon: An Integrated Water Purification System

The Cyclon is available in 4 or 8 l.hr<sup>-1</sup> single distilled or 4 l.hr<sup>-1</sup> double distilled formats and as a complete water purification system with matching pre-deioniser and distillate reservoir.

To eliminate the need for routine cleaning in hard water areas, the Stills are also able to be adapted to accept pre-treated water. All systems can be wall or bench mounted while tap feed models can easily be upgraded to use pre-treated water.

## Purity

The patented 'cyclonic' vapour trap eliminates all carry over while the advanced borosilicate glassware design removes the risk of foaming and improves purity levels. The distillate leaves the condenser at the optimum temperature to guarantee product quality.

## Safety in Operation

The thermistor protects the Still against interruptions in the water supply controlling heater operation. Additional protection is provided by a thermal cut-out fuse to prevent overheating.

Operator protection is assured through totally enclosed glassware and built-in spillage tray.

## Reliability and Ease of Use

Combined with the microprocessor, the thermistor sensor provides precise control of the Still and simplifies operation and cleaning procedures.

A vertical boiler configuration minimises stress on the durable silica sheathed heating elements. Along with an auto-drain function, this design also helps to reduce the build-up of scale.

The Cyclon is supplied with an electronic float switch which will shut off the Still automatically when the storage reservoir is full, enabling safe, unattended operation.

## Economy

The flow of cooling water is automatically controlled to minimise water usage.





## Cyclon Pretreated Feed Option

Feeding the Still with pretreated water can eliminate the need for descaling of the Still's boiler in hard tap water areas.

All Cyclon Stills are supplied with accessories which enable the user to adapt from tap feed to treated feed supply. In this configuration, for economy, the treated water for the boiler and the tap water for the condenser are separated.

The Stills can be fed from the matching Cyclon deioniser which is specially designed to provide quality pretreated water. The deioniser is electronically controlled by the Still's microprocessor to ensure optimum use is made of the deioniser's ion exchange capacity. A rapid regeneration service is offered using a pre-paid voucher system. (UK customers only).

Alternatively, the Cyclon can be used with pretreated water from the user's own source. Suitable quality water includes reverse osmosis, deionised or purified water from a central piped supply.

## Cyclon Deioniser

The Cyclon deioniser features a simple to read conductivity meter which indicates resin exhaustion and a separate outlet tap allowing users to draw off deionised water at any time.

The deioniser will typically provide up to 700 litres of purified water on 200ppm tds water. On exhaustion the resin can either be regenerated or replaced by new resin. Replacement resin packs are offered to users should a local regeneration service be unavailable.

## Cyclon Reservoir Tank

The 30 litre, matching Cyclon reservoir tank incorporates a fast flow tap and a sight tube showing the contents of the reservoir. Distillate access ports are fitted on both sides allowing the reservoir to be sited either side of the Still.

To ensure the highest purity levels are maintained, the reservoir features a polyethylene liner, vent filter and a cleaning access port. The electronic float switch shuts off the Still on a full reservoir.

# Cyclon Specifications

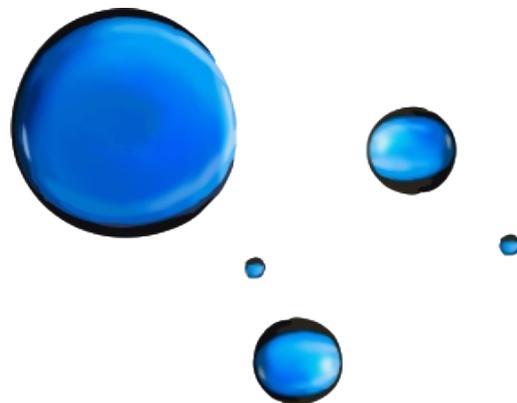
Model	WSC004	WSC044	WSC008
<b>Output capacity</b>	4 litres. hr <sup>-1</sup> single distilled	4 litres. hr <sup>-1</sup> Double distilled	8 litres. hr <sup>-1</sup> Single distilled
<b>Pyrogen Free</b>	Yes	Yes	Yes
<b>pH</b>	5.6 - 6.0	5.6 - 6.0	5.6 - 6.0
<b>Conductivity</b>	1µS. cm <sup>-1</sup>	<1µS. cm <sup>-1</sup>	1µS. cm <sup>-1</sup>
<b>Power Rating</b>	3kW	6kW	6kW
<b>Tap Water Pressure (min-max)*</b>	70-560 kPa 10-80 lbf.in <sup>-2</sup>	70-560 kPa 10-80 lbf.in <sup>-2</sup>	70-560 kPa 10-80 lbf.in <sup>-2</sup>
<b>Tap Water Flow (min)</b>	1 litre. min <sup>-1</sup>	2 litres. min <sup>-1</sup>	2 litres. min <sup>-1</sup>
<b>Dimensions (HxWxD)mm</b>	750 x 300 x 380	750 x 490 x 380	750 x 490 x 380
<b>Weight</b>	25kg	29kg	29kg

\* The accessory low pressure adaptor will allow operation down to 35kPa (5lbf.in<sup>-2</sup>).

Model	Cyclon Deioniser	Cyclon Reservoir
<b>Resin Volume</b>	7 Litres	-
<b>Volume Output</b>	Approx. 700 litres on 200 ppm tds water	-
<b>Dimensions, (H x W x D)</b>	750 x 300 x 380 mm	750 x 300 x 380 mm
<b>Weight</b>	21kg	Empty: 11kg Full: 42kg



# CALYPSO



## Automatic Water Still

The Fistream Calypso automatic Stills offer many of the proven features of the high performance Cyclon at an economical price.

The Calypso is available with outputs of 2 or 4 l.hr<sup>-1</sup> and can be bench or wall mounted. The 2 litre Still is suitable for use in the smaller laboratory. If higher outputs are required, the 4 litre model is ideal.

### Guaranteed Purity

Incorporating the patented 'cyclonic' vapour trap, the Calypso produces the very highest quality pyrogen free water. Purity is also assured through all borosilicate glass construction and the use of durable, silica sheathed heating elements.



### Convenient Automatic Operation

The Calypso can be connected directly to a mains tap supply or where preferred, from a pretreated water supply using the optional pretreated feed kit. An automatic flow controller governs the rate of water consumption and allows the unit to be used over a wide tap water pressure range. In the pretreated mode, purified water is fed directly to the boiler and tap water is used for cooling purposes only.

The Still is supplied with a polyethylene level sensor which automatically shuts off power and input water whenever the reservoir is full, enabling safe, unattended operation.

The Calypso Still is offered with an optional reservoir tank which allows a reserve of up to 30 litres of storage capacity. The tank's polyethylene liner is fitted with an air filter, fast flow tap and contents sight tube and provides a convenient and compact collection system. Automatic shut off is provided by the Still's controls.

Outputs of 2 and 4 L/hr

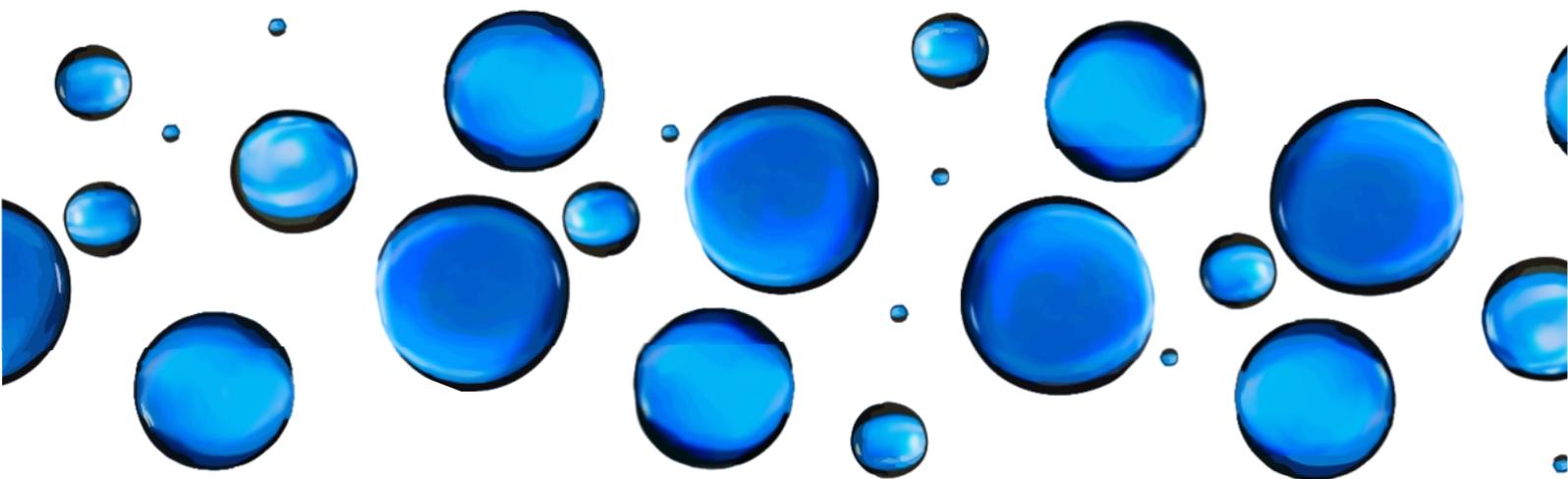
Budget Design Concept

Highest Purity, Pyrogen Free Distillate

Safe, Automatic Operation

Pretreated Feed Option

Matching Reservoir Tank



## Safe and Easy to Use

A high temperature cut-off protects the heaters in the event of water failure, while operator safety is assured through totally enclosed glassware.

For ease of cleaning, the Still is fitted with a boiler drain valve. Cleaning solution is simply introduced into the boiler, via the constant level device - no dismantling is necessary.

Calypso Stills and the optional reservoir tank can be bench or wall mounted.

## Calypso Specifications

Model	WCA002	WCA004
<b>Output Capacity</b>	2 litres . hr <sup>-1</sup> Single distilled	4 litres . hr <sup>-1</sup> Single distilled
<b>Pyrogen Free</b>	Yes	Yes
<b>pH</b>	5.6-6.0	5.6-6.0
<b>Conductivity</b>	1µS. cm <sup>-1</sup>	1µS. cm <sup>-1</sup>
<b>Power Rating</b>	1.8kW	3.0kW
<b>Tap Water Pressure (Min - Max)</b>	70-560 kPa 10-80 lbf.in <sup>-2</sup>	70-560 kPa 10-80 lbf.in <sup>-2</sup>
<b>Minimum Water Pressure for Pretreated Flow Valve Option</b>	15 kPa 2 lbf.in <sup>-2</sup>	15 kPa 2 lbf.in <sup>-2</sup>
<b>Tap Water Flow (Min)</b>	0.5 litres.min <sup>-1</sup>	1 litre.min <sup>-1</sup>
<b>Dimensions (HxWxD) mm</b>	790 x 260 x 325	790 x 260 x 325
<b>Weight</b>	15 kg	15 kg

## Cyclon Ordering Information

### Stills (For Tap and Treated Feed)

<b>4 litres. hr<sup>-1</sup></b>	Single Distilled	220 V 50/60 Hz 240 V 50/60 Hz	WSC004.MH3.4 WSC004.MH3.7
<b>4 litres. hr<sup>-1</sup></b>	Double Distilled	220 V 50/60 Hz 240 V 50/60 Hz	WSC044.MH3.4 WSC044.MH3.7
<b>8 litres. hr<sup>-1</sup></b>	Single Distilled	220 V 50/60 Hz 240 V 50/60 Hz	WSC008.MH3.4 WSC008.MH3.7

## Accessories

<b>Cyclon Reservoir Tank, 30 Litres</b>			WSC900.RTB.9
<b>Cyclon Deioniser, Complete with Cartridge</b>			WSC901.PDC.5
<b>Deioniser Resin</b> Resin refill, Carton of 2 x 7 litre refill packs (provides 2 resin replacements)			DCF-560-010D
<b>Regeneration Voucher System</b> (UK Customers only) Service deioniser cartridge, Regeneration vouchers, book of 2			WGS-950-130D WGS-950-530K

## Calypso Ordering Information

<b>2 litres. hr<sup>-1</sup></b>	Single Distilled	220 V 50/60 Hz 240 V 50/60 Hz	WCA002.MH1.4 WCA002.MH1.7
<b>4 litres. hr<sup>-1</sup></b>	Single Distilled	220 V 50/60 Hz 240 V 50/60 Hz	WCA004.MH1.4 WCA004.MH1.7

## Accessories

<b>Calypso Reservoir Tank, 30 litres</b>			WCA900.RTA.9
<b>Pretreated Feed kit</b>			WCA901.SVA.7





**Fistreem International Limited:**

Beacon House,  
Nuffield Road,  
Cambridge,  
CB4 1TF,  
UK

Telephone: +44 (0)1223 727100

Fax: +44 (0)1223 727101

Email: [sales@fistreem.co.uk](mailto:sales@fistreem.co.uk)

Website: [www.fistreeminternational.com](http://www.fistreeminternational.com)

Please refer to  
[www.fistreeminternational.com](http://www.fistreeminternational.com) for all  
ordering information.

