

# aquamax KF

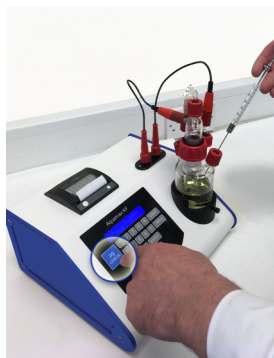
## Plus

## in-lab ppm water content

### Product Description

Aquamax KF Plus titrators have been specifically designed for the determination of water content, combining coulometry with the Karl Fischer method.

The versatile Aquamax KF Plus is suitable for a wide range of applications and offers many advantages including a tough measuring vessel, a 'press go' keypad and built-in printer.



Water check button and syringe

### Water Check

The ug check button allows the operator to simply press go, inject 1ul or maybe 10ul of distilled water (as required by some ASTM methods) and verify if the instrument and reagent are working with in their required specification. The ug check overrides the programmed calculation and displays/prints out a report of the verification check. The coulometer then automatically reverts back to the pre-programmed setting.



### Tough measuring vessel

The unique LDC glassware design is by far the easiest to use and also the most robust. The electrode locking system allows the joints to seal completely, without the use of grease or PTFE sleeves, and provides improved baseline stability. Hassle free assembly and disassembly.



### Single shot Karl Fischer Reagent

Aquamax KF Reagent A is a general coulometric KF anolyte for use with generator electrodes which incorporate a frit or diaphragm to separate the anode and cathode chambers. Used in conjunction with Reagent C this formulation is supplied in a pack of 8 x 100ml bottles, 8 x 5ml cathode vials, all conveniently located in a single carton.

To conform to ASTM, API, EI, ISO (plus others) methodology for water content determination of oil and petroleum products, the anode reagent must be modified with xylene to improve sample solubility and miscibility.

Aquamax KF Reagent is pre-mixed with xylene, and other solubilizers to eliminate side reactions, so that the operator does not have to store or mix chemicals.



## Features

- Simple operation
- 10 user programmable methods
- 1ppm / 100%
- Results in ppm, mg/kg, % & µg water
- Multi language display & print out
- Small footprint
- Integral high speed printer
- Integral battery
- Fully portable
- Low drift cell design
- Results Manager software
- Automatically compensated errors (patented technique)

## Results Manager

Run#	Time	Dist	Vol	Density	Result	Page
1	07:46:50	0	0.92	1.0000	0.8700	18.25
2	07:47:43	0	0.81	1.0000	0.8700	18.13
3	07:48:37	0	0.50	1.0000	0.8700	18.32
4	07:49:29	0	0.07	1.0000	0.8700	18.43

Max: 10.9 ppm    Min: 10.1 ppm    Mean: 10.4 ppm    SD: 0.30    CV: 2.89

This is a windows application that allows you to view and print sets of results created by the Aquamax KF Titrator. It can download results directly from the instrument via a serial port connection, or open result files previously saved to disk. The Results Manager package contains all necessary cables, connections, installation cd and user manual.



For those who need to use the titrator outside of the laboratory, the removable flash drive (memory stick) will store all the results whilst you complete your on-site work. The USB flash drive can then be connected to a pc and results downloaded via Results Manager when returning to your work place.

## Technical Specifications of Aquamax KF Plus - Part No: 90.18.0001

**Titration Method:** Coulometric Karl Fischer titration

**Electrolysis Control:** Patented "ACE" control system GB2370641

**End Point Detection:** AC polarisation

**End point indication:** Visual display/print out/acoustic beep

**Titration vessel:** Low Drift Cell design, no grease or PTFE sleeves required

**Measuring range:** Possible 1µg - 200mg water  
Typical 1µg - 10mg water

**Moisture range:** 1ppm - 100% water

**Max. sensitivity:** 0.1µg

**Max. titration speed:** 2.24 mg per minute

**Max. current:** 400 ma

**Drift compensation:** Automatically controlled

**Precision:** 10-100µg ± 3µg, 100µg-1mg ±3µg,  
above 1mg ±0.3%

**Start delay time:** 0-30 minutes, user selectable

**End delay time:** 0-30 minutes, user selectable

**Calculation modes:** Weight/weight, (W/w) (user programmable)  
Weight/dilution ratio, (W/K)  
Volume/density, (V/SG)  
Volume/volume, (V/v)

**Display format:** µg, mg/kg, ppm, %

**Print format:** µg, mg/kg, ppm, %

**Statistics:** max, mean, min values up to 99 runs

**Method storage:** 10 user programmable methods

**Sample ID number:** User programmable

**Stirrer speed:** Microprocessor controlled

**Languages:** Multi languages – user selectable

**Calendar/clock:** Analysis time & date print out

**Battery low indicator:** Display & print out indication

**Data outputs:** USB and RS232 ports

**Removable Data storage:** Flash drive (memory stick)

**Data Entry:** 15 key touchpad

**Display:** 40 character alphanumeric backlit LCD

**Printer:** 42 character high speed thermal printer

**Power supply:** 90-264V AC, 47-63 Hz.

**Dimensions:** 290 x 255 x 130 mm

**Weight:** 3.0 k

## Certificates

All Aquamax KF Coulometric titrators are supplied with a calibration certificate traceable to national standards.

For additional technical information, specifications, MSDS data, user manuals, and exhibition news, email us at [info@echscientific.com](mailto:info@echscientific.com)

### Head Quarters to ECH GmbH ECH Elektrochemie Halle GmbH

Otto-Eissfeldt-Str. 8  
D-06120 Halle (Saale)  
Germany

Tel: +49 345 279570-0  
Fax: +49 345 279570-99

### Sales & Support to ECH GmbH ECH Scientific Limited

Building 69, Wrest Park, Silsoe  
Bedfordshire, MK45 4HS  
United Kingdom

Tel: **+44 (0) 1525 404747**  
Fax: +44 (0) 1525 404848

Email: [info@echscientific.com](mailto:info@echscientific.com) • [www.ech.de](http://www.ech.de) • [www.grscientific.com](http://www.grscientific.com)



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# aquamax KF

## Portable

## on-site ppm water content

### Product Description

Measuring and controlling the amount of water in oils and fuels is of considerable economic importance to the industrial community, particularly to the petroleum, fuel, used oils and electric power industries.

Water content determination by Karl Fischer titration is no longer restricted to being used by a chemist in a laboratory – now the technique is used by, plant operators, tanker drivers, distribution/maintenance engineers and other non-laboratory personnel.

Karl Fischer titrations can now be performed in many different locations such as the tailgate of trucks, mobile laboratories, offshore installations, tankers, engineering workshops and dockside cabins.

The Aquamax KF Portable is simply a mobile version of the very successful Aquamax KF Plus.



### Built in battery and built in printer for on-site use



The Aquamax KF Portable is a small, single foot print instrument with integrated printer, a built-in battery and carrying case allowing the field engineer to take the instrument complete with an assembled measuring vessel and ready for immediate use on arrival at destination.

**Rugged case and tough measuring vessel make a real mobile Karl Fischer titrator**

### Water Check



Water check button and syringe

The ug check button allows the operator to simply press go, inject 1ul or maybe 10ul of distilled water (as required by some ASTM methods) and verify if the instrument and reagent are working within their required specification. The ug check overrides the programmed calculation and displays/prints out a report of the verification check. The coulometer then automatically reverts back to the pre-programmed setting.

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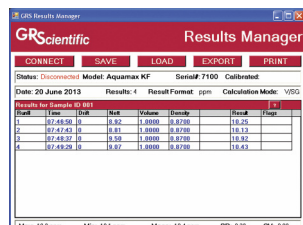
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## Homogenizers

To conform to ASTM, API, etc, methodologies, it is necessary to homogenise crude oil samples prior to analysis.

The PRO25D is a powerful and versatile low cost digital homogenizer whilst the SB-1 model is a Silent Brushless Homogenizer which is maintenance free as it has no carbon brushes, so it runs cleaner and quieter.

- PRO25D Digital Homogenizer, with stand
- SB-1 Silent Brushless Homogenizer, with stand
- Saw Tooth Generator Probe

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## Technical Specifications

### of Aquamax KF Portable - Part No: 90.18.0002

**Titration Method:** Coulometric Karl Fischer titration

**Electrolysis Control:** Patented "ACE" control system  
GB2370641

**End Point Detection:** AC polarisation

**End point indication:** Visual display/print out/acoustic beep

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**Data Entry:** 15 key touchpad

**Display:** 40 character alphanumeric backlit LCD

**Printer:** 42 character high speed thermal printer

**Protective Sleeve**

**Carrying handle**

**Power supply:** 90-264V AC, 47-63 Hz.

12V DC car adapter/internal battery

**Dimensions:** 290 x 255 x 130 (excluding the protective cage)

**Weight:** 5.0 kg

**Head Quarters to ECH GmbH**  
**ECH Elektrochemie Halle GmbH**  
Otto-Eissfeldt-Str. 8  
D-06120 Halle (Saale)  
Germany

Tel: +49 345 279570-0  
Fax: +49 345 279570-99

**Sales & Support to ECH GmbH**  
**ECH Scientific Limited**  
Building 69, Wrest Park, Silsoe  
Bedfordshire, MK45 4HS  
United Kingdom

Tel: **+44 (0) 1525 404747**  
Fax: +44 (0) 1525 404848

Email: [info@echscientific.com](mailto:info@echscientific.com) • [www.ech.de](http://www.ech.de) • [www.grscientific.com](http://www.grscientific.com)



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# aquamax KF

## Reagents

### Single shot Karl Fischer Reagent

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We conducted extensive comparison trials of Aquamax KF Reagents against other leading brands with very positive results. Using water standards ranging from 10 µg water up to 10,000 µg water under controlled conditions we found Aquamax KF A and KF C to be equivalent in performance accuracy to the other brands but much faster in titration speed and with lower background drift values. Aquamax KF Reagents, performed much faster than other special oil reagents and at the 10,000 µg count level (as required by ASTM methods), gave a result of 10,004 µg which is within 0.04%.

### Aquamax KF Reagents combine speed and accuracy

- Single shot bottles
- Faster precondition
- Safer to use
- Reduced downtime
- Safer to store
- Improved sample miscibility / solubility
- Low cost
- For use with all coulometers

### Ordering Information

Part No.	Product description
303.18.0002	Aquamax KF Reagent Kit (8 x 100ml anode plus 8 x 5ml cathode)

#### ECH Elektrochemie Halle GmbH

Otto-Eissfeldt-Str. 8  
D-06120 Halle (Saale)  
Germany

Tel: +49 345 279570-0  
Fax: +49 345 279570-99

Email: [info@echscientific.com](mailto:info@echscientific.com) • [www.ech.de](http://www.ech.de) • [www.grscientific.com](http://www.grscientific.com)

#### ECH Scientific Limited

Building 69, Wrest Park, Silsoe  
Bedfordshire, MK45 4HS  
United Kingdom

Tel: +44 (0) 1525 404747  
Fax: +44 (0) 1525 404848



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