

aquamax KF

Portable

on-site ppm water determination in oil and fuels

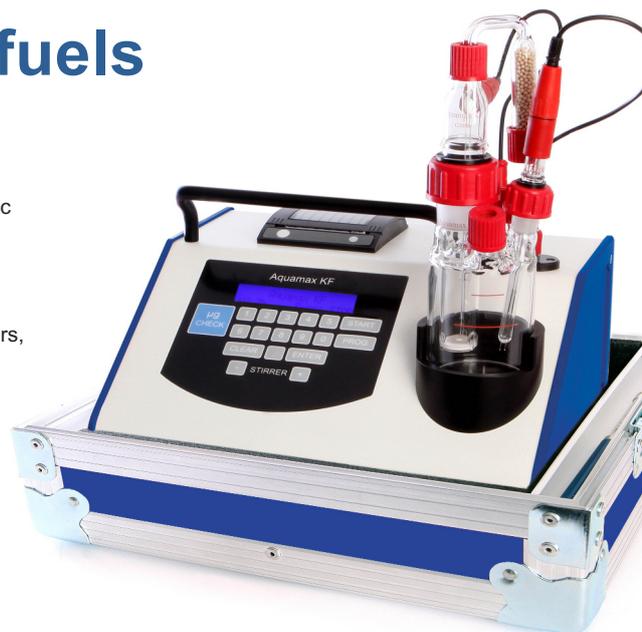
Product Description

Measuring and controlling the amount of water in oils is of considerable economic importance to the industrial community, particularly to the crude oil 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 engineers, 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 a truly mobile version of the very successful Aquamax KF Coulometer which includes Low Drift Cell twin port glassware as standard. Also incorporates a carry handle and a protective sleeve for the titration vessel and electrodes. The unique low drift cell 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. This glassware enables users to transport the instrument with reagents already in the titration cell so that it can be used immediately on arrival.



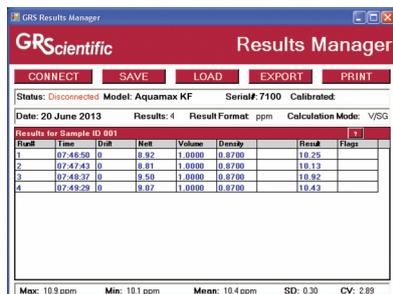
Built in battery and built in printer for on-site use



The Aquamax KF Portable is also supplied with a carry case to provide the portability required by the field engineer. It can be transported, complete with glassware assembled, ready for immediate use on arrival at destination. Power cords, syringes, etc. can all be carried inside the carry case lid which has a special compartment for this purpose. There are plastic drip trays positioned either side of the titrator to accommodate two syringes, typically 1.0 or 5.0ml for the samples and 10 μ l syringe for water checks as per the ASTM methods.

Tough measuring vessel and rugged case design making a real mobile coulometer

Results Manager



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 titrator through 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 and do not have a pc or laptop with them, our removable flash drive (memory stick) will store all the results. This flash drive can then be connected to a pc and results downloaded through Results Manager when returning to the laboratory.

The Results Manager Software is supplied as an optional item with the Aquamax KF.



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)



Water check button and syringe

Water Check

The µg check button on the front panel allows the operator to simply press one button before injecting the 1ul or 10ul distilled water as required by the ASTM methods for these analyses. This overrides the programmed calculation settings for a single run so that the display and print out report the result in micrograms water. After running the 10,000 microgram check the coulometer reverts back to ordinary user mode.

Tough measuring vessel

The unique Low Drift Cell 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.





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

Use the Aquamax KF for the follow methods and more

The Aquamax KF series of Coulometric Karl Fischer titrators can be used for the following standard methods, either by direct sample introduction or in conjunction with accessories such as water evaporators:-

ASTM	D 1533	Insulating liquids	EI / IP	386	Crude petroleum
	D 3401	Halogenated organic solvents		438	Petroleum products
	D 4928	Crude oils	BS	6829:1.5	Surface active agents
	D 5460	Rubber compounding materials		ISO	TC 158/SC
	D 6304	Petroleum products, lubricating oils and additives	10101-1		Natural gas
	D 6869	Plastics	10101-3		Natural gas
	E 1064	Organic liquids	10337	Crude petroleum	
API MPMS	Ch. 10.9	Crude oil	12937	Petroleum products	
			IEC	60814	Insulating liquids

Technical Specifications

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

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

Ordering Information

Part No.	Product
90.18.0002	Aquamax KF Portable Coulometric Titrator
330.18.0002	Carry Case
321.18.0003	In-Car Adaptor
321.18.0001	Power Adaptor
332.18.0002	Titration Vessel LDC
332.18.0003	Detector Electrode LDC
332.18.0004	Generator Electrode & Frit LDC
321.18.0002	Electrode Lead x 2
332.18.0006	Desiccant Tube LDC + Cap
325.18.0002	Pack Injection Septa (10pk)
332.18.0008	Gas Tight 1.0ml Syringe
303.18.0001	Molecular Sieve
325.18.0004	Stirrer Bar
301.18.0002	Paper Roll (Thermal) Single
325.18.0016	Luer Needle 19 Gauge (Screw Fit)

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

Optional Extras

Part No.	Product
309.18.0001	Results Manager Software Package
325.18.0017	PRO25D Homogenizer 110V
325.18.0018	PRO25D Homogenizer 220V
325.18.0019	SB-1 Homogenizer 110V
325.18.0020	SB-1 Homogenizer 220V
325.18.0021	20mm x 115mm Generator Probe
325.18.0022	20mm x 200mm Generator Probe
332.18.0011	2 Years In-Lab Spares Kit comprising of: 4 x Aquamax KF Reagent Kit, 4 x GasTight 1.0ml Syringe, 4 x Luer Needle 19 Gauge, 2 x 1.0 Microlitre Water Check Syringe, 8 x Injection Septa (pack of 10), 2 x Stirrer Bar, 2 x Electrode Lead, 2 x Thermal Paper Rolls (pack of 20)
332.18.0012	2 Years On-Site Spares Kit comprising of: 4 x Aquamax KF Reagent Kit, 4 x GasTight 1.0ml Syringe, 4 x Luer Needle 19 Gauge, 2 x 1.0 Microlitre Water Check Syringe, 8 x Injection Septa (pack of 10), 2 x Stirrer Bar, 2 x Electrode Lead, 2 x Thermal Paper Rolls (pack of 20)



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