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## Data Sheet

# Fully Automatic Water Content Measuring Test Equipment Aquameter KFM 3000

The coulometer Karl Fischer titration based KFM 3000 serves for the water content determination of insulating oils and gases. Despite its compact construction the equipment fulfils all the expectations.

The KFM 3000 has two operational modes: an expert and a standard mode. In the standard mode only those functions are accessible which are used during the daily routine. The operation in this mode is extremely simple and requires only a few interactions from the user.

**Features:**

- Built-in thermal printer.
- Two RS-232C-Interfaces permit the communications with a balance and external printer.
- The new automatic regulator algorithm guarantees precision and correctness also for water contents in the lower micro gram range.
- The languages German, English, French, Spanish, Portuguese, Swedish and Italian belong likewise to the standard equipment.
- Illuminated graphical LCD Display.
- Graphical representation of the determination process (water content as function of the time).
- The KFM 3000 is available with diaphragm generator cell.
- The integrated measurement memory offers place for approx. 100 measurements.

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**Technical specifications:**

| | |
|---|---|
| **Operating modes:** | KFC Coulometric KF-titration.<br>KFC-B Coulometric KF-titration with blank deduction.<br>BLANK Blank determination.<br>GLP Validation of the Coulometer. |
| **Endpoint indication:** | Volta metric, AC indication.<br>$I_{pol}$ 2, 5, 10, 20 or 30 µA (adjustable). |
| **Iodine production:** | Pulses of variable length and current intensity.<br>Current at the electrode: 100, 200, 400 mA. |
| **Titration rate:** | Max. 2,24 mg $H_2O$/min. |
| **Determination range:** | 10 µg to 200 mg $H_2O$. |
| **Resolution:** | 0,1 µg $H_2O$. |
| **Reproducibility:** | Sample: water standard from a reagent manufacturer.<br>10 µg ≤ m($H_2O$) ≤ 1000 µg ±3 µg<br>m($H_2O$) > 1000 µg $H_2O$ ±0,3 % or better. |
| **Drift compensation:** | Automatic, manual or none. |
| **Materials:** | Housing Power-coated metal.<br>Keypad cover Polycarbonate (PC). |
| **Screen:** | Graphical LCD, 192 x 64 dots, backlit.<br>Field: 100 x 37 mm. |
| **Printer:** | Built-in thermal printer.<br>Paper width 57 mm. |
| **Memory:** | Method storage for approx. 100 methods.<br>Silo memory for sample data and results. |
| **Stirrer control:** | Switching on/off either manually or coordinated with the titration process. |
| **RS-232-Interface:** | 2 separate interfaces, each can be configured for printer, balance or computer connection: completely controllable from external control unit. |
| **Ambient temperature:** | Nominal operation range 5…40°C<br>Storage -20…60°C<br>Transport -40…60°C |
| **Safety specifications:** | Designed and tested in accordance with IEC publication 1010, safety class I. |
| **Power connection:** | Voltage 100…240 V ±10 %<br>Frequency 50…60 Hz<br>Power consumption max. 38 W<br>Fuse 2 x T1H 250 V (The fuse can be changed<br>only by sending the unit back). |
| **Dimensions:** | Width 145 mm<br>Height 194 mm<br>Depth 307 mm |
| **Weight, including keypad:** | Approx. 4,5 kg. |

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**Standard equipment**

- Aquameter KFM 3000, generator electrode with diaphragm and printer
- Magnetic stirrer
- Indicator electrode, double Pt
- Generator electrode with Diaph.
- Drying tube
- Glass stopper NS 14
- Stopper NS 14/M10 KFM 3000
- Set of septa, 5 items each 16 mm
- Titration vessel 250 ml for KFM 3000
- Magnetic stirring bar
- Stand console for mounting stirrer or Ti Stand KFM 3000
- Adjusting ring ø 10 mm for KFM
- Support rod, length 250 mm KFM
- Titration vessel holder KFM 3000
- Electrode cable F for indicator electrode KFM
- Electrode cable H for generator electrode KFM
- Keypad for KFM 3000
- Rolls of thermal paper for KFM 3000
- Spindle for thermal paper for KFM 3000
- Screw cap
- Joint sleeves NS 14 KFM
- Joint sleeve NS 29 KFM
- PTFE joint sleeve NS 19/26 KFM
- Stopper with nipple M10 KFM 3000
- Funnel for  KFM
- Bottle of molecular sieve KFM
- Needle for Syringe
- Syringe 5 ml for KFM

CERTIFIED IQNet MANAGEMENT SYSTEM
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ISO 9001:2000 no.00465/0

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