GESERCO
EQUIPMENT FOR TESTING LUBRICANTS

NUMBER 1
IN LUBRICANT CONDITION MONITORING

Digital Precision Oil Tester DPOT™

WATER IN OIL ANALYZER FOR LUBRICATING OILS, FUEL OILS AND SOLVENTS

The new DPOT™ from GESERCO is the most advanced and innovative water in oil analyzer to be developed by the Number 1 Expert in rapid condition monitoring of oils in service.

DPOT™ is based on the "Aquatest" water in oil analysis method which is standardized by ISO [1], AFNOR [2] and GFC [3] and which was continuously refined by GESERCO over the past 40 years.

[1] Standard ISO 9114: 1997 | [2] Standard NF T60-640 June 2018 | [3] Method GFC TR-40-A-December 14 2014

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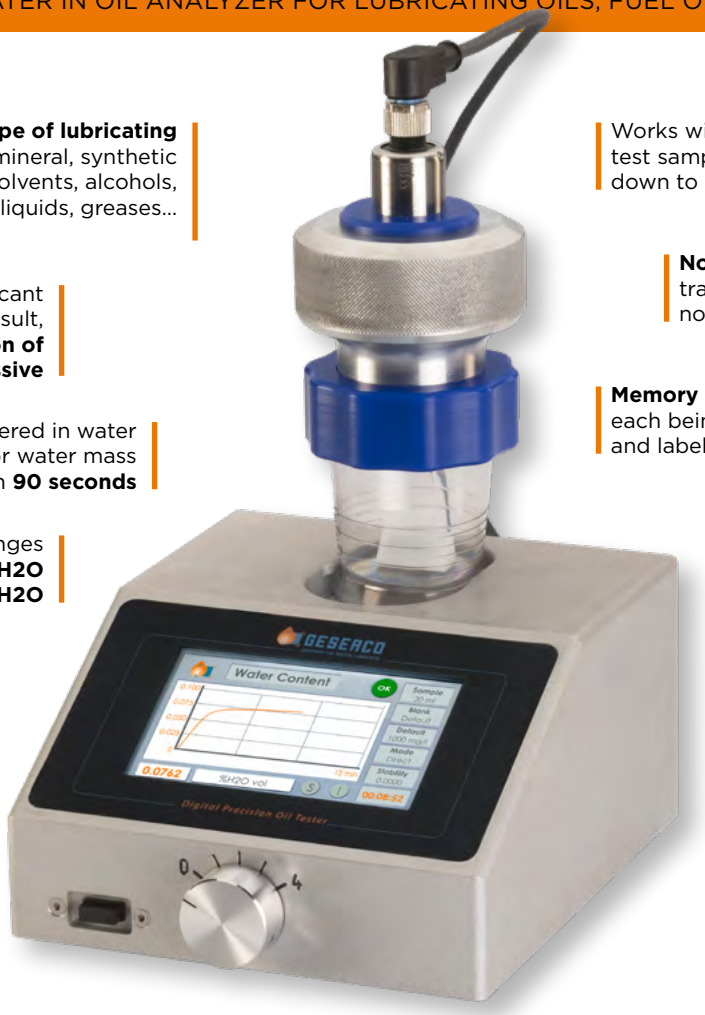
Applicable to **any type of lubricating oils and fuel oils** (mineral, synthetic or bio-generated), solvents, alcohols, aromatic liquids, greases...

No interference of the lubricant additives on the analysis result, **even when the proportion of additives is massive**

Digital result delivered in water volume or water mass within **90 seconds**

8 measuring ranges from **0 – 2000 ppm H2O** to **0 – 15 % H2O**

Very high measurement sensitivity down to **1 ppm** H2O



Works with very small test samples down to **0.5 cc**

No hazardous chemicals for transportation, nor flammable, nor corrosive, nor CMR

Memory for up to 500 test results, each being individually stamped and labeled

The **USB port** allows for test results download and for upgrading the embedded firmware to the latest available version

Small and rugged, the DPOT is extremely simple and quick to use, even when in the hands of an operator with no specific chemistry expertise. Its multi lingual user interface gives step by step operating instructions, and its numerous embedded functions make it easy to use.

Highly efficient **standardized measuring principle**

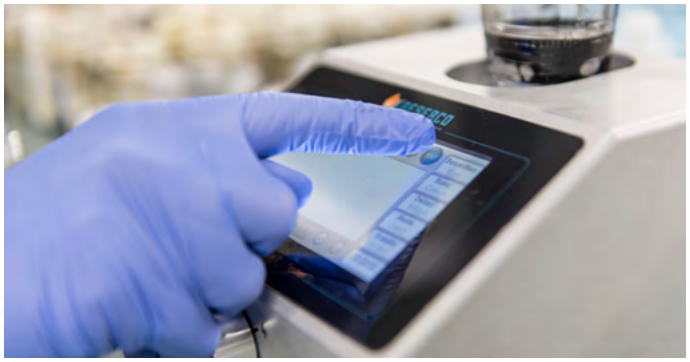
DPOT™ uses the «Aquatest» water content analysis technique which is standardized by ISO, AFNOR and GFC: a reagent transforms each molecule of water in the test sample into gas. The quantity of released gas produces a pressure which is exactly proportional to the water content. A latest generation sensor measures the pressure which is converted to %H2O or ppmH2O then displayed.

A **very robust analytical instrument** made for the job

Extremely small and compact, DPOT™ takes up less bench space than an A4 sheet. Its solid heavy duty aluminum housing gives it great stability and makes it very rugged.

No more dangerous reagents for water content analysis

The standard NH version of DPOT™ does not include any reagent which is hazardous for transport, or flammable, or corrosive or CMR.



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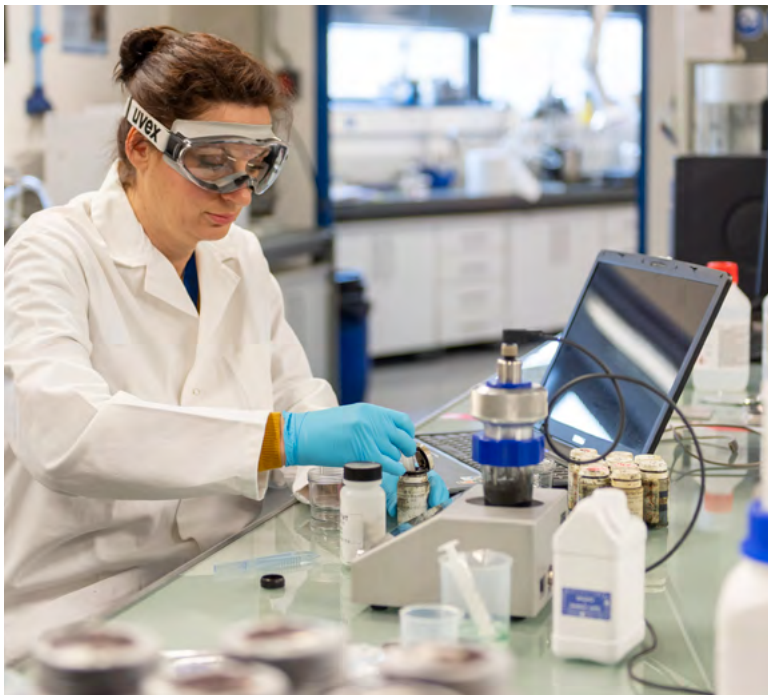
PREDICTIVE TEST MODE:

Result within **90 seconds!**

- The predictive measurement mode of DPOT™ is built on several tens of thousands of water in oil analyses produced by GESERCO over the past 40 years.
- When in predictive test mode, DPOT™ monitors carefully the release of water from the sample as well as the test profile. After a few tens of seconds of integration, the DPOT™ algorithm is able to predict the final water content of the sample with an accuracy better than ±10%. After a few minutes the final result is **estimated to ± 1%**.

This test mode is ideal when screening samples or when the acceptance criterion on the final result is wider.



DIRECT TEST MODE:

Accuracy **maximized!**

- When operating in direct test mode, DPOT™ computes and displays in real time the reaction result as the water is being released from the sample.
- The test development is graphically displayed to facilitate its monitoring by the operator, and the test can be completed either on operator's command, on stability criterion, or after a user programmable time laps of up to 3 hours.

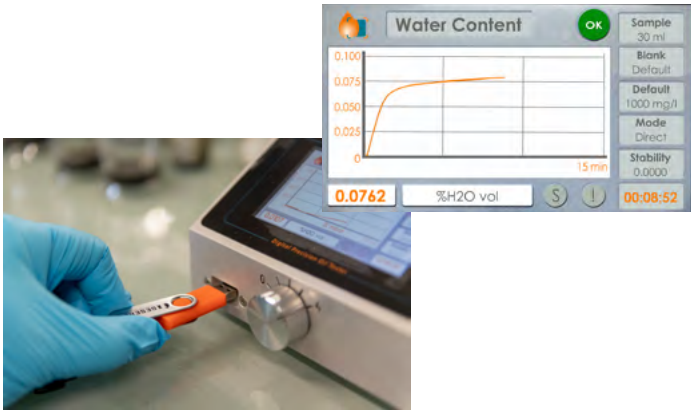
This test mode is ideal when high measurement accuracy is expected, or in delicate cases, for example when water is deeply dissolved in the liquid being analyzed.

3 END OF TEST MODES:

User definable

- Automatic detection of the end of reaction
- Timer
- Operator control

The highly user friendly and intuitive design of DPOT™ expands its scope of application, whatever the operating conditions or the needs of the user.



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Metrological Specifications

MEASURING RANGE	SENSITIVITY	ACCURACY
0 – 2 000 ppm H2O // 0 – 0,2 %H2O	< 1 ppm H2O	± 6 ppm H2O
0 – 3 000 ppm H2O // 0 – 0,3 %H2O	< 1 ppm H2O	± 9 ppm H2O
0 – 7 000 ppm H2O // 0 – 0,7 %H2O	< 1 ppm H2O	± 20 ppm H2O
0 – 15 000 ppm H2O // 0 – 1,5 %H2O	< 1 ppm H2O	± 42 ppm H2O
0 – 25 000 ppm H2O // 0 – 2,5 %H2O	< 1 ppm H2O	± 70 ppm H2O
0 – 37 000 ppm H2O // 0 – 3,7 %H2O	1 ppm H2O	± 0,01 %H2O
0 – 75 000 ppm H2O // 0 – 7,5 %H2O	2 ppm H2O	± 0,02 %H2O
0 – 150 000 ppm H2O // 0 – 15 %H2O	4 ppm H2O	± 0,04 %H2O

Resolution: 5 levels from 1 ppm H2O to 1 %H2O

Engineering units: %H2O volume, %H2O mass, ppmH2O volume, ppmH2O mass

Test principle: Aquatest

Test reagents: Reagent WT or Reagent WT/NH (2), solvent WT2 (2).

2 measuring modes: (1) Direct mode for high accuracy test results

(2) Predictive mode for fastest test results

Time to test result: Down to 90 seconds in predictive mode

4 end of test modes: (1) automatic end of test detection with user defined criterion

(2) standardized test duration (15 minutes)

(3) User defined test duration (up to 3 hours)

(4) On operator command

Sample volume under test: from 0.5 ml

Ergonomics and Embedded Functions

- Large capacitive high-resolution color touch screen
- User interface in French and English
- Step by step user instructions for test preparation and execution
- Built-in magnetic stirrer
- Automatic correction of solvent blank
- 1 factory fluid pattern and 11 user programmable fluid patterns
- Time/date stamping and user defined identifier for each test
- Graphic display of the evolution of the test with dynamic resizing of the curve
- Automatic storage of the results for up to 500 tests
- USB interface to download test results to a computer and to upgrade the embedded firmware
- «Diagnostic» mode for leak detection and / or verification of the embedded sensor

Other Features

- Dimensions: 18 x 16 x 20 cm
- Weight: 5.2 kg
- Power supply: 100 - 240 Vac / 50 - 60 Hz

(1) Or 0.3% typical F.S.; max. 0.5% F.S. (including zero-point, end of scale, linearity, hysteresis and reproducibility)

(2) WT / NH and WT2 reagents are neither dangerous for transport, neither flammable, nor corrosive, nor CMR

Codification

DPOT ™ Analyzer: WT9026

Including: 1 DPOT ™ water content analyzer, 1 power supply unit, 2 magnetic bars, 1 measuring head, 2 reaction flasks, 1 tweezers, 1 stylus, 1 tube of anhydrous grease, 1 operating manual

Non-hazardous reagent pack: PP9109

Traditional reagent pack: PP9110

FEEL FREE TO CONTACT GESERCO FOR DETAILS

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

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