DTA 100 C

BAUR oil breakdown voltage tester

The figure is illustrative

The standard in oil testing in the laboratory

- Suitable for mineral or silicone oils and ester liquids
- Reliable, reproducible measurement results using the latest measurement technology
- Designed for daily continuous operation in laboratories

The DTA 100 C oil breakdown voltage tester automatically tests the electrical breakdown strength of insulating liquids. Test sequences can be accomplished easily and fully automatically in compliance with all international and national standards. With reliable, informative test results it is possible to determine the exact condition of the insulating material and initiate any necessary measures, e.g. preparation of transformer oil.

The high precision of the BAUR oil breakdown voltage testers is based on a tried and tested and very accurate test voltage measurement principle performed directly on the HV unit of the device, as well as the permanent monitoring of the voltage slew (RBM). The especially short switch-off time after a breakdown counteracts the contamination of the oil sample, thus ensuring reliable reproducibility of the measurement results.

The DTA 100 C oil breakdown voltage tester has been specially designed for continuous operation in laboratories. The robust and sophisticated design guarantees safe and failure-free operation for several hundred thousands of oil sample measurements.

Features

- Test voltages of 0 to 100 kV_{rms}
- Reliable, reproducible measurement results across multiple measurements thanks to short switch-off time < 10 µs
- Clear breakdown detection by means of very precise measurement principle performed directly in the HV unit and RBM technology
- Fully automatic test sequences for 19 common test standards around the globe and spot tests
- Easy creation of user-specific test sequences
- Built-in sensor for measuring the temperature of the insulating liquid
- Precise adjustment of standard electrode distances
- Automatic self-test with HV output voltage test each time you start
- EMC screen for preventing damage to electronic devices nearby
- Comprehensive safety concept, incl. high voltage shutdown through cover contacts
- User interface available in 14 languages
- Illuminated test vessel
- Ergonomic operating unit with oil-proof membrane keypad, easy to read LC colour display and integrated printer
- Automatic reading of measurement results and creation of measurement logs in PDF format or as text file with BAUR oil tester data management software ITS Lite*
  - Management of measurement results for multiple oil testers possible
  - Customised layout of measurement logs

*Free download at www.baur.eu

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Technical data

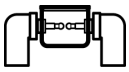
General	
Input voltage	90 – 264 V (50/60 Hz)
Power consumption	Max. 70 VA
Display	Colour LCD (approx. 3.5"), screen Resolution 320 x 240 pixels
Data interface	▪ USB 2.0 (type B plug) ▪ BAUR Report Manager external USB interface (type A plug)
Printer	Matrix printer, 24 characters, 57 mm plain paper
Ambient temperature (operational)	-10°C to +55°C
Storage temperature	-20°C to +60°C
Humidity	Non-condensing
Dimensions (W x H x D)	545 x 458 x 380 mm (closed) 545 x 770 x 461 mm (open)
Weight	Approx. 39 kg
Degree of protection	IP32
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU), EMC Directive (2014/30/EU), EN 60068-2-ff Environmental testing
Software available in	Czech, Chinese (CN), Chinese (TW), Dutch, English, French, German, Italian, Korean, Polish, Portuguese, Russian, Spanish, Turkish

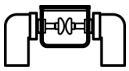
Insulating oil testing	
Output voltage	0 – 100 kV_{rms} symmetrical
Voltage slew rate	0.5 – 10 kV/s
Switch-off time	< 10 µs
Voltage slew monitoring	Real Breakdown Monitoring (RBM)
Accuracy	0 – 100 kV ± 1 kV
Resolution	0.1 kV
Internal temperature recording of the oil sample	0 – 99°C
Temperature resolution	1°C
Test standards	ASTM D1816:2012 1 mm, ASTM D1816:2012 2 mm, ASTM D1816/97, ASTM D877/D877M:2019 PA, ASTM D877/D877M:2019 PB, BS EN 60156, CEI EN 60156, CSSR RVHP:1985, IEC 60156 ED4:2024, IEC 60156 ED4:2024 Annex A, IRAM 2341:1972, JIS C2101:1999, PN 77/E-04408, SEV EN 60156, UNE EN 60156, NF EN 60156, SABS EN 60156, VDE 0370-5:1996, AS 1767.2.1
User-specific test sequences	10

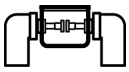
Standard delivery

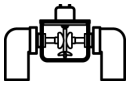
- DTA 100 C oil breakdown voltage tester
  incl. integrated plain paper printer
- 1 x glass test vessel (test standard as selected)
- Magnetic stirrer
- Lifting stick for magnetic stirrer
- Setting gauge (test standard as selected)
- Mains supply cord, 2.5 m
- User manual

Available test vessels 0.4 litre made of glass (with cover)


Test vessel according to IEC 60156 Fig. I


Test vessel according to IEC 60156 Fig. II


Test vessel according to ASTM D877


Test vessel according to ASTM D1816

Accessories and options

- Dust cover
- Transport case
- Magnetic stirrer
- Lifting stick for magnetic stirrer
- Setting gauge 1 mm acc. to ASTM D1816
- Setting gauge 2 mm acc. to ASTM D1816
- Setting gauge 2.5 mm acc. to IEC 60156
- Setting gauge 2.54 mm acc. to ASTM D877
- Setting gauge 4 mm acc. to BS EN 60156
- Setting gauge 5 mm acc. to SEV EN 60156
- Face pin wrench for disassembling the test vessel
- Paper roll for printer, 57 mm width
- Ink ribbon (black) for printer
- Glass test vessels 0.4 litres acc. to IEC 60156 Fig. I or Fig. II,
  ASTM D1816 or ASTM D877
- Electrode pair for test vessels acc. to IEC 60156 Fig. I or Fig. II,
  or ASTM D877
- BAUR Report Manager – External USB interface for measurement data management

Would you like to discover more about this product?
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