

# Auto & Semi-Auto High Voltage Insulating Oil Testers

[www.koehlerinstrument.com](http://www.koehlerinstrument.com)



 **Koehler**  
INSTRUMENT COMPANY, INC.



### Features & Benefits

- Conforms to ASTM D877, D1816 and related test specifications
- Suitable for all insulating fluids
- Fast cut-out of the high voltage immediately after oil dielectric breakdown
- Overtemperature protection system with power cut-out

### Test Method

The majority of high-voltage transformers, cables, switchgears, transducers, capacitors, and rectifiers use insulating oils for insulating electrically live parts and to carry off thermal energy. The quality of the insulating oil must be checked at regular intervals to ensure a long equipment service life. The most important requirement of an insulating oil is a high dielectric strength. Determination of the dielectric breakdown voltage of insulating oils provides an early detection method for any reduction in the insulating properties.

## Dielectric Breakdown Voltage of Insulating Oils

### Automatic & Semi-Automatic High Voltage Insulating Oil Testers

The microprocessor-based Koehler Automatic and Semi-Automatic High Voltage Insulating Oil Testers perform the determination of insulating oil dielectric breakdown for both single and multiple tests. The portable apparatus consists of a frame housing with LED display, sample compartment with indirect illumination, and a motor-driven rotary table. The measuring electrodes are swiveling and arranged eccentrically with respect to the axis of the table, enabling an easier cleaning and dispersing of any combustion sediments by the rotary motion. A thorough mixing of the oil is achieved by a magnetic rod inserted into the testing vessel. Contactless drive is provided by a small motor with an additional magnet below the lift. For operator security, the sample chamber is closed by a perspex door with an interlocking switch. A special safety feature locks the start button in case of improper electrical grounding.

### Specifications

Conforms to the specifications of: ASTM D877, D1816; IP 295; FTM 791-5702; NF C 27-221; IEC 60156; DIN VDE 0370

Voltage Between Electrodes: 0-60, 0-75, or 0-100 kVrms

Resolution: 1 kV

Testing Transformer Power: 250 VA

Voltage Increase, adjustable: 0.5, 2, 3, or 5 kV/sec

Shutdown Sensitivity: approx. 5mA

Accuracy: ±1%

Switch-off Time: < 100µsec

Display: 7 segment LED

Ambient Operating Temperature: 0-40°C

Ambient Operating Humidity 80% RH at 40°C

### Included Accessories

Epoxy Test Cup, 400mL  
Setting Gauge 2.5 / 10mm  
Fuses (2)

### Optional Accessories

Transport Case

### Electric Requirements

Electrical Requirements  
115/230V 50/60Hz

### Dimensions l x w x h, in. (cm)

17.5x19.75x13.5 (44.5x50x34.5)  
Net Weight: 88 lbs (40kg)

### Ordering Information

Catalog No.	Description
K16171	Semi-Auto High Voltage Insulating Oil Tester, 60kV
K16174	Semi-Auto High Voltage Insulating Oil Tester, 75kV
K16176	Semi-Auto High Voltage Insulating Oil Tester, 100kV
K16173	Automatic High Voltage Insulating Oil Tester, 60kV
K16175	Automatic High Voltage Insulating Oil Tester, 75kV
K16177	Automatic High Voltage Insulating Oil Tester, 100kV

### Accessories

K16171-6	Pair of Electrodes, spherical dome shaped (ASTM D1816)
K16171-7	Pair of Standard Electrodes (IEC 60156; DIN VDE 0370)
K16171-8	Pair of Electrodes, disc shaped (ASTM D877)
K16172	Parallel Port Interface with BCD Printer <i>For printing, the instrument should be ordered together with K16172 Parallel Interface and BCD Printer.</i>

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