

## Oil Breakdown Voltage Test Set

'SECO' make Oil Breakdown Voltage Test Set is used for testing of dielectric strength of insulating oils used in transformers, switch gear, etc. It is very useful tool for Manufacturing Units, Maintenance units, Oil filtration units, Laboratories, OEMs and even End user customers. The Oil Test Set is capable of supplying very high voltages, typically 60 kV, 80 kV and 100 kV AC between the electrodes with adjustable gap between them, located in an insulating, transparent Oil Test Cup. The midpoint of high voltage winding is connected to EARTH.

A motorised variac supplies gradually increasing Test Voltage till the Oil breaks down OR till the Maximum value of Test Voltage, whichever is reached earlier. To test the dielectric strength of Oil, very high voltage is passed through the oil between two electrodes. The oil breaks down with a spark in the gap between electrodes. Oil BDV test set trips at that instant and indicates voltage at which breakdown occurred. The value of Test voltage is indicated on a Panel Meter. The set is complete with a standard oil test cup with adjustable gap, a transparent cover which is electrically interlocked to prevent accidental touch to live parts and a voltmeter for the high voltage measurement.



### Technical Specifications and Features:

<b>Input:</b>	Single phase, 230 V $\pm$ 10%, 50 Hz AC supply. (Test set suitable for other voltage and frequency can be supplied as per specific requirement from customer).
<b>Output:</b>	Continuously variable, Ranges can be selected from the following while ordering the Test set. 0 - 60 kV, 0 – 80 kV, 0 - 100 kV
<b>Tripping Current:</b>	10 mA standard. (20 mA can be supplied as a special requirement).

<b>Operation:</b>	The operation can be Manual, Semi-automatic (Motorised) or Fully Automatic (Microprocessor based).
<b>Indication of Output Voltage:</b>	Analog Panel Meter (Digital Panel meter can be provided as Option).
<b>Accuracy:</b>	± 5 % of Nominal value in 20 – 100 % of range.
<b>Rate of rise of Test Voltage:</b>	2 kV / second approx.
<b>Electrodes:</b>	Mushroom type, 36 mm (Other shapes can be provided as option)
<b>Reference:</b>	Can be used to test in accordance with IS: 6792, IEC: 60156
<b>Other Features:</b>	<p>Zero Start Interlock: High voltage cannot be energised unless variac is brought to Zero position.</p> <p>Maximum position interlock: Variac cannot exceed the Max. position set.</p> <p>HV chamber cover Interlock: High voltage cannot be switched ON if HV chamber safety cover is not closed.</p> <p>Open Earth interlock: Set cannot be switched ON if Earth terminal is not connected to Earth (Ground).</p> <p>Trip voltage hold: Value of Test voltage at Trip is held on Display till Reset.</p> <p>Provision of Indicating Lamps</p> <p>Fuse Protection</p>
<b>Optional Features:</b>	<p>Values of specifications other than given above can be provided on request.</p> <p>Special lucrative Enclosure with Castor Wheels can be provided.</p> <p>Magnetic Stirrer for keeping the oil moving inside oil test cup during testing.</p> <p>Fault Reset Interlock: Next testing cannot be started till the fault is acknowledged by pressing RESET push button.</p> <p>Other shapes of Electrodes</p> <p>Buzzer</p>
<b>Controls:</b>	Switches, Push Buttons and Indicating Lamps are provided for all appropriate circuits to ensure greatest convenience to the user.
<b>Environment:</b>	<p>Reference Temperature: 23 Deg. C ± 2 Deg. C</p> <p>Operating Temperature: 0 to + 50 Deg. C</p> <p>Operating Humidity: &lt; 80 % RH at 40 Deg. C Non condensing</p> <p>(De-rating of specifications is applicable in case environmental parameters exceed Reference range).</p>