TESTING APPLICATIONS
Measure the breakdown voltage of insulation fluids used in transformers, capacitors, bushings and related high voltage equipment. With the appropriate oil vessel test cell, these test sets are designed to perform tests in accordance with standards ASTM D1816, ASTM D877, IEC 60156, BS 148, VDE 0370, plus other applicable standards.

DESCRIPTION
Three standard models rated at 60, 75, and 100 kV are available. The operating controls are conveniently grouped on the front panel and include a large, easy-to-read digital voltmeter, on/off switch with indicator light, rate of rise selector switch, plus a start/reset switch. The test compartment is provided with a transparent cover interlocked to the test circuit with a limit switch to ensure full operating safety.

The test set is semi-automatic. The liquid to be tested is placed in the test cell and then placed in the test compartment on the cradle contacts, the rate of rise is selected, the test chamber lid closed, and the switch moved to start position. The test set will automatically raise the voltage. When a breakdown of the liquid occurs, the test sample failure lamp will illuminate, and the meter will hold the breakdown voltage level.

➤ Lightweight and ruggedly constructed for years of field or lab use
➤ Economical liquid dielectric testing solution
➤ Simple set-up
➤ Semi-automatic operation
### SAFETY and DESIGN FEATURES

- Center tapped high voltage transformer.
- Safety interlock engaged when lid is open.
- Fast acting relay ensures immediate cutout at flashover.
- Lamp indicating AC power on.
- Lamp indicating test sample breakdown.
- Fuses are located on the input to the test set and on the primary of the high voltage transformer.
- Zero start interlock
- Memory voltmeter retains breakdown voltage.
- The test compartment is provided with outlet for convenient plug-in of motor driven stirrer when testing to ASTM D1816 and VDE standards.

### ENVIRONMENTAL CONDITIONS

- 10-40°C, indoor/outdoor in fair weather
- Humidity <95% non-condensing
- Altitude <3300 ft (1000 meters)
### OPTIONS

#### TEST CELLS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>TEST STANDARD</th>
<th>TEST ELECTRODES</th>
<th>GAP SETTING</th>
<th>RATE OF RISE</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC/DE (flat electrodes)</td>
<td>ASTM D877</td>
<td>Polished brass disc 1&quot; (25 mm) diameter</td>
<td>.1&quot; +/-0.0005&quot;</td>
<td>3000 Volts per Second</td>
</tr>
<tr>
<td>TC/VDE (motorized with stirrer)</td>
<td>ASTM D1816</td>
<td>Spherical dome 1.4&quot; (36 mm) diameter</td>
<td>.04&quot; or .08&quot; +/-0.001&quot;</td>
<td>500 Volts per Second</td>
</tr>
<tr>
<td>TC/IEC</td>
<td>IEC 60156</td>
<td>Spherical dome 36 mm (1.4&quot;) diameter</td>
<td>2.5 mm +/-0.1 mm</td>
<td>2000 Volts per Second</td>
</tr>
<tr>
<td>TC/BS</td>
<td>BS 148</td>
<td>Spherical cap 12.5 mm (.5&quot;) diameter</td>
<td>2.5 mm +/-0.1 mm</td>
<td>2000 Volts per Second</td>
</tr>
</tbody>
</table>

**Liquid Dielectric Comparison Unit**

As an External Voltmeter unit for use with Phenix Technologies Liquid Dielectric (LD) test set, the LDCU may be used before testing oil or as a periodic standard to verify the voltmeter operation of the LD test set. The easy to use LDCU installs into the same position as the LD test cells.

The LDCU consists of precision voltage dividers with passive analog voltmeter. The high voltage resistors and meters are housed in a custom built composite material enclosure with brass terminals for direct connection to the LD. The voltmeter scale offers a direct read of voltage for comparison to the LD voltmeter.
PHENIX Technologies is committed to providing leadership, innovation, technology, quality, and service in all areas of our business.

Our 80,000 square-foot headquarters is a modern manufacturing facility. All aspects of electrical, mechanical, and software design and production are performed in this facility and controlled by an ISO9001 certified quality program. Our engineers offer a unique blend of theoretical knowledge and practical experience. Our Service and Calibration Department assists customers during and after installation to ensure years of trouble free service.

We carry our commitment into the future as we proudly continue to provide the best in high voltage, high current, high power test systems and components.