We are **OEM Manufacturer** of **transformer testing instruments** with **in-house R&D Division**.

**We Provide**

- Test and Measurement Solution for Transformer, Motor, Pump, LED lights and other Electrical Appliances.

**Our Approach**

- Service Driven
- Customer Centric
❖ To Make Import Substitute Products
❖ To Promote MADE IN INDIA Products
Why Transformer Testing Is Important?

- Transformer is a **heart of electricity distribution system**, which has the major impact on industries overall cost, its reliability and efficiency. Energy efficient transformer distributes power from power generating facilities to end-users and while energy loss during transmission is inevitable, measures are taken to reduce it considerably. Losses in transformer occurs due to faulty raw material, inappropriate design of transformer & improper assembling of transformer. If we measure that losses we can improve efficiency. So, it is crucial to test transformer for saving energy & confirming performance of transformer.

- **Type test of transformer** confirms main and basic design criteria of a production lot.

- **Routine tests of transformer** is mainly for confirming operational performance of individual unit in a production lot.

- **Special tests of transformer** is done as per customer requirement to obtain information useful to the user during operation or maintenance of the transformer.
Benefits of Testing Transformer

- Long life of Transformer is ensured
- Brand Value increases as the tested transformers are performing as per standards.
- Efficiency increases which reduce maintenance and costing of labor Work.
- Leads to increase huge Energy Saving.
- A tested Transformer will be energy efficient as all its faults were resolved at the production.
- Testing Transformers is also important for safety measures as the transformers have already gone through those situations during the time of production.
Transformer Test

Type Test
- All Routine Tests
- Lightening Impulse Test
- Temperature Rise Test
- Air Pressure Test
- Permissible Flux Density & Overfluing

Routine Test
- Winding Resistance Test
- Insulation Resistance Test
- HV Test
- DVDF Test
- Turns Ratio Test
- No Load Test & Full Load test (OC & SC Test)
- Vector Group Verification Test
- Oil BDV Test

Special Test
- Harmonic Test
- Vibration Test
Open and Short Circuit Test

- Open circuit test on transformer is used to determine core losses in transformer.

- Short circuit test on transformer is used to determine copper loss in transformer at full load.

These two tests are performed on a transformer to determine
- Voltage Regulation of Transformer (Percentage change in the output voltage from no-load to full-load)
- Efficiency of transformer (Output Power / Input Power)
Better method to find efficiency of a transformer is using, efficiency = $(\text{input} - \text{losses}) / \text{input} = 1 - (\text{losses} / \text{input})$.

The power required for these open circuit test and short circuit test on transformer is equal to the power loss occurring in the transformer.

- **Equipment Used for Testing:** 3 Phase Power analyzer with Other Required Accessories
Transformer Ratio Test

- The performance of a transformer largely depends upon perfection of specific turns or voltage ratio of transformer. So transformer ratio test is an essential type test of transformer.

- \[ V_1/V_2 = N_1/N_2 \]

- The voltage ratio is equal to the turns ratio in a transformer.

- It Ensure Proper Performance of Transformer.

Object: Equipment Used for Testing: Transformer Turns ratio Meter
High Voltage Test

❖ Performed to ensure expected over all insulation strength of Transformer.

❖ To check the ability of main insulation to earth and between winding.

❖ The Basic test Voltage for HV test is the 2X (Operating Voltage) + 1000 V for 1 minute duration.

- **Equipment Used for Testing:** High Voltage Tester
Temperature Rise Test

❖ Perform to verify the calculated temperature rise (ΔT). The test is performed in two steps. The "no-load" test results in temperature rise due to the hysteresis losses in the magnetic core. The "short-circuit" test results in temperature rise due to the thermal losses on the windings.

❖ Mainly perform to verify the worst case average temperature rise in the transformer windings.

❖ The test involves two independent tests; an open-circuit (no-load) test and a short-circuit test.

- **Equipment Used for Testing:** RTD Sensor with Temperature Indicator & Winding Resistance Meter
It is also known as IOVT (Induced Over Voltage Test), it is usually performed to check in turn insulations of the windings.

As per IEC specifications, test should be carried out by applying double the rated voltage (usually LV side is preferred) at double the rated frequency to the transformer for 1 minute, one winding open circuited (usually HV preferred).

There is no restriction on frequency, as it can be more than double the rated frequency but it should not be less than double the rated. Time period depends upon test frequency.

- Equipment Used for Testing: Motor Generator Set (DVDF Test Set)
Test Sequence

➢ Low Voltage/Rated Voltage Tests

- Ratio
- Polarity
- Resistance
- Core loss
- Load loss
- Zero sequence
- Temperature rise/overload
Test Sequence

➢ **Dielectric Tests**

- Lightning impulse
- Switching impulse
- Applied voltage test
- Induced voltage/Partial discharge test
- Repeat no load test when specified
## Our Products

### 3-Phase Precision Power Analyzer: VPA-60080

![Image of 3-Phase Precision Power Analyzer]

### Application

![Image of application example]

### Key Features

<table>
<thead>
<tr>
<th>Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRMS Voltage: 600V/1200V Phase, 1050V/2100V Line</td>
</tr>
<tr>
<td>TRMS Current: 80 A/160A Direct</td>
</tr>
<tr>
<td>Basic accuracy: +/- 0.1%</td>
</tr>
<tr>
<td>Data Storage Inbuilt: 500</td>
</tr>
<tr>
<td>High Speed Measurement In 0.25sec</td>
</tr>
<tr>
<td>NABL certified in EQDC &amp; ERDA</td>
</tr>
<tr>
<td>Torque, RPM, %Slip, Eff. Measurement (Motor Version)</td>
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<tr>
<td>Flow, Head, RPM, %Slip Measurement (Pump Version)</td>
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<tr>
<td>Portable in Size</td>
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WhatsApp: +91-99090 36698 / +91-98792 08038

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Our Products

AUTOMATIC TRANSFORMER TURNS RATIO METER:-VTRM

New Design Launched Specially for Distribution & Other Transformers

VTRM

VTRMe

KEY FEATURES

- Fully Automatic Measurement of Turns Ratio
- 0.1 % Accuracy For VTRM, 0.2% Accuracy For VTRMe
- LCD to see Measured Parameter
- Reverse Polarity Indication
- Switch for test ON & OFF
- Hold Switch to Freeze Result
- Inbuilt Over Current Protection for Short Winding
- 36 Vector Group Selection Facility Available In VTRM (Optional)
- Ratio Range 1.0-200.0/1.0-2000.0

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Our Products

AC High Voltage Tester: VHT

Application
- Transformer Manufacturer
- Pumps Manufacturer
- Ceramic & Porcelain Manufacturer
- Motor Manufacturer

KEY FEATURES

- KV Meter for High Voltage Indication
- mA Meter for Leakage Current Indication
- Timer to Set Testing Time
- Variable Test Voltage Setting Knob
- Selection Switch for Leakage Current
- 3 in 1 Digital Meter (KV, mA & Timer)
- Over Current Protection
- Output Voltage Range 3kV to 100 kV
- Switch for Test ON/OFF
- Visual Indication for High Voltage ON
- Dimmer Zero Limit Switch
- High Glow LED Display
- Compact & Simple to Operate

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Our Products

Transformer Testing Panel:- VTTP

KEY FEATURES

- Useful for No Load Test (O.C), Load Test (S.C), DVDF Test, HV Test for Transformer
- Capable to Test up to 1000 KVA
- Mains Indication by R, Y, B Indication Lamp
- Computer Interfacing Software for Power Analyzer
- Compliance to IS: 2026 & Other Standards
- Hold Feature to Freeze all measurement of Power Analyzer
- Zero Start Interlock Facility

NOTE: Above all product photos are for reference purpose, actual products may be differ.

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Our Products

Digital Epstein Tester:-VET-1608

Application

KEY FEATURES

Basic accuracy: +/- 0.1%
IS:649 & ASTM A-343 Compliance
B-H Curve Measurement
Free Software For Test Report
Accurate sine wave with Negative feedback
Tamper Proof calibration
USB & RS-232 Port for Computer Interfacing
Automatic Over Voltage Shut Down
Fuse Protection For Over Current Condition

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## Our Products

### Digital Iron Loss Tester: - VDW-2065

![Digital Iron Loss Tester](image)

#### Application

#### Key Features

<table>
<thead>
<tr>
<th>Feature</th>
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<tr>
<td>Direct Measurement Of Watt/Kg</td>
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<tr>
<td>Testing Up to 0.65 mm thickness</td>
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<tr>
<td>Testing For 1.0-1.8 Tesla Induction</td>
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<tr>
<td>Testing up to 19.00 Watt/Kg</td>
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<td>Immediate Testing Of Specimen</td>
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<tr>
<td>ISO 9001:2008 Compliance</td>
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<tr>
<td>Ultra Glow Red LED Display</td>
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<td>Portable in Size</td>
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Partial List Of Our Valuable Government Clients

[Logos of various government clients]
Partial List Of Our Valuable Private Clients

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Contact Us

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THANK YOU