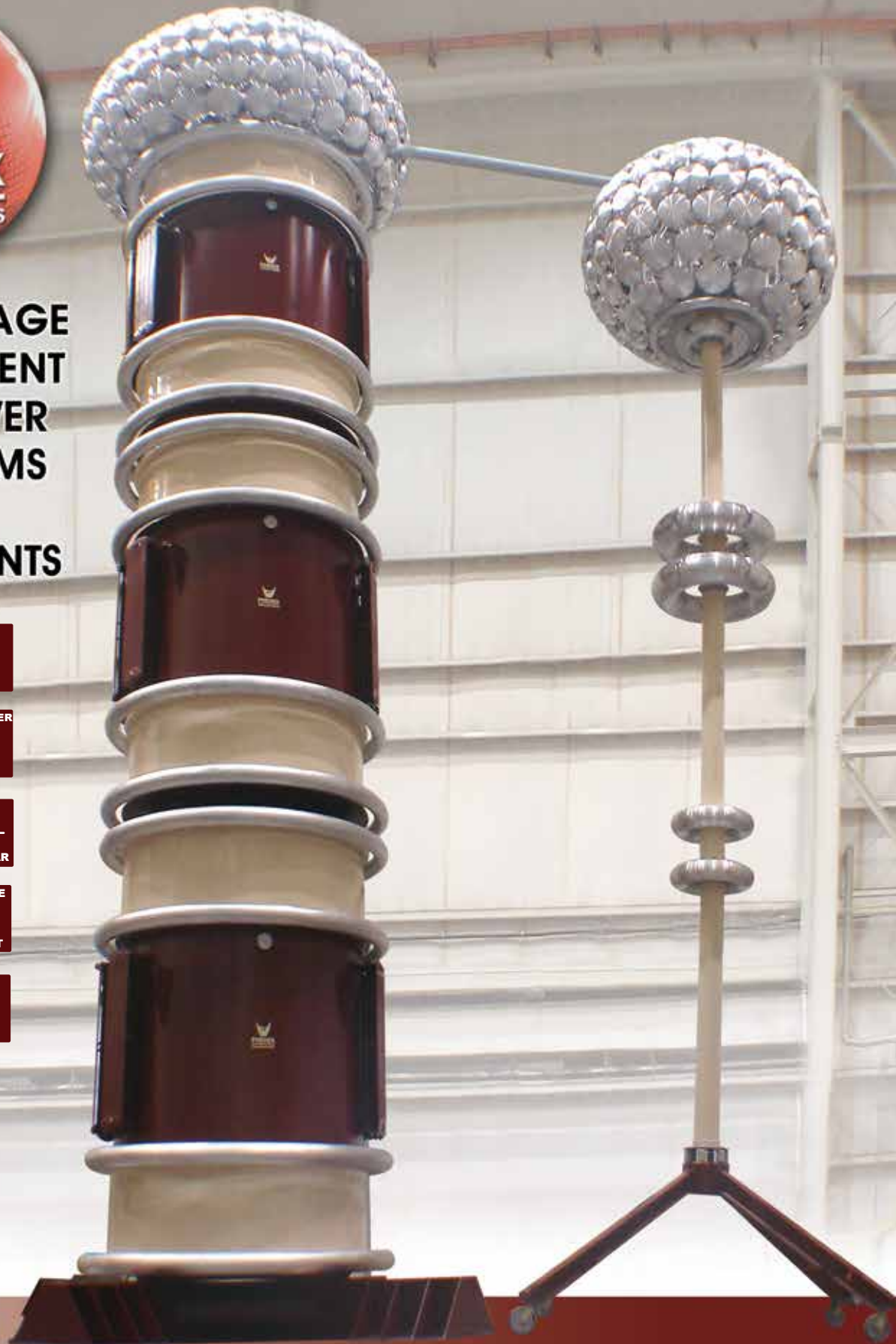




**HIGH VOLTAGE
HIGH CURRENT
HIGH POWER
TEST SYSTEMS
AND
COMPONENTS**

- | | |
|-------------------------------------|-------------------------------------|
| CABLE
 | CIRCUIT
BREAKER
 |
| MOTOR
 | TRANSFORMER
 |
| GENERATOR
 | GIS
SWITCHGEAR
 |
| RECLOSER
 | PROTECTIVE
EQUIPMENT
 |
| INSULATION
MATERIALS
 | PORTABLE
 |



Product Line

PHENIX TECHNOLOGIES

Phenix Technologies is a manufacturer of high voltage, high current, high power test systems and components.

We have been in business since 1975, beginning as American HV Test Systems. In 1989, the company became Phenix Technologies. Our manufacturing facility is located in Accident, Maryland, USA with additional sales offices located in Atlanta, GA; San Francisco, CA; Basel, Switzerland; and Taipei, Taiwan. Additionally, we have sales representative organizations across the U.S. and in over 50 countries.

Our state-of-the-art products have been delivered around the world providing quality assurance testing solutions to:

- Electrical Utilities
- Equipment Manufacturers
- Motor Manufacturers and Repair Industry
- Transformer Manufacturers and Repair Industry



- Cable Manufacturers and Service Contractors
- Personal Protective Equipment Test Laboratories
- Field Service Organizations
- High Voltage Test Laboratories
- Quality Control Areas

Phenix Technologies offers a full line of standard-design products as well as the expertise to design and build custom test systems.

Our product line includes:

RESONANT TEST SYSTEMS

Applications

- AC High Potential testing providing higher current than traditional AC transformers
- Perform GIL/GIS, Cable, Transformer, Motor, Generator high potential testing
- Variable Frequency systems for on-site/field testing

Phenix offers

- Ratings from 25 kV to over 1 million Volts, 50 or 60 Hz
- Variable Frequency from 20 to 300 Hz or Variable Inductance systems
- High Q ratings for low input current requirements
- Basic or advanced computerized control options
- Dead tank and insulated cylinder designs
- Series and parallel configurations
- Stand-alone, skid-mounted, and truck-mounted
- Systems for laboratory use and outdoor applications



Variable Frequency, 265 kV, 22 MVA



Series/Parallel, 400 kV, 2000 kVA



Cascade Type, 500 kV, 25 MVA



AC and DC DIELECTRIC HIGH POTENTIAL (HIPOT) TEST SYSTEMS

Applications

- Verify electrical insulation integrity and safety in any type of electrical apparatus
- Perform Dielectric Breakdown Tests, Dielectric Withstand Tests, Insulation Resistance Tests, Partial Discharge Tests

Phenix offers

- Ratings from 1 kV to over 1 million volts AC or DC
- Basic or advanced computerized control options
- Rugged design for field, industrial, and laboratory settings
- Stand-alone, modular, truck-, trailer- or container-mounted
- Models meeting specific standards such as ASTM D149 for material testing and ANSI A92.2 for insulated work platforms
- Units integrated with Partial Discharge Detectors
- Stackable DC test sets up to 600 kV DC and custom systems with voltage levels up to 1.5 million volts DC
- Oil insulated or epoxy cast high voltage transformers



AC, Cascade Type, 400 kV, 800 kVA



Stackable DC, 180 kV, 5 mA



AC, 20 kV, ASTM D149



AC, Tank Type, 50 kV, 125 kVA



AC, Tank Type, 300 kV, 150 kVA



DC, 1200 kV, 20 mA



HIGH CURRENT TEST SYSTEMS

Applications

- Verify the operation of circuit breakers and reclosers by injecting primary current into the test specimen and verifying the mechanical operation and trip timing of the device
- Designs for product specific testing or custom high current power sources
- Circuit breaker and recloser testing, for real power primary injection testing

Phenix offers

- High Current Test Sets from 300 Amps to 75,000 Amps for instantaneous trip testing of circuit breakers. Computer controlled models feature test template creation and data acquisition
- Recloser Test Sets with output power of 19 kVA or 47 kVA, featuring database creation of test results and procedures to allow repetitive testing of common reclosers



TRANSFORMER TEST SYSTEMS

Applications

- Testing transformers to verify the quality of manufacture or remanufacture
- Perform all applicable tests per ANSI C57 and IEC 60076 standards on single and three-phase distribution and power transformers
- Perform no-load/full-load loss measurements, applied potential, induced potential, winding resistance, and turns ratio tests

Phenix offers

- Designs for single-phase and three-phase transformers
- Self-guided software to allow semi-automatic testing of transformers
- One step set-up for each transformer type increasing productivity
- Custom automated systems for high throughput capabilities
- Test sets to meet or exceed DOE performance requirements
- Stand-alone or trailer-mounted Variable Frequency Transformer Test Systems featuring line or induced frequency output voltage, reduced size, low input power requirement and no moving parts for testing of large power transformers



Applications

- Testing motors to ensure quality production/rewind
- Testing the stator and armature steel

Phenix offers

- Motor Test Systems rated from 50 kVA to 10 MVA for load and no-load testing of all types of AC & DC motors, including traction motors, synchronous motors, and induction motors
- Core Loss Test Sets rated to test up to 20,000 HP motors
- Water-Brake Dynamometers to provide the load for the motor under test



25 kVA Core Loss Tester



50 kVA, AC/DC



100 kVA, AC



7500 kVA, AC/DC



1500 kVA, AC/DC



ELECTRICAL PROTECTIVE RUBBER GOODS TEST SYSTEMS

Application

- Testing utility worker protective equipment including rubber gloves, sleeves, overshoes/boots, helmets, hoses, hoods, switch sticks, bucket liners, and blankets

Phenix Offers

- Test systems with AC/DC power supplies to meet all applicable standards
- Independent test chambers each with its own controller which is fiberoptically networked to the master controller allowing easy future expansion, dependability and operator safety
- Washers and Dryers for cleaning protective equipment



Glove Tester



Washer



Dryer



Blanket Tester



CABLE TESTING ACCESSORIES

Applications

- Inductive heating of cable samples
- Temporary test termination

Phenix Offers

- Output range of up to 7,500 Amps
- Optional PLC controls and fiberoptic temperature measurement
- Complete line of temporary cable test terminations, both water and oil type

Heat Cycling Test Sets



Oil Cable Terminations



Water Cable Terminations



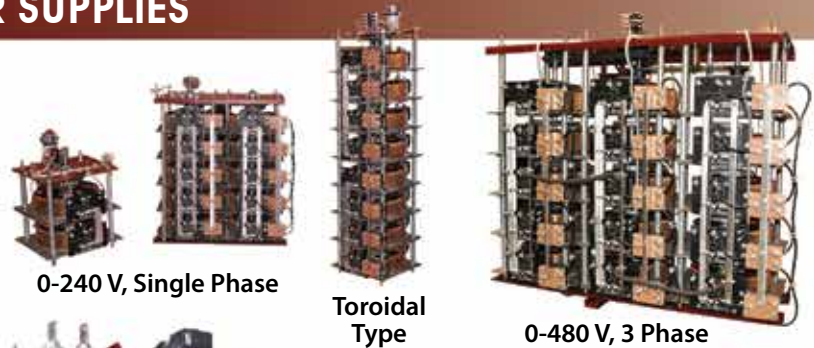
VOLTAGE REGULATORS/POWER SUPPLIES

Applications

- Meet practically any need for varying voltage
- Provide dependable and precise regulation for many testing applications

Phenix offers

- Toroidal Transformers suit most low power applications up to 300 kVA and up to 600 Volts input voltage
- Column-Type Variable Transformers for high power applications from 150 kVA to 2500 kVA and up to 600 Volts input voltage. Utilizes a roller type brush design, low turn-to-turn voltage of less than 0.7 volts, and nickel-plated windings to create the most dependable and maintenance-free regulator available.
- Thoma-Type Transformers are best suited for high power applications from 1000 kVA to 6000 kVA. These unique regulators produce stepless voltage regulation over their operating range. Input voltages up to 15 kV may be used.
- Power Supplies to meet applications that require any range of output AC or DC voltage and power



Thoma-Type
0-4160 V, Single Phase



Column-Type
0-480 V, 3 Phase



Designed for field or factory testing, housed in rugged, high density polyethylene cases, PHENIX portables offer years of outstanding service.

- **Oil Dielectric Test Sets** – 60, 75, and 100 kV AC models
- **AC Dielectric Test Sets** – 15 to 200 kV AC models
- **Circuit Breaker Test Sets** – models with 1000, 2000, 3000, and 5000 Amp instantaneous output
- **DC Hipots** – 6, 15, 40, 75, 100, 120, and 160 kV DC models
- **Polarization Index and Dielectric Absorption Test Sets** – up to 15 kV DC models
- **Megohmmeters** – automated and standard up to 25 kV models
- **Benchtop AC Hipots** – 3 to 15 kV AC models
- **AC/DC Hipots** – 5/6 kV and 10/25 kV models
- **Kilovoltmeters** – 100 and 200 kV models
- **Microhmmeters** – 100 Amp model
- **Partial Discharge and Radio Influence Voltage Measurement**
- **Tangent Delta Measurement**

PHENIX Technologies also offers various complimentary items including:

- **Cable Fault Locators**
- **Standard Capacitors**
- **Coupling Capacitors**
- **Voltage Dividers**
- **Motor Generator Sets**



Aerial Lift Test Set Model BK 130/36



AC/DC Kilovoltmeter 200 kV



AC Hipot 30 kV



DC Hipot 75 kV



AC/DC Hipot/Megohmmeter 10/25 kV



Microhmmeter 100 Amp



Benchtop AC Hipot 5 kV



High Current Test Set 2000 Amp



CABLE



CIRCUIT BREAKER



GENERATOR



GIS SWITCHGEAR



INSULATION MATERIALS



MOTOR



TRANSFORMER



RECLOSER



PROTECTIVE EQUIPMENT



PORTABLE





**PHENIX
TECHNOLOGIES**

PHENIX Technologies is committed to providing leadership, innovation, technology, quality, and service in all areas of our business.

Our 70,000 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 will 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.

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