

High Voltage  
High Current  
High Power  
Test Systems  
and  
Components



Accident, Maryland USA

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



# WELCOME

New processes, advanced technology and industry experience that spans the globe...That's the business advantage you get from Phenix Technologies, the preferred supplier of high voltage, high current, high power test systems serving:

- Electrical Utilities
- Motor Repair Industry
- OEMs (Original Equipment Manufacturers)
- Transformer Manufacturers
- Transformer Repair Industries
- Cable Manufacturers and Service Contractors
- Quality Control Areas
- High Voltage Test Labs
- Field Service Organizations

Whether you need a comprehensive testing system or a portable test set, count on Phenix to deliver solutions that enable you to leverage your investment in powerful ways. For over 40 years we've been delivering innovative engineering and cutting-edge technology. The unmatched depth of our knowledge combined with superior service and manufacturing capabilities bring value to every client.





# YOUR PHENIX TEAM







Incorporated in 1988, Phenix Technologies is a privately held company committed to fulfilling the evolving needs of our customers. Much of the company's success is due to the executive management team that spearheads our vision and direction. A steadfast plan for leadership succession has secured the foundation of continued growth.

# THE COMPANY BEHIND THE NAME

All of the major components in systems produced by Phenix — from portable products to a fully automated test system — are produced in our western Maryland facility. Your product is under Phenix control throughout the production process, ensuring rigorous quality standards are met — and exceeded — each step of the way.





## Engineering

Phenix engineers offer a unique blend of theoretical knowledge and practical experience imperative to developing customized solutions for industry leaders. The engineers hold committee positions with a number of the world's leading professional and technical organizations, such as the Institute of Electrical and Electronics Engineers (IEEE) and the International Electrotechnical Commission (IEC).

## Software and Automation

We bring customers appreciable value by using industrial controllers or application specific microprocessor assemblies that meet the extensive and unique requirements of high voltage test equipment. Our well experienced engineers develop the application software used in our innovative operating systems.

## Winding / Lamination

All Phenix transformers, including regulating and output transformers, are manufactured onsite using highly customized machines and proprietary winding techniques. The unmatched performance of Phenix transformers is proven throughout the industry.

## Machining / Mechanical Construction

Phenix maintains a fully equipped machining and mechanical construction department to streamline the production process. Custom tanks and cabinets are manufactured onsite to accommodate each customer's application. 20 and 40 ton cranes, versatile welding/fabrication shop and high capacity paint booths support the highly customized construction.

## Wiring

Skilled personnel perform accurate control and power wiring of all Phenix units. Here, the industry's standards for quality and precision are exceeded daily by the experience only Phenix can deliver.



# THE COMPANY BEHIND THE NAME



## High Voltage Tank Assembly and Processing Area

As the coils are assembled in their tanks, our multiple high volume, high vacuum oil purifier and degasifier systems filter impurities, and remove moisture to ensure the highest level of oil processing of our products. This allows for greater throughput capacity for a shortened process time.

## Shipping

Experience is the key to our success in shipping Phenix products internationally. Knowledge of proper packaging and customs procedures guarantee the safe delivery of shipments to Phenix customers around the world.







## Training

Phenix is committed to ensuring that every customer is provided with the information and resources that are necessary for the efficient and safe use of the product in which they have invested. Training is tailored to individual requirements for applications and operators and can be implemented at the customer's site, at the Phenix facility in western Maryland, or at an on-site test setting.

## Production Test / Quality Assurance

All Phenix products endure rigorous testing measures to meet or exceed on-the-job specifications for the most demanding conditions. At 70 feet (21.5 meters) high, the Phenix test bay is one of the highest in the industry and accommodates voltages greater than 1,000,000 Volts AC and DC. Our state-of-the-art test area is manned by experienced test engineers, trained to deliver the reliability that clients expect from our products. ISO compliancy ensures that quality objectives are established, documented, measured, and periodically reviewed ensuring that Phenix processes are continuously monitored and improved.



# PREMIUM PRODUCTS

On a daily basis, our people push the boundaries of current technology, responding to the challenge of finding new and better ways of meeting and exceeding demanding technical specifications. As Phenix continues to expand the industry's most comprehensive product line, customers will benefit from next generation products. Our extensive array of products includes, but is not limited to:



## Transformer Test Systems

Designed for single-phase and three-phase transformers, our industry-leading automated/computer controlled test systems will increase your test area throughput and accuracy.



## AC, DC and AC/DC Motor Test Systems

Supplies available on all models are designed with the adjustable output voltage from near zero to full rating in AC and DC. Phenix manufactures systems to satisfy the lower power requirements of the smaller shop as well as higher power and voltage ratings for the largest user.



## AC Dielectric and AC Resonant Test Systems

Test systems with ratings from 1000 volts to over 1 million volts are designed by Phenix to test motors, cables, switchgear, bushings, capacitors, fuses, arrestors, etc. Phenix manufactures AC Resonant Test Systems and AC units that are configured for special applications as well.





## DC Insulation Test Sets and DC Power Supplies

A wide range of portable and modular test systems has been expanded to include high power and high voltage applications. Systems up to 2 million volts are available.



## High Current / Circuit Breaker Test Systems

With output ratings up to 75,000 amps on standard units, these Phenix systems are used for testing thermal and magnetic overloads, ratioing current transformers, and primary injection testing of circuit breakers.



## Voltage Regulators and Power Supplies

Phenix manufactures AC voltage regulators with ratings up to 15 MVA. These regulators are a unique design by Phenix. Phenix also builds power supplies to meet applications that require any range of output AC or DC voltage and power.



## Protective Equipment Test Systems

Phenix designs and manufactures fully automated systems to test rubber gloves, sleeves, over-shoes, helmets, hoses and hoods, switch sticks, bucket liners and blankets.



# PORTABLE / STANDARD PRODUCTS



Our Portable / Standard Products division consists of its own wiring, assembly, testing and shipping areas. Housed in rugged, high density polyethylene cases, Phenix portables provide years of dependable service.

The following field and factory test equipment is available from Phenix:

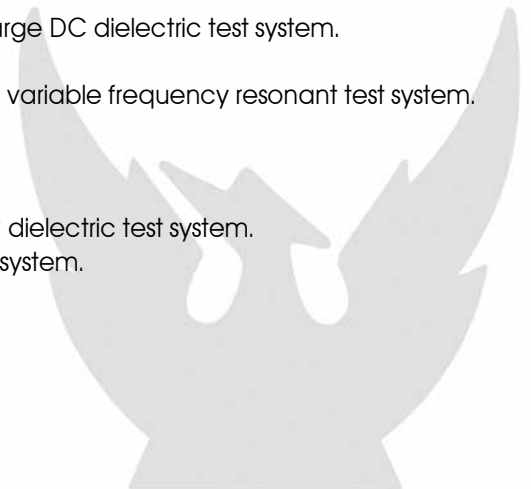
- AC Hipots
- DC Hipots
- Oil Dielectric Test Sets
- Vacuum / Oil Interrupter Test Sets
- Recloser & Circuit Breaker Test Sets
- Polarization Index & Dielectric Absorption Test Sets
- Megohmmeters
- Kilovoltmeters
- Microhmeters
- Partial Discharge Detectors & Tangent Delta Measurement
- Coupling Capacitors
- Standard Capacitors





# A PHENIX TIMELINE

- 1989 PHENIX Technologies purchases assets of American HV Test Systems, which was founded in 1975.
- 1990 PHENIX introduces a new line of voltage regulated high power motor test systems utilizing the rugged and reliable column type variable transformer.
- 1992 PHENIX introduces computerized transformer test systems to the market.
- 1993 PHENIX introduces computer controlled circuit breaker and recloser test sets.  
PHENIX delivers the largest motor core loss tester model CL500, designed for up to 20,000 HP motors.
- 1994 PHENIX designs and manufactures world's largest motor test center and computerized resonant test systems.
- 1995 PHENIX launches Thoma-type regulators for transformer testing.
- 1998 PHENIX creates fully automated, high volume transformer test set in-house, establishing PHENIX Technologies as a premier supplier of fully integrated, automated test systems.  
PHENIX introduces line of rubber protective equipment test systems.
- 1999 PHENIX introduces line of fully automated core loss test sets.
- 2001 PHENIX builds variable frequency resonant test system for the onsite testing of GIS and high voltage cables.
- 2002 PHENIX completes 400 kV dead tank resonant test system designed for long term cable testing outdoors.
- 2003 PHENIX introduces R2 regulation system for motor testing, allowing construction of up to 10 MVA and beyond, fully regulated motor test systems.
- 2005 PHENIX moves into 70,000 sq ft (6,500 sq meter) state-of-the-art manufacturing facility boasting a 70 ft (21.5 meter) ceiling clearance high voltage test bay and 40 ton high capacity crane.
- 2006 PHENIX designs and manufactures world's largest 1 million volt dead tank resonant test system.
- 2007 PHENIX completes single tank 550 kV resonant test system designed for long term cable testing in all weather conditions.
- 2008 PHENIX delivers a 7.5 MVA motor test system designed for testing motors to over 35,000 HP.  
PHENIX produces trailer mounted 450 kV, 2.25 MVA variable frequency resonant test system.
- 2009 PHENIX produces 1.2 million volt, 20 mA low partial discharge DC dielectric test system.
- 2013 PHENIX produces trailer mounted 1.3 million volt, 3.6 MVA variable frequency resonant test system.
- 2015 PHENIX produces 800 kV water cable test terminations.
- 2016 PHENIX produces 1.6 MV, 30 mA low partial discharge DC dielectric test system.  
PHENIX produces 60 kV, 25  $\mu$ F cosine rectangular VLF test system.





**Get Answers Fast**

As a privately held company, Phenix affords its customers with unprecedented access to key decision makers focusing on customer needs and fulfilling those needs promptly, competitively and always with a superior product.

**Service Reliability**

Phenix ensures optimum equipment performance from the start by providing a proficient team of support engineers, service and sales managers, and technicians for on-site assistance. This global support network operates worldwide to ensure customer satisfaction during and after installation.

**Worldwide Accessibility**

Through customer driven innovation, Phenix Technologies continues to demonstrate exponential growth and industry leadership in the global marketplace.

- Over 110 Phenix sales representatives are located in more than 45 countries.
- Phenix products are performing in more than 100 countries around the world.
- International offices are strategically located in North America, Europe and Asia.

**Our Name**

The name Phenix is associated with the mythical bird that was "reborn." After purchasing the assets of the firm's predecessor, the founding Phenix shareholders promised – and delivered – a new level of dedication, determination and commitment. The Phenix name was chosen to symbolize this "rebirth."







### **Our Location**

#### **The “Accident” that became Accident**

Approximately 1751, a grant of land was given to Mr. George Deakins by King George II of England. The grant was payment for a debt. According to the terms, Mr. Deakins was to receive his choice of 600 acres of land anywhere in Western Maryland. Mr. Deakins sent out two corps of engineers, each without knowledge of the other group, to survey the best 600 acre parcel.

After the survey, the engineers returned with maps of their surveyed plots. To their surprise, they had both surveyed the identical tract of land, starting at the same tall oak tree and returning to the starting point. Mr. Deakins chose this plot of ground and had it patented “The Accident Tract” – hence the town named Accident.

### **Our Environmental Responsibility**

Phenix stands vigilant in reducing its impact on the environment:

- No greenhouse gasses are produced in the manufacturing of high voltage test equipment.
- In-house production of all components eliminate other greenhouse omissions associated with transportation of these items.
- All scrap copper, steel, paper and plastic products are recycled.
- Minimal Carbon Footprint.

### **Our Social Responsibility**

Phenix is passionate about making positive contributions to the community in which it operates. As a good neighbor, Phenix provides local support to many area social organizations and charities.

Phenix also supports the future adults of its' community by working with many local school training programs. These include machine tool, electronics, computer science and automotive programs. The regional GEARS (Garrett Electronics and Robotics Society), 4H and FFA (Future Farmers of America) are constant recipients of support.

# PUT THE EXPERTISE OF PHENIX TO WORK FOR YOU!



# **PHENIX**

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# **TECHNOLOGIES**

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