

Power System Services



Keeping You Productive
Is Our Business



Circuit Breaker Services

3-D Service specializes in providing total maintenance and repair services for low- and medium-voltage circuit breakers in all applications of use. Our knowledge and experience gained in repairing thousands of circuit breakers for the industrial, commercial, and utility markets enables us to provide a full complement of services for all major OEM circuit breaker types. 3-D Services' long established program for repairing circuit breakers for the nuclear power industry provides a strong base of technical and quality assurance standards that we apply to all circuit breakers we service.

Our field service technicians are available to provide circuit breaker removal and installation logistics, and engineering service. They also perform preventive maintenance, which includes periodic on-site testing, to maximize reliability.

Our circuit breaker services also feature:

- A structured certification program for service technicians
- Convenient, timely, and economical arrangements for nationwide shipments

3-D Service offers comprehensive services for all major OEM circuit breakers, including GE, ABB, ITE, Westinghouse, and Cutler-Hammer. We are your single source for all circuit breaker reconditioning, refurbishment, and remanufacturing needs.



Mechanism parts from an ITE KD circuit breaker before and after refurbishment.



ITE KD circuit breaker after refurbishment.



ITE KD circuit breaker before refurbishment.



Preventive Maintenance – keeps your circuit breakers in prime operating condition with scheduled on-site maintenance, as well as refurbishing at scheduled intervals.

Recondition and Refurbishing Services – are provided at our state-of-the-art service centers.

Remanufactured Circuit Breakers – provide an alternative to factory-produced circuit breakers. We offer remanufactured circuit breakers, built by our technicians, with full warranty coverage.

Spares Management – offers a unique program in which 3-D Service maintains your circuit breaker spares to facilitate recondition or refurbishment.

Breaker Parts/Components – provides quick and easy access to virtually all OEM circuit breaker parts and components from our warehouse.

Turnkey Customer Service – provided by our customer service professionals and covers all of the logistical details of circuit breaker maintenance for you. We're available 24 hours a day, 7 days per week and look forward to your call.

Total Circuit Breaker Management Program – in addition to the multiple services we provide, which can be selected as you require, our Total Circuit Breaker Management Program handles all administrative functions, including circuit breaker removal, shipping, re-installation, and documentation.

Warranty Coverage – is provided with each class of our low- and medium-voltage circuit breaker services at a corresponding warranty level.





Turnkey Engineered Switchgear Upgrades

Cost, extended deliveries, space limitations, and meeting tight installation windows are a few of the reasons for choosing 3-D Service to assist you with your power system switchgear upgrades. Our Turnkey Engineered Switchgear Upgrades offer customers a unique alternative to the purchase and installation of new switchgear.

Upgraded OEM switchgear offers distinct advantages when compared to new switchgear. The installation of new switchgear assemblies, which differ from existing equipment, presents difficulties such as:

- The inability to easily line-up new equipment with existing gear
- Major cable and bus modifications
- Foundation changes
- Additional operational and safety training
- High installation costs

Engineered and Remanufactured OEM Switchgear

Extending the life of your existing switchgear and improving its reliability, while increasing performance capabilities and maintaining safety are the major goals of this service offering. We service a wide variety of switchgear equipment, including 600V to 35kV, metal clad and metal enclosed, air and vacuum.

Our technical staff has extensive expertise with switchgear and electrical components manufactured by OEMs such as Allis-Chalmers, ABB, Cutler-Hammer, General Electric, ITE, Siemens, Square D, and Westinghouse.

Our special engineered solutions address an array of issues beyond switchgear equipment upgrading. Helping you ensure proper performance when implementing new technologies and finding the best ways to accommodate increased power demands are just two examples of how our professional engineers help you deal with both routine installation issues and unexpected challenges.



Custom Bus Fabrication

Our custom bus fabrication services include:

- Epoxy-coated bus
- Rectifier bus additions or modifications
- Engineered bus solutions
- ISO phase bus service and repair
- Emergency service

Engineered Motor Starters

- Low- and medium-voltage applications
- Vacuum retrofits

Specialty Switchgear Products

- Remote racking designs and modifications
- Secondary contact designs and modifications
- Motor control center upgrades

Power Systems Consulting Switchgear Engineering

3-D Services' dedicated power systems engineering staff consists of licensed professional engineers with extensive technical expertise and in-depth knowledge of ANSI, IEEE, and NEC standards. They are specialists in the latest power systems computerized systems and software.

In addition to analyzing your situation with sound and proven engineering practices, we leverage the expertise gained from years of installation and start-up experience to provide switchgear engineering that far exceeds customer requirements. Our power systems consulting switchgear engineering capabilities include:

- Power System Studies and Analysis Services
- Consulting Engineering and Design Services
- AutoCAD® Drafting Services





On-Site Transformer Services to Prevent Outages and Assure Performance

3-D Service offers a comprehensive selection of services to help ensure prime operating performance of your equipment.

- Preventive Maintenance
 - This service includes regularly scheduled visits by highly-trained technicians to perform routine inspection, maintenance and testing of your transformers.
- Predictive Maintenance
 - This service takes our preventive maintenance services one step further by trending the results of your transformer's electrical performance over time to uncover potential problems. It provides advance warning of unseen conditions within your transformers to give you time to schedule service before damage or a failure occurs.
- Repairs and Upgrades
 - General Reconditioning
 - Load Tap Changers and Controls
 - Remote Monitoring Equipment
 - Field Re-Blocking – Dynamic Clamping Modifications
 - PCB Transformer Replacements
- Equipment Testing
 - Turns ratio, Doble® Power Factor, Megger®, Winding Resistance, Low Voltage and Impedance
- Oil Services
 - Testing and Evaluation, Removal and Disposal
 - Oil Processing: Vacuum Degassing, Oil Dehydration
 - Insulating Oil Filtration



Oil Testing and Analysis to Improve Performance and Guard Against Outages

While many companies can test the oil in your transformers and provide scientific results, 3-D Service can translate those results into terms that determine the actual condition of your transformer. For example, our oil analysis can pinpoint internal arcing, deterioration of insulation, overheating of insulating fluids, and faulty electrical connections. Once the analysis is completed, you will be provided with the steps that should be taken to correct any of these problems before they create costly damage or result in a catastrophic breakdown.

Transformer oil services include:

- Oil Quality Testing and Analysis including Standard ASTM
- Dissolved Gas Analysis
- Polychlorinated Biphenyl (PCB)

Specialized Training Services

We offer a variety of power systems training programs that can be customized for individual requirements. Popular classes include substation maintenance, electrical safety, circuit breaker and switchgear maintenance, and more.





Service & Support for Operational Excellence

Our job is to help you do your job better. 3-D Service offers the resources to help you:

- Lower maintenance and repair costs
- Reduce downtime and improve productivity
- Upgrade equipment to meet new demands
- Increase operating efficiency
- Achieve a better return on assets

We Speak Your Language

With broad experience in servicing equipment in virtually every industry, we understand your company's particular demands and know the equipment and processes you use. This in-depth knowledge is available to help you maximize productivity and efficiency.

Service Expertise on Virtually All Brands of Equipment

We are very experienced in servicing equipment from manufacturers including General Electric, U.S. Electric, Reliance Electric, ABB, MagneTek, Westinghouse, Emerson, Siemens, Baldor, ITE, Cutler-Hammer, Square D and many more.

Commitment to Quality and Service

Throughout our company we are dedicated to providing quality you can trust. This is why we have highly-trained personnel who participate in these ongoing quality programs and certifications:

- ISO 9001 Certification
- UL® Certified Service

Equipment Services

- Repair and Remanufacturing
- Specialty Equipment Repair
- Preventive Maintenance
- Predictive Maintenance
- Motor Management
- Motor Engineering & Diagnostics
- New Equipment

Power Systems Services

- Engineering & Analysis
- Preventive Maintenance
- Predictive Maintenance
- Switchgear
- Circuit Breakers
- Substations
- Emergency Services
- New & Used Circuit Breakers
- Project Management

Transformer Services

- Fluid Testing
- On-Site Service
- Engineering

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