Custom Power Equipment For Tunneling and Extraction
Line Power Corporate Overview

Line Power, a division of Electro-Mechanical Corporation, is a privately held, American owned company founded in 1958. It is headquartered in Bristol, Virginia (USA) and for more than 50 years has manufactured a wide variety of products used in the generation, transmission, distribution and control of electricity. These products, along with various electrical equipment repair and maintenance services, are used by a diverse mix of Energy (coal, oil and gas), Electric Utility and Industrial customers worldwide.

Electro-Mechanical Corporation’s Electrical Group has earned a “customer oriented” reputation by keeping its focus on providing the best value to our customers through quality products and services. With six manufacturing companies and two repair and service companies, the Electrical Group has over 650,000 square feet of modern manufacturing facilities, located in Virginia and Tennessee.

In addition to our corporate headquarters, we have a 20,000 square foot, full time stand alone Conference Centre for customer and employee training located in Bristol.

The Electrical Group companies have the following industry recognition:


Federal Pacific - Dry-type transformers from .050 KVA through 10,000 KVA single and three phase, up to 34.5 kV, 150 kV BIL with UL approval through 15 kV; Vacuum pressure impregnation and epoxy shielded transformers ISO 9001:2000 Registered. Medium voltage switchgear including air-insulated live-front, dead-front, SCADA-controlled, automatic transfer, primary metering and wall-mounted pad-mounted and metal-enclosed switchgear.

Metal Castings Company -Permanent mold and sand cast aluminum products.

Machinery Components - Prototype and machined component products.

Electric Motor Repair & Sales Company - Electric motor and apparatus repair and new equipment sales.

Line Power Parts & Rebuild - Complete electrical equipment remanufacturing and onsite electrical equipment service. The parts service department provides replacement components manufactured by Electrical Group companies as well as commonly used OEM parts.
XP Single-Circuit Vacuum Circuit Breaker Switch House

- XP Single Circuit Vacuum Circuit Breaker Switch-House Featuring:
- MSHA Approved Explosion Proof Enclosure
- Designed For 4160 VAC Input and Output
- Vacuum Circuit Breaker, 1200 Amp and 600 Amp Available
- Ground Fault Relay and Ground Monitor
- Capacitor Trip Device
- Ideal For Reestablishing Ground 1000 Feet From Outside Main Power Source.
2000 kVA Open Type/Explosion Proof Substation

- Open Type Enclosure and MSHA Approved Explosion Proof Enclosure Installed On One Skid
- Designed For 13,200 Vac Input and 480 Vac Output
- Open Type Enclosure Includes:
  - Line Power Dry-Type, Energy Efficient 2000 kVA Mitre Core Design Transformer
  - 480 VAC Ventilating Fan
  - Thirty Two Low Voltage Cable Glands
- XP Explosion Proof Enclosure Includes:
  - Line Power 15 kV, 600 amp load break switch
  - Line Power High Voltage Fuses
  - Line Power Lightning Arrestors
  - Emergency Stop Push-button
  - Cover Interlock Switches
XP Seven-Circuit DA-7 Distribution Box

- XP Seven Circuit DA-7 Distribution Box Featuring:
- MSHA Approved Explosion Proof Enclosure
- Designed For Dual Input 600 VAC and 480 VAC
- One 1000 Amp, One 600 Amp, Two 150 Amp, Two 90 Amp and One 80 Amp Output Circuits
- Output Circuits Complete With Ground Fault Relay and Ground Monitor
- Utility Circuits
1000 KVA, 11000 VAC, 50 Hz
TBM Substation For Limited Space Application
2000 KVA Underground, Open-Type Power Center

• 2000 kVA Underground, Open Type Power Center Featuring:
• Designed To Comply With MSHA Regulations
• Designed For Dual 13,800 X 15,000 VAC Input, Delta
• Dual Output Voltages Of 995 and 480 VAC Wye
• Line Power High Voltage Couplers
• Line Power 15 kV, 600 Amp Load Break Switch
• Line Power High Voltage Fuses and Lightning Arrestors
• Line Power Dry-Type, Energy Efficient 2000 kVA Mitre Core Design Transformer
• Line Power Ground Monitor and Ground Fault Relays
• Line Power Low Voltage Plugs and Receptacles
• One 995 VAC, 800 Amp Output Circuit
• Four 480 VAC Output Circuits: Two 400 Amp, One 225 Amp and One 150 Amp
• 5 kVA Utility Circuit With Two 30 and Two 20 Amp Outlets
• Heavy Duty, Underground, Skid-Mounted Enclosure
• Another Example Of Line Power’s Unique Ability To Design To The Customer’s Specification and Application Needs.
Four-Circuit Open-Type Vacuum Circuit Breaker Switch House

- Four Circuit Vacuum Circuit Breaker Switch-House Featuring:
- Designed To Comply With MSHA Regulations
- Designed For 13,800 VAC Input
- Line Power 15 kV, 600 Amp Vacuum Circuit Breaker
- Line Power Capacitor Trip Device
- Line Power High Voltage Ground Monitor
- Line Power High Voltage Couplers
- Dust and Water Tight Enclosure Designed For Underground, Heavy-Duty Application.
Substations

- **1500 KVA Portable Substation Featuring:**
  - Completely Galvanized Substation Including Skid, Mast and Switch-House For Corrosive Environments
  - Designed For 22860 VAC X 13200 VAC Input Voltage
  - Designed For 4160 VAC Output
  - Retractable Mast Designed To Withstand 150 MPH Winds Fully Extended
  - Line Power 1500 KVA, 115° C Rise, Dry Type Transformer With:
    - Vacuum Pressure Impregnation
    - Epoxy Shield
    - Copper Windings
    - Designed To Be 99.0% Efficient At Full Load
    - Transformer Over-Temperature Device
  - Line Power 15.5 kV, 600 Amp Vacuum Circuit Breaker
  - Line Power Capacitor Trip Device
  - Line Power High Voltage Ground Monitor

- **5000 KVA Portable Substation Featuring:**
  - Designed For 13800 VAC Input and 7200Y/4160 VAC Output
  - Trailer Mounted On A 48 Foot, Tandem Axle Trailer
  - 36” Catwalks On Both Sides and 42” Handrails
  - Canopy Around Complete Perimeter Of Substation
  - 15 kV, 1200 Amp Switch-house Including:
    - NEMA 3R Outdoor Construction
    - Line Power 15 kV, 1200 Amp Auto-Jet® Load Break Switch
    - Line Power 15 kV, 1200 Amp Vacuum Circuit Breaker
    - Line Power Capacitor Trip Device
    - Line Power High Voltage Gear Mounted Plugs
    - Line Power 5000 KVA, 150° C Rise, Dry-Type Transformer

- **Two Output Circuits Including:**
  - Line Power 15 kV, 600 Amp Auto-Jet Load Break Switch
  - Line Power 15 kV, 600 AMP Vacuum Circuit Breaker
  - Over-Current and Ground Fault Relay
  - Exterior Lightning
  - Line Power 4160 VAC, 25 Amp, Continuous Duty Neutral Grounding Resistor
  - Line Power High Voltage Ground Monitor
Miter Core Transformers = Lower Operating Cost = Lower Energy Cost = Quicker Payback!

### Typical Operating Cost Savings Butt-Lap vs Miter Core

<table>
<thead>
<tr>
<th>KVA</th>
<th>Core Weight (Pounds)</th>
<th>Losses in Watts</th>
<th>Annual Savings Based on $0.08 per KWH</th>
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**Step-Lapped Miter Core**
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Genuine Line Power Component Parts

Switches

Vacuum Circuit Breakers

Low and High Voltage Couplers, Flange Terminators

Ground Monitors and Ground Fault Relays

High Voltage Splice Boxes

Mine-Duty Transformers