Engineered Power Equipment For Tunneling And Extraction

LINE POWER™
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.

P0554C
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 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 Degrees 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 Degrees 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!

Step-Lapped Miter Core

Typical Operating Cost Savings Butt-Lap vs Miter Core

<table>
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<tr>
<th>KVA</th>
<th>Core Weight (Pounds)</th>
<th>Losses in Watts</th>
<th>Difference in Watts</th>
<th>Annual Savings Based on $0.08 per KWH</th>
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<td>Butt Lap</td>
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Genuine Line Power Component Parts

- **Switches**
- **Vacuum Circuit Breakers**
- **Low and High Voltage Couplers**
- **Ground Monitors and Ground Fault Relays**
- **High Voltage Splice Boxes**
- **Mine-Duty Transformers**

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