Energizing a world that demands more.

Eaton is energizing the world to maximize uptime and energy efficiency and to lower costs, while keeping people and property safe.

Shovels and draglines are the primary excavating tools used in today’s surface mining operations. Eaton combines electrical systems upgrades and aftermarket hydraulic solutions to support your application requirements for a 24/7 uptime operation. Augmenting upgraded systems with predictive diagnostic tools offers enhanced reliability and advanced warning to schedule maintenance and prevent downtime. With over 100 years of market experience, Eaton has the expertise to see beyond the needs of today to help you build a more sustainable business.
Medium and low voltage drives
- 2400 V up to 2500 hp and 4160 V to 6000 hp standard and arc-resistant
- 600 V to 2000 hp
- 24-pulse 2.4 kV and 4.1 kV to 6000 hp (ANSI)
- 6-pulse 480 V and 575 V to 2000 kV (ANSI and IEC)
- IEEE 519 harmonic compliance

Motor protective relays
- LED indicator provides predictive indication
- Accurately identifies excessive current or phase loss
- Easy integration into plant management systems for remote monitoring and control
- Integral ground fault protection

Medium and low voltage motor control centers
- Medium voltage motor control centers to 15,000 V and 3000 A main bus
- Low voltage motor control centers to 600 V and 3200 A main bus
- ANSI and IEC certified
- Standard and arc-resistant available

Motor protective relays
- LED indicator provides predictive indication
- Accurately identifies excessive current or phase loss
- Easy integration into plant management systems for remote monitoring and control
- Integral ground fault protection

Low voltage distribution
- Panels (ANSI and IEC)
- Safety switches (ANSI and IEC)
- Dry-type distribution transformers (ANSI)
- Control power transformers (ANSI and IEC)

Circuit breakers
- Vacuum to 38 kV
- Low voltage power circuit breakers
- Molded case industrial breakers
- Medium voltage mining breakers

Power and control fuses
- Medium voltage expulsion and current limiting
- Low voltage power
- Control
- ANSI and IEC configurations

Hydraulic and pneumatic control
- Hydraulic power units
- Pneumatic cylinders
- Hydraulic cylinders
- Complete air tank solutions

Fluid conveyance and management
- Hydraulic hoses and fittings
- Hydraulic hose assemblies
- Airbrake hoses
- Hydraulic filters
- Connectors/couplings
- Grease lines—nylon tubing

Pumps, motors and valves
- Mobile and proportional valves
- Open and closed circuit pumps
- Fixed and variable motors
- High-speed low-torque motors

Display and control
- Electronic switch modules and vehicle display
- Multiplexed vehicle electrical center
- Cam switches and pushbuttons

Legacy—disc brakes
- A full suite of air-cooled disc brakes suitable for swing, propel, hoist and drag functions
- DBA
- DBBS
- Completely packaged air-cooled systems

Revolutionary—disc brakes
- New disc brake technology—Floating Hose Brake—offers a rapid friction replacement capability
- Taper shaft lock
- Zero spline/gear wear
- Quick friction replacement
- Completely packaged air-cooled systems

For more information about our solutions, visit: Eaton.com/Mining
**Lighting**  
- LED, HID, incandescent and fluorescent  
- Types: Flood, task, high bay, wall pack and area  
- Application: Indoor, outdoor, industrial, harsh, hazardous areas  
- ANSI and IEC configurations

**Mechanical and structural solutions**  
- Aluminum, stainless steel, galvanized steel and FA series fiberglass material options  
- Strut systems, fittings and accessories  
- GripStrut® slip-resistant walkways

**Wireless and instrumentation**  
- Wireless I/O systems  
- Isolation barriers  
- Surge suppression  
- Controls/software

**Enclosures**  
- Junction boxes and enclosures  
- Stainless steel, aluminum, fiberglass, steel iron  
- Instrument housings  
- Industrial- and commercial-grade enclosures  
- ANSI and IEC configurations

**Meters and relays**  
- Revenue grade energy monitors  
- Panel meters  
- Motor and feeder protective relays  
- InsulGard™ partial discharge relays

**Signals and alarms**  
- Beacons and strobes  
- Fire detection and alarms  
- Mass notification systems  
- ANSI and IEC configurations

**Plugs, receptacles and connectors**  
- Welding receptacles  
- Industrial, harsh, hazardous areas  
- Molded to cable  
- Passive connectivity  
- ANSI and IEC configurations

**Power connectors**  
- IEC 309 industrial pin and sleeve devices  
- Medium voltage load-break and dead-break connectors (ANSI and IEC)  
- Industrial, harsh, hazardous areas

**Cable and conduit wiring solutions**  
- Industrial fittings  
- Cable glands  
- Hub reducers, adapters and accessories  
- Industrial, harsh, hazardous areas  
- ANSI and IEC configurations

**Hydraulic services**  
- Accumulators  
- Electronic controls/software  
- Hydraulic power units  
- Hydraulic pumps and motors  
- Steering solutions  
- Variable speed drive pump solutions  
- Hydraulic hoses and fittings  
- Hydraulic hose assemblies  
- Filtration  
- Industrial and mobile valves  
- Hydraulic cylinders  
- Hose condition monitoring systems  
- Radial piston motors  
- Air-cooled disc brakes  
- Constructing drum clutch/brakes  
- Pneumatic controls  
- Field service support

**Hydraulics**  
PH: (952) 937-9800  
fpgproductsupport@eaton.com  
Associated product lines  
- Accumulators  
- Electronic controls/software  
- Hydraulic power units  
- Hydraulic pumps and motors  
- Steering solutions  
- Variable speed drive pump solutions  
- Hydraulic hoses and fittings  
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Energizing a world that demands more.

We deliver:

- **Electrical solutions** that use less energy, improve power reliability and make the places we live and work safer and more comfortable.
- **Hydraulic and electrical solutions** that enable machines to deliver more productivity without wasting power.
- **Aerospace solutions** that make aircraft lighter, safer and less costly to operate, and help airports operate more efficiently.
- **Vehicle drivetrain and powertrain solutions** that deliver more power to cars, trucks and buses, while reducing fuel consumption and emissions.

Discover today’s Eaton.

Powering business worldwide

As a global power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses. Eaton’s innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2014 sales of $22.6 billion, Eaton has approximately 100,000 employees around the world and sells products in more than 175 countries.

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