

## SD500 SEVERE DUTY AC TRACTION DRIVE SYSTEM



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Magnetek's M-FORCE® SD500 Severe Duty AC Traction Drive System is part of our proven line of state-of-the-art industrial controllers. The system can be connected to induction AC motors for high system efficiency at a wide range of motor speeds. The DC input, AC output drive can be used in a variety of applications including battery-operated mobile vehicles, conveyors, crushers, drills, and locomotives.

### CONTROLLER

The rugged controller monitors and controls the system's M-FORCE® SD500 drives providing operation and fault reporting. It provides full-time monitoring of motor drive temperature, battery health status, system faults, run time, and a host of other features.

### FEATURES

- CAN-Bus Communication
- Wireless RF capability
- Analog/digital inputs from gas pedal, joystick, temperature transducers and other switching devices
- Inputs from PLC and other controllers
- Multi-language display

### DISPLAY

The display in an MSHA-approved housing provides real-time performance monitoring of the control system through the controller. External controls allow for system programming and re-configuration, data reporting, and troubleshooting within a permissible area.



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### CUSTOM ENGINEERED SYSTEMS

Magnetek can provide custom-designed engineered power solutions for applications such as transportation, mining, marine or locomotive applications using our M-FORCE® SD500 Variable Frequency Drives. Magnetek can also provide custom monitoring, data collection and display systems integrated with any Magnetek M-FORCE® severe duty drive to provide the ultimate in assured performance and control. Our flexible building block approach allows us to configure a custom display and controller to your exact requirements. The control interface provides real-time diagnostics for preventative maintenance and troubleshooting, reducing down time and repairs.

### IMPROVED PERFORMANCE

Adjustable operating speeds, torque limits, and controlled stopping allow for smooth operation and torque control from stall to 400 Hz.

### INCREASED ENERGY EFFICIENCY

A custom engineered system can improve the power factor and reduce in-rush currents to minimize energy consumption.

### GREATER RELIABILITY

Controlled start-up torque decreases the wear and tear on the motor and connected load, which reduces mechanical breakdown to extend motor life.

### QUALITY BUILT

Magnetek Mining designs, builds and tests our products in our ISO 9001:2008 certified manufacturing facility.

Contact us today at 888.428.2299 for a custom power solution to optimize your mining application.

### POWER SOURCE OPTIONS

- Fuel Cell
- Ultra Capacitor
- Battery
- Engine Generator
- Generator-Battery Hybrid System
- Generator-Capacitor Hybrid System

### PERFORMANCE FEATURES

- Flux Vector Control
- 96% - 98% efficiency
- Full regenerative capabilities
- Wide battery voltage range: 150 to 400 VDC input for 230 VAC motor
- Smooth torque from stall to 400 Hz
- 30-135kW peak
- 10° to 55° C ambient temperature
- Isolated Gate BiPolar Transistors (IGBT)
- Air and liquid cooled
- Single- or two-pedal control
- Reduced EMI emissions
- RFI shielding
- Adjustable over- and under-voltage suppression algorithm
- Automatic tuning function for use with custom motors
- Communication options available
- 24 VDC supply start and run signals

### Drive Dimensions

