

# MAGNETEK

CONTROLS, BRAKES AND MOTORS FOR  
HEAVY MOVEABLE STRUCTURES



MAGNETEK  
MATERIAL HANDLING

Magnetek, a premier provider of innovative power control solutions to the material handling industry, brings that expertise to the control of Heavy Moveable Structures. Our state-of-the-art controls, brakes and motors, plus our extensive application engineering experience make Magnetek the ideal complete control system solution for your heavy moveable structure.

MAGNETEK PRODUCTS ARE MADE IN THE USA AND INCLUDE:

- Mondel® Braking Systems
- IMPULSE® AC Digital Drives
- OmniPulse™ DSD DC Digital Regenerative Drives
- Complete Control Panels
- AC Motors

MAGNETEK OFFERS:

- Pre-tested complete control systems
- Systems available with plug-and-play components to facilitate quick and easy installation
- Custom solutions designed to meet your exact specifications

## MONDEL BRAKING SYSTEMS

Mondel Brakes are the ideal braking solution for your heavy moveable structure. They are designed with high performance, ease of use, reliability and safety in mind. Our advanced design features are ideal for applications requiring reliable braking with minimal maintenance and downtime.

### AISE-NEMA MILL DUTY SHOE BRAKES BASIC BRAKE FEATURES INCLUDE

- 5"-30" diameter
- 10-11,000 lb. Ft. Torque
- AC, DC or Hydraulic

### HEAVY DUTY DISC BRAKES

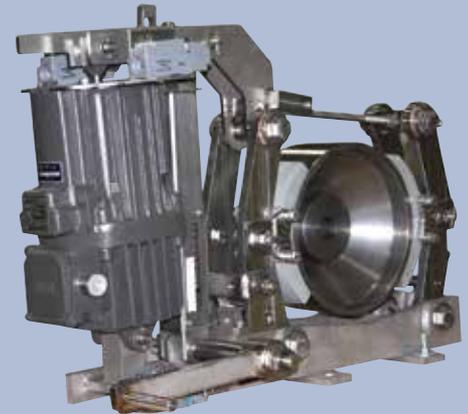
- 12"-50" diameter
- 50-30,000 lb. Ft. Torque
- Type ADT Brake conforms to AISE ratings and dimensions
- AC or DC
- Adjustable external torque spring with calibrated indicator
- Available in 230/460 Vac, 575 Vac, and 230 Vdc (special voltages available)
- Brake wheels or discs that may be mounted on motors as a complete package
- Stainless steel enclosures that stand up to the harshest environment; available with NEMA 3R or 4X protection
- Actuator operating fluid covering a wide ambient temperature range is available
- One-year warranty

### COMMON BRAKE OPTIONS AVAILABLE

- Corrosion protection
- 304 stainless steel construction
- Externally adjustable, stepless time delays—for set, release or both
- Latching manual hand release
- Limit switches indicating brake release, brake set and hand release
- Select manufacturer drop-in replacements (consult factory)
- Brake, brake wheel and motor supplied as a unit

### ACCESSORIES

- Brake wheels supplied with finished bore and keyway or rough stock bore for finishing on-site
- Brake wheel couplings in geared or flexible grid versions
- Discs
- Discs/Hubs (Rigid)
- Discs/Couplings (Flexible)



**Magnetek also offers general purpose shoe brakes with many of the same features and options – consult factory for more information.**

## IMPULSE® AC DIGITAL DRIVES



Magnetek's Electromotive Systems IMPULSE® AC Digital Drives offer the latest in advanced technology. They provide unmatched performance, versatility, reliability and safety for controlling your heavy moveable structure. We offer open loop vector and closed loop flux vector control that will meet the demands of your application.

### FEATURES

- Programmable digital control
- User-friendly keypad with expanded digital display — provides five lines of 16 characters each, making it easy to navigate and read diagnostics
- Xpress Programming™ — allows programming initial setup in seconds
- Safe Operating Windows — reduces the possibility of programming unsafe parameters
- Load Sharing\* — allows two or more mechanically coupled motors to be controlled in a master/slave torque control fashion
- Load Float™\* — allows a load to be held aloft at zero speed without setting the electric brake
- Brake Test\* — allows testing of available brake torque
- Encoder Loss Detection\* — signal loss detection at all times even when the motor is not rotating (load float)
- Snapped Shaft Detection\* — detects a broken coupling shaft or discontinuity in the drive train
- Multi-Level Password Protection — limits unauthorized modification of drive parameters
- Communication — built-in RS-485 communication (Modbus - RTU)
- Optional Serial Communication — provides reliable digital linkage among various system peripherals including Modbus+, Profibus and Ethernet
- Inverter control of wound rotor motors — convert existing wound rotor motors to IMPULSE variable frequency drive compatibility with a simple process. Consult factory for additional information.
- Three-year warranty

\*Features on Flux Vector Controls only

## OMNIPULSE™ DSD DC DIGITAL REGENERATIVE DRIVES

Easy to install and program, our OmniPulse DSD DC Digital Drives provide reliable, energy-efficient control of DC shunt wound motors, while significantly reducing operating and maintenance costs.



Our state-of-the-art performance, safety and troubleshooting features include:

- Programmable digital control
- Torque proving at start/stop — monitors brake function
- Safe Operating Windows™ — reduces the possibility of programming unsafe parameters
- Load Float™ — allows a load to be held aloft at zero speed
- Microprocessor-based built-in monitoring and diagnostics
- 2 line x 16 character LCD display in control cabinet is standard
- Saves last 16 faults, automatic reset, or external fault reset
- Built-in motor overload protection
- One-year warranty

## DRIVE SUPPORT AND DIAGNOSTIC TOOLS



Magnetek offers a complete array of drive diagnostic, monitoring and support tools including:

### DataLogger/DATAPULSE

- This user-friendly recording device simplifies troubleshooting and gathers information for preventive maintenance.

It plugs into the keypad pocket of the drive and allows operators to easily access the run, alarm and fault histories.

### IMPULSE•Link 4.1 Wireless Diagnostic System (WDS)

- IMPULSE•Link 4.1 WDS is a Windows-based interactive drive software and hardware package designed to enhance productivity by allowing you to efficiently program, monitor and troubleshoot your IMPULSE AC drive from a remote location and PC.

### IMPULSE•Link 4.1 Basic—Interactive Drive Software Package

- IMPULSE•Link 4.1 Basic is a Windows-based interactive parameter management tool for a direct link to local IMPULSE controls.

## COMPLETE CONTROL PANELS

Custom engineered panels, built in Magnetek's UL508A certified panel facility, feature all the components needed to provide complete motor control of your heavy moveable structure. With our combination of extensive application experience and leading-edge products, Magnetek provides the ultimate solution for heavy moveable structures.



## MAGNETEK DRIVE DATA

	IMPULSE AC CONTROLS		OMNIPULSE DSD DC CONTROLS
	ADJUSTABLE FREQUENCY/OPEN LOOP VECTOR DRIVES	FLUX VECTOR DRIVES	DIGITAL REGENERATIVE DRIVES
Ratings*	200-240 Vac, 7 to 415 AMP (1 to 125 HP) 380-460 Vac, 2.1 to 1050 AMP (1 to 500 HP) 500-600 Vac, 1.7 to 200 AMP (1 to 200 HP)	200-240 Vac, 7 to 415 AMP (1 to 125 HP) 380-460 Vac, 2.1 to 1090 AMP (1 to 500 HP) 500-600 Vac, 1.7 to 200 AMP (1 to 200 HP)	230/460 Vac, 3-phase +/- 10%, 48 to 62 Hz (15-800 HP) (DC output voltage proportional to AC input)
Overload Capacity	150% of rated load for 1 minute		200% of rated load for 1 minute
Braking Torque	150% or more with dynamic braking (optional)		Consult Factory
Speed Range	40:1 in V/F Mode (15 preset V/F Patterns, 1 Adjustable) 200:1 in Open Loop Vector Mode	1500:1	1000:1 speed range with encoder (lift)
Operating Temperature	14° to 140° F (-10° to 60° C) (Consult factory for high ambient applications)		14° F (-10° C ) to 130° F (55° C)
Certification	UL, cUL, CSA (CE available upon request)		CSA Listed

\* 575V available. Consult Factory.

All IMPULSE and OMNIPULSE Drives are made in the USA.

## MOTORS

As part of your complete solution, Magnetek's motors are the ideal complement to our control package when precision motion control and performance are a must.

### AC MOTOR FEATURES

- Up to 1000 HP
- 1.0 Service Factor on PWM drives
- 1500:1 speed range when coupled with our IMPULSE Flux Vector Drive
- Available—
  - Totally Enclosed Non-Ventilated (TENV) 60 Min. duty
  - Totally Enclosed Blower Cooled (TEBC) continuous duty
  - Totally Enclosed Non-Ventilated (TENV) continuous duty
- NEMA design A, optimized for operation with IGBT inverters
- Standard Class H insulation with patented winding system for use with IGBT variable frequency drives
- Class F thermostats (klixons) in all three phases
- Cast iron frame and brackets for strength and corrosion resistance
- 230, 380, 460, 575 and 690 volt, 3 phase, 60 Hz
- Available options include encoders, space heaters, severe duty treatment, doubleshaft/tapershaft, brakes, and Inpro seals
- Two-year warranty

## MAGNETEK'S UNBEATABLE SERVICE, TESTING, AND SUPPORT

All Magnetek Material Handling products are backed with:

- On-site technical support
- Emergency control replacement
- Field start-up service available
- Complete application and engineering support
- Factory-certified dynamic performance testing available with every job
- On-site and in-house training programs

Our highly trained team of service technicians offers superior aftermarket support. We're always on call—available to you 24/7, 365 days per year. Our team is unsurpassed at providing you with service and support—where and when you need it.





**MAGNETEK**  
MATERIAL HANDLING

**ELECTROMOTIVE SYSTEMS  
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MONDEL**

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