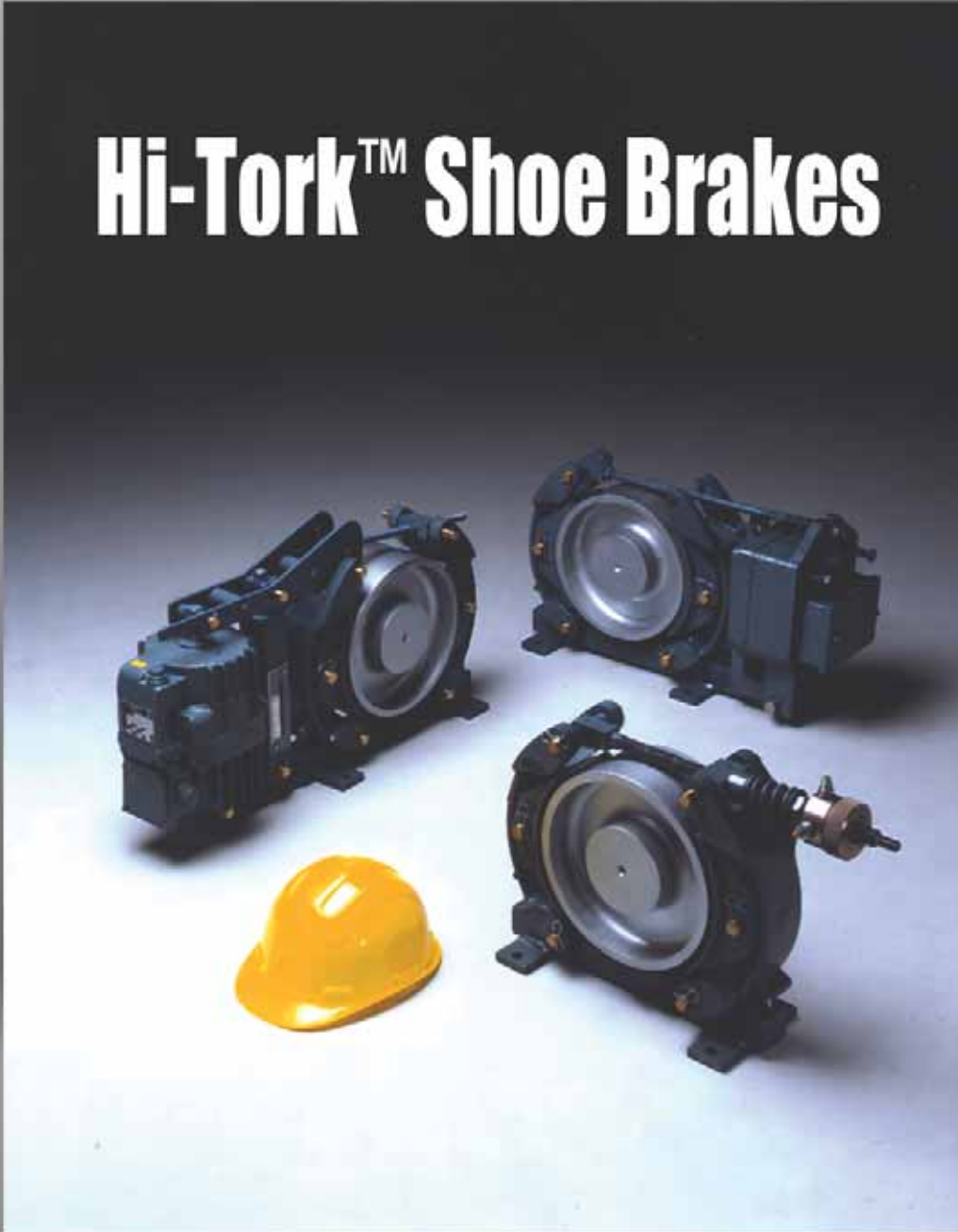


**Mondel Engineering**  
*Hi-TORK™ 200S*  
*Industrial Shoe Brakes*

# Hi-Tork™ Shoe Brakes



**MAGNETEK**  **UNCOMMON POWER**

# MONDEL MEANS BRAKES

## Contents and Page Reference Guide

PAGE	DESCRIPTION	TYPE
3-4	Introduction	-----
5-6	DC Magnet Operated Brakes	SA
7-9	3-Phase AC Hy-Thrust™ Actuator Brakes	ST & ST/E
10	3-Phase AC Hy-Thrust™ Operated Explosion-proof and Flame-proof Brake	STX & STF
11	Pneumatic and Hydraulic Operated Brakes	SP/E & SH/E
12	Hydraulic (Pedal) Operated Brakes	SM
13	Pedal Operated Hydraulic Override System for adding to Brake Types SA, ST, and ST/E Brakes	SA/M, ST/M
14	Handwheel and Lever Applied Brakes	S/W & S/L
15	Symmetrical and Offset Hub Brake Wheels	SBW & OBW
16-17	Geared Brake Wheel Couplings	G66
18	DC Magnetek Brake Rectifiers and Controllers	SA & SA/M
19	Brake Enclosures	SA, ST & ST/E

The information contained in this technical manual is general in nature and shall not be construed to warrant suitability of the equipment for any specific installation or application. All designs, specifications and components of the equipment described are subject to change at Magnetek's sole discretion at any time without advance notice.

# Hi-Tork™ 200S Series Industrial Shoe Brakes

## Introduction

Magnetek's heavy-duty, cost-effective Mondel Industrial Duty Shoe Brakes are designed for a wide variety of industrial and mining applications and environments. Minimal moving parts provide an extremely reliable range of brakes that are easy to install, adjust and maintain. The 200S Brake Series has a compact size with low shaft height, making it easy to retrofit into existing installations where space is tight.

Applications include:

- Overhead cranes
- Conveyors
- Hoists
- Bridges
- Movable Bridges
- Fans
- Winches
- Turntables
- Overhead Doors
- Lock Gates
- Strip Processing Equipment
- Ship Loaders
- Ore Bridges
- Machine Tools
- Other types of machinery requiring reliable stopping and holding

### ■ STANDARD FEATURES

- Environmentally safe molded non-asbestos brake linings provide a constant coefficient of friction over the normal operating temperature range.
- Standard linings are bonded to the brake shoes to provide a maximum amount of shoe wear.
- Brake shoes are pivoted; automatic positioners prevent the shoes from dragging on the brake wheel.
- Series wound coils for all currents.
- Shunt wound coils for all popular voltages.
- AC operators are C.S.A. certified for all popular voltages and frequencies.
- Top hinged armatures on DC magnets keep air gap free from dirt and debris.
- Hardware is non-corrosive.



TYPE 8" ST/E-Ed 23/5 AC HY-THRUST™ BRAKE

### ■ BRAKE WHEELS

- Standard wheels are cast in a ductile iron alloy.
- Wheel material endures high temperatures and is resistant to scoring.
- Wheels available to meet customers' specifications; from fully machined and balanced to semi-finished rough bored. *(Reference pg. 14)*

### ■ BRAKE WHEEL COUPLINGS

- Brake wheel couplings available for all sizes of 200S Series brake wheels. *(Reference pg. 15)*

### ■ BRAKE RECTIFIERS AND BRAKE CONTROLLERS

- Rectifiers allow a DC magnet brake to be utilized with an AC power supply.
- Hoist brake rectifiers include a forcing/holding circuit to minimize set and release times.
- Standard controller designed to operate BE Series brake with shunt wound 50 VDC coil.
- Standard controller supplied in a NEMA 3R Enclosure. *(Reference pg. 17)*

## ENVIRONMENT

- The standard 200S Series Brakes have been designed to function in moderately dusty and moist locations. The AC and DC actuators are sealed, encapsulated or gasketed. Brake components and associated hardware are painted, plated or corrosion resistant.

## BRAKE ENCLOSURES

- Custom enclosures are designed to protect the brake from its application environment.
- Available in NEMA 3R and NEMA 4 design configurations. (Reference pg. 18)

## SPACE HEATERS

- In low temperature and/or damp locations, where condensation may be a problem, space heaters can be provided for mounting inside brake enclosures.
- Hy-Thrust actuators are available with optional built-in heaters.

## BRAKETRONIC™

- AC/DC variable frequency torque control of thruster operated shoe or disc brake.

## HAZARDOUS LOCATIONS

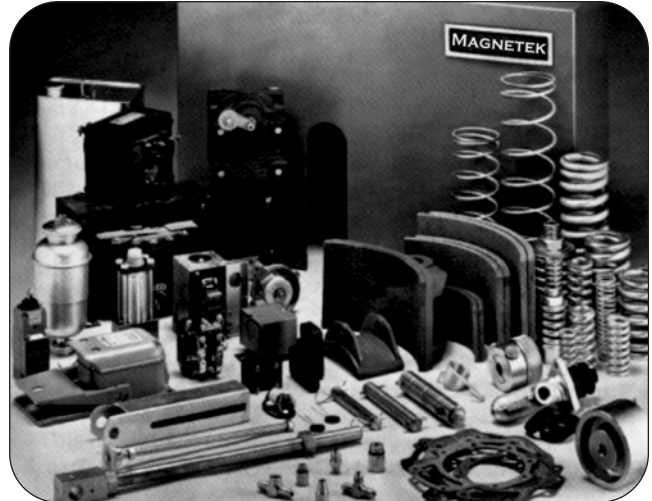
- Hy-Thrust actuators are widely used in explosion-proof and flame-proof areas on Drum, Band, and Disc brakes for conveyors, hoists, cranes, and many other applications in the mining, petro-chemical and material handling industries.

## INSTALLATION, MAINTENANCE AND SPARE PARTS

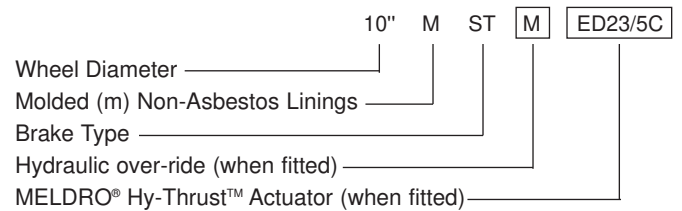
- Specific installation, operation, and maintenance information and spare parts lists are shipped with each brake.
- Additional copies are available on request or downloaded from the [www.magnetekmh.com](http://www.magnetekmh.com) web site.

## OPTIONAL FEATURES

- Self-adjustment keeps brake shoe/wheel gap constant as brake linings wear (MST)
- Extra wide shoes
- Bolted or riveted linings
- Brake shoe thermostats to monitor brake wheel temperatures
- Brake lining replacement warning/interlock system
- Hydraulic over-ride/parking/emergency stopping
- Stainless steel pivot pins
- Special pivot pins, fitted with lubricators, for harsh environment applications
- Latching manual release levers
- Mechanical and magnetic proximity interlock/limit switches
- Corrosion protection
- Vertical mounting on certain models



## HOW TO ORDER BRAKES



### SPECIFY

- Brake Size and Type (Catalog #)
- Torque (LB. FT.)
- HP speed of shaft on which brake is mounted (RPM)
- Brake application (Crane Hoist/Bridge/Trolley, conveyor etc.)
- Electrical Supply (DC Volts – AC Volts/3Ph/60Hz)
- Shunt/Series Wound Coil (Type SA)
- Rating (8, 1 or 1/2 Hour)
- Motor data for 'SA' Series Wound Coil (Make, Type and Frame Number HP, RPM, Volts, FLC, Rating)
- Duty Cycle (OPH)
- Ambient Temperature
- Optional Features
- For replacement brakes, provide the original brake nameplate information.
- Refer to Selection and Application Data section in our Product Binder.

### ACCESSORIES

- Brake Wheels/Couplings, Rectifiers/Controllers, Covers, and Braketronic. Order as required.

# Hi-Tork™ 200S Series

## Type “SA”—DC Magnet Operated Brakes

The “SA” type brake is a spring applied, electrically released DC shoe brake, utilizing a short stroke magnet designed to produce a quick acting brake with a low armature impact. These brakes will provide a long service life with a minimum amount of maintenance and downtime.

### STANDARD FEATURES

- Compact design, requires minimum installation space.
- Braking torque may be adjusted to 50% of the maximum torque.
- Double torque springs—in the event one fails the other will provide partial torque.
- Easy adjustments are provided for spring pressure, magnet air gap and shoe clearance.
- Class “F” Insulation
- A weather-proof (Type 3R) terminal box is provided on all shunt brakes.
- The air gap shield is fitted to prevent dirt from falling between the armature and the actuator.

### OPTIONAL FEATURES

- Hydraulic over-ride/parking/emergency stopping
- Built-in Rectifier—an encapsulated diode bridge can be mounted inside the terminal box
- Shunt discharge unit
- Time delay (for up to 1.0 seconds)
- Manual brake release lever

### SHUNT BRAKES

Standard shunt brakes are continuous (8 Hr.) rated and designed for Class “B” temperature rise at a maximum 40°C ambient. At full torque, maximum air-gap and normal operating temperatures, the brakes are designed to release at 80% of full line voltage. Shunt wound brakes can be supplied for 12V to 550V DC operation.

The “pick-up” times of shunt operated brakes can be improved by implementing the “voltage” or the “resistance” forcing methods. With the voltage method, a standard coil is “forced” by the application of 2 to 3 times normal volts for approximately a 1/2 second (Ref. Fig. 1). Using the resistance method, a partial-voltage coil is used in series with a suitable resistance which is controlled by a heavy-duty contactor.(Ref. Fig. 2).

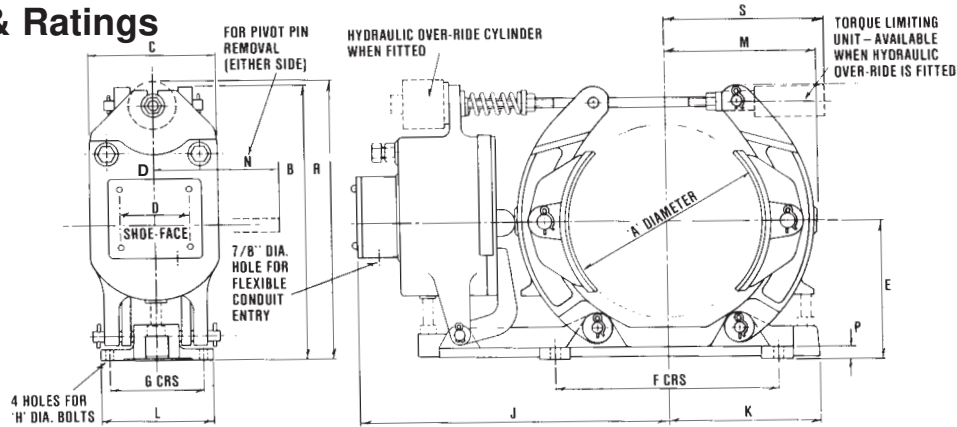


TYPE 8" SA BRAKE

### SERIES BRAKES

Series brakes are available with coils designed for 1/2 hour and 1-hour duty to correspond with the relevant motor horsepower ratings and currents. The brakes will release at 40% full-load motor current and remain released down to 10% full load motor current.

## Dimensions & Ratings



### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	C	E	F	G	H	J	K	L	M	N	P	R	S
4"	2	6 3/8	4 1/4	3 3/8	6	3	5/16	10	4	4	3 3/4	3 3/4	3/8	7 1/4	6 1/4
6"	3	9 3/8	6 1/2	4 3/4	8	3	3/8	13	5 1/2	4 1/8	5 1/4	5 1/4	1/2	10	9
8"	4	11 3/4	7 3/4	6	11	4	3/8	14 1/2	6 3/4	5 1/4	6 5/8	6 1/2	5/8	12 3/8	9 1/2
10"	4	13 5/8	8 1/2	7	12	5	1/2	15 3/4	7 7/8	6 1/4	7 3/4	6 1/2	3/4	14 1/4	9 1/2
12"	5	17 1/4	10 1/2	8 3/4	14	6	1/2	19 1/2	9 1/2	7 1/4	9 1/2	8	3/4	17 5/8	12 1/8
13"	5 1/2	17 1/4	10 1/2	8 3/4	14	6	1/2	20	9 1/2	7 1/4	10	8	3/4	17 5/8	12 1/8
15"	6 1/4	20 7/8	13 1/4	10 1/2	18	7	5/8	24	11 7/8	8 3/4	12 1/8	9	1	20 7/8	17 1/4
16"	6 1/4	20 7/8	13 1/4	10 1/2	18	7	5/8	24 1/2	11 7/8	8 3/4	12 5/8	9	1	20 7/8	17 1/4

For construction purposes request certified drawing.

### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Catalog #	Brake Wheel Diameter A	Shunt Maximum Torque Continuous (LB. FT.)	Shunt Forcing Rectifier 30 min. (LB. FT.)	Series 1/2-Hour (50% Duty Cycle)	Series 1-Hour (30% Duty Cycle)	Net Weight (LB.)	Gross Weight (LB.)
4" SA	4"	18	22	25	15	24	30
6" SA	6"	50	67	40	30	65	80
8" SA	8"	140	140	100	65	110	130
10" SA	10"	240	290	200	130	150	170
12" SA	12"	425	510	510	335	320	360
13" SA	13"	460	550	550	365	320	360
15" SA	15"	750	960	960	610	560	620
16" SA	16"	800	1000	1000	650	560	620

NOTES: 1 – CUSTOM BRAKE SIZES AVAILABLE, CONSULT FACTORY

TYPICAL TIME-CURRENT CURVES FOR SHUNT BRAKES WITH AND WITHOUT FORCING.

- This method of control is typically used to improve the response times of brakes on crane hoist applications.

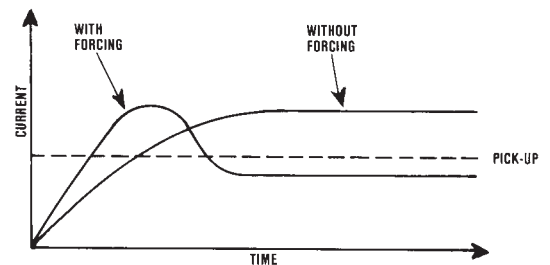


FIG. 4

# Hi-Tork™ 200S Series

## Type “ST”–3-Phase AC Hy-Thrust Actuator Brakes

The ST (and ST/E) type, 3-phase AC shoe brakes are spring applied—electrically released by a completely sealed, continuously rated, Hy-Thrust actuator. These brakes are designed with a minimum number of parts to provide a long service life with reduced maintenance and downtime.

This versatile brake can be applied to a wide range of applications and environmental conditions, where smooth, responsive stopping and holding is required. The cushioned brake action produces significantly less mechanical oscillations as compared to the DC Armature or the AC Solenoid type brakes. The latter are notoriously expensive to maintain in terms of spare parts and downtime. The inherent cushioning effect makes the brake ideal for high duty cycles or jogging applications, virtually eliminating mechanical shock loading which can lead to increased component wear and/or component failures.

Since the growth in popularity of AC controlled cranes, this brake has rapidly become the standard for all crane motions. It has the same high reliability that is normally associated with the DC Armature brakes, but does not require an expensive transformer/rectifier controller to supply the DC power.

### STANDARD FEATURES

- Fast response times
- High switching frequency—1200 to 2000 operations per hour
- Long service life—20 million switching cycles
- Working fluid operating range -13°F (-25°C) through 122°F (50°C)
- Built-in compression spring (Standard “ST” Type)
- Available for 230VAC, 460VAC, 575VAC/3 Ph/60Hz as standard.
- Environmentally safe molded non-asbestos brake linings provide a constant coefficient of friction over the normal operating temperature range.
- Convenient adjustments for torque, lining wear and shoe clearance.
- Manual release lever
- Floor mounting

### OPTIONAL FEATURES

- Stepless, externally adjustable time delays for Setting (“S”), Releasing (“H”)
- Special fluids operating in extreme ambient temperatures
- External torque springs (“ST/E” Type)
- Tropicalized, explosion-proof and flame-proof units available
- Corrosion protection
- Braketronic stepless remote braking available (consult factory)
- Hydraulic pedal operated manual over-ride systems
- Automatic Adjustment (AA) - keeps brake shoe/wheel gap constant as the shoe linings wear.
- Automatic Equalization (AE) - maintains equal shoe running clearance for balanced and equal lining wear.



TYPE 13" MST– Ed 50/6C BRAKE  
WITH (AA) AND (AE)

### BRAKING TORQUES

#### The standard Type “ST”(Internal torque spring)

- Torque spring compression rating is fixed within the thruster.
- Pre-set torques setting provided by pull rod pivot pin locations (3).
- Torque may be reduced to 60% of maximum rating.

#### The optional Type “ST/E”(External torque spring)

- Provides stepless torque adjustment.
- Torque adjustment made by rotating the nut atop the spring tube assembly.
- Torque may be reduced to 40% of maximum rating.
- The actual setting can be read on the calibrated torque indicator (C.T.I.) located in the side of the spring tube assembly.

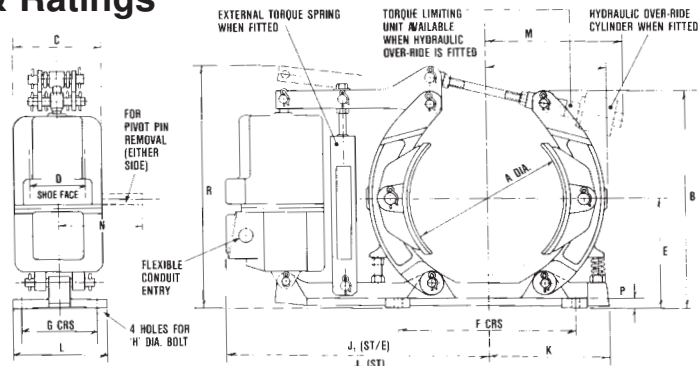


TYPE 8" MSTX/E–EdE 30/5 AC HY-THRUST™  
EXPLOSION-PROOF (CSA LISTED)  
ACTUATOR AS FITTED TO OIL RIG CRANE.

# Hi-Tork™ 200S Series

## Type "ST and STE" – 3-Phase AC Hy-Thrust Actuator Brake

### Dimensions & Ratings



Type ST– with internal torque spring as shown on photograph on page 7. Type ST/E– with external torque spring as shown on outline drawing above.

### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	C	E	F	G	H	J1	J2	K	L	M	N	P	R	S
6"	3	9 3/8	6 3/8	4 3/4	8	3	3/8	17	14 3/4	5 1/2	4 1/8	5 1/4	5 1/4	1/2	15 1/2	11
8"	4	11 3/4	6 3/8	6	11	4	3/8	17 3/4	16	6 3/4	5 1/4	6 5/8	6 1/2	5/8	15 1/2	11 1/2
10"	4	15 5/8	6 3/8	7	12	5	1/2	20 3/4	17 1/4	7 7/8	6 1/4	7 3/4	6 1/2	3/4	19 1/8	11 1/2
12"	5	17 1/4	7 3/4	8 3/4	14	6	1/2	23	20 1/2	9 1/2	7 1/4	9 1/2	8	3/4	22 1/2	14 1/8
13"	5	17 1/4	7 3/4	8 3/4	14	6	1/2	23 1/2	21	9 1/2	7 1/4	10	8	3/4	22 1/2	14 1/8
15"	6 1/4	20 7/8	9 1/2	10 1/2	18	7	5/8	29	26 1/2	11 7/8	8 3/4	12 1/8	9	1	31 3/4	19 1/4
16"	6 1/4	20 7/8	9 1/2	10 1/2	18	7	5/8	29 1/2	27	11 7/8	8 3/4	12 5/8	9	1	31 3/4	19 1/4
*19"	8 1/2	26 1/4	9 1/2	13 1/4	18 1/2	10	1	32	30	15	12 3/4	15 3/8	10	1 1/8	33	21

### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

For construction purposes request certified drawing.

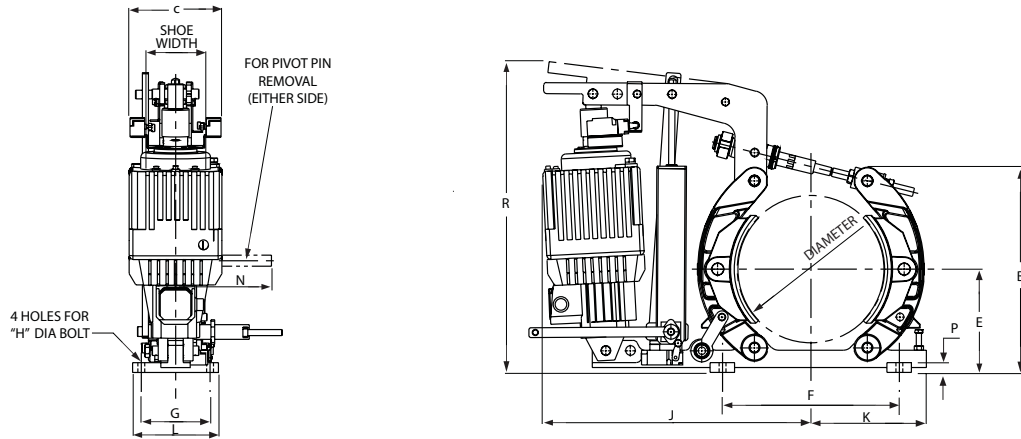
Brake Size		A	Torque LB. FT. ST	Torque LB. FT. ST/E	Power Input (1) Watts	Net Weight (LB.)	Gross Weight (LB.)
ST	ST/E						
6" ST	6" ST/E	Ed23	60	60	165	50	65
8" ST	8" ST/E	Ed23	186	155	165	70	88
8" ST	8" ST/E	Ed30	200	200	200	85	106
10" ST	10" ST/E	Ed23	210	210	165	85	106
10" ST	10" ST/E	Ed30	255	255	200	90	112
12" ST	12" ST/E	Ed23	260	260	165	145	180
12" ST	12" ST/E	Ed30	320	320	200	148	184
12" ST	12" ST/E	Ed50	400	400	260	150	188
13" ST	13" ST/E	Ed23	280	280	165	145	180
13" ST	13" ST/E	Ed30	345	345	200	148	184
13" ST	13" ST/E	Ed50	435	435	260	150	188
15" ST	15" ST/E	Ed30	420	420	200	330	395
15" ST	15" ST/E	Ed50	660	660	260	350	420
15" ST	15" ST/E	Ed80	1030	1030	330	355	425
15" ST	15" ST/E	Ed121	1270	1270	330	380	455
16" ST	16" ST/E	Ed30	450	450	200	330	395
16" ST	16" ST/E	Ed50	700	700	260	350	420
16" ST	16" ST/E	Ed80	1100	1100	330	355	425
16" ST	16" ST/E	Ed121	1350	1350	330	380	455
19" ST	19" ST/E	Ed80	1200	1200	330	730	875
19" ST	19" ST/E	Ed121	1400	1400	330	760	910
19" ST	19" ST/E	Ed201	2260	2260	450	765	920

\*Hydraulic override not available.



# Hi-Tork™ 200S Series

Type "ST and STE"—3 Phase AC Hy-Thrust Operated Brake with Automatic Adjustment (AA) and Automatic Equalization (AE)

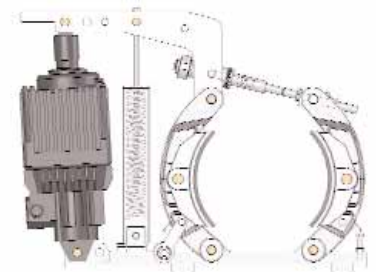


Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER	ACTUATOR	SHOE WIDTH	B	C	E	F	G	H	J	K	L	N	P	R
6"	ED23	3	9.38	8.75	4.75	8	3	3/8	16.50	5.25	4.13	5.25	0.38	16.25
8"	ED23	4	11.75	8.75	6	11	4	3/8	17.50	6.75	5.25	6.50	0.50	16.75
	ED30	4	11.75	9.25	6	11	4	3/8	17.50	6.75	5.25	6.50	0.50	20.38
10"	ED23	4	13.75	8.75	7	12	5	1/2	19.50	7.75	6.25	6.50	0.50	17.50
	ED30	4	13.75	9.25	7	12	5	1/2	19.50	7.75	6.25	6.50	0.50	20.88
12"	ED30	5	17.25	9.25	8.75	14	6	1/2	21.88	9.50	7.25	8.00	0.63	24.00
	ED50	5	17.25	9.50	8.75	14	6	1/2	23.00	9.50	7.25	8.00	0.63	24.00
	ED80	5	17.25	9.50	8.75	14	6	1/2	23.25	9.50	7.25	8.00	0.63	24.00
13"	ED30	5	17.25	9.25	8.75	14	6	1/2	22.75	10.00	7.25	8.00	0.63	24.00
	ED50	5	17.25	9.50	8.75	14	6	1/2	23.63	10.00	7.25	8.00	0.63	24.00
	ED80	5	17.25	9.50	8.75	14	6	1/2	23.63	10.00	7.25	8.00	0.63	24.00
15"	ED50	6.25	20.88	9.50	10.5	18	7	5/8	26.25	11.75	8.75	9.75	1.00	28.38
	ED80	6.25	20.88	9.50	10.5	18	7	5/8	26.38	11.75	8.75	9.75	1.00	28.38
	ED121	6.25	20.88	9.25	10.5	18	7	5/8	27.25	11.75	8.75	9.75	1.00	31.63
16"	ED50	6.25	20.88	9.50	10.5	18	7	5/8	26.75	12.25	8.75	9.75	1.00	28.00
	ED80	6.25	20.88	9.50	10.5	18	7	5/8	26.81	12.25	8.75	9.75	1.00	28.13
	ED121	6.25	20.88	9.25	10.5	18	7	5/8	27.75	12.25	8.75	9.75	1.00	31.63
19"	ED80	8.5	25.75	9.50	13.25	18.5	10	1	31.13	15.00	12.75	11.00	1.00	29.88
	ED121	8.5	25.75	9.75	13.25	18.5	10	1	30.50	15.00	12.75	11.00	1.00	33.25

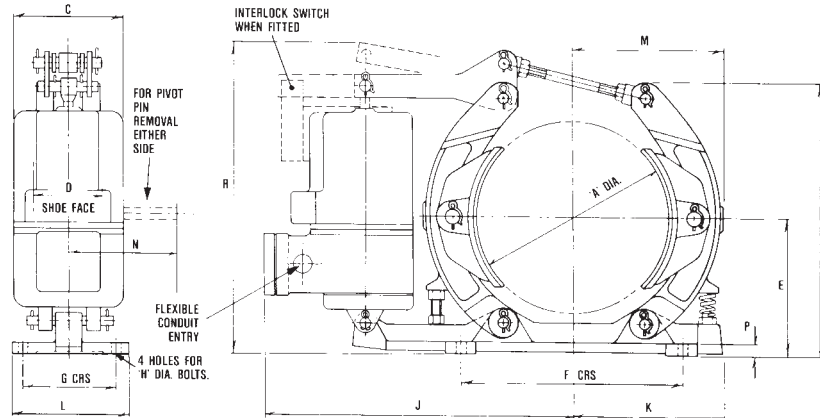
Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Brake Wheel Diameter	ACTUATOR	Torque - ST Ft.Lb.	Torque - STE Ft.Lb.	Actuator Power Watts	Net weight Lb.	Gross Weight Lb.
6"	ED23	60	60	165	82	97
8"	ED23	155	155	165	102	120
	ED30	200	200	200	114	132
10"	ED23	210	210	165	129	150
	ED30	255	255	200	143	165
12"	ED30	320	320	200	201	237
	ED50	400	400	260	216	254
	ED80	600	600	330	216	254
13"	ED30	345	345	200	201	237
	ED50	435	435	260	221	259
	ED80	650	650	330	220	258
15"	ED50	660	660	260	356	421
	ED80	1000	1000	330	358	423
	ED121	1250	1250	330	381	456
16"	ED50	700	700	260	356	421
	ED80	1100	1100	330	358	423
	ED121	1350	1350	330	381	456
19"	ED80	1200	1200	330	503	648
	ED121	1400	1400	330	553	703
	ED201	2250	2250	450	553	703



# Hi-Tork™ 200S Series

## Type “STX and STF”–3-Phase AC Hy-Thrust Explosion-proof and Flame-proof Brakes



Approximate Dimensions (Inches) Flame-proof Brakes Types STF–Consult Factory

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	C	E	F	G	H	J	K	L	M	N	P	R
6"	3	9 3/8	6 3/8	4 3/4	8	3	3/8	17 1/2	5 1/2	4 1/8	5 1/4	5 1/4	1/2	20 7/8
8"	4	11 3/4	6 3/8	6	11	4	3/8	18 3/4	6 3/4	5 1/4	6 5/8	6 1/2	5/8	20 7/8
10"	4	13 5/8	6 3/8	7	12	5	1/2	20 1/8	7 7/8	6 1/4	7 3/4	6 1/2	3/4	20 7/8
12"	5	17 1/4	7 1/2	8 3/4	14	6	1/2	22	9 1/2	7 1/4	9 1/2	8	3/4	25 3/8
13"	5	17 1/4	7 1/2	8 3/4	14	6	1/2	22 1/2	9 1/2	7 1/4	10	8	3/4	25 3/8
15"	6 1/4	20 7/8	7 1/2	10 1/2	18	7	5/8	27 1/2	11 7/8	8 3/4	12 1/8	9	1	30 1/4
16"	6 1/4	20 7/8	7 1/2	10 1/2	18	7	5/8	28	11 7/8	8 3/4	12 5/8	9	1	30 1/4
*19"	8 1/2	26 1/4	9 1/2	13 1/4	18 1/2	10	1	32 1/2	15	12 3/4	12 3/4	10	1 1/8	34 3/4

\*Hydraulic override not available.

For construction purposes request certified drawing.

Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Catalog #	Brake Wheel Diameter A	Maximum Torque (LB. FT.)	Power Input (Watts)	Net Weight (LB.)	Gross Weight (LB.)
6" ST-Ed E 30/5C	6"	60	200	88	110
8" ST-Ed E 30/5C	8"	155	200	108	135
10" ST-Ed E 30/5C	10"	255	200	120	150
12" ST-Ed E 50/6C	12"	400	260	200	250
13" ST-Ed E 50/6C	13"	435	260	200	250
15" ST-Ed E 50/6C	15"	660	260	380	460
16" ST-Ed E 50/6C	16"	700	260	380	460
Ed-E 80/6C		1100	330	385	465
*19" ST-Ed E 80/6C	19"	1200	330	760	915
Ed-E 121/6C		1400	330	785	945

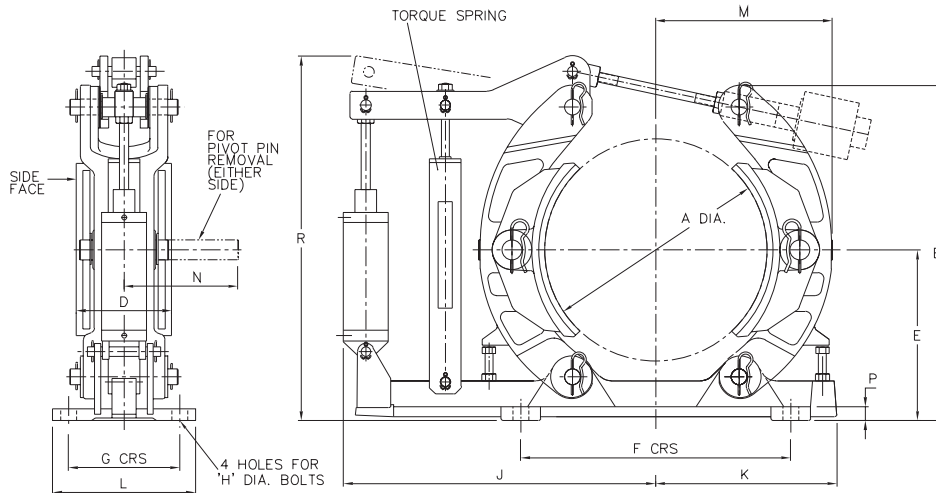
\*Hydraulic override not available.

### FEATURES

- Operation of brake similar to type “ST” on page 7.
- Standard brakes fitted with Hy-Thrust™ explosion-proof Actuators.
- Alternative types of explosion-proof and flame-proof actuators also available.
- Mechanical or Magnetic Proximity interlock/limit switches optional.
- Actuators comply with International Standards including CSA/EMR (Canada), HSE (U.K.) and BVS (West Germany). Details available on request.
- Photograph of typical brake shown bottom of page 7.

# Hi-Tork™ 200S Series

## Type “SP/E and SH/E” –Pneumatic/Hydraulic Operated Brakes



### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	E	F	G	H	J	K	L	M	N	P	R
6"	3	9 3/8	4 3/4	8	3	3/8	13 1/4	5 1/2	4 1/8	5 1/4	5 1/4	1/2	15 1/2
8"	4	11 3/4	6	11	4	3/8	14	6 3/4	5 1/4	6 5/8	6 1/2	5/8	15 1/2
10"	4	13 5/8	7	12	5	1/2	16	7 7/8	6 1/4	7 3/4	6 1/2	3/4	19 1/4
12"	5	17 1/4	8 3/4	14	6	1/2	19	9 1/2	7 1/4	9 1/2	8	3/4	22 1/2
13"	5	17 1/4	8 3/4	14	6	1/2	19	9 1/2	7 1/4	10	8	3/4	22 1/2
15"	6 1/4	20 7/8	10 1/2	18	7	5/8	23	11 7/8	8 3/4	12 1/8	9	1	31 3/4
16"	6 1/4	20 7/8	10 1/2	18	7	5/8	23	11 7/8	8 3/4	12 5/8	9	1	31 3/4

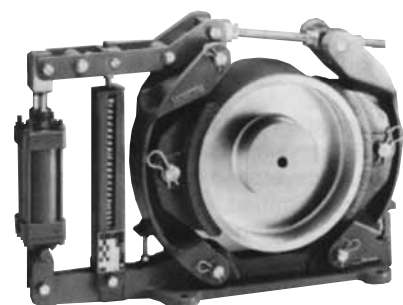
For construction purposes request certified drawing.

### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Catalog #	Brake Wheel Diameter A	Maximum Torque (LB. FT.)	Minimum Pressure to Lift (P.S.I.)	Net Weight (LB.)	Gross Weight (LB.)
6" SP/E	6"	60	30	35	50
8" SP/E	8"	155	40	55	70
10" SP/E	10"	255	50	70	90
12"/13" SP/E	12"/13"	435	50	130	155
15"/16" SP/E	15"/16"	1350	60	310	365
6" SM/E	6"	60	85	35	50
8" SM/E	8"	155	215	55	70
10" SM/E	10"	255	215	70	90
12"/13" SM/E	12"/13"	435	300	130	155
15"/16" SM/E	15"/16"	1350	700	310	365

### FEATURES

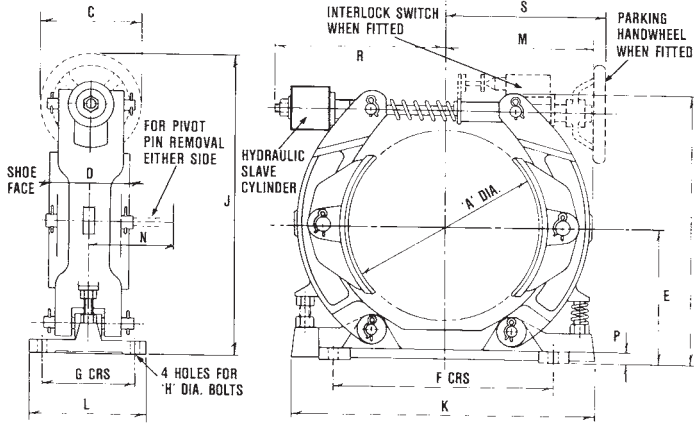
- This spring applied, air/hydraulic released brake will stop and hold a load when air/hydraulic pressure is exhausted from the heavy-duty long stroke cylinder.
- Stepless reduced torque can be obtained by adjustment of the external torque spring. This is easily read from the calibrated torque indicator (CTI).
- Air released brakes are suitable for use in explosion-proof atmospheres.



TYPE 12" SP/E AIR OPERATED BRAKE

# Hi-Tork™ 200S Series

## Type “SM”–Hydraulic (Pedal) Operated Brakes



TYPE 8" SM BRAKE

### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	C	E	F	G	H	J	K	L	M	N	P	R	S
6"	3	9 3/8	6	4 3/4	8	3	3/8	11 3/8	11	4 1/8	5 1/4	5 1/4	1/2	11	9 1/2
8"	4	11 3/4	7	6	11	4	3/8	14 1/2	13 1/2	5 1/4	6 5/8	6 1/2	5/8	11 1/2	9 1/2
10"	4	13 5/8	7	7	12	5	1/2	16 3/8	15 3/4	6 1/4	7 3/4	6 1/2	3/4	11 3/4	10
12"	5	17 1/4	8	8 3/4	14	6	1/2	20 1/4	19	7 1/4	9 1/2	8	3/4	14 1/8	11 1/4
13"	5	17 1/4	8	8 3/4	14	6	1/2	20 1/4	19	7 1/4	10	8	3/4	14 5/8	11 3/4
15"	6 1/4	20 7/8	10	10 1/2	18	7	5/8	24 1/2	23 3/4	8 3/4	12 1/8	9	1	18 1/2	15 1/4
16"	6 1/4	20 7/8	10	10 1/2	18	7	5/8	24 1/2	23 3/4	8 3/4	12 5/8	9	1	19	15 3/4

For construction purposes request certified drawing.

### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Catalog #	Wheel Diameter A	Service Torque (LB. FT.)	Emergency Torque (LB. FT.)	Pedal Effort		Net Weight (LB.)	Gross Weight (LB.)
				Service (LB.)	Emergency (LB.)		
6" SM	6	50	80	20	25	26	34
8" SM	8	150	190	30	38	49	60
10" SM	10	240	285	40	43	55	70
12"/13" SM	12/13	350	500	45	60	160	200
15"/16" SM	15/16	475	775	45	70	265	320

MANUAL KIT INCLUDES:	REMOTE BLEEDER KIT INCLUDES:
<ul style="list-style-type: none"> <li>• Foot-Operated Master Station</li> <li>• Reservoir</li> <li>• Hydraulic Fluid (SAE J1703F)</li> <li>• Copper Tubing (5/16" Dia.)                             <ul style="list-style-type: none"> <li>–Single 50Ft.</li> <li>–Double 100Ft.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Foot-Operated Master Station</li> <li>• Reservoir, Solenoid Valve and Pushbutton Fittings</li> <li>• Hydraulic Fluid (SAE J1703F)</li> <li>• Copper Tubing (5/16" Dia.)                             <ul style="list-style-type: none"> <li>–Single 50 Ft.</li> <li>–Double 100 Ft.</li> </ul> </li> </ul>

Line Pressure: Service 420 psi / Emergency 640 psi Pedal Stroke: One Brake Operation–4 3/8"/Two Brake Operation–7 1/2"

The manual pedal operated, hydraulically set–spring released shoe brakes (Type “S”) are designed for medium duty crane service to provide the operator with a sensitive pressure/torque braking system for smooth, controlled slowing and stopping.

#### OPERATION

The “SM” Series brake is fitted with a direct-operating hydraulic slave cylinder mounted on the brake pushrod. The hydraulic pressure developed by the pedal-operated master cylinder is transmitted via the connection lines to the slave cylinder which in turn applies torque to the brake wheel. The master cylinder provides sensitive control between zero and maximum force/torque.

The standard hydraulic brake includes a manual bleeder. The addition of a remote control bleeder permits quick and easy bleeding of the system. The remote control system consists of a fluid reservoir, solenoid-operated control valve and a pushbutton station located near the operator. Depressing the pushbutton switch energizes the solenoid coil and opens the valve. By pressing the pedal, the operator can force fluid through the system, into the double fluid reservoir. After all the air has been vented from the system, the pushbutton is released and the control valve closes. This seals the system and operation of the master cylinder once again develops pressure to operate the slave cylinder and apply torque to the brake wheel.

# Hi-Tork™ 200S Series

## Types “SA/M and ST/M” – Pedal Operated Hydraulic Over Ride System



TYPE 8" ST/M BRAKE (AC)



TYPE 8" SA/M BRAKE (DC)

The 200S pedal controlled hydraulic over ride system can be fitted to the “SA” and “ST” Series brakes. The hydraulic portion of the over ride system functions in the same manner and utilizes the same basic components as the “SM” Series brake. This provides the operator with smooth slowing and stopping from the foot pedal. The system provides the operator with variable torque control with the electrical actuator providing emergency stopping and parking.

### OPERATION

The electric actuator, DC or AC, must be continuously rated and is arranged to be independently “energized/released” during the normal operation of the crane. An ON/OFF pushbutton is usually mounted in the cab so that the operator can de-energize the electric actuator and set the brake in an emergency or for temporary parking. Operation of the foot pedal allows the operator to apply torque to the brake wheel by “over-riding” the electric actuator through the hydraulic slave cylinder mounted on the brake pushrod.

### AC CRANES

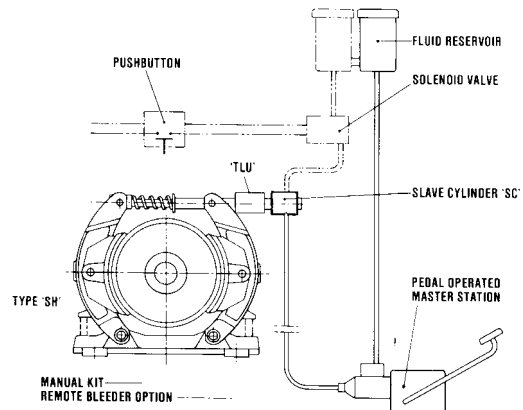
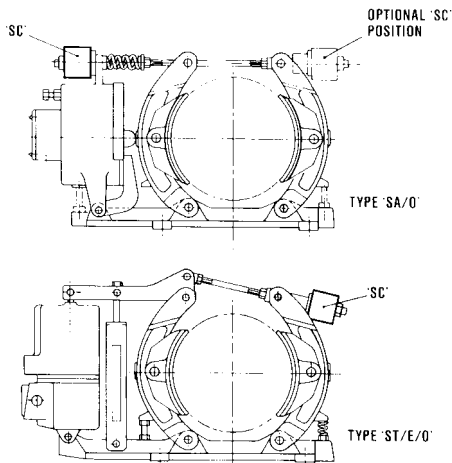
The “ST” (and ST/E) type, 3-phase AC brakes can be fitted with a pedal operated (manual) hydraulic override system. This type of brake combines a hydraulic set/spring release brake with a spring set/electrically released brake. These brakes retain all of the features and characteristics of the individual type ST and ST/E 3-Phase AC Hy-Thrust Operated brakes and the “SM” Hydraulic brakes.

### DC CRANES

The DC Magnet Operated Brakes (Type SA) can be fitted with a pedal operated (manual) hydraulic over ride system. The brake designation then becomes a SA/M Type. This type of brake combines a hydraulic set/spring release brake with a spring set/magnetically released brake. The SA/M Type shoe brake includes all the features of the individual “SA” Type DC magnet operated brakes and the “SM” Type hydraulic (pedal) operated brakes.

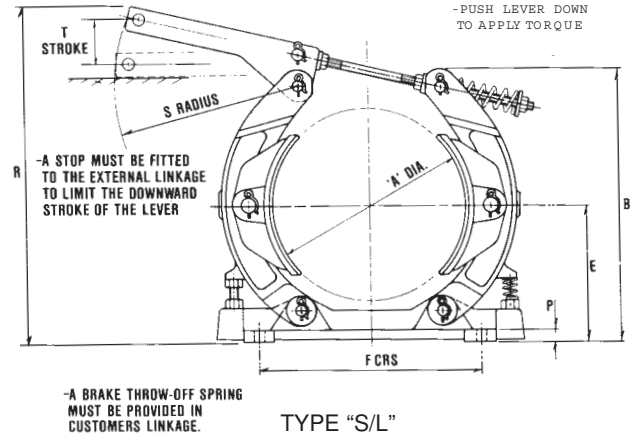
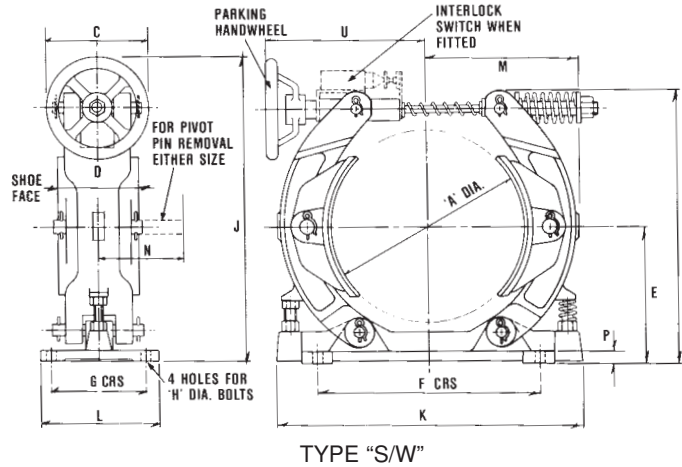
The “SA/M” DC brake mat also must be used on an AC powered crane in conjunction with a suitable rectifier panel.

A torque-limiting unit (TLU) is available as an option. This unit can be set to limit the maximum torque applied to the brake, independent of the force exerted on the foot pedal.



# Hi-Tork™ 200S Series

## Type “S/W and S/L” –Handwheel and Lever Applied Brakes



### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER A	SHOE WIDTH D	B	C	E	F	G	H	J	K	L	M	N	P	R	S	T	U
6"	3	9 3/8	6	4 3/4	8	3	3/8	11 3/8	11	4 1/8	5 1/4	5 1/4	1/2	11 1/2	7	2	9 1/2
8"	4	11 3/4	7	6	11	4	3/8	14 1/2	13 1/2	5 1/4	6 5/8	6 1/2	5/8	12 3/4	7 3/4	2	9 1/2
10"	4	13 5/8	7	7	12	5	1/2	16 3/8	15 3/4	6 1/4	7 3/4	6 1/2	3/4	14 7/8	8 1/2	2	10
12"	5	17 1/4	8	8 3/4	14	6	1/2	20 1/4	19	7 1/4	9 1/2	8	3/4	21 3/4	10 1/2	2	11 1/4
13"	5	17 1/4	8	8 3/4	14	6	1/2	20 1/4	19	7 1/4	10	8	3/4	21 3/4	10 1/2	2	11 3/4
15"	6 1/4	20 7/8	10	10 1/2	18	7	5/8	24 1/2	23 3/4	8 3/4	12 1/8	9	1	23	13 1/2	2	15 1/4
16"	6 1/4	20 7/8	10	10 1/2	18	7	5/8	24 1/2	23 3/4	8 3/4	12 5/8	9	1	23	13 1/2	2	15 3/4

For construction purposes request certified drawing.

### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Catalog #		Brake Wheel Diameter A	Maximum Torque (LB. FT.)	Lever Effort (LB.)	Net Weight (LB.)	Gross Weight (LB.)
Type S/L	Type S/W					
6" S/L	6" S/W	6	60	22	26	34
8" S/L	8" S/W	8	145	40	49	60
10" S/L	10" S/W	10	240	50	55	70
12"/13" S/L	12"/13" S/W	12/13	350	65	160	200
15"/16" S/L	15"/16" S/W	15/16	1350	200	265	320

### FEATURES

- Torque is mechanically lever applied and released on type “S/L” Brakes by a throw-off spring in a customer’s connecting linkage. They are also suitable for use as lever applied drag brakes.
- On type “S/W” Brakes, torque is applied and released by the screw-on handwheel. A throw-off spring is fitted to provide shoe lining clearance and an optional torque limiting unit (TLU) can be fitted to limit the force which can be applied by the handwheel.
- Handwheel applied brakes are particularly suitable for delayed slowing and maintenance holding/parking of rotating machinery, such as ventilation fans. Padlocking and control circuit interlock switches are optional features.



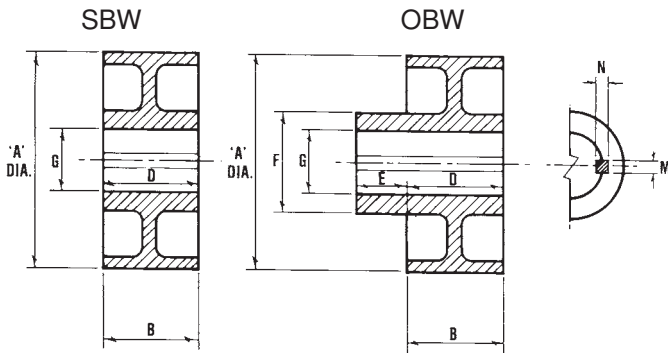
TYPE 8" S/W BRAKE



TYPE 8" S/L BRAKE

# Hi-Tork™ 200S Series

## Type “SBW (Symmetrical)/ OBW (Offset Types)”–Brake Wheels



### Hub Bores and Keyway Dimensions

Diameter	G =
(Give tolerance for Straight Bore)	
Length	S =
	E =
Keyway Width	M =
Depth	N =
Taper (1.25" per foot or other)	=

### Rating Data and Approximate Dimensions (inches) / Weights

CATALOG #		BRAKE WHEEL DIAMETER A	WHEEL FACE B	HUB				MAX RPM	WK <sup>2</sup> (LB.FT. <sup>2</sup> )	NET WEIGHT (LB.)
SYMMETRICAL HUB	OFFSET HUB			D MAX	E MAX	F	G MAX			
4" SBW	4" OBW	4	2 1/4	2 1/4	3/4	2	1	5730	0.05	7
6" SBW	6" OBW	6	3 1/4	3 1/4	1 3/4	3	1 3/4	3820	0.30	15
8" SBW	8" OBW	8	4 1/4	4 1/4	2 1/4	4 1/4	2 3/4	2860	1.1	35
10" SBW	10" OBW	10	4 1/4	4 1/4	2 1/4	4 1/4	2 3/4	2290	3.2	40
12" SBW	12" OBW	12	5 1/4	5 1/4	2 3/4	5	3 1/4	1910	8.2	80
13" SBW	13" OBW	13	5 3/4	5 3/4	2 1/2	5 3/4	3 1/2	1760	12	90
15" SBW	15" OBW	15	6 3/4	6 3/4	2 3/4	8	5	1525	22	160
16" SBW	16" OBW	16	6 3/4	6 3/4	2 7/8	8	5	1430	30	200
19" SBW	19" OBW	19	8 3/4	8 3/4	3 1/8	9	6	1200	75	260
23" SBW	23" OBW	23	11 1/4	11 1/4	4 1/4	10	6 1/4	995	205	450
30" SBW	30" OBW	30 1/2	14 1/4	14 1/4	4 1/4	13 1/2	8	765	600	894

For construction purposes request certified drawing.

Standard brake wheels are cast from 65–45–12 ductile iron alloy. This alloy has a minimum tensile strength of 65,000 psi, minimum yield strength of 45,000 psi, and this provides excellent strength, good machinability and is resistant to scoring. It's compatible with a variety of friction materials where the lining and the brake wheel wear evenly and smoothly. Fully machined wheels can be supplied with a parallel or tapered bore and keyway to meet the customer's specifications. Tapered bored hubs can be provided with a bent lock washer slot to give a more positive method of locking the wheel to the shaft. The wheels can be furnished completely machined to provide proper balance at normal operating speeds. Brake wheels can also be furnished semi-finished with a solid or rough bored hub for final machining by the customer. Standard wheel dimensions are shown on the table above; wheels that do not fall within these dimensional parameters may still be available, please contact the factory.

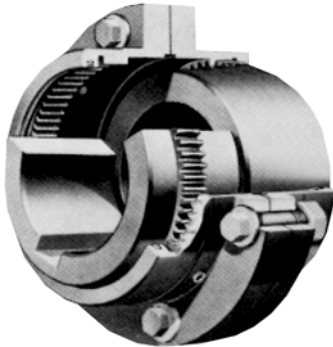
### STANDARD FEATURES

- Manufactured from ductile-iron alloy
- Completely machined to provide proper balance at normal operating speeds
- Resistant to scoring
- Wears smoothly and evenly
- Good compatibility with friction materials

### OPTIONAL FEATURES

- Special materials, tool steel, etc.
- Deep carburizing
- Chrome plated brake path
- Dynamic balancing

# Hi-Tork™ 200S Series Brake Wheel Couplings



TYPE G66  
FLEX COUPLING

## ■ BRAKE WHEEL COUPLINGS

The brake wheel couplings are available for all 200S Series shoe brakes. They are useful in situations where space is limited and they also eliminate the need for expensive double shaft extensions on motors and gearboxes.

## ■ SELECTION

1. Brake wheel couplings are selected to provide sufficient rating based on the torque rating of the brake.
2. Check rating data table for required brake wheel coupling speed against allowable speed.
3. Check rating data table on page 16 for shaft diameters against coupling bore and keyway sizes. If larger bore is required, select a larger coupling.

## NOTES:

- Torque ratings listed are typical values for the 200S Series brakes based on normal operation of drive systems. For repetitive high peak load applications please consult the factory.
- Maximum speeds (RPM) are based on maximum RIM velocity of 6000 feet per minute. Brake wheels and couplings must be balanced if peripheral speed exceeds this value.
- Couplings are normally furnished with an average interference fit of 0.0005" per inch of shaft diameter, unless otherwise specified.
- Double engagement brake wheel couplings require realignment of the brake wheel to the brake if parallel misalignment becomes excessive due to tilting of the wheel and sleeve assembly.
- The high centrifugal forces encountered in couplings separate the base oil and thickener of general-purpose greases. Special long-term grease (LTG) only should be used.

- Standard coupling seals are BUNA-N material. Maximum continuous operating temperature is 250° F (121°C) and maximum intermittent (less than 1000 hours) operating temperature is 300°F (149°C).
- For unlisted brake torques and coupling types, please consult the factory.
- Metric sizes are optional.

## ■ BRAKE WHEEL COUPLING ORDER INFORMATION

### SPECIFY:

- (1) Coupling (If selecting from the standard units shown on page 16 simply specify the catalog number. Example 13" x 5.75" – 1025 G) or if not known please supply the following information:
  - Brake wheel diameter and face width
  - Motor HP and RPM (or speed) of shaft on which brake is mounted
  - Gear ratio or shaft speeds
  - Details of application

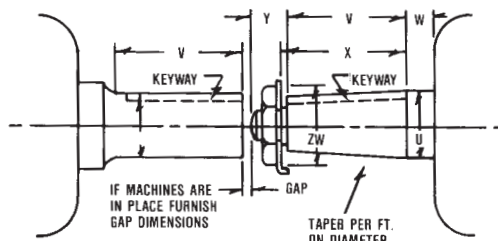
- (2) Hub bores and keyway dimensions

### STRAIGHT SHAFTS:

	Driving Shaft	Driven Shaft
Shaft Diameter (provide tolerance)	U =	U =
Keyway Width	M =	M =
Keyway Depth	N =	N =

### TAPER SHAFTS:

Shaft Diameter (provide tolerance)	U =
Length Dim	V =
Length Dim	W =
Length Dim	X =
Length Dim	Y =
Across Flats	=
Across Corners	ZW=
Taper(1.25 per foot or other)	=
Keyway Width	M =
Keyway Depth	N =

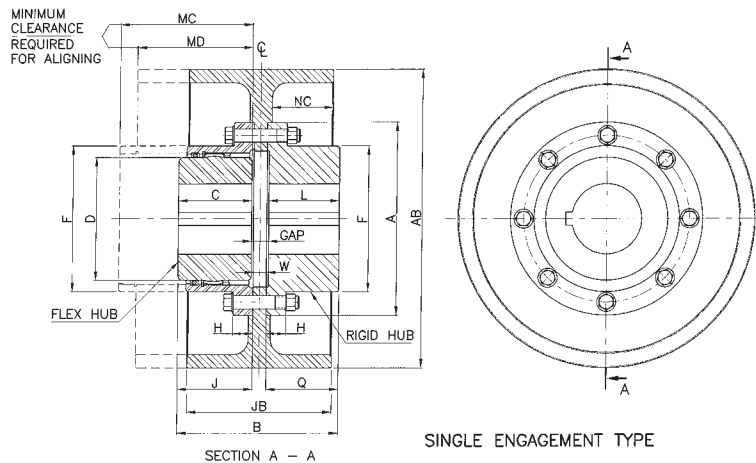




# Hi-Tork™ 200S Series

## Brake Wheel Couplings—Gear Type

### Dimensions & Ratings



#### Approximate Dimensions in Inches

Brake Wheel Diameter AB	A	B	C	D	F	H	J	L	Q	W	GAP	MC MD MAX
6"	4.56	3.88	1.69	2.70	3.30	0.55	1.53	1.56	1.66	0.38	0.50	2.50
8/10"	6.00	4.50	1.94	3.40	4.14	0.75	1.88	1.82	1.92	0.50	0.625	2.90
12"/13"/15"/16"	8.38	6.81	3.03	5.14	6.10	0.86	2.82	2.90	3.00	0.56	0.75	4.10
19"	11.00	9.38	4.19	7.00	8.32	1.12	3.84	4.02	4.12	0.75	1.00	6.58
23"	12.50	10.50	4.75	8.25	9.66	1.12	4.38	4.54	4.70	0.75	1.00	7.82
30"	15.31	13.37	6.03	10.00	12.04	1.50	5.54	5.80	6.00	1.00	1.312	9.76

For construction purposes request certified drawing.

#### Approximate Dimensions in Inches

Size	Single Engagement		
	Parallel Offset Inches	Angular	
		Inches	Degrees
1010G	Do Not Use	.005	1/8
1015G	Single Engagement	.005	1/8
1025G	Couplings To	.010	1/8
1035G	Compensate For	.015	1/8
1040G	Parallel Offset	.020	1/8
1050G	Misalignment	.020	1/8

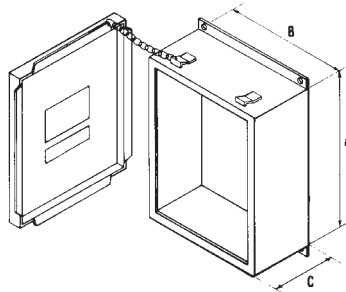
#### Rating Data and Approximate Weights Fitted with Molded Non-Asbestos Linings

Brake Wheel Dia x Face AB JB	Coupling Ref	Brake Rating of Coupling (LB.FT.)	Max Speed RPM	Min Bore	For one square key		For one rectangular key			Weights (LB.)		WK <sup>2</sup> (LB.FT. <sup>2</sup> )	
					Max Bore	M = N	Max Bore	M	N	Wheel and Coupling (No-bore)	Lube	Wheel and Coupling (No-Bore)	Coupling (No-Bore)
6 x 3.25	- 1010G	185	3820	.50	1.875	0.500	2.000	.500	.375	15	.10	.45	.132
8 x 4.25	- 1015G	420	2860	.75	2.375	0.625	2.500	.625	.500	37	.20	1.6	.486
10 x 4.25	- 1015G	420	2290	.75	2.375	0.625	2.500	.625	.500	44	.20	3.7	.486
12 x 5.25	- 1025G	1400	1910	1.25	3.625	0.875	3.875	1.000	.750	100	.60	10.9	2.68
13 x 5.75	- 1025G	1400	1760	1.25	3.625	0.875	3.875	1.000	.750	110	.60	14.7	2.68
15 x 6.25	- 1025G	1400	1525	1.25	3.625	0.875	3.875	1.000	.750	132	.60	25	2.68
16 x 6.75	- 1025G	1400	1430	1.25	3.625	0.875	3.875	1.000	.750	170	.60	33	2.68
19 x 8.75	- 1035G	3550	1200	2.00	4.875	1.250	5.250	1.250	.875	205	1.25	87	11.3
23 x 11.25	- 1040G	5400	995	2.50	5.750	1.500	6.250	1.500	1.00	390	2.00	230	21.6
30 x 14.25	- 1050G	10000	765	3.50	7.000	1.750	7.375	1.750	1.50	770	4.12	660	62.5

Other ratings and arrangements are available, consult factory for details.

# Hi-Tork™ 200S Series

## Type “SA and SA/M” –DC Magnetek Brake Rectifiers/Controllers



NEMA 12 ENCLOSURE

### Rating Data and Approximate Dimensions (inches) and weights (LB.)

DC Magnet Brake Catalog #	Brake Wheel Diameter	Catalog #	A	B	C	Brake Coil (Watts)	Net Weight (LB.)
4"/6" SA	4"/6"	BR-250	10	6	6	90	10
8" SA	8"	BR-250	10	6	6	110	15
10" SA	10"	BR-250	10	6	6	170	15
12"/13" SA	12"/13"	BR-350	10	6	6	210	15
15"/16" SA	15"/16"	BR-350	12	8	8	350	20
4" to 10" SA	4" to 10"	BC-250	12	8	8	90 to	25
12" to 13" SA	12" to 13"	BC-350	12	8	8	210 90 to	25
15"/16" SA	15"/16"	BC-450	12	8	8	210 350	30

For construction purposes request certified drawing.

The Mondel DC Power Supplies and Controllers are primarily designed for use with the 200SA range of DC Shunt Wound Brakes on medium duty applications (120 OPH) when a suitable DC supply is not available. They can be supplied with a number of standard ratings and enclosures or on backing plates for panel mounting.

#### ■ TRANSFORMER/RECTIFIER (BR) NO FORCING

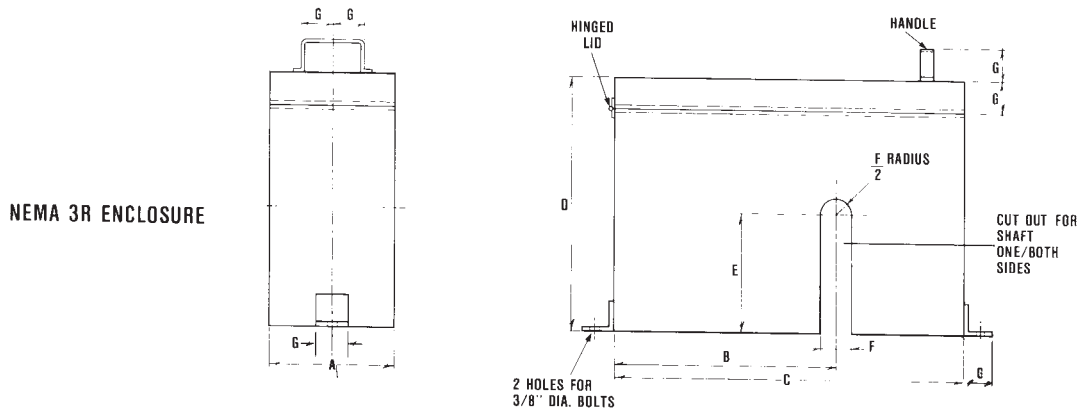
This unit is a simple transformer/rectifier power supply and is normally used on crane bridges and in similar applications which do not require fast response. If fast setting is required, an AC/DC relay can be added to interrupt the circuit to the brake coil.

#### ■ CONTROL UNITS (BC) WITH FORCING

This combined power supply/controller is designed to improve the response times of the 200SA and similar DC shunt wound brakes. The unit consists of a heavy-duty tapped transformer, full wave rectifier, brake and timer relays and static timer board. The transformer is fitted with taps for three alternative inputs 230V, 460V and 600V, single phase, 60Hz. When the power is applied to the transformer, primary brake relay  $K_2$  is energized. The dual, secondary windings of the transformer are initially connected in series to produce a high voltage/current at the brake coil. After 0.5 second, the static timer energizes relay  $K_1$  which connects the secondary windings in parallel, thus reducing the voltage/current for holding the brake released. This method of "voltage" forcing eliminates the need for "dropping" resistors which are power consumers, heat generators and require open or ventilated enclosures.

# Hi-Tork™ 200S Series

## Type “SA, ST and ST/E” – Brake Enclosure



### Approximate Dimensions (Inches)

BRAKE WHEEL DIAMETER	TYPE SA				TYPE ST				TYPE ST/E							NET WEIGHT (LB.)
	A	B	C	D	A	B	C	D	A	B	C	D	E	F	G	
4"	6	11	16	8	—	—	—	—	—	—	—	—	3 3/8	1	2	7
6"	8 1/4	14	20 1/2	11	8 1/4	15 1/2	22	17 3/4	8 1/4	18	24 1/4	17 3/4	4 3/4	1 1/4	2	18
8"	9 1/2	15 1/2	23 1/8	13 1/2	8 1/4	17	25 5/8	17 3/4	8 1/4	18 3/4	26 3/8	17 3/4	6	2	2	21
10"	10 1/4	16 3/4	25 1/2	15 1/2	8 1/4	18 1/2	27 1/4	27 1/4	8 1/4	21 3/4	30 1/2	21 1/4	7	2 1/2	2	28
12"	12 1/2	20 1/2	31	19 1/4	9 3/4	21 1/2	24 3/4	24 3/4	9 3/4	24	34 1/4	24 3/4	8 3/4	2 1/2	2	40
13"	12 1/2	20 1/2	31	19 1/4	9 3/4	21 1/2	24 3/4	24 3/4	9 3/4	24	34 1/4	24 3/4	8 3/4	2 1/2	2	42
15"	15 1/4	25 1/8	38 3/8	23	11 1/2	27 3/4	33 1/4	33 1/4	11 1/2	30 1/4	43 1/2	33 1/4	10 1/2	3 3/4	2	60
16"	15 1/4	25 1/8	38 3/8	23	11 1/2	27 3/4	33 1/4	33 1/4	11 1/2	30 1/4	43 1/2	33 1/4	10 1/2	3 3/4	2	62
19"	—	—	—	—	11 1/2	27 3/4	35 1/2	35 1/2	11 1/2	30 1/4	50	35 1/2	13 1/4	4 1/4	2	70

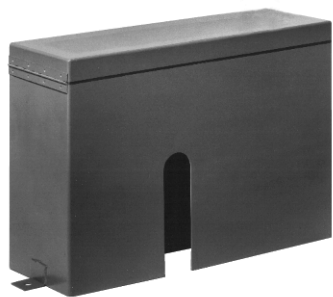
For construction purposes request certified drawing.

### STANDARD FEATURES

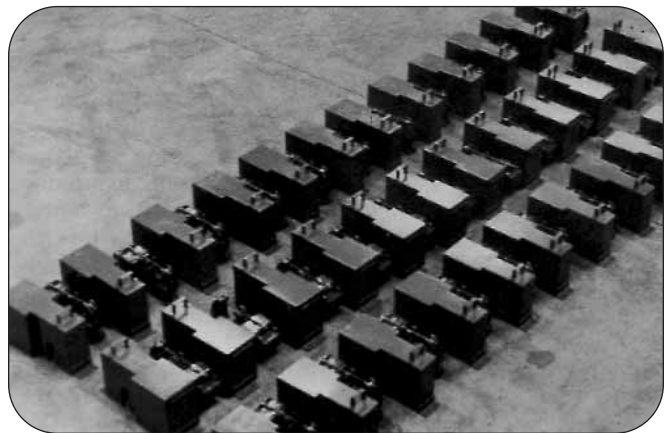
- Sheet Steel Welded Construction
- Nema 3R Enclosure
- Hinged Inspection Cover
- Primed Paint Finish

### OPTIONAL FEATURES

- Other Nema Enclosure Types
- Space Heaters
- Tropical and/or Corrosion Protection
- Stainless steel



NEMA 3R ENCLOSURE/BRAKE COVER



(36) DC BRAKES AND NEMA 3R COVERS SUPPLIED TO COLUMBIAN COAL MINE.

# MAGNETEK



# MATERIAL HANDLING

**Electromotive Systems**

**Telemotive**

**Mondel Engineering**

**YOUR ONE-STOP SOURCE FOR MATERIAL HANDLING CONTROL SOLUTIONS**

## Engineered Systems & Solutions

Project Evaluation  
Application Solutions  
Engineering Design  
PLC/PC Program  
Development  
System Manufacturing  
Project Management  
Installation Assistance  
Field Startup and Test  
Customer Training  
Maintenance Support

## IMPULSE® AC Adjustable Frequency Drives

230, 460, and 575 Volt Power Platforms  
.25– 1,500 Hp  
Exclusive Application Software  
Specific Crane & Hoist Software

## OmniPulse™ Digital Drives

AC in/DC out  
15-800 Hp  
DC in/DC out  
5–500 Hp

## MAC™•2000 Motor Acceleration Control

Single & 2 Speed—up to 15.2 Amps  
Contactor Panels

## Variable Speed Motor Control Panels

Standard Pre-Engineered Systems  
Custom Engineered Systems

## Motors & Accessories

Standard Inverter Duty AC Induction Motors  
Flux Vector Designed Motors

## Power Delivery Systems

ELECTROBAR® — 90, 110, 250, 350 Amps  
ELECTROBAR® FS — 90, 125, 250, 400 Amps  
ELECTROBAR® ELITE — 60, 100, 130, 200 Amps  
ELECTROBAR® HX — 400, 700, 1000, 1500 Amps  
FABA® Conductor Bar Systems — 100 Amps

## ELECTROMOTIVE™ Festooning Systems

Standard Duty  
Heavy Duty  
Mill Duty

## SBP® & SBP2® Pendant Push Button Stations

Standard 2 thru 12 Button Stations  
Custom Configured Stations

## Radio Remote Control Systems

### Pre-Engineered Radio Control Systems

MLTX™  
SLTX™  
JLTX™  
telePilot™  
telePendant™  
Pendant Style

### Engineered Radio Control Systems

MLTX™  
SLTX™  
JLTX™  
Locomotive Control Systems

## Collision Avoidance Systems

Laser Guard®  
Reflex®

## Brakes

### 200S Industrial Shoe Brakes

4"–19" Diameter  
6–2,650 Lb. Ft. Torque  
AC, DC, Hydraulic Actuators  
AC Explosion-proof Actuators

### AISE-NEMA 300M Mill Duty Shoe Brakes

5"–30" Diameter  
10–11,000 Lb. Ft. Torque  
AC, DC, Hydraulic Actuators  
AC Explosion-proof Actuators

### 400D Heavy Duty Disc Brakes

8"–50" Diameter  
50–30,000 Lb. Ft. Torque  
AC, DC, Hydraulic Actuators  
AC Explosion-proof Actuators

### Bracketronic™ Control System

Bracketronic Controller  
Standard Pre-engineered Panel  
Mill Duty Foot Pedal (optional)

### Brake Kit

Remote Air/Hydraulic Bridge Brake  
Conversion Kit



## Magnetek

N49 W13650 Campbell Dr.  
Menomonee Falls, WI 53051  
Toll Free: (800) 288-8178  
Fax: (262) 783-3510

## Magnetek Canada

2610 Dunwin Drive  
Mississauga, Ontario  
Canada L5L 1J5

Toll Free: (800) 792-7253  
Phone: (905) 828-1526  
Fax: (905) 828-5707

[www.magnetekmh.com](http://www.magnetekmh.com)

Brochure No. HI-TORK™200S-06  
Copyright © 2006  
Printed in U.S.A.