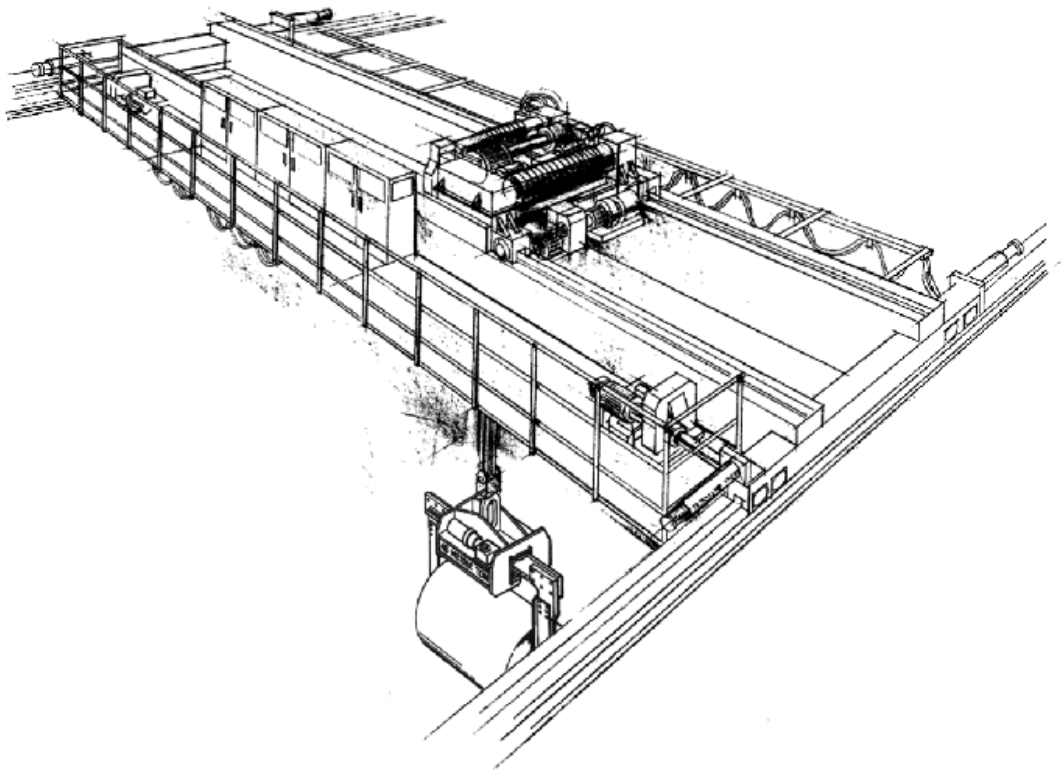




Magnetek Dynamic Braking Resistors

Motor Control

Instruction Manual

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Menomonee Falls, WI 53051
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SERVICE: 1-866-MAG-SERV (1-866-624-7378)



MAGNETEK
MATERIAL HANDLING

DBR Installation Manual —December 2009
Part Number: 140-10319-R4
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PRODUCT MANUAL SAFETY INFORMATION

Magnetek, Inc. (Magnetek) offers a broad range of radio remote control products, control products and adjustable frequency drives, and industrial braking systems for material handling applications. This manual has been prepared by Magnetek to provide information and recommendations for the installation, use, operation and service of Magnetek's material handling products and systems (Magnetek Products). Anyone who uses, operates, maintains, services, installs or owns Magnetek Products should know, understand and follow the instructions and safety recommendations in this manual for Magnetek Products.

The recommendations in this manual do not take precedence over any of the following requirements relating to cranes, hoists lifting devices or other material handling equipment which use or include Magnetek Products:

- Instructions, manuals, and safety warnings of the manufacturers of the equipment where the radio system is used,
- Plant safety rules and procedures of the employers and the owners of facilities where the Magnetek Products are being used,
- Regulations issued by the Occupational Health and Safety Administration (OSHA),
- Applicable local, state or federal codes, ordinances, standards and requirements, or
- Safety standards and practices for the industries in which Magnetek Products are used.

This manual does not include or address the specific instructions and safety warnings of these manufacturers or any of the other requirements listed above. It is the responsibility of the owners, users and operators of the Magnetek Products to know, understand and follow all of these requirements. It is the responsibility of the employer to make its employees aware of all of the above listed requirements and to make certain that all operators are properly trained. **No one should use Magnetek Products prior to becoming familiar with and being trained in these requirements and the instructions and safety recommendations in this manual.**

All rights reserved. This notice applies to all copyrighted materials included with this product, including, but not limited to, this manual and software embodied within the product. This manual is intended for the sole use of the persons to whom it was provided, and any unauthorized distribution of the manual or dispersal of its contents is strictly forbidden. This manual may not be reproduced in whole or in part by any means whatsoever without the expressed written permission of MAGNETEK.

***WARNING, CAUTION, and NOTE* Statements**

WARNING, CAUTION, and NOTE statements are used throughout this manual to emphasize important and critical information. You must read these statements to help ensure safety and to prevent product damage. The statements are defined below.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: A note statement is used to notify people of installation, operation, programming, or maintenance information that are important, but not hazard-related.



WARNING

- This manual instructs you how to use Magnetek Material Handling's Dynamic Braking Resistors. If you disregard the instructions, information, and/or warranty in the manual, you could be assuming responsibility for damages, costs, or injury incurred by such disregard.
- Do not touch any circuit components on the circuit board while the main AC or DC power is on.

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Introduction

Welcome to the Magnetek Dynamic Braking Resistors instruction manual. Magnetek Dynamic Braking Resistors consist of grid, smooth wound, wire wound or edge wound type resistor coils mounted in ventilated enclosures. These resistors can be used in any type of AC or DC power circuit/application. They are designed for many types of applications: continuous duty applications where high resistance and low current are required, continuous duty applications where low resistance and high current are required, and low current applications. Units are most commonly used for variable frequency drives, motor control, neutral grounding applications, load testing, and load banks.

Magnetek offers a large selection of standard size coils to meet most requirements; for specialized applications or requirements, please consult the factory.



WARNING

These instructions should be read thoroughly before installation. All warnings and precautions should be observed for both personal safety and for proper equipment performance and longevity.

Construction: Magnetek's Dynamic Braking Resistors consist of grid, smooth wound, wire wound or edge wound type resistor coils mounted in ventilated enclosures. All current carrying components used to manufacture our resistor coils, including the elements, terminals and terminal hardware, are stainless steel for maximum corrosion resistance. Standard enclosures will be mill galvanized with terminals factory wired to a terminal block. Braking resistors are available with a variety of options such as special enclosure finishes, outdoor ratings and thermal sensing switches.

Inspection: Upon receipt of your Dynamic Braking Resistor, be sure to inspect the unit carefully for any shipping damage. After unpacking, check the unit for loose, broken, bent or otherwise damaged parts due to shipping. Report any shipping damage immediately to the freight carrier. Be sure to verify that the part number and ratings listed on the nameplate conform to the order specification. The ohm rating listed on the nameplate is critical (too low of an ohm value may cause damage to the drive).

INSTALLATION



CAUTION

The National Electric Code (NEC) and local regulations govern the installation and wiring of electrical equipment such as braking resistors. DC power wiring, AC power wiring, control wiring and conduit must be installed in accordance with these codes.

Enclosure Types: Magnetek offers four enclosure types designed with respect to element coil style and intended mounting location.

Enclosure Type	Description
A	High density edge wound or wire wound resistor enclosure
D	Grid resistor enclosure
G	Weatherproof, louvered grid resistor enclosure
S	Edge wound, smooth wound or wire wound resistor enclosure
W	Weatherproof, louvered resistor enclosure for edge wound, smooth wound or wire wound resistors

Mounting: Magnetek braking assemblies cool by natural convection, causing hot air to rise vertically from the enclosure. Braking resistors should be mounted in a well-ventilated location free of any combustible materials or equipment affected by heat. Units should be installed with at least 24 inches of free space above the enclosure top and 6 inches of free space surrounding the enclosure sides. If necessary, units can be mounted on spacers or channels to limit heat from conducting from the resistor enclosure to its mounting surface.

Type S braking resistor enclosures can be mounted vertically or horizontally. If the unit is mounted vertically, it is important that the resistor coils remain in a horizontal position. Also, if a thermal switch is included with the unit, the switch should be positioned near the top of the enclosure. See Figure 1 for vertical mounting details.

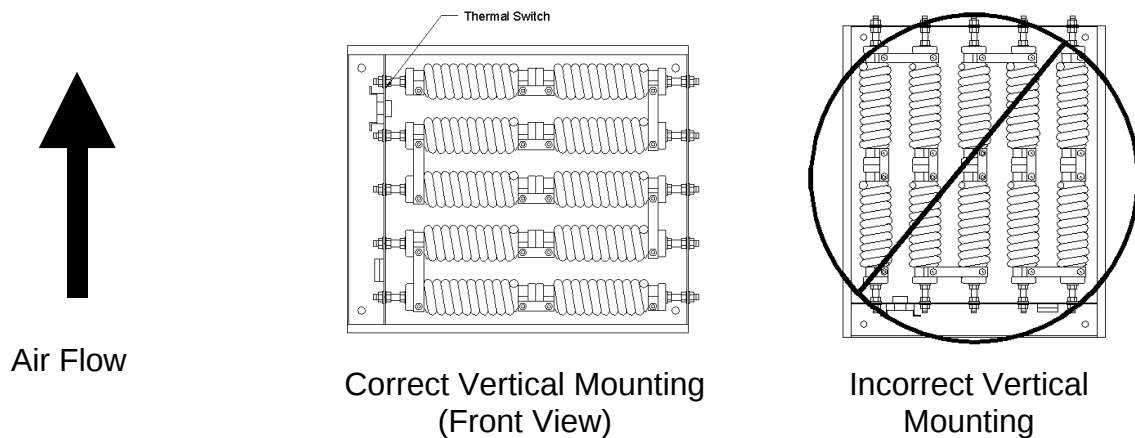


Figure 1: Resistor Mounting Orientation



CAUTION

Type A, D, G, and W enclosures must be installed with the mounting holes on a horizontal surface.

Installation:

1. Remove the ventilated cover.
 - a. Type D, G, S, and W enclosures require a 5/16" wrench to remove the cover.
 - b. Type A enclosures require a 7/16" wrench to remove the cover.
2. Fasten the unit securely in place. Mounting holes can be found on the inside of the braking resistor enclosure. The enclosure styles are listed in the tables on the following pages, and the mounting dimensions for each enclosure style are listed on pages 28 through 30, 33, and 34.
 - a. Type S and W enclosures have 7/16" diameter mounting holes designed for 3/8" hardware.
 - b. Type A, D, and G enclosures have 5/8" diameter mounting holes designed for 1/2" hardware.
3. Remove the proper knockout after determining a suitable entry point. It is preferable to route conduit near the bottom of the resistor enclosure.
 - a. Type D, G, S, and W enclosures have convenient conduit knockouts for easy connection.
 - b. Type A enclosures require field punching for conduit entry.
4. After attaching conduit, pull wiring into the enclosure for connection to resistor. Refer to CDBR-B Dynamic Braking Unit, Regenerative Power Module, or IMPULSE®/OmniPulse® drive manuals for correct wire sizes. Be sure to properly ground the resistor enclosure to prevent electrical shock.
 - a. If connecting directly to the terminals on the resistor elements, it is necessary to use high temperature silicon or Teflon wire rated 200°C.
 - b. Try to route wiring along the bottom of the enclosure and avoid running the wiring near the resistor elements.
 - c. If your braking resistor contains an optional factory wired terminal block, then you may connect to the unit with standard 90°C rated wire.
5. If an optional thermal switch is included with the unit, then connect control wiring directly to the #8 terminals.
 - a. Type A enclosures with the thermal switch option are pre-wired to a terminal block with #10 terminals, located in the bottom of the resistor enclosure.
 - b. Thermal sensing switches are available with either normally closed or normally open contacts.
6. After installing and wiring to your Dynamic Braking Resistor, return the ventilated cover to its proper position. Securely tighten cover hardware (do not exceed 20 inch-pounds of torque).

Maintenance: Periodically check the unit for loose connections and an accumulation of dust or dirt on the inside and outside of the resistor enclosure.

- 1) Remove all power before servicing the unit to avoid electrical shock.
- 2) Allow at ten minutes after input power has been removed for the bus voltage to discharge. Electric shock can cause serious injury or death.
- 3) Be sure to allow the unit to cool before servicing (contact may result in burn injury).

Resistor elements should not glow red under normal operating conditions. If the resistor elements glow red you may need a higher rated braking resistor.

Ratings: Magnetek Dynamic Braking Resistor duty cycles are based on Magnetek's interpretation of CMAA 70-2 Crane Classification specification. Consult Magnetek for application assistance where actual duty cycles exceed the below definitions for any class of service, or for applications involving special environmental conditions such as high ambient temperatures.



WARNING

The total lowering time at full speed should not exceed 60 seconds. Consult Magnetek for application assistance with extended lowering time.

CMAA Class C

Resistors for CMAA Class C service are based upon ten cycles per hour with an average 50% load. A typical cycle is defined as follows:

Motion	Duration	Load
Raise	30 sec	50 %
Traverse	60 sec	50 %
Lower	30 sec	50 %
Raise	30 sec	10 %
Traverse	30 sec	10 %

Deceleration time for traverse motions is assumed to be 5 seconds, with a maximum 120% retarding torque.

CMAA Class D		
Resistors for CMAA Class D service are based upon twenty cycles per hour with an average 65% load. A typical cycle is defined as follows:		
Motion	Duration	Load
Raise	30 sec	65 %
Traverse	60 sec	65 %
Lower	30 sec	65 %
Raise	30 sec	10 %
Traverse	30 sec	10 %
Deceleration time for traverse motions is assumed to be 3 seconds, with a maximum 150% retarding torque.		

CMAA Class E		
Resistors for CMAA Class E service are based upon twenty-five cycles per hour with an average 100% load. A typical cycle is defined as follows:		
Motion	Duration	Load
Raise	24 sec	100 %
Traverse	24 sec	100 %
Lower	24 sec	100 %
Raise	24 sec	10 %
Traverse	24 sec	10 %
Deceleration time for traverse motions is assumed to be 3 seconds, with a maximum 160% retarding torque.		

CMAA Class F	
Resistors for CMAA Class F service are based upon continuous service loads approaching rated capacity. A typical cycle is defined as follows:	
Motion	Load
Raise	100 %
Traverse	100 %
Lower	100 %
Raise	50 %
Traverse	50 %
Deceleration time for traverse motions is assumed to be 2 seconds, with a maximum 175% retarding torque.	

Technical Support: If you have any questions about your braking resistor, contact Magnetek for assistance at (800) 288-8178.

230 Volt Traverse Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
2022 CT	S1	7	2001 DTP	S1	7	2003 ET	S1	7	2003 FT	S1	7
2028 CT	S2	9	2004 DTP	S1	7	2006 ET	S1	7	2006 FT	S2	9
2042 CT	S2	9	2005 DTP	S1	7	2009 ET	S2	9	2009 FT	S2	9
2054 CT	S3	13	2006 DTP	S1	7	2015 ET	S2	9	2015 FT	S3	13
2068 CT	S6	15	2011 DTP	S1	7	2022 ET	S3	13	2022 FT	S4	16
2080 CT	S6	15	2015 DTP	S2	9	2028 ET	S4	16	2028 FT	S5	18
2104 CT	S6	16	2017 DTP	S2	9	2042 ET	S6	16	2042 FT	S6	19
2130 CT	S6	18	2001 DT	S1	7	2054 ET	S6	18	2054 FT	S8	25
2154 CT	S8	20	2003 DT	S1	7	2068 ET	S6	21	2068 FT	S8	24
2192 CT	S6	21	2006 DT	S1	7	2080 ET	S8	23	2080 FT	S12	29
2248 CT*	2x S6	36	2009 DT	S1	7	2104 ET	S12	27	2104 FT	S18	43
2312 CT*	2x S6	40	2015 DT	S2	9	2130 ET	S12	30	2130 FT	S18	39
-	-	-	2022 DT	S2	9	2154 ET	S12	35	2154 FT	S30	61
-	-	-	2028 DT	S3	13	2192 ET*	2x S8	56	2192 FT*	2x S18	84
-	-	-	2042 DT	S4	16	2248 ET*	2x S12	62	2248 FT*	2x S18	80
-	-	-	2054 DT	S6	17	2312 ET*	2x S18	76	2312 FT*	2x A2	140
-	-	-	2068 DT	S6	19	-	-	-	-	-	-
-	-	-	2080 DT	S6	20	-	-	-	-	-	-
-	-	-	2104 DT	S9	21	-	-	-	-	-	-
-	-	-	2130 DT	S9	29	-	-	-	-	-	-
-	-	-	2154 DT	S12	29	-	-	-	-	-	-
-	-	-	2192 DT*	2x S8	44	-	-	-	-	-	-
-	-	-	2248 DT*	2x S8	54	-	-	-	-	-	-
-	-	-	2312 DT*	2x S12	58	-	-	-	-	-	-

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

230 Volt Hoist Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
2003 CH	S1	7	2003 DH	S1	7	2003 EH	S2	9	2003 FH	S2	9
2006 CH	S2	9	2006 DH	S2	9	2006 EH	S2	9	2006 FH	S4	16
2009 CH	S2	9	2009 DH	S3	13	2009 EH	S3	13	2009 FH	S5	18
2015 CH	S3	13	2015 DH	S4	16	2015 EH	S5	18	2015 FH	S6	18
2022 CH	S4	16	2022 DH	S6	18	2022 EH	S6	19	2022 FH	S12	28
2028 CH	S5	18	2028 DH	S8	22	2028 EH	S6	18	2028 FH	S12	31
2042 CH	S6	18	2042 DH	S12	28	2042 EH	S12	30	2042 FH	S12	29
2054 CH	S8	22	2054 DH	S12	27	2054 EH	S12	27	2054 FH	S18	40
2068 CH	S8	27	2068 DH	S18	39	2068 EH	S18	38	2068 FH	S24	56
2080 CH	S12	26	2080 DH	S18	45	2080 EH	S18	44	2080 FH	S30	57
2104 CH	S18	39	2104 DH	S30	54	2104 EH	S30	54	2104 FH	A3	114
2130 CH	S18	45	2130 DH	S30	61	2130 EH	A2	81	2130 FH	A3	131
2154 CH	S18	46	2154 DH	A2	85	2154 EH	A3	118	2154 FH	A3	154
2192 CH	A2	77	2192 DH*	2x S18	94	2192 EH*	2x S30	110	2192 FH*	2x A2	178
2248 CH*	2x S24	96	2248 DH*	2x A2	154	2248 EH*	2x A2	166	2248 FH*	2x A3	250
2312 CH*	2x S30	108	2312 DH*	2x A2	170	2312 EH*	2x A3	236	2312 FH*	2x A3	294

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

460 Volt Traverse Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
4011 CT	S1	7	4001 DTP	S1	6	4001 ET	S1	7	4001 FT	S1	7
4014 CT	S2	9	4002 DTP	S1	6	4003 ET	S1	7	4003 FT	S2	9
4021 CT	S2	9	4004 DTP	S1	7	4004 ET	S2	9	4004 FT	S2	9
4027 CT	S3	13	4005 DTP	S1	7	4007 ET	S2	9	4007 FT	S3	13
4034 CT	S3	13	4008 DTP	S2	9	4011 ET	S3	13	4011 FT	S4	16
4040 CT	S4	16	4001 DT	S1	6	4014 ET	S4	16	4014 FT	S5	18
4052 CT	S5	18	4003 DT	S1	7	4021 ET	S6	20	4021 FT	S8	25
4065 CT	S6	17	4004 DT	S1	7	4027 ET	S8	24	4027 FT	S8	23
4077 CT	S6	18	4007 DT	S2	9	4034 ET	S8	24	4034 FT	S9	23
4096 CT	S8	23	4011 DT	S2	9	4040 ET	S9	22	4040 FT	S12	29
4124 CT	S8	25	4014 DT	S3	13	4052 ET	S12	27	4052 FT	S18	42
4155 CT	S12	28	4021 DT	S4	16	4065 ET	S15	36	4065 FT	S18	38
4175 CT	S12	34	4027 DT	S5	18	4077 ET	S18	40	4077 FT	S30	55
4240 CT*	2x S8	50	4034 DT	S6	20	4096 ET	S18	47	4096 FT	S30	62
4300 CT*	2x S12	52	4040 DT	S6	18	4124 ET	S24	53	4124 FT	A2	78
4340 CT*	2x S12	58	4052 DT	S6	19	4155 ET	A2	73	4155 FT	A3	118
4460 CT*	2x S18	80	4065 DT	S9	23	4175 ET	A3	85	4175 FT*	2x S24	96
4515 CT*	3x S12	87	4077 DT	S10	30	4240 ET*	2x S30	122	4240 FT*	2x A2	158
4590 CT*	3x S18	120	4096 DT	S12	28	4300 ET*	2x A2	148	4300 FT*	2x A3	208
4605 CT*	3x S18	120	4124 DT	S24	49	4340 ET*	2x A2	174	4340 FT*	3x S30	198
-	-	-	4155 DT	S24	50	4460 ET*	3x A2	219	4460 FT*	3x A3	354
-	-	-	4175 DT	S24	54	4515 ET*	3x A2	261	4515 FT*	4x A2	308
-	-	-	4240 DT*	2x S15	80	4590 ET*	4x A2	296	4590 FT*	4x A3	416
-	-	-	4300 DT*	2x S24	102	4605 ET*	4x A2	292	4605 FT*	4x A3	416

460 Volt Traverse Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
-	-	-	4340 DT*	2x S24	110	-	-	-	-	-	-
-	-	-	4460 DT*	3x S24	150	-	-	-	-	-	-
-	-	-	4515 DT*	3x S24	162	-	-	-	-	-	-
-	-	-	4590 DT*	4x S24	204	-	-	-	-	-	-
-	-	-	4605 DT*	4x S24	204	-	-	-	-	-	-

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

460 Volt Hoist Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
4001 CH	S1	7	4001 DH	S1	7	4001 EH	S2	9	4001 FH	S3	13
4003 CH	S2	9	4003 DH	S2	9	4003 EH	S3	13	4003 FH	S4	16
4004 CH	S2	9	4004 DH	S3	13	4004 EH	S4	16	4004 FH	S5	18
4007 CH	S3	13	4007 DH	S5	18	4007 EH	S5	18	4007 FH	S8	24
4011 CH	S4	16	4011 DH	S6	20	4011 EH	S8	24	4011 FH	S12	33
4014 CH	S5	18	4014 DH	S8	25	4014 EH	S10	30	4014 FH	S15	30
4021 CH	S8	24	4021 DH	S12	33	4021 EH	S15	31	4021 FH	S15	31
4027 CH	S10	30	4027 DH	S15	30	4027 EH	S15	31	4027 FH	S24	47
4034 CH	S12	33	4034 DH	S15	31	4034 EH	S24	51	4034 FH	S24	56
4040 CH	S12	26	4040 DH	S24	49	4040 EH	S24	48	4040 FH	S30	55
4052 CH	S15	33	4052 DH	S24	46	4052 EH	S24	47	4052 FH	A2	80
4065 CH	S24	50	4065 DH	S30	68	4065 EH	A2	75	4065 FH	A3	122
4077 CH	S24	49	4077 DH	S30	58	4077 EH	A2	86	4077 FH	A3	117
4096 CH	S30	58	4096 DH	A2	92	4096 EH	A3	109	4096 FH	A4	173
4124 CH	A2	78	4124 DH	A3	123	4124 EH	A4	156	4124 FH	A5	227
4155 CH	A3	100	4155 DH	A4	162	4155 EH	A5	211	4155 FH	A6	293
4175 CH	A3	115	4175 DH	A5	204	4175 EH	A5	212	4175 FH*	2x A4	308
4240 CH*	2x A2	158	4240 DH*	2x A3	206	4240 EH*	2x A4	288	4240 FH*	2x A6	494
4300 CH*	2x A3	206	4300 DH*	2x A4	328	4300 EH*	2x A5	430	4300 FH*	2x A6	600
4340 CH*	2x A3	234	4340 DH*	2x A5	416	4340 EH*	2x A5	432	4340 FH*	3x A5	582
4460 CH*	2x A4	310	4460 DH*	3x A4	486	4460 EH*	3x A5	633	4460 FH*	3x A6	879
4515 CH*	3x A3	351	4515 DH*	3x A5	612	4515 EH*	3x A5	648	4515 FH*	4x A6	1036
4590 CH*	3x A3	381	4590 DH*	4x A4	656	4590 EH*	4x A5	860	4590 FH*	4x A6	1224
4605 CH*	3x A4	471	4605 DH*	4x A4	656	4605 EH*	4x A5	844	4605 FH*	4x A6	1224

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

575 Volt Traverse Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
5003 CT	S1	6	5003 DT	S1	7	5003 ET	S2	9	5003 FT	S2	9
5004 CT	S1	7	5004 DT	S2	9	5004 ET	S2	9	5004 FT	S2	9
5006 CT	S1	7	5006 DT	S2	9	5006 ET	S2	9	5006 FT	S3	13
5009 CT	S1	7	5009 DT	S3	13	5009 ET	S3	13	5009 FT	S4	16
5011 CT	S2	9	5011 DT	S3	13	5011 ET	S4	16	5011 FT	S5	18
5017 CT	S2	9	5017 DT	S4	16	5017 ET	S5	18	5017 FT	S8	25
5022 CT	S3	13	5022 DT	S5	18	5022 ET	S8	24	5022 FT	S10	30
5027 CT	S3	13	5027 DT	S6	20	5027 ET*	2x S5	36	5027 FT*	2x S6	40
5032 CT	S4	16	5032 DT*	2x S4	32	5032 ET*	2x S5	36	5032 FT*	2x S8	48
5041 CT*	2x S3	26	5041 DT*	2x S5	36	5041 ET*	2x S8	48	5041 FT*	2x S10	60
5052 CT*	2x S3	26	5052 DT*	2x S6	40	5052 ET*	3x S6	60	5052 FT*	3x S8	75
5062 CT*	2x S4	32	5062 DT*	3x S5	54	5062 ET*	3x S8	72	5062 FT*	3x S10	90
5077 CT*	3x S3	39	5077 DT*	3x S6	60	5077 ET*	3x S8	75	5077 FT*	4x S9	108
5099 CT*	3x S4	48	5099 DT*	4x S6	80	5099 ET*	4x S8	100	5099 FT*	5x S10	150
5125 CT*	4x S4	64	5125 DT*	5x S6	100	5125 ET*	5x S8	125	5125 FT*	6x S10	180
5144 CT*	5x S3	65	5144 DT*	6x S6	120	5144 ET*	6x S8	150	5144 FT*	7x S10	210
5192 CT*	6x S4	96	5192 DT*	7x S6	140	5192 ET*	8x S8	200	5192 FT*	9x S10	270

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

575 Volt Hoist Motions

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)	Part# EDB-	Encl. Style	Approx. Weight (lb)
5003 CH	S2	9	5003 DH	S3	13	5003 EH	S3	13	5003 FH	S4	16
5004 CH	S2	9	5004 DH	S3	13	5004 EH	S4	16	5004 FH	S5	18
5006 CH	S3	13	5006 DH	S5	18	5006 EH	S5	18	5006 FH	S8	25
5009 CH	S4	16	5009 DH	S6	20	5009 EH	S8	24	5009 FH	S12	33
5011 CH	S5	18	5011 DH	S8	25	5011 EH	S8	25	5011 FH	S15	38
5017 CH	S8	25	5017 DH	S12	33	5017 EH	S15	31	5017 FH	S24	43
5022 CH	S10	30	5022 DH	S15	31	5022 EH	S18	37	5022 FH	S30	57
5027 CH	S12	33	5027 DH	S15	31	5027 EH*	2x S12	66	5027 FH*	2x S18	74
5032 CH	S12	26	5032 DH*	2x S12	66	5032 EH*	2x S15	76	5032 FH*	2x S24	88
5041 CH*	2x S10	60	5041 DH*	2x S15	60	5041 EH*	2x S15	62	5041 FH*	2x S18	76
5052 CH*	2x S12	66	5052 DH*	2x S15	62	5052 EH*	3x S15	93	5052 FH*	3x S24	129
5062 CH*	2x S12	52	5062 DH*	3x S15	90	5062 EH*	3x S15	93	5062 FH*	3x S18	114
5077 CH*	3x S10	90	5077 DH*	3x S15	96	5077 EH*	3x S18	108	5077 FH*	4x S24	172
5099 CH*	3x S15	93	5099 DH*	4x S15	128	5099 EH*	4x S18	148	5099 FH*	5x S24	215
5125 CH*	4x S12	104	5125 DH*	5x S15	160	5125 EH*	5x S18	185	5125 FH*	6x S18	228
5144 CH*	5x S12	135	5144 DH*	6x S18	216	5144 EH*	6x S15	192	5144 FH*	7x S18	266
5192 CH*	6x S12	156	5192 DH*	7x S15	217	5192 EH*	7x S15	224	5192 FH*	9x S24	423

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

230 Volt Traverse Motions - Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
2001 CT	W1	6	2004 DTP	W1	7	2001 ET	W1	7	2001 FT	W1	7
20015 CT	W1	7	2005 DTP	W1	7	20015 ET	W1	7	20015 FT	W1	7
2002 CT	W1	7	2006 DTP	W1	7	2002 ET	W1	7	2002 FT	W1	7
20025 CT	W	7	2011 DTP	W1	7	20025 ET	W1	7	20025 FT	W1	7
2003 CT	W1	7	2015 DTP	W2	9	2003 ET	W1	7	2003 FT	W1	7
2006 CT	W1	7	2017 DTP	W2	9	2006 ET	W1	7	2006 FT	W2	9
2009 CT	W1	7	2001 DT	W1	6	2009 ET	W2	9	2009 FT	W2	9
2015 CT	W1	7	20015 DT	W1	7	2015 ET	W2	9	2015 FT	W3	13
2022 CT	W1	7	2002 DT	W1	7	2022 ET	W3	13	2022 FT	W4	16
2028 CT	W2	9	20025 DT	W1	7	2028 ET	W4	16	2028 FT	W5	18
2042 CT	W2	9	2003 DT	W1	7	2042 ET	W6	16	2042 FT	W6	19
2054 CT	W3	13	2006 DT	W1	7	2054 ET	W6	18	2054 FT	W8	25
2068 CT	W6	15	2009 DT	W1	7	2068 ET	W6	21	2068 FT	W8	24
2080 CT	W6	15	2015 DT	W2	9	2080 ET	W8	23	2080 FT	W12	33
2104 CT	W6	16	2022 DT	W2	9	2104 ET	W12	31	2104 FT	W18	47
2130 CT	W6	18	2028 DT	W3	13	2130 ET	W12	34	2130 FT	W18	43
2154 CT	W8	20	2033 DT	W3	13	2154 ET	W12	39	2154 FT	W30	65
2192 CT	W6	21	2042 DT	W4	16	2192 ET*	2x W8	28	2192 FT*	2x W18	46
2248 CT*	2x W6	18	2053 DT	W6	17	2248 ET*	2x W12	35	2248 FT*	2x W18	44
2312 CT*	2x W6	20	2068 DT	W6	19	2312 ET*	2x W18	42	2312 FT*	2x A3	101
-	-	-	2080 DT	W6	20	-	-	-	-	-	-
-	-	-	2104 DT	W9	25	-	-	-	-	-	-
-	-	-	2130 DT	W9	33	-	-	-	-	-	-
-	-	-	2154 DT	W12	33	-	-	-	-	-	-

230 Volt Traverse Motions - Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
-	-	-	2192* DT	2x W8	22	-	-	-	-	-	-
-	-	-	2248* DT	2x W8	27	-	-	-	-	-	-
-	-	-	2312* DT	2X W12	33	-	-	-	-	-	-

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

230 Volt Hoist Motions – Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
2001 CH	W1	6	2001 DH	W1	6	2001 EH	W1	7	2001 FH	W1	7
20015 CH	W1	7	20015 DH	W1	7	20015 EH	W1	7	20015 FH	W1	7
2002 CH	W1	7	2002 DH	W1	7	2002 EH	W1	7	2002 FH	W1	7
20025 CH	W1	7	20025 DH	W1	7	20025 EH	W1	7	20025 FH	W2	9
2003 CH	W1	7	2003 DH	W1	7	2003 EH	W2	9	2003 FH	W2	9
2006 CH	W2	9	2006 DH	W2	9	2006 EH	W2	9	2006 FH	W4	16
2009 CH	W2	9	2009 DH	W3	13	2009 EH	W3	13	2009 FH	W5	18
2015 CH	W3	13	2015 DH	W4	16	2015 EH	W5	18	2015 FH	W6	18
2022 CH	W4	16	2022 DH	W6	18	2022 EH	W6	19	2022 FH	W12	32
2028 CH	W5	18	2028 DH	W8	22	2028 EH	W6	18	2028 FH	W12	35
2042 CH	W6	18	2042 DH	W12	32	2042 EH	W12	34	2042 FH	W12	33
2054 CH	W8	22	2056 DH	W12	31	2054 EH	W12	31	2054 FH	W18	44
2068 CH	W8	27	2068 DH	W18	43	2068 EH	W18	42	2068 FH	W24	60
2080 CH	W12	30	2080 DH	W18	49	2080 EH	W18	48	2080 FH	W30	61
2104 CH	W18	43	2104 DH	W30	58	2104 EH	W30	58	2104 FH	A3	129
2130 CH	W18	49	2130 DH	W30	65	2130 EH	A3	112	2130 FH	A4	167
2154 CH	W18	50	2154 DH	A3	116	2154 EH	A3	133	2154 FH	A4	190
2192 CH	A3	108	2192 DH*	2x W18	51	2192 EH*	2x W30	59	2192 FH*	2x A3	121
2248 CH*	2x W24	52	2248 DH*	2x A3	108	2248 EH*	2x A3	114	2248 FH*	2x A4	161
2312 CH*	2x W30	58	2312 DH*	2x A3	116	2312 EH*	2X A3	133	2312 FH*	2x A4	183

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

460 Volt Traverse Motions - Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
4001 CT	W1	7	4002 DTP	W1	6	4001 ET	W1	7	4001 FT	W1	7
4003 CT	W1	7	4004 DTP	W1	7	4003 ET	W1	7	4003 FT	W2	9
4004 CT	W1	7	4005 DTP	W1	7	4004 ET	W2	9	4004 FT	W2	9
4007 CT	W1	7	4008 DTP	W2	9	4007 ET	W2	9	4007 FT	W3	13
4011 CT	W1	7	4001	W1	6	4011 ET	W3	13	4011 FT	W4	16
4014 CT	W2	9	4003	W1	7	4014 ET	W4	16	4014 FT	W5	18
4017 CT	W2	9	4004	W1	7	4021 ET	W6	20	4021 FT	W8	25
4021 CT	W2	9	4007	W2	9	4027 ET	W8	24	4027 FT	W8	23
4027 CT	W3	13	4011	W2	9	4034 ET	W8	24	4034 FT	W9	27
4034 CT	W3	13	4012	W2	9	4040 ET	W9	26	4040 FT	W12	33
4040 CT	W4	16	4014	W3	13	4052 ET	W12	31	4052 FT	W18	46
4052 CT	W5	18	4017	W3	13	4065 ET	W15	40	4065 FT	W18	42
4065 CT	W6	17	4021	W4	16	4077 ET	W18	44	4077 FT	W30	59
4077 CT	W6	18	4027	W5	18	4096 ET	W18	51	4096 FT	W30	66
4096 CT	W8	23	4034	W6	20	4124 ET	W24	57	4124 FT	A3	109
4124 CT	W8	24	4040	W6	19	4155 ET	A3	104	4155 FT	A4	156
4155 CT	W12	32	4052	W6	19	4175 ET	A3	116	4175 FT*	2x W24	104
4175 CT	W12	39	4065	W9	28	4240 ET*	2x W30	130	4240 FT*	2x A3	220
4240 CT*	2x W8	70	4077	W10	30	4300 ET*	2x A3	212	4300 FT*	2x A3	238
4300 CT*	2x W12	60	4096	W12	32	4340 ET*	2x A3	236	4340 FT*	3x W30	210
4340 CT*	2x W12	66	4124	W24	53	4460 ET*	3x A3	312	4460 FT*	3x A4	468
4460 CT*	2x W18	88	4155	W24	54	4515 ET*	3x A3	354	4515 FT*	4x A3	424
4515 CT*	3x W12	99	4175	W24	58	4590 ET*	4x A3	424	4590 FT*	4x A3	476
4590 CT*	3x W18	132	4240*	2x W15	88	4605 ET*	4x A3	412	4605 FT*	4x A3	476

460 Volt Traverse Motions - Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
4605 CT*	3x W18	132	4300*	2x W24	110	-	-	-	-	-	-
-	-	-	4340*	2x W24	118	-	-	-	-	-	-
-	-	-	4460*	3x W24	162	-	-	-	-	-	-
-	-	-	4515*	3x W24	174	-	-	-	-	-	-
-	-	-	4590*	4x W24	220	-	-	-	-	-	-
-	-	-	4605*	4x W24	220	-	-	-	-	-	-

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

460 Volt Hoist Motions – Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
4001 CH	W1	7	4001 DH	W1	7	4001 EH	W2	9	4001 FH	W3	13
4003 CH	W2	9	4003 DH	W2	9	4003 EH	W3	13	4003 FH	W4	16
4004 CH	W2	9	4004 DH	W3	13	4004 EH	W4	16	4004 FH	W5	18
4007 CH	W3	13	4007 DH	W5	18	4007 EH	W5	18	4007 FH	W8	24
4011 CH	W4	16	4011 DH	W6	20	4011 EH	W8	24	4011 FH	W12	37
4014 CH	W5	18	4014 DH	W8	25	4014 EH	W10	30	4014 FH	W15	34
4021 CH	W8	24	4021 DH	W12	37	4021 EH	W15	35	4021 FH	W15	35
4027 CH	W10	30	4027 DH	W15	34	4027 EH	W15	35	4027 FH	W24	52
4034 CH	W12	37	4034 DH	W15	35	4034 EH	W24	55	4034 FH	W24	60
4040 CH	W12	30	4040 DH	W24	53	4040 EH	W24	52	4040 FH	W30	59
4052 CH	W15	37	4052 DH	W24	50	4052 EH	W24	51	4052 FH	A3	111
4065 CH	W24	54	4065 DH	W30	72	4065 EH	A3	106	4065 FH	A4	158
4077 CH	W24	53	4077 DH	W30	63	4077 EH	A3	117	4077 FH	A4	153
4096 CH	W30	63	4096 DH	A3	123	4096 EH	A4	145	4096 FH	A5	214
4124 CH	A3	109	4124 DH	A4	159	4124 EH	A4	176	4124 FH	A6	273
4155 CH	A3	115	4155 DH	A5	203	4155 EH	A6	257	4155 FH	A7	344
4175 CH	A4	151	4175 DH	A5	229	4175 EH	A5	237	4175 FH*	2x A5	390
4240 CH*	2x A3	220	4240 DH*	2x A3	236	4240 EH*	2x A4	328	4240 FH*	2x A6	554
4300 CH*	2x A3	236	4300 DH*	2x A5	410	4300 EH*	2x A6	522	4300 FH*	2x A7	702
4340 CH*	2x A4	306	4340 DH*	2x A5	466	4340 EH*	2x A5	482	4340 FH*	3x A5	657
4460 CH*	2x A4	350	4460 DH*	3x A5	609	4460 EH*	3x A5	672	4460 FH*	3x A7	1034
4515 CH*	3x A4	459	4515 DH*	3x A5	687	4515 EH*	3x A5	726	4515 FH*	4x A6	1156
4590 CH*	3x A4	489	4590 DH*	4x A5	820	4590 EH*	4x A6	1044	4590 FH*	4x A7	1428
4605 CH*	3x A4	531	4605 DH*	4x A5	820	4605 EH*	4x A5	944	4605 FH*	4x A7	1428

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

575 Volt Traverse Motions – Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
5003 CT	W1	6	5003 DT	W1	7	5003 ET	W2	9	5003 FT	W2	9
5004 CT	W1	7	5004 DT	W2	9	5004 ET	W2	9	5004 FT	W2	9
5006 CT	W1	7	5006 DT	W2	9	5006 ET	W2	9	5006 FT	W3	13
5009 CT	W1	7	5009 DT	W3	13	5009 ET	W3	13	5009 FT	W4	16
5011 CT	W2	9	5011 DT	W3	13	5011 ET	W4	16	5011 FT	W5	18
5017 CT	W2	9	5017 DT	W4	16	5017 ET	W5	18	5017 FT	W8	25
5022 CT	W3	13	5022 DT	W5	18	5022 ET	W6	24	5022 FT	W10	30
5027 CT	W3	13	5027 DT	W6	20	5027 ET*	2x W5	36	5027 FT*	2x W6	40
5032 CT	W4	16	5032 DT*	2x W4	32	5032 ET*	2x W5	36	5032 FT*	2x W8	47
5041 CT*	2x W3	25	5041 DT*	2x W5	36	5041 ET*	2x W8	47	5041 FT*	2x W10	60
5052 CT*	2x W3	25	5052 DT*	2x W6	40	5052 ET*	3x W6	59	5052 FT*	3x W8	75
5062 CT*	2x W4	32	5062 DT*	3x W5	54	5062 ET*	3x W8	71	5062 FT*	3x W10	90
5077 CT*	3x W3	38	5077 DT*	3x W6	60	5077 ET*	3x W8	75	5077 FT*	4x W9	125
5099 CT*	3x W4	64	5099 DT*	4x W6	80	5099 ET*	4x W8	100	5099 FT*	5x W10	150
5125 CT*	4x W4	64	5125 DT*	5x W6	100	5125 ET*	5x W8	125	5125 FT*	6x W10	180
5144 CT*	5x W3	65	5144 DT*	6x W6	120	5144 ET*	6x W8	150	5144 FT*	7x W10	210
5192 CT*	6x W4	96	5192 DT*	7x W6	140	5192 ET*	8x W8	200	5192 FT*	9x W10	270

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

575 Volt Hoist Motions – Weatherproof Louvered

CMAA Class C			CMAA Class D			CMAA Class E			CMAA Class F		
Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)	Part# EDB-**- WL	Encl. Style	Approx. Weight (lb)
5003 CH	W2	9	5003 DH	W3	13	5003 EH	W3	13	5003 FH	W4	16
5004 CH	W2	9	5004 DH	W3	13	5004 EH	W4	16	5004 FH	W5	18
5006 CH	W3	13	5006 DH	W4	18	5006 EH	W5	18	5006 FH	W8	25
5009 CH	W4	16	5009 DH	W5	19	5009 EH	W8	24	5009 FH	W12	37
5011 CH	W5	18	5011 DH	W7	25	5011 EH	W8	25	5011 FH	W15	42
5017 CH	W8	25	5017 DH	W12	37	5017 EH	W15	36	5017 FH	W24	47
5022 CH	W10	30	5022 DH	W15	35	5022 EH	W18	41	5022 FH	W30	61
5027 CH	W12	37	5027 DH	W15	35	5027 EH*	2x W12	74	5027 FH*	2x W18	82
5032 CH	W12	30	5032 DH*	2x W12	74	5032 EH*	2x W15	84	5032 FH*	2x W24	96
5041 CH*	2x W10	60	5041 DH*	2x W15	69	5041 EH*	2x W15	70	5041 FH*	2x W18	84
5052 CH*	2x W12	74	5052 DH*	2x W15	71	5052 EH*	3x W15	106	5052 FH*	3x W24	141
5062 CH*	2x W12	60	5062 DH*	3x W15	102	5062 EH*	3x W15	105	5062 FH*	3x W18	126
5077 CH*	3x W10	90	5077 DH*	3x W15	107	5077 EH*	3x W18	121	5077 FH*	4x W24	189
5099 CH*	3x W15	106	5099 DH*	4x W15	144	5099 EH*	4x W18	163	5099 FH*	5x W24	235
5125 CH*	4x W12	121	5125 DH*	5x W15	180	5125 EH*	5x W18	203	5125 FH*	6x W18	250
5144 CH*	5x W12	155	5144 DH*	6x W18	242	5144 EH*	6x W15	214	5144 FH*	7x W18	293
5192 CH*	6x W12	181	5192 DH*	7x W15	244	5192 EH*	8x W15	285	5192 FH*	9x W24	457

**NOTE: These parts consist of multiple quantities of the enclosure style. The approximate weight already takes into account any multiple quantities.*

Type S Enclosures

These heavy gauge screened enclosures feature a solid bottom and a built-in compartment separated from the resistor assembly. The resistors are factory wired to a terminal block mounted in this compartment using high temperature Teflon or silicone wire. During installation, standard 90°C rated wire is routed into the compartment through the removable ½ inch conduit knockouts and connected to the factory wired terminal block. The terminal compartment wall is pre-punched for an optional thermal switch for sensing a resistor temperature overload.

Our standard unit includes a screened cover which is CNC punched to obtain maximum cooling and professional aesthetics. Mounting holes are located inside the enclosure and can be easily accessed by removing the cover. Resistor coils are interconnected using stainless steel bus bars and all stainless steel hardware, producing a corrosion resistant current path to withstand nearly any harsh industrial environment. The standard enclosure finish is galvanized, but an optional powder coated, yellow zinc, aluminum or stainless steel finish is available upon request.

Type S Enclosure Dimensions					
Enclosure	Dimensions in Inches				
	A	B	C	D	E
S1	12	5	5	10-1/2	—
S2	12	7	5	10-1/2	4-1/2
S3	12	10	5	10-1/2	7-1/2
S4	12	13	5	10-1/2	10-1/2
S5	12	16	5	10-1/2	13-1/2
S6	19	10	5	17-1/2	7-1/2
S8	19	13	5	17-1/2	10-1/2
S9	26-1/2	10	5	25	7-1/2
S10	19	16	5	17-1/2	13-1/2
S12	26-1/2	13	5	25	10-1/2
S15	26-1/2	16	5	25	13-1/2
S18	28	10	10	26-1/2	7-1/2
S24	28	13	10	26-1/2	10-1/2
S30	28	16	10	26-1/2	13-1/2

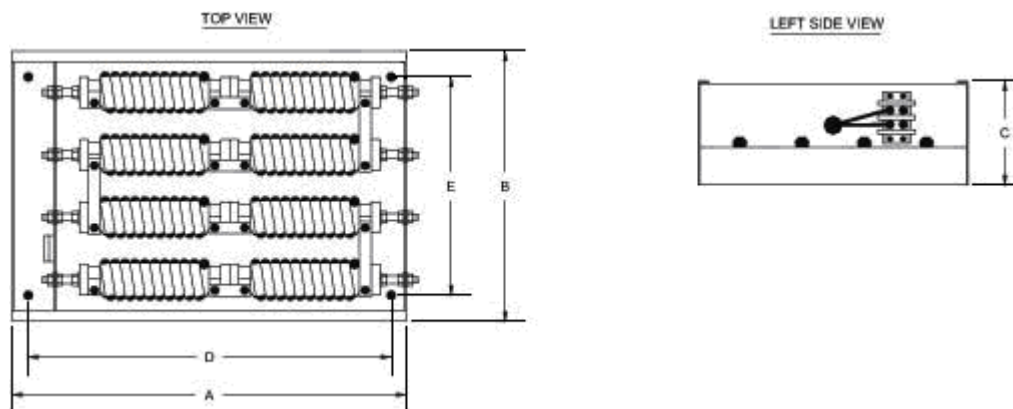


Figure 2: Type S Enclosure Dimensions

Type W Enclosures

These heavy gauge louvered enclosures feature a solid bottom and a built-in compartment separated from the resistor assembly. The resistors are factory wired to a terminal block mounted in this compartment using high temperature Teflon or silicone wire. During installation, standard 90°C rated wire is routed into the compartment through the removable ½ inch conduit knockouts and connected to the factory wired terminal block. The terminal compartment wall is pre-punched for an optional thermal switch for sensing a resistor temperature overload.

Mounting holes are located inside the enclosure and can be easily accessed by removing the cover. Resistor coils are interconnected using stainless steel bus bars and all stainless steel hardware, producing a corrosion resistant current path to withstand nearly any harsh industrial environment. The standard enclosure finish is galvanized, but an optional powder coated, yellow zinc, aluminum or stainless steel finish is available upon request.

Type W Enclosure Dimensions					
Enclosure	Dimensions in Inches				
	A	B	C	D	E
W1	12-3/8	4-7/8	5	10-1/2	—
W2	12-3/8	6-7/8	5	10-1/2	4-1/2
W3	12-3/8	9-7/8	5	10-1/2	7-1/2
W4	12-3/8	12-7/8	5	10-1/2	10-1/2
W5	12-3/8	15-7/8	5	10-1/2	13-1/2
W6	19-3/8	9-7/8	5	10-1/2	7-1/2
W8	19-3/8	12-7/8	5	10-1/2	10-1/2
W9	26-1/2	9-7/8	6	25	7-1/2
W10	19-3/8	15-7/8	5	10-1/2	13-1/2
W12	26-1/2	12-7/8	6	25	10-1/2
W15	26-1/2	15-7/8	6	25	13-1/2
W18	28	9-7/8	11	26-1/2	7-1/2
W24	28	12-7/8	11	26-1/2	10-1/2
W30	28	15-7/8	11	26-1/2	13-1/2

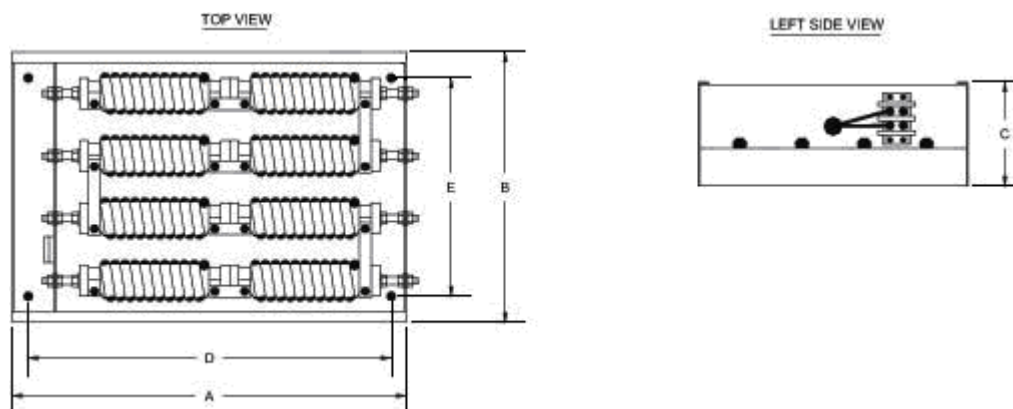


Figure 3: Type W Enclosure Dimensions

Type A Enclosures

The Type A enclosure is designed for applications requiring a large number of edge wound or wire wound resistor coils. In addition to the large capacity, these units are available with several options to simplify installation. We offer optional terminal connections up to 400 amps continuous located on a terminal plate in the bottom of the enclosure. These factory wired connections allow standard 90°C rated wire to be used if routed along the enclosure bottom. If installing without the optional terminal connections, always use 150°C rated silicone or Teflon wire when attaching directly to resistors.

These rigid enclosures include a screened top and removable front and back screened covers. The enclosure sides and bottom are solid and furnished with two lifting eyes. Mounting holes are located inside the enclosure and can be easily accessed by removing the front or back cover. Resistor coils are interconnected using all stainless steel bus bars and hardware, producing a corrosion resistant current path to withstand nearly any harsh industrial environment. The standard finish is galvanized, but an optional powder coated, hot dipped galvanized, aluminum or stainless steel finish is available upon request.

Type A Enclosure Dimensions					
Enclosure	Dimensions in Inches				
	A	B	C	D	E
A1	30	18	10	28	16
A2	30	18	16	28	16
A3	30	18	24	28	16
A4	30	18	32	28	16
A5	30	18	40	28	16
A6	30	18	48	28	16
A7	30	18	56	28	16
A8	30	18	64	28	16
A9	30	18	72	28	16

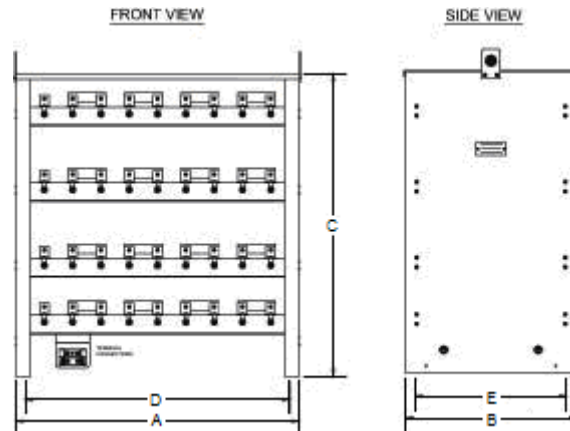


Figure 4: Type A Enclosure Dimensions

Panel Mount Resistors

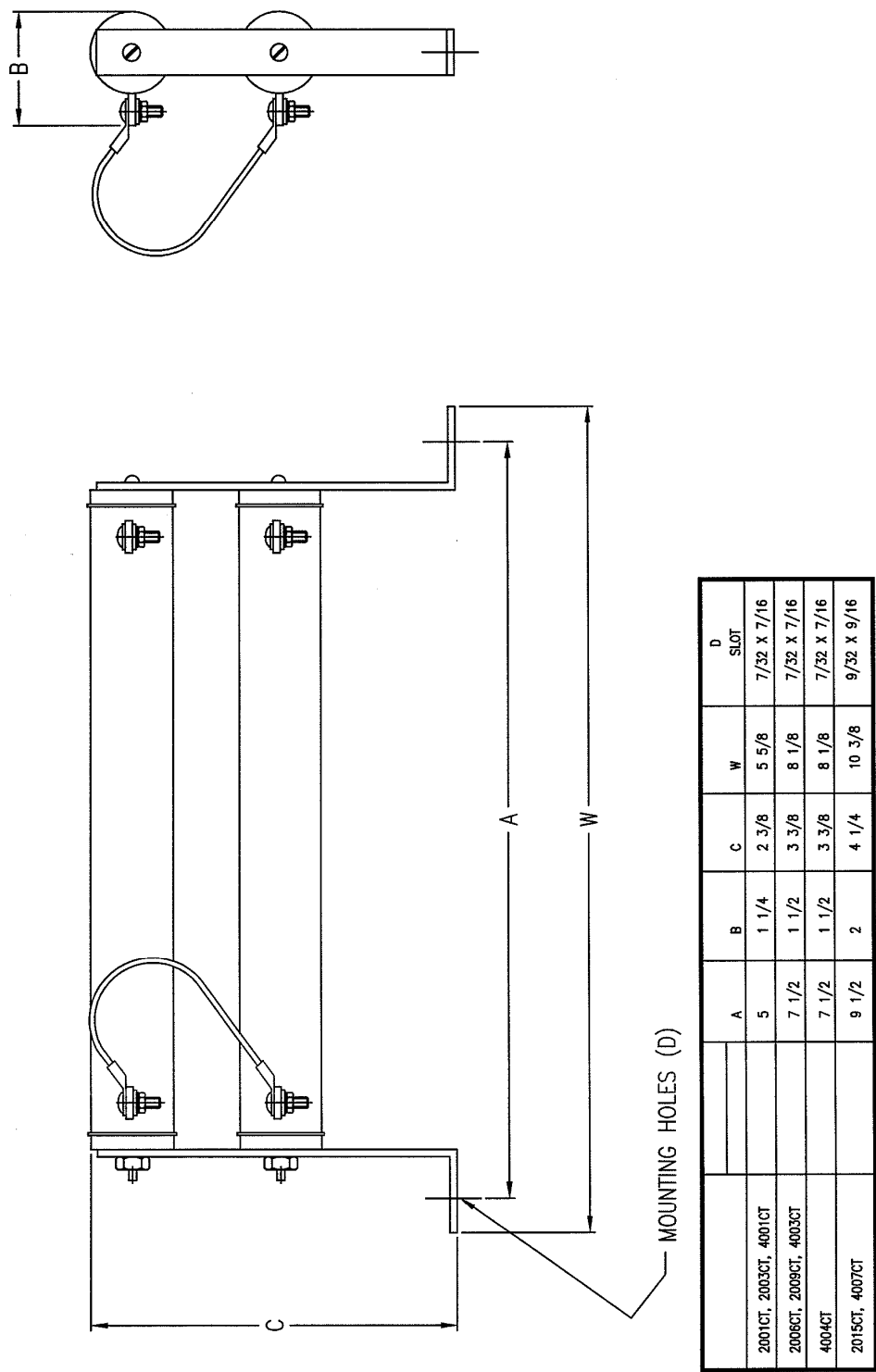


Figure 5: Panel Mount Resistor Dimensions

DC Dynamic Braking Resistors

Magnetek's grid resistors are primarily used for DC dynamic braking applications. Their stainless steel elements and rugged construction make these resistors ideal for high vibration and mill duty applications.

DC Dynamic Braking Resistors Enclosure Styles

Part #	Enclosure Size	Part #	Enclosure Size
EDB20044-6D	D1	EDB20029-8D	D1
EDB20057-6D	D1	EDB20045-8D	D1
EDB20077-6D	D1	EDB20057-8D	D1
EDB20129-6D	D1	EDB20077-8D	D1
EDB20175-6D	D1	EDB20098-8D	D1
EDB20248-6D	D2	EDB20145-8D	D1
EDB20375-6D	D2	EDB20246-8D	D2
EDB20500-6D	D2	EDB20335-8D	D2
EDB20730-6D	D3	EDB20500-8D	D2
EDB20955-6D	D4	EDB20730-8D	D3
EDB21296-6D	D4	EDB20955-8D	D4
EDB21800-6D	D6	EDB21140-8D	D4
146-15135*	D7	EDB21404-8D	D5
146-15136*	D8	EDB21800-8D	D6

Weatherproof Louvered DC Dynamic Braking Resistors Enclosure Styles

Part #	Enclosure Size	Part #	Enclosure Size
EDB20044-6D-WL	G1	EDB20029-8D-WL	G1
EDB20057-6D-WL	G1	EDB20045-8D-WL	G1
EDB20077-6D-WL	G1	EDB20057-8D-WL	G1
EDB20129-6D-WL	G1	EDB20077-8D-WL	G1
EDB20175-6D-WL	G1	EDB20098-8D-WL	G1
EDB20248-6D-WL	G2	EDB20145-8D-WL	G1
EDB20375-6D-WL	G2	EDB20246-8D-WL	G2
EDB20500-6D-WL	G2	EDB20335-8D-WL	G2
EDB20730-6D-WL	G3	EDB20500-8D-WL	G2
EDB20955-6D-WL	G4	EDB20730-8D-WL	G3
EDB21296-6D-WL	G4	EDB20955-8D-WL	G4
EDB21800-6D-WL	G6	EDB21140-8D-WL	G4
146-15188*	G7	EDB21404-8D-WL	G5
146-15189*	G8	EDB21800-8D-WL	G6

**NOTE: Parts 146-15135, 146-15136, 146-15188, and 146-15189 include a N.C. series thermostat internal to the enclosure.*

Type D Enclosures

The Type D DC Dynamic Braking Resistor enclosure includes a screened top and removable front and back screened covers. The enclosure sides and bottom are solid. The metal has a mill galvanized finish standard and other finishes are available upon request.

Type 'D' DC Dynamic Braking Resistor Enclosure Dimensions	
Enclosure Size	Dimensions in Inches
	H
D1	16
D2	24
D3	32
D4	40
D5	56
D6	72
D7	34
D8	58

FRONT VIEW

SIDE VIEW

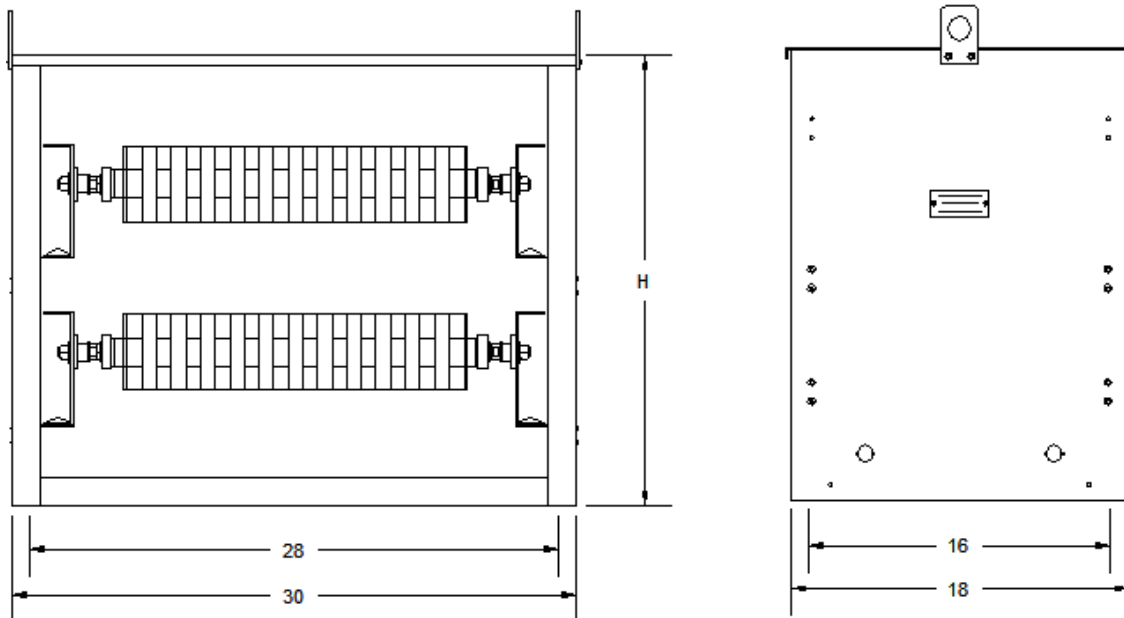


Figure 6: Type D Enclosure Dimensions

Type G Enclosures

The Type G DC Dynamic Braking Resistor enclosure includes a weatherproof, louvered top, front and back with removable front and back covers. The enclosure sides and bottom are solid. The metal has a mill galvanized finish standard and other finishes are available upon request.

Type 'G' DC Dynamic Braking Resistor Enclosure Dimensions	
Enclosure Size	Dimensions in Inches
	H
G1	17.5
G2	25.5
G3	33.5
G4	41.5
G5	57.5
G6	73.5
G7	33.5
G8	57.5

FRONT VIEW

SIDE VIEW

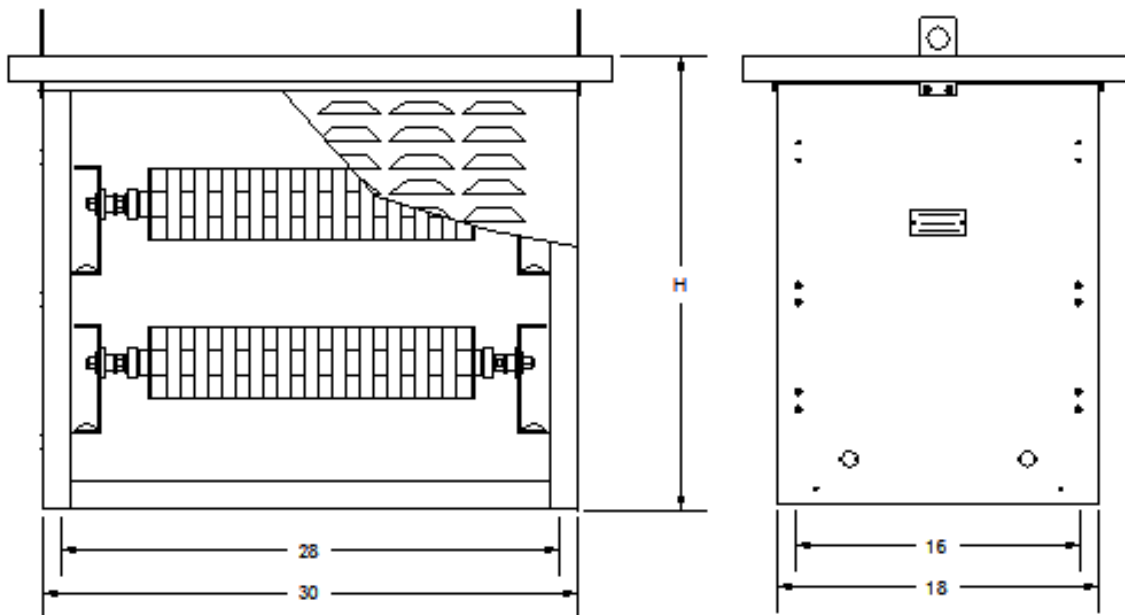


Figure 7: Type G Enclosure Dimensions