



3200 & 5200 Series Side Mount Parallel Drive Package for Standard Load 60 Hz Gearmotors

Installation, Maintenance & Parts Manual



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Introduction

IMPORTANT

<i>Some illustrations may show guards removed. DO NOT operate equipment without guards.</i>

Upon receipt of shipment:

- Compare shipment with packing slip. Contact factory regarding discrepancies.
- Inspect packages for shipping damage. Contact carrier regarding damage.
- Accessories may be shipped loose. See accessory instructions for installation.

Dorner 3200 Series conveyors are covered by patent numbers 5156260, 5156261, 5203447, 5265714, 6871737, 6910571, 6971509, and patent applications in other countries.

Dorner LPZ Series conveyors are covered by patent numbers 5156260, 5156261, 5203447, 5265714, 5875883 and patent applications in other countries.

Dorner 5200 Series conveyors have patents pending.

Dorner's Limited Warranty applies.

Dorner reserves the right to make changes at any time without notice or obligation.

Dorner has convenient, pre-configured kits of Key Service Parts for all conveyor products. These time saving kits are easy to order, designed for fast installation, and guarantee you will have what you need when you need it. Key Parts and Kits are marked in the Service Parts section of this manual with the Performance Parts Kits  logo.

Warnings - General Safety

WARNING

The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.

DANGER



Climbing, sitting, walking or riding on conveyor will cause severe injury.
KEEP OFF CONVEYORS.

DANGER



DO NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.

WARNING



Exposed moving parts can cause severe injury.
LOCK OUT POWER before removing guards or performing maintenance.

WARNING



Gearmotors may be **HOT**.
DO NOT TOUCH Gearmotors.

WARNING



Exposed moving parts can cause severe injury.
REPLACE ALL GUARDS BEFORE RUNNING CONVEYOR.

WARNING



Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.

When conveyors are used in conjunction with other equipment or as part of a multiple conveyor system, **CHECK FOR POTENTIAL PINCH POINTS** and other mechanical hazards before system start-up.

Product Description

Refer to **(Figure 1)** for typical components.

- | | |
|---|--------------------|
| 1 | Conveyor |
| 2 | Gearmotor Assembly |
| 3 | Spider Web Bushing |
| 4 | Anti-Rotation Pin |
| 5 | Coupling Half |

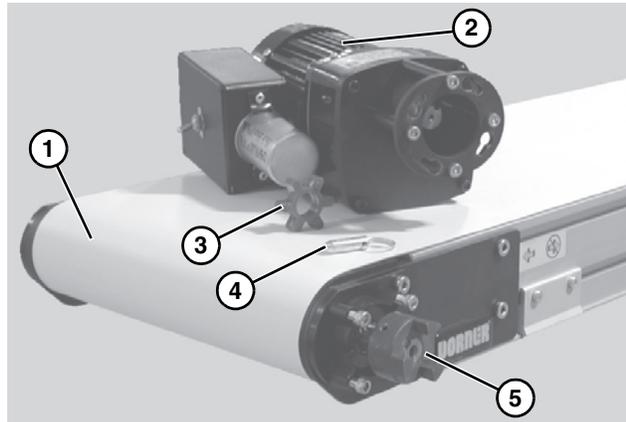


Figure 1

Specifications

Gearmotor Mounting Package Models:

Example:

32 M S P S A

- Product Series: 32 = 3200 Series
52 = 5200 Series
- Language Code = U.S. English
- Mount Style = Side Mount
- Output Shaft Type = Parallel
- Gearmotor Type: S = Standard Load
L = Light Load
- Mount Position = A, B, C or D
(see detail to the right)

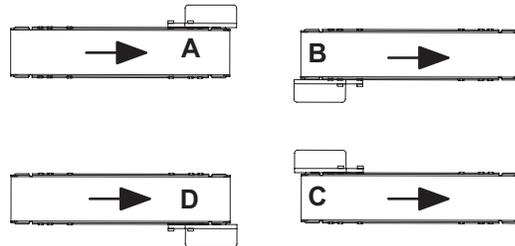


Table 1: Gearmotor Specifications

	Single Phase	Three Phase	DC Variable Speed	VFD Variable Speed
Power/ Gear Ratio	hp (kW)	hp (kW)	hp (kW)	hp (kW)
5:1	.08 (.06)	.17 (.13)	.12 (.09)	.17 (.13)
10:1	.17 (.13)	.17 (.13)	.25 (.19)	.17 (.13)
20:1	.33 (.25)	.38 (.28)	.25 (.19)	.38 (.28)
30:1	.33 (.25)	.38 (.28)	.25 (.19)	.38 (.28)
60:1	.33 (.25)	.38 (.28)	.33 (.25)	.38 (.28)
180:1	.33 (.25)	.38 (.28)	N/A	.38 (.28)
Input Voltage	115 VAC	230 VAC	130 VDC	230 VAC
Input Frequency	60 Hz	60 Hz	N/A	10 to 60 Hz

Specifications

Table 1: Gearmotor Specifications Continued

	Single Phase	Three Phase	DC Variable Speed	VFD Variable Speed
Input Current/ Gear Ratio	FLA	FLA	FLA	FLA
5:1	1.2	1.0	1.0	1.0
10:1	1.9	1.0	1.8	1.0
20:1	4	1.9	1.8	1.9
30:1	4	1.9	1.8	1.9
60:1	4	1.9	2.3	1.9
180:1	4	1.9	N/A	1.9
Motor RPM	1725	1725	2500	1725
Power/Ratio	Totally Enclosed	Fan Cooled	Totally Enclosed Non-Ventilated	Totally Enclosed Fan Cooled

Table 2: Belt Speeds for Fixed Speed Parallel Shaft 60 Hz Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
62M180PS4vpFn	10	226		7.6	2.3
62M060PS4vpFn	29	237		22.9	7.0
32M030PS4vpFn	58	142		45.8	14.0
32M020PS4vpFn	86	78		68.6	20.9
32M010PS4vpFn	173	41		137.3	41.9
32M005PS4vpFn	345	41		274.6	83.7

(vp) = voltage and phase

23 = 208 – 230/460 V, 3-phase

11 = 115 V, 1-phase

Table 3: Belt Speeds for Variable Speed Parallel Shaft VFD Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
62M180PS4vpFn	10	226		1.3–7.6	0.4–2.3
62M060PS4vpFn	29	237		3.8–22.9	1.2–7.0
32M030PS4vpFn	58	142		7.6–45.8	2.3–14.0
32M020PS4vpFn	86	78		11.5–68.6	3.5–20.9
32M010PS4vpFn	173	41		22.9–137.3	7.0–41.9
32M005PS4vpFn	345	41		45.9–274.6	14.0–83.7

Table 4: Belt Speeds for Variable Speed Parallel Shaft DC Gearmotors

Standard Load Gearmotors				Belt Speed	
Part Number	RPM	In-lb	N-m	Ft/min	M/min
62M180PSD3DEN	14	226		1.3–11.1	0.4–3.4
62M060PSD3DEN	42	237		4.0–33.2	1.2–10.1
62M030PSD3DEN	83	142		8.0–66.3	2.4–20.2
62M020PSD3DEN	125	78		11.9–99.5	3.6–30.3
62M010PSD3DEN	250	41		23.9–199.0	7.3–60.7

NOTE

For belt speed other than those listed, contact factory for details.

Installation

Required Tools

- Hex-key wrenches:
2 mm, 2.5 mm, 3 mm, 5 mm
- Straight edge
- Torque wrench

Mounting

⚠ WARNING



Exposed moving parts can cause severe injury.
LOCK OUT POWER before removing guards or performing maintenance.

Installation Component List:

- | | |
|---|--------------------|
| 1 | Gearmotor Assembly |
| 2 | Spider Web Bushing |
| 3 | Anti-Rotation Pin |

1. Typical components (**Figure 2**).

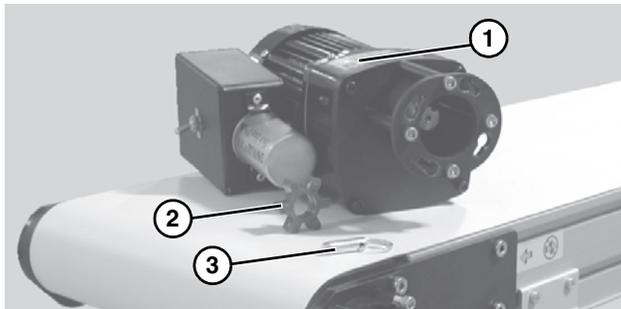


Figure 2

2. Install spider bushing (**Figure 3, item 1**) in three jaw coupling (**Figure 3, item 2**).

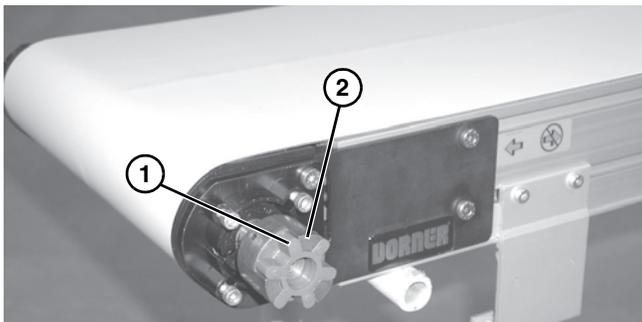


Figure 3

3. Rotate conveyor belt and attached conveyor coupling (**Figure 4, item 1**) to align with gearmotor coupling (**Figure 4, item 2**).

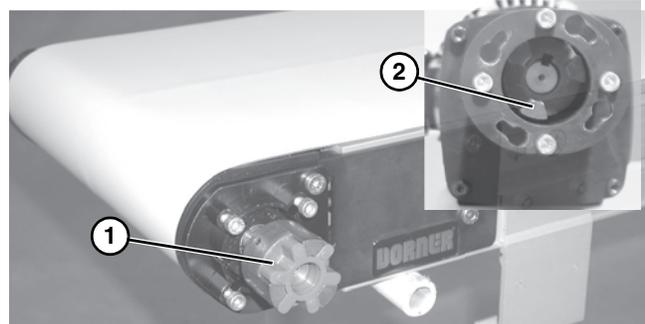


Figure 4

4. Slide mounting screws (**Figure 5, item 1**) through slots (**Figure 5, item 2**) in gearmotor bracket (**Figure 5, item 3**) and rotate gearmotor assembly into desired position.

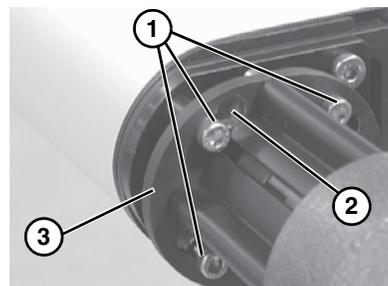


Figure 5

5. Tighten screws (**Figure 6, item 1**) to 146 in-lbs (16.5 N-m) and install anti rotation pin (**Figure 6, item 2**).

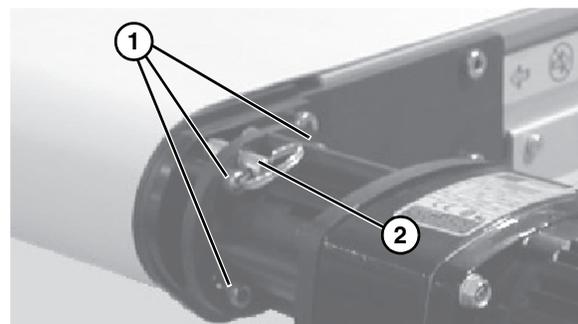


Figure 6

Preventive Maintenance and Adjustment

Required Tools

- Hex-key wrenches:
2 mm, 2.5 mm, 3 mm, 5 mm
- Adjustable wrench (for hexagon head screws)
- Straight edge
- Torque wrench

Motor Replacement

⚠ WARNING

Exposed moving parts can cause severe injury. LOCK OUT POWER before removing guards or performing maintenance.

⚠ WARNING

Hazardous voltage will cause severe injury or death. LOCK OUT POWER BEFORE WIRING.

1. For single phase motor, unplug power cord from outlet.
2. For three phase and VFD variable speed motor:
 - a. Loosen terminal box screws (**Figure 7, item 1**) and remove cover (**Figure 7, item 2**).

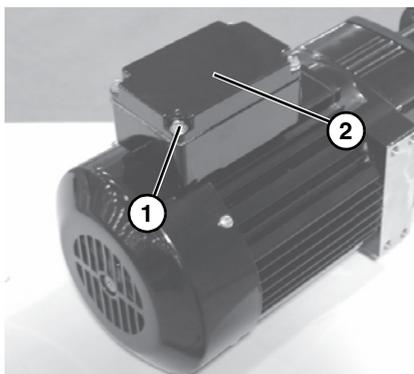


Figure 7

- b. Record wire colors on terminals 1, 2 and 3. Loosen wire nuts and remove wires 1, 2 and 3.
- c. Loosen cord grip and remove cord.

3. For DC variable speed motor, unplug motor cord at disconnect (**Figure 8, item 1**).

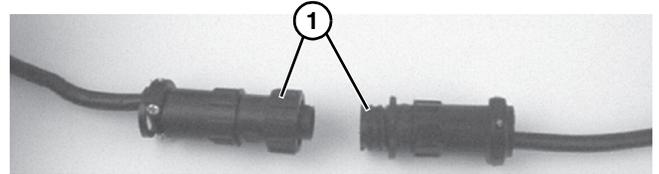


Figure 8

⚠ WARNING
Gearmotor can rotate and fall off, causing injury. Support the gearmotor prior to removing anti rotation pin.

4. Reverse steps 2 thru 5 of the “Mounting” section starting on page 6.
5. Remove four (4) screws (**Figure 9, item 1**) and detach gearmotor coupling guard (**Figure 9, item 2**) and mounting ring (**Figure 9, item 3**).

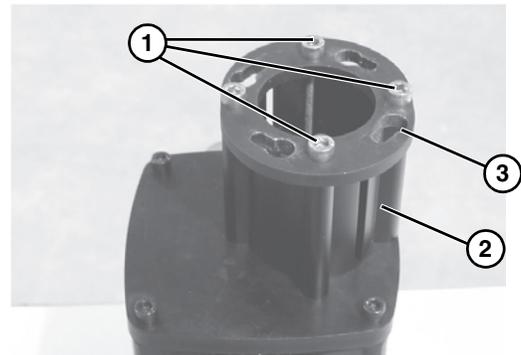


Figure 9

6. Loosen set screw (**Figure 10, item 1**) and remove 3 jaw coupling (**Figure 10, item 2**).

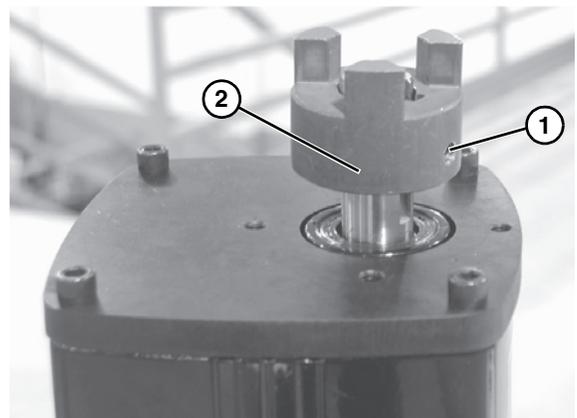


Figure 10

Preventive Maintenance and Adjustment

7. Remove four (4) screws (**Figure 11, item 1**) and detach motor (**Figure 11, item 2**).

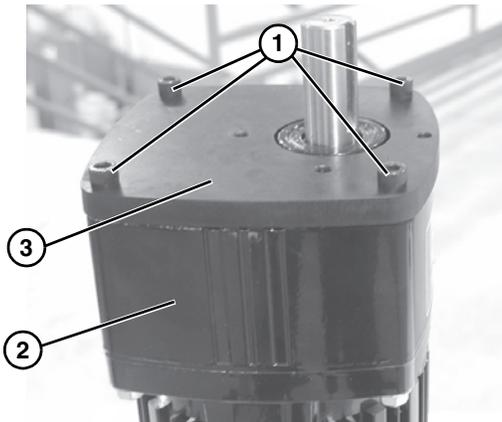


Figure 11

8. Install mounting plate (**Figure 11, item 3**) on new motor with screws (**Figure 11, item 1**) and tighten to 75 in-lbs (8.5 N-m).
9. Install 3 jaw coupling (**Figure 12, item 1**) and tighten set screw (**Figure 12, item 2**) to 45 in-lbs (5 N-m).
10. Install gearmotor coupling guard (**Figure 9, item 2**) and mounting ring (**Figure 9, item 3**) with four (4) screws (**Figure 9, item 1**) and tighten to 110 in-lbs (12 N-m).

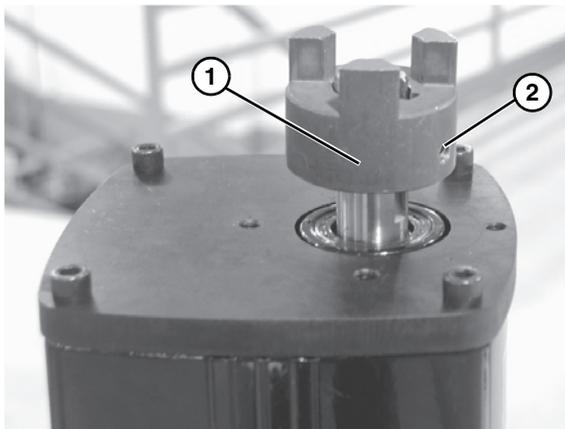


Figure 12

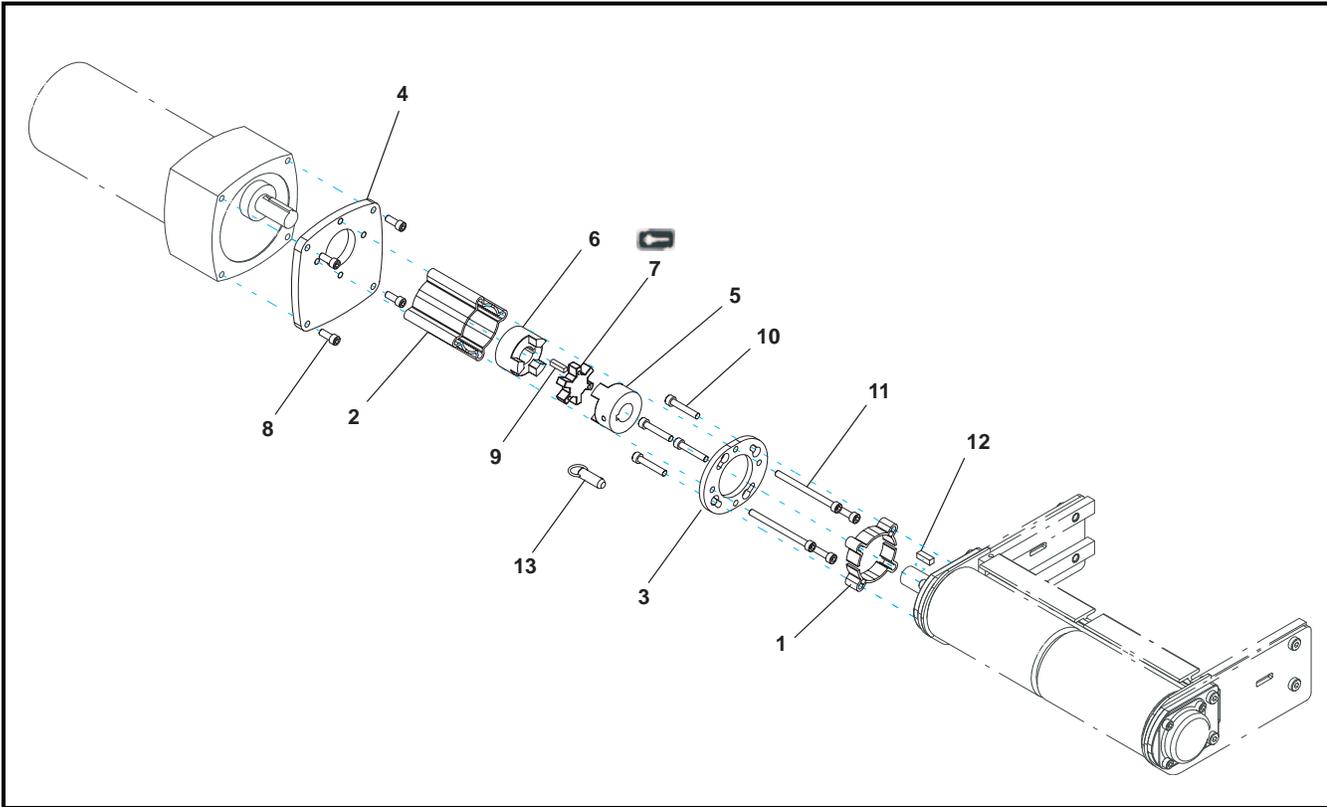
11. Follow steps 2 thru 5 of the “Mounting” section starting on page 6.
12. Replace wiring:
- For a single phase motor, reverse step 1 on page 7.
 - For a three phase or VFD variable speed motor, reverse step 2 on page 7.
 - For a DC variable speed motor, reverse step 3 on page 7.

Service Parts

NOTE

For replacement parts other than those shown in this section, contact an authorized *Dorner Service Center* or the factory. Key Service Parts and Kits are identified by the Performance Parts Kits logo . Dorner recommends keeping these parts on hand.

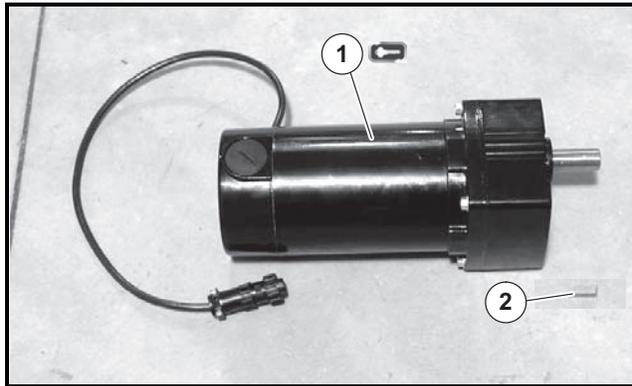
Side Mount Parallel Drive Package for Industrial Gearmotors



Item	Part Number	Description
1	301092	Short Side Drive Guard (x2)
2	301093	Long Side Drive Guard (x2)
3	301094	Side Drive Mounting Ring
4	301096	Parallel Face Motor Mounting Plate
5	807-1140	20mm 3 Jaw Coupling
6	807-1142	3/4" 3 Jaw Coupling
7 	807-1143	3 Jaw Rubber Spider

Item	Part Number	Description
8	902-157	Socket Head Cap Screw, 1/4-28 x 0.75"
9	912-078	Square Key
10	920635M	Socket Head Screw, M6 x 35 mm
11	920680M	Socket Head Screw, M6 x 80 mm
12	980630M	Square Key, Undersize
13	807-1169	Quick Release Pin

Parallel Shaft Industrial Gearmotors



Item	Part Number	Description
1 	62M180PS411FN	Motor, 0.08hp (0.06Kw), 115 Volts, 60 Hz, 1-Phase
	62M180PS411FR	Motor, 0.08hp (0.06Kw), 115 Volts, 60 Hz, 1-Phase with Reversing
	62M180PS423FN	Motor, 0.17hp (0.13Kw), 208–230/460 Volts, 60 Hz, 3-Phase
	62M060PS411FN	Motor, 0.17hp (0.13Kw), 115 Volts, 60 Hz, 1-Phase
	62M060PS411FR	Motor, 0.17hp (0.13Kw), 115 Volts, 60 Hz, 1-Phase with Reversing
	62M060PS423FN	Motor, 0.17hp (0.13Kw), 208–230/460 Volts, 60 Hz, 3-Phase
	32M030PS411FN	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase
	32M030PS411FR	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase with Reversing
	62M030PS423FN	Motor, 0.38hp (0.28Kw), 208–230/460 Volts, 60 Hz, 3-Phase
	32M020PS411FN	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase
	32M020PS411FR	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase with Reversing
	62M020PS423FN	Motor, 0.38hp (0.28Kw), 208–230/460 Volts, 60 Hz, 3-Phase
	32M010PS411FN	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase
	32M010PS411FR	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase with Reversing

Item	Part Number	Description	
	62M010PS423FN	Motor, 0.38hp (0.28Kw), 208–230/460 Volts, 60 Hz, 3-Phase	
	32M005PS411FN	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase	
	32M005PS411FR	Motor, 0.33hp (0.25Kw), 115 Volts, 60 Hz, 1-Phase with Reversing	
	62M005PS423FN	Motor, 0.38hp (0.28Kw), 208–230/460 Volts, 60 Hz, 3-Phase	
	62M180PSD3DEN	Motor, 0.12 hp (0.09 Kw), 130 Volts DC	
	62M060PSD3DEN	Motor, 0.25 hp (0.19 Kw), 130 Volts DC	
	62M030PSD3DEN	Motor, 0.25 hp (0.19 Kw), 130 Volts DC	
	62M020PSD3DEN	Motor, 0.25 hp (0.19 Kw), 130 Volts DC	
	62M010PSD3DEN	Motor, 0.33 hp (0.25 Kw), 130 Volts DC	
	62M180PS423EN	Motor, 0.17 hp (0.13 Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	62M060PS423EN	Motor, 0.17 hp (0.13 Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	62M030PS423EN	Motor, 0.38 hp (0.28 Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	62M020PS423EN	Motor, 0.38 hp (0.28 Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	62M010PS423EN	Motor, 0.38 hp (0.28 Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	62M005PS423EN	Motor, 0.38 hp (0.28Kw), 230 Volts, 60 Hz, 3-Phase VFD	
	2	917–078	Key, Square, 0.188" x 0.75" L

Return Policy

Returns must have prior written factory authorization or they will not be accepted. Items that are returned to Dorner without authorization will not be credited nor returned to the original sender. When calling for authorization, please have the following information ready for the Dorner factory representative or your local distributor:

1. Name and address of customer.
2. Dorner part number(s) of item(s) being returned.
3. Reason for return.
4. Customer's original order number used when ordering the item(s).
5. Dorner or distributor invoice number.

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization number for reference.

There will be a return charge on all new undamaged items returned for credit where Dorner was not at fault. Dorner is not responsible for return freight on such items.

Conveyors and conveyor accessories	
Standard catalog conveyors	30%
MPB Series, cleated and specialty belt conveyors	50%
7400 & 7600 Series conveyors	non-returnable items
Engineered special products	case by case
Drives and accessories	30%
Sanitary stand supports	non-returnable items

Parts	
Standard stock parts	30%
MPB, cleated and specialty belts	non-returnable items

Returns will not be accepted after 60 days from original invoice date.

The return charge covers inspection, cleaning, disassembly, disposal and reissuing of components to inventory.

If a replacement is needed prior to evaluation of returned item, a purchase order must be issued. Credit (if any) is issued only after return and evaluation is complete.

Dorner has representatives throughout the world. Contact Dorner for the name of your local representative. Our Technical Sales, Catalog Sales and Service Teams will gladly help with your questions on Dorner products.

For a copy of Dorner's Warranty, contact factory, distributor, service center or visit our website at www.dorner.com.

For replacement parts, contact an authorized Dorner Service Center or the factory.



Dorner Mfg. Corp. reserves the right to change or discontinue products without notice. All products and services are covered in accordance with our standard warranty. All rights reserved. © Dorner Mfg. Corp. 2008

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