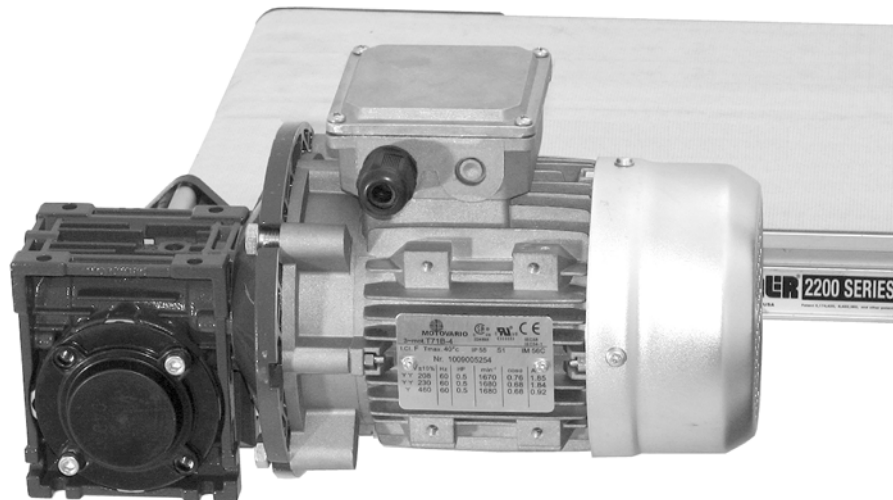




2100, 2200, 2300, 4100, 6200, MPB Series Side Mount Drive Package for Standard Load 90° Industrial Gearmotors

Installation, Maintenance & Parts Manual



Featuring: **eDrive™** Technology

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Table of Contents

| | | | |
|---|---|---|----|
| Introduction | 2 | Table 6: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on MPB Series Conveyors | 8 |
| Warnings – General Safety | 3 | U.S. Version | 8 |
| Product Description | 4 | CE Version | 8 |
| Specifications | 5 | Table 7: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on MPB Series Conveyors | 8 |
| Gearmotor Mounting Package Models: | 5 | U.S. Version | 8 |
| Table 1: Gearmotor Specifications | 5 | CE Version | 8 |
| U.S. Version | 5 | Installation | 9 |
| CE Version | 5 | Required Tools | 9 |
| Table 2: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on 2200 Series Conveyors | 6 | Mounting | 9 |
| U.S. Version | 6 | For 4100 and 2100 Flat Belt Conveyors | 10 |
| CE Version | 6 | For 6200, 2200, MPB a | |
| Table 3: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on 2200 Series Conveyors.... | 6 | nd 2100 Cleated Belt Conveyors | 11 |
| U.S. Version | 6 | Preventive Maintenance and Adjustment | 13 |
| CE Version | 6 | Required Tools | 13 |
| Table 4: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on 2100, 4100 & 6200 Series Conveyors | 7 | Gear Reducer Replacement | 13 |
| U.S. Version | 7 | For eDrive style gearmotor | 15 |
| CE Version | 7 | For old style gearmotor prior to June 2011 | 16 |
| Table 5: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on 2100, 4100 & 6200 Series Conveyors | 7 | Motor Replacement | 17 |
| U.S. Version | 7 | Service Parts | 18 |
| CE Version | 7 | Side Mount Drive Package for 90° Gearmotors | 18 |
| | | 4100 Series Adapter Components | 20 |
| | | U.S. Version Gearmotors | 21 |
| | | CE Version Gearmotors | 21 |
| | | Return Policy | 22 |


Introduction

IMPORTANT

Some illustrations may show guards removed. DO NOT operate equipment without guards.

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 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 .

Dorner 2100 Series conveyors are covered by the following patent numbers: 5131529, 5174435, and corresponding patents and patent applications in other countries.

Dorner 4100 Series conveyors are covered by patent number 3923148 and corresponding patents and patent applications in other countries.

Dorner 2200, 6200 & MPB Series conveyors are covered by patent number 5174435, 6109427, 6298981, 6422382 and corresponding patents and patent applications in other countries.

Dorner's Limited Warranty applies.

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

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.

⚠ WARNING



MPB Series Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.
DO NOT REVERSE MPB SERIES CONVEYORS.

Product Description

Refer to **Figure 1** for typical conveyor components.

| | |
|---|------------------|
| 1 | Conveyor |
| 2 | Mounting Bracket |
| 3 | Gearmotor |
| 4 | Coupling |

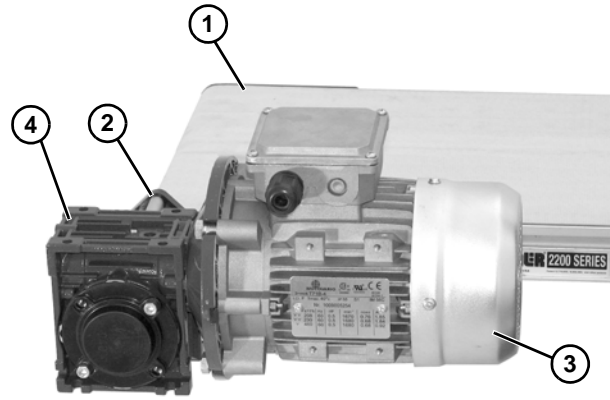


Figure 1

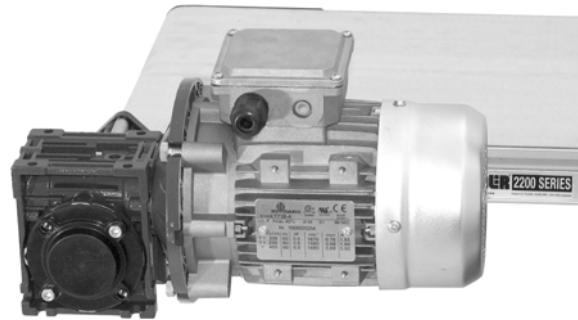
NOTE

The 90° industrial gearhead changed configuration in 2011. See below for configuration details.



Mount Packages with Old Style Gearmotors prior to June 2011

Figure 2

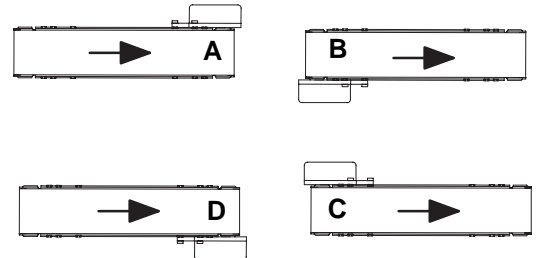
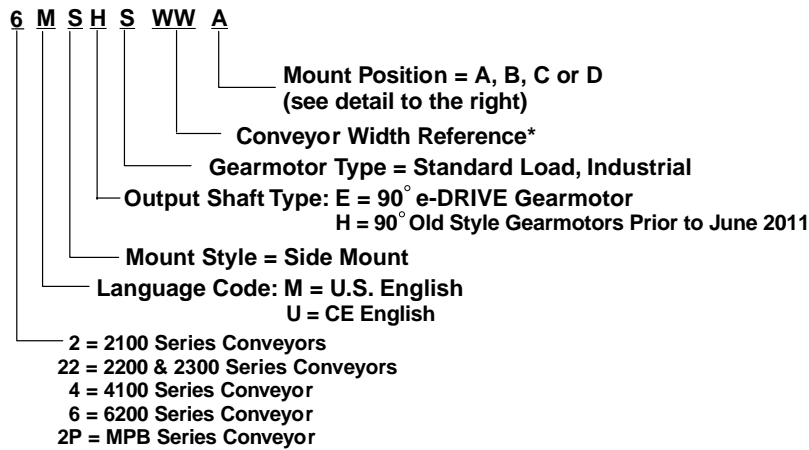


Mount Packages with eDrive Gearmotors

Figure 3

Gearmotor Mounting Package Models:

Example:



* See Ordering and Specifications Catalog for details.

Table 1: Gearmotor Specifications

U.S. Version

| | Single Phase | Three Phase | DC Variable Speed |
|------------------|------------------------------|---------------------------|-------------------|
| Output Power | 0.25 hp (0.19 kw) | | |
| Input Voltage | 115 Volts A.C. | 208 to 230/460 Volts A.C. | 130 Volts D.C. |
| Input Frequency | 60 Hz | | N/A |
| Input Current | 5.0 Amperes | 1.2 /0.6 Amperes | 2.2 Amperes |
| Motor RPM | 1725 | | 2500 |
| Gearmotor Ratios | 5:1, 10:1, 20:1, 40:1, 60:1 | | |
| Frame Size | NEMA 42 CZ | | |
| Motor Type | Totally Enclosed, Fan-cooled | | |

CE Version

| | Single Phase | Three Phase | VFD Variable Speed |
|-------------------|-----------------------------|--------------------|--------------------|
| Output Power | 0.18 kw | | |
| Input Voltage | 230 Volts A.C. | 230/400 Volts A.C. | 230 Volts D.C. |
| Input Frequency | 50 Hz | | 25 to 63 Hz |
| Input Current | 1.6 Amperes | 1.42 /0.8 Amperes | 1.4 Amperes |
| Gearmotor Ratios | 5:1, 10:1, 20:1, 40:1, 60:1 | | |
| Protection Rating | IP55 | | |
| Frame Size | IEC 63 B5 | | |

Specifications

Table 2: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on 2200 Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|-------------------|-----|-------|------|------------|-------|
| Part Number | RPM | In lb | N-m | Ft/min | M/min |
| 32M060EL4(vp)F(n) | 29 | 226 | 25.5 | 10.0 | 3.0 |
| 32M040EL4(vp)F(n) | 43 | 237 | 26.8 | 15.0 | 4.6 |
| 32M020EL4(vp)F(n) | 86 | 142 | 16 | 30.0 | 9.1 |
| 32M010EL4(vp)F(n) | 173 | 78 | 8.8 | 61.0 | 18.6 |
| 32M005EL4(vp)F(n) | 345 | 41 | 4.6 | 121.0* | 36.9* |

(vp) = voltage and phase

11 = 115 V, 1-phase

23 = 208 – 230/460 V, 3-phase

(n) = Reversing Capability

N = No Reversing Capability

R = With Reversing Capability

* = Nosebar transfers operate at maximum 77Ft/min (23.5M/min) belt speed

CE Version

| Gearmotors | | | Belt Speed |
|-----------------|-----|------|------------|
| Part Number | RPM | N-m | M/min |
| 62Z060ES4(vp)FN | 23 | 26.4 | 2.4 |
| 62Z040ES4(vp)FN | 35 | 28.9 | 3.7 |
| 62Z020ES4(vp)FN | 70 | 19.4 | 7.6 |
| 62Z010ES4(vp)FN | 140 | 10.7 | 14.9 |
| 62Z005ES4(vp)FN | 280 | 5.6 | 29.3 |

(vp) = voltage and phase

21 = 230 V, 1-phase

23 = 230 V, 3-phase

43 = 400 V, 3-phase

Table 3: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on 2200 Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|---------------|---------|-------|------|---------------|-------------|
| Part Number | Max RPM | In-lb | N-m | Ft/min | M/min |
| 32M060ELD3DEN | 42 | 198 | 22.4 | 1.8 – 14.0 | 0.5 – 4.5 |
| 32M040ELD3DEN | 63 | 163 | 18.4 | 2.6 – 22.0 | 0.8 – 6.7 |
| 32M020ELD3DEN | 125 | 98 | 11.1 | 5.3 – 44.0 | 1.6 – 13.0 |
| 32M010ELD3DEN | 250 | 54 | 6.1 | 10.0 – 88.0* | 3.2 – 27.0* |
| 32M005ELD3DEN | 500 | 28 | 3.2 | 21.0 – 176.0* | 6.4 – 54.0* |

* = Nosebar transfers operate at maximum 77Ft/min (23.5M/min) belt speed

CE Version

| Gearmotors | | | Belt Speed |
|---------------|-------------|------|------------|
| Part Number | RPM @ 50 Hz | N-m | M/min |
| 62Z060ES423EN | 23 | 26.4 | 1.2 - 3.1 |
| 62Z040ES423EN | 35 | 28.9 | 1.9 - 4.7 |
| 62Z020ES423EN | 70 | 19.4 | 3.7 - 9.4 |
| 62Z010ES423EN | 140 | 10.7 | 7.5 - 19 |
| 62Z005ES423EN | 280 | 5.6 | 15 - 38 |

Table 4: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on 2100, 4100 & 6200 Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|-------------------|-----|-------|------|------------|-------|
| Part Number | RPM | In lb | N-m | Ft/min | M/min |
| 32M060EL4(vp)F(n) | 29 | 226 | 25.5 | 8.0 | 2.4 |
| 32M040EL4(vp)F(n) | 43 | 237 | 26.8 | 12.0 | 3.7 |
| 32M020EL4(vp)F(n) | 86 | 142 | 16 | 25.0 | 7.6 |
| 32M010EL4(vp)F(n) | 173 | 78 | 8.8 | 49.0 | 14.9 |
| 32M005EL4(vp)F(n) | 345 | 41 | 4.6 | 99.0 | 30.2 |

(vp) = voltage and phase

(n) = Reversing Capability

11 = 115 V, 1-phase

N = No Reversing Capability

23 = 208 – 230/460 V, 3-phase

R = With Reversing Capability

CE Version

| Gearmotors | | | Belt Speed |
|-----------------|-----|------|------------|
| Part Number | RPM | N-m | M/min |
| 62Z060ES4(vp)FN | 23 | 26.4 | 2.1 |
| 62Z040ES4(vp)FN | 35 | 28.9 | 3.0 |
| 62Z020ES4(vp)FN | 70 | 19.4 | 6.1 |
| 62Z010ES4(vp)FN | 140 | 10.7 | 12.2 |
| 62Z005ES4(vp)FN | 280 | 5.6 | 24.4 |

(vp) = voltage and phase

23 = 230 V, 3-phase

21 = 230 V, 1-phase

43 = 400 V, 3-phase

Table 5: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on 2100, 4100 & 6200 Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|---------------|---------|-------|------|------------|-----------|
| Part Number | Max RPM | In-lb | N-m | Ft/min | M/min |
| 32M060ELD3DEN | 42 | 198 | 22.4 | 1.4 – 12 | 0.4 – 3.6 |
| 32M040ELD3DEN | 63 | 163 | 18.4 | 2.1 – 18 | 0.7 – 5.4 |
| 32M020ELD3DEN | 125 | 98 | 11.1 | 4.3 – 36 | 1.3 – 11 |
| 32M010ELD3DEN | 250 | 54 | 6.1 | 9.0 – 71 | 2.6 – 22 |
| 32M005ELD3DEN | 500 | 28 | 3.2 | 17 – 143 | 5.2 – 43 |

CE Version

| Gearmotors | | | Belt Speed |
|---------------|-------------|------|-------------|
| Part Number | RPM @ 50 Hz | N-m | M/min |
| 62Z060ES423EN | 23 | 26.4 | 1.0 – 2.6 |
| 62Z040ES423EN | 35 | 28.9 | 1.5 – 3.8 |
| 62Z020ES423EN | 70 | 19.4 | 3.0 – 7.7 |
| 62Z010ES423EN | 140 | 10.7 | 6.1 – 15.0 |
| 62Z005ES423EN | 280 | 5.6 | 12.2 – 30.0 |

Specifications

Table 6: Belt Speeds for Standard Load Fixed Speed 90° 60 Hz Gearmotors on MPB Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|-------------------|-----|-------|------|------------|-------|
| Part Number | RPM | In lb | N-m | Ft/min | M/min |
| 32M060EL4(vp)F(n) | 29 | 226 | 25.5 | 20 | 6.0 |
| 32M040EL4(vp)F(n) | 43 | 237 | 26.8 | 29 | 8.9 |
| 32M020EL4(vp)F(n) | 86 | 142 | 16 | 59 | 17.9 |

(vp) = voltage and phase

(n) = Reversing Capability

11 = 115 V, 1-phase

N = No Reversing Capability

23 = 208 – 230/460 V, 3-phase

R = With Reversing Capability

CE Version

| Gearmotors | | | Belt Speed |
|-----------------|-----|------|------------|
| Part Number | RPM | N-m | M/min |
| 62Z060ES4(vp)FN | 23 | 26.4 | 4.8 |
| 62Z040ES4(vp)FN | 35 | 28.9 | 7.4 |
| 62Z020ES4(vp)FN | 70 | 19.4 | 14.5 |

(vp) = voltage and phase

23 = 230 V, 3-phase

21 = 230 V, 1-phase

43 = 400 V, 3-phase

Table 7: Belt Speeds for Standard Load Variable Speed 90° DC Gearmotors on MPB Series Conveyors

U.S. Version

| Gearmotors | | | | Belt Speed | |
|---------------|---------|-------|------|------------|----------|
| Part Number | Max RPM | In-lb | N-m | Ft/min | M/min |
| 32M060ELD3DEN | 42 | 198 | 22.4 | 3.4–28 | 1.0–8.6 |
| 32M040ELD3DEN | 63 | 163 | 18.4 | 5.1–42 | 1.6–12.9 |
| 32M020ELD3DEN | 125 | 98 | 11.1 | 10–85 | 3–26 |
| 32M010ELD3DEN | 250 | 54 | 6.1 | 20–170* | 6–52* |

* = Cleated and Sidewall Cleated belts operate at a maximum of 150 ft/min (45.7 m/min)

CE Version

| Gearmotors | | | Belt Speed |
|---------------|-------------|------|--------------|
| Part Number | RPM @ 50 Hz | N-m | M/min |
| 62Z060ES423EN | 23 | 26.4 | 2.4 – 6.1 |
| 62Z040ES423EN | 35 | 28.9 | 3.9 – 9.1 |
| 62Z020ES423EN | 70 | 19.4 | 7.2 – 18.0 |
| 62Z010ES423EN | 140 | 10.7 | 14.0 – 36.0 |
| 62Z005ES423EN | 280 | 5.6 | 29.0 – 73.0* |

* = Cleated and Sidewall Cleated belts operate at a maximum of (45.7 m/min)


NOTE


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

Required Tools

- Hex key wrenches:
3 mm, 5 mm
- Large flat-blade screwdriver
- Torque wrench

Mounting

| |
|---|
| ⚠ WARNING |
|  |
| <p>Exposed moving parts can cause severe injury.</p> <p>LOCK OUT POWER before removing guards or performing maintenance.</p> |

| |
|--|
| ⚠ WARNING |
|  |
| <p>MPB Series Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.</p> <p>DO NOT REVERSE MPB SERIES CONVEYORS.</p> |

Installation Component List:

| | |
|---|-------------------------------|
| 1 | Drive Assembly |
| 2 | M6x25 Socket Head Screws (2x) |

1. Typical components (**Figure 4**)

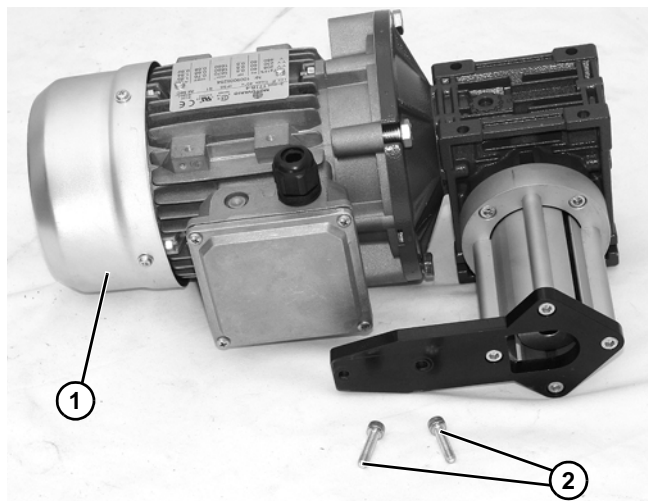


Figure 4

| |
|---|
| NOTE |
| <p>Flat belt mounting package shown above (Figure 4), cleated belt mounting package similar.</p> |

| |
|---|
| NOTE |
| <p>Gearmotor may be operated in positions 1, 2, 3 or 4 (Figure 5).</p> |

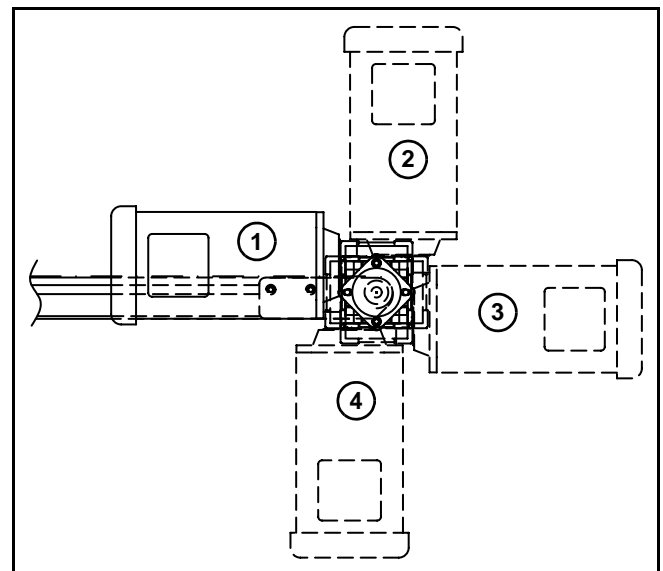


Figure 5

2. If required, change gearmotor position by removing four (4) screws (**Figure 6, item 1**). Rotate gearmotor to other position (**Figure 5**) and replace screws (**Figure 6, item 1**). Tighten to 100 in-lb (12 N-m).

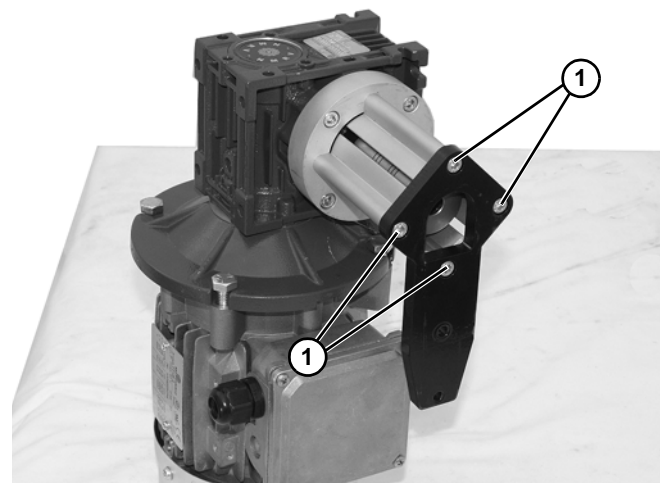


Figure 6

Installation

For 4100 and 2100 Flat Belt Conveyors

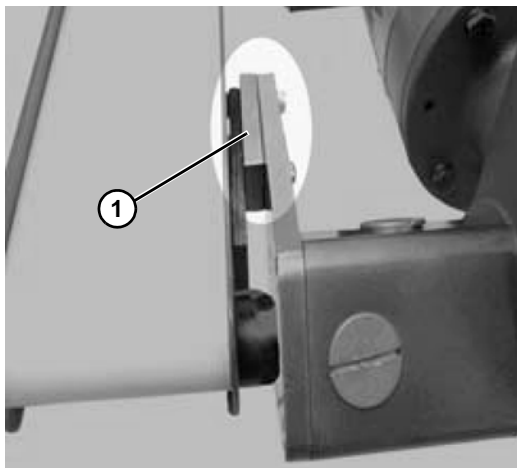
IMPORTANT

On 4 inch (95 mm) and wider conveyors, the hex broach is offset from center towards the drive side for hex shaft engagement.

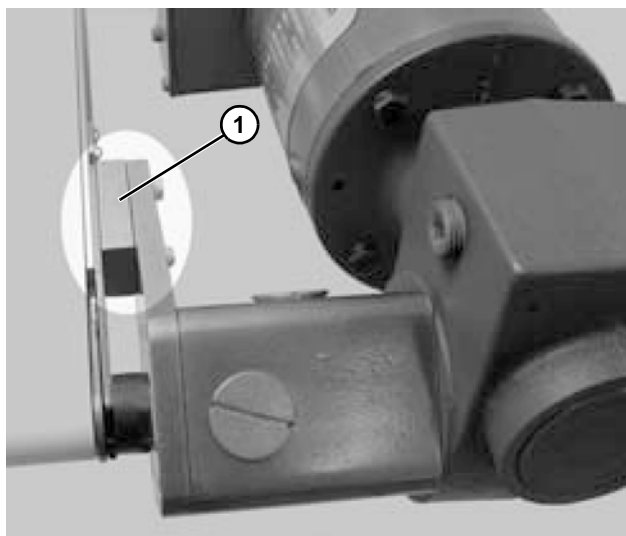
1. The figures below show gearmotor mounting for 4100 and 2100 series conveyors.

NOTE

Gearmotor bottom mount assembly is mounted to spacer plate (**Figure 7, item 1**) and (**Figure 8, item 1**).



4100 Series
Figure 7



2100 Series
Figure 8

2. Locate drive mounting position and remove two (2) screws (**Figure 9, item 1**).

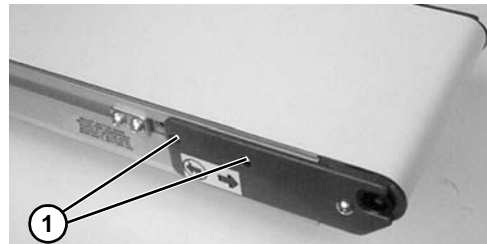


Figure 9

3. Insert hex shaft (**Figure 10, item 1**) into coupling.

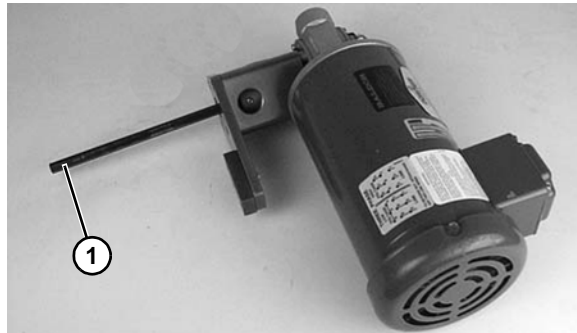


Figure 10

⚠ WARNING



Exposed moving parts can cause severe injury.
KEEP HANDS CLEAR OF DRIVE WHILE JOGGING MOTOR.

NOTE

Coupling has two (2) set screws (**Figure 11, item 1**).

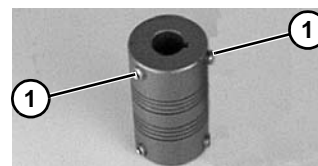


Figure 11

4. Remove fan guard (**Figure 12, item 1**) and rotate fan to align set screws (**Figure 13, item 1**) with access slot (**Figure 13, item 2**). Tighten to 32 in-lb (3.7 N-m). Repeat for second set screw.
5. Insert hex shaft (**Figure 14, item 1**) into drive pulley hex bushing and slide drive against conveyor. Install two (2) screws (**Figure 14, item 2**). Tighten to 80 in-lb (9 N-m).

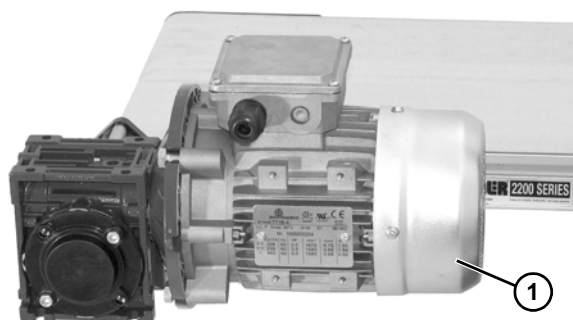



Figure 12



Figure 14

| |
|--|
| ⚠ WARNING |
|  |
| Exposed moving parts can cause severe injury. LOCK OUT POWER AFTER JOGGING MOTOR. |

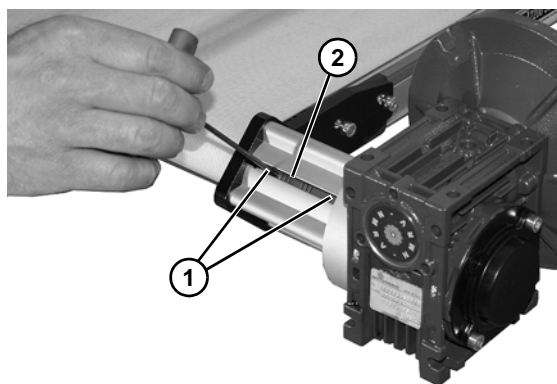


Figure 13

Installation

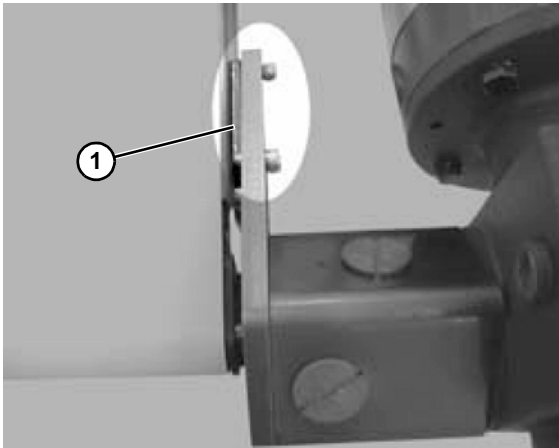
For 6200, 2200, MPB and 2100 Cleated Belt Conveyors

⚠ WARNING



Drive shaft keyway may be sharp.
HANDLE WITH CARE.

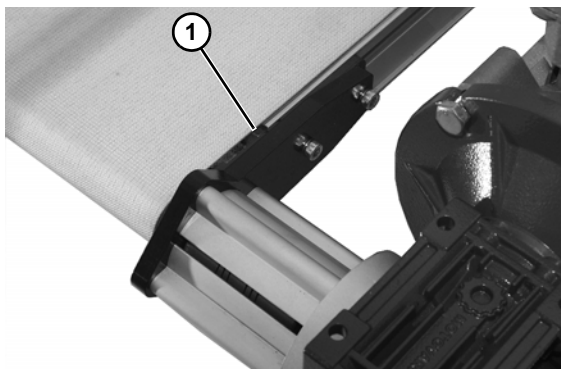
1. The figures below show gearmotor mounting for 6200, 2200 and MPB series conveyors.
- For 6200 series models, gearmotor and drive plate are mounted to spacer plate (**Figure 15, item 1**).



6200 Series

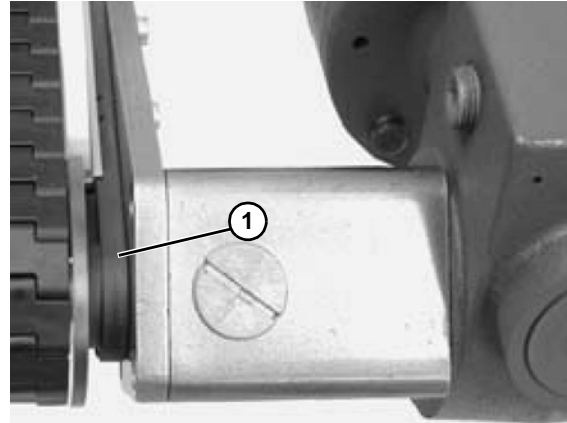
Figure 15

- For 2200 and MPB models, gearmotor and drive plate are mounted to head plate (**Figure 16, item 1**) and (**Figure 17, item 1**).



2200 Series

Figure 16



MPB Series

Figure 17

NOTE

6200 conveyor shown, 2200 and MPB cleated belt conveyors similar.

2. Locate drive output shaft. Remove two screws (**Figure 18, item 1**). Install key (**Figure 18, item 2**).

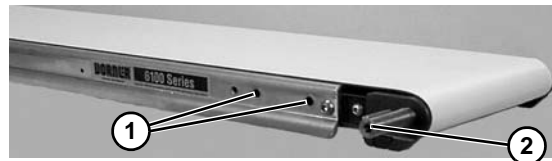


Figure 18

3. Slide coupling over drive output shaft and install gear reducer assembly (**Figure 19, item 1**) with screws (**Figure 19, item 2**). Tighten to 80 in-lb (9 N-m).

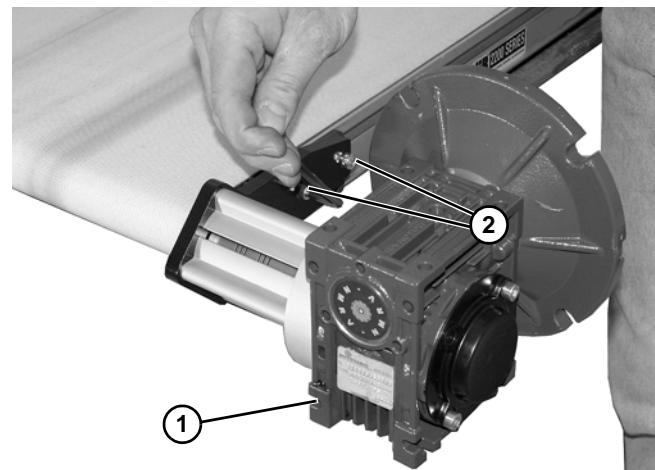


Figure 19

⚠ WARNING



Exposed moving parts can cause severe injury.
KEEP HANDS CLEAR OF DRIVE WHILE JOGGING MOTOR.

NOTE

Coupling has two (2) set screws (Figure 20, item 1).

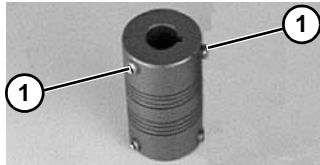


Figure 20

4. Remove fan guard (Figure 22, item 1), and rotate fan to align set screws (Figure 21, item 1) with access slot (Figure 21, item 2). Tighten to 32 in-lb (3.7 N-m). Repeat for second set screw.

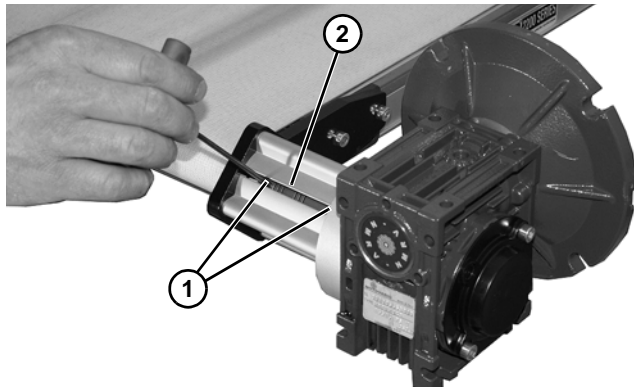


Figure 21

⚠ WARNING



Exposed moving parts can cause severe injury.
LOCK OUT POWER AFTER JOGGING MOTOR.

5. Apply anti-seize compound to motor shaft before assembling to gearbox. Install motor assembly (Figure 22, item 2) and secure with four bolts (Figure 22, item 3).

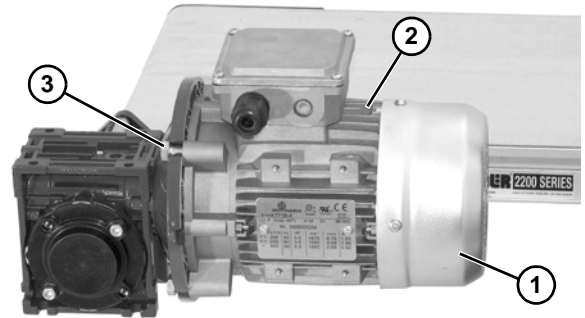


Figure 22

Preventive Maintenance and Adjustment

Required Tools

- Hex key wrenches:
2.5 mm, 3 mm, 5 mm
- Large flat-blade screwdriver
- Adjustable wrench (for hexagon head screws)
- External snap ring pliers
- Torque wrench

Gear Reducer Replacement

⚠ WARNING



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

⚠ WARNING



Exposed moving parts can cause severe injury.
KEEP HANDS CLEAR OF DRIVE WHILE JOGGING MOTOR.

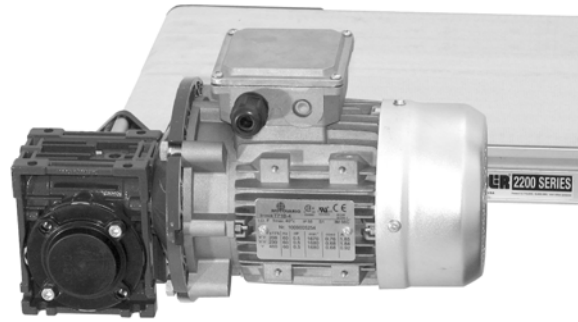
NOTE

The 90° industrial gearhead changed configuration in 2011. See below for configuration details. See Service Parts section to ensure proper replacement parts are installed.



Old Style Gearmotor prior to June 2011

Figure 23



eDrive Gearmotor

Figure 24

NOTE

Coupling has two (2) set screws (Figure 20, item 1).

1. Remove fan guard (Figure 22, item 1) and rotate fan to align set screws (Figure 21, item 1) with access slot (Figure 21, item 2). Loosen set screw. Repeat for second set screw.
2. Remove two (2) screws (Figure 19, item 2). Remove drive assembly (Figure 19, item 1).
3. Remove four (4) screws (Figure 25, item 1) and remove mounting bracket & tube (Figure 25, item 2).

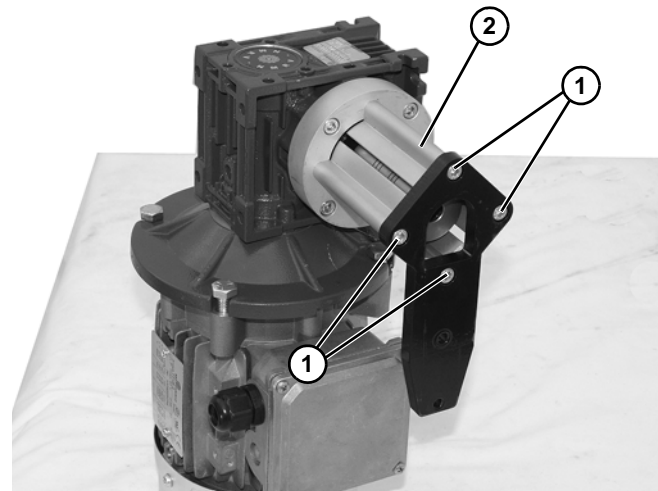


Figure 25

Preventive Maintenance and Adjustment

4. Loosen two (2) set screws (**Figure 26, item 1**) and detach coupling (**Figure 26, item 2**) from gear reducer.

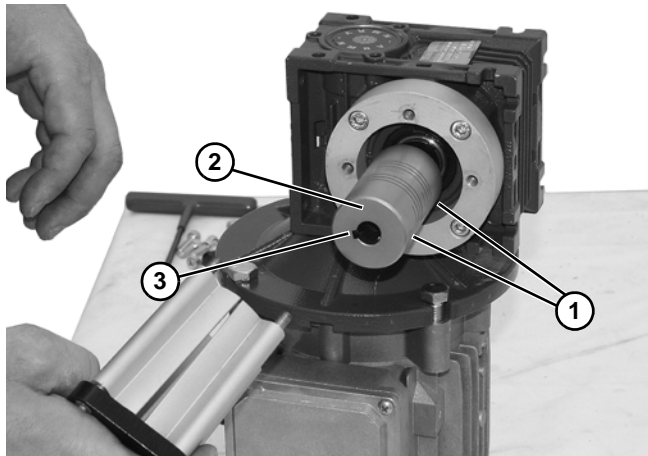


Figure 26

5. Remove gear reducer output shaft key (**Figure 26, item 3**).

NOTE

Step 6 and (Figure 27, item 2) is required for standard load VFD gearmotors only.

6. Loosen four (4) socket head screws (**Figure 27, item 1**) and detach spacer (**Figure 27, item 2**) from gear reducer (**Figure 27, item 3**).

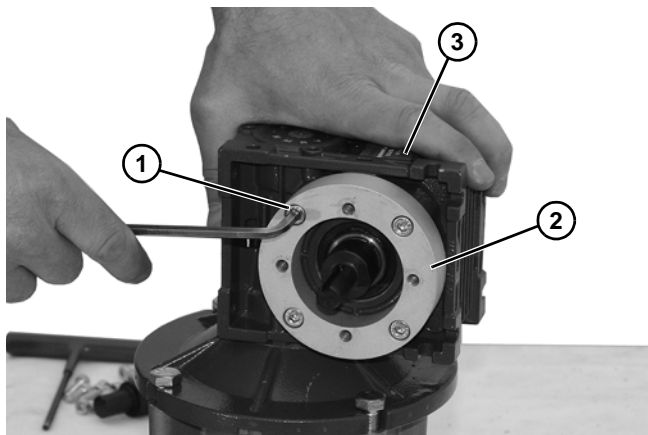


Figure 27

7. Remove four screws (**Figure 28, item 1**). Detach motor (**Figure 28, item 2**) from gear reducer (**Figure 28, item 3**). Retain shaft key (**Figure 28, item 4**).

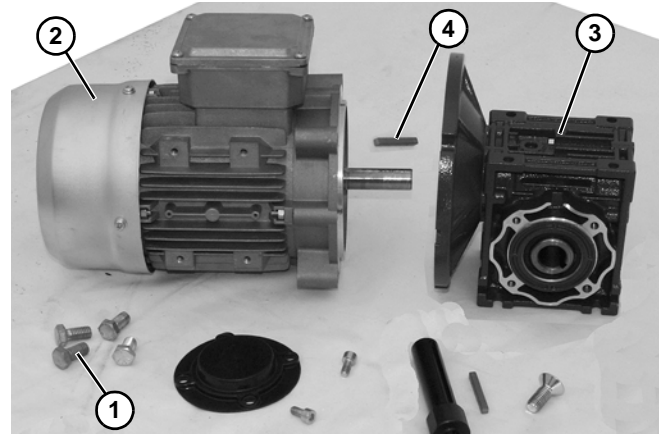


Figure 28

8. Remove two (2) screws (**Figure 29, item 1**) and detach output shaft cover (**Figure 29, item 2**).

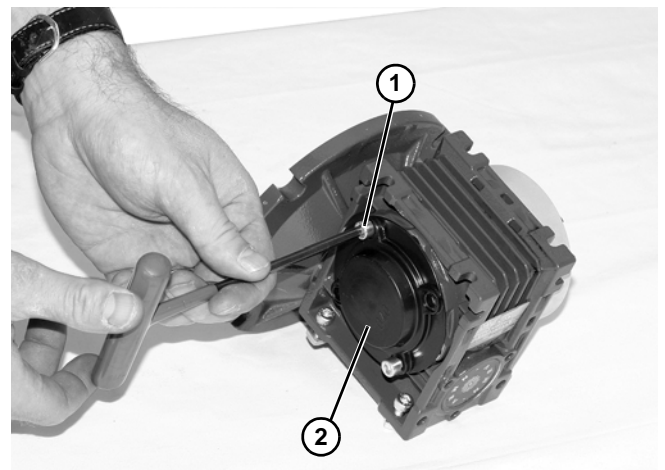


Figure 29

9. Remove driveshaft:

Preventive Maintenance and Adjustment

NOTE

Follow proper procedure below depending upon old or new style gearmotor assembly.

For eDrive style gearmotor

1. Loosen driveshaft bolt (Figure 30, item 1).

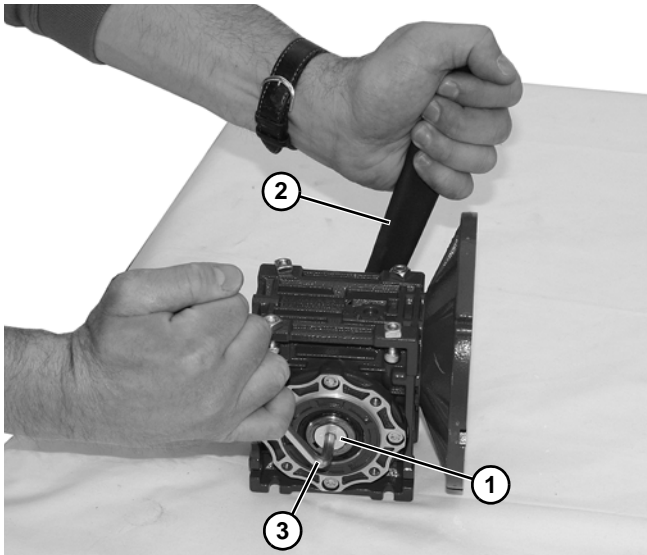


Figure 30

2. Hold the driveshaft with a wrench (Figure 30, item 2) as shown to keep shaft from turning, while removing screw with hex wrench (Figure 30, item 3).
3. Remove driveshaft (Figure 31, item 1) and key (Figure 31, item 2).

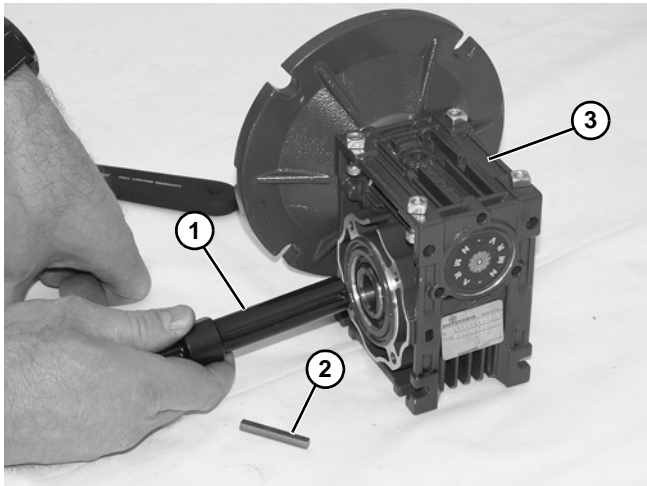


Figure 31

4. Replace gear reducer (Figure 31, item 3).

5. Apply anti-seize (Figure 32, item 1) to shaft.

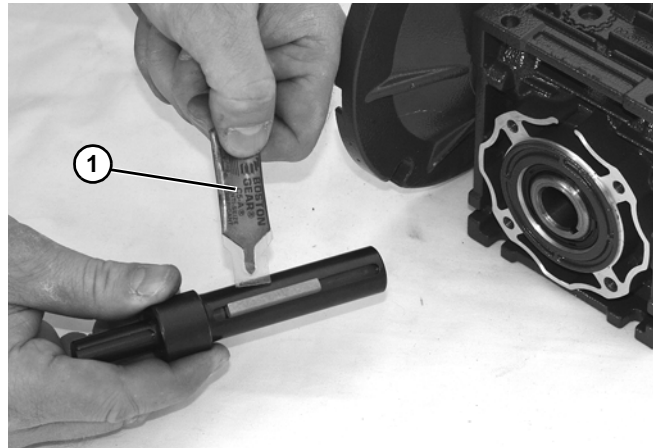


Figure 32

6. Replace the original shaft components into new gear reducer (see Figure 31).

IMPORTANT

Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.

7. Hold the driveshaft with a wrench (Figure 30, item 2) as shown to keep shaft from turning, while installing screw with hex wrench (Figure 30, item 3). Tighten screw to 100 in-lb (11.5 Nm) for 42CZ or 350 in-lb (39.5 Nm) for 56C, 63B5 and 71B5.
8. Apply anti-seize to motor shaft before assembling to gearbox. With key (Figure 28, item 2) in keyway, slide motor (Figure 28, item 2) and gear reducer (Figure 28, item 3) together. Install screws (Figure 28, item 1) and tighten.
9. Install spacer (Figure 27, item 2) onto gear reducer (Figure 27, item 3) with four (4) socket head screws (Figure 27, item 1).
10. Attach coupling (Figure 26, item 2) to gear reducer shaft. Tighten two set screws (Figure 26, item 1) to 32 in-lb (3.7 Nm).
11. Attach mounting bracket & tube (Figure 25, item 2) to gearmotor. Tighten screws (Figure 25, item 1) to 103 in-lb (12 Nm).
12. Complete installation steps:
 - See “4100 and 2100 Flat Belt Conveyors” section on page 10.
 - See “6200 2200, MPB and 2100 Cleated Belt Conveyors” section on page 12.

Preventive Maintenance and Adjustment

For old style gearmotor prior to June 2011

1. Loosen six (6) set screws (**Figure 33, item 1**). Remove drive shaft (**Figure 33, item 2**) and key (**Figure 33, item 3**).

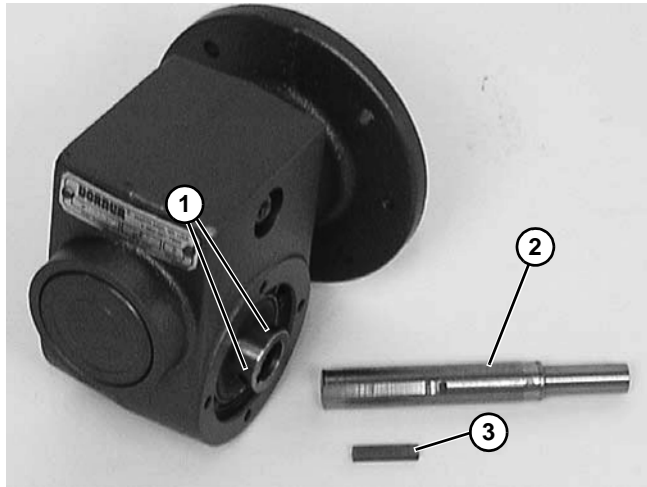


Figure 33

2. Apply anti-seize (**Figure 34, item 1**) to shaft.

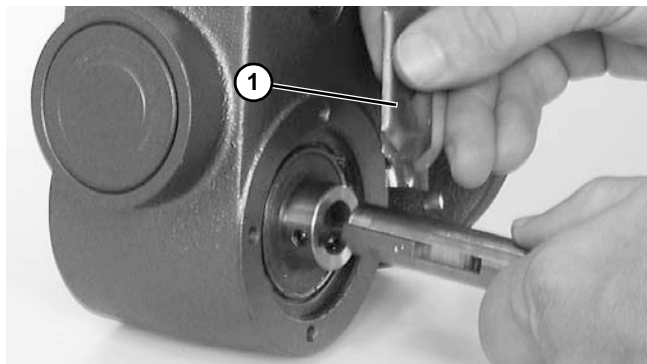


Figure 34

3. Replace the original shaft components into new gear reducer (**Figure 33**).

IMPORTANT


Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.


4. Apply anti-seize to motor shaft before assembling to gearbox. With key (**Figure 28, item 4**) in keyway, slide motor (**Figure 28, item 2**) and gear reducer (**Figure 28, item 3**) together. Install screws (**Figure 28, item 1**) and tighten.
5. Install spacer (**Figure 27, item 2**) onto gear reducer (**Figure 27, item 3**) with four (4) socket head screws (**Figure 27, item 1**).

6. With output shaft key (**Figure 26, item 3**) in keyway, attach coupling (**Figure 26, item 2**) to gear reducer shaft. Tighten two set screws (**Figure 26, item 1**) to 32 in-lb (3.7 Nm).
7. Attach mounting bracket & tube (**Figure 25, item 2**) to gearmotor. Tighten screws (**Figure 25, item 1**) to 103 in-lb (12 Nm).
8. Complete installation steps:
 - See “4100 and 2100 Flat Belt Conveyors” section on page 10.
 - See “6200 2200, MPB and 2100 Cleated Belt Conveyors” section on page 12.

Preventive Maintenance and Adjustment

Motor Replacement

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

| |
|--|
| ⚠ DANGER |
|  |
| Hazardous voltage will cause severe injury or death. LOCKOUT POWER BEFORE before wiring. |

1. For single phase motor, unplug power cord from outlet.
2. For three phase motor:
 - a. Loosen terminal box screws (Figure 35, item 1) and remove cover (Figure 35, item 2).

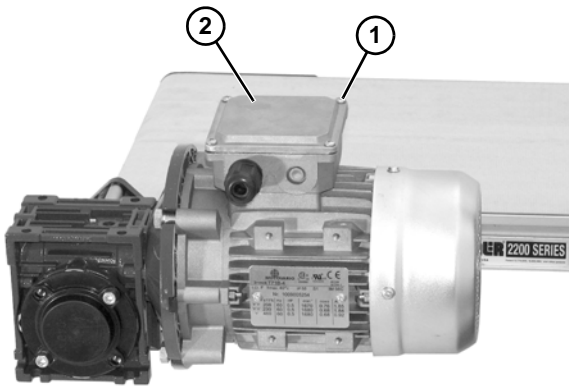


Figure 35

- b. Record wire colors connecting to wires 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 36, item 1).

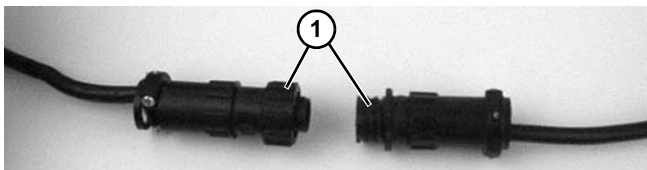


Figure 36

4. Remove four screws (Figure 37, item 1). Detach motor (Figure 37, item 2) from gear reducer (Figure 37, item 3). Retain motor output shaft key (Figure 37, item 4).

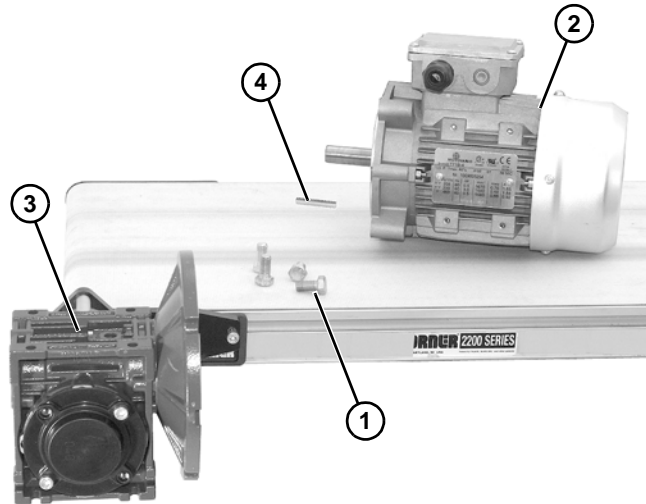


Figure 37

IMPORTANT

Be extremely careful when coupling motor to gear reducer. Avoid misalignment and forcing the connection causing possible permanent gear reducer seal damage.

5. Apply anti-seize to motor shaft before assembling to gearbox. With key (Figure 38, item 1) in keyway, slide motor and gear reducer together. Install screws (Figure 37, item 1) and tighten.

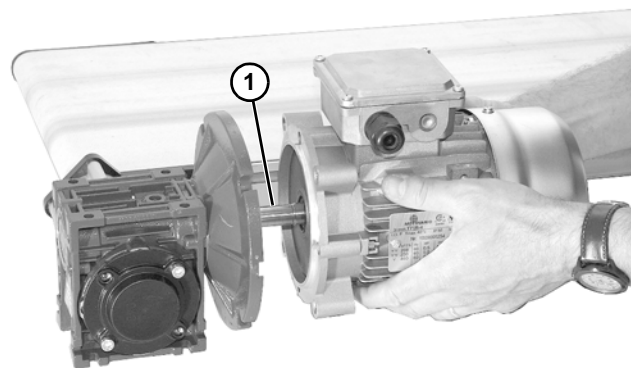



Figure 38

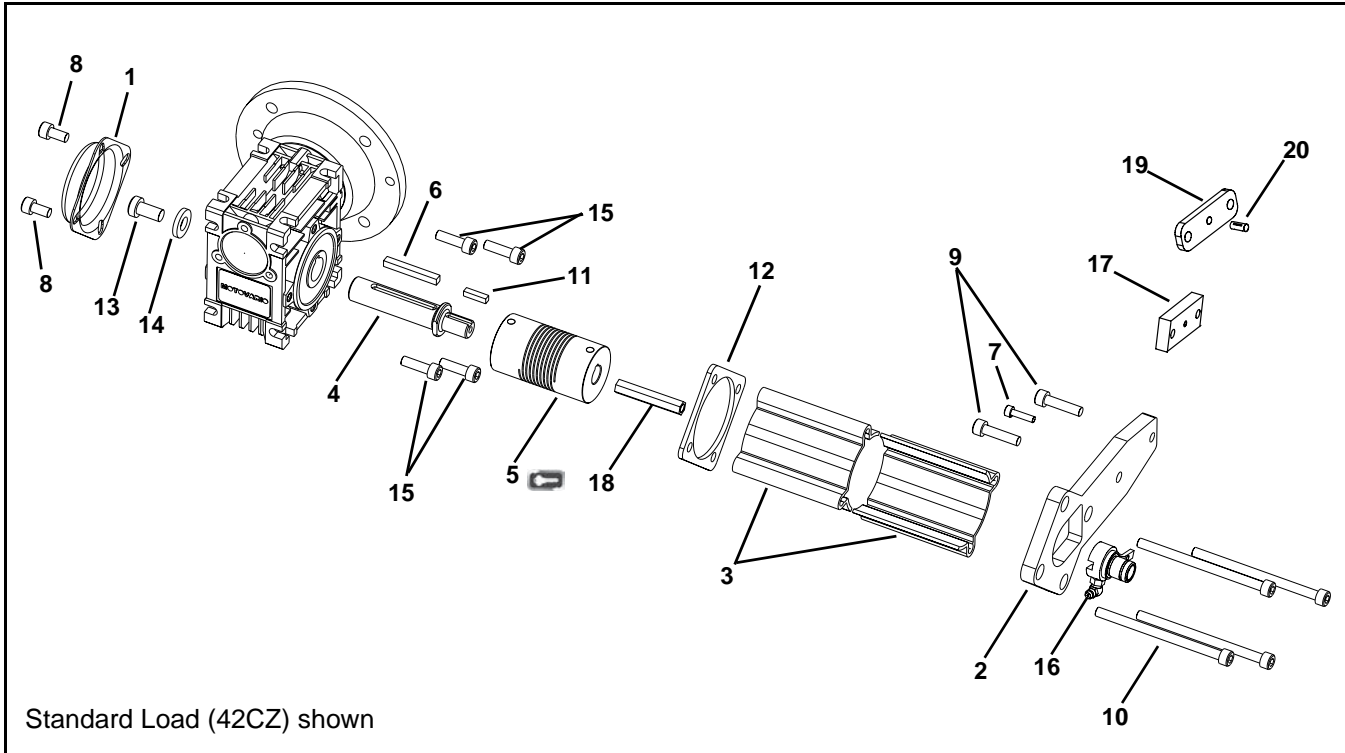
6. Replace wiring:
 - For a single phase motor, reverse step 1 on page 18.
 - For a three phase motor, reverse step 2, on page 18.
 - For a DC variable speed motor, reverse step 3 on page 18.

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 Drive Package for 90° Gearmotors



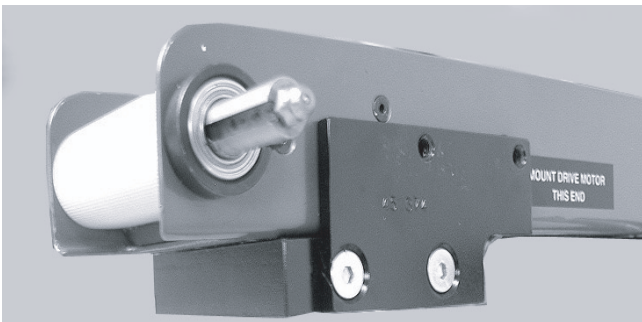
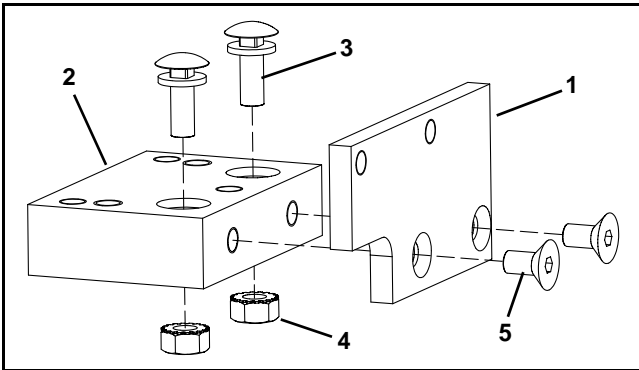
Service Parts

| Item | Part Number | Description |
|------|-------------|--|
| 1 | 807-2059 | Drive-Bearing Shaft Cover (for E-Drive 42CZ C Face Gearmotors) |
| | 807-2016 | Drive-Bearing Shaft Cover (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors) |
| | 300139 | Drive-Bearing Shaft Cover (for Old Style Gearmotors, Prior to June 2011) |
| 2 | 242525 | Side Drive Plate (2200 & MPB Series) |
| | 450266M | Side Drive Plate (2100, 4100 & 6200 Series) |
| 3 | 400028 | Side Drive Spacer Guard |
| | 450475 | Side Drive Spacer Guard (for Old Style Gearmotors, Prior to June 2011) |
| 4 | 202273 | Output Shaft (for E-Drive 42CZ C Face Gearmotors) |
| | 350120 | Output Shaft (for E-Drive 56 C Face Gearmotors) |
| | 350135 | Output Shaft (for E-Drive IEC 63B5 and IEC 71B5 Gearmotors) |
| | 450444M | Output Shaft (for Old Style Gearmotors, Prior to June 2011) |
| 5 | 807-995 | Flex Coupling |
| | 807-996 | Flex Coupling (for 2100 & 4100 Series) |
| 6 | 912-084 | Square Key, 0.188 x 1.50 |
| | 980636M | Square Key, 6 mm x 36 mm (for E-Drive IEC 63B5 and IEC 71B5 Gearmotors) |
| 7 | 920416M | Socket Head Screw, M4-.70 x 16 mm (2100 & 4100 Series) |
| 8 | 920612M | Socket Head Screw, M6-1.00 x 12 mm |
| 9 | 920625M | Socket Head Screw, M6-1.00 x 25 mm |
| | 920630M | Socket Head Screw, M6-1.00 x 14 mm (4100 Series 1" - 2" (25 mm -52 mm) Wide Conveyors) |
| | 242525M | Socket Head Screw, M6-1.00 x 30 mm (6200 Series) |
| | 920635M | Socket Head Screw, M6-1.00 x 35 mm (2100 Series) |
| 10 | 920690M | Socket Head Screw, M6-1.00 x 90 mm |
| 11 | 980416M | Square Key, 4 mm x 16 mm |
| 12 | 400026 | Spacer Ring (for E-Drive 42CZ C Face Gearmotors) |
| | 350115 | Adapter (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors) |
| 13 | 920893M | Low Head Cap Screw, M8-1.25 x 16 mm (for E-Drive 42CZ C Face Gearmotors) |
| | 931020MSS | Flat Head Screw M10-1.50 x 20 mm (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors) |
| 14 | 605280P | Washer |
| 15 | 920620M | Socket Head Screw, M6-1.00 x 20 mm (for E-Drive 56 C Face, IEC 63B5 and IEC 71B5 Gearmotors) |
| 16 | 618898 | Retaining Sleeve 3" - 12" (76 mm - 305 mm) Wide (4100 Series) |
| | 200399M | Retaining Sleeve (2100 Series Flat Belt Conveyors) |
| | 200223M | Retaining Sleeve (2100 Series Cleated Belt Conveyors) |

| Item | Part Number | Description |
|--------|--|--|
| 17 | 697863M | Spacer Plate (for 4100 Series) |
| | 203975M | Spacer Plate (for 2100 Series) |
| 18 | 616301 | Outboard Drive Shaft 1" (25 mm) Wide (4100 Series) |
| | 616302 | Outboard Drive Shaft 2" (51 mm) Wide (4100 Series) |
| | 616303 | Outboard Drive Shaft 3" (76 mm) Wide (4100 Series) |
| | 616304 | Outboard Drive Shaft 4" (102 mm) Wide (4100 Series) |
| | 616305 | Outboard Drive Shaft 5" (127 mm) Wide (4100 Series) |
| | 616306 | Outboard Drive Shaft 6" (152 mm) Wide (4100 Series) |
| | 616308 | Outboard Drive Shaft 8" (203 mm) Wide (4100 Series) |
| | 616310 | Outboard Drive Shaft 10" (254 mm) Wide (4100 Series) |
| | 616312 | Outboard Drive Shaft 12" (305 mm) Wide (4100 Series) |
| | 203968 | Outboard Drive Shaft 18" (457 mm) Wide (2100 Series) |
| | 203971 | Outboard Drive Shaft 21" (533 mm) Wide (2100 Series) |
| 203974 | Outboard Drive Shaft 24" (610 mm) Wide (2100 Series) | |
| 19 | 450027M | Spacer Plate (6200 Series) |
| 20 | 807-952 | Groove Pin (6200 Series) |

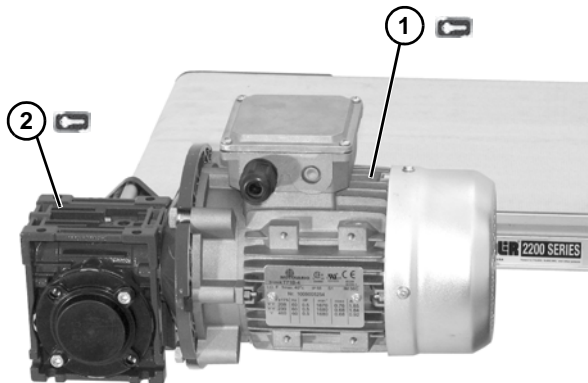
Service Parts

4100 Series Adapter Components

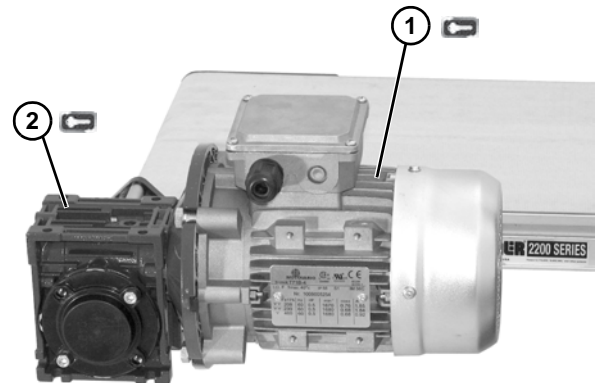


| Item | Part Number | Description |
|------|-------------|----------------------------|
| 1 | 450374 | Drive Adaptor Plate |
| 2 | 609486 | Mounting Block 1" (25mm) |
| | 609487 | Mounting Block 2" (51mm) |
| | 609488 | Mounting Block 3" (76mm) |
| | 609479 | Mounting Block 4" (102mm) |
| | 609480 | Mounting Block 5" (127mm) |
| | 609481 | Mounting Block 6" (152mm) |
| | 609482 | Mounting Block 7" (178mm) |
| | 609483 | Mounting Block 8" (203mm) |
| | 609484 | Mounting Block 10" (254mm) |
| | 609485 | Mounting Block 12" (305mm) |
| 3 | 613602P | Bolt/Flat Washer Assembly |
| 4 | 910-126 | Hex Nut with Lock Washer |
| 5 | 930612M | Flat Head Screw M6 x 12mm |

U.S. Version Gearmotors



CE Version Gearmotors



| Item | Part Number | Description |
|------|-------------|---|
| 1 | 62MES411FN | Motor, 0.25 Hp (0.19 Kw) 115/230 Volts, 60 Hz, 1-Phase |
| | 62MES423FN | Motor, 0.25 Hp (0.19 Kw) 208-230/460 Volts, 60 Hz, 3-Phase |
| | 62MSD3DEN | Motor, 0.25 Hp (0.19 Kw) 130 Volts DC |
| | 32MS423EI* | Motor, 0.25 Hp (0.19 Kw) 230/460 Volts DC, 60 Hz, 3-Phase Variable Frequency/Indexing |
| 2 | 32M005EL | Gear Reducer, 5:1, 42CZ |
| | 32M010EL | Gear Reducer, 10:1, 42CZ |
| | 32M020EL | Gear Reducer, 20:1, 42CZ |
| | 32M040EL | Gear Reducer, 40:1, 42CZ |
| | 32M060EL | Gear Reducer, 60:1, 42CZ |
| | 32M005ES | Gear Reducer, 5:1, 56C (for motors with part numbers ending with EI or EN only) |
| | 32M010ES | Gear Reducer, 10:1, 56C (for motors with part numbers ending with EI or EN only) |
| | 32M020ES | Gear Reducer, 20:1, 56C (for motors with part numbers ending with EI or EN only) |
| | 32M040ES | Gear Reducer, 40:1, 56C (for motors with part numbers ending with EI or EN only) |
| | 32M060ES | Gear Reducer, 60:1, 56C (for motors with part numbers ending with EI or EN only) |

*This motor is rated at 1/2 hp when running as a fixed speed motor at 60 hz or when used as an indexing motor. When used as a variable speed motor, the HP rating is reduced to 1/4 hp.

| Item | Part Number | Description |
|------|-------------|---|
| 1 | 826-281 | Motor, 0.19 Kw 230 Volts, 1400 RPM 50 Hz, 1-Phase |
| | 826-284 | Motor, 0.19 Kw 230/400 Volts, 1400 RPM 50 Hz, 3-Phase |
| 2 | 62Z005ES | Gear Reducer, 5:1, 63 B5 |
| | 62Z010ES | Gear Reducer, 10:1, 63 B5 |
| | 62Z020ES | Gear Reducer, 20:1, 63 B5 |
| | 62Z040ES | Gear Reducer, 40:1, 63 B5 |
| | 62Z060ES | Gear Reducer, 60:1, 63 B5 |

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 (if available, part serial number).

A representative will discuss action to be taken on the returned items and provide a Returned Goods Authorization (RMA) number for reference. RMA will automatically close 30 days after being issued. To get credit, items must be new and undamaged. There will be a return charge on all items returned for credit, where Dorner was not at fault. It is the customer's responsibility to prevent damage during return shipping. Damaged or modified items will not be accepted. The customer is responsible for return freight.

Conveyors and conveyor accessories

| | |
|--|----------------------|
| Standard catalog conveyors | 30% |
| MPB, 7200, 7300 Series, cleated and specialty belt | 50% |
| AquaGard & AquaPruf Series conveyors | non-returnable items |
| Engineered to order products | case by case |
| Drives and accessories | 30% |
| Sanitary stand supports | non-returnable items |

Parts

| | |
|--|----------------------|
| Standard stock parts | 30% |
| Plastic chain, 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 Customer Service Team 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. 2011

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