



3200 & 5200 Series Bottom Mount 90° Drive Package for Light & Standard Load 60 Hz Gearmotors

Installation, Maintenance & Parts Manual



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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 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 | Cover |
| 3 | Driven Pulley |
| 4 | Timing Belt |
| 5 | Drive Pulley |
| 6 | Gearmotor |
| 7 | Timing Belt Tensioner |
| 8 | Mounting Bracket |

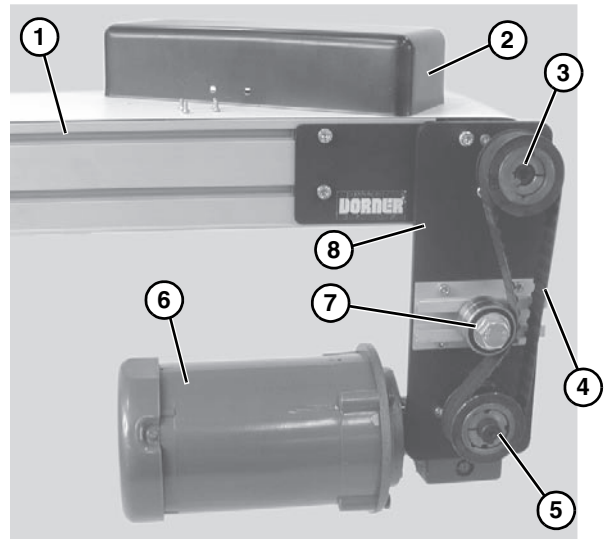


Figure 1

Specifications

Gearmotor Mounting Package Models:

Example:

32 M B H S A - 16 16
 — Driven Pulley (see Table 2, 3 & 4)
 — Drive Pulley (see Table 2, 3 & 4)
 — Belt Type (- = flat belt, A through J = cleated belt)
 — Mount Position = A, B, C or D
 (see detail to the right)
 — Gearmotor Type: S = Standard Load
 L = Light Load
 — Output Shaft Type = 90° Industrial
 — Mount Style = Bottom Mount
 — Language Code = U.S. English
 — Product Series: 32 = 3200 Series
 52 = 5200 Series

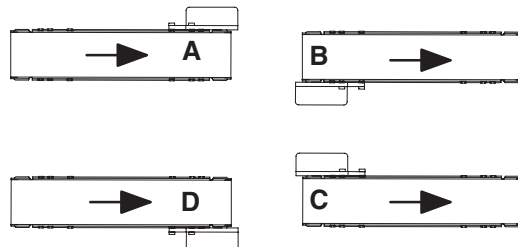


Table 1: Gearmotor Specifications

| Item | Light Load Gearmotor | | | Standard Load Gearmotor | | | |
|-------------------------|------------------------------|-------------------|-------------------|------------------------------|-------------------|--------------------|-------------------|
| | Single-Phase | Three Phase | DC Variable Speed | Single-Phase | Three Phase | VFD Variable Speed | DC Variable Speed |
| Output Power | 0.25 hp (0.19 kw) | | | 0.5 hp (0.37 kw) | | | |
| Input Voltage | 115 VAC | 208 – 230/460 VAC | 130VDC | 115 VAC | 208 – 230/460 VAC | 230 VAC | 90VDC |
| Input Frequency | 60Hz | | N/A | 60Hz | | 10 – 60Hz | N/A |
| Input Current (Amperes) | 5.0 | 1.2/0.6 | 2.2 | 7.4 | 2.1 – 2/1 | 1.6 | 5.0 |
| Gearmotor Ratios | 5:1, 10:1, 20:1, 40:1, 60:1 | | | 5:1, 10:1, 20:1, 40:1, 60:1 | | | |
| Frame Size | NEMA 42CZ | | | NEMA 56C | | | |
| Motor Type | Totally enclosed, Fan cooled | | | Totally enclosed, Fan cooled | | | |

3200 & 5200 Series Bottom Mount 90° Drive Package for Light & Standard Load 60 Hz Gearmotors

Specifications

Table 2: Belt Speeds for Fixed Speed 90° 60 Hz Gearmotors

| Light Load Gearmotors | | | | Standard Load Gearmotors | | | | Belt Speed | | Drive Pulley | Driven Pulley |
|-----------------------|-----|-------|------|--------------------------|-----|-------|------|------------|-------|--------------|---------------|
| Part Number | RPM | In-lb | N-m | Part Number | RPM | In-lb | N-m | Ft/min | M/min | | |
| 32M060HL4(vp)FN | 29 | 226 | 25.5 | 32M060HS4(vp)FN | 29 | 226 | 25.5 | 23 | 7.0 | 16 | 16 |
| 32M040HL4(vp)FN | 43 | 237 | 26.8 | 32M040HS4(vp)FN | 43 | 247 | 27.9 | 34 | 10.4 | 16 | 16 |
| 32M040HL4(vp)FN | 43 | 237 | 26.8 | 32M040HS4(vp)FN | 43 | 247 | 27.9 | 52 | 15.8 | 24 | 16 |
| 32M020HL4(vp)FN | 86 | 142 | 16 | 32M020HS4(vp)FN | 86 | 248 | 27.9 | 69 | 21.0 | 16 | 16 |
| 32M020HL4(vp)FN | 86 | 142 | 16 | 32M020HS4(vp)FN | 86 | 248 | 27.9 | 103 | 31.4 | 24 | 16 |
| 32M010HL4(vp)FN | 173 | 78 | 8.8 | 32M010HS4(vp)FN | 173 | 156 | 17.6 | 137 | 41.8 | 16 | 16 |
| 32M010HL4(vp)FN | 173 | 78 | 8.8 | 32M010HS4(vp)FN | 173 | 156 | 17.6 | 172 | 52.4 | 20 | 16 |
| 32M010HL4(vp)FN | 173 | 78 | 8.8 | 32M010HS4(vp)FN | 173 | 156 | 17.6 | 206 | 62.8 | 24 | 16 |
| N/A | N/A | N/A | N/A | 32M005HS4(vp)FN | 345 | 81 | 9.1 | 275 | 83.8 | 16 | 16 |
| N/A | N/A | N/A | N/A | 32M005HS4(vp)FN | 345 | 81 | 9.1 | 343 | 104.5 | 20 | 16 |
| N/A | N/A | N/A | N/A | 32M005HS4(vp)FN | 345 | 81 | 9.1 | 412 | 125.6 | 24 | 16 |

(vp) = voltage and phase

23 = 208 – 230/460 V, 3-phase

11 = 115 V, 1-phase

Table 3: Belt Speeds for Variable Speed 90° DC Gearmotors

| Light Load Gearmotors | | | | Standard Load Gearmotors | | | | Belt Speed | | Drive Pulley | Driven Pulley |
|-----------------------|-----|-------|------|--------------------------|-----|-------|------|------------|----------|--------------|---------------|
| Part Number | RPM | In-lb | N-m | Part Number | RPM | In-lb | N-m | Ft/min | M/min | | |
| 32M060HLD3DEN | 42 | 198 | 22.4 | 32M060HSD9DEN | 42 | 198 | 22.4 | 4.0 – 33 | 1.2 – 10 | 16 | 16 |
| 32M040HLD3DEN | 63 | 163 | 18.4 | 32M040HSD9DEN | 63 | 215 | 24.3 | 6.0 – 50 | 1.8 – 15 | 16 | 16 |
| 32M040HLD3DEN | 63 | 163 | 18.4 | 32M040HSD9DEN | 63 | 215 | 24.3 | 9.0 – 75 | 2.7 – 23 | 24 | 16 |
| 32M020HLD3DEN | 125 | 98 | 11.1 | 32M020HSD9DEN | 125 | 196 | 22.1 | 12 – 100 | 3.6 – 30 | 16 | 16 |
| 32M020HLD3DEN | 125 | 98 | 11.1 | 32M020HSD9DEN | 125 | 196 | 22.1 | 18 – 150 | 5.5 – 45 | 24 | 16 |
| 32M010HLD3DEN | 250 | 54 | 6.1 | 32M010HSD9DEN | 250 | 108 | 12.2 | 24 – 200 | 7.3 – 61 | 16 | 16 |
| 32M010HLD3DEN | 250 | 54 | 6.1 | 32M010HSD9DEN | 250 | 108 | 12.2 | 30 – 250 | 9.1 – 76 | 20 | 16 |
| 32M010HLD3DEN | 250 | 54 | 6.1 | 32M010HSD9DEN | 250 | 108 | 12.2 | 36 – 300 | 11 – 92 | 24 | 16 |

Table 4: Belt Speeds for Fixed Speed 90° VFD Gearmotors

| Standard Load Gearmotors | | | | Belt Speed | | Drive Pulley | Driven Pulley |
|--------------------------|-----|-------|------|--------------|--------------|--------------|---------------|
| Part Number | RPM | In-lb | N-m | Ft/min | M/min | | |
| 32M060HS423EN | 29 | 226 | 25.5 | 2.3 – 22.9 | 0.7 – 7.0 | 16 | 16 |
| 32M040HS423EN | 43 | 247 | 27.9 | 3.4 – 34.3 | 1.0 – 10.5 | 16 | 16 |
| 32M040HS423EN | 43 | 247 | 27.9 | 5.1 – 51.5 | 1.6 – 15.7 | 24 | 16 |
| 32M020HS423EN | 86 | 248 | 27.9 | 6.9 – 68.6 | 2.1 – 20.9 | 16 | 16 |
| 32M020HS423EN | 86 | 248 | 27.9 | 10.3 – 103.0 | 3.1 – 31.4 | 24 | 16 |
| 32M010HS423EN | 173 | 156 | 17.6 | 13.7 – 137.3 | 4.2 – 41.9 | 16 | 16 |
| 32M010HS423EN | 173 | 156 | 17.6 | 17.2 – 171.6 | 5.2 – 52.3 | 20 | 16 |
| 32M010HS423EN | 173 | 156 | 17.6 | 20.6 – 205.9 | 6.3 – 62.8 | 24 | 16 |
| 32M005HS423EN | 345 | 81 | 9.1 | 27.5 – 274.6 | 8.4 – 83.7 | 16 | 16 |
| 32M005HS423EN | 345 | 81 | 9.1 | 34.3 – 343.2 | 10.5 – 104.6 | 20 | 16 |
| 32M005HS423EN | 345 | 81 | 9.1 | 41.2 – 411.9 | 12.6 – 125.6 | 24 | 16 |

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.

⚠ WARNING



For Cleated Belt Conveyors, Gearmotors must be mounted as shown in Figure 2. Failure to do so creates pinch points which can cause severe injury.

NOTE

Gearmotor position on Flat Belt conveyor shown below left, **Figure 2**. Gearmotor position on Cleated Belt conveyor shown below right, **Figure 2**.

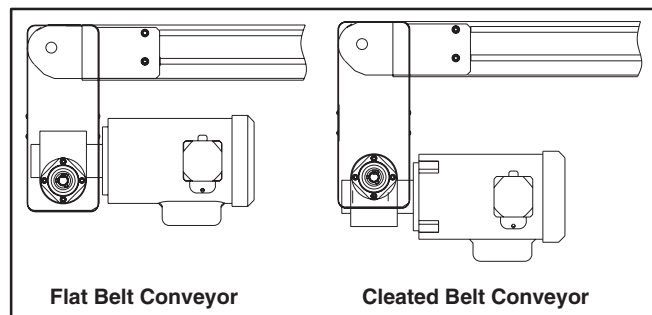


Figure 2

Installation Component List:

- | | |
|---|----------------------------|
| 1 | Bottom Mount Assembly |
| 2 | Drive Pulley |
| 3 | Cover |
| 4 | M4 Socket Head Screws (4x) |
| 5 | Driven Pulley |
| 6 | Key |
| 7 | M6 Socket Head Screws (4x) |
| 8 | M8 Socket Head Screws (2x) |
| 9 | Timing Belt |

1. Typical components (Figure 3).

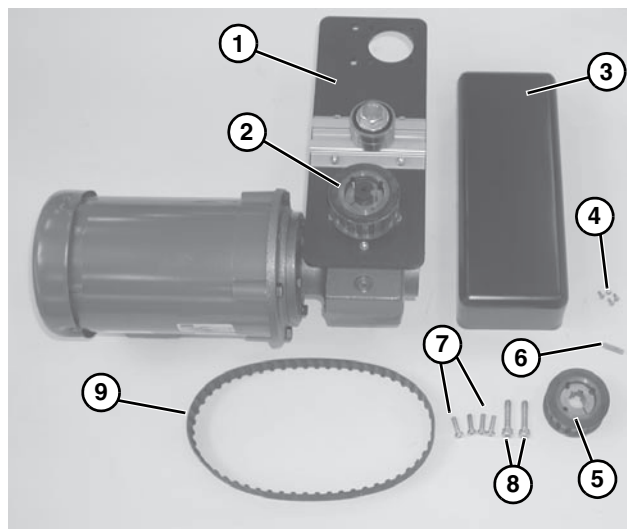


Figure 3

NOTE

Cleated belt mounting package shown, flat belt mounting package similar.

NOTE

Gearmotor may be operated in positions 1, 3 or 4 (Figure 4).

Installation

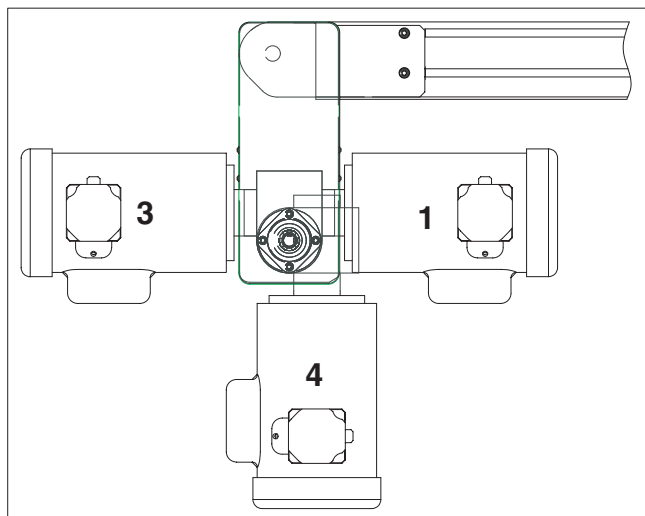


Figure 4

2. If required, change gearmotor position by removing four (4) screws (**Figure 5, item 1**). Rotate gearmotor to other position and replace screws (**Figure 5, item 1**). Tighten to 110 in-lb (12 Nm).

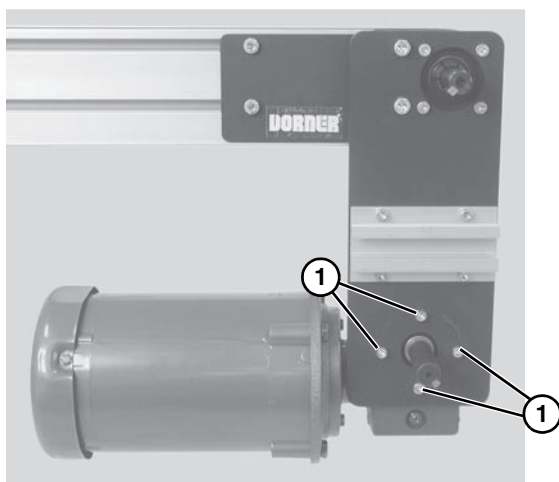


Figure 5

3. Locate drive output shaft (**Figure 6, item 1**). Remove two (2) M8 screws (**Figure 6, item 2**) and four (4) M6 screws (**Figure 6, item 3**) and discard.

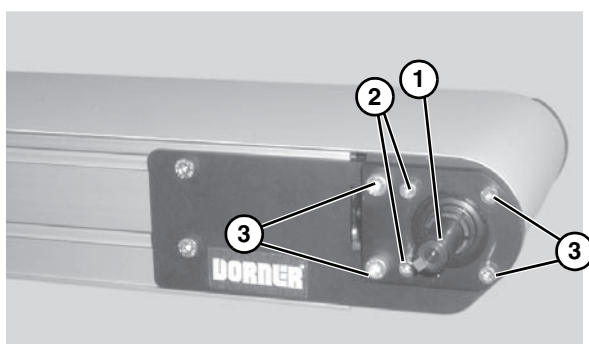


Figure 6

4. Attach mount assembly (**Figure 7, item 1**) with two (2) M8 screws (**Figure 7, item 2**) and four (4) M6 screws (**Figure 7, item 3**). Tighten M6 screws to 146 in-lbs (16.5 N-m) and M8 screws to 288 in-lbs (32.5 N-m).

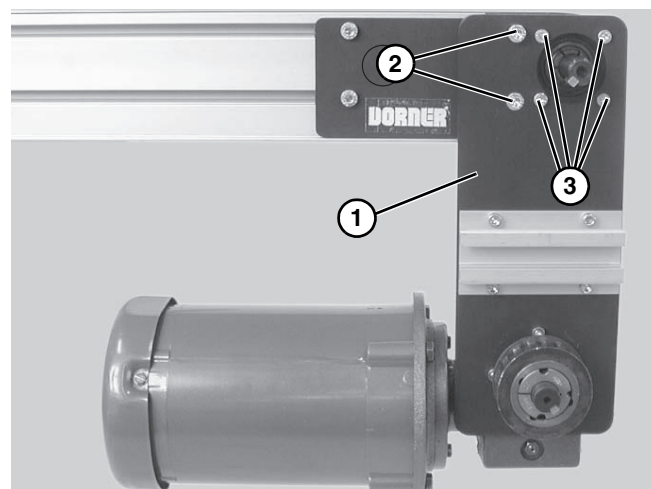


Figure 7

⚠ WARNING



Drive shaft keyway may be sharp.
HANDLE WITH CARE.

5. Install key (**Figure 8, item 1**).

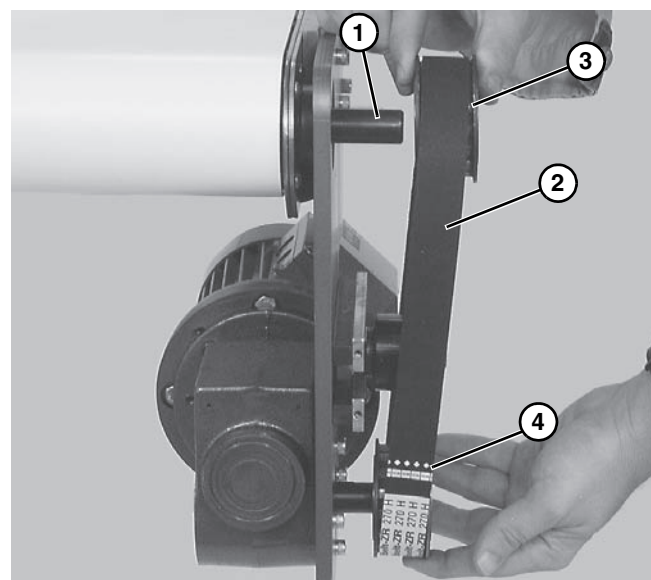


Figure 8

6. Wrap timing belt (**Figure 8, item 2**) around driven pulley (**Figure 8, item 3**) and drive pulley (**Figure 8, item 4**). Install driven pulley onto conveyor shaft.

Installation

7. Using a straight edge (**Figure 9, item 1**), align driven pulley (**Figure 9, item 1**) with drive pulley (**Figure 9, item 1**).

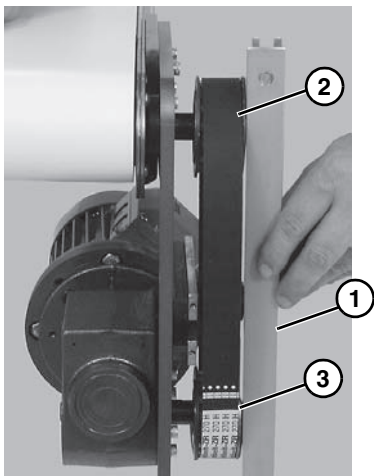


Figure 9

10. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).

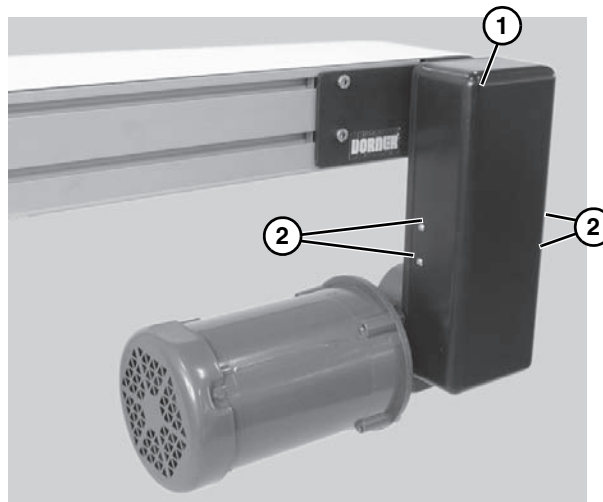


Figure 12

8. Tighten driven pulley taper-lock screws (**Figure 10, item 1**).

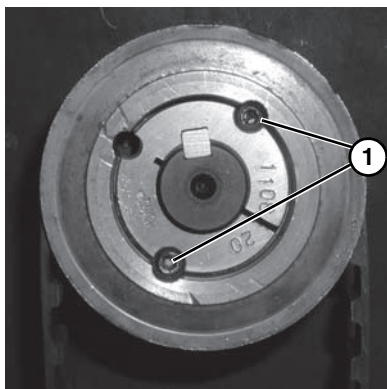


Figure 10

9. Depending on conveyor belt travel (direction A or B), locate timing belt tensioner (**Figure 11, item 1**) as shown. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt mid-point (**Figure 11, item 2**). Tighten tensioner screw to 110 in-lb (12 Nm).

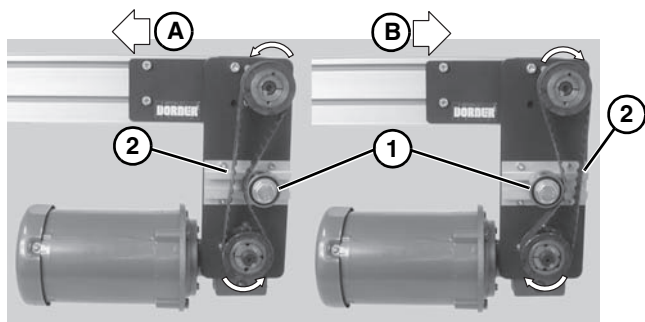



Figure 11

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

Timing Belt Tensioning

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

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen tensioner (**Figure 13, item 1**).

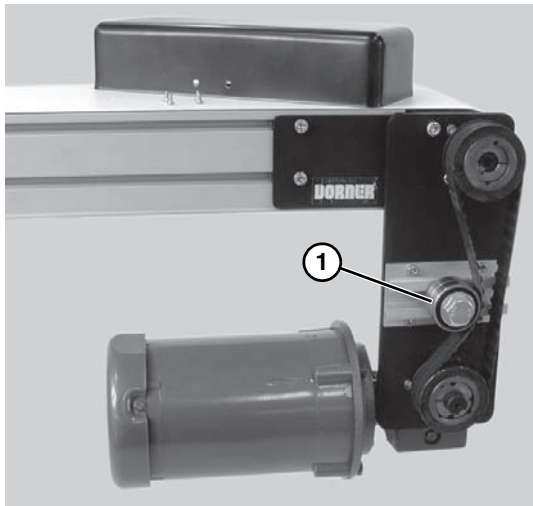



Figure 13

3. Depending on conveyor belt travel (direction A or B), locate timing belt tensioner (**Figure 11, item 1**) as shown. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt midpoint (**Figure 11, item 2**). Tighten tensioner screw to 110 in-lb (12 Nm).
4. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).

Timing Belt Replacement

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

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen tensioner (**Figure 13, item 1**).
3. Remove timing belt (**Figure 14, item 1**).

| NOTE |
|--|
| <i>If timing belt does not slide over pulley flange, loosen driven pulley taper-lock screws (Figure 14, item 2) and remove pulley with belt (Figure 14, item 1). For re-installation, see steps 6 thru 8 on beginning on page 7.</i> |

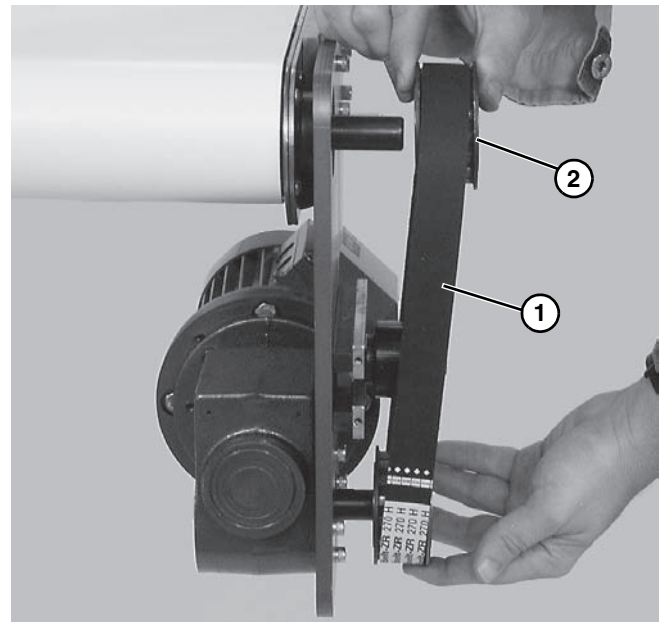


Figure 14

4. Install new timing belt.
5. Depending on conveyor belt travel (direction A or B), locate timing belt tensioner (**Figure 11, item 1**) as shown. Tension timing belt to obtain 1/8" (3 mm) deflection for 6 lb (3 Kg) of force at timing belt midpoint (**Figure 11, item 2**). Tighten tensioner screw to 110 in-lb (12 Nm).
6. Install cover (**Figure 12, item 1**) with four (4) screws (**Figure 12, item 2**). Tighten screws to 35 in-lb (4 Nm).

Preventive Maintenance and Adjustment

Drive or Driven Pulley Replacement

⚠ WARNING



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

1. Complete steps 1 through 3 of “Timing Belt Replacement” section on page 9.
2. Remove taper-lock screws (**Figure 15, item 1**). Insert one (1) of taper lock screws in remaining hole (**Figure 15, item 2**). Tighten screw until pulley is loose. Remove pulley and taper hub assembly.

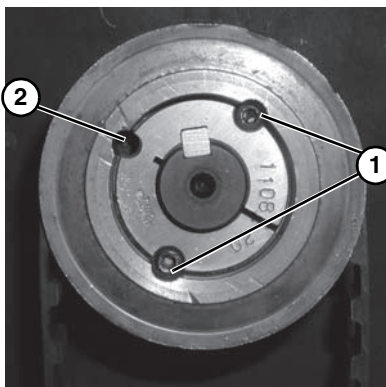


Figure 15

NOTE

*If drive pulley (**Figure 18, item 1**) is replaced, wrap timing belt around drive pulley and complete step 3.*

3. Complete steps 6 through 9 of “Installation” section beginning on page 7.

Gear Reducer Replacement

⚠ WARNING



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

1. Remove four (4) screws (**Figure 12, item 2**) and remove cover (**Figure 12, item 1**).
2. Loosen M10 shaft locking screw (**Figure 16, item 1**).

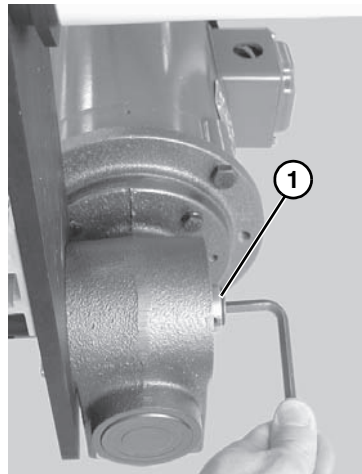


Figure 16

3. Loosen tensioner (**Figure 13, item 1**).
4. Loosen taper-lock screws (**Figure 17, item 1**) and remove drive pulley: Insert one (1) of taper lock screws in remaining hole (**Figure 17, item 2**). Tighten screw until pulley is loose.

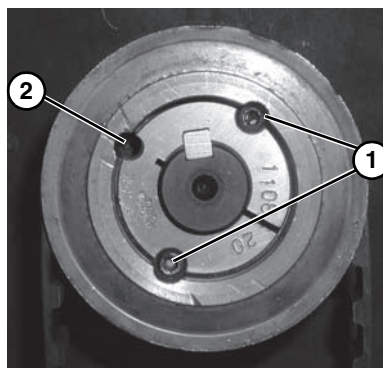


Figure 17

5. Remove pulley (**Figure 18, item 1**), taper hub assembly (**Figure 18, item 2**), and timing belt (**Figure 18, item 3**).

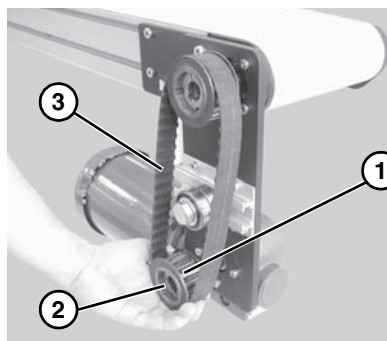


Figure 18

Preventive Maintenance and Adjustment

6. Remove four (4) gear reducer mounting screws (**Figure 19, item 1**). Remove gearmotor.

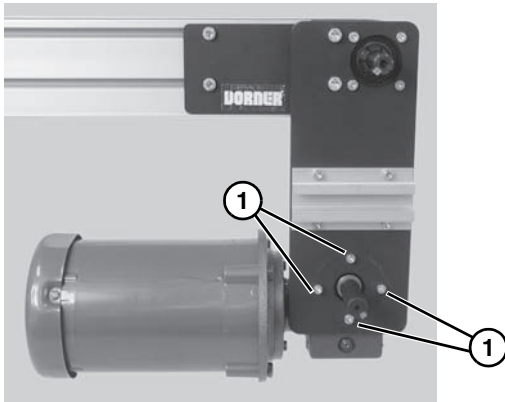


Figure 19

7. Remove four screws (**Figure 20, item 1**). Detach motor (**Figure 20, item 2**) from gear reducer (**Figure 20, item 3**). Retain motor output shaft key (**Figure 20, item 4**).

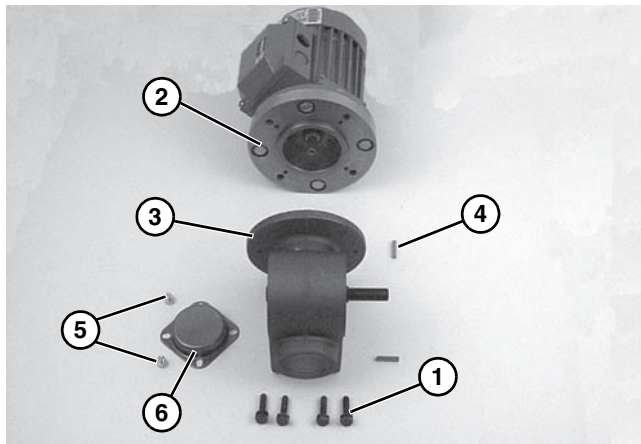


Figure 20

8. Remove two (2) screws (**Figure 20, item 5**) and detach output shaft cover (**Figure 20, item 6**).
9. Remove M10 shaft locking screw (**Figure 21, item 1**), remove gear reducer output shaft (**Figure 21, item 2**) and key (**Figure 21, item 3**).

NOTE

Output shaft (**Figure 21, item 2**) is held in Gear Reducer with a tapered press fit. Removal may require use of an arbor press.

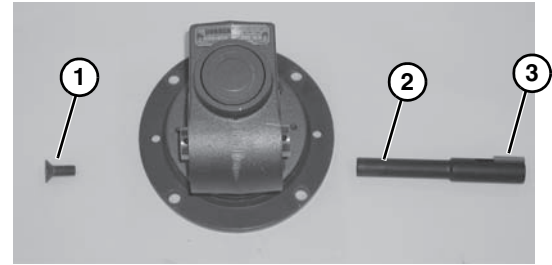


Figure 21

10. Insert the new shaft with key (**Figure 21, item 3**) into new gear reducer. Tighten M10 shaft locking screw (**Figure 21, item 1**) to 300 in-lbs (34 N-m).

IMPORTANT

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

11. With key (**Figure 20, item 4**) in keyway, slide motor (**Figure 20, item 2**) and gear reducer (**Figure 20, item 3**) together. Install screws (**Figure 20, item 1**) and tighten.

NOTE

*Gearmotor position on Flat Belt conveyor shown below left, **Figure 22**. Gearmotor position on Cleated Belt conveyor shown below right, **Figure 22**.*

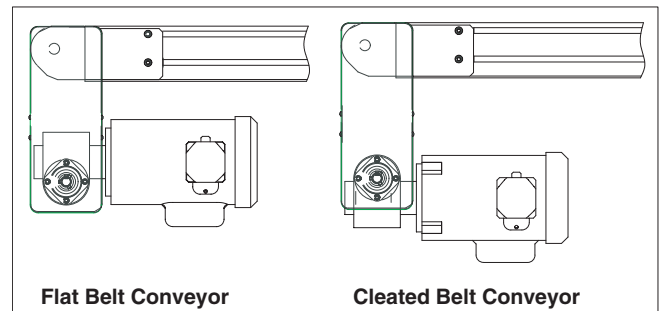


Figure 22

12. Install gearmotor to mounting bracket and tighten screws (**Figure 19, item 1**) to 110 in-lb (12 Nm).

NOTE

*Drive pulley (**Figure 18, item 1**) is removed. Wrap timing belt around drive pulley and complete step 13.*

13. Complete steps 6 through 10 of "Installation" section beginning on page 7.

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.
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 23, item 1) and remove cover (Figure 23, item 2).

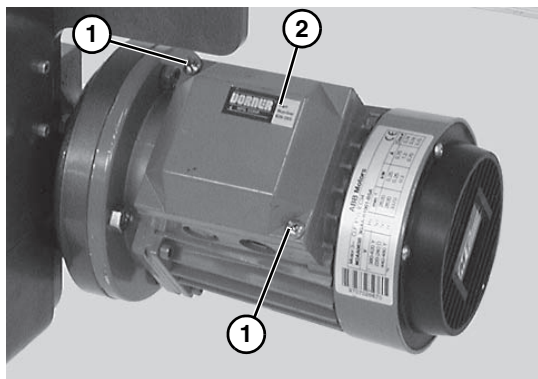


Figure 23

- 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 24, item 1).

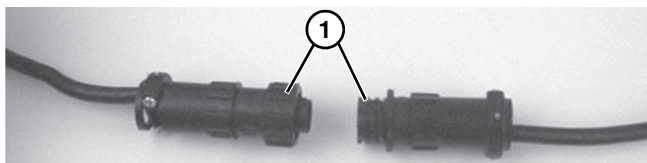


Figure 24

4. Remove four (4) screws (Figure 25, item 1). Detach motor (Figure 25, item 2) from gear reducer (Figure 25, item 3). Retain motor output shaft key (Figure 25, item 4).

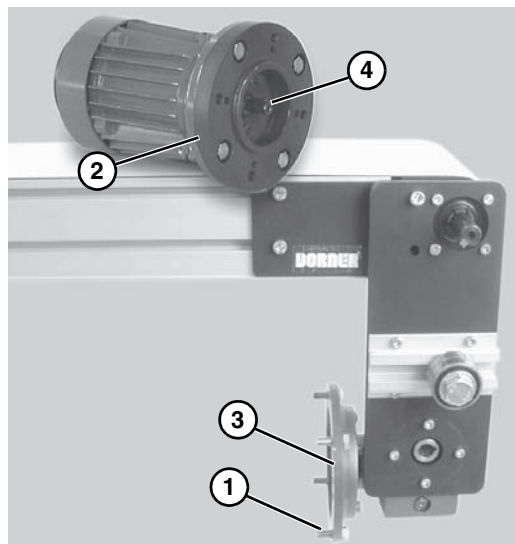


Figure 25

IMPORTANT

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

5. With key (Figure 26, item 1) in keyway, slide motor (Figure 26, item 2) and gear reducer together. Install screws (Figure 26, item 3) and tighten.

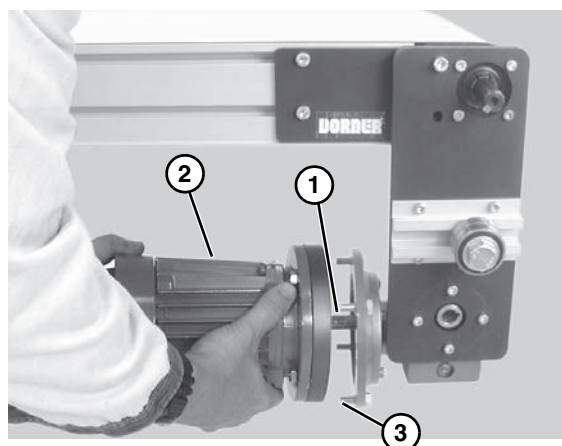



Figure 26

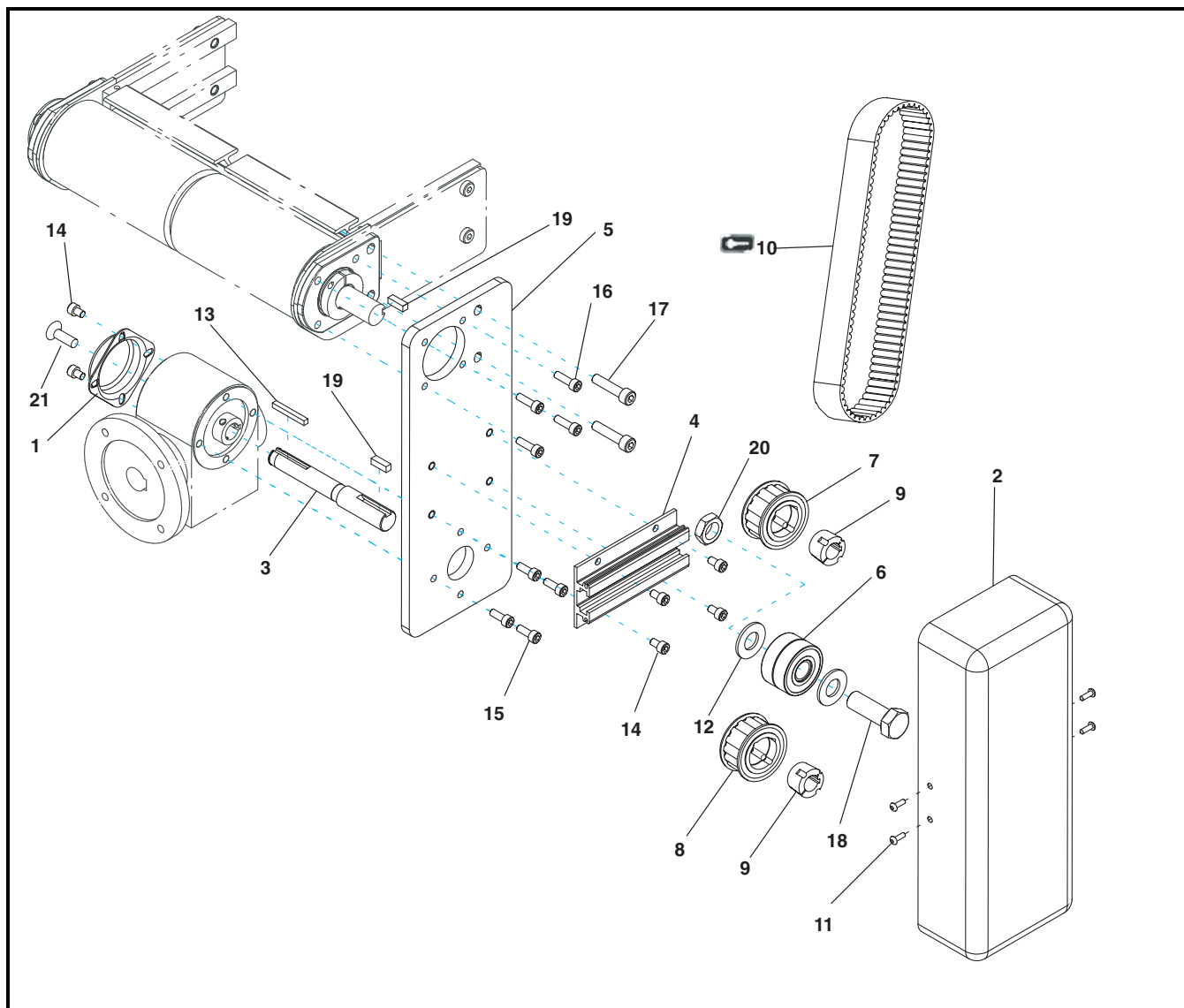
6. Replace wiring:
 - For a single phase motor, reverse step 1 on page 12.
 - For a three phase or VFD variable speed motor, reverse step 2 on page 12.
 - For a DC variable speed motor, reverse step 3 on page 12.

Service Parts

NOTE

For replacement parts other than those shown on this page, 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.

Bottom Mount Drive Package for 90° Industrial Gearmotors




| Item | Part Number | Description |
|------|-------------|--|
| 1 | 300139 | Bearing Shaft Cover |
| 2 | 300871 | Drive Cover |
| 3 | 301146 | Grove Gearhead Output Shaft |
| 4 | 301076 | Drive Tensioner Slide |
| 5 | 301151 | Mounting Plate |
| 6 | 301153 | Tensioner Bearing Assy |
| 7 | 811-133 | Driven Pulley, 14 Tooth, Taper Lock TL1108 |
| | 811-126 | Driven Pulley, 16 Tooth, Taper Lock TL1108 |

| Item | Part Number | Description |
|------|-------------|--|
| 8 | 811-133 | Drive Pulley, 14 Tooth, Taper Lock TL1108 |
| | 811-126 | Drive Pulley, 16 Tooth, Taper Lock TL1108 |
| | 811-127 | Drive Pulley, 18 Tooth, Taper Lock TL1210 |
| | 811-135 | Drive Pulley, 20 Tooth, Taper Lock TL1210 |
| | 811-136 | Drive Pulley, 22 Tooth, Taper Lock TL1610 |
| | 811-137 | Drive Pulley, 24 Tooth, Taper Lock TL1610 |

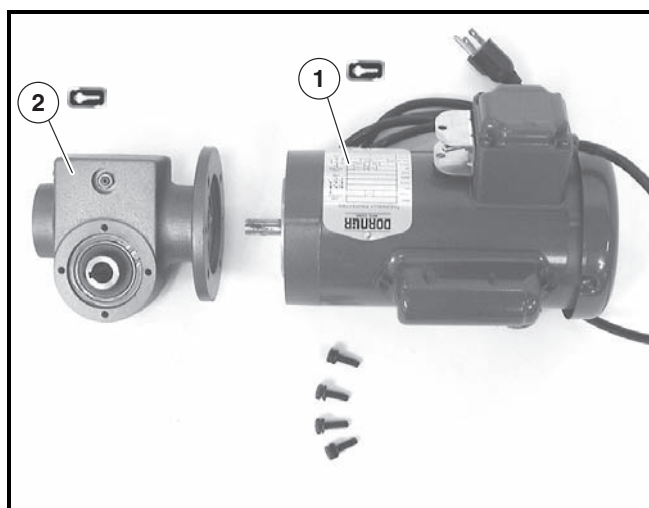
3200 & 5200 Series Bottom Mount 90° Drive Package for Light & Standard Load 60 Hz Gearmotors



Service Parts

| Item | Part Number | Description |
|--|-------------|---------------------------------------|
| 9 | 811-288 | Taper Lock Bushing, 20 MM, TL1108 |
| | 811-289 | Taper Lock Bushing, 20 MM, TL1210 |
| | 811-290 | Taper Lock Bushing, 20 MM, TL1610 |
| 10  | 814-125 | Timing Belt, 1.0" W x 25.5" L |
| | 814-059 | Timing Belt, 1.0" W x 27.0" L |
| | 814-060 | Timing Belt, 1.0" W x 28.0" L |
| | 814-079 | Timing Belt, 1.0" W x 30.0" L |
| 11 | 920483M | Flanged Socket Head Screw, M4 x 16 mm |
| 12 | 911-013 | Flat Washer |

| Item | Part Number | Description |
|------|-------------|--------------------------------|
| 13 | 912-084 | Square Key |
| 14 | 920608M | Socket Head Screw, M6 x 8 mm |
| 15 | 920618M | Socket Head Screw, M6 x 18 mm |
| 16 | 920622M | Socket Head Screw, M6 x 22 mm |
| 17 | 920835M | Socket Head Screw, M8 x 35 mm |
| 18 | 961645M | Socket Head Screw, M16 x 45 mm |
| 19 | 980630M | Square Key |
| 20 | 991610M | Hex Jam Nut, M16 |
| 21 | 931025M | Flat Head Screw, M10 x 25 mm |

90° Industrial Gearmotors



| Item | Part No. | Description |
|---|-----------|--|
| 1  | 62MS411FN | Motor, 0.25hp (0.19Kw), 115/230 Volts, 60 Hz, 1-Phase |
| | 62MS411FR | Motor, 0.25hp (0.19Kw), 115/230 Volts, 60 Hz, 1-Phase with Reversing |
| | 62MS423 | Motor, 0.25hp (0.19Kw), 208-230/460 Volts, 60 Hz, 3-Phase |
| | 22MSD3DEN | Motor, 0.25hp (0.19Kw), 130 VDC |
| | 62MH411FN | Motor, 0.5hp (0.37Kw), 115/230 Volts, 60Hz, 1-Phase |
| | 62MH423 | Motor, 0.5hp (0.37Kw) 208-230/460 Volts, 60Hz, 3 Phase |
| | 62MHD9DEN | Motor, 0.5hp (0.37Kw), 90 VDC |
| | 32MS423EN | Motor, 0.5hp (0.37Kw), 230 Volts, 3 Phase Inverter Duty |
| | 32MHD9DEN | Motor, 0.75 hp, (0.56Kw), 90 VDC |
| 2  | 32M005HL | Gear Reducer, 5:1, NEMA 42CZ |
| | 32M010HL | Gear Reducer, 10:1, NEMA 42CZ |
| | 32M020HL | Gear Reducer, 20:1, NEMA 42CZ |
| | 32M040HL | Gear Reducer, 40:1, NEMA 42CZ |
| | 32M060HL | Gear Reducer, 60:1, NEMA 42CZ |
| | 32M005HS | Gear Reducer, 5:1, NEMA 56C |
| | 32M010HS | Gear Reducer, 10:1, NEMA 56C |
| | 32M020HS | Gear Reducer, 20:1, NEMA 56C |
| | 32M040HS | Gear Reducer, 40:1, NEMA 56C |
| | 32M060HS | Gear Reducer, 60:1, NEMA 56C |
| | 32M010HH | Gear Reducer, 10:1, 140 TC |

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.



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