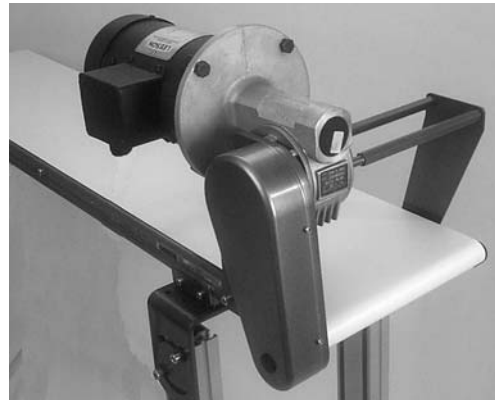




# 2100, 2200, 4100, 6200 and MPB Series Top Mount Drive Package for Heavy Load 90° Industrial 60 Hz Gearmotors

## Installation, Maintenance & Parts Manual



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## Introduction

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<b>IMPORTANT</b>
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<i>Some illustrations may show guards removed. Do NOT operate equipment without guards.</i>
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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 2100 Series conveyors are covered by the following patent numbers: 5131529, 5174435, and corresponding patents and patent applications in other countries.


Dorner 2200 and MPB Series conveyors are covered by patent number 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 6200 Series conveyors are covered by patent numbers: 6685009, 5174435, 6109427 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.

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.

### 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 components.

- |   |                       |
|---|-----------------------|
| A | Conveyor              |
| B | Mounting Bracket      |
| C | Gearmotor             |
| D | Timing Belt Tensioner |
| E | Cover                 |
| F | Timing Belt           |
| G | Drive Pulley          |
| H | Driven Pulley         |

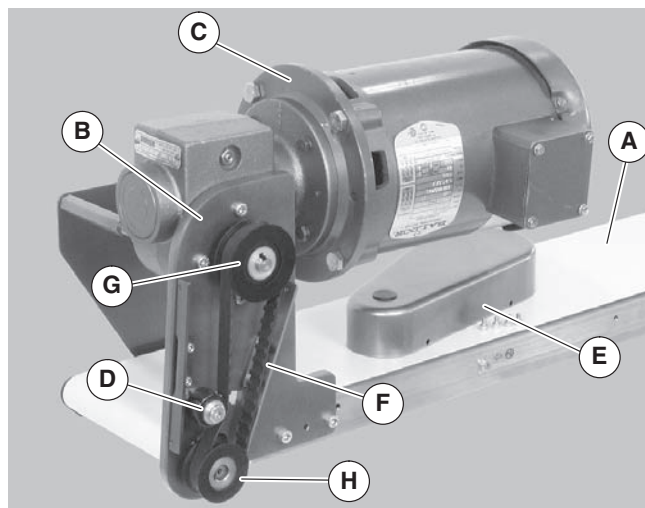


Figure 1

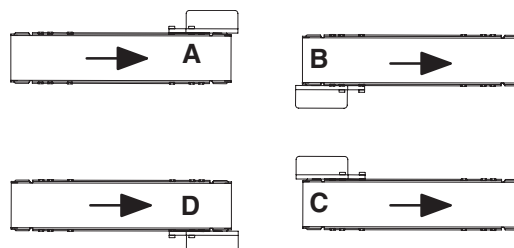
## Specifications

### Gearmotor Mounting Package Models:

#### Example:

**2 M T H H W W A - 32 32**

- 2 = 2100 Series Conveyor
- M = Language Code: M = U.S. English
- T = Mount Style: T = Top Mount
- H = Gearmotor Type: H = Heavy Load, Industrial
- H = Output Shaft Type: H = 90° Industrial
- W = Conveyor Width Reference\*
- W = Mount Position = A, B, C or D (see detail to the right)
- A = Belt Type ( - = flat belt, A through J = cleated belt )
- 32 = Drive Pulley (see Table 2 & 3)
- 32 = Driven Pulley (see Table 2 & 3)



\* See Ordering and Specifications Catalog for details.

# Specifications

**Table 1: Gearmotor Specifications**

	Single Phase	Three Phase	DC Variable Speed	VFD Variable Speed
Output Power	0.50 hp (0.37 kw)			
Input Voltage	115 VAC	208– 230 / 460 VAC	90 VDC	230 VAC
Input Frequency	60 Hz		N/A	10 – 60 Hz
Input Current	7.4 Amperes	2.1 – 2/ 1 Amperes	5.0 Amperes	1.6 Amperes
Motor RPM	1725		2500	1725
Gearmotor Ratios	5:1, 10:1, 20:1, 40:1, 60:1			
Frame Size	NEMA 56C			
Motor Type	Totally enclosed, Fan-cooled			

**Table 2: Belt Speeds for Heavy Load Fixed Speed 90° 60 Hz Gearmotors on 2100, 2200 (Gang Drive), 4100 and 6200 Series Conveyors**

Gearmotors					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060HS4(vp)F(n)	60:1	29	270	30.5	6	1.7	22	32
32M060HS4(vp)F(n)	60:1	29	270	30.5	8	2.4	32	32
32M060HS4(vp)F(n)	60:1	29	270	30.5	12	3.7	48	32
32M040HS4(vp)F(n)	40:1	43	247	27.9	12	3.7	32	32
32M040HS4(vp)F(n)	40:1	43	247	27.9	18	5.5	48	32
32M020HS4(vp)F(n)	20:1	86	90	10.2	25	7.6	32	32
32M020HS4(vp)F(n)	20:1	86	90	10.2	37	11.3	48	32
32M010HS4(vp)F(n)	10:1	173	45	5.1	49	14.9	32	32
32M010HS4(vp)F(n)	10:1	173	45	5.1	74	22.6	48	32
32M005HS4(vp)F(n)	5:1	345	25	2.8	99	30.2	32	32
32M005HS4(vp)F(n)	5:1	345	25	2.8	148	45.1	48	32
32M005HS4(vp)F(n)	5:1	345	25	2.8	169	51.5	48	28
32M005HS4(vp)F(n)	5:1	345	25	2.8	197	60.0	44	22
32M005HS4(vp)F(n)	5:1	345	25	2.8	215	65.5	48	22
32M005HS4(vp)F(n)	5:1	345	25	2.8	249	75.9	48	19

(vp) = voltage and phase:

11 = 115 V, 1-phase

23 = 230V, 3-phase

(n) = reversing capability:

N = no reversing switch

R = with reversing switch (115V, 1 phase only)

# Specifications

**Table 3: Belt Speeds for Heavy Load Fixed Speed 90° 60 Hz Gearmotors on 2200 Series Conveyors (Excluding Gang Drive)**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060HS4(vp)F(n)	60:1	29	270	30.5	6	1.7	19	32
32M060HS4(vp)F(n)	60:1	29	270	30.5	10	3.0	28	28
32M040HS4(vp)F(n)	40:1	43	247	27.9	15	4.6	28	28
32M060HS4(vp)F(n)	60:1	29	270	30.5	16	4.9	44	28
32M040HS4(vp)F(n)	40:1	43	247	27.9	24	7.3	44	28
32M020HS4(vp)F(n)	20:1	86	90	10.2	30	9.1	28	28
32M020HS4(vp)F(n)	20:1	86	90	10.2	48	14.6	44	28
32M010HS4(vp)F(n)	10:1	173	45	5.1	61	18.6	28	28
32M010HS4(vp)F(n)	10:1	173	45	5.1	95	29.0	44	28
32M010HS4(vp)F(n)	10:1	173	45	5.1	104	31.7	48	28
32M005HS4(vp)F(n)	5:1	345	25	2.8	121	36.9	28	28
32M005HS4(vp)F(n)	5:1	345	25	2.8	138	42.1	32	28
32M005HS4(vp)F(n)	5:1	345	25	2.8	176	53.6	32	22
32M005HS4(vp)F(n)	5:1	345	25	2.8	208	63.4	48	28
32M005HS4(vp)F(n)	5:1	345	25	2.8	242	73.8	44	22
32M005HS4(vp)F(n)	5:1	345	25	2.8	264	80.5	48	22

(vp) = voltage and phase:

11 = 115 V, 1-phase

23 = 230V, 3-phase

(n) = reversing capability:

N = no reversing switch

R = with reversing switch (115V, 1 phase only)

**Table 4: Belt Speeds for Heavy Load Fixed Speed 90° 60 Hz Gearmotors on MPB Series Conveyors**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060HS4(vp)F(n)	60:1	29	270	30.5	13	4.0	22	32
32M060HS4(vp)F(n)	60:1	29	270	30.5	20	6.0	28	28
32M040HS4(vp)F(n)	40:1	43	247	27.9	29	8.9	28	28
32M040HS4(vp)F(n)	40:1	43	247	27.9	44	13.4	48	32
32M020HS4(vp)F(n)	20:1	86	90	10.2	59	17.9	28	28

(vp) = voltage and phase:

11 = 115 V, 1-phase

23 = 230V, 3-phase

(n) = reversing capability:

N = no reversing switch

R = with reversing switch (115V, 1 phase only)

# Specifications

**Table 5: Belt Speeds for Heavy Load Variable Speed 90° VFD Gearmotors on 2100, 4100 and 6200 Series Conveyors**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060HS423EN	60:1	29	226	35.5	0.6–5.6	0.2–1.7	22	32
32M060HS423EN	60:1	29	226	35.5	0.8–8.2	0.3–2.5	32	32
32M040HS423EN	40:1	43	247	27.9	1.2–12	0.4–3.8	28	28
32M020HS423EN	20:1	86	248	27.9	2.5–25	0.8–7.5	32	32
32M010HS423EN	10:1	173	156	17.6	4.9–49	1.5–15	32	32
32M005HS423EN	5:1	345	81	9.1	9.9–99	3–30	32	32
32M005HS423EN	5:1	345	81	9.1	14–148	4.5–45	48	32
32M005HS423EN	5:1	345	58	6.5	19–197	6–60	44	22
32M005HS423EN	5:1	345	58	6.5	24–249	7.6–76	48	19

\* At 60 Hz

**Table 6: Belt Speeds for Heavy Load Variable Speed 90° VFD Gearmotors on 2200 Series Conveyors (Excluding Gang Drive)**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060HS423EN	60:1	29	270	30.5	0.6–6	0.2–1.8	19	32
32M060HS423EN	60:1	29	270	30.5	1–10	0.3–3.1	28	28
32M040HS423EN	40:1	43	247	27.9	1.5–15	0.5–4.6	28	28
32M020HS423EN	20:1	86	167	18.9	3–30	0.9–9.2	28	28
32M010HS423EN	10:1	173	115	13	6–60	1.8–18	28	28
32M010HS423EN	10:1	173	115	13	10–104	3.2–32	48	28
32M005HS423EN	5:1	345	58	6.5	12–121	3.7–37	28	28
32M005HS423EN	5:1	345	58	6.5	26–264	8.1–81	48	22

\* At 60 Hz

**Table 7: Belt Speeds for Heavy Load Variable Speed 90° VFD Gearmotors on MPB Series Conveyors**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM*	In-lb*	N-m*	Ft/min	M/min		
32M060HS423EN	60:1	29	270	30.5	1.3–13.4	0.4–4.1	22	32
32M060HS423EN	60:1	29	270	30.5	2–19	0.9–5.9	28	28
32M040HS423EN	40:1	43	247	27.9	2.9–29	0.9–8.9	28	28
32M020HS423EN	20:1	86	167	18.9	5.9–59	1.8–18	28	28
32M010HS423EN	10:1	173	115	13	11–117	3.6–36	28	28
32M010HS423EN	10:1	173	115	13	17–175	5.4–54	48	32
32M005HS423EN	5:1	345	58	6.5	23–234	7.1–71	28	28

\* At 60 Hz

# Specifications

**Table 8: Belt Speeds for Heavy Load Variable Speed 90° DC Gearmotors on 2100, 2200 (Gang Drive), 4100 and 6200 Series Conveyors**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060PSD3DEN	60:1	42	270	30.5	1.0–8.2	0.3–2.5	22	32
32M060PSD3DEN	60:1	42	270	30.5	1.4–12	0.4–3.6	32	32
32M040PSD3DEN	40:1	63	215	24.3	2.1–18	0.7–5.4	32	32
32M020PSD3DEN	20:1	125	90	10.2	4.3–36	1.3–11	32	32
32M010PSD3DEN	10:1	250	72	8.1	9–71	2.6–22	32	32
32M005PSD3DEN	5:1	500	25	2.8	17–143	5.2–43	32	32
32M005PSD3DEN	5:1	500	25	2.8	26–214	7.8–65	48	32
32M005PSD3DEN	5:1	500	25	2.8	29–245	9.0–75	48	28

**Table 9: Belt Speeds for Heavy Load Variable Speed 90° DC Gearmotors on 2200 Series Conveyors (Excluding Gang Drive)**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060PSD3DEN	60:1	42	270	30.5	1.8–14	0.5–4.5	28	28
32M040PSD3DEN	40:1	63	215	24.3	2.6–22	0.8–6.7	28	28
32M060PSD3DEN	60:1	42	270	30.5	2.8–23	0.8–7	44	28
32M020PSD3DEN	20:1	125	90	10.2	5.3–44	1.6–13	28	28
32M010PSD3DEN	10:1	250	72	8.1	10–88	3.2–27	28	28
32M005PSD3DEN	5:1	500	25	2.8	17–138	5–42	44	28
32M005PSD3DEN	5:1	500	25	2.8	21–176	6.4–54	28	28
32M005PSD3DEN	5:1	500	25	2.8	33–276	10–84	44	28

**Table 10: Belt Speeds for Heavy Load Variable Speed 90° DC Gearmotors on MPB Series Conveyors**

Gearmotors*					Belt Speed		Drive Pulley	Driven Pulley
Part Number	Gear Ratio	RPM	In-lb	N-m	Ft/min	M/min		
32M060PSD3DEN	60:1	42	270	30.5	2.3–19	0.7–5.9	22	32
32M060PSD3DEN	60:1	42	270	30.5	3.4–28	1–8.6	28	28
32M040PSD3DEN	40:1	63	215	24.3	5.1–42	1.6–12.9	28	28
32M060PSD3DEN	60:1	42	270	30.5	5.3–44	1.6–13	44	28
32M020PSD3DEN	20:1	125	90	10.2	10–85	3–26	28	28
32M020PSD3DEN	20:1	125	90	10.2	15–127	4.7–39	48	32
32M010PSD3DEN	10:1	250	72	8.1	20–170	6–52	28	28
32M010PSD3DEN	10:1	250	72	8.1	31–255	9–77	48	32

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

## NOTE


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




## Required Tools

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

## Mounting

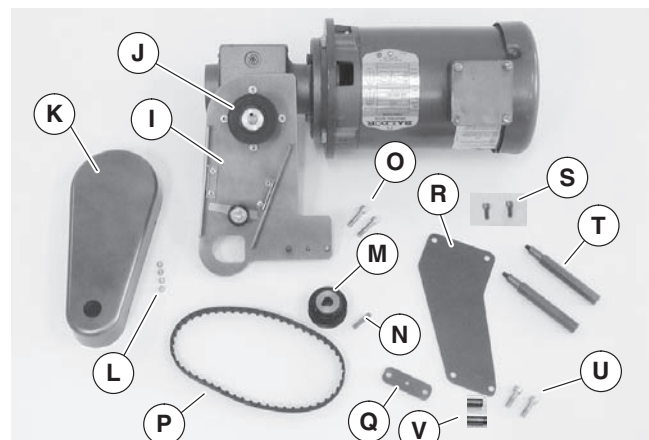
<b>⚠ WARNING</b>

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

<b>⚠ WARNING</b>

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

### Installation Component List:

I	Top Mount Assembly
J	Drive Pulley
K	Cover
L	M4 Socket Head Screws (4x)
M	Driven Pulley
N	Key
O	M6 Socket Head Screws (2x)
P	Timing Belt
Q	Support Plate Spacer
R	Support Plate
S	M6 Hex-Post Screws (2x)
T	Hex Posts (2x)
U	M6 Support Plate Screws (2x)
V	Support Tubes (2x, for 2" & 3" conveyors only)

### 1. Typical components (Figure 2)

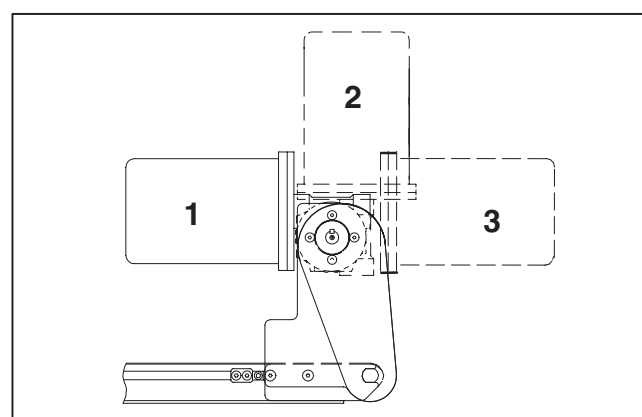


**Figure 2**

<b>NOTE</b>
<p><i>Support Plate Spacer (Figure 2, item Q) required for 2" &amp; 3" wide conveyors only.</i></p>

<b>NOTE</b>
<p><i>4100 conveyors do not include items Q through U of Figure 2.</i></p>

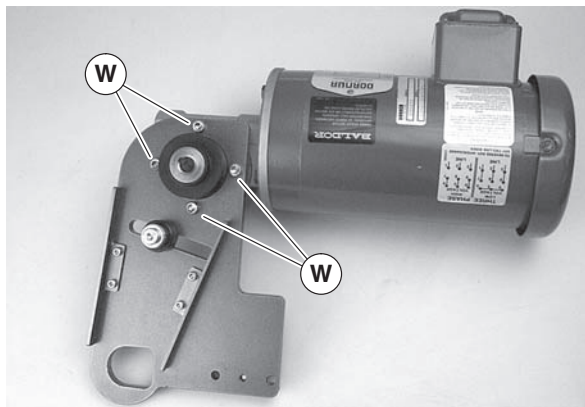
<b>NOTE</b>
<p><i>Gearmotor may be operated in positions 1, 2 or 3 (Figure 3).</i></p>



**Figure 3**

# Installation

2. If required, change gearmotor position by removing four (4) screws (Figure 4, item W). Rotate gearmotor to other position and replace screws (W). Tighten to 103 in-lb (12 Nm).

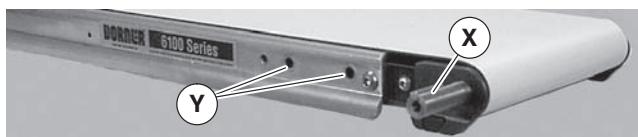


**Figure 4**

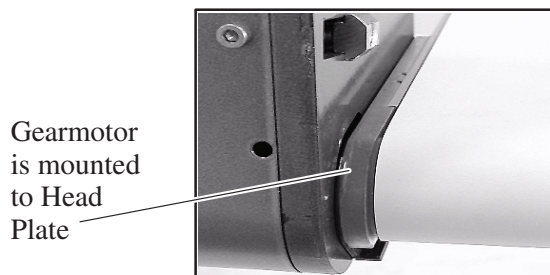
## NOTE

6200 conveyor shown, other Series similar.

3. Locate drive output shaft (Figure 5, item X) and remove two (2) screws (Y).



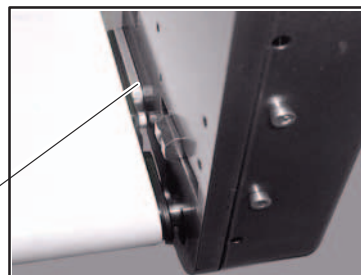
**Figure 5**



**2200 Series**

**Figure 6**

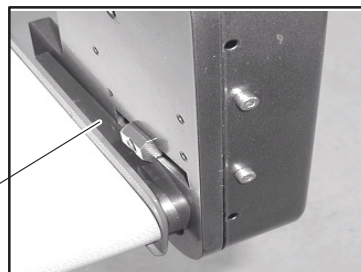
Gearmotor  
is mounted to  
Drive Spacer



**6200 Series**

**Figure 7**

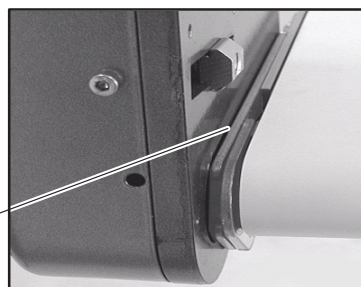
Gearmotor  
is mounted to  
Drive  
Adapter  
Plate



**4100 Series**

**Figure 8**

Gearmotor  
is mounted  
to Head  
Plate



**2100 Series**

**Figure 9**

Gearmotor  
is mounted  
to Head  
Plate

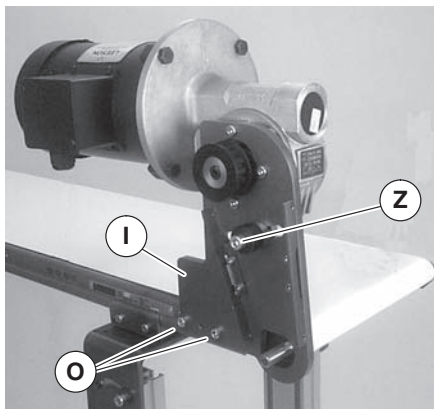


**MPB Series**

**Figure 10**

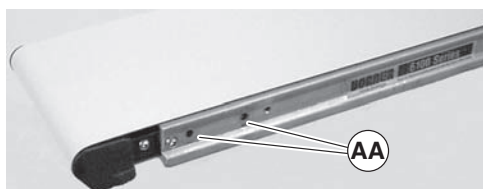
# Installation

4. Attach mount assembly (Figure 11, item I) with screws (O). Tighten to 80 in-lb (9 Nm). For 4100 conveyors, proceed to step 7.



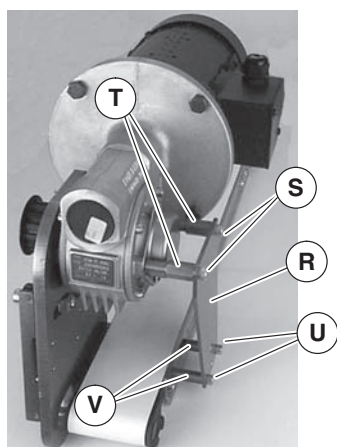
**Figure 11**

5. On side opposite drive output shaft, remove two screws (Figure 12, item AA).



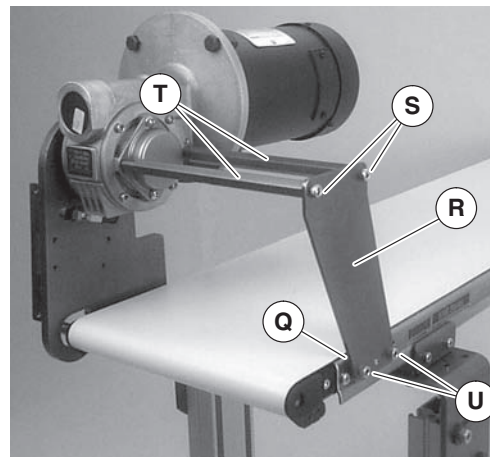
**Figure 12**

6.
  - a. For 2" & 3" Wide Conveyors  
Install hex posts (Figure 13, item T). Attach wide end of support plate (R) to hex posts with screws (S). Attach narrow end of support plate to conveyor, using spacers (V) and screws (U). Tighten screws to 80 in-lb (9 Nm).



**Figure 13**

- b. For 4"-and-Wider Conveyors  
Install hex posts (Figure 14, item T). Attach wide end of support plate (R) to hex posts with screws (S). Attach narrow end of support plate to conveyor, using spacer (Q) and screws (U). Tighten screws to 80 in-lb (9 Nm).



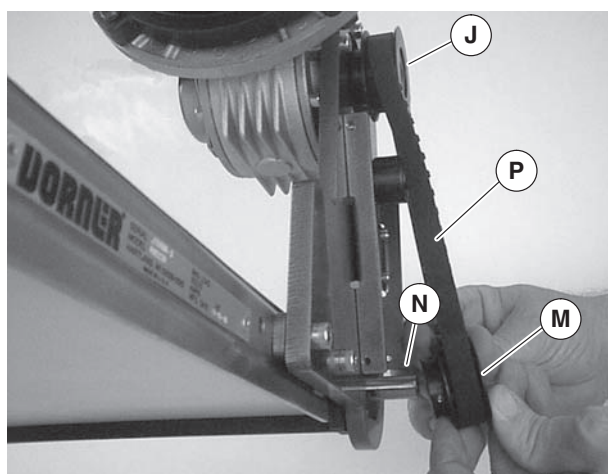
**Figure 14**

## ⚠ WARNING



**Drive shaft keyway may be sharp.  
HANDLE WITH CARE.**

7. Install key (Figure 15, item N).

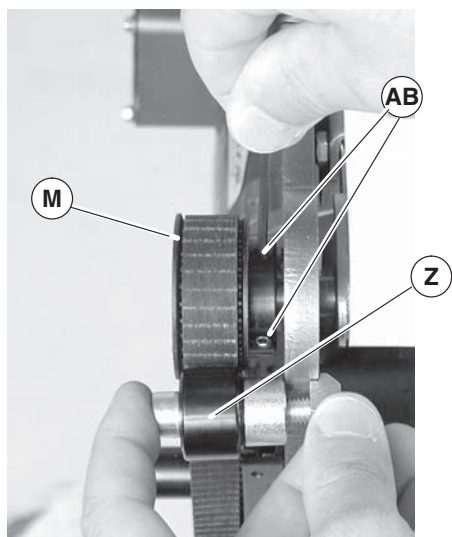


**Figure 15**

8. Wrap timing belt (P) around driven pulley (M) and drive pulley (J). Install driven pulley (M) onto conveyor shaft.

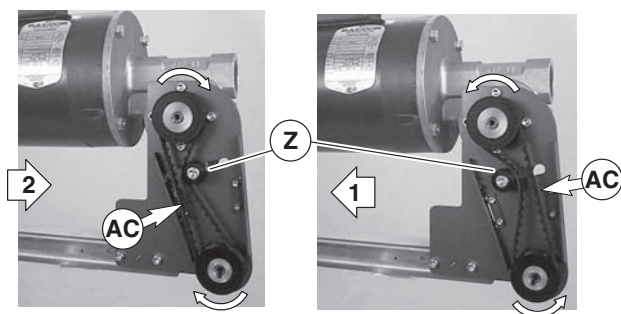
# Installation

- Remove cam bearing and spacer (Figure 11, item Z). Place the cam bearing and spacer (Figure 16, item Z) next to the driven pulley (M). Ensure the flanges of the driven pulley are aligned with the cam bearing. Tighten driven pulley set screws (AB). This will allow for proper belt alignment while conveyor is in use. Install cam bearing and spacer (Z).



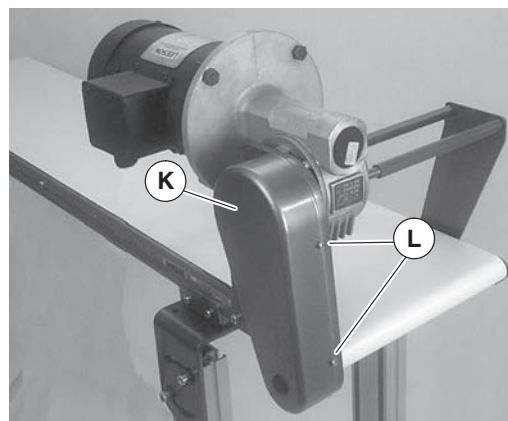
**Figure 16**

- Depending on direction of conveyor belt travel (Figure 17, item 1 or 2), position belt tensioner (Z) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (AC). Tighten tensioner screw to 103 in-lb (12 Nm).



**Figure 17**

- Install cover (Figure 18, item K) with four screws (L). Tighten to 35 in-lb (4 Nm).




**Figure 18**

# Preventive Maintenance and Adjustment

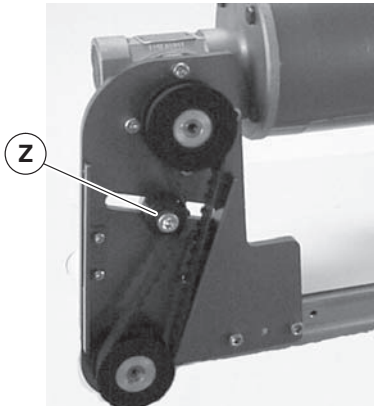
## Required Tools

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

## Timing Belt Tensioning

<b>⚠ WARNING</b>

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


1. Remove four screws (Figure 18, item L) and remove cover (K).
2. Loosen tensioner (Figure 19, item Z).



**Figure 19**

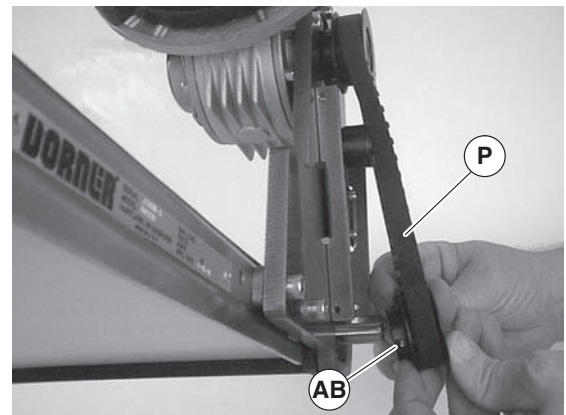
3. Depending on direction of conveyor belt travel (Figure 17, item 1 or 2), position belt tensioner (Z) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (AC). Tighten tensioner screw to 103 in-lb (12 Nm).
4. Install cover (Figure 18, item K) with four screws (L). Tighten to 35 in-lb (4 Nm).

## Timing Belt Replacement

<b>⚠ WARNING</b>

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

1. Remove four screws (Figure 18, item L) and remove cover (K).
2. Loosen tensioner (Figure 19, item Z).
3. Remove timing belt (Figure 20, item P).

<b>NOTE</b>
<i>If timing belt does not slide over pulley flange, loosen driven pulley set screws (Figure 20, item AB) and remove pulley with belt (P). For re-installation, see steps 8 and 9 on page 11.</i>



**Figure 20**

4. Install new timing belt.
5. Depending on direction of conveyor belt travel (1 or 2 of Figure 17), position belt tensioner (Z) as shown. Tension belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at belt mid-point (AC). Tighten tensioner screw to 103 in-lb (12 Nm).
6. Install cover (Figure 18, item K) with four screws (L). Tighten 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 13.
2. Loosen set screws and remove drive or driven pulley.

### NOTE

*If drive pulley (Figure 21, item J) is replaced, wrap timing belt around drive pulley and complete step 3.*

3. Complete steps 8 through 11 of “Installation” section on page 11.

## Gear Reducer Replacement

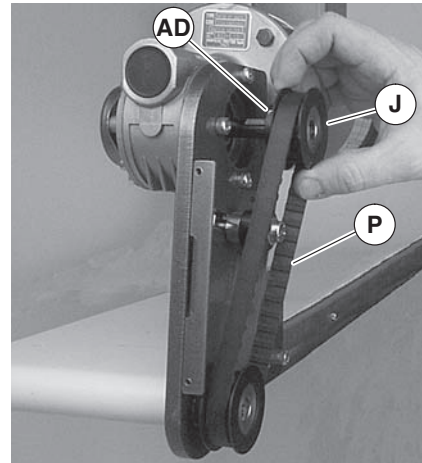
### ⚠ WARNING



Exposed moving parts can cause severe injury.

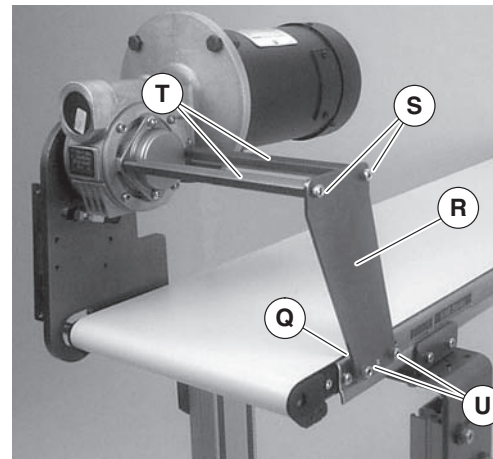
**LOCK OUT POWER** before removing guards or performing maintenance.

1. Remove four screws (Figure 18, item L) and remove cover (K).
2. Loosen tensioner (Figure 19, item Z).
3. Loosen drive pulley set screws (Figure 21, item AD). Remove drive pulley (J) and timing belt (P).



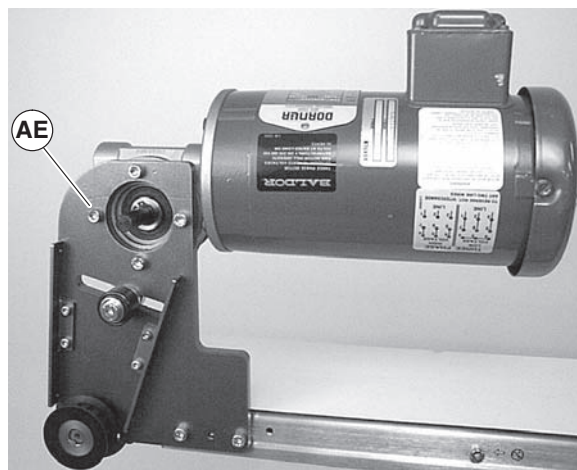
**Figure 21**

4. Remove screws (Figure 22, item S & U) and remove support plate (R) and spacer (Q). Remove hex posts (T).



**Figure 22**

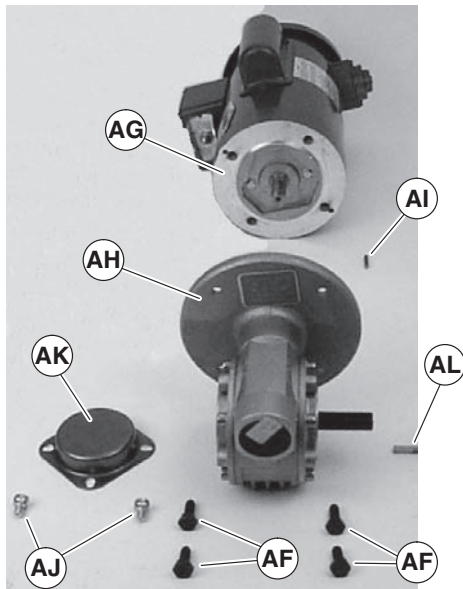
5. Remove four (4) gear reducer mounting screws (Figure 23, item AE). Remove gearmotor.



**Figure 23**

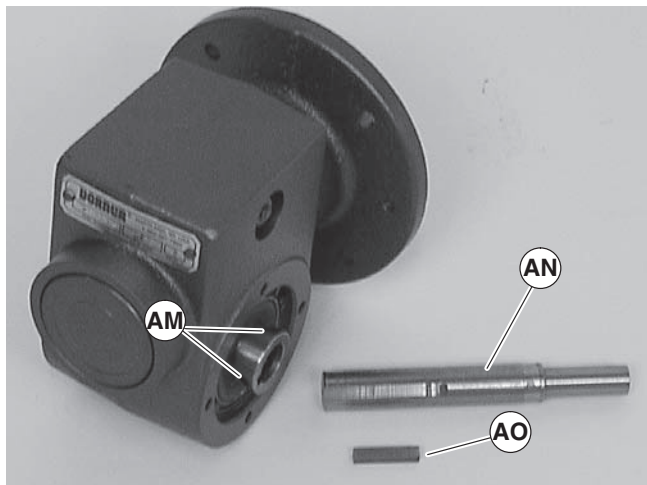
# Preventive Maintenance and Adjustment

6. Remove four screws (Figure 24, item AF). Detach motor (AG) from gear reducer (AH). Retain motor output shaft key (AI).



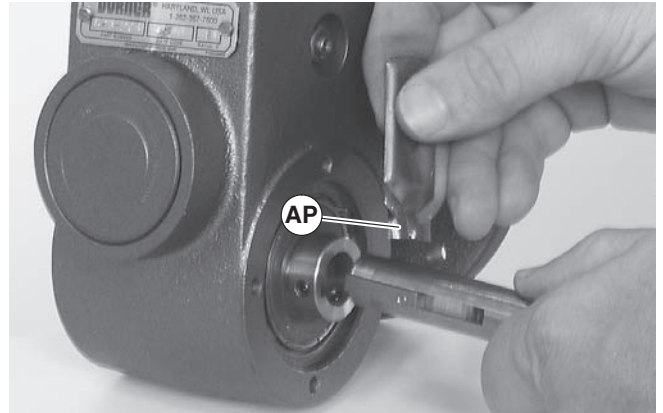
**Figure 24**

7. Remove two (2) screws (AJ) and detach output shaft cover (AK).
8. Remove gear reducer output shaft key (AL).
9. Loosen six (6) set screws (Figure 25, item AM). Remove drive shaft (AN) and key (AO).



**Figure 25**

10. Apply grease (Figure 26, item AP) to shaft.



**Figure 26**

11. Replace the original shaft components into new gear reducer (see 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.*

12. With key (Figure 24, item AI) in keyway, slide motor (AG) and gear reducer (AH) together. Install screws (AF) and tighten.
13. Reverse steps 4 and 5 on page 14.

## NOTE

*Drive pulley (Figure 21, item J) is removed. Wrap timing belt around drive pulley and complete step 14.*

14. Complete steps 8 through 11 of "Installation" section on page 11.

# 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 and VFD variable speed motor:
  - a. Remove terminal box screws (Figure 27, item AQ) and remove cover (AR).

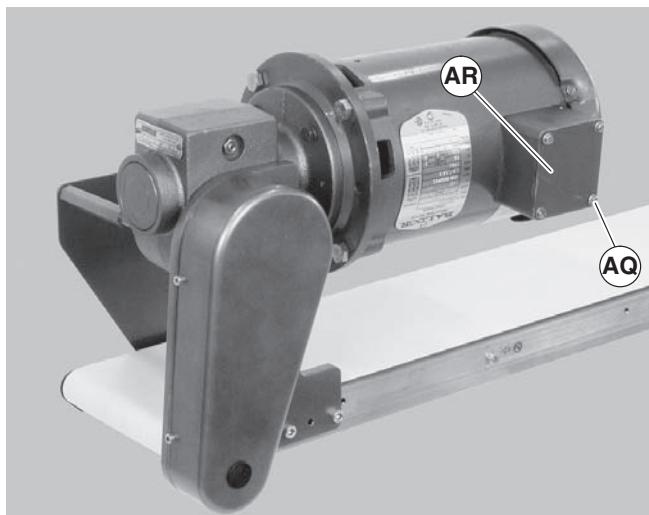


Figure 27

- 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 28, item AS).

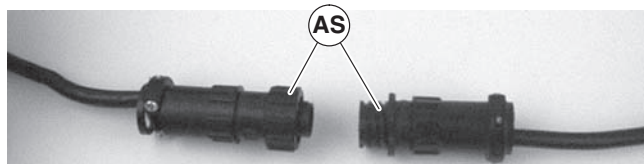


Figure 28

4. Remove four screws (Figure 29, item AF). Detach motor (AG) from gear reducer (AH). Retain motor output shaft key (AI).

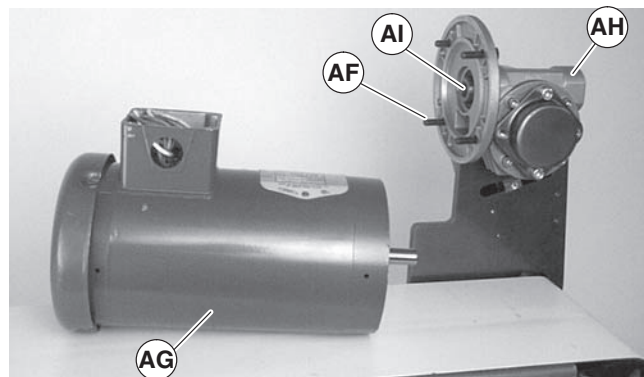


Figure 29

### 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 30, item AI) in keyway, slide motor and gear reducer together. Install screws (AF) and tighten.

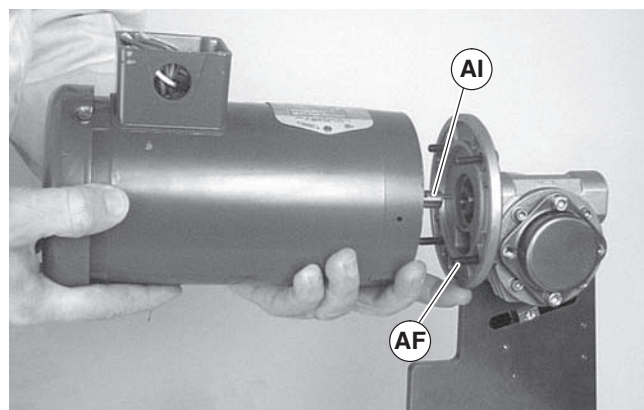


Figure 30


6. Replace wiring:
  - For a single phase motor, reverse step 1 on page 16.
  - For a three phase and VFD variable speed motor, reverse step 2, on page 16.
  - For a DC variable speed motor, reverse step 3 on page 16.



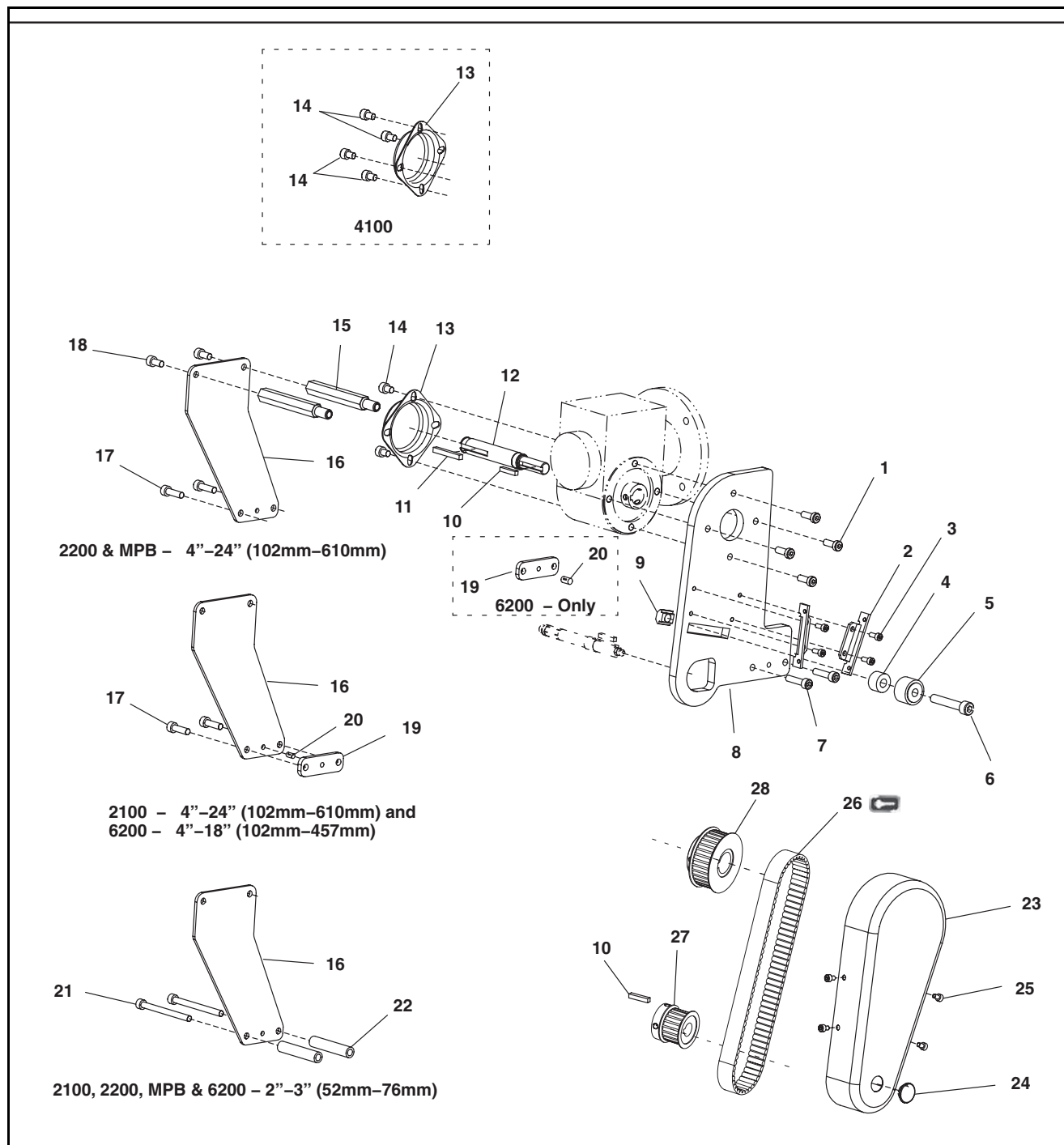


# Service Parts

## 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.

## 2100, 2200, 4100, 6200 Series (All) and MPB Series (Flat Belt) Top Mount Drive Package



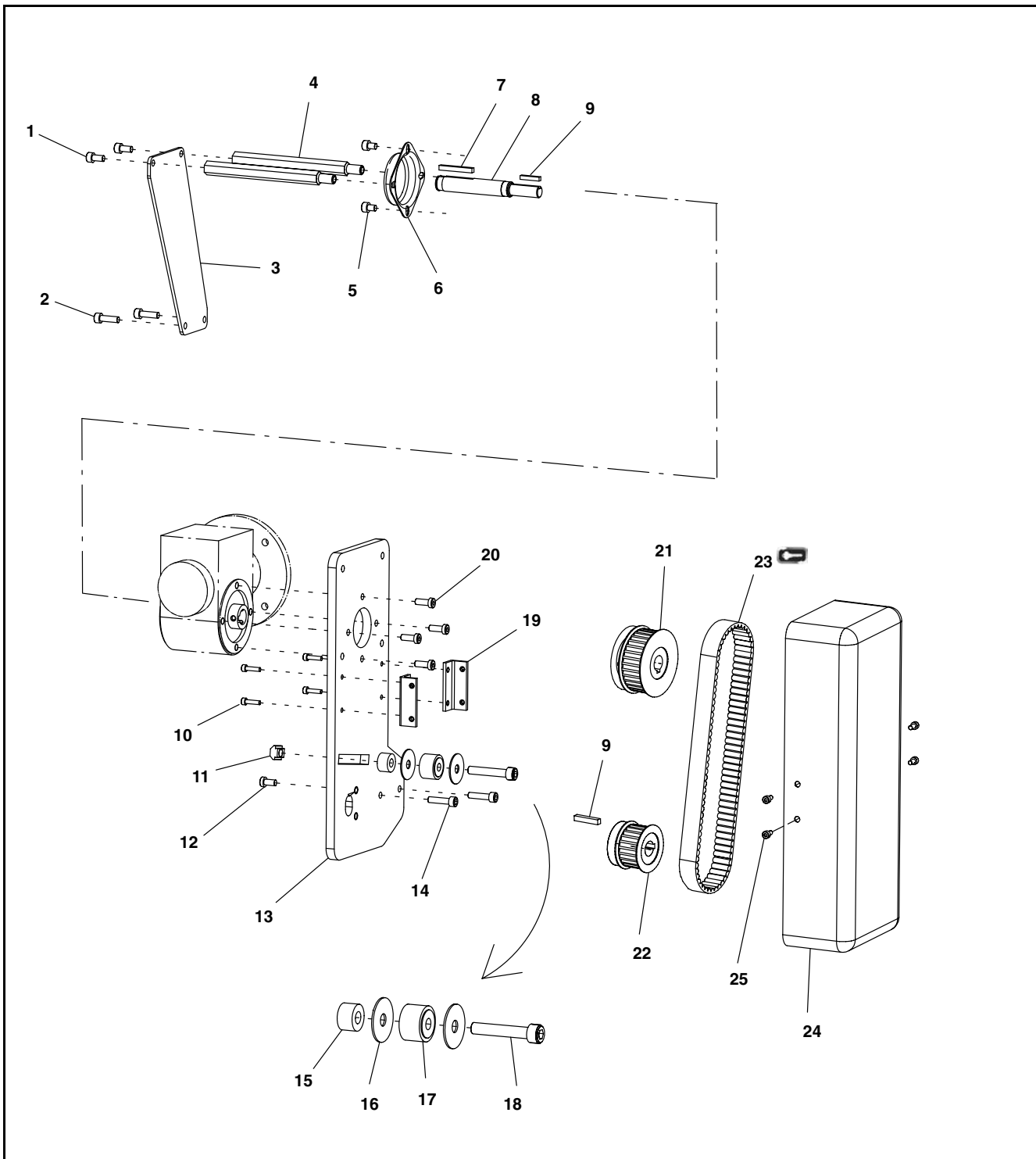
# Service Parts

Item	Part Number	Description
1	920693M	Socket Low Head Screw M6x16mm
2	450375M	Cover Mounting Bracket
3	920410M	Socket Head Screw M4x10mm
4	450445	Spacer
5	802-046	Bearing
6	920845M	Socket Head Screw M8x45mm
7	920625M	Socket Head Screw M6x25mm(2100, 2200 & MPB)
	920616M	Socket Head Screw M6x16mm(4100)
	920630M	Socket Head Screw M6x30mm(6200)
8	450443M	Grove Mounting Plate
9	202390M	Nut
10	980422M	Square Key 4mm x 22mm
11	912-084	Square Key, 0.188 x 1.5"
12	450444M	Grove Output Shaft 12mm
13	300139	Drive-Bearing Shaft Cover
14	920608M	Socket Head Screw M6x8mm
15	453304M	Gearhead Support Hex Post – 2" –4" (51mm – 102mm) Wide Conveyor
	4533WWM	Gearhead Support Hex Post – 5"(127mm) and Wide Conveyor
16	450442M	Gearhead/Conveyor Support Plate
17	920620M	Socket Head Screw M6x20mm
18	920612M	Socket Head Screw M6x12mm
19	450027M	Drive Spacer [2100 – 4"-24"(102mm – 610mm) and 6200 (2x)]
20	807-952	Grooved Pin [2100 – 4"-24"(102mm – 610mm) and 6200 (2x)]
21	920670M	Socket Head Screw M6x70mm – 2"(51mm) Wide Conveyor Only
	920645M	Socket Head Screw M6x70mm – 3"(76mm) Wide Conveyor Only

Item	Part Number	Description
22	450158M	Drive Spacer – 2" (51mm) Wide Conveyor Only (2100 & 6200)
	450155	Drive Spacer – 2" (51mm) Wide Conveyor Only (2200 & MPB)
	450157M	Drive Spacer – 3" (76mm) Wide Conveyor Only (2100 & 6200)
	450156	Drive Spacer – 3" (76mm) Wide Conveyor Only (2200 & MPB)
23	450376M	Drive Guard
24	807-226	Snap-out Plastic Plug
25	920406M	Socket Head Screw M4x6mm
26	814-104	Timing Belt, 15mm W x 450mm L
	814-105	Timing Belt, 15mm W x 460mm L
	814-065	Timing Belt, 15mm W x 475mm L
	814-112	Timing Belt, 15mm W x 495mm L
	814-101	Timing Belt, 15mm W x 500mm L
	814-108	Timing Belt, 15mm W x 520mm L
	814-064	Timing Belt, 15mm W x 535mm L
	814-099	Timing Belt, 15mm W x 565mm L
27	450365MP	Driven Pulley, 19Tooth, 12mm bore
	450366MP	Driven Pulley, 22Tooth, 12mm bore
	450367MP	Driven Pulley, 28Tooth, 12mm bore
	450368MP	Driven Pulley, 32Tooth, 12mm bore
28	450365MP	Drive Pulley, 19Tooth, 12mm bore
	450366MP	Drive Pulley, 22Tooth, 12mm bore
	450367MP	Drive Pulley, 28Tooth, 12mm bore
	450368MP	Drive Pulley, 32Tooth, 12mm bore
	450369MP	Drive Pulley, 44Tooth, 12mm bore
	450370MP	Drive Pulley, 48Tooth, 12mm bore
WW = Conveyor width ref.: 05, 06, 08, 10, 12, 18, 21, 24		


# Service Parts

## MPB Series Cleated Belt Top Mount Drive Package



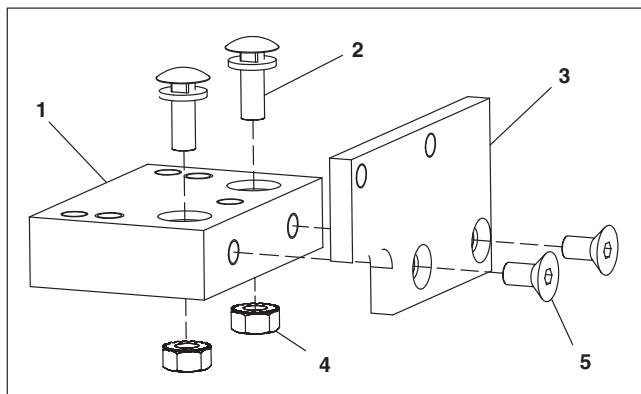
# Service Parts

Item	Part Number	Description
1	920612M	Socket Head Screw M6 x 12mm
2	920620M	Socket Head Screw M6 x 20mm
3	243403	Gearhead/Conveyor Support Plate
4	4533WWM	Gearhead Support Hex Post
5	920608M	Socket Head Screw M6x8mm
6	300139	Drive Bearing Shaft Cover
7	912-084	Square Key, 0.188 x 1.5"
8	450444M	Grove Output Shaft 12mm
9	980422M	Square Key 4mm x 22mm
10	920416M	Socket Head Screw M4 x 16mm
11	202390M	Nut
12	920692M	Stabilization Screw M6 x 12mm Low Hd
13	243401	Mounting Plate
14	920625M	Socket Head Screw M6 x 25mm
15	450445	Spacer
16	807-1133	Washer
17	802-046	Bearing
18	920845M	Socket Head Screw M8 x 45mm
19	243402	Cover Mounting Angle
20	920693M	Socket Low Head Screw M6 x 16mm

Item	Part Number	Description
21	450365MP	Drive Pulley, 19Tooth, 12mm bore
	450366MP	Drive Pulley, 22Tooth, 12mm bore
	450367MP	Drive Pulley, 28Tooth, 12mm bore
	450368MP	Drive Pulley, 32Tooth, 12mm bore
	450369MP	Drive Pulley, 44Tooth, 12mm bore
	450370MP	Drive Pulley, 48Tooth, 12mm bore
22	450365MP	Driven Pulley, 19Tooth, 12mm bore
	450366MP	Driven Pulley, 22Tooth, 12mm bore
	450367MP	Driven Pulley, 28Tooth, 12mm bore
	450368MP	Driven Pulley, 32Tooth, 12mm bore
23	814-104	Timing Belt, 15mm W x 450mm L
	 814-105	Timing Belt, 15mm W x 460mm L
	814-065	Timing Belt, 15mm W x 475mm L
	814-112	Timing Belt, 15mm W x 495mm L
	814-101	Timing Belt, 15mm W x 500mm L
	814-108	Timing Belt, 15mm W x 520mm L
	814-064	Timing Belt, 15mm W x 535mm L
	814-099	Timing Belt, 15mm W x 565mm L
24	300871M	Drive Cover
25	920408M	Socket Head Screw M4 x 8mm
WW = Conveyor width ref.: 04, 06, 08, 10, 12, 18, 21, 24		

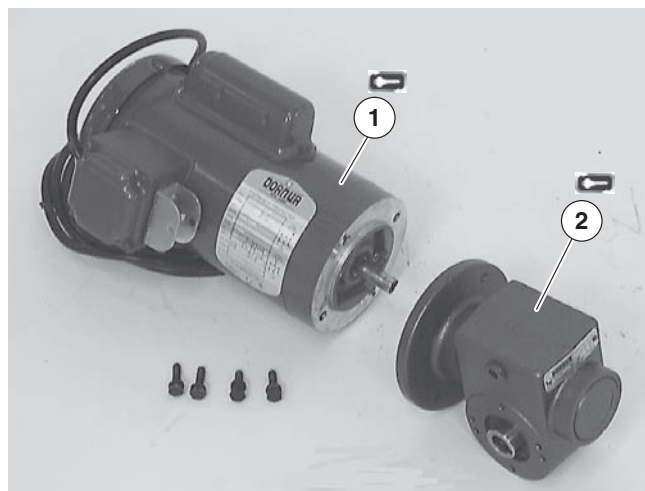
# Service Parts

## 4100 Series Adapter Package



Item	Part No.	Part Description
1	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)
2	613602P	Bolt & Flat Washer Assembly
3	450374	Drive Adapter Plate
4	910-126	Hex Nut with Lock Washer
5	930612M	Flat Head Screw M6 x 12mm

## Gear Motor



Item	Part No	Part Description
1	62MH411FN	Motor, 0.5 hp (0.37 Kw) 115/230 Volts, 60 Hz, 1-Phase, non-reversing
	62MH411FR	Motor, 0.5 hp (0.37 Kw) 115/230 Volts, 60 Hz, 1-Phase, reversing
	62MHD9DEN	Motor, 0.5 hp (0.37 Kw) 90 Volts DC
	32MS423EN	Motor, 0.5 hp (0.37 Kw) 230V, 10- 60Hz, Inverter Duty, 3 Phase
	62MH423	Motor, 0.5 hp (0.37 Kw) 208-230/460 Volts, 60 Hz, 3-Phase
2	32M005HS	Gear Reducer, 5:1, 56C
	32M010HS	Gear Reducer, 10:1, 56C
	32M020HS	Gear Reducer, 20:1, 56C
	32M040HS	Gear Reducer, 40:1, 56C
	32M060HS	Gear Reducer, 60:1, 56C



# 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](http://www.dorner.com).

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



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