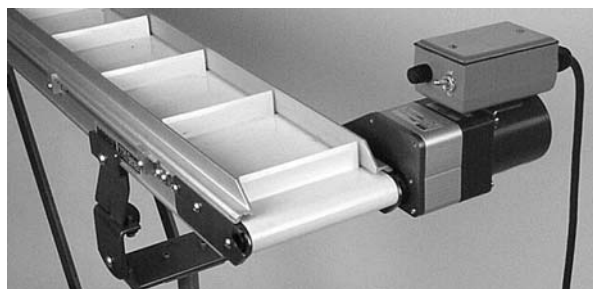
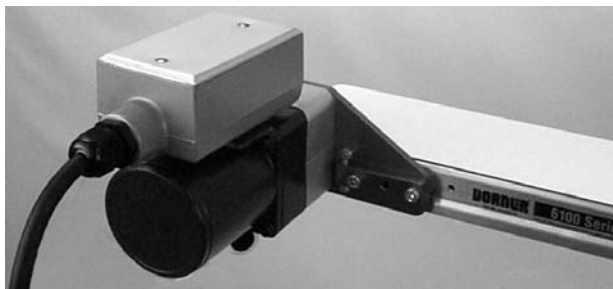




2100, 2200, 4100, 6200, MPB Series Side Mount Drive Package for Light Load 60 Hz Gearmotors

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 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 Series conveyors are covered by patent number 5174435 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.

DANGER



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

WARNING



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

WARNING



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

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 startup.

Product Description

Refer to Figure 1 for typical conveyor components.

- A

B

C

D

E

F

G

H
- Conveyor

Mounting Bracket

Gearmotor

Belt Tensioner

Cover

Timing Belt

Drive Pulley

Driven Pulley

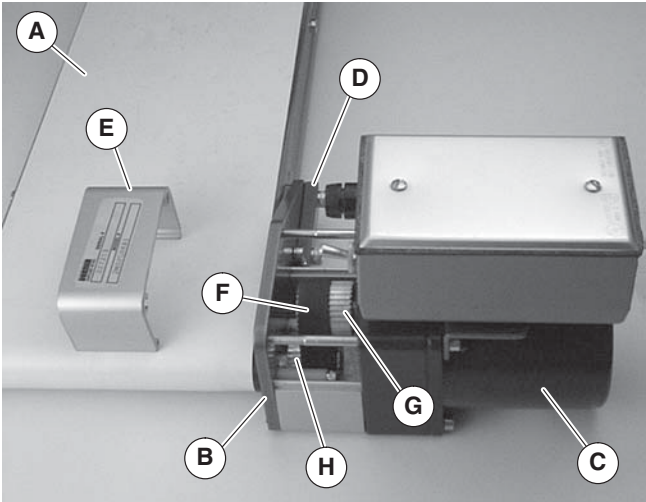


Figure 1

Specifications

Gearmotor Mounting Package Models:

Example:

2

M

S

P

L

W

W

A

Mount Position = A, B, C or D
(see detail to the right)

Conveyor Width Reference*

Gearmotor Type: L = Fixed Speed,
V = Variable Speed

Output Shaft Type = Parallel Shaft

Mount Style = Side Mount

Language Code = U.S. English

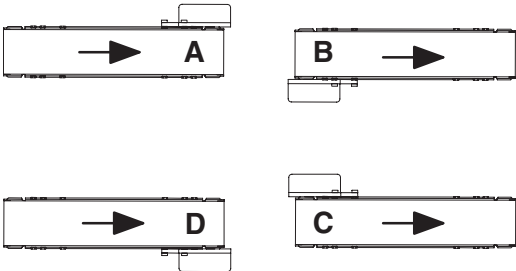
2 = 2100 Series Conveyor

22 = 2200 Series Conveyor

4 = 4100 Series Conveyor

6 = 6200 Series Conveyor

2P = MPB Series Conveyor



* See Ordering and Specifications Catalog for details.

Table 1: Gearmotor Specifications

| | DC Variable Speed | Single Phase |
|-------------------|-------------------|--------------------|
| Output Power | 0.06 hp (0.04 kw) | 0.03 hp (0.025 kw) |
| Input Voltage | 130 Volts D.C. | 115 Volts A.C. |
| Input Frequency | N/A | 60 Hz |
| Full Load Amperes | 0.48 Amperes | 0.49 Amperes |
| Gearmotor Ratios | 18:1 and 60:1 | 15:1 and 36:1 |

Installation

Table 2: Belt Speeds for Light Load Fixed Speed Parallel Shaft 60 Hz Gearmotors on 2100, 2200, 4100 & 6200 Series Conveyors

| Gearmotors | | | | Belt Speed | |
|---------------|-----|-------|-----|------------|-------|
| Part Number | RPM | In-lb | N-m | Ft/min | M/min |
| 62M036PL411FN | 42 | 36 | 4.1 | 11.9 | 3.6 |
| 62M015PL411FN | 100 | 15 | 1.7 | 28.6 | 8.7 |

Table 3: Belt Speeds for Light Load Variable Speed Parallel Shaft DC Gearmotors on 2100, 2200, 4100 & 6200 Series Conveyors

| Gearmotors | | | | Belt Speed | |
|---------------|-----|-------|-----|------------|----------|
| Part Number | RPM | In-lb | N-m | Ft/min | M/min |
| 62M060PLD3DEN | 42 | 65 | 7.4 | 1.4–11.9 | 0.4–3.6 |
| 62M018PLD3DEN | 139 | 21 | 2.4 | 4.8–39.7 | 1.5–12.1 |

NOTE

8 – 24 in (203 – 610 mm) wide conveyors with light load drives should be limited to 96 in (2438 mm) length.

NOTE

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

Installation

Required Tools

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

Mounting

⚠ WARNING



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

Installation Component List:

| | |
|---|----------------------------|
| I | Side Mount Assembly |
| J | Driven Pulley |
| K | Top Cover |
| L | Tensioner Bar |
| M | Timing Belt |
| N | Key |
| O | M6 Socket Head Screws (2x) |

1. Typical components (Figure 2)

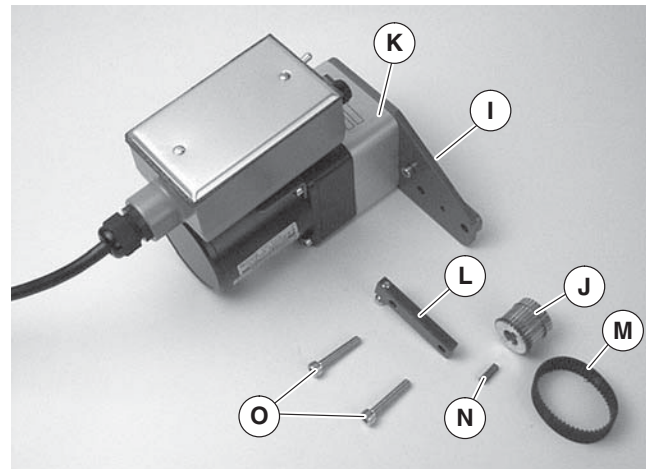


Figure 2

NOTE

6100 conveyor shown, 2100 & 4100 similar.

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

Installation

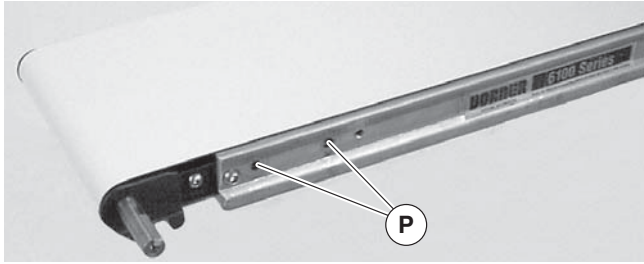


Figure 3

3. Loosen four (4) screws (Figure 4, item Q). Detach mounting bracket (R).

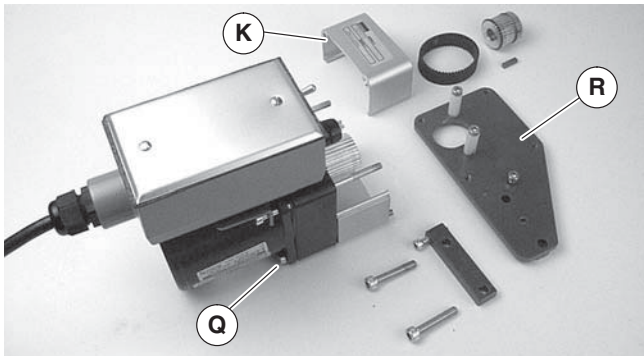


Figure 4

4. Remove two (2) top screws (Q) and remove top cover (K).
5. Attach mounting bracket (Figure 5, item R) and tensioner bar (L) with screws (O). Hand-tighten screws (O).

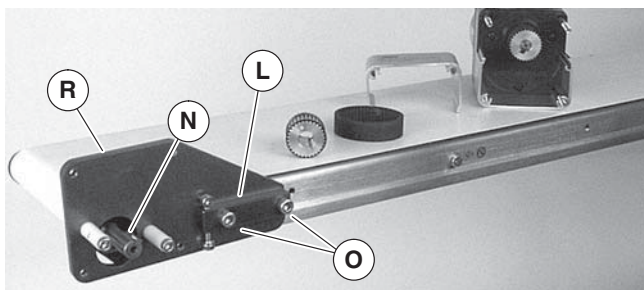


Figure 5

⚠ WARNING



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

6. Install key (Figure 5, item N).
7. Install driven pulley (Figure 6, item J). Tighten two (2) set screws to 33 in-lb (3.7 Nm).

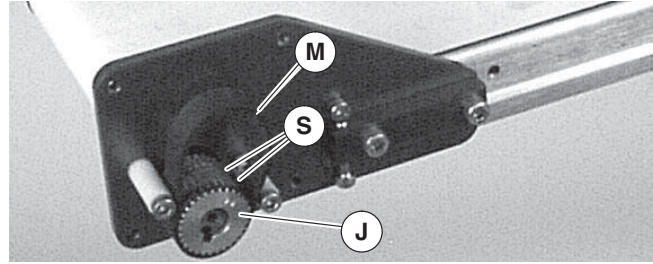


Figure 6

8. Place timing belt (Figure 6, item M) over driven pulley (J) and between belt flanges (S).
9. Insert gearmotor drive pulley into timing belt. Mount assembly with two (2) bottom screws (Figure 7, item Q). Tighten to 45 in-lb (5 Nm).

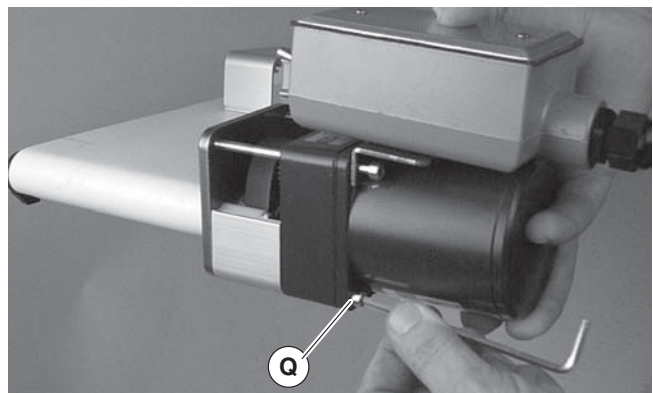


Figure 7

10. Insert top cover (Figure 8, item K) into bottom cover. Attach top cover with two (2) top screws (Q). Tighten to 45 in-lb (5 Nm).

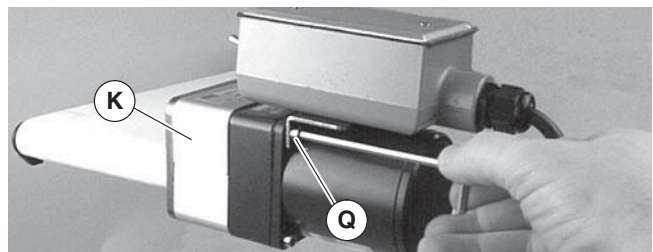


Figure 8

11. Tighten timing belt tensioner screw (Figure 9, item T) to 15 in-lb (1.7 Nm).

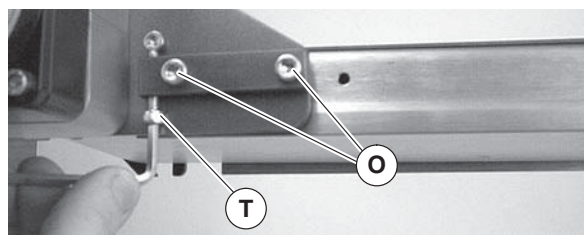


Figure 9

12. Tighten screws (O) to 80 in-lb (9 Nm).

Preventive Maintenance and Adjustment

Required Tools

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

Timing Belt Tensioning

⚠ WARNING



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

1. Loosen two (2) screws (Figure 10, item O). Tighten timing belt tensioner screw (T) to 15 in-lb (1.7 Nm).

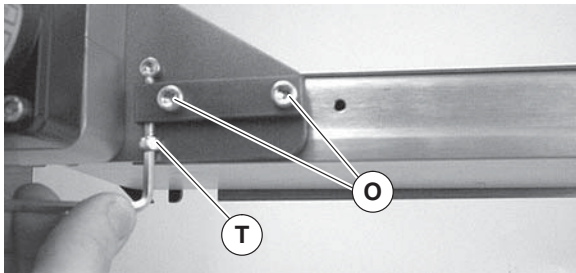


Figure 10

2. Tighten screws (O) to 80 in-lb (9 Nm).

Timing Belt Replacement

⚠ WARNING



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

1. Loosen two (2) screws (Figure 10, item O).
2. Loosen timing belt tensioner screw (T).
3. Remove four (4) screws (Figure 11, item Q). Remove gearmotor (U) and top cover (K).

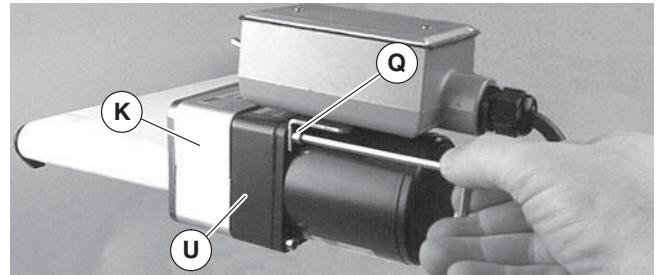


Figure 11

4. Remove old timing belt (Figure 12, item M).

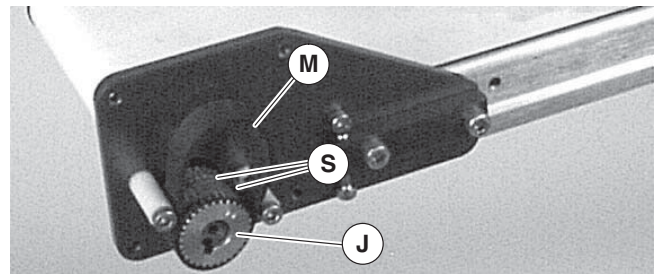


Figure 12

5. Place new timing belt (M) over driven pulley (J) and between belt flanges (S).
6. Insert gearmotor drive pulley into timing belt. Mount assembly with two (2) bottom screws (Figure 13, item Q). Tighten to 45 in-lb (5 Nm).

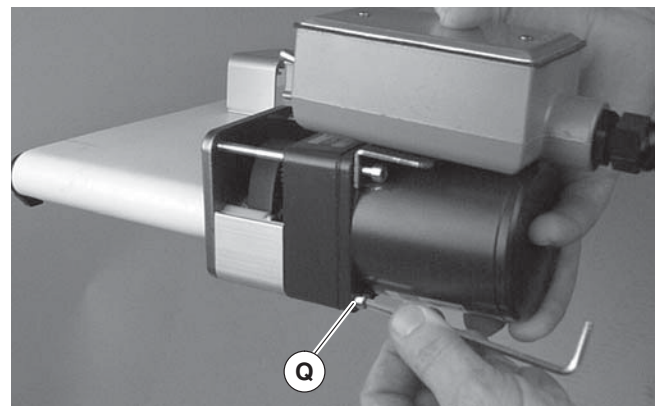


Figure 13

7. Insert top cover (Figure 11, item K) into bottom cover. Mount assembly with two (2) top screws (Q). Tighten to 45 in-lb (5 Nm).
8. Tighten timing belt tensioner screw (Figure 10, item T) to 15 in-lb (1.7 Nm)
9. Tighten screws (O) to 80 in-lb (9 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 4 of “Timing Belt Replacement” section on page 7.
2. Loosen set screws (Figure 14, item V) and remove driven pulley (J) or drive pulley (W).

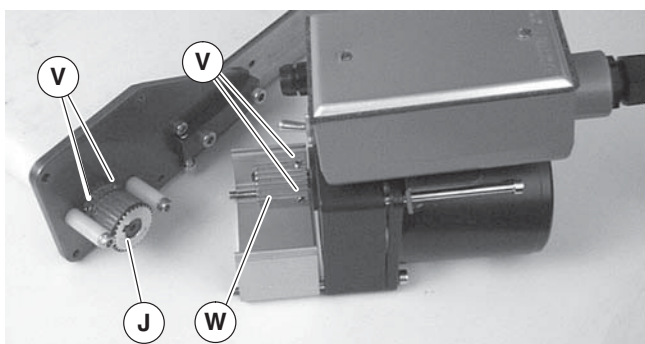


Figure 14

3. Replace drive or driven pulley. Tighten set screws to 33 in-lb (3.7 Nm).
4. Complete steps 5 through 9 of “Timing Belt Replacement” section beginning on page 7.

Gearmotor 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 DC variable speed motor, unplug cord at disconnect (Figure 15, item X).

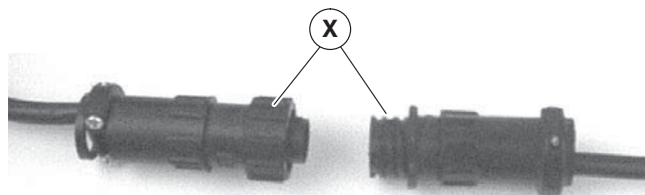

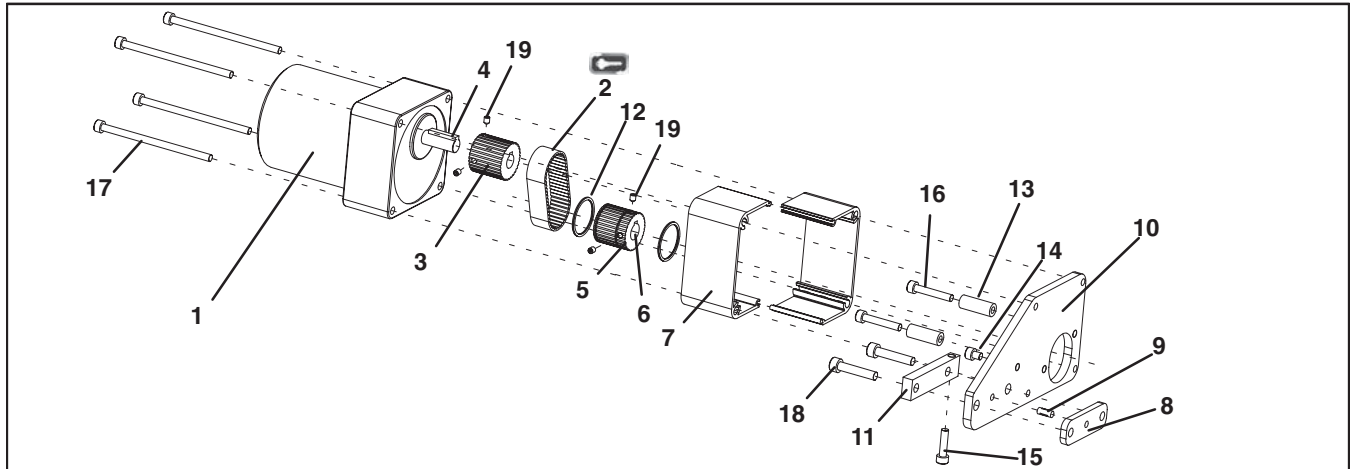


Figure 15

3. Remove four (4) screws (Figure 11, item Q). Remove gearmotor (U) and top cover (K).
4. Loosen set screws (Figure 14, item V) and remove drive pulley (W).
5. Replace drive pulley (W) on new gearmotor and tighten set screws (V) to 33 in-lb (3.7 Nm).
6. Complete steps 5 through 9 of “Timing Belt Replacement” section beginning on page 7.
7. Replace wiring:
 - For a single phase motor, reverse step 1.
 - For DC variable speed motor, reverse step 2.

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.



| Item | Part No. | Part Description |
|------|---------------|--|
| 1 | 62M036PL411FN | Gearmotor, 0.03 hp, 115 Volts, 42 RPM, 60 Hz, 1-Phase, 36:1 |
| | 62M015PL411FN | Gearmotor, 0.03 hp, 115 Volts, 100 RPM, 60 Hz, 1-Phase, 15:1 |
| | 62M060PLD3DEN | Gearmotor, 0.06 hp, 130 Volts, 42 RPM, DC, 60:1 |
| | 62M018PLD3DEN | Gearmotor, 0.06 hp, 130 Volts, 139 RPM, DC, 18:1 |
| 2 | 814-088 | Timing Belt, 3mm x 15 mm |
| 3 | 450078M | Drive Pulley, 1/2" Bore |
| | 450076M | Drive Pulley, 10mm Bore |
| 4 | 912-052 | Key, 1/8" x 5/8", 1/2" Bore |
| | 980422M | Key, 4mm x 22mm, 10mm Bore |
| 5 | 450077M | Driven Pulley, 12 mm Bore |
| 6 | 980422M | Driven Pulley Key, 4 mm x 22 mm |

| Item | Part No. | Part Description |
|------|----------|------------------------------------|
| 7 | 450087 | Guard, Half, Light Duty Side Drive |
| 8 | 450027M | Drive Spacer, Metric (6100 Only) |
| 9 | 807-952 | Groove Pin (6200 Only) |
| 10 | 450084M | Plate, Side Drive LD |
| | 450046M | Plate, Side Drive LD (2200 Only) |
| 11 | 450088M | Tensioning Bar, Side Drive |
| 12 | 807-954 | Spiral Retaining Ring |
| 13 | 807-973 | Nylon Spacer |
| 14 | 920506M | Socket Head Screw M5x6mm |
| 15 | 920520M | Socket Head Screw M5x20mm |
| 16 | 920530M | Socket Head Screw M5x30mm |
| | 920500M | Socket Head Screw M5x100mm |
| 17 | 920590M | Socket Head Screw M5x90mm |
| | 920630M | Socket Head Screw M6x30mm |
| 18 | 920630M | Socket Head Screw M6x30mm |
| 19 | 970405M | Cup Set Screw M4x5mm |

Return Policy

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

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

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

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

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

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

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

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

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

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

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

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



Dorner Mfg. Corp. reserves the right to change or discontinue products without notice. All products and services are covered in accordance with our standard warranty. All rights reserved. © Dorner Mfg. Corp. 2006

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