

6100 Series Bottom Mount Drive Package for Standard Load Parallel Shaft Sanitary Gearmotors



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Warnings – General Safety

	WARNING	
<p>The safety alert symbol, black triangle with white exclamation, is used to alert you to potential personal injury hazards.</p>		

	WARNING
<p>Gearmotors may be HOT. DO NOT TOUCH Gearmotors.</p>	

	DANGER
<p>Climbing, sitting, walking or riding on conveyor will cause severe injury. KEEP OFF CONVEYORS.</p>	

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

	DANGER
<p>Do NOT OPERATE CONVEYORS IN AN EXPLOSIVE ENVIRONMENT.</p>	

	WARNING
<p>Dorner cannot control the physical installation and application of conveyors. Taking protective measures is the responsibility of the user.</p> <p>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.</p>	

	DANGER
<p>Hazardous voltage will cause severe injury or death. LOCKOUT POWER BEFORE WIRING.</p>	

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 6100 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.

Product Description

Refer to Figure 1 for typical components.

Typical Components	
A	Conveyor
B	Mounting Bracket
C	Gearmotor
D	Timing Belt Tensioner
E	Cover
F	Timing Belt
G	Drive Pulley
H	Driven Pulley
I	Motor Control

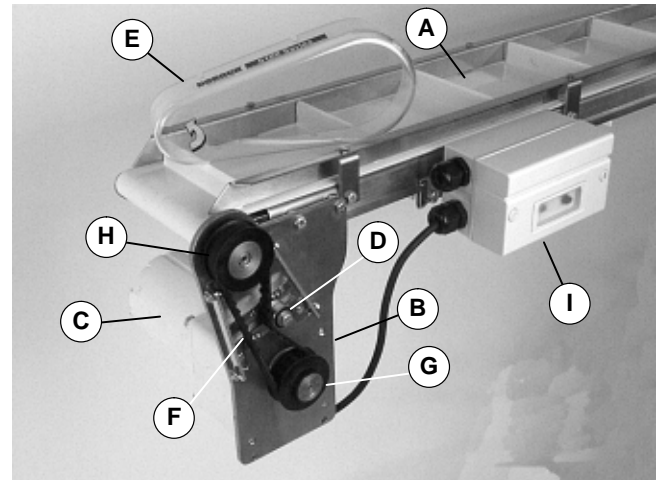
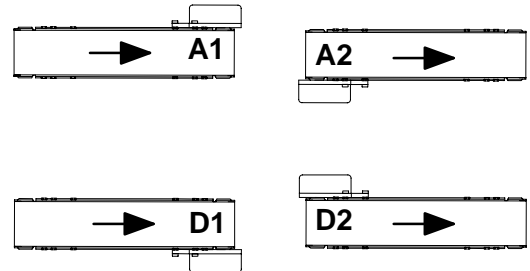
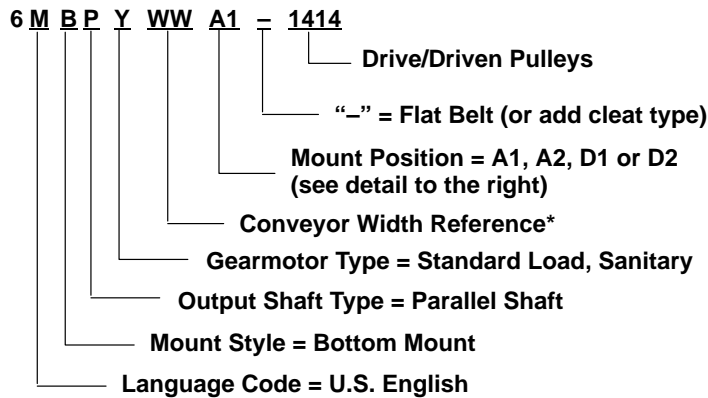


Figure 1

Specifications

Gearmotor Mounting Package Models:

Example:



* See “Ordering and Specifications” Catalog for details.

Table 1: Gearmotor Specifications

	Single-Phase	Three-Phase	VFD Variable Speed
Output Power	0.12 hp (0.09 kw)		
Input Voltage	115 Volts A.C.	230 Volts A.C.	230 Volts A.C.
Input Frequency	60 Hz	50/60 Hz	25 to 63 Hz
Full Load Amperes	1.5 Amperes	0.5 Amperes	
Gearmotor Ratios	9:1 and 30:1		
Protection Ratings	IP65 for Gearmotor, IP55 for Motor Starter		

Specifications

Table 2: Maximum Conveyor Load

Conveyor Width Reference		02	03	04	05	06	08	10	12	18
Maximum Load	lb	30	35	42	50	60	60	60	60	60
	kg	14	16	19	23	27	27	27	27	27

Table 3: Standard Load Fixed Speed Parallel Shaft 60 Hz Gearmotors

Gearmotors				Belt Speed		Drive Pulley	Driven Pulley	Maximum Conveyor Load					
Part Number	RPM	In-lb	N-m	ft/min	M/min			02 & 03		04, 05 & 06		08 through 18	
								lb	Kg	lb	Kg	lb	Kg
62M030PY4 (vp) FN	53	77	8.7	14	4	16	16	-	-	-	-	-	-
62M030PY4 (vp) FN	53	77	8.7	25	8	28	16	-	-	-	-	-	-
62M030PY4 (vp) FN	53	77	8.7	33	10	28	12	-	-	-	-	-	-
62M009PY4 (vp) FN	167	25	2.8	48	15	16	16	-	-	-	-	-	-
62M009PY4 (vp) FN	167	25	2.8	63	19	16	12	-	-	-	-	26	12
62M009PY4 (vp) FN	167	25	2.8	79	24	20	12	-	-	33	15	3	1
62M009PY4 (vp) FN	167	25	2.8	111	34	28	12	-	-	6	3	n/a	n/a

(vp) = voltage and phase
11 = 115 V, Single-phase

23 = 230 V, Three-phase

"-" = values, see "Maximum Conveyor Load" Table 2

Table 4: Standard Load Variable Speed Parallel Shaft VFD Gearmotors

Gearmotors				Belt Speed		Drive Pulley	Driven Pulley	Maximum Conveyor Load					
Part Number	RPM	In-lb	N-m	ft/min	M/min			02 & 03		04, 05 & 06		08 through 18	
								lb	Kg	lb	Kg	lb	Kg
62M030PY423EN	53	109	12.3	2.4 to 14	0.7 to 4.4	16	16	-	-	-	-	-	-
62M030PY423EN	53	109	12.3	4.2 to 25	1.3 to 7.6	28	16	-	-	-	-	-	-
62M030PY423EN	53	109	12.3	6 to 33	1.7 to 10	28	12	-	-	-	-	-	-
62M009PY423EN	167	37	4.2	8 to 48	2.4 to 14.5	16	16	-	-	-	-	-	-
62M009PY423EN	167	37	4.2	11 to 63	3.2 to 19.4	16	12	-	-	-	-	-	-
62M009PY423EN	167	37	4.2	13 to 79	4 to 24.2	20	12	-	-	-	-	43	20
62M009PY423EN	167	37	4.2	19 to 111	5.6 to 34	28	12	-	-	35	16	5	2

"-" = values, see "Maximum Conveyor Load" Table 2

NOTE: Maximum conveyor loads based on:

- Non-accumulating product
- Product moving towards gearmotor
- Conveyor being mounted horizontal

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

Required Tools

- Wrenches (for hexagon head fasteners)
7 mm & 10 mm
- 2.5 mm hex key wrench
- Straight edge
- Torque wrench

Mounting

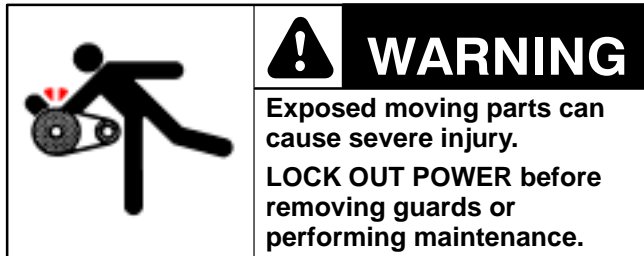


Illustration References

J	Bottom Mounting Plate Assembly
K	Drive Pulley
L	Driven Pulley
M	Key
N	M6 x 30 mm, Hexagon Head Screws (2 x)
O	Timing Belt
P	Cover
Q	Accessory Mounting Clips (2x)
R	M6 x 20 mm, Hexagon Head Screws (2x)
S	Typical Motor Starter

1. Typical components (Figure 2)

NOTE: Three-phase Motor Starter shown, Single-phase Starter or VFD Controller similar.

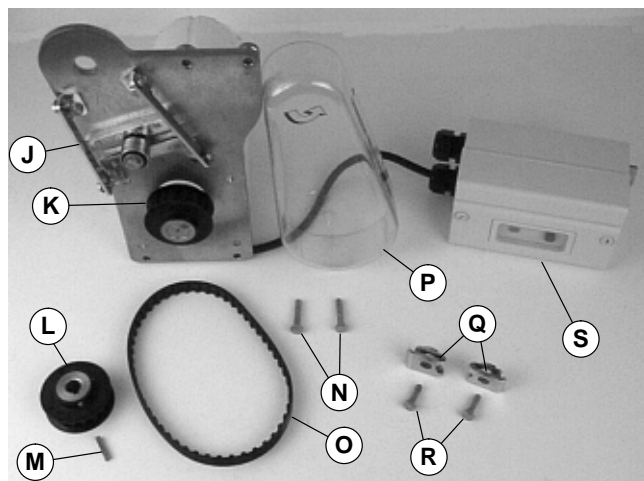


Figure 2

2. Locate drive output shaft (T of Figure 3) and remove two (2) screws (U).

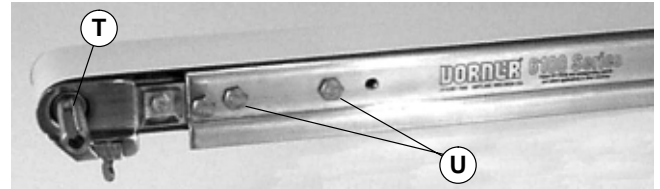


Figure 3

3. Attach bottom mounting plate assembly (J) with screws (N). Tighten to 92 in-lb (10.4 Nm).

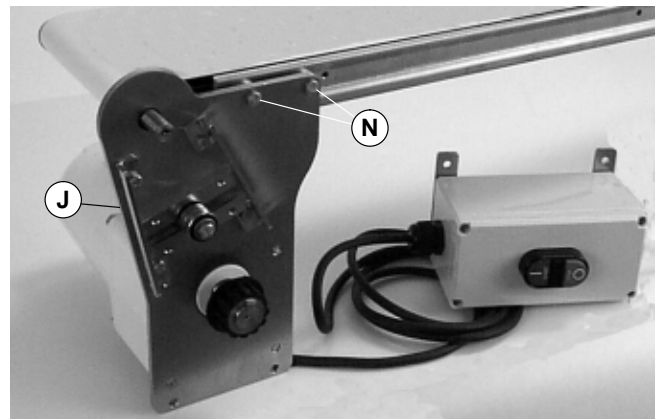


Figure 4



4. Install key (M of Figure 5).

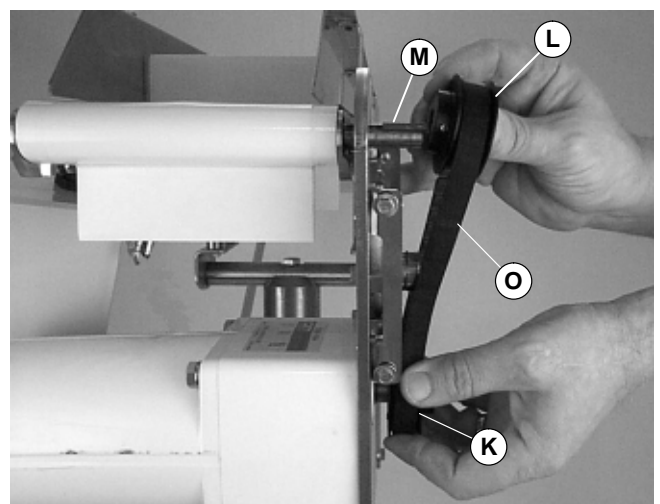


Figure 5

5. Wrap timing belt (O) around driven pulley (L) and drive pulley (K). Install driven pulley (L) onto conveyor shaft.

Installation

- Using a straight edge (V of Figure 6), align driven pulley (L) with drive pulley (K). Tighten driven pulley set screws (W).

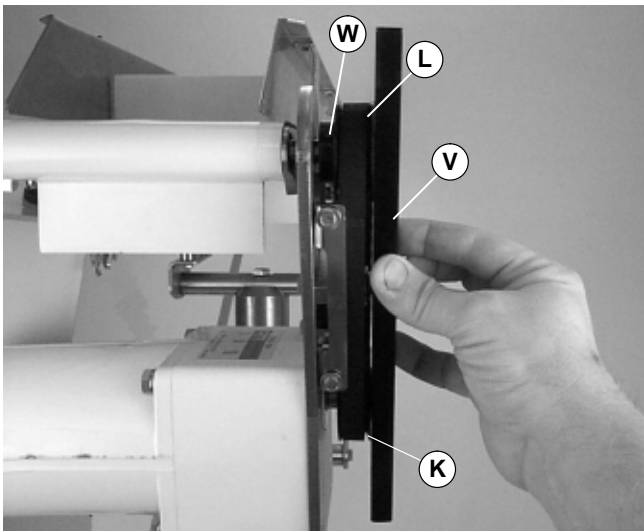


Figure 6

- Depending on conveyor belt travel (direction 1 or 2), locate timing belt tensioner (X of Figure 7) as shown. Tension timing belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at timing belt mid-point (Y). Tighten tensioner screw to 92 in-lb (10.4 Nm).

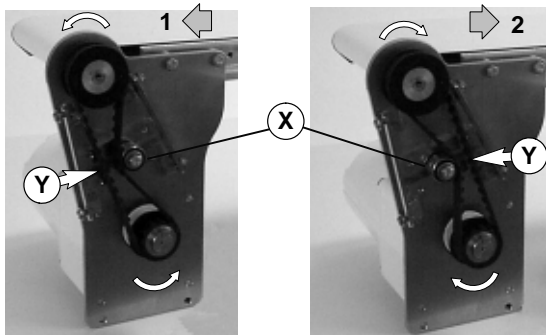


Figure 7

NOTE: Do not over-tighten screws (Z of Figure 8).

- Install cover (P of Figure 8) and tighten four (4) screws (Z) to 35 in-lb (4 Nm).

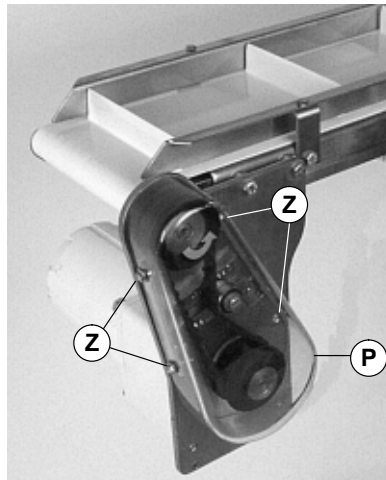


Figure 8

- Attach accessory mounting clips (Q of Figure 9) to conveyor.

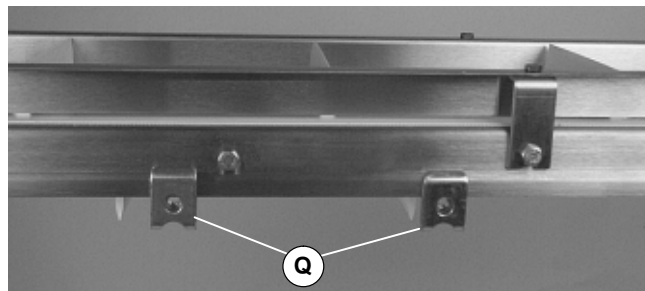


Figure 9

NOTE: Three-phase Motor Starter shown, Single-phase Starter similar. For VFD controller mounting, see accessory instructions.

- Attach motor starter (S of Figure 10) to clips with screws (R). Tighten to 92 in-lb (10.4 Nm).





Figure 10

Wiring

Single-phase Motor Starter

NOTE: Power cord must be plugged into a GFI outlet. No additional wiring is required.

Three-phase Motor Starter

	 <h2 style="margin: 0;">DANGER</h2> <p style="margin: 0;">Hazardous voltage will cause severe injury or death.</p> <p style="margin: 0;">LOCKOUT POWER BEFORE WIRING.</p>
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NOTE: 230 volt three-phase manual motor starters must be wired in accordance with applicable electrical codes.

1. Loosen cover screws (AA of Figure 11). Remove cover.

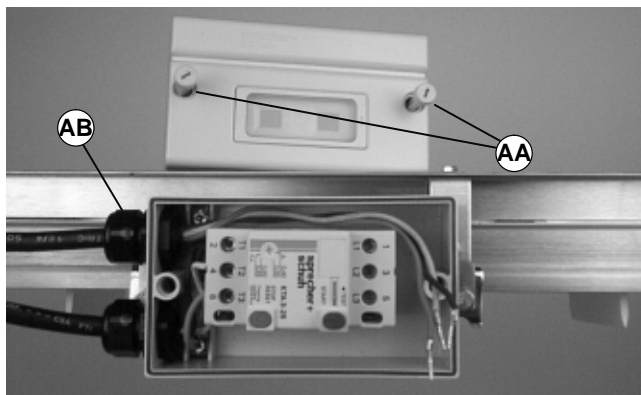


Figure 11

NOTE: Line cord must be 0.28" (7 mm) minimum to 0.47" (12 mm) maximum in diameter.

2. Insert line cord through grip (AB) and tighten nut.

3. For correct three-phase motor shaft rotation, connect line phase sequence L1, L2 & L3 to terminals as shown (Figure 12).

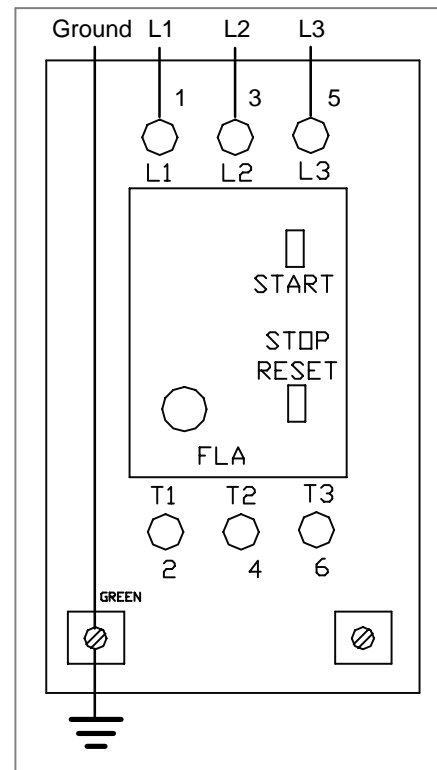


Figure 12

	<h2 style="margin: 0;">WARNING</h2> <p style="margin: 0;">Controller must be properly grounded. Failure to properly ground control box may cause injury to personnel.</p>	
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NOTE: The motor ground wire is also attached to left terminal marked ⊥ (Figure 12).

4. Attach ground wire to lower left terminal marked ⊥ (see Figure 12).
5. Replace starter cover and tighten screws (AA of Figure 11).

VFD Controllers

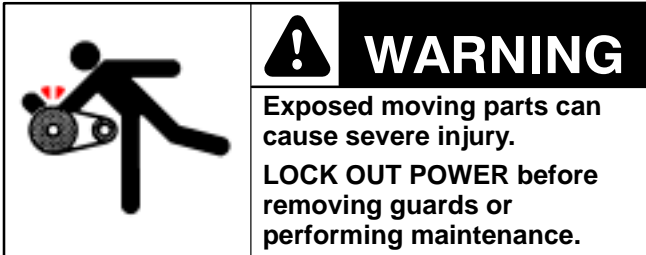
NOTE: Refer to VFD Controller Set-up, Operation & Maintenance Manual.

Preventive Maintenance & Adjustment

Required Tools

- Wrenches (for hexagon head fasteners)
7 mm & 10 mm
- 2.5 mm hex key wrench
- Torque wrench

Timing Belt Replacement



1. Loosen four (4) screws (Z of Figure 13) and remove cover (P).

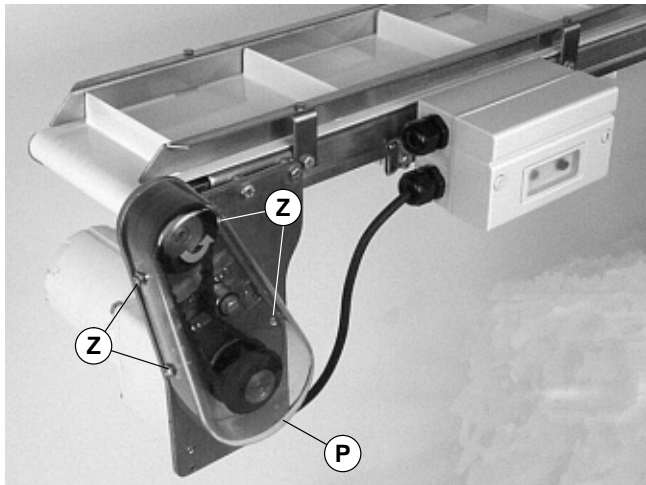


Figure 13

2. Loosen tensioner (X of Figures 14).

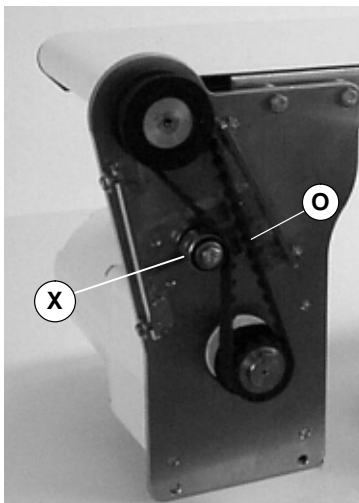


Figure 14

3. Remove timing belt (O).

NOTE: If timing belt does not slide over pulley flange, loosen driven pulley set screws (W of Figure 15) and remove pulley with belt. For re-installation, see steps 5 and 6 on pages 5 and 6.

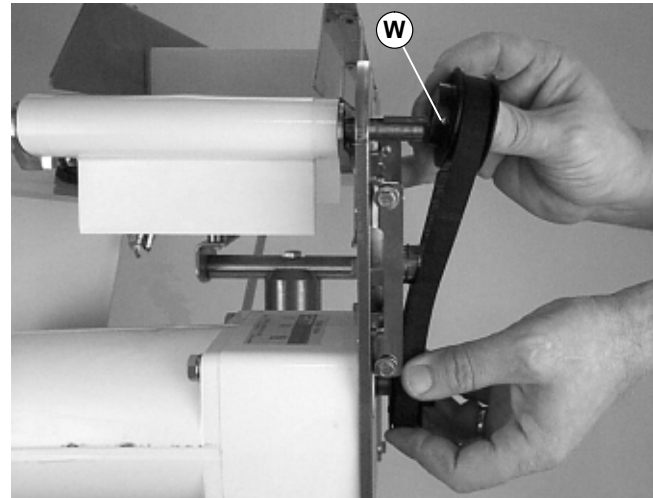


Figure 15

4. Install new timing belt.
5. Depending on conveyor belt travel (direction 1 or 2), locate timing belt tensioner (X of Figure 16) as shown. Tension timing belt to obtain 0.125" (3 mm) deflection for 1.0 lb (456 grams) of force at timing belt mid-point (Y). Tighten tensioner screw to 92 in-lb (10.4 Nm).

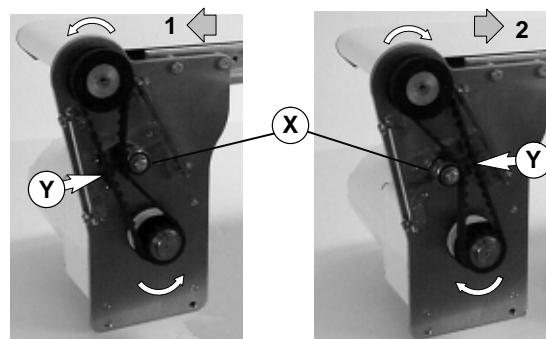


Figure 16

NOTE: Do not over-tighten screws (Z of Figure 13).

6. Replace cover (P of Figure 13) and tighten four (4) screws (Z) to 35 in-lb (4 Nm).

NOTE: For replacement parts other than those shown on this page, contact an authorized Dorner Service Center or the factory.

Item	Part No.	Part Description
1	62M009PY411	Gearmotor, 115V Single Phase, 9:1 Ratio
	62M030PY411	Gearmotor, 115V Single Phase, 30:1 Ratio
	62M009PY423	Gearmotor, 230V Three Phase, 9:1 Ratio
	62M030PY423	Gearmotor, 230V Three Phase, 30:1 Ratio
2	814-054	Timing Belt 0.50" x 17.63"
	814-022	Timing Belt 0.50" x 18.75"
	814-051	Timing Belt 0.50" x 19.5"
	814-023	Timing Belt 0.50" x 21"
3	802-123	Tensioner Bearings (2x required)
4	450051MP	Driven Pulley 12Tooth
	450052MP	Driven Pulley 14Tooth
	450053MP	Driven Pulley 16Tooth
5	980422MSS	Square Key 4 mm x 22 mm
6	450346M	Drive Pulley 16Tooth
	450251M	Drive Pulley 18Tooth
	450252M	Drive Pulley 20Tooth
	450253M	Drive Pulley 24Tooth
	450254M	Drive Pulley 28Tooth
	450055M	Drive Pulley 12Tooth
7	450194MSS	Key 6 mm Square x 25 mm & Set Screw

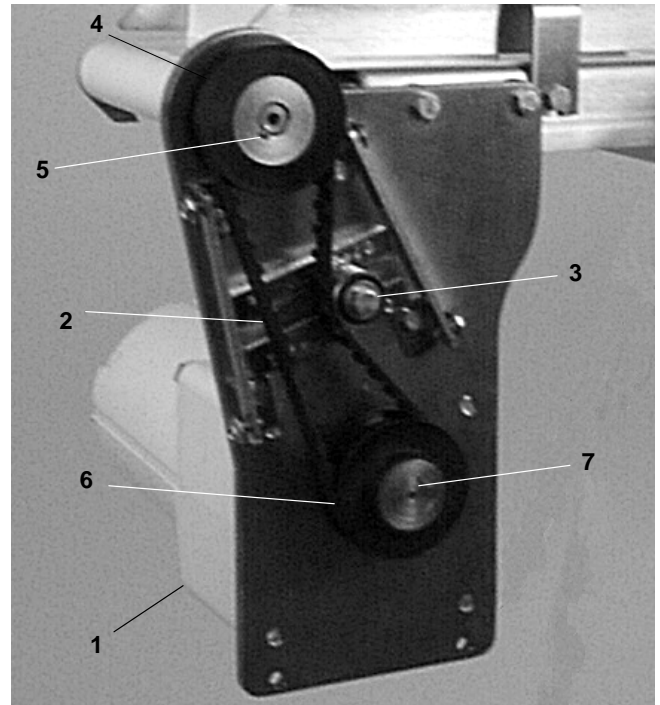


Figure 17

Return Policy

No returns will be accepted without prior written factory authorization. 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. 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 to reference.

There will be a 15% restocking charge on all new items returned for credit where Dorner was not at fault. These will not be accepted after 60 days from original invoice date. The restocking charge covers inspection, cleaning, disassembly, and reissuing 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. Feel free to contact Dorner for the name of your local representative. Our technical sales and service staff will gladly help with your questions on Dorner products.

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

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

DORNER[®]

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DORNER MFG. CORP.

580 Industrial Drive, PO Box 20
Hartland, WI 53029-0020 USA

USA

TEL 1-800-397-8664 (USA)

FAX 1-800-369-2440 (USA)

Outside the USA:

TEL 1-262-367-7600, FAX 1-262-367-5827

DORNER

Arnold-Sommerfeld-Ring 2
D-52499 Baesweiler

Germany

TEL (02401) 80 52 90

FAX (02401) 80 52 93

Internet: www.dorner.com