

2100, 4100, 6100 Series Side Mount Drive Package for Light Load 50 Hz Gearmotors

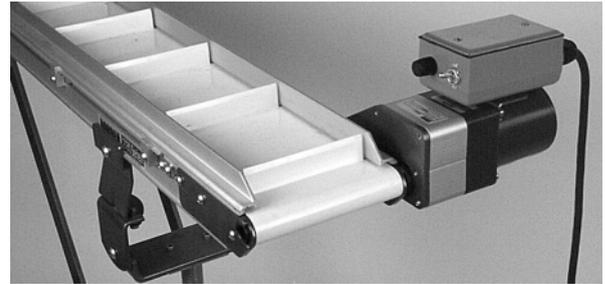
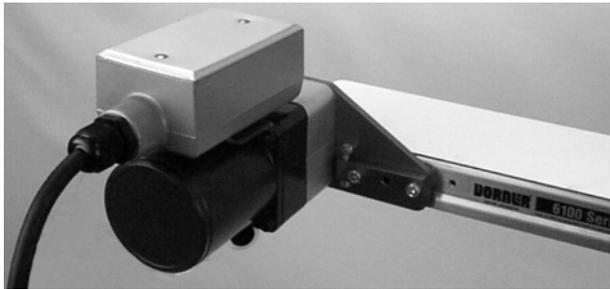


Table of Contents

Warnings – General Safety	2	Preventative Maintenance & Adjustment	6
Introduction	2	Required Tools	6
Product Description	3	Timing Belt Tensioning	6
Specifications	3	Timing Belt Replacement	6
Installation	4	Drive or Driven Pulley Replacement	6
Required Tools	4	Gearmotor Replacement	7
Mounting	4	Service Parts	9
		Return Policy	10

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>		

	WARN-
<p>Gearmotor parts 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>	

	WARN-
<p>Exposed rotating 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>	

	WARN-
<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 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 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	Belt Tensioner
E	Cover
F	Timing Belt
G	Drive Pulley
H	Driven Pulley

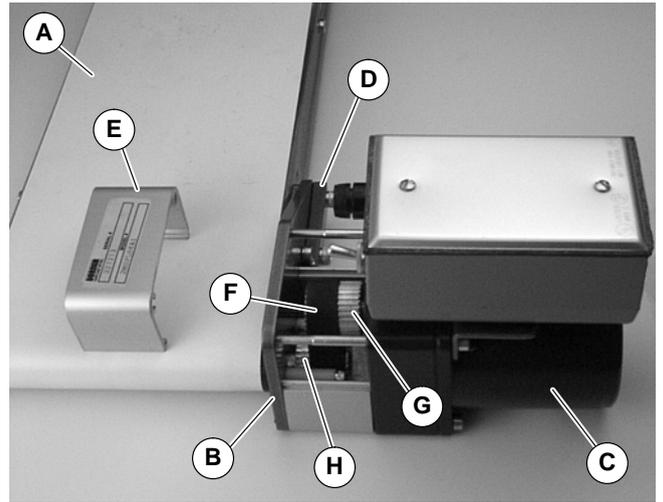
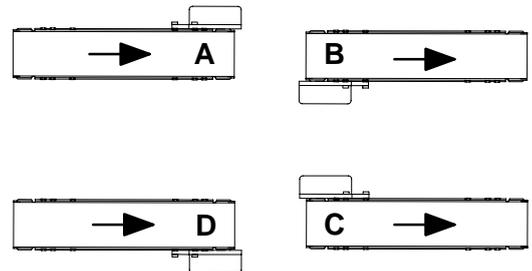
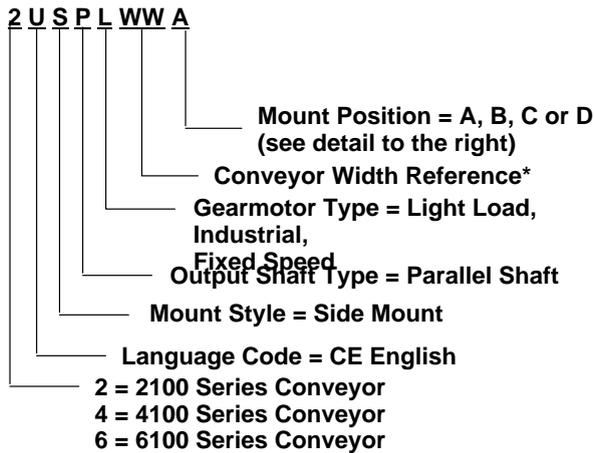


Figure 1

Specifications

Gearmotor Mounting Package Models:

Example:



* See "Ordering and Specifications" Catalog for details.

Table 1: Gearmotor Specifications

	Single Phase	Three Phase
Output Power	0.022 kw	0.02 kw
Input Voltage	230 Volts A.C.	230/400 Volts A.C.
Input Frequency	50 Hz	
Full Load Amperes	0.31 Amperes	0.22/0.13 Amperes
Gearmotor Ratios	8:1 and 28.1:1	
Protection Ratings	IP44	

Specifications

Table 2: Belt Speeds for Light Load Fixed Speed Parallel Shaft 50 Hz Gearmotors

Gearmotors			Belt Speed M/min
Part Number	RPM	N-m	
62U028PL4(vp)FN	41	2.6	4
62U008PL4(vp)FN	144	0.9	13

(vp) = voltage and phase
 21 = 230 V, 1-phase
 23 = 230 V, 3-phase
 43 = 400 V, 3-phase

NOTE: 203 through 610 mm wide conveyors with light load drives should be limited to 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

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

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)

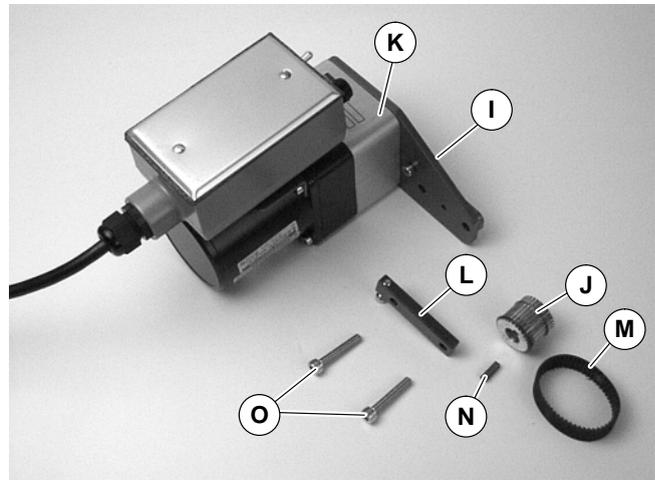


Figure 2

NOTE: 6100 conveyor shown, 2100 & 4100 similar.

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

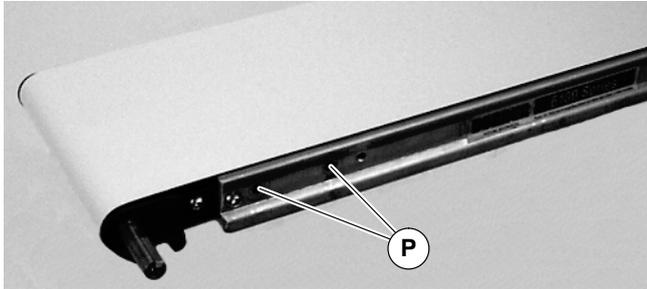


Figure 3

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

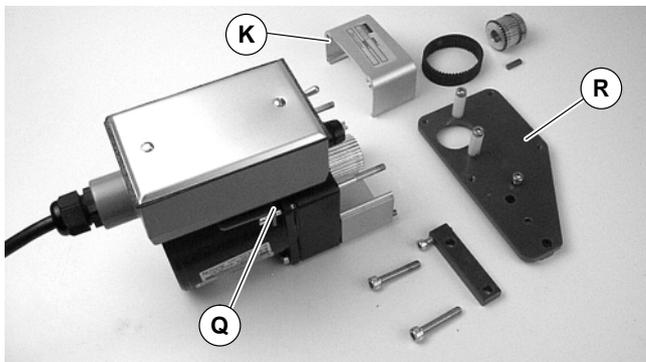


Figure 4

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

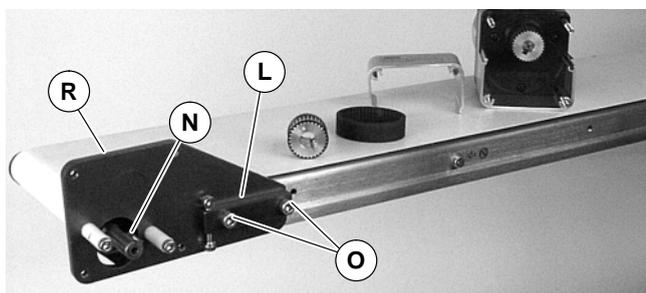


Figure 5



6. Install key (N of Figure 5).

7. Install driven pulley (J of Figure 6). Tighten two (2) set screws to 3.7 Nm.

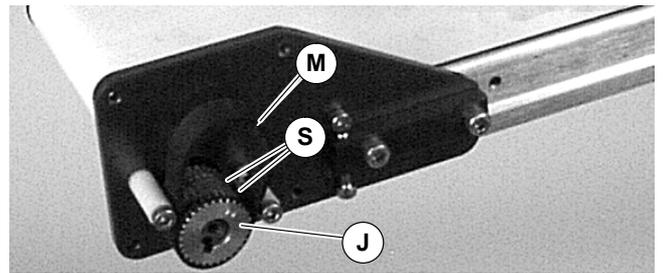


Figure 6

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

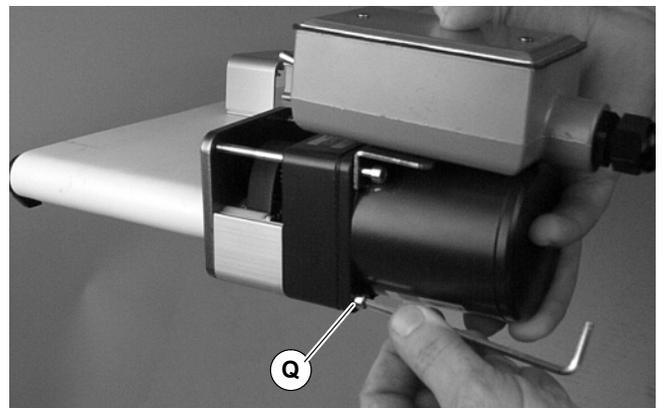


Figure 7

10. Insert top cover (K of Figure 8) into bottom cover. Attach top cover with two (2) top screws (Q). Tighten to 5 Nm.

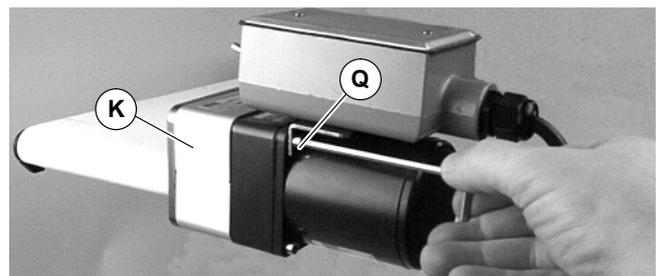


Figure 8

11. Tighten timing belt tensioner screw (T of Figure 9) to 1.7 Nm.

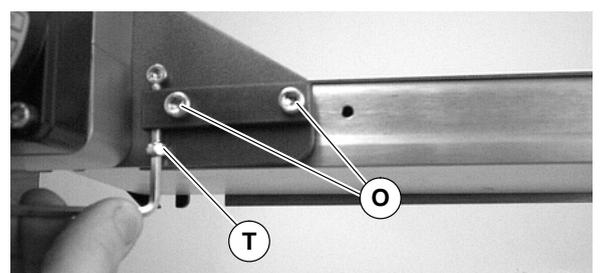


Figure 9

12. Tighten screws (O) to 9 Nm.

Preventive Maintenance and Adjustment

Required Tools

- Hex key wrenches
– 2 mm, 3 mm & 5 mm
- Torque wrench

Timing Belt Tensioning



1. Loosen two (2) screws (O of Figure 10). Tighten timing belt tensioner screw (T) to 1.7 Nm.

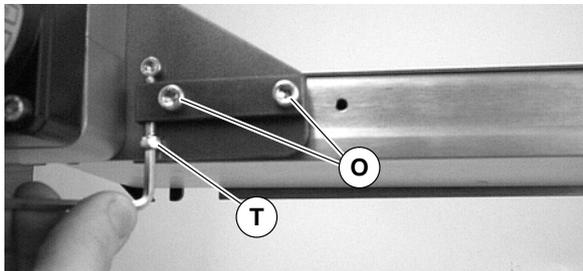


Figure 10

2. Tighten screws (O) to 9 Nm.

Timing Belt Replacement



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

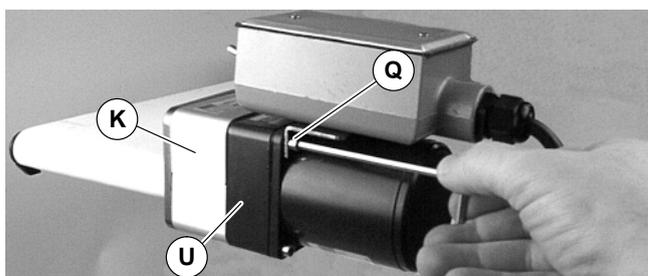


Figure 11

4. Remove old timing belt (M of Figure 12).

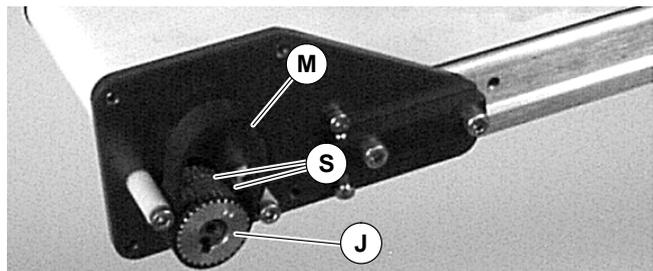


Figure 12

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 (Q of Figure 7). Tighten to 5 Nm.

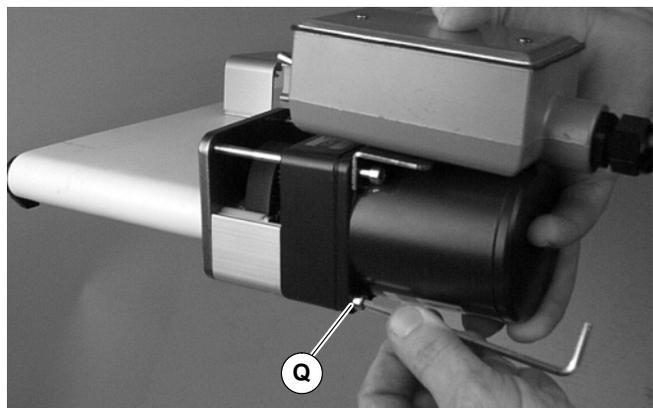


Figure 13

7. Insert top cover (K of Figure 11) into bottom cover. Mount assembly with two (2) top screws (Q). Tighten to 5 Nm.
8. Tighten timing belt tensioner screw (T of Figure 10) to 1.7 Nm.
9. Tighten screws (O) to 9 Nm.

Drive or Driven Pulley Replacement



1. Complete steps 1 through 4 of “Timing Belt Replacement” section on this page.

Preventive Maintenance and Adjustment

- Loosen set screws (V of Figure 14) and remove driven pulley (J) or drive pulley (W).

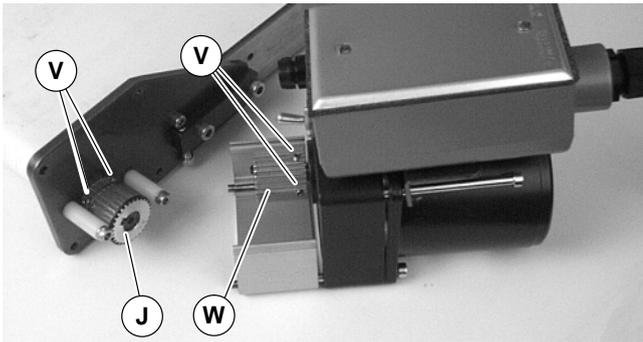


Figure 14

- Replace drive or driven pulley. Tighten set screws to 3.7 Nm.
- Complete steps 5 through 9 of “Timing Belt Replacement” section on page 6.

Gearmotor Replacement

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

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

- For single phase motor:

NOTE: Single phase gearmotor shown, three phase similar.

- Loosen terminal box screws (X of Figure 15) and remove cover (Y).

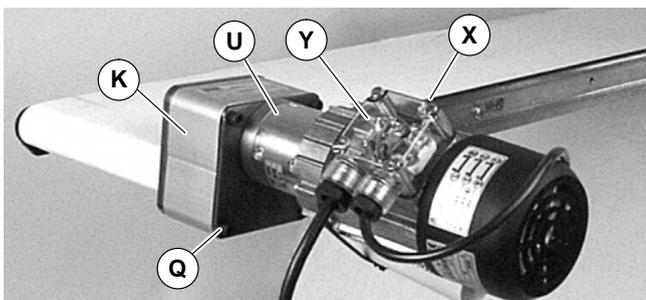


Figure 15

- Record wire colors on terminals U1, W1 and ground (\perp) (Figure 16). Loosen terminals U1, W1 and ground and remove wires.

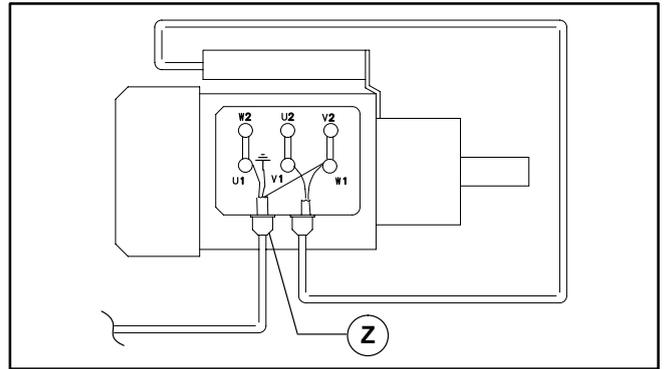


Figure 16

- Loosen cord grip (Z of Figure 16) and remove cord.
- For three phase motor:

- Loosen terminal box screws (X of Figure 15) and remove cover (Y).
- Record wire colors on terminals U1, V1, W1 and ground (\perp) (Figure 17). Loosen terminals U1, V1, W1 and ground and remove wires.

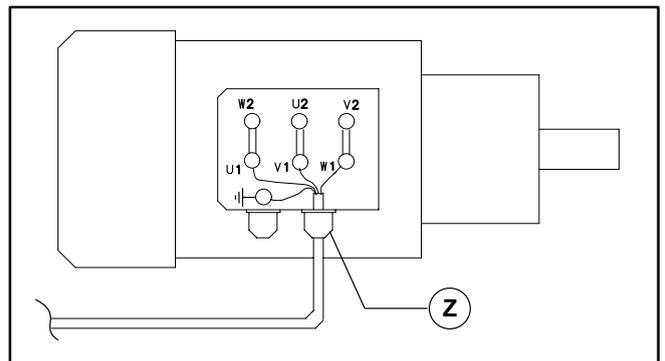


Figure 17

- Loosen cord grip (Z of Figure 17) and remove cord.
- Remove four (4) screws (Q of Figure 15). Remove gearmotor (U) and top cover (K).

Preventive Maintenance and Adjustment

- Loosen two (2) set screws (V of Figure 18). Remove drive pulley (W).

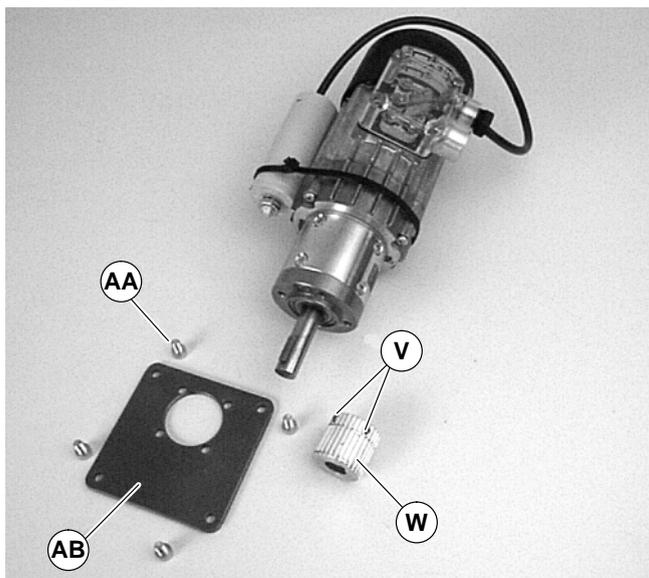


Figure 18

- Remove four (4) screws (AA) and detach adapter plate (AB).
- Mount adapter plate (AB) to new gearmotor with four (4) screws (AA). Tighten to 5 Nm.
- Replace drive pulley (W) and tighten set screws (V) to 3.7 Nm.
- Complete steps 5 through 9 of “Timing Belt Replacement” section on page 6.
- Replace wiring:
 - For a single phase motor, reverse step 1 on page 7.
 - For a three phase motor, reverse step 2 on page 7.

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

NOTE: Single phase gearmotor shown, three phase similar.

Item	Part No.	Part Description
1	62U028PL421	Gearmotor, 22 W, 230 Volts, 41 RPM, 50 Hz, 1-Phase, 28:1
	62U008PL421	Gearmotor, 22 W, 230 Volts, 144 RPM, 50 Hz, 1-Phase, 8:1
	62U028PL423	Gearmotor, 20 W, 230Volts, 41 RPM, 50 Hz, 3-Phase, 28:1
	62U008PL423	Gearmotor, 20 W, 230 Volts, 144 RPM, 50 Hz, 3-Phase, 8:1
	62U028PL443	Gearmotor, 20 W, 400 Volts, 41 RPM, 50 Hz, 3-Phase, 28:1
	62U008PL443	Gearmotor, 20 W, 400 Volts, 144 RPM, 50 Hz, 3-Phase, 8:1
2	814-088	Timing Belt, 3mm x 15 mm
3	450077M	Drive Pulley, 12 mm Bore
4	807-1070	Drive Pulley Woodruff Key
5	450077M	Driven Pulley, 12 mm Bore
6	980422M	Driven Pulley Key, 4 mm x 22 mm

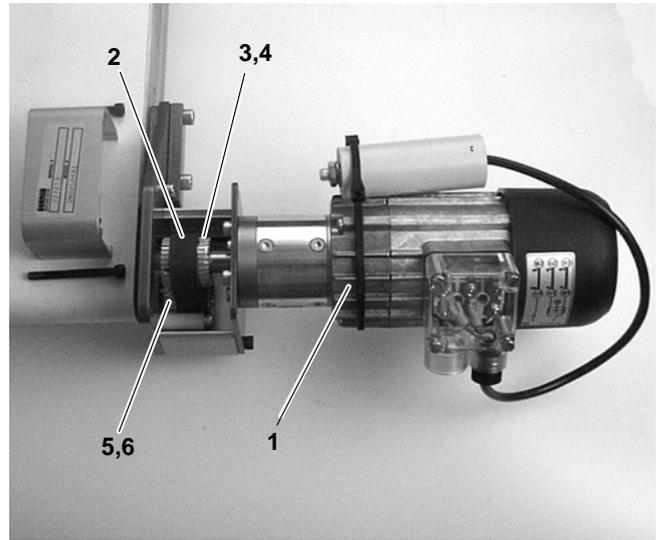


Figure 19

Return Policy

No returns will be accepted without prior written factory authorization. When calling for authorization, please have the following information ready for the Dornier 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. Dornier 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 Dornier 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.

Dornier has representatives throughout the world. Feel free to contact Dornier for the name of your local representative. Our technical sales and service staff will gladly help with your questions on Dornier products.

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

DORNER[®]

Dornier 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. ©Dornier Mfg. Corp. 2000

DORNER MFG. CORP.

975 Cottonwood Ave. 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

1-262-867-5827

DORNER

Arnold-Sommerfeld-Ring 2
D-52499 Baesweiler

Germany

TEL (02401) 80 52 90

FAX (02401) 80 52 93

Internet: www.dornier.com