

3200 Series Flat Belt LPZ Conveyors

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's Limited Warranty applies.

Dorner 3200 series conveyors are covered by Patent Numbers 5,156,260, 6,871,737B2, 6,910,571B1, 6,971,509B2, and corresponding patents and patent applications in other countries.

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



Product Description

Refer to Figure 1 for typical conveyor components.

- A Conveyor
- B Gearmotor Mounting Package
- C Gearmotor
- D Guiding & Accessories
- E Mounting Brackets
- F Knuckle
- G Support Stand
- H Drive End
- I Idler/Tension End



Figure 1

Specifications

Models:

Flat Belt LPZ Series End Drive Conveyor



* See "Ordering and Specifications" Catalog for details.

Conveyor Supports:

Maximum Distances:

J = 24" (610 mm) (Drive End)

K = 12 ft (3658 mm)

L = 36" (914 mm) (Idler End)

Maximum Angle:

M = 0 to 35 degrees



Figure 2

Specifications

Specifications:

Conveyor Width Reference (WW)	04	05	06	08	10	12	18	24	30	36	48
Conveyor Belt Width	3.75" (95mm)	5" (127mm)	6" (152mm)	8" (203mm)	10" (254mm)	12" (305mm)	18" (457mm)	24" (609mm)	30" (762mm)	36" (915mm)	48" (1220mm)
Maximum Conveyor Load* (See NOTE Below)	42 lb (19 kg)	50 lb (23 kg)	60 lb (27 kg)	70 lb (32 kg)	80 lb (36 kg)	80 lb (36 kg)	80 lb (36 kg)	400 lb (181kg)	400 lb (181kg)	400 lb (181kg)	400 lb (181kg)
Conveyor Start-up Torque*	6 in-lb (0.7Nm)	7 in-lb (0.8 Nm)	8 in-lb (0.9Nm)	10 in-lb (1.1 Nm)	12 in-lb (1.4Nm)	14 in-lb (1.5Nm)	15 in-lb (1.7Nm)	30 in-lb (3.9Nm)	35 in-lb (3.9Nm)	38 in-lb (4.2Nm)	40 in-lb (4.4Nm)
Conveyor Section Length Reference (LLLL)	0200 to 3800 in 0001 increments (2 ft to 38 ft in 0.12" increments)										
Total Conveyor Length	4 ft (1219mm) to 40 ft (12192mm) in 0.12" (0.31mm) increments										
Belt Travel	9.7" (246 mm) per revolution of pulley										
Maximum Belt Speed*	421 ft/minute (128 m/minute)										
Belt Takeup	1.62" (41 mm) of Belt Takeup on Conveyors Under 20' Length 3.24" (82 mm) of Belt Takeup on Conveyors Over 20' Length										

NOTE

Maximum conveyor loads based on:

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

A WARNING



LPZ Series Conveyors are not reversible. Reversing creates pinch points which can cause severe injury.

DO NOT REVERSE LPZ SERIES CONVEYORS.

NOTE

Conveyor MUST be mounted straight, flat and level within confines of conveyor. Use a level (Figure 3, item N) for setup.



Figure 3

Required Tools

- Hex-key wrenches: 4 mm, 5 mm
- Level
- Torque wrench
- 8mm hex, open end wrench

Recommended Installation Sequence

- Install support stands (see accessory instructions)
- Assemble conveyor (if required)
- Attach mounting brackets to conveyor (see page 8 for instructions)
- Adjust angle (see page 16 for instructions)
- Attach conveyor to stands
- Install return rollers on conveyor (see page 9 for instructions)
- Mount gearmotor mounting package (see accessory instructions)
- Attach guides/accessories (see page 32 through page 41 of "Service Parts" section for details)

Conveyors Up to 13 ft (3962 mm)

No assembly is required. Install mounting brackets and return rollers. Refer to "Mounting Brackets" on page 8 and "Return Rollers" on page 9.

Conveyors Longer Than 13 ft (3962 mm)

Installation Component List:

1. Locate and arrange conveyor sections by section labels (Figure 4, item P).

0	Conveyor frame

P Section Label



Figure 4

2. On tension end of the conveyor, identified by the pinion locking screw (Figure 5, item T), push in head plate assembly (V): Loosen the pinion locking screw (T), adjust the pinion torque screw (Figure 6, item W). On both sides of conveyor, loosen the two tail clamp bolts (Figure 5, item U), and push head plate assembly (V) inward.



Figure 5

Installation





 Roll out conveyor belt (Figure 7, item Q). Loosen (4) screws (X) on both sides of knuckle (R). Slide frame (P) into knuckle (R). Tighten screws (X) to 60 in-lb (7 N– m) on both sides of conveyor.



Figure 7

 Join additional conveyor sections if necessary and install connector brackets (Figure 8, item Y) or connector/mount brackets (YA) and screws (Z) on both sides as indicated. Tighten screws to 60 in-lb (7 Nm).



Figure 8

5. Slide belt (Figure 9, item Q) over assembled conveyor sections (AA).



Figure 9

- 6. Tension conveyor belt, refer to Conveyor Belt Tensioning on page 14.
- 7. Install mounting brackets and return rollers. Refer to page 8
- 8. Adjust conveyor angle. See "Conveyor Angle Adjustment" on page 16.

Mounting Brackets

1. Locate brackets. Exploded views shown in Figure 10.



Mounting Brackets for Flat Belt Conveyor

Figure 10

- 2. Remove screws (Figure 10, item AB & AC), washers (AD), nuts (AE) and T-bars (AF) from brackets.
- Insert T-bars (Figure 10, item AF) into conveyor side slots (Figure 11, item AF). Fasten brackets (Figure 11, item AG) to conveyor with mounting screws (AB).

Installation



Figure 11

- 4. Fasten brackets to support stand with mounting screws (Figure 11, item AC), washers (AD) and nuts (AE).
- 5. Tighten screws (Figure 11, item AB & AC) to 60 in-lb (7 Nm).

Return Rollers

4–6" (51–152 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded view shown in Figure 12.



Figure 12

2. Remove screws (Figure 12, item AH) and clips (AI) from roller assembly.

3. Install roller assemblies (Figure 13, item AJ) as shown. Tighten screws (AH) to 60 in-lb (7 Nm).



Figure 13

8–48" (203–1219 mm) Wide Flat Belt Conveyors

1. Locate return rollers. Exploded view shown in Figure 14.



Figure 14

- 2. Remove screws (Figure 14, item AK) and clips (AL) from roller assembly.
- 3. Install roller assembly as shown (Figure 15, item AM). Tighten screws (AK) to 60 in-lb (7 Nm).



Figure 15

Required Tools

Standard Tools

- Hex-key wrenches: 2.5 mm, 4 mm, 5 mm
- 8mm hex, open end wrench

Checklist

- Keep service parts on hand (see "Service Parts" section for recommendations)
- Keep supply of belt cleaner
- Clean entire conveyor and knurled pulley while disassembled
- · Replace worn or damaged parts

Lubrication

No lubrication is required. Replace bearings if worn.

Maintaining Conveyor Belt

Troubleshooting

Inspect conveyor belt for:

- Surface cuts or wear
- Stalling or slipping
- Damage to V-guide

Surface cuts and wear indicate:

- Sharp or heavy parts impacting belt
- Jammed parts
- Improperly installed bottom wipers (if installed)
- Accumulated dirt in wipers (if installed)
- Foreign material inside the conveyor
- · Improperly positioned accessories
- · Bolt-on guiding is pinching belt

Stalling or slipping indicates:

- Excessive load on belt
- Conveyor belt or drive timing belt are not properly tensioned
- · Worn knurl or impacted dirt on drive pulley
- Intermittent jamming or drive train problems

Damage to V-guide indicates:

- · Twisted or damaged conveyor frame
- · Dirt impacted on pulleys
- Excessive or improper side loading

Cleaning

Use Dorner Belt Cleaner. Mild soap and water may also be used. Do not soak the belt.

For /05 woven polyester and /06 black anti-static belts, use a bristled brush to improve cleaning.

Conveyor Belt Replacement

A WARNING



Exposed moving parts can cause severe injury.

LOCK OUT POWER before removing guards or performing maintenance.

Conveyor Belt Replacement Sequence

Release Tension

Remove old conveyor belt:

- Conveyor without Stands or Gearmotor Mounting Package
- Conveyor with Stands and Gearmotor Mounting Package
- Install new conveyor belt
- · Tension conveyor belt

Belt Removal for Conveyor Without Stands or Gearmotor Mounting Package

- 1. If equipped, remove return rollers and guiding and accessories from one side of conveyor.
- 2. On tension end of the conveyor, identified by the pinion locking screw (Figure 16, item T), push in head plate assembly (V): Loosen the pinion locking screw (T), adjust the pinion torque screw (Figure 17, item W). On both sides of conveyor, loosen the two tail clamp bolts (Figure 16, item U), and push head plate assembly (V) inward.



Figure 16



Figure 17

3. Remove screws (Figure 18, item AN) on both sides of knuckle and remove guard (AO).



Figure 18

4. Push in hex posts (Figure 19, item AP) and remove roller (AQ).



Figure 19

5. Remove belt (Figure 20, item AR) from conveyor.





Figure 20

Belt Removal for Conveyor With Stands and Gearmotor Mounting Package



PROVIDE SUPPORT UNDERNEATH THE GEARMOTOR WHEN CHANGING THE BELT

1. Place temporary support stands (Figure 21, item AS) at both ends of the conveyor. Place an additional support stand under the drive motor (AT), if equipped. See WARNING.



Figure 21

- 2. Remove mounting brackets (Figure 21, item AU) from one side of conveyor. (Reverse steps 3 & 4 of "Mounting Brackets" section on page 8).
- 3. If equipped, remove return rollers, guiding and accessories from side opposite drive cover.
- 4. On tension end of the conveyor, identified by the pinion locking screw (Figure 22, item T), push in head plate assembly (V): Loosen the pinion locking screw (T), adjust the pinion torque screw (Figure 23, item W). On both sides of conveyor, loosen the two tail clamp bolts (Figure 22, item U), and push head plate assembly (V) inward.



Figure 22



Figure 23

5. Remove screws (Figure 24, item AN) on both sides of knuckle and remove guard (AO).



Figure 24

6. Push in hex posts (Figure 25, item AP) and remove pulley (AQ).



Figure 25

7. Remove belt (Figure 26, item AR) from conveyor.



Figure 26

Belt Installation for Conveyor without Stands or Gearmotor Mounting Package

 Orient belt so splice leading fingers (Figure 27, item AV) point in the direction of belt travel as identified by the conveyor directional label (AW).



Figure 27

- 2. Slide belt onto the conveyor frame assembly.
- 3. Install spring loaded return pulley (Figure 28, item AQ) into knuckle plate (AX).



Figure 28

 Install knuckle guard (Figure 29, item AO) with screws (AN) on both sides of knuckle. Tighten screws to 25 in– lbs (3 N–m).



Figure 29

- 5. Tension belt. Refer to "Conveyor Belt Tensioning" on page 14.
- 6. If equipped, install wipers, return rollers and guiding.

Belt Installation for Conveyor with Stands and Gearmotor Mounting Package



- Ensure temporary support stands (Figure 21, item AS) are placed at both ends of the conveyor. Place an additional support stand under the drive motor (AT), if equipped. See WARNING.
- 2. Orient belt so splice leading fingers (Figure 27, item AV) point in the direction of belt travel as identified by the conveyor directional label (AW).
- 3. Install belt (Figure 30, item AR) on conveyor. Lift conveyor slightly to avoid pinching belt on temporary support stands.



Figure 30

- 4. Re-install conveyor mounting brackets. Refer "Mounting Brackets" on page 8, steps 3 through 5.
- 5. Install spring loaded return pulley (Figure 31, item AQ) into knuckle plate (AX).



Figure 31

 Install knuckle guard (Figure 32, item AO) with screws (AN) on both sides of knuckle. Tighten screws to 25 in– lbs (3 N–m).



Figure 32

- 7. Tension belt. Refer to "Conveyor Belt Tensioning" on page 14.
- 8. If equipped, re-install return rollers and guiding.

Conveyor Belt Tensioning



 On tension end of the conveyor, identified by the pinion locking screw (Figure 33, item T), loosen the two tail clamp bolts (U), on both sides of conveyor.



Figure 33

 With 5mm hex wrench, hold pinion torque screw (Figure 34, item W). Loosen the pinion locking screw (Figure 33, item T) and turn the pinion torque screw (W) to extend head plate assembly.



Figure 34

NOTE

On pinion gear, do not exceed a torque of 100 in-lb (11.3 N-m). Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.

3. Extend head plate assembly until proper tension in the belt is achieved. If proper tensioning can not be obtained before the belt life indicator is all black (Figure 35, item BA) the belt must be replaced.



Figure 35

- After adjusting proper tensioning, tighten the pinion locking screw (Figure 33, item T) to 69 in–lbs (7.8 N– m), and tighten tail clamp bolts (Figure 33, item U) on both sides of conveyor to 146 in-lb (16.5 N–m).
- 5. If belt tracking is necessary, refer to "Conveyor Belt Tensioning" on page 14.

Conveyor Belt Tracking

V-Guided Belts

V-guides on belts help maintain proper belt tracking. Track as needed to reduce belt bulge from center of belt (Figure 36). See steps below in "Non V-guided Belts" procedure for adjusting for any belt bulging. Belt bulge will be minimal when belt is properly tracked.



Figure 36

Non V-Guided Belts

Non V-guided belt conveyors are equipped with belt tracking assemblies.

When adjusting belt tracking, always adjust the discharge end of the conveyor first. To adjust belt tracking:

- Ensure tensioning racks are extended and touching the idler pulley headplates: loosen the pinion locking screw (Figure 33, item T) and rotate the pinion torque screw (Figure 34, item W) clockwise until contact with the head plate is made, then tighten the pinion locking screw (T) to 69 in–lbs (7.8 N–m)
- 2. On the side of conveyor to be adjusted, loosen two (2) tail clamp screws (Figure 37, item U).

With the conveyor running, use wrench (Figure 38, item BB) to rotate the tracking screw (Figure 39, item BC) in small increments until the belt tracks in the center of the conveyor.



Figure 38



Figure 39

4. Re-tighten the head plate fastening screws (Figure 40, item U) with a 5 mm hex-key wrench to 100 in-lb (12 Nm).



Figure 37



Figure 40

Conveyor Angle Adjustment



1. Place temporary support (Figure 41, item BD) under conveyor sections.



Figure 41

2. Loosen screws (Figure 42, item BE) on both sides of knuckle.



Figure 42

3. Move conveyor to desired angle as indicated by angle label (Figure 43, item BF).



Figure 43

4. Tighten screws (Figure 42, item BE) on both sides of knuckle to 100 in–lbs (12 N–m).

Pulley Removal



Remove conveyor belt to access pulley(s). See "Conveyor Belt Replacement" on page 10. Remove the desired pulley following the corresponding instructions below:

- A Idler Pulley Removal
- **B** Drive Pulley Removal
- C Transfer Tail Pulley Removal
- D Knuckle Idler Pulley Removal
- E Knuckle Return Roller Removal

A – Idler Pulley Removal

1. Temporarily support the idler pulley.



Figure 44

 On one side of conveyor, loosen the two (2) back fastening screws (Figure 45, item U) and remove two (2) front fastening screws (BG).



Figure 45

3. Pull back the outer headplate (Figure 46, item V) and remove the inner spacer (BH).



Figure 46

4. Slide the idler pulley assembly (Figure 47, item BI) out of the headplate on the opposite side.



Figure 47

5. Remove the pulley shaft assembly: remove the clip ring (Figure 48, item BJ) and washer (BK) from one side of the pulley assembly.



Figure 48

6. Slide the shaft assembly (Figure 49, item BL) out of the pulley (BI).





B – Drive Pulley Removal



- Top and Bottom Mount Drives
- Side Mount Drives

Top and Bottom Mount Drives

a. Use a temporary support (Figure 50, item BM) to support Gearmotor.



Figure 50

b. Remove four (4) screws (Figure 51, item BN) and remove cover (BO).





c. Loosen tensioner (Figure 52, item BP).



Figure 52

d. Remove taper-lock screws (Figure 53, item BR) on the driven pulley (Figure 52, item BQ). Insert one (1) of taper lock screws (Figure 53, item BR) in remaining hole (BS). Tighten screw (BR) until pulley is loose. Remove pulley, taper hub assembly and timing belt.



Figure 53

e. Remove four (4) M5 mounting screws (Figure 54, item BT) and two (2) M8 mounting screws (BU).



Figure 54

f. Remove gearmotor and mounting plate assembly (Figure 54, item BV).

Side Mount Drives

- a. Temporarily support Gearmotor
- b. Loosen the four (4) lock screw (Figure 55, item BW).



Figure 55

c. Rotate and remove the gear motor and guard assembly (Figure 56, item BX).



Figure 56

d. Remove the four (4) lock screws (Figure 57, item BW) and the short side drive guard (BY).



Figure 57

2. Temporarily support the drive pulley.



Figure 58

3. Remove four shaft cover screws (Figure 59, item BZ). Remove the shaft cover (CA).



Figure 59

4. Loosen the bearing collar set screw (Figure 60, item CB) and remove bearing collar (CC). Repeat on drive shaft side of pulley (Figure 61, item CB & CC).



Figure 60



Figure 61

NOTE

When reassembling, tighten the bearing collar set screws to 52 in-lbs (6 Nm). Check after 24 hours of conveyor use.

5. On the drive headplate, remove two (2) screws (Figure 62, item U).



Figure 62

6. Remove the outer headplate assembly (Figure 63, item CD), and inner spacer (BH).



Figure 63

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7. Slide the drive pulley (Figure 64, item CE) out of the headplate on the opposite side.



Figure 64

C – Transfer Tail Pulley Removal

1. Temporarily support the transfer tail assembly.



Figure 65

2. On one side of conveyor, loosen the two (2) back fastening screws (Figure 66, item U), and remove the two (2) front fastening screws (BG).



Figure 66

3. Pull back the outer headplate (Figure 67, item V) and remove the inner spacer (BH).



Figure 67

4. Slide the transfer tail pulley assembly (Figure 68, item CF) out of the headplate on the opposite side.

NOTE

On pinion gear, do not exceed a torque of 100 in-lb (11.3 N–m). Over tensioning the conveyor belt could cause excessive pulley bearing load and early failure.



Figure 68

5. Remove hex nuts (Figure 69, item CG).



Figure 69

6. Remove support plates (Figure 70, item CH) and washers (CI).



Figure 70

7. Remove pulleys (Figure 71, item CJ) and additional washers (CK).



Figure 71

8. To remove additional pulleys, repeat steps 6 through 7.

D – Knuckle Idler Pulley Removal

- 1. Remove knuckle return roller and guard see "Knuckle Return Roller Removal" on page 23.
- 2. Temporarily support the knuckle idler pulley.



Figure 72

3. On one side of knuckle, remove screws (Figure 73, item CL) and knuckle plate assembly (CM).



Figure 73

4. Slide the idler pulley assembly (Figure 74, item CN) out of the knuckle plate on the opposite side.



Figure 74

5. Remove the pulley shaft assembly: remove the clip ring (Figure 75, item BJ) and washer (BK) from one side of the pulley assembly.



Figure 75

6. Slide the shaft assembly (Figure 76, item BL) out of the pulley (CN).



Figure 76

E – Knuckle Return Roller Removal

1. Remove screws (Figure 77, item AN) on both sides of knuckle and remove guard (AO).



Figure 77

2. Push in hex posts (Figure 78, item AP) and remove pulley (AQ).



Figure 78

Bearing Replacement



- A Idler Bearing
- **B** Drive Bearing
- C Transfer Tail Bearing
- D Knuckle Idler Bearing
- E Knuckle Return Roller Bearing

A – Idler Bearing Replacement

The bearings in a 3200 Series Idler Pulley can not be removed. Replace the entire pulley assembly when worn.

B – Drive Bearing Removal and Replacement



Removal

1. Turn bearing (Figure 79, item CO) to align with slots (CP) in bearing housing. Then remove bearing.





Replacement

- 1. Inspect bearing housing bearing surface. If worn or damaged, replace. See "Service Parts" on page 26.
- 2. Insert bearing (Figure 80, item CO) into housing slot (CP). Locate anti–rotation nub (CQ) to align with slot (CR), and twist bearing into housing.



Figure 80

C – Transfer Tail Bearing Replacement

The bearings in a 3200 Series Transfer Tail Pulley can not be removed. Replace the entire pulley assembly when worn.

D – Knuckle Idler Bearing Replacement

The bearings in a 3200 Series Knuckle Idler Pulley can not be removed. Replace the entire pulley assembly when worn.

E – Knuckle Return Roller Bearing Replacement

The bearings in a 3200 Series Knuckle Return Roller can not be removed. Replace the entire roller assembly when worn.

Pulley Replacement

Idler Pulley

To replace the idler pulley, reverse the "Idler Pulley Removal" procedure on page 17.

Drive Pulley

To replace the drive pulley, reverse the "Drive Pulley Removal" procedure on page 18.

Transfer Tail Pulley

To replace the transfer tail pulley, reverse the "Transfer Tail Pulley Removal" procedure on page 21.

Knuckle Pulley

To replace the knuckle pulley, reverse the "Knuckle Pulley Removal" procedure on page 22.

Knuckle Return Roller

To replace the knuckle return roller, reverse the "Knuckle Return Roller Removal" procedure on page 23.

Notes

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.

Drive End Tail Assembly



ltem	Part Number	Description
1	300139	Shaft Cover
2	300885	Bearing Retainer
3	301048	Drive Tail Cover Plate
4	301083	3" Inner Tail Plate
5	301088	Tail Bar Clamp
6	301196	Hex Tension Tracking Shaft
7	3202 <u>WW</u>	Tail Articulation Bar
8	3286 <u>WW</u>	Knurled Drive Spindle Assy.
	3288 <u>WW</u>	Lagged Drive Spindle Assy.
9	802–135	D–Lok Bearing
10	807–1151	Retaining Ring
11	807–1152	Hex Head Cap Screw M6 x 20 mm
12	920612M	Socket Head Screw M6 x 12 mm
13	950816M	Low Head Cap Screw M8 x 16 mm
14	950825M	Low Head Cap Screw M8 x 25 mm

ltem	Part Number	Description	
15 D	32D	Drive Spindle Bearing Kit (Includes Items 2, 9 and 12)	
16	32KD– <u>WW</u>	Knurled Spindle Kit (Includes Items 2, 8, 9 and 12)	
	32LD– <u>WW</u>	Lagged Spindle Kit (Includes Items 2, 8, 9 and 12)	
17	32KDTA– <u>WW</u>	Knurled Tail Assy. Position A and B (Includes items 1 through 5, 7 through 9 and 12 through 14)	
	32KDTD– <u>WW</u>	Knurled Tail Assy. Position C and D (Includes items 1 through 5, 7 through 9 and 12 through 14)	
18	32LDTA– <u>WW</u>	Lagged Tail Assy. Position A and B (Includes items 1 through 5, 7 through 9 and 12 through 14)	
	32LDTD- <u>WW</u>	Lagged Tail Assy. Position C and D (Includes items 1 through 5, 7 through 9 and 12 through 14)	
<u>WW</u> = Conveyor width reference: 04 – 48 in 02 increments			

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Transfer Tail Assembly



ltem	Part Number	Description
1	301082	Nosebar Cover Plate
2	301084	1" Inner Tail Plate
3	301088	Tail Bar Clamp Transfer
4	301090	Tail Support Plate
5	301196	Hex Tension Tracking Shaft
6	301352	Nut, E-ring, Brace
7	301354	Inner Transfer Tail Support Plate
8	3202 <u>WW</u>	Tail Articulation Bar
9	3217 <u>WW</u>	1" Idler Tail Axle Shaft
10	3219 <u>WW</u>	Support Bar
11	3237 <u>WW</u>	Transfer Tail Roller – (Qty. = 4 for 04–
		24 Wide, 8 for 26–48 Wide)
12	807–1136	Washer
13	807–1151	Retaining Ring

Item	Part Number	Description	
14	807–1152	Hex Head Cap Screw M6 x 20 mm	
15	910–203	3/8" Hex Nut	
16	915–319	Retaining Ring	
17	920408M	Hex Head Cap Screw M4 x 8 mm	
18	950816M	Low Head Cap Screw M8 x 16 mm	
19	32T1– <u>WW</u>	1" Idler Spindle Kit (includes items 6, 9, 11, 12, 15 and 16)	
20	32TT1– <u>WW</u>	Tail Assembly (includes items 1 through 4, 6 through 12, 15 through 18)	
<u>WW</u> =	WW = Conveyor width reference: 04 - 48 in 02 increments		

Idler End Assembly



ltem	Part Number	Description
1	301049	Idler Cover Plate
2	301083	Inner 3" Tail Plate
3	301088	Tail Bar Clamp
4	3282 <u>WW</u>	Idler Spindle Wand Assembly (includes items 8 and 11)
5	301196	Hex Tension Tracking Shaft
6	3202 <u>WW</u>	Tail Articulation Bar
7	3289 <u>WW</u>	3" Idler Pulley
8	605280P	Hard Washer
9	807–1151	Tracking Shaft Retaining Ring
10	807–1152	Hex Head Cap Screw M6 x 20 mm
11	915–235	Stub Shaft Retaining Ring
12	950816M	Low Head Cap Screw M8 x 16 mm
13	32T3– <u>WW</u>	Idler Spindle Kit
D		(includes items 4 and 7)
14	32TT3– <u>WW</u>	Tail Assembly (including items 1 through 4, 6, 7 and 12)
<u>WW</u> = Conveyor width reference: $04 - 48$ in 02 increments		

Knuckle Assembly



Item	Part Number	Description
1	300657	Slots Pointer Cover Disc
2	301155	Short LPZ Cover Plate
3	301156	Flat Upper Outside Plate
4	301160	LPZ Inside Pivot Plate
5	301223	LH Angle Label 0–35
6	301224	RH Angle Label 0–35
7	3225 <u>WW</u>	Return Roller Cover
8	3276 <u>WW</u>	Belt Support Rail Assy
9	3285 <u>WW</u>	LPZ–CD Idler Pulley Assy (includes
		items 15 and 16)

ltem	Part Number	Description
10	300150M	Drop In Tee Bar
11	3252 <u>WW</u>	Return Roller
12	920516M	Socket Head Screw M5 x 16 mm
13	920612M	Socket Head Screw M6 x 12 mm
14	950612M	Low Head Cap Screw M6 x 12 mm
15	3289 <u>WW</u>	3" Idler Pulley
16	3283 <u>WW</u>	Idler Shaft Assembly
17	915–235	Retaining Ring
18	LPZNO- <u>WW</u>	Nose-over Knuckle Kit (includes items 11, 15, 16 and 17)
<u>WW</u> = Conveyor width reference: $04 - 48$ in 02 increments		

Frame Assembly



ltem	Part Number	Description	
1	240420	Rack Gear	
2	301091	Pinion Bearing	
3	605279P	Washer	
4	920484M	Flange Torx Screw, M4 x 16 mm	
5	920616M	Socket Head Screw M6 x 16 mm	
6	950616M	Low Head Cap Screw M6 x 16 mm	
7	3245 <u>WW</u>	Cross Support Rail	
8	301041– <u>LLLLL</u>	RH Side Rail	
9	301042– <u>LLLLL</u>	LH Side Rail	
10	3229 <u>WW</u>	Pinion	
11		Bed Plate Rail	
<u>WW</u> = Conveyor width reference: 04 – 48 in 02 increments <u>LLLLL</u> = Frame Length (see Bed Plate & Frame Formulas)			

Item 11: Bed Plate Rail				
Width	Part Number			
1.75" (mm)	300887– <u>LLLLL</u>			
2" (54mm)	300888– <u>LLLLL</u>			
4" (102mm)	300889– <u>LLLLL</u>			
6" (152mm)	300890- <u>LLLLL</u>			
LLLLL = Bed Plate Length (see Bed Plate & Frame Formulas on the next page)				

Bed Plate and Frame Formulas

Bed P Frame	e LLLLL	_ Con	veyor Ler	ngth LLLL	X 12 – Tai	I Adder							
···um	- <u>4488</u>			-	Conveyor								
Tail A	dder		0 for each										
			5 for each 0 for each		Ision End Attachme	nt							
Width		0000		TATUCKIC	Attachine		late Confi	aurotion					
4"				1		Deu P	1.75"	guration					
4 6"							4"						+
8"							6"						
10"						2"	4"	2"					
12"						2"	6"	2"					
14"				+		4"	4"	4"		+			+
16"						4"	6"	4"					
18"						6"	4"	6"					+
20"						6"	6"	6"					1
22"				1	4"	4"	4"	4"	4"	1			1
24"					4"	4"	6"	4"	4"				1
26"					6"	4"	4"	4"	6"				
28"					6"	4"	6"	4"	6"				
30"					6"	6"	4"	6"	6"				
32"					6"	6"	6"	6"	6"				
34"				4"	4"	6"	4"	6"	4"	4"			
36"				4"	4"	6"	6"	6"	4"	4"			
38"				4"	6"	6"	4"	6"	6"	4"			
40"				4"	6"	6"	6"	6"	6"	4"			
42"				6"	6"	6"	4"	6"	6"	6"			
44"				6"	6"	6"	6"	6"	6"	6"			
46"			4"	4"	6"	6"	4"	6"	6"	4"	4"		
48"			4"	4"	6"	6"	6"	6"	6"	4"	4"		
50"			4"	6"	6"	6"	4"	6"	6"	6"	4"		
52"			4"	6"	6"	6"	6"	6"	6"	6"	4"		
54"			6"	6"	6"	6"	4"	6"	6"	6"	6"		
56"			6"	6"	6"	6"	6"	6"	6"	6"	6"		
58"		4"	4"	6"	6"	6"	4"	6"	6"	6"	4"	4"	
60"		4"	4"	6"	6"	6"	6"	6"	6"	6"	4"	4"	
62"		4"	6"	6"	6"	6"	4"	6"	6"	6"	6"	4"	
64"		4"	6"	6"	6"	6"	6"	6"	6"	6"	6"	4"	
66"		6"	6"	6"	6"	6"	4"	6"	6"	6"	6"	6"	
68"		6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	
70"	4"	4"	6"	6"	6"	6"	4"	6"	6"	6"	6"	4"	4"
72"	4"	4"	6"	6"	6"	6"	6"	6"	6"	6"	6"	4"	4"

Conveyor Configurations



Guiding Options (TT)



Section and Length Determination



Walk Through Frame – Section L1



ltem	Part Number	
1	200121	Guide Retaining Clip
2	639971M	Single Drop–in Tee Bar

Item	Part Number	
3	950620M	Low Head Cap Screw M6 x 20 mm

Elevating Belt Travel

Section L1 Length – LLLL	I	II	111		
0200	No Guiding Section	38TT17	38TT18		
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038		
0400 and up 38TT00–LLLLL LLLLL = (LLLL x 12) – 02400		38TT17	38TT18		
For TT options see "Guide Options" section on page 32					

Section L1 Length – LLLL	I	II			
0200	No Guiding Section	38TT15	38TT16		
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038		
0400 and up	38TT00–LLLLL LLLLL = (LLLL x 12) – 02400	38TT15	38TT16		
For TT options see "Guide Options" section on page 32					

Walk Through Frame – Section L2



Item	Part Number	Description	lte	em	Part Number	Description
1	200121	Guide Retaining Clip	3		950620M	Low Head Cap Screw M6 x 20 mm
2	639971M	Single Drop-in Tee Bar				

Elevating Belt Travel

Section L2 Length – <u>LLLL</u>	I	II	III	IV	V			
0200 – 0371	38TT17–LLLLLLLLLL = (LLLL x 6) + 00075	38TT18–LLLLLLLLLL = (LLLL x 6) + 00075	No Guiding Section	38TT15–LLLLLLLLLL = (LLLL x 6) + 00075	38TT16–LLLLLLLLLL = (LLLL x 6) + 00075			
0371 – 0600	38TT17–LLLLLLLLLL = (LLLL x 4) + 00050	38TT18–LLLLLLLLLL = (LLLL x 4) + 00050	38TT00–LLLLLLLLLL = (LLLL x 4) + 00050	38TT15–LLLLLLLLLL = (LLLL x 4) + 00050	38TT16–LLLLLLLLLL = (LLLL x 4) + 00050			
0601 and up	38TT17	38TT18	38TT00-LLLLLLLLLL = (LLLL x 12) - 04600	38TT15	38TT16			
For TT options see	"Guide Options" section	For TT options see "Guide Options" section on page 32						

IT options see "Guide Options" section on page

Section L2 Length – <u>LLLL</u>	I	II	III	IV	v
0200 – 0373	38TT15–LLLLLLLLLL = (LLLL x 6) + 00075	38TT16–LLLLLLLLLL = (LLLL x 6) + 00075	No Guiding Section	38TT17–LLLLLLLLLL = (LLLL x 6) + 00075	38TT18–LLLLLLLLLL = (LLLL x 6) + 00075
0373 – 0600	38TT15–LLLLLLLLLL = (LLLL x 4) + 00050	38TT16–LLLLLLLLLL = (LLLL x 4) + 00050	38TT00-LLLLLLLLLL = (LLLL x 4) + 00050	38TT17–LLLLLLLLLL = (LLLL x 4) + 00050	38TT18–LLLLLLLLLL = (LLLL x 4) + 00050
0601 and up	38TT15	38TT16	38TT00-LLLLLLLLLL = (LLLL x 12) - 04600	38TT17	38TT18
For TT options see "Guide Options" section on page 32					

Walk Through Frame – Section L3



Item Part Number		Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop-in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Elevating Belt Travel

Section L3 Length – LLLL	I	II			
0200	No Guiding Section	38TT15	38TT16		
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038		
0400 and up 38TT00–LLLLL LLLLL = (LLLL x 12) – 02400		38TT15	38TT16		
For TT options see "Guide Options" section on page 32					

Section L3 Length – LLLL	I	II	
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up 38TT00-LLLLL LLLLL = (LLLL x 38TT17 38TT18 12) - 02400			
For TT options see "Guide Options" section on page 32			

Nose Over Frame – Section L2



Elevating	Belt	Travel

Section L2 Length – LLLL	I	II	III
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up 38TT00-LLLLL LLLLL = (LLLL x 38TT17 38TT18 12) - 02400		38TT18	
For TT options see "Guide Options" section on page 32			

Section L2 Length – LLLL	I	II	
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up 38TT00-LLLLL LLLLL = (LLLL x 38TT15 38TT16 12) - 02400		38TT16	
For TT options see "Guide Options" section on page 32			

Nose Over Frame – Section L3



Item	Part Number	Description
1	200121	Guide Retaining Clip
2	639971M	Single Drop-in Tee Bar

Item	Part Number	Description
3	950620M	Low Head Cap Screw M6 x 20 mm

Elevating Belt Travel

Section L3 Length – LLLL	I	II	
0200	No Guiding Section	38TT15	38TT16
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT15–LLLLL LLLLL = (LLLL x 6) + 00038	38TT16–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up 38TT00–LLLLL LLLLL = (LLLL x 12) – 02400		38TT15	38TT16
For TT options see "Guide Options" section on page 32			

Section L3 Length – LLLL	I	II	
0200	No Guiding Section	38TT17	38TT18
0201 – 0399	38TT00–LLLLL LLLLL = (LLLL x 6) + 00038	38TT17–LLLLL LLLLL = (LLLL x 6) + 00038	38TT18–LLLLL LLLLL = (LLLL x 6) + 00038
0400 and up 38TT00-LLLLL LLLLL = (LLLL x 38TT17 38TT18 38TT18			
For TT options see "Guide Options" section on page 32			

-13 Adjustable Guiding



Item	Part Number(s)	Description
1	202983	Aluminum Profile Guide 2' (610mm)
	202984	Aluminum Profile Guide 3' (914mm)
	202985	Aluminum Profile Guide 4' (1219mm)
	202986	Aluminum Profile Guide 5' (1524mm)
	202987	Aluminum Profile Guide 6' (1829mm)
	202988	Aluminum Profile Guide 7' (2134mm)
	202989	Aluminum Profile Guide 8' (2438mm)
	202990	Aluminum Profile Guide 9' (2743mm)
	202991	Aluminum Profile Guide 10' (3048mm)
	202992	Aluminum Profile Guide 11' (3353mm)
	202993	Aluminum Profile Guide 12' (3658mm)
	202994	Aluminum Profile Guide 13' (3962mm)

ltem	Part Number(s)	Description
2	200830M	Drop–In Tee Bar
3	202004	Mounting Bracket
4	202027M	Guide Mounting Shaft Vertical
5	202028M	Guide Mounting Shaft Horizontal
6	674175MP	Square Nut
7	807–652	Cross Block
8	807–948	Vinyl Shaft Cap
9	614068P	Flat Extruded Guide (per foot)
10	920612M	Socket Head Screw M6 x 12 mm
11	920616M	Socket Head Screw M6 x 16 mm

Flat Belt Mounting Brackets



Item	Part Number	Description	ltem	Part Number	Description
1	240831	Stand Mount	4	807–920	Square Nut M6 5 mm x 10 mm
2	300150M	Drop–In Tee Bar	5	920620M	Socket Head Screw M6 x 20 mm
3	605279P	Washer	6	950612M	Low Head Cap Screw M6 x 12 mm

Connecting Assembly without Stand Mount



Item	Part Number	Description
1	240858	Frame Bar Connector
2	240859	Intermediate Clamp Plate
3	950612M	Low Head Cap Screw M6 x 12 mm

Flat Belt Connecting Assembly with Stand Mount



Item	Part Number	Description	ltem	Part Number	Description
1	240858	Frame Connector Bar	4	807–920	Square Nut M6 5 mm x 10 mm
2	240831	Stand Mount Joint	5	920620M	Socket Head Screw M6 x 20 mm
3	605279P	Washer	6	950612M	Low Head Cap Screw M6 x 12 mm

4" (102 mm) to 6" (152 mm) Flat Belt Return Roller



Item	Part Number	Description	ltem	Part Number	Description		
1	240825	Return Roller Guard – Short	5	950616M	Low Head Cap Screw M6 x 16 mm		
2	240827	Return Roller Clip	6	240840	Roller Assembly (Includes Items 1, 3		
3	802–027	Bearing			and 4)		
4	913–100	Dowel Pin	7	240830	4" (102mm) to 6" (152mm) Flat Belt		
	•				Return Roller Assy		

8" (203 mm) to 48" (1219 mm) Flat Belt Return Roller



Item	Part Number	Description
1	240826	Return Roller Bearing
2	240827	Return Roller Clip
3	2409 <u>WW</u>	Return Roller Guard
4	2410 <u>WW</u>	Return Roller Rod

Item	Part Number	Description			
5	950616M	Low Head Cap Screw M6 x 16 mm			
6 D	3249 <u>WW</u>	8" (203mm) – 48" (1219mm) Flat Belt Return Roller Assembly			
WW = Conveyor width reference: 08 – 48 in 02 increments					

Conveyor Belt Part Number Configuration



Figure 81

Flat Belt Part Number Configuration

Refer to Dorner patent plate (Figure 81). From the model number, determine tail type ("T"), width ("WW"), length ("LLLL"), splice type ("S") and belt type ("B"). Use data to configure belt part number as indicated below. *Add "V" for V-guided belts.



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.

	Product Type								
	Standard Products							Engineered to order parts	
Product Line	Conveyors	Gearmotors & Mounting Packages	Support Stands	Accessories	Spare Parts (non-belt)	Spare Belts - Standard Flat Fabric	Spare Belts - Cleated & Specialty Fabric	Spare Belts - Plastic Chain	All equipment and parts
1100									
2200									
2200 Modular Belt									
2200 Precision Move									
2300									
2300 Modular Belt									
3200		30% return fee for all products except: 50% return fee for conveyors with modular belt, cleated belt or specialty belts non-returnable							
3200 LPZ		cle	ated belt	or specialty b	elts		non-ret	urnable	case-by-case
3200 Precision Move									
4100									
5200									
5300									
6200									
Controls									
7200 / 7300	50% return fee for all products								
7350							•		
7360	non-returnable								
7400									
7600									

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.

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



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